Current Parking Program Assessment

City of Rochester, MN

Report Version: 1.0

Prepared for:

DMC Transportation & Infrastructure Program
City of Rochester, MN

Prepared by:

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DMC Project No.: Rochester J8618-J8622 Parking/TMA Study

Table of Contents

City of Rochester Parking Program Overview

Transit and Parking Division Overview

Introduction

This document provides an overview of current City of Rochester Parking program. It reviews program organization and staffing, budget and finance, planned parking capital investments and parking asset inventory, utilization and monitoring and summary of recent program accomplishments.

Also, included in this report is a detailed listing of documentation provided by the City and a summary of the current programs and services based on current City parking website information.

Kimley-Horn also assessed the current City parking program utilizing our "20 Characteristics of Effective Parking Programs" methodology. This document was formatted to provide a detailed explanation of each of the "20 Characteristics" and included an opportunity for the City to provide a "self-assessment" of each area. This is followed by a "consultant assessment" of the same categories of evaluation. This assessment is provided in a separate document (see Appendix A to this report).

City of Rochester Parking Program – Summary of Program Accomplishments

The following listing of "significant work items" from the past several years does an excellent job of summarizing the types, scope, and scale of the programs operational and administrative activities. It also documents various awards and program recognition, program grants, planning, facilities maintenance/restoration projects, contract management and other management functions.

This summary reinforces our positive assessment of not only the unique and well-integration of transit and parking functions, but also the high quality of the management and operational dimensions of the program. It is rare, in our experience, to see such an impressive listing of program accomplishments.

2009 (October forward)

- Center Street Ramp Restoration $267,537
- Gillig Bus Award
- Downtown Bus Stop Design
- OIG Complaint and follow up – no findings
- City/ RCL Contract
- FTA Grant Activity – 6 grants - $6,921,474
- Preparation of 2010 budgets and Capital Improvements Program (CIP)

2010 Significant work items

- Best value review -Phase 4 PWTOC
- Best Value review - low voltage at PWTOC
- Bus award for ARBOCS (ZIPS)
- RDG Design Art Contract/ Downtown Bus Stop
- Civic Ramp Restore $125,490
- Civic Ramp Sprinkler project $161,140
- Civic Ramp and skyway HVAC $123,495
- Third Street Ramp Restoration $249,992
- Third Street Elevator HVAC
- Establish RCVB group rate for parking
- Parking Management RFP (developed and sent out)
- FTA Triennial Review
- City/CL Contract
- FTA Grant Activity - 4 grants - $4,337,306
- Preparation of 2011 budgets and Capital Improvements Program (CIP)

2011 Significant work items

- Implement parking rate changes
- Parking management RFP process continued
- Parking management contract awarded (Lanier)
- Parking contract transition between operators
- Discussions with FTA on triennial finding/ requiring competitive bids
- Awarded Center Street Ramp Elevator Code Update $313,608
- First Street Ramp Restoration Project $247,005
- Third Street Ramp joint warranty issue
- Center Street Ramp LED study and contract $69,518
- 800 mghrz radios for regular route transit operations
- Prepared FTA State of Good Repair grant application for PWTOC Phase 5 Garage
- Prepared & issued RFP for Transit Operations & Maintenance contract
- Public transit fare change –reduced fares for elderly and disabled
- Participant fleet software design
- City/ RCL 6 mos. Contract
- FTA Grant Activity – 2 grants - $2,399,373
- Preparation of 2012 budgets and Capital Improvements Program (CIP)

2012 Significant work items

- Transit RFP Continued-
- RFP for moderator services –awarded RLS
- Transit contract award and transition
- System rebranding- bus stop signs, bus striping, passes and schedules.
- Transit RFP legal challenges
- Transit fleet management software project
- Public transit branding study – name. logo, striping etc.
- 800 mghrz radios for ZIPS transit
- Best Value review –Phase 5 PWTOC
- Pay by space study on 1st Ave SW
- Transit fare changes- delete Rt 17 Zone B premium
- Second Street Ramp Condition Study $45,000
- Second Street Ramp Restoration Project $218,404
- Elevator tower HVAC at Center Street Ramp- $76,667
- Retrofit contract for LED lighting in Civic Ramp $209,685
- Opening of Walmart South Park and Ride (Route 6D)
- Relocation of Target South Park and Ride to Galaxy Theater

- FTA Grant Activity - 3 grants - $9,236,023
- Installation of three passenger shelters
- Major parking equipment purchases; Bob Cat/Toolcat and Tenant Scrubber
- Preparation of 2013 budgets and CIPs

2013 Significant Work Items

- Continues transit operations transition activities
- Award of 4 buses (Gilligs) for regular route
- Award of 2 buses (ARBOCs) for ZIPS
- RPT schedule redesign
- Parking rate increases implemented
- Renewal of UMR Parking Lease (2013 – 2016)
- NW Transit Service Expansion Planning (Routes 12 and 19)
- PWTOC Open house
- COOP Planning participation
- City Engagement survey participation
- Department Vision and mission development
- Department strategic plan development
- Center Street Ramp Condition Study $30,000
- Center Street Ramp Restoration Project $87,000
- Center Street Ramp Handrail Project $18,000
- Second Street Ramp Additional Structural Repairs $56,500
- Pay by Space Change out at Third Street Ramp to credit card machines
- Joint repair project at Third Street Ramp/ Bio science $20,652 (potential claim on original build)
- Joint repair project at Civic Center Ramp/ NE Tower $30,306
- Flood repair project at Civic Center Ramp lower level-$12,000
- Civil Rights Complaint investigation FTA Complaint #13-0153-Resolved
- Installation of the Bike Spot/ locker station at Third Street Ramp
- Continued support and coordination for RDA events via Lanier (signing and barricades for Thursdays on First etc.)
- FTA Grant Activity- 2 grants $2,100,716
- New parking enforcement technology review (continuing in 2014)
- Parking space renumbering plan (Continuing in 2014)
- 1st Avenue SW Pay by Space (4th to 6th) power and fiber installed
- 1st Avenue SW Pay by Space (4th to 6th) machines & signage on order (Continuing in 2014)
- Preliminary design meetings for new ramp – CJs lot
- PWTOC/ RPD Lease / FTA approval

- Alternate Fuels/ CNG Transit Fueling/ Feasibility Study (Continuing in 2014)
- Termination of Bethel Park and Ride lot lease effective 12/31/2013.
- Relocation of Galaxy Theater Park and Ride to Target South (12/02/2013)
- 2014 State Operating and Capital Grant Applications
- Preparation of 2014 budgets and CIPS

2014 Significant Work Items

- FTA Triennial Review
- Federal Grant Activity- 2014 FTA Operating Grant $1,783,130
- New Transit Service Implementation on Routes 12 and 19 (March 2014)
- 1st Ave SW Pay by Space Installation
- 100 Block North Broadway Alley Parking Lease
- Fontaine Parking Lease Renewal through 6/30/2015
- Civic Center Parking Ramp Condition Study $28,907
- Third Street Parking Ramp Condition Study $24,432
- Participation on Joint Agency Bus Procurement
- Award to Gillig of 7 New Buses for RR
- Third Street Parking Ramp IP Camera Plan $11,450
- Civic Center Parking Ramp Elevator Upgrade Plan $22,500
- Third Street Parking Ramp Restoration $112,944
- Civic Center Parking Ramp Restoration $226,638
- Parking PARC system / PCI software updates in 4 ramps $133,028
- RFP for Parking Rate Study (differed pending DMC study)
- New Transit Service Implementation on Route 4A and 4B (September 2014)
- Hiring and mentoring of Transit Planner (September 2014)
- Integrated Parking Enforcement and Citation Management System (RFP and contract)
- 2015 State Operating and Capital Grant Applications
- Preparation of 2015 budgets and CIPS

2015 Significant Work Items

- FTA Operating and Capital Grants $1,964,143
- Award and Deployment of Electronic Fare Box Project $820,295 (PM S Retzlaff)
- Award of Transit Development Plan Update (PM is B Law)
- Update of New Transit and Parking Websites (Coordinator S Retzlaff)
- Implementation of New Parking Enforcement/ Citation Management System

- Phase 2 Parking Enforcement – Selection of License Plate Recognition (LPR) System
- Implementation of New Rates for Parking System (Effective 1/1/2015)
- Third Street IP Camera Upgrade Project $121,158 (90% complete as of 12/15)
- Civic Center Parking Ramp Elevator Upgrade $183,300
- First Street Parking Ramp Condition Study
- First Street Parking Ramp Restoration (Concrete and Coatings) $209, 892 partially completed.
- First Street Parking Ramp Restoration MEP Repairs –awarded $89,500
- Continued Participation on Parking Ramp #6 Design
- Award of EMV (credit card) update for all gats and cashiers $62,000
- Mayo Parking Lease for 246 Spaces at Third Street Renewal for 1 year
- Vacation of Walmart North and South Park and Rides (June 2015)
- Startup of Fairgrounds Park and Ride Phase 1(June 2015)
- Startup of IBM Park and Ride (June 2015)
- Continued Analysis of Alternate Fuels for Transit (CNG and all electric)
- Award of 5 Gillig BRTs Buses (Delivery 2017)
- Delivery of 7 Gillig BRT Buses
- Renewal of Lanier Parking Management Contract (2016-2020)
- 2016 State Operating and Capital Grant Applications
- Preparation of 2016 budgets and CIPS

2016 Significant Work Items

- FTA Triennial Review
- Federal Grant Activity- 2016 FTA Operating / Capital Grants $1,415,400
- Continued federal and State grants administration
- Development and Award of 2017-2021 RFP for Transit Operations
- Deployment of AVL and Real Time Bus Information System
- Continued Work on Transit Development Plan (with coordination meetings with the Comp Plan and DMC activities)
- Hiring of Communications and Outreach Coordinator (October, 2016)
- Second Street Ramp Condition Report Completed (work differed pending development project)
- Completion of First Street Ramp Restoration Project
- Installation of EMV (credit card readers) –certification pending
- Update of Digital Pay by Space Software (to IRIS System)
- Award of Parking Ramp Stair Tower Railing Update (Center and Second) $113,800
- Award of Column Caps Projects for Civic and First Street Ramps (50% complete)

- Completed LED conversion of Gov Center Lot
- Approval of 2017 Contract Parking Rate Increases (Effective 1/1/2017)
- Award and completion of First Street Ramp Tower and Skyway Re-glazing $220,114
- Renewal of Mayo Parking Lease (through April 30, 2018)
- Renewal of UMR Parking Lease through 8/31/2019 at market rates
- Continued participation in DMC transit studies
- Continued participation in Ramp #6 design
- Continued design discussion of Gov Center Lot
- RFP for PARCS design (Ramp #6 and Third) and IP Camera expansion at Civic
- Added the Armory Lot 70 spaces
- Continued Design work on St Marys Bus Stop
- 2017 State and Capital Grant Applications
- Preparation of 2017 budgets and CIPS (Capital Improvements Program)

Current City of Rochester Parking Program Assessment

- The following is a summary listing of the parking operations, management and planning information provided by the City parking program in support of this "current program assessment" exercise:
- **Category:** Inventory/Utilization Assessment
  - Provided Documentation:
    - 3rd Street Ramp Evening Car Count Snapshot - Evening/Night Occupancy.
    - 2016 Civic Center South Daily Space Counts
    - CCSL Space Count 2014
    - Commuters using Short-term Parking Duration 2013
    - Parking Data for DMC 2014 0528
    - Count Activity 2016 October Crystal Report
    - Entry Exit 2016 1031 Crystal Report
    - Entry Exit Summary 2016 1031 Crystal Report
    - Facility Short-term Parking Full Log
    - Normal Parking Availability Map Jan 2016
    - Occupancy snapshot 2016 0121
    - Rochester-Lanier Flat Lot Mid-morning Occupancy 2016
    - COR Parking Ramp Data 2009
    - COR_Parking Meter Inventory (OFFICIAL)

- COR_Parking Meter Map
- Municipal Parkers by Duration - September 2009 9-14 to 9-18
- Municipal Parking In Out by Hour Per Facility
- Municipal Parking Instances of Full at Ramps - 2008
- PARKERS BY TYPE BY FACILITY OCT 09
- PARKING FACILITY REFERENCE 2014
- Parking Supply and Demand
- Ramp occupancy Rochester Municipal Parking Revised

Category: Parking Operations and Management

- Provided Documentation:
  - 2016 Parking Customer Survey
  - Typical Month Management Report Package
    - Section 1.1 Management Letter
    - Section 1.2 Executive Summary
    - Section 1.3 Monthly Parkers
    - Section 1.4 Usage and Payment Metrics
    - Section 2.0 Rochester MN Financial Statements
    - Section 3.0 Rochester Utilities Expenses
    - Section 3.1 Management Summaries
    - Section 3.2 AR Report
    - Section 3.7 Hotel Validation
    - Section 4.0 Rochester MN Financial Variance Reports
    - Section 5.0 Ticket Summaries
    - Section 6.0 Market Rate Analysis

- **Category:** Planning
  - Provided Documentation:
    - DMCC Plan_2015_Downtown Rochester_base map (various scales)
    - Ver 4 Revised Final DMC Parking Overlay Working Copy 09-26-2016
    - DMC Design Guidelines
    - DMC_Development Plan_20150129
    - DRAFT_Rochester Downtown Interim Parking Ordinance_160707_Rev0
    - Interim Parking Regs 09-2016
    - J8618_22_Parking_TMA_Destination Medical Center District Parking Overlay Proposal
    - Parking Min-Max

- Parking Overlay District Amendments
- Parking Requirement Table_Min-Max Reccomendations_160707_Rev0
- Rochester Comp Plan Docs
  - RCP_Background Documents Summary Draft_201504
  - RCP_Existing Conditions Map Book_20150302
  - RCP_Existing Conditions Summary_201505
  - RCP_Non-Motorized Transportation Analysis_201504
  - RCP_P2S Trends Workshop Results Summary_20150523
  - RCP_Peer City Policy Review_201504
  - RCP_Project Update_201508
  - RCP_Transit System and Market Analysis_201504
  - RCP_Travel Patterns and Link Analysis_201504
  - RDA_Urban Village Overlay Zone Design Guidelines_200907
- Rochester Parking System Assessment Final Draft Report 072004
- Rochester Public Library_Parking Survey Summary_2014_2015
- Walker_Final Parking Report 82908 PDF

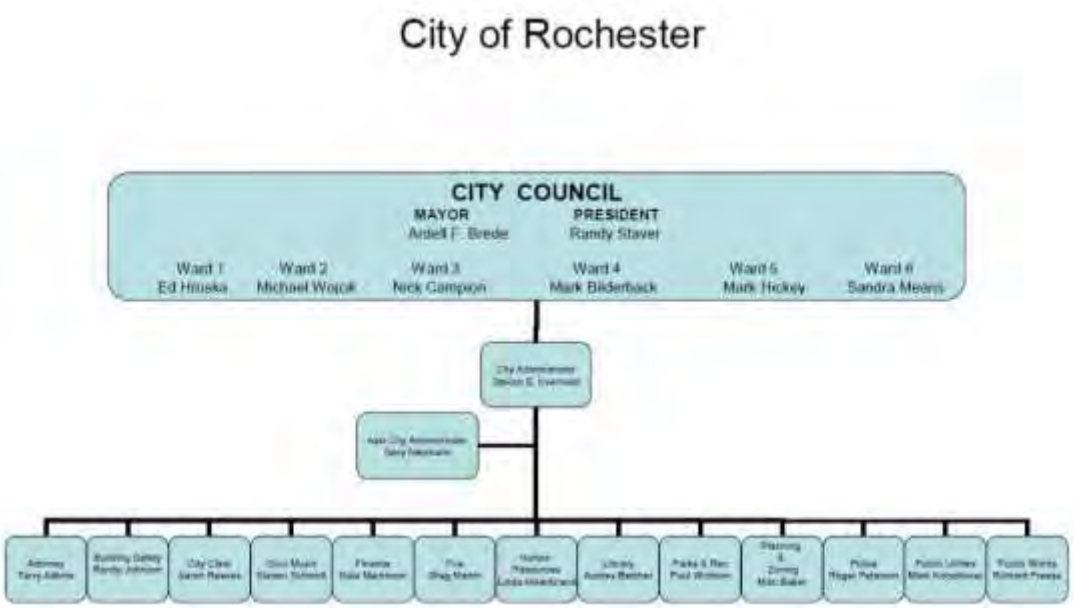
- **Category: Remote Parking Shuttles**
  - Provided Documentation:
    - Routes-Shuttles and Buses
    - Shuttle Schedules
    - Ridership for intercampus shuttles
    - EAST-WEST Counts 11-5
    - EAST-WEST Counts 11-12
    - EAST-WEST Counts 2-11-13
    - EAST-WEST Counts 2-18-13
    - EAST-WEST Counts 4-8-13
    - Intercampus Counts 2-11-13
    - Intercampus Counts 2-18-13
    - Intercampus Counts 11-5-13
    - Intercampus Counts 11-12-13

- **Category: Budget**
  - Provided Documentation:
    - Copy of 2017-2021 CIP Budget Master Recommended
    - Rochester Parking Budget Effectiveness Measurements 2007-2009 (2)
    - Proposed 2017 Budget sheets
- **Category: Program Overview**
  - Provided Documentation:
    - Copy of 2017-2021 CIP Budget Master Recommended
    - Rochester Parking Budget Effectiveness Measurements 2007-2009 (2)
    - Proposed 2017 Budget sheets

Organization and Staffing

Organization

- Organizationally, the Transit and Parking Division are located under the Department of Public Works



Staffing

Within the Transit and Parking Division, key staff and contracted vendors include:

- Transit and Parking Manager - Tony Knauer
- Transit and Parking Assistant – Scott Retzlaff
- Transit Planner - Bryan Law
- First Transit (Regular Route Operations)
- R and S (Paratransit Operations)
- Lanier Parking Solutions (Ramp and Lot Operations)

Comments Regarding Organizational Structure

- One of the very positive elements of the City of Rochester Transit and Parking Program is the way in which transit and parking functions are effectively vertically integrated. This rather rare, but excellent combination of services and expertise bodes well for further integration and expansion of more robust Travel Demand Management (TDM) and shared mobility strategies moving forward.
- Another positive element is the fact that the Transit and Parking program is structured as an "enterprise fund".

Transit and Parking Workforce Planning

- The following table illustrates 2016 staffing as well as preliminary staff planning for a ten-year planning horizon:

	2016	10 YEARS OUT	
TRANSIT & PARKING DIVISION			
TRANSIT & PARKING MANAGER	**1**	**1**	
TRANSIT AND PARKING ASSISTANT	**1**	**1**	
OPERATIONS MANAGER	**1**	**2**	
FINANCE, AUDIT, ACCOUNTING		**1**	
GRANTS ADMNISTRATOR	**1**	**1**	
PLANNER	**1**	**2**	
MARKETING/ COMMUNITY OUTREACH	**1**	**2**	
IS/ TECHNOLOGY		**1**	
WARRANTY MANAGER		**1**	**SHARED**
CLERK/ RECEPTIONIST	**1**	**1**	**SHARED**
PARTS CLERK	**1**	**2**	**SHARED**
CONTRACTED TRANSIT EMPLOYEES	**94**	**181**	
METER COLLECTIONS/ MAINTENANCE	**2**	**3**	
CONTRACTED PARKING EMPLOYEES	**36**	**56**	
TOTAL	**140**	**255**	

PRIVATE EMPLOYEES

Notes

Transit- Assumes doubling the fleet in 10 years to meet Downtown Master Plan to serve 20% of mode share (30% by 2035)

Parking - Assumes 3 new ramps w/ automation, consolidation w/ park and ride facilities and 24/7 response for customer service, security

Parking Program Budget and Finance

Revenue and Expenses

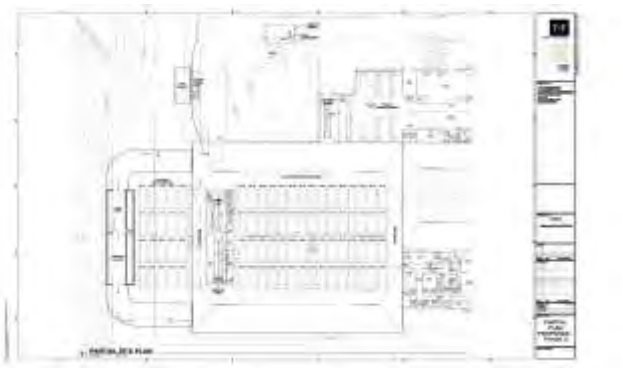
- The City of Rochester Parking program breaks down their operating revenues and expenses into six major categories:
  - Parking Administration
  - Parking Ramp Operations
  - Parking Lot Operations
  - Parking Street/Meter Operations
  - Parking Enforcement
  - Residential Parking Permit Operations

- The table below summarizes revenue and expenses by major category for fiscal years 2014 and 2015.
  - Total Annual Revenues for all categories by year are noted below:
    - 2014: $6,309,209.00
    - 2015: $6,854,181.00
  - Total Annual Expenses for all categories by year are noted below:
    - 2014: $4,887,865.00
    - 2015: $4,866,101.00
  - Net Operating Results for all categories by year are noted below:
    - 2014: $1,421,344.00
    - 2015: $1,988,080.00

		2014	2015
Parking Administration			
	Revenue		$ -
	Expenses	$ 162,678	$ 184,563
Parking Ramp Operations			
	Revenue	$ 4,591,061	$ 4,986,724
	Expenses	$ 3,653,431	$ 3,624,100
Parking Lot Operations			
	Revenue	$ 388,993	$ 438,868
	Expenses	$ 239,203	$ 238,294
Parking Street/Meter Ops.			
	Revenue	$ 989,616	$ 1,063,023
	Expenses	$ 319,186	$ 309,448
Parking Enforcement			
	Revenues	$ 318,384	$ 342,636
	Expenses'	$ 494,196	$ 480,917
Residential Permit Parking Ops.			
	Revenue	$ 21,155	$ 22,930
	Expenses	$ 19,171	$ 28,779

Planned Parking Capital Investments

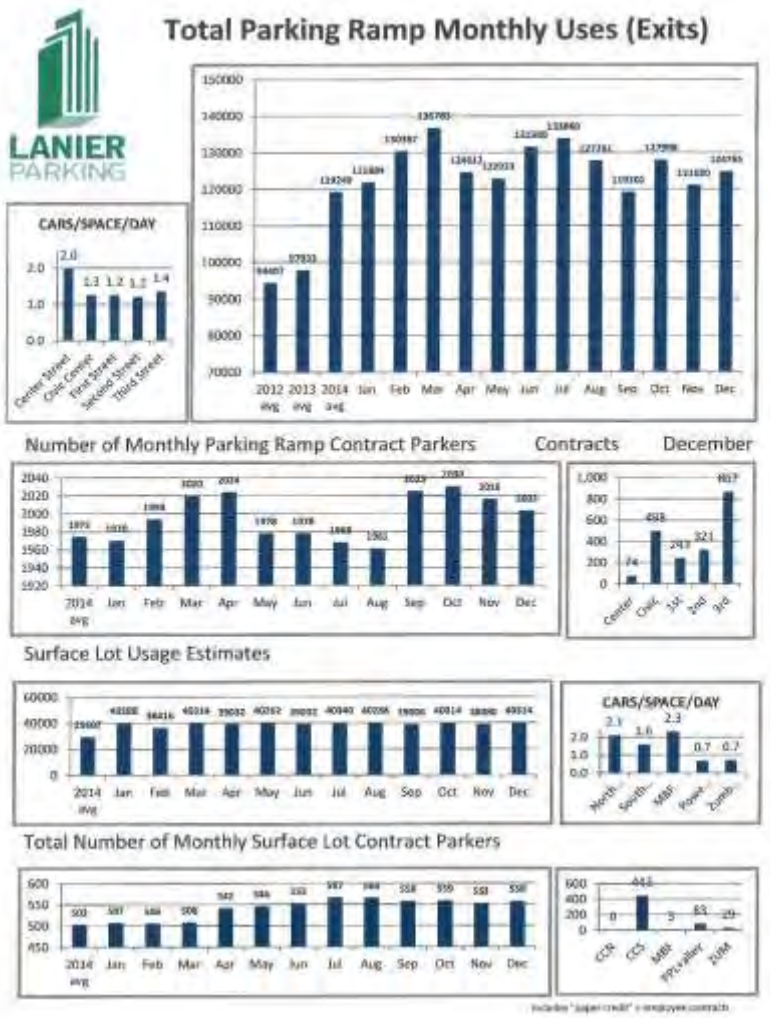
- Planned capital investments for the City of Rochester Parking program in 2017 include:
  - Construction of a new public parking ramp (Ramp # 6)
  - Continued New Technology for Payment, Information and Enforcement Parking Lot Operations
  - Demolition and Replacement
    - The city currently owns and operates approximately 5,348 public parking spaces in the core area along with several park and ride facilities located in various locations around the city. Proposed developments will result in the removal of the 2nd Street Ramp and the Center Street Ramp.
  - Parking Partnerships / DMC
  - Expanded / Structured Park and Ride Capacity



- Planning for new technologies and services in the next 1 – 5 year planning horizon include the following possibilities:
  - Parking Information Apps
  - Wireless Intelligent Enforcement
  - License Plate Recognition
  - Hosted Services
  - Pay by Space
  - Pay by Phone
  - Drone Enforcement?

Parking Asset Inventory, Utilization and Monitoring

- Another positive element of the current parking program is the degree to which the program monitors and assesses parking resource utilization on an on-going basis.
- This is important both for planning and active parking management on a routine basis. With over 2 million parking transactions per year, this type of utilization monitoring and analysis is critical to staying head of the parking demand curve. The graphic below is just one illustration of how parking management is tracking resource utilization.



Parking Inventory

- The City of Rochester parking system currently consists of the following physical assets:
    - Parking Ramp Spaces: 2,973
    - Surface Parking Lot Spaces: 1,091
    - On-Street Metered Spaces: 1,303
    - **Total Spaces: 5,367**
- The City provided a detailed spreadsheet of parking assets (please see Appendix B) which included more detail than is typically provided by municipal systems including:
    - Facility name
    - Location
    - Year Built
    - Construction Type
    - Number of Levels
    - Ground Level Foot Print Dimensions
    - Total Number of Spaces
    - Parking Access/Revenue Control System(s)
    - Potential for Expansion
    - Vehicle Height Limits
    - Additional Comments

Parking Program Assessment Methodology

"20 Characteristics of Effective Parking Programs" Assessment Approach

Introduction

In addition to the documentation of current parking program elements above, Kimley-Horn also provided a special program assessment tool to both the City of Rochester and the Mayo Clinic. This unique program assessment program referred to as the "20 Characteristics of Effective Parking Programs" was developed specifically for municipal parking programs.

Below is a summary of the "20 Characteristics" system evaluation process:

1. System Vision/Mission
2. Parking Philosophy
3. Strong Planning
4. Community Engagement
5. Organizational Effectiveness
6. Staff Development
7. Safety, Security, and Risk Management
8. Effective Communication
9. Effective and Accountable Revenue Control
10. Financial Planning
11. Creative, Flexible, and Accountable Parking Management
12. Operational Efficiency
13. Facilities Maintenance and Asset Protection
14. Effective Use of Technology
15. Parking System Branding, Marketing, and Strategic Communication
16. Customer Service Programs
17. Special Event Parking
18. Effective Enforcement
19. Transportation Demand Management
20. Awareness of Competitive Environment

An Introduction to the "20 Characteristics"

Based on Kimley-Horn's extensive experience evaluating municipal parking systems of various sizes and complexity across the country and abroad, Kimley-Horn has identified a set of "20 Characteristics", that when combined into an integrated approach to parking and access management, can provide the basis for a sound and well-managed operation that is positioned to best serve the city today and into the future.

THE 20 CHARACTERISTICS INCLUDE:

A transportation and parking system that has all twenty of these characteristics is well on its way to being in a class apart from most parking programs. The goal of the System Evaluation process is to identify an easy-to-understand set of criteria that, when used to guide program development and management, can support parking's continued investment to be an active contributor to improving the overall experience of traveling to, and around, Downtown Rochester.

System Evaluation Process

- As part of our current program assessment process, we provide both the City and Mayo programs with an opportunity to conduct a "Program Self-assessment" using this approach.
- Assessment Rating: Using a scale of 1 through 10, where 1 = "poor" and 10 = "excellent", we are asking each program leader to rank how they feel the program would score today. At the end of our review, the consultant team will also provide our assessment of each program.
- The rating scale is pictured below:

- The City's self-assessment is provided as an attachment to this document.

Program Assessment Rating Summary

Assessment Rating:	Self	Consultant
1. System Vision/Mission	__	8
2. Parking Philosophy	8	8
3. Strong Planning	10	10
4. Community Engagement	__	7
5. Organizational Effectiveness	__	10
6. Staff Development	6	6
7. Safety, Security, and Risk Management	9	9
8. Effective Communication	8	7
9. Effective and Accountable Revenue Control	10	9
10. Financial Planning	10	10
11. Creative, Flexible, and Accountable Parking Management	7	9
12. Operational Efficiency	9	9
13. Facilities Maintenance and Asset Protection	9	9
14. Effective Use of Technology	8	9
15. Parking System Branding & Strategic Communication	7	7
16. Customer Service Programs	9	9
17. Special Event Parking	7	8
18. Effective Enforcement	9	9
19. Transportation Demand Management	8	8
20. Awareness of Competitive Environment	9	9
Total Score: (Out of a possible 200)	___*	**170**

* Note: the City staff did not provide self-assessment scores in all categories.

City of Rochester Parking Program Overview – City Parking Website

For documentation purposes, the following program overview reflects what a citizen or visitor to Rochester would see on the City's Parking website. This also provides a good overview of current services and programs.

The City of Rochester provides for on- and off-street parking through its municipal parking program. All revenues derived from parking fees are dedicated to a Parking Enterprise Fund, which is used exclusively to sustain the existing parking system and provide new parking lots and ramps. All parking ramps are connected to the downtown and clinic by skyway.

The City of Rochester Parking Program can be reached at:

Rochester Municipal Parking
11 West Center Street
Rochester, MN 55902
Phone: 507-282-4545
Web: http://www.rochestermn.gov/departments/public-parking

Private parking is also provided by Mayo Clinic, downtown hotels, and businesses. Information on Mayo Clinic Visitor Parking and Airport Parking can be found using these links:

Mayo Clinic Visitor Parking - http://www.mayoclinic.org/patient-visitor-guide/minnesota/travel-lodging-maps/parking

Rochester Airport Parking - http://flyrst.com/transportation/parking/

General Program Information

Shopping

- Short-term parking needs are met with 90-minute on-street parking, on-street metered spaces and off-street metered lots. For longer shopping trips, the 2nd Street, Center Street, Civic Center, 3rd Street, and 1st Street Ramps provide convenient, covered parking. Except for the 3rd Street ramp, all ramps have indoor connections to adjacent office buildings, retail, hotels, and banks.

Parking Meter Enforcement Hours

- Parking meters are enforced 8:00 a.m. to 5:00 p.m. Monday through Friday except the following holidays:
    - New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas Day.
- On-street parking is prohibited on most streets in the downtown from 2:00 a.m. until 6:00 a.m. Look for the posting.
- Under Minnesota Law, vehicles with state issued disability plates, or tags, the following provisions apply:
    - Vehicles with a state issued disability plate, or tag, park free at any metered space.
    - Vehicles with a state issued disability plate or tag may park up to 4 hours in 1 hour, 90 minute or 2 hour metered zones.
    - Vehicles with a state issued disability plate or tag that park in a cashiered municipal ramp as an hourly customer are eligible for a 50% discount.

Free Parking Times

- Free parking is provided at all meters after 5:00 p.m. during the weekday and always on weekends. Parking in City parking ramps is free after 5:00 p.m. in the evenings and on weekends from 6:30 a.m. until 2:30 a.m. See below for Overnight Parking restrictions. Fees may be charged for certain event parking. Ramp parking is "Free" if you are in and out within an hour when parking in the following parking ramps; Center Street, Civic Center, First Street and Second Street.

Overnight Parking

- Overnight parking on most streets in the downtown area is prohibited between the hours of 2:00 a.m. and 6:00 a.m. There is a charge of $13.50 for overnight parking in the city parking ramps.

Parking Validation

- Many downtown businesses will validate your parking at Center, Civic, First Street, and Second St Ramps. Ask for your validation.

Park & Ride System

- The City of Rochester has a great inter-modal transportation system to help you get to your destination faster. A system of Park & Ride lots enables you to drive your vehicle into town, park at one of

several safe, convenient locations, then board a city bus to take you to your destination. People who use this system often get to their destination less stressed than fellow commuters, and help to relieve the amount of congestion and improve the air quality. Go to www.rochesterbus.com for more information on public transit in Rochester.

Credit Card Payment in the Ramps

- Credit card payment is accepted in the First Street, Second Street, Center Street and Civic Center parking garages. You can use your credit card to enter and/or exit. The charges will be automatically made to your card. You can also present your credit card to the cashier as you exit. Credit Cards accepted include: VISA, MasterCard, American Express and Discover.

Cash Key

- We are not currently selling the cash keys because we are short on supply. We will, however, refill any cash keys that have already been sold.
- Cash Keys can be reloaded with value at the City Clerk's Office located in City Hall, 201 4th Street SE, Rochester, MN or call (507)328 -2900.

Pay By Space Lots

- Pay lots are controlled by manual or electronic pay boxes. Select a parking stall, observe the stall number and if it's a manual pay box place your fee in the corresponding slot at the pay station. On the electronic boxes you will need to enter your space number and deposit coins for the amount of time you wish to park. Cash Keys also work in the electronic pay stations.

Meter Bags

- The City does issue meter bags for construction and other miscellaneous activities. A fee of $6.00 per day per meter is charged. For more information contact Rochester Public Works at (507) 328-2400.

Monthly Parking

- Monthly parking spaces are leased in the municipal ramps and lots. The number of monthly spaces is limited. For more information on

monthly leases call Lanier Parking Solutions at (507) 282-4545. You can also click here

Vehicle Height (Limits in City Parking Garages)

- Vehicle height limits for the municipal garages are listed below. If your vehicle exceeds these heights, please contact the garage management about oversized parking at telephone (507)282-4545.

Oversized Parking (Buses and Trucks)

- Limited parking for buses and trucks in the downtown for Civic Center events and hotel guests is available. Contact Lanier Parking Solutions at (507) 282-4545 for details.

RV Parking

- If you are visiting Rochester in an RV and staying in the downtown, oversized parking is available (No camping).

Employee Parking

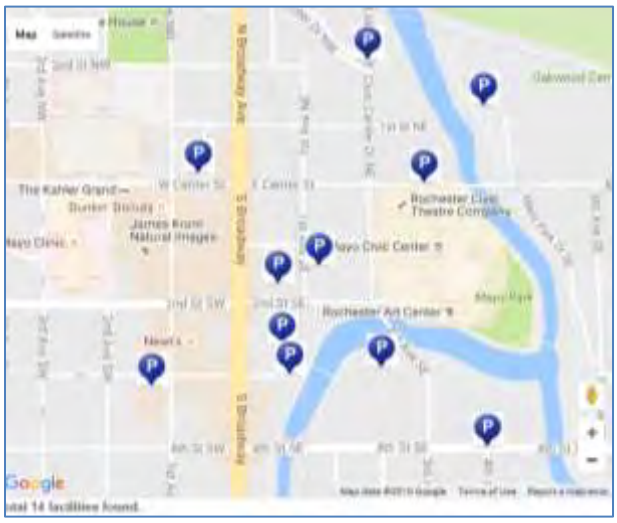
- If you are a downtown employee or business, please consider leaving the short term on-street and lot spaces available to customers and guests. There are 10 hour meters reasonably priced on the fringe of the downtown (10 hour meters have a green top). These meters also take Cash Key. For monthly leases in lots and ramps call (507) 282-4545.

Mayo Civic Center Events

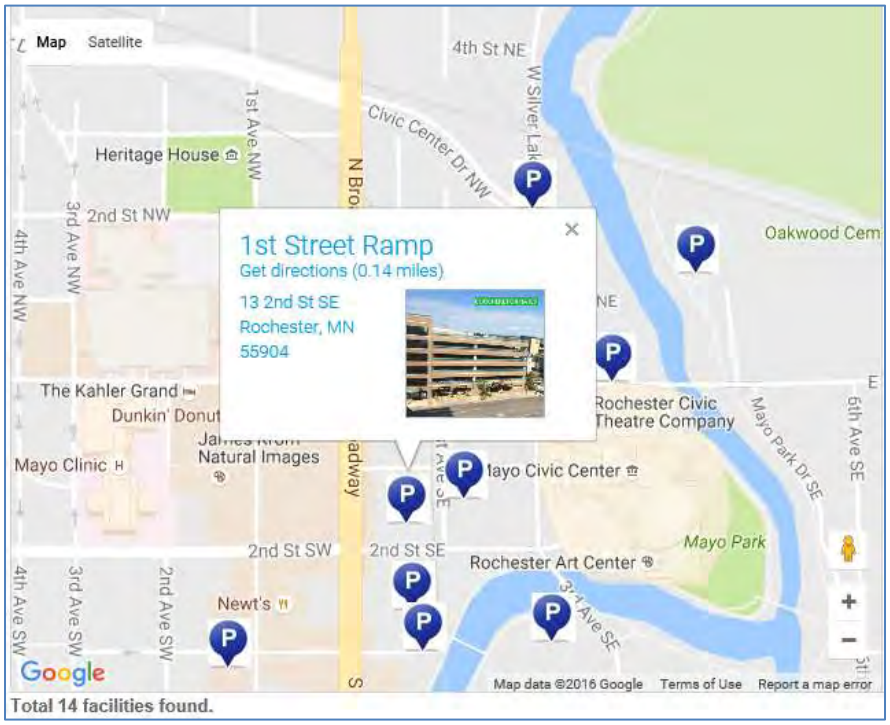
- The Mayo Civic Center is served by several parking ramps and surface lots within a short walk. The parking ramps are connected to the Civic Center by skyway. Your hotel/motel may also provide free shuttle service to the Civic Center.

Parking Locations

- The City Parking website offers an interactive public parking location map to assist the public in finding parking options.



By clicking on a specific facility more information on that parking facility can be obtained as illustrated below.



- Parking Lot & Ramp Rates
- The City parking website also contains information on parking lot and ramp monthly and hourly rates. The City of Rochester has 5 parking ramps and 8 surface lots in the downtown area.
- Monthly rates are also available.

Hourly rates for specific facilities are also provided as illustrated to the right.

On Street Parking Meters

Rate information for on-street meters is also provided on the website as illustrated below.

On-street Parking Rates (LAST UPDATED 01/01/2015)			
30 minute	$0.70	Total Street Meters	1274
90 minute	$1.20 / hour		
2 hour	$1.40 / hour		
3 hour	$1.20 / hour		
10 hour	$0.40 / hour		
ALL RATES SUBJECT TO CHANGE			

Residential Parking Permits

The City of Rochester also administers a Residential Parking Permit program. Parking permits are required to park on certain streets in the City of Rochester. As of October 2016, Residential Parking permit enforcement will no longer require a physical tag on your vehicle as proof of a valid parking permit. The license plate on your vehicle is now your permit.

Permittees are required to provide a registered license plate number for the particular vehicle to be parked in the residential permit parking zone. Parking enforcement will use automatic license plate readers to determine which vehicles are not permitted in the zone. All Parking Tickets must be paid before Permit is approved.

Residential Parking Permit (RPP) Cost and Requirements:

Cost requirements (must submit for new and renewal permits)

- Application Fee •$5 one-time fee / vehicle
- Annual Permit Cost •$20 per vehicle / year
- Proof of Residency
    - Valid Driver's License with current address AND current electric/phone/cable bill, OR lease agreement
- Proof of Vehicle Ownership: State Issued Registration with License Plate Number and Make, Model and Year of Vehicle

The table below explains the process for permit application or renewal.

To Purchase or Renew:

Online	Secure internet payments can be made with Visa, MasterCard, or Discover 24-hours per day, 7-days per week. *A convenience fee of $2.50 applies to internet payments.*	**Purchase/Renew Parking Permit**
Mail	Fill out the application form and mail it with the proper fee, copy of proof of residency and vehicle registration. Make your check or money order payable to the City Clerk's Office. (Do not send originals- please make copies) Resident Application | Business Application	**City Clerk's Office** **201 4th St. SE Room 135** **Rochester, MN 55904**
In Person	You may purchase or renew in person at City Hall. You must provide proof of residency and vehicle registration.	**City Clerk's Office** **201 4th St. SE Room 135** **Rochester, MN 55904**
Parking Frequently Asked Questions	Do you have a question about: Residential Parking Permit? Find your answers on our Frequently Asked Question list.	Frequently Asked Question list

Pay a Parking Ticket

- The City Parking website also provides basic information on how to pay a parking citation.
- Clicking on any link below will redirect you to the Parking Control webpage within the City of Rochester
  - Parking Ticket Information/Contesting a Ticket
  - Payment Options
  - Parking Meter Enforcement

Parking Citation Payment Methods

- Pay Online
- Over-the-Phone
- By Mail
- In Person
- Payment may also be made using the drop box located at the beginning of the circle drive in front of the Government Center.

Contesting a Parking Citation

To Plead Not Guilty

- Bring the ticket or summons to the 5th floor of the Government Center, clerk of courts, at 1 pm Monday, Tuesday or Wednesday, or call (507) 206-2496.

Error Correction

- If you receive a citation or summons in error (i.e. you no longer own the vehicle or the parking tickets do not belong to you, please contact the City Clerk's office at (507) 328-2907.
- If you no longer own the vehicle, please provide enough information for us to contact the new owner, "normally a copy of the transfer of sale document". You will continue to receive notices of additional tickets are received if the State shows the title in your name.
- Click here to view the City of Rochester parking ordinance.

Parking Meter Enforcement

- Parking meters are enforced Monday through Friday from 8 a.m. until 5 p.m. Meter parking is NOT enforced on weekends or on the following holidays:
  - New Year's Day
  - Memorial Day
  - July 4th
  - Labor Day
  - Thanksgiving
- Christmas
- Christmas, New Year's Day and July 4th will occasionally fall on a Sunday. We will not enforce parking meters on that following Monday. *We may enforce other parking violations such as loading zones, handicapped violations, no parking zones and other types of parking prohibitions.*
- Parking meters and other parking regulations will be enforced on other legal holidays if the demand for parking is at or about the normal levels because Mayo Clinic and most other downtown businesses are open.
- The days and times that meters are enforced are listed on each parking meter.

ROCHESTER MUNICIPAL PARKING							12/21/2016			
PARKING SPACE INVENTORY										
FACILITY / ADDRESS	YEAR BUILT	CONSTRUCTION TYPE	DATE/ COST OF LAST AND SIGNIFICANT RESTORATION	LEVELS W/ GROUND AND BELOW GRADE	GROUND LEVEL FOOT PRINT (approx)	TOTAL NUMBER OF SPACES	REVENUE SYSTEMS	POTENTIAL FOR EXPANSION	VEHICLE HEIGHT LIMIT	COMMENTS
1ST STREET RAMP/ 19 2nd Street SE	1988	Post tension cast in place decks, precast wall panels	2011 / $231,159 w/ engineering - 2007/ $229,005 approx.. included landscaping, elevator repair ($50k)	6	115' x 264'	578	CASHIERED W/ GATES/ TICKETS & CREDIT CARD IN/OUT - 2006 SKIDATA	NO	6'7" ALL ENTRANCES	1999 STUDY INDICATED ONE ADDITIONAL DECK COULD BE ADDED. EXPANSION DECK ADDED IN 2003 TO SERVE BROADWAY PLAZA APPROX COST OF $1.4 MILLION FOR 95 SPACES.
2ND STREET RAMP/ 14 2nd Street SE	1962	Structural slabs w/ reinforced slabs, columns and beams	2013- $52,540 concrete nad paint, 2012- $244,136 concrete and coatings plus eng. ENG., 2008 - $197,000 - concrete, coating, paint 2004- $800,000 plus, new elevators & lighting,	6	105' x 262 '	435	CASHIERED W/ GATES/ TICKETS & CREDIT CARD IN/OUT - 2006 SKIDATA	NO	6'7" MAIN AND OVERSIZED PASS THRU, 6'5" AT REAR	USEFUL LIFE CAN BE EXTENDED., NOTE- DESIGN STANDARD CHANGES SUCH AS HEIGHT, TURNING RADII. PROGRAMMED FOR DEMO IN 2016 TO BE COORDINATED WITH DEVELOPMENT.
3RD STREET RAMP/ 100 3rd Street SW	1999	Post tension concrete slab with concrete frame	2010-$85,772- concrete patch, entrance gland 2006- $73,000 concrete, coating,	8	235' X 113'	925	GATES FOR NESTED AREA, HANG TAGS AND DIGITAL PAY BY SPACE (PBS) 2009 -PBS UPDATED TO CC IN	YES	8'2"	ADDED TWO DECKS W/ BIO SCIENCE BLDG.2008-2009
CENTER STREET RAMP/ 11 West Center Street	1982	Slab on grade, cast in place post tension decks, precast panels over Center Street	coating, 2 tendons, stair railing, 2012-Top deck switched out w/ new poles to LED, 2012-$313,608 major code update on elevators, 2009- $267,537 concrete,	2 - 4	No of Center-106' x 151' Over Center 106' x 78' So of Center 263' x 99'	393	CASHIERED W/ GATES/ TICKETS & CREDIT CARD IN/OUT - 2006 SKIDATA	YES	7'	INDICATES FEASIBILITY OF ADDING TWO DECKS. SECOND ADDITIONAL DECK WITH ADDITION OF REINFORCING WALLS AND COLUMNS - EACH NEW LEVEL ADDS 164 CARS- PRELIMINARY TESTS BY AMERICAN TESTING (1999)OF
CIVIC CENTER RAMP/ 100 1st Avene Se	1993	Post tension concrete slab with concrete frame	2012- Converted lighting from HPS to LED. 2010- $535,073 concrete, coating, caulking, new HVAC, new sprinkler system 2006- $34,000 concrete, coating , caulking,	7	117.25' X 299.25'	642	CASHIERED W/ GATES/ TICKETS & CREDIT CARD IN/OUT - 2006 SKIDATA	?	8' AT MAIN, 7' AFTER SECOND LEVEL	NO DOCUMENTATION FOUND FOR FEASIBILITY OF EXPANSION . WILL RESEARCH WITH DESIGNER.
					SUBTOTAL RAMPS	2973				
FIRST AVENUE LOT/		Surface Lot	80 pay by space plus HC			82	0			
ZUMBRO MARKET LOT		Surface Lot	31 metered			65	30			
CIVIC CENTER NORTH LOT/ 317 East Center Street		Surface Lot	pay box		184 + 4hc	193	0			
MAYO BALLFIELD LOT/ 403 East Center Street		Surface Lot	pay box		75 +37 = equipment yrd	135	18	Paper Credits		
CIVIC CENTER SOUTH LOT/ 401 4th Street SE		Surface Lot	pay box		64 + 139city+ 114county	330	240	Paper Credits		
GOVERNMENT CENTER LOT		Surface Lot	metered			144	0	127 METERED		
GOVERNMENT CENTER SOUTH LOT		Surface Lot	50 pay bu space			66	1	Paper Credits	50 PAY BY SPACE	
CIVIC NORTH OVERFLOW -POWER PLANT		Surface Lot	pay box		49 permit, 3 oversized, 18 public	76	48	**13** Paper Credits		
					SUBTOTAL LOTS	1091				
ONSTREET METERS										
DOWNTOWN						1276				
ST MARYS AREA						27				
					SUBTOTAL STREET		1303			
					TOTAL ALL SPACES	5367				
							1666	SPACES		
							373	LESS LOTS INCLUDING PBS		
							1293	STREET METERS		
							1536	METERED -STREET & LOTS		

Kimley»Horn SRF Consulting Group, Inc.

DMC TRANSPORTATION
& INFRASTRUCTURE PROGRAM

Parking Management and Design Best Practices

AUG 2012

Prepared by Kimley»Horn SRF Consulting Group, Inc.

Prepared for DMC TRANSPORTATION INFRASTRUCTURE PROGRAM MANAGEMENT

DMC TRANSPORTATION INFRASTRUCTURE PROGRAM MANAGEMENT

DMC Transportation & Infrastructure Program
PARKING MANAGEMENT AND DESIGN BEST PRACTICES

Kimley»Horn

SRF Consulting Group, Inc.

Introduction/Overview

This “Tool Box” of parking management and design best practices has been compiled over a number of years and continues to evolve as the parking industry evolves.

Our goals in the development and organization of this document were to provide a comprehensive categorization of parking planning, management and design areas to make finding specific best practices easier. As is often the case when trying to categorize a wide range of items there are instances where one item might legitimately be placed in multiple categories.

As this collection has grown, we have expanded our thinking on exactly what to include. For example, in the category of “Sustainable Parking Design & Management Strategies” we chose to include some concepts that speak more to potential future applications. While technically not “best practices”, they do illustrate new ideas and approaches that can inspire creative thinking.

We know of no parking/transportation program anywhere that has adopted all of these concepts and management strategies. It is our hope that this tool will provide the University with a wealth of ideas to stimulate program development as you tackle parking issues as a key transformative strategy within the context of your downtown revitalization and parking program enhancement plans.

Kimley»Horn

DMC TRANSPORTATION INFRASTRUCTURE PROGRAM MANAGEMENT

DMC Transportation & Infrastructure Program
PARKING MANAGEMENT AND DESIGN BEST PRACTICES

Kimley»Horn

SRF Consulting Group, Inc.

Table of Contents (Page 1 of 2)

Chapters:

DMC TRANSPORTATION INFRASTRUCTURE PROGRAM MANAGEMENT

DMC Transportation & Infrastructure Program
PARKING MANAGEMENT AND DESIGN BEST PRACTICES

Kimley»Horn

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Table of Contents (Page 2 of 2)

Chapters:

Ch.
1

A Comprehensive Approach to Program Development

Guiding Principles

Creating a comprehensive set of “guiding principles” is the first step in creating a strategic parking plan for your organization.

ex.

- » Guiding Principles form the strategic framework of a program
- » Within a parking strategic plan, specific action items are organized by the larger “guiding principle categories”.
- » In this way, by working the action plan, you will remain true to the vision, mission and core values of the strategic plan which was developed with significant stakeholder involvement.

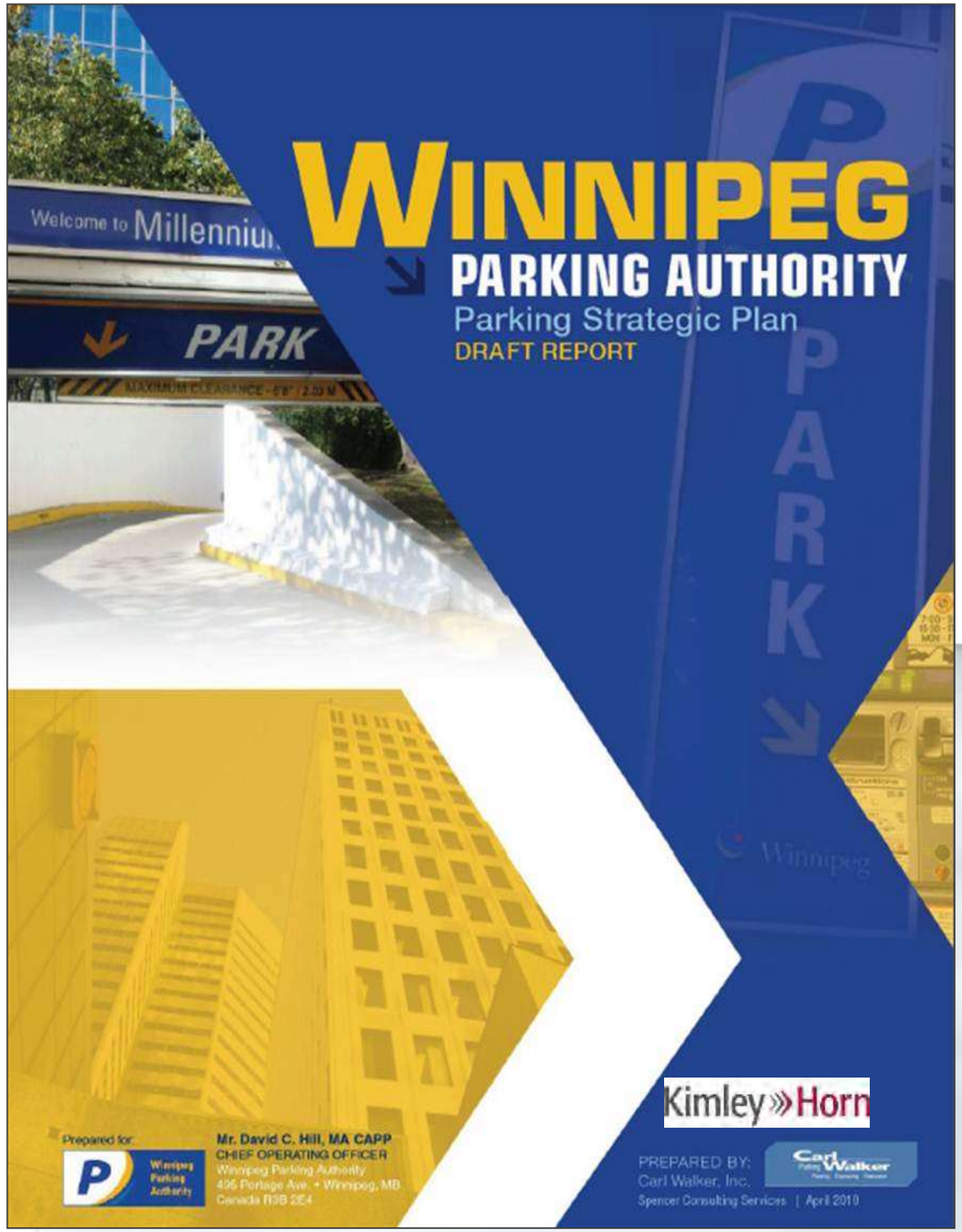
Parking Strategic Plans

A characteristic of “Best in Class” parking programs is that they have developed a *Parking Strategic Plan* to define the program’s vision, mission and work plan.

One key to success is the degree to which programs actually “work the plan”.

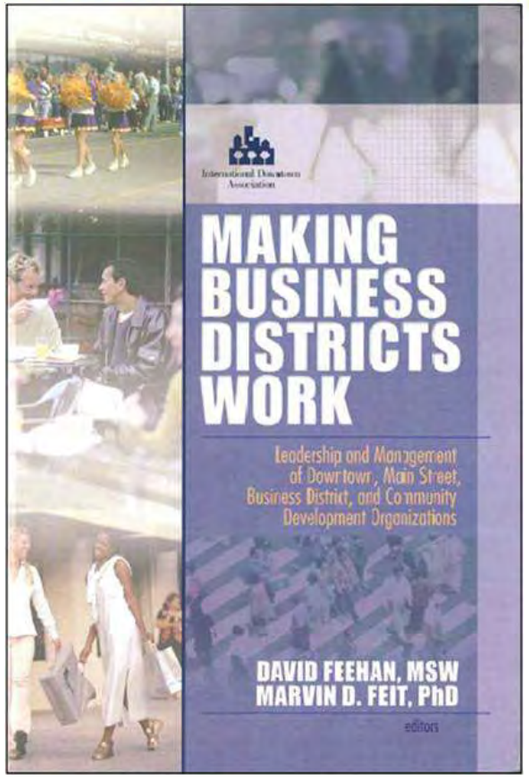
ex.

- » The strategic plan helps set program priorities
- » Builds consensus on program direction
- » Defines funding priorities
- » Informs staffing development
- » Connects the program of work with related community interests
- » Provides a roadmap for future program development



20 Characteristics of Effective Parking Programs

The parking chapter of the book *"Making Business Districts Work"* reviews what the author considers to be the "20 Characteristics of Best-in-Class Parking Programs". Taken as a whole these characteristics form the foundation for a comprehensive parking management program.



- Clear Vision and Mission
- Parking Philosophy & Guiding Principles
- Strong Planning
- Community Involvement
- Organization
- Staff Development
- Safety, Security and Risk Mgmt.
- Communications
- Consolidated Parking Programs
- Financial Planning
- Effective Parking Management
- Operational Efficiency
- Facilities Maintenance & Asset Protection
- Use of Technology
- Parking System Marketing
- Customer Service Programs
- Special Events Parking
- Effective Enforcement
- Parking & Trans. Demand Mgmt.
- Awareness of Competitive Environment

DMC TRANSPORTATION INFRASTRUCTURE PROGRAM MANAGEMENT

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Ch.
2

Program Organization

Vertical Integration

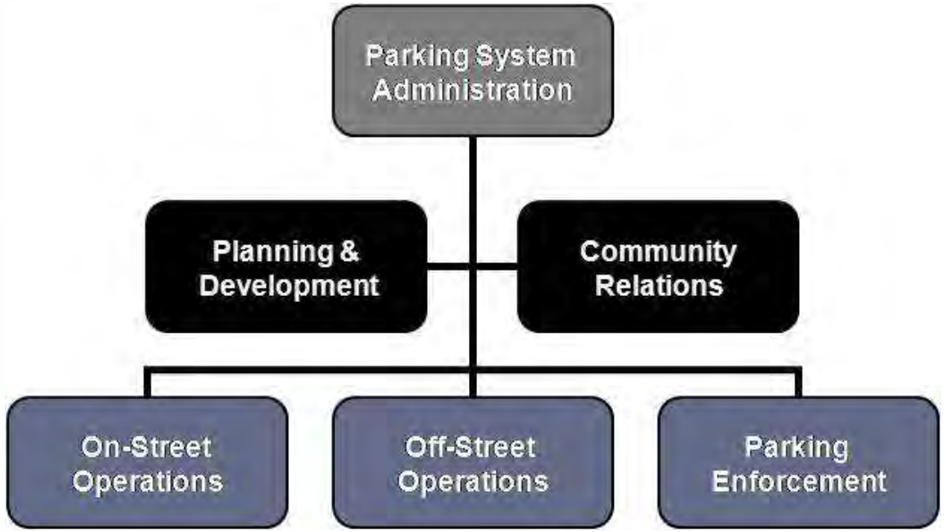
The single most important element of a parking program's organizational structure is the principle of "vertical integration".

- The most successful parking program organizational models include:
  - Parking Authorities
  - Vertically Integrated City Departments
  - Business Improvement Districts
  - Parking Management Districts
  - The Professional Services Model
- At a minimum the following three areas are essential for a vertically integrated parking program:
  - Off-Street Management
  - On-Street Management
  - Parking Enforcement

ex.

- Beyond the three primary functional areas (on-street, off-street and enforcement), the other recommended primary areas include: administration, planning/development and community relations.

  Other key areas might include: contract administration, finance/audit and special projects, depending on the program.

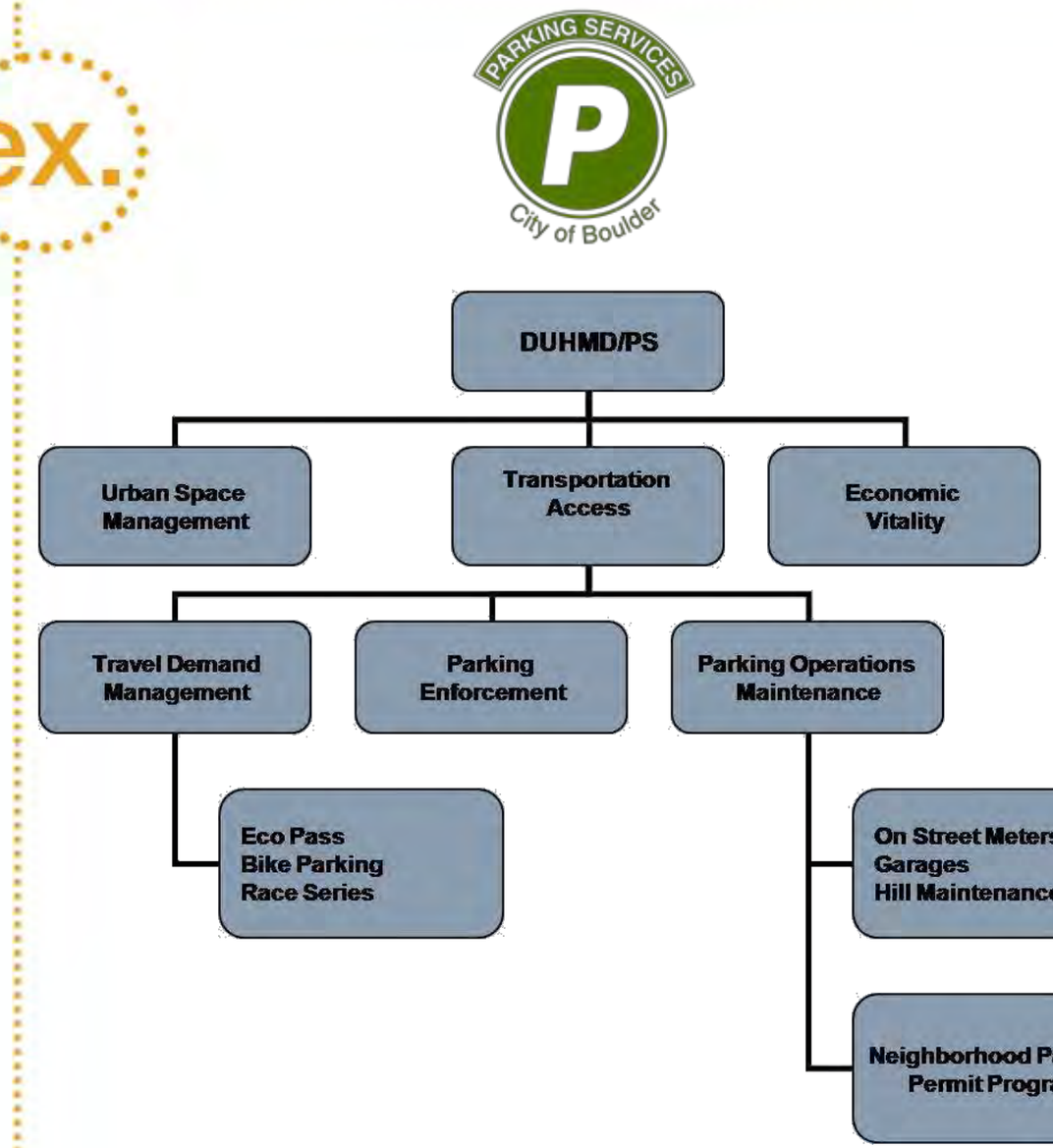


Non-Traditional Organizational Models

The City of Boulder has a unique combination of integrated municipal services within the Downtown and University Hill Management Division & Parking Services (DUHMD/PS).

» Beyond the basic parking program integration of off-street management, on-street management and parking enforcement, this program has a broader organizational mandate including urban space management, transportation and economic vitality.

ex.



"Dual Mission Philosophy"

Some of the most effective and progressive parking programs in operation today are those being managed by Business Improvement Districts, Downtown Development Authorities, Urban Renewal Agencies, etc.

» One of characteristics that helps make these organizations so successful is what we refer to as the "Dual Mission Philosophy".

» The primary goal of the agency is to create a revitalized downtown. Because of this, parking is managed as a tool to support this primary goal.

» The result is that different decisions are made relative to parking than those made in traditional city parking departments.

ex.

Examples of high quality parking programs that fit into this category include:

» The City of Boulder, Boulder, CO

» The Capital City Development Corporation – Boise, ID

» The Ann Arbor Downtown Development Authority – Ann Arbor, MI

» The Anchorage Community Development Authority – Anchorage, AK

» Downtown Tempe Community, Inc. – Tempe, AZ

» The Cedar Rapids Downtown District – Cedar Rapids, IA

» Charlotte CENTER CITY Partners, - Charlotte, NC

» Missoula Parking Commission – Missoula, MT

Organizational Development Pyramid

The organizational development pyramid succinctly defines the major organizational issues that any program should consider.

» **The primary questions to be answered include:**

- » Where are we going?
- » Why are we here?
- » What do we believe in?
- » What do we need to accomplish?
- » Who does what?
- » How do we get things done?
- » How do we work together as a team?

ex.

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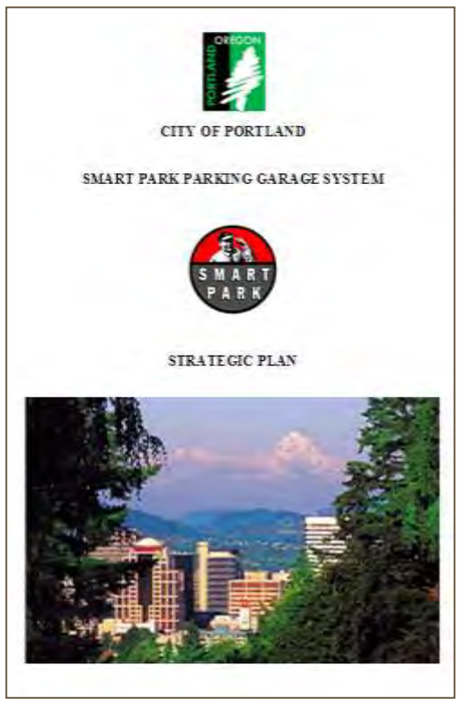
Ch.
3

Parking Planning

Alignment with Community Transportation and Strategic Plans

"Best in Class" programs typically have developed parking specific strategic or community access strategic plans that are aligned with larger community transportation planning initiatives.



ex.

» Strategic plan action items include:

- Exploration of alternative management methodologies to enhance customer service
- Evaluation of new parking technologies
- Forming of partnerships with community organizations
- Generating facilities development plans
- Evaluating the impact of related transportation resources
- Undertaking survey research to identify customers perceptions regarding parking availability and pricing

Guiding Principles

Development of a set of parking system "Guiding Principles" is a good tool for setting and communicating program goals and objectives to both staff and community stakeholders.

» "Guiding Principles" are not intended to replace policies and procedures, rather, they define the goals and objectives that ultimately define the character of the parking department.

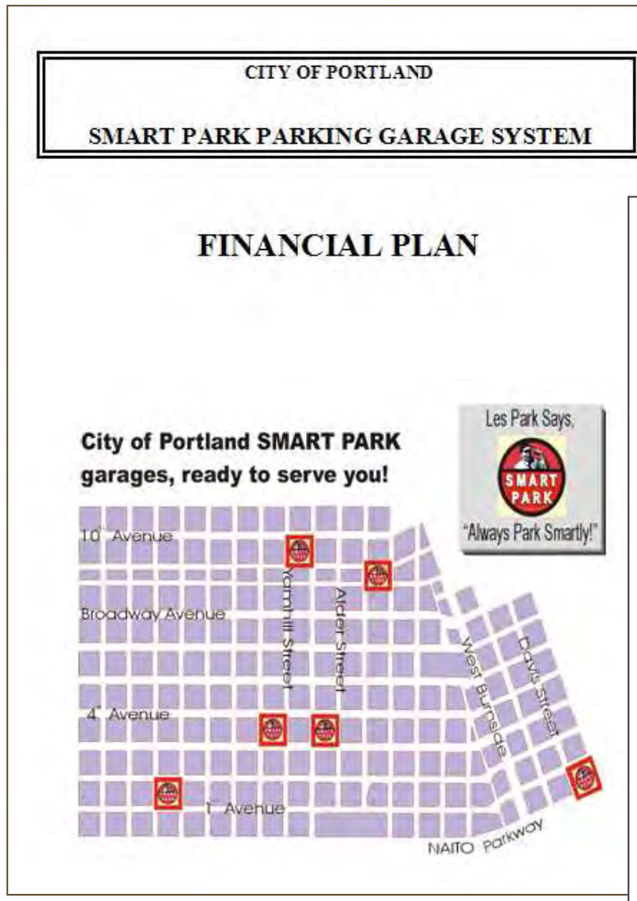
ex.

» Guiding Principles typically cover:

- Mission Statement / Statement of Purpose
- Operations/Funding Strategies
- Community Relationships
- Responsibility for Parking Operations
- Rate Setting Guidelines
- Options for Allocating/Procuring Parking
- Inclusion of Parking in Strategic and Master Planning Processes
- Procedures for Managing Losses of Parking Supply (both temporary and long-term)
- Definition and Communication of Parking Rules and Regulations
- Enforcing and Adjudicating Parking Rules and Regulations
- Defining Parking Facility Maintenance Responsibilities
- Special Event Parking
- Budgeting and Planning Cycles

Financial Plans

"Best in Class" programs typically have developed parking specific financial plans.


CITY OF PORTLAND

SMART PARK PARKING GARAGE SYSTEM

FINANCIAL PLAN

City of Portland SMART PARK garages, ready to serve you!

Les Park Says,

SMART PARK

"Always Park Smartly!"

10th Avenue

Broadway Avenue

4th Avenue

1st Avenue

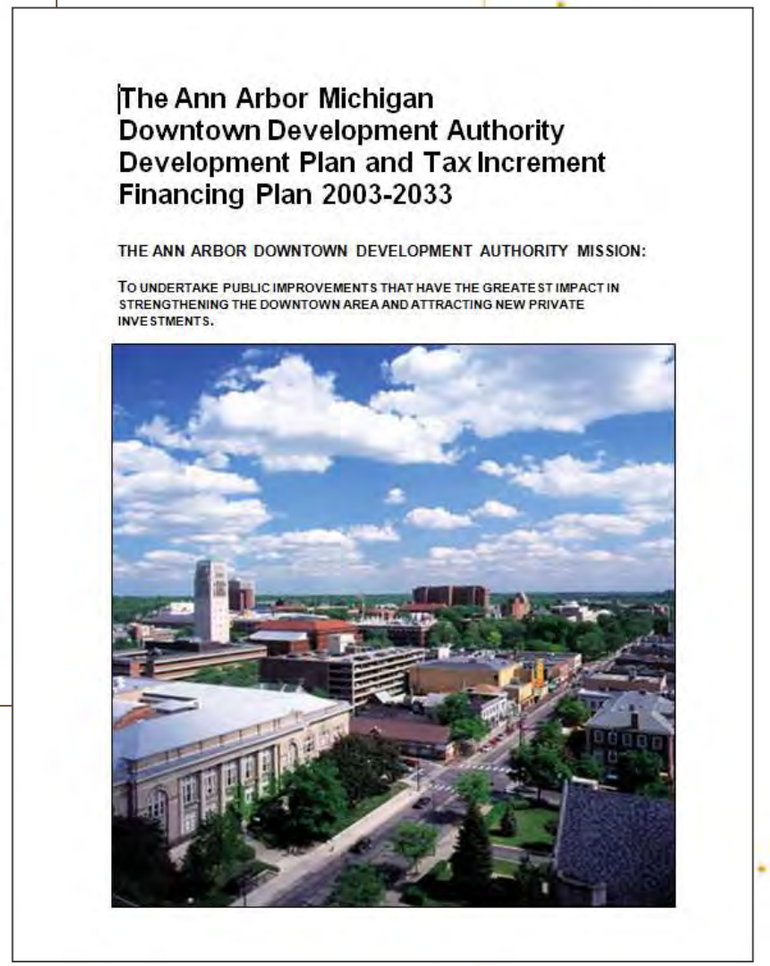
Kamhill Street

Alder Street

West Burnside

Davis Street

NAITO Parkway


The Ann Arbor Michigan
Downtown Development Authority
Development Plan and Tax Increment
Financing Plan 2003-2033

THE ANN ARBOR DOWNTOWN DEVELOPMENT AUTHORITY MISSION:

TO UNDERTAKE PUBLIC IMPROVEMENTS THAT HAVE THE GREATEST IMPACT IN STRENGTHENING THE DOWNTOWN AREA AND ATTRACTING NEW PRIVATE INVESTMENTS.

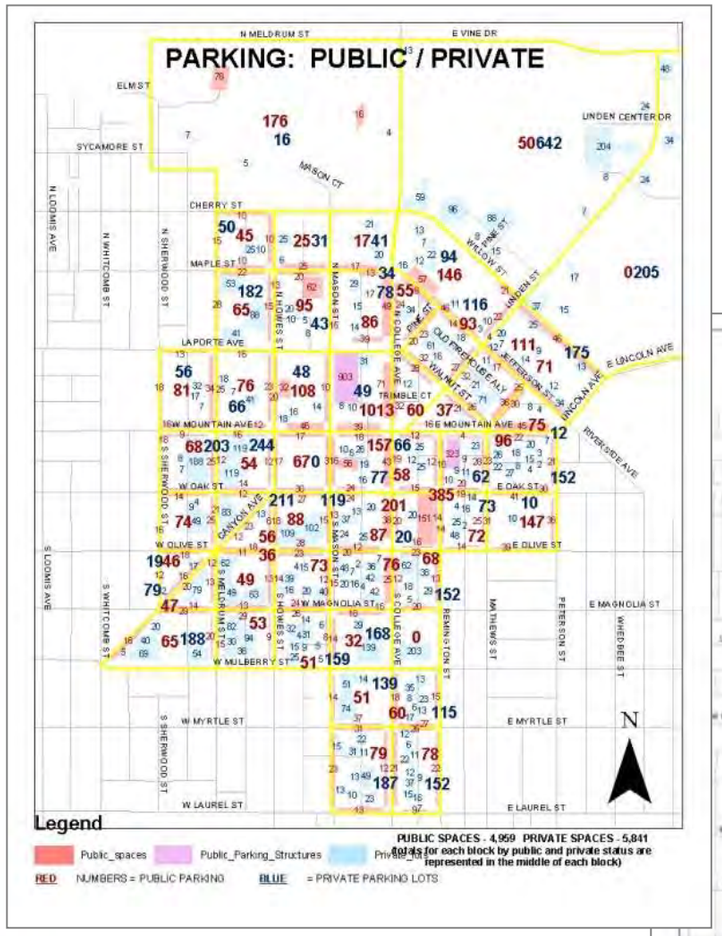
ex.

» Sample Financial Plan Table of Contents

- Introduction
- Background
- Planning and Policy Framework
- Operational Objectives
- Fund Balance and Reserve Policy
- Policies Regarding Uses of Parking Revenues
- Debt Policy
- Rates Policies
- Annual Updates

Parking Inventories

A basic element of effective parking program management is maintaining an up-to-date parking inventory.



ex.

- Parking inventories should be kept up to date on an on-going basis.
- Supply additions and losses should be tracked along with the dates spaces come into or out of service.
- It is extremely useful to also track land-uses and square footages.
- Parking supply should be subdivided by type of spaces.
  - On-Street vs. Off-Street
  - Public vs. Private
  - Surface lot vs. Structured

Supply/Demand Analysis

Periodic assessments of parking supply/demand are critical to effective parking system planning.

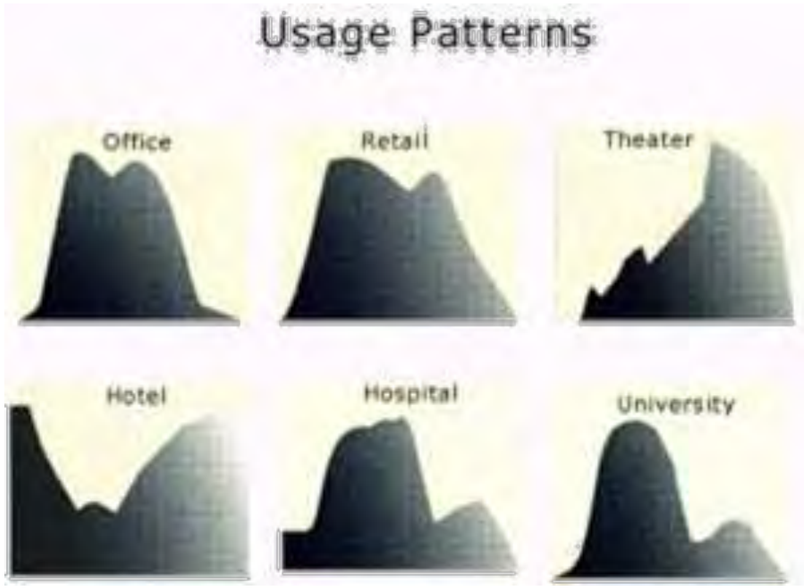
- » Documenting current parking adequacy, typically on a zoned basis, is the first task in this process.
- » This is followed by analyzing potential changes in parking supply conditions and future development projects.
- » Projections of future parking demand and adequacy are typically developed based on proposed land-use changes or by analyzing specific development initiatives.

ex.

Shared Parking Model

Shared parking can have a significant impact on mixed-use development parking requirements. Combining certain land uses results in a demand for parking spaces that is less than the demand generated by separate, freestanding developments of similar size and character.

Having a community adopted shared parking model as part of the local parking requirements is a recommended best practice.



ex.

- Shared parking is defined as parking space that can be used to serve two or more individual land uses, without conflict or encroachment
- The opportunity to implement shared parking is the result of two conditions:
  - Variations in the peak accumulation of parked vehicles as a result of different activity patterns of adjacent or nearby land uses (by hour, by day, by season).
  - Relationships among land use activities that result in people's attraction to two or more land uses on a single auto trip to a given area or development.

On-Street Occupancy

Documenting on-street parking occupancy is another effective tool to help you better understand and manage your parking resources.

- » Routinely tracking on-street parking occupancy and documenting the results graphically provides valuable management data.
- » Often there is adequate parking supply despite a wide-spread perception that the parking supply is inadequate.
- » Documenting the true occupancy rates are the first step to effectively resolving parking problems (real or perceived).

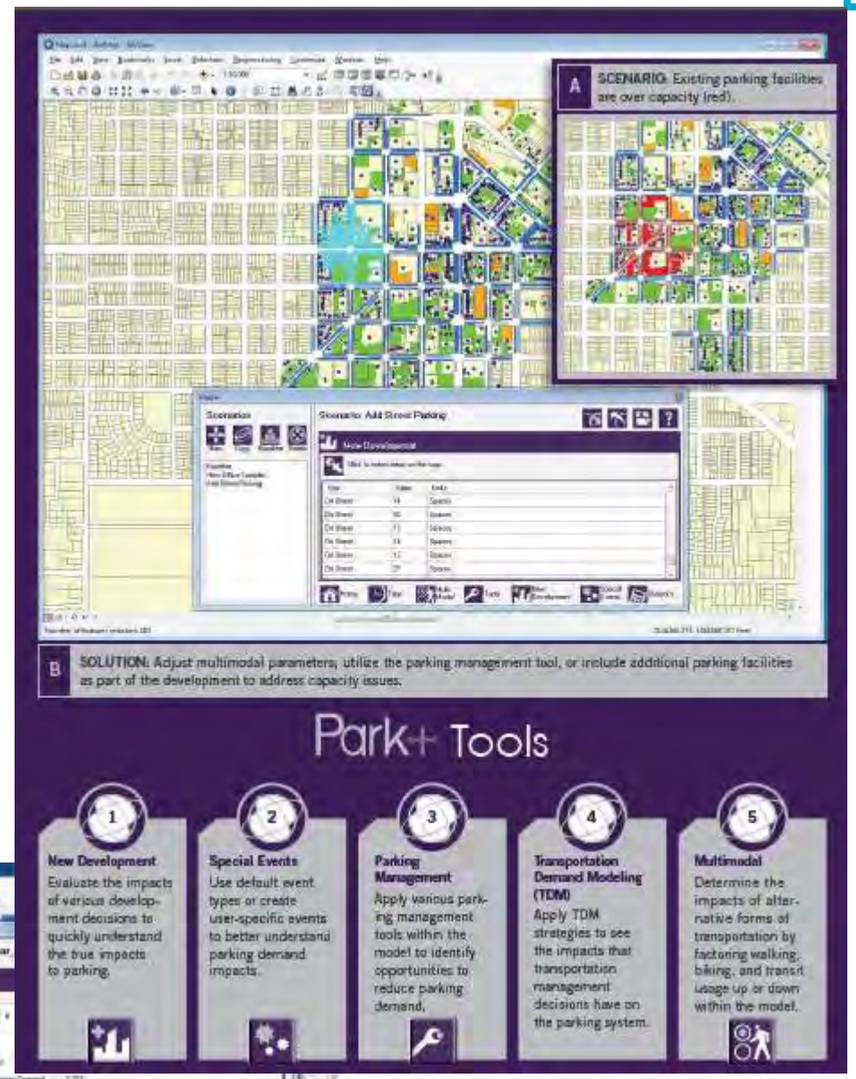
ex.

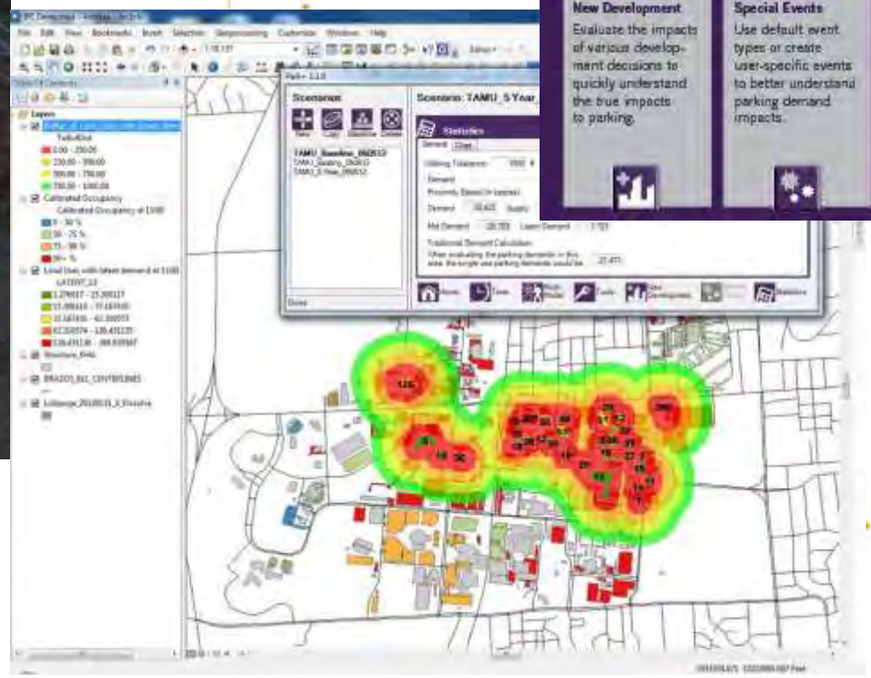
Parking Demand Model

Kimley-Horn has developed a model to help our clients keep parking inventory, utilization, land-use and parking adequacy data up to date.

» This dynamic toll is linked to Arc/GIS systems to provide an even more effective tool for local governments and institutions.

ex.





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Zoning and Parking Requirements

Zoning is the means by which cities and other local governmental agencies ensure that development projects meet the community's standards. It has been termed "a preventative" approach for achieving planned and orderly development."

Summary Table of Uses and Space Requirements

Use	Parking Spaces Required
Single Family Dwelling Unit	2/ Dwelling Unit
Multi-Family Dwelling Unit	
Rental	1.65/ Dwelling Unit
Owned	1.85/ Dwelling Unit
Accessory Dwelling Unit	1/ Dwelling Unit
Sleeping Rooms	1/ Unit or Room plus 2 for owners/managers
Commercial Lodgings	1.25/ Sleeping Room or unit plus 10/1,000 sq ft GLA restaurant lounge plus 30/per 1000 sq ft GLA meeting rooms/banquet plus or, where more than 50 sq ft of meeting banquet per guest room, 20/1,000 sq ft GLA
Elderly Housing	0.5/ Dwelling Unit
Group, Convalescent and Nursing Home	0.33/ Resident
Day Care Center	1 space per employee plus 1.2 spaces per person licensed capacity enrollment, plus drop-off spaces equal to one for each eight enrollees permitted
Hospital/Medical Center	0.4/ Employee plus 1 space/ 3 beds plus 1 space/ 5 average daily outpatient treatments plus 1 space for each 4 members of medical staff. (Medical centers and teaching hospitals add 1 space for each student, full-time faculty/staff)
Retail Service	
General Retail	3.3/1,000 sq ft of GFA
Convenience Retail	4.3/1,000 sq ft of GFA
Service Retail	4/1,000 sq ft of GFA
Hard Goods Retail	2.5/1,000 sq ft GFA interior sales space plus 1.5/1,000 sq ft of interior storage and exterior display/ storage areas
Shopping Center	4/ 1,000 sq ft GLA for centers with up to 400,000 sq ft GLA; scaled for centers with 400,000 to 600,000 sq ft; 4.5/1,000 sq ft of GLA if over 600,000
Personal Care Services	2/ Treatment station but not less than 4/1,000 sq ft of GFA
Coin Operated Laundries	1 space/ 2 washer and dryer machines
Other Retail/Service Uses	As determined by the Zoning Administrator
Temporary Retail	3.3/1,000 sq ft of GFA
Motor Vehicle Sales and Services	2.5/1,000 sq ft of GFA interior sales space plus 1.5/1,000 sq ft of external display (does not include stock areas closed to the public) plus 3/ service bay
Motor Vehicle Laundries	1 space per each 2 peak shift employees plus queue space for vehicle count equal to one and one-half times the maximum hourly capacity of the facility
Food and Beverage	
Fine Dining and Eating and Drinking	20/1,000 sq ft GLA
Family Restaurant	15/1,000 sq ft GLA
Fast Food	15/1,000 sq ft GLA
Office and Business Services	
General Business Offices	3.8/1,000 sq ft of GFA for GFA up to 25,000 sq ft; scaled for GFA 25,000 to 100,000 sq ft; 3.4 for GFA of 100,000 sq ft; scaled for GFA between 100,000 and 500,000 sq ft; 2.8/1,000 sq ft GFA for GFA over 500,000 sq ft
Consumer Service Offices	4.5/1,000 sq ft of GFA for GFA up to 25,000 sq ft; 4.0/1,000 sq ft GLA for GFA over 25,000 sq ft
Data Processing/ Telemarketing/Operations Offices	7/1,000 sq ft of GFA for GFA up to 25,000 sq ft; 6/1,000 sq ft GFA for GFA over 25,000 sq ft
Medical Offices (not part of hospital campus)	4.5/1,000 sq ft GLA
Medical Offices (on hospital	4/1,000 sq ft GLA

ex.

- With respect to parking, zoning standards typically lay out formulas for determining how many parking spaces must be provided for specific types of land uses.
- Design standards are often included. The layout of parking, particularly the size of parking spaces and aisles, is frequently covered.
- There will always be variations in demand within a community, so that a single rigid formula may not adequately cover all situations for each land use category.
- Reviewing zoning requirements on a regular basis is recommended.
- New concepts such as "Form-Based Codes" are rapidly gaining in acceptance.

Flexible Parking Standards

More accurate and flexible standards means that the parking requirements at a particular location are adjusted to account for various factors. This approach reduces to potential for overbuilding parking supply thus contributing to a more sustainable overall parking and transportation program.

ex.

Examples of Adjustment Factors:

- Geographic Location
- Residential Density
- Employment Density
- Land-use Mix
- Transit Accessibility
- Car-Sharing
- Walkability

Form Based Codes

A form-based code is one that is based primarily on “form” - urban form, including the relationship of buildings to each other, to streets and to open space. This contrasted to codes that are based primarily on land use.

» A Form-Based Code is a development code that provides the developer / applicant greater flexibility in permitted land uses in exchange for more stringent regulations controlling urban form.

» These types of codes support mixed-use, pedestrian-friendly and mixed housing development more effectively than conventional codes.

» Form-Based Codes are becoming increasingly attractive to municipalities that want greater control over how buildings look and feel.

ex.

A BRIEF COMPARISON OF CONVENTIONAL CODES AND FORM-BASED CODES

URBAN FORM GENERATING CHARACTERISTICS

CONVENTIONAL CODES	FORM-BASED CODES
• Include extensive lists of permitted, prohibited and conditional uses by zone. Many land uses in conventional codes lists are outdated and do not reflect the nature of contemporary employment models or dwelling types • Often disallow a mix of uses • Prohibit adaptability of buildings to other uses over time • On zoning maps, land use designations typically begin and end at the center of the street or Right of Way	• Consider the building “walls” that frame the Right of Way (often referred to as the “public realm”) as one of the primary determinants of form • Regulating plan zone designations typically transition at the back of the lot • The same or similar development standards typically apply to both sides of the street • Land uses allow a much broader range of uses within a zone or subarea; also allow a greater mix of uses • Many uses are allowed if they meet performance standards

Parking Requirements for Transit Oriented Developments

The rise in popularity and success of "Transit Oriented Developments" or TODs is creating a need to reassess and redefine zoning and parking requirements for these districts.

» Specific development plans for TODs and "Transit Station Areas" has led to the development of specific station area typologies to support transit friendly development.

Planning for Transit-Friendly Development at the 43rd Street El Station

ex.

Client:
Jones Lang LaSalle and Chicago Transit Authority

Location:
Chicago, IL

Services:
Transportation and urban planning, and public involvement

Chicago Transit Authority Station Area Typology Study

Kimley-Horn led the urban planning element of the initiative by the Chicago Transit Authority (CTA) to create a typology or hierarchy for station areas around each of the 144 CTA stations. The objective is to establish a set of guidelines by which planning and design of transit friendly design (TFD) projects can occur in these station areas and to identify incentives to future development projects through zoning, funding, and public private partnerships.

Kimley-Horn gathered data related to station area characteristics and led workshop meetings of the advisory committee to reach a consensus as to the definition and application of each of seven typologies.

Seven Typologies
- (DC) Downtown core
- (MC) Major activity center
- (LC) Local activity center
- (DN) Dense urban neighborhood
- (UN) Urban neighborhood
- (SD) Service Employment District
- (MD) Manufacturing Employment District

Various one-on-one meetings with elected officials and more formal stakeholders' meetings and open house formats also were conducted. Conceptual design guidelines and recommendations have been developed and a final report was prepared in "magazine" workbook format. The final document entitled *Transit Friendly Development Guide, Station Typology* will be used by the city, CTA, elected officials, and developers to encourage appropriate development around stations.

Kimley-Horn and Associates, Inc.

Kimley»Horn

SRF

Program Criteria Documents

Program Criteria Documents are a tool to help ensure that institutional goals, objectives and standards are incorporated during the early phases of project planning and development.

ex.

» Program Criteria Document benefits:

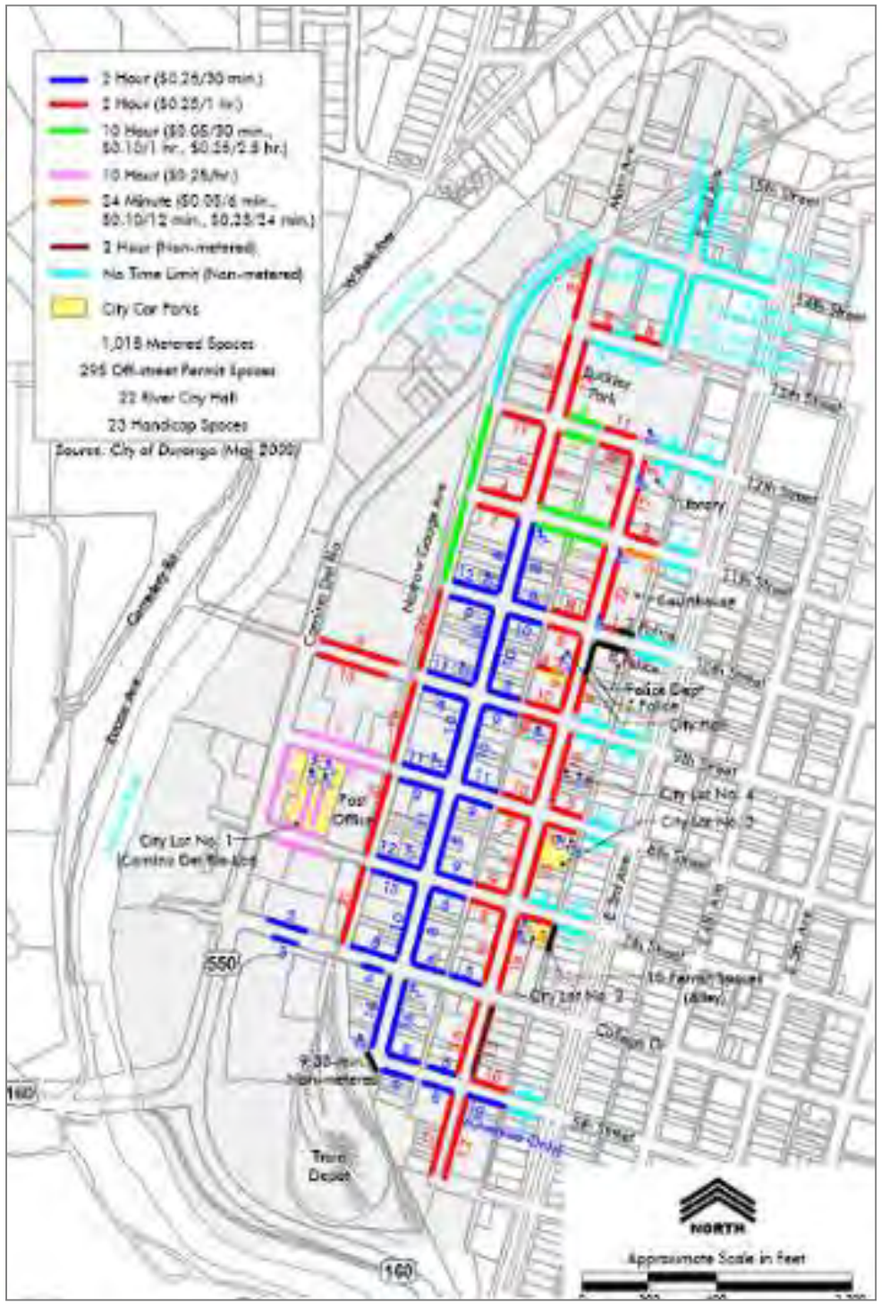
- Development of a more comprehensive understanding of the project impacts and scope.
- Build or strengthen project momentum and acceptance.
- Promote parking-specific areas of concern that are often overlooked without direct and early involvement by parking professionals, such as:
  - designing for operational flexibility
  - planning for alternative payment technologies
  - designing to maximize passive security, user comfort, etc.

Time-Limit Maps

On-street parking time-limits should be mapped and changes tracked over time.

- Mapping on-street time-limits is an important tool for staff education, and communicating with the public.
- It is a fundamental tool for documenting resource usage, facilitates the analysis of trends and is an effective planning tool.
- Tracking changes over time creates a record of management strategies that have been used in the past.

ex.



Mapping Parking Permit Zones

Mapping parking permit zones provides an important tool to effectively communicate the permit zone rules and regulations as well as locations.

- This practical tool helps you better educate City Council members other planning officials and citizens at large.
- It also provides a means of documenting changes to permit zones over time.
- It is also an important tool for training new parking enforcement officers.

ex.

Parking Rate Assessment Strategies

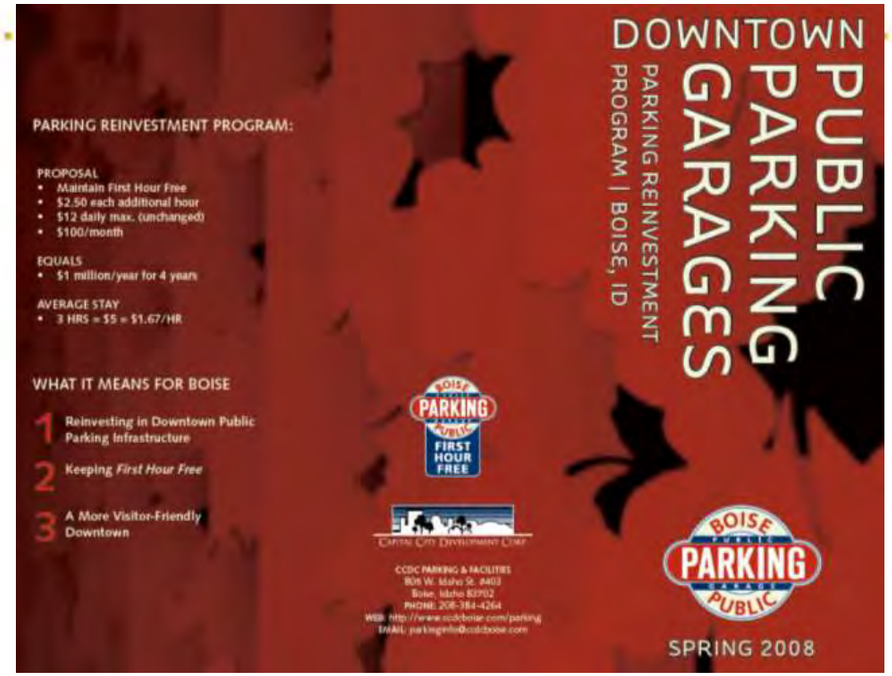
Assessing parking rates is something every parking program must do from time to time. A successful parking rate assessment strategy has two key elements:

- Defining the type and impact of rate increase options &
- Defining a program for how new revenues will be invested.

» Our recommended process includes the development of a parking rate modeling tool that can be used to project parking revenues by any incremental increase in transient, monthly and special event rates.

» The process also includes the development of "parking investment plan" which is essentially the program's work plan for the defined planning horizon.

ex.



Retail Supportive Parking Strategies

Revitalizing retail in a downtown setting is one of the most difficult elements of downtown revitalization to get right. Convenient, plentiful and easily accessible parking is especially critical to the success of retail in a downtown area.

» What is often overlooked or underestimated in retail revitalization projects is a comprehensive "retail parking strategy".

» In many cases this will involve significant investment in new parking infrastructure or at least a restructuring or reallocation of existing parking resources.

» Once the parking supply issues have been addressed, a wide range of parking management strategies should also be considered.

ex.

We recommend a three pronged approach to developing a retail parking strategy:

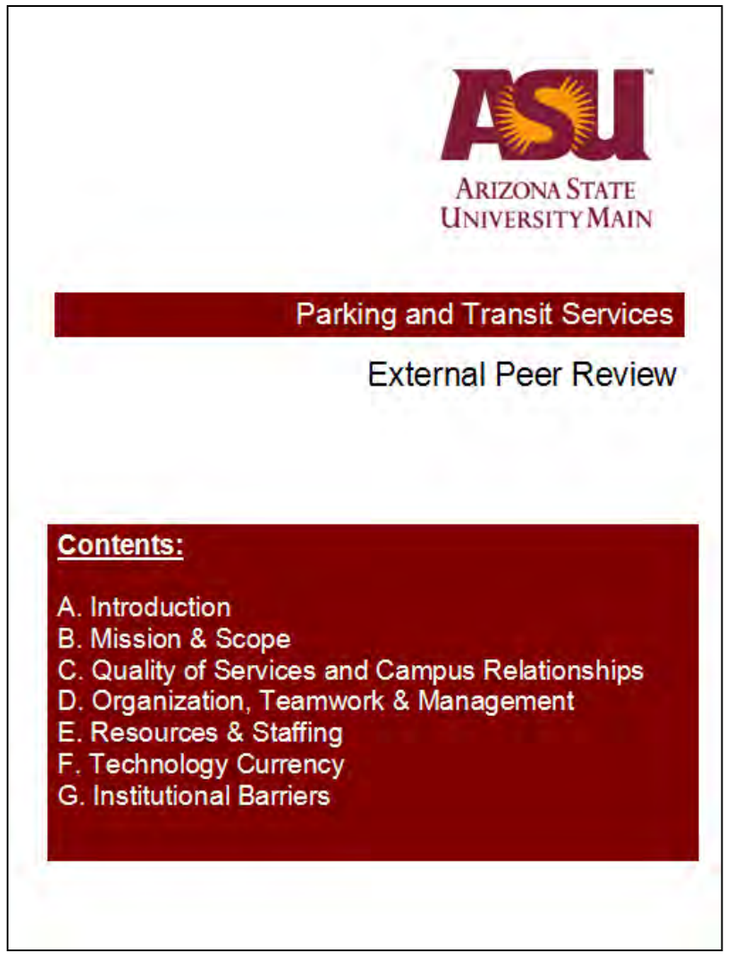
» **On-street Parking** – As the most conveniently located parking assets (and therefore the most valuable), effective management of on-street parking to promote turnover is critical.

» **Off-street Parking** – In a downtown environment the primary issues related to retail parking are to provide large, easy-to-find reservoirs of parking within close proximity to the retail cores or corridors.

» **Overall Parking Management** - From a management and operations perspective, there are many effective strategies that downtown parking programs can employ to better support retail and the larger community's strategic goals.

Operational Peer Reviews

This is a low cost initiative that can be set up through local, regional or national parking associations.



ex.

- The scope of peer reviews vary, but are generally focused on operational elements and might include maintenance practices, staffing and staff training, the use of technology, customer services practices, etc.
- Peer reviews are often reciprocated.
- The ASU External Peer Review brought in four other university parking system administrators from across the country and generated a very professional and objective system assessment.

Ch. 4

Integrated Access Management Strategies

What is “Integrated Access Management”?

“Integrated Access Management” is a term that refers to a more holistic approach to community or institutional planning relative to parking and transportation.

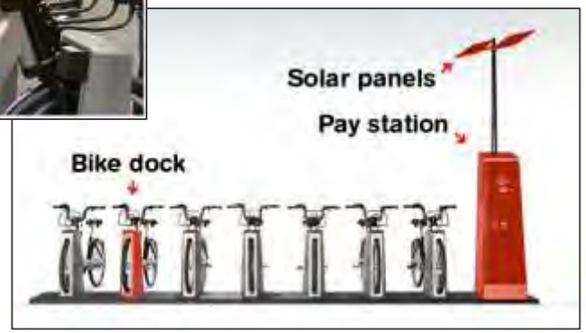
- Within the parking arena, this concept strives to promote a broader view of program scope and participation.
- It fights the tendency to place parking in a “silo”, divorced from the larger transportation equation.
- The primary intent of this approach is to get communities to focus on “access” incorporating the full range of parking, transportation and demand management strategies to improve not only access, but to also enhance and promote walkable urban environments.

ex.

Community Bike Rental Programs

Located at key locations in the central business district, the bikes provide a new way of discovering and moving around the city.

- The bike stations are modular and the bikes are ergonomic and light-weight in a distinct design.
- Bikes are parked at docking points which use a proprietary locking system to ensure that each bike is securely stored.



ex.

» http://www.smartbikedc.com/


Operations


Bike Stations


Docking Points


The Bikes

Bike Parking & Lockers

One more way for parking programs to support Transportation Demand Management (TDM) is through the provision of bike lockers in and around parking facilities. This is also a means of securing LEED credits in support of parking program sustainability goals.

- Bicycles chained haphazardly to railings, posts or lamp columns can be dangerous and inconvenient to pedestrians, particularly visually impaired people.
- Proper bicycle parking can reduce this risk, as well as removing unsightly clutter.

ex.

Vintage Bike Racks

Portable Bike Racks

Wall Mounted Racks

Bike Racks on Busses – Practice Makes Perfect

For those advanced parking systems that are part of the larger transportation solution, providing access to transportation options through the parking office is not uncommon.

» However, the University of Washington provides a “practice station” for those wishing to learn how to put their bike in the “on-bus bike racks”.

ex.

» This little extra effort is one of the many things that sets the UW program apart.

Be an Engaged Partner in Other Community Transportation Initiatives

As part of the commitment to a broader approach to community access strategies, the parking program should become an interested and engaged partner in other community transportation initiatives.

» Getting involved in the Dallas Bike Plan is a good example of this type of recommended strategy.

ex.


Newsletter November/December 2010

2011 DALLAS BIKE PLAN

2011 DALLAS BIKE PLAN Newsletter November/December 2010

INTEREST IN BIKE PLAN STILL STRONG AT SECOND PUBLIC MEETING

SURVEY PROVIDES OPPORTUNITY FOR CITY-WIDE INPUT

FIELD WORK


DRAFT BIKEWAY SYSTEM FACILITY RECOMMENDATIONS

STAY INFORMED ON THE BIKE PLAN WEBSITE

NEXT PUBLIC MEETING - THURSDAY, JANUARY 20, 2011

2011 DALLAS BIKE PLAN

Bike Parking As Public Art!

Bike racks have become a favorite medium for creating practical and engaging community public art.

ex.

Integrate Intermodal Options

Installing bike lockers is just one example of incorporating multi-modal options into parking structures and contributing to a more balanced parking and transportation program.

- Other more aggressive strategies include integrating bus or shuttle transfer stations into parking garages.
- Creation of express park and ride lots, etc.

ex.

Transit Visualization System

TransLōc
Transit Visualization Systems

See What We've Done

- Auburn University *Tiger Transit*
- Emory University *Emory Shuttles*
- Harvard University *Harvard Shuttle*
- MASCO - Boston, MA *LMA Shuttle*
- Microsoft Silicon Valley *Shuttle Connect*
- NC State University *The Wolfline*
- Princeton University *TigerTransit* (new)
- University of Alabama *CrimsonRide*
- University of Florida *Regional Transit System*
- University of Maryland, BC *UMBC Transit*
- Yale University *Yale Transit*

The TransLoc Transit Visualization System shows buses moving in real-time live on the internet, making it easier for riders to use transit.

ex.

- » North Carolina State University in Raleigh, NC was the first transit system in NC to broadcast its bus locations live over the internet.
- » Since then, many other transit systems have added the TransLoc Transit Visualization System.
- » You can view the live, interactive system at: http://live.transloc.com

Ch. 5

Effective Communications & Community Engagement

Strategic Communications

A Strategic Communications Plan has the power to transform an organization:

- Both in terms of your credibility and status in your community
- And in terms of the way you work together as a team to achieve your mission and vision

The Communications Plan Pyramid

- ✧ Assess your communications infrastructure
- ✧ Establish your goals
- ✧ Who is your target?
- ✧ Who is your audience?
- ✧ How to frame your issues?
- ✧ What is your message?

ex.

Parking Information Clearinghouse

An important role your organization can play is to become THE parking information clearinghouse for your community.

- » If you become the “go to source” for all parking info, you will not be providing a needed service, but you will enhance your program’s value and reputation in the community.
- » (You may actually learn as much as you inform!)
- » Developing a web-based program is one effective way of serving multiple goals in this type of endeavor.

ex.

Keep In Touch... Parking E-Newsletters

Even if you don't have your own parking "E-Newsletter (and why not?), see if you can tag a message onto other appropriate E-venues.

ex.

DOWNTOWN UPDATE
Hit the Bricks!

Downtown Boulder Business Improvement District — August 5, 2005

What's Cooking on the East End

Join us at our monthly Downtown Community Exchange and check out Coburn Development's newest projects.

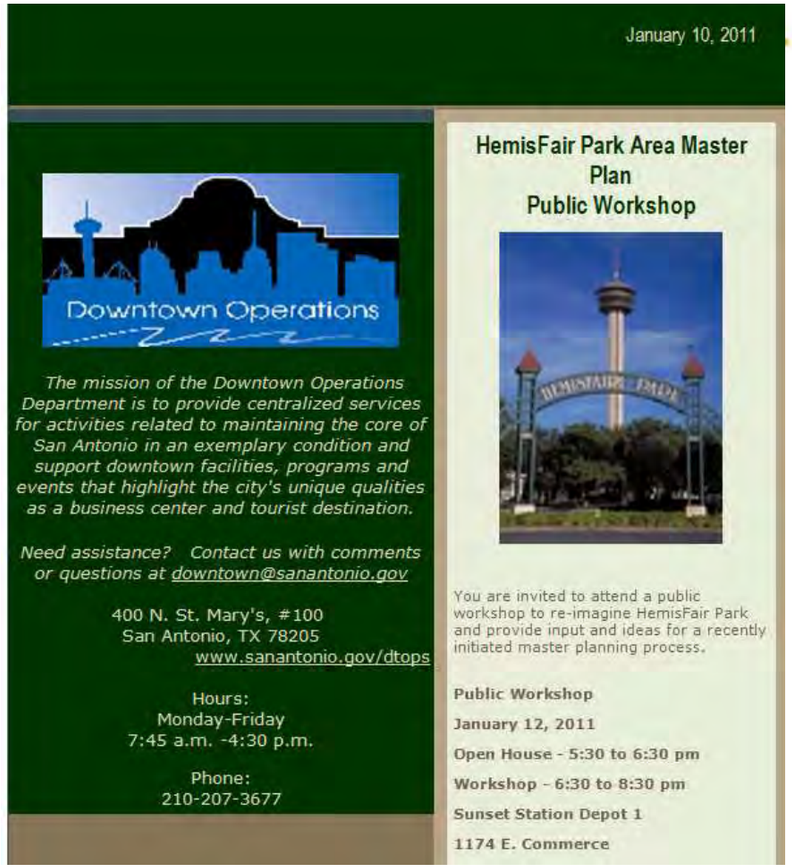
When: Thursday, August 11, 2005; 5:30-7pm
Cost: FREE
Where Coburn Development--1811 Pearl Street (upstairs)
What Else: Great door prizes, updates on Downtown Boulder
RSVP: to Downtown Boulder info@dbi.org --303-449-3774 by August 9th--to ensure plenty of refreshments.

Don't Miss These Events in Downtown Boulder!

August 5th-7th--Sidewalk Sales in Downtown Boulder. Take advantage of fabulous savings.

August 10th--Farmer's Market--4-8pm on 13th Street between Arapahoe and Canyon

August 13th & 14th--Asian Festival



January 10, 2011

Downtown Operations

The mission of the Downtown Operations Department is to provide centralized services for activities related to maintaining the core of San Antonio in an exemplary condition and support downtown facilities, programs and events that highlight the city's unique qualities as a business center and tourist destination.

Need assistance? Contact us with comments or questions at downtown@sanantonio.gov

400 N. St. Mary's, #100
San Antonio, TX 78205
www.sanantonio.gov/dtops

Hours:
Monday-Friday
7:45 a.m. -4:30 p.m.

Phone:
210-207-3677

HemisFair Park Area Master Plan Public Workshop

You are invited to attend a public workshop to re-imagine HemisFair Park and provide input and ideas for a recently initiated master planning process.

Public Workshop
January 12, 2011
Open House - 5:30 to 6:30 pm
Workshop - 6:30 to 8:30 pm
Sunset Station Depot 1
1174 E. Commerce

- » Promote parking validations.
- » Links to parking info/websites.
- » Promote merchants that participate in validation programs.
- » Promote parking availability.
- » Promote alternative transportation options.

Parking Meets Social Media

Get the word out! Stay in Touch!

- Develop your own communities of users
- Advertise directly
- Celebrate accomplishments
- Highlight staff
- Offer Facebook only coupons
- Get program feedback
- Solicit testimonials
- Provide event notifications
- Broadcast construction updates

Follow us on: twitter

Find us on Facebook

ex.

Parking Meets Mobile Apps

Connecting with a world on the move!

- Availability
- Rates
- Services
- Proximity to key destinations

ex.

Mobile Parking Apps

Mobile Parking Apps will help you find the cheapest parking rates anywhere in Chicago, San Francisco, San Diego, Seattle, LA, and New York. More cities are coming soon... Avoid overpaying for parking by comparing rates from neighborhood garages. Ability to search by an address.

Features:

* Search over 300+ Parking Garages to find the best rates (by hour, daily, weekend, monthly)

* Map showing all Meters, Zones, Rates, and Paybox locations

* List showing all the Early Bird Specials in the city

* Search for local parking spots for rent and sale

*Save yourself a parking ticket with the built in parking timer.

*Remember where you parked with turn by turn directions back to your car. Ability to leave voice memo

* Real-Time updates, Reservations, public transportation schedule

Developing Smart Parking & Development Educational Tools

Being a leader in the development of planning and development toolkits can improve the image and reputation of your organization (as well as advancing your planning goals)!

ex.

Kimley»Horn

SRF Consulting Group, Inc.

Enter the Blogosphere!

- Do you really want to know what people think? (Are you sure???)
- Have a couple hundred opinions you'd like to share?
- Want to get YOUR version of things expressed?

Then Blogging may be just your thing!

» To start your own blog visit:

http://parkingpress.com/

» Other parking blogs:

Parking Blogs

Grush Hour

MoBlog

Parking By Design

ParkingCarma

ParkWhiz Blog

PT's Parking Blog

Airport Parking Connection

ex.

Customer Alerts - Parking E-Notifications

The evolution of technology, especially in the area of mobile devices is transforming our customer service options.

Now we can send out customer notifications in real-time through a variety of channels.

ex.

- » Reduces parking patron frustration
- » Improves the image of the downtown or institution
- » Can be very useful in snow closings, or to alert a campus community of on-going construction activities.

"Fast Facts" – Program Summary

What is your program really all about? How do inform your stakeholders of your mission, key program goals, funding sources, key staff, staff roles, organizational structure, policy positions, budget highlights, accomplishments, etc.

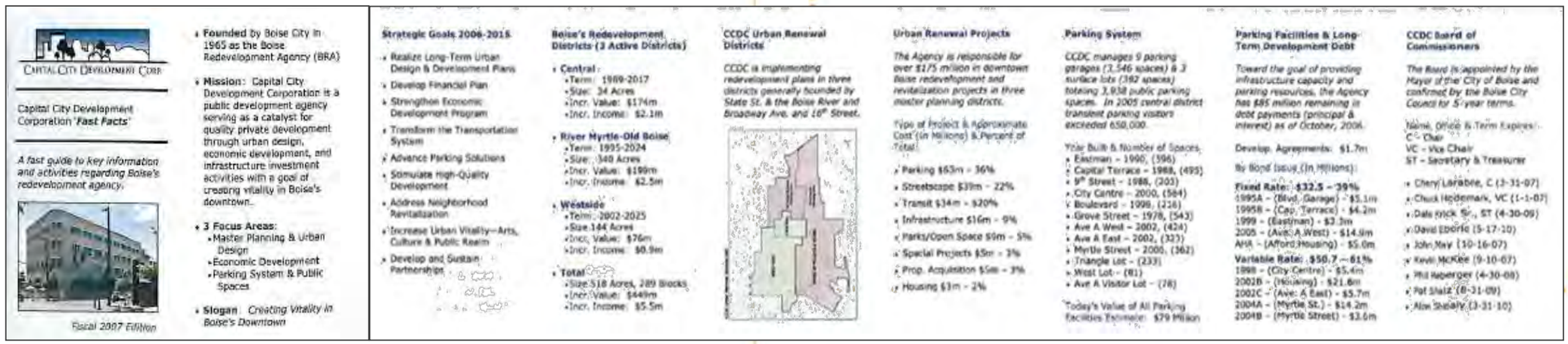
The "Fast Facts" mini brochure covers all these topics and more in a succinct and meaningful way.

ex.

» Using a creative 3.5" x 17" double-sided layout, this info packed mini-brochure is filled with valuable information and manages to capture the scope, mission and accomplishments of the organization in a positive way.

Specific section headers include:

- Cover – Fiscal 2007 Edition
- Founded/Mission/# Focus Areas/Slogan
- Strategic Goals
- Redevelopment Districts – Central/River Myrtle/Westside/Total
- Urban Renewal Districts
- Whose Job Is It?
- Budget
- Top 10 Cost Issues FY07
- Top 10 Policy Positions
- FY 07 Budget highlights
- Selected Boise Rankings



Capital City Development Corp

Capital City Development Corporation "Fast Facts"

A fast guide to key information and activities regarding Boise's redevelopment agency.

Fiscal 2007 Edition

- **Founded** by Boise City in 1965 as the Boise Redevelopment Agency (BRA)
- **Mission:** Capital City Development Corporation is a public development agency serving as a catalyst for quality private development through urban design, economic development, and infrastructure investment activities with a goal of creating vitality in Boise's downtown.
- **3 Focus Areas:**
  - Master Planning & Urban Design
  - Economic Development
  - Parking System & Public Spaces
- **Slogan:** *Creating Vitality in Boise's Downtown*

Strategic Goals 2006-2015

- Realize Long-Term Urban Design & Development Plans
- Develop Financial Plan
- Strengthen Economic Development Program
- Transform the Transportation System
- Advance Parking Solutions
- Stimulate High-Quality Development
- Address Neighborhood Revitalization
- Increase Urban Vitality—Arts, Culture & Public Realm
- Develop and Sustain Partnerships

Boise's Redevelopment Districts (3 Active Districts)

- **Central**
  - Term: 1969-2017
  - Size: 34 Acres
  - Incr. Value: $174m
  - Incr. Income: $2.1m
- **River Myrtle-Old Boise**
  - Term: 1995-2024
  - Size: 340 Acres
  - Incr. Value: $199m
  - Incr. Income: $2.5m
- **Westside**
  - Term: 2002-2025
  - Size 144 Acres
  - Incr. Value: $76m
  - Incr. Income: $0.9m
- **Total**
  - Size 518 Acres, 289 Blocks
  - Incr. Value: $449m
  - Incr. Income: $5.5m

CCDC Urban Renewal Districts

CCDC is implementing redevelopment plans in three districts generally bounded by State St. & the Boise River and Broadway Ave. and 16th Street.

Urban Renewal Projects

The Agency is responsible for over $175 million in downtown Boise redevelopment and revitalization projects in three master planning districts.

Type of Project & Approximate Cost (in Millions) & Percent of Total:

- Parking $63m – 36%
- Streetscape $39m – 22%
- Transit $34m – 20%
- Infrastructure $16m – 9%
- Parks/Open Space $9m – 5%
- Special Projects $5m – 3%
- Prop. Acquisition $5m – 3%
- Housing $3m – 2%

Parking System

CCDC manages 9 parking garages (7,546 spaces) & 3 surface lots (392 spaces) totaling 3,938 public parking spaces. In 2005 central district transient parking visitors exceeded 650,000.

Year Built & Number of Spaces:

- Eastman – 1990, (596)
- Capital Terrace – 1988, (495)
- 9th Street – 1988, (203)
- City Centre – 2000, (584)
- Boulevard – 1998, (216)
- Grove Street – 1978, (543)
- Ave A West – 2002, (424)
- Ave A East – 2002, (323)
- Myrtle Street – 2000, (362)
- Triangle Lot – (233)
- West Lot – (81)
- Ave A Visitor Lot – (78)

Today's Value of All Parking Facilities Estimate: $79 Million

Parking Facilities & Long-Term Development Debt

Toward the goal of providing infrastructure capacity and parking resources, the Agency has $85 million remaining in debt payments (principal & interest) as of October, 2006.

Develop. Agreements: $1.7m

By Bond Issue (in Millions):

Fixed Rate: $32.5 – 39%
1995A – (Blvd. Garage) - $5.1m
1995B – (Cap. Terrace) - $4.2m
1999 – (Eastman) - $2.3m
2005 – (Ave. A West) - $14.9m
AHA – (Afford. Housing) - $5.0m

Variable Rate: $50.7 – 61%
1998 – (City Centre) - $5.4m
2002B – (Housing) - $21.6m
2002C – (Ave. A East) - $5.7m
2004A – (Myrtle St.) - $14.2m
2004B – (Myrtle Street) - $3.6m

CCDC Board of Commissioners

The Board is appointed by the Mayor of the City of Boise and confirmed by the Boise City Council for 5-year terms.

Name, Office & Term Expires:
C - Chair
VC - Vice Chair
ST - Secretary & Treasurer

- Cheryl Larabee, C (3-31-07)
- Chuck Heidemark, VC (1-1-07)
- Dale Crick, Sr., ST (4-30-09)
- David Eberle (5-17-10)
- John May (10-16-07)
- Kevin McKee (9-10-07)
- Phil Reberger (4-30-08)
- Pat Shatz (8-31-09)
- Alex Shealy (3-31-10)

Know the Numbers – "Combating Misperception"

More often than not, parking problems are more perceived than real. The Boulder & Lincoln parking programs addressed this issue through a "Know the Numbers" campaign.

- » 34% more downtown spaces with the opening of 10th & Walnut garage.
- » 3,778 City parking spaces in Downtown Boulder.
- » 93 merchants that reimburse customer's parking.
- » 2,209 Free covered downtown parking spaces on Saturday & Sunday.

ex.

Multi-Language Signage

Increasingly, dual or multi-language signage is becoming more important.

Electronic signage can be useful in providing flexibility.

Pictograms or universal symbologies are becoming the norm.

ex.

Parking News & FAQs In Related Communications Resources

Tapping into other community communication resources is a great way to educate the community on new parking programs and to promote parking program contributions

DOWNTOWN Boulder **Update**

▸BoulderDowntown.com
▸Forward to a friend
▸Buy a Gift Certificate!
▸Downtown RSS

IN THIS ISSUE: ▼NEWS YOU CAN USE ▼ NEW MEMBERS & OPENINGS ▼ SPOTLIGHT ON ...

NEWS YOU CAN USE

To skip to a specific news item, use the links below! To read them all, just scroll on down.

- Last Day for Spring Green Orders
- Steps for Literacy
- Bolder Boulder Volunteers Needed
- KidLinks Entry Form Now Available
- Hop 2 Chautauqua Kickoff Party
- Bauman College Cooking Demos
- Parking Pay Station Q & A
- Website Tips and Tricks
- **Spotlight On**:Tulip Fairy & Elf Parade

Last Day for Spring Green Orders
It's time again for Downtown Boulder's Spring Green, which means free flowers (Petunias) for businesses in the Downtown Boulder BID. The deadline for putting in your orders is **May 9th,** so **Click Here** to register online, call our office at 303-449-3774 or fax back the Spring Green order form to 303-449-1582. Flowers will be delivered between May 20th and May 23rd.

Picture of the Week

WHAT'S HAPPENING
May 8th - May 25th

This Weekend's Weather

Fri 70/38

ex.

Parking Paystation Q & A

Q: What do I do with my old meter key?

A: Parking Services is working diligently to implement a prepay card to replace the meter keys. The City intends to trade balances on the keys to these new cards.

If you have a specific question you would like answered send an email to parking@dbi.org.

Parking Paystation Q & A
Now that the solar powered pay stations are up and running there are a few questions that people have. This section addresses these questions.

Q: Can I take my time with me?

A: Yes! Once you have your printed receipt displayed on your dashboard, you may move your vehicle to another metered spot until your original time is up.

If you have a specific question you would like answered send an email to parking@dbi.org.

Parking Paystation Q & A
Now that the solar powered pay stations are up and running there are a few questions that people have. This section addresses these questions.

Q: What are the enforced hours?

A: Pay stations are enforced -Monday through Saturday 9am to 7pm. Pay stations are FREE on Sunday and on city holidays. Please go to www.boulderparking.com to verify the holidays the city observes.

If you have a specific question you would like answered send an email to parking@dbi.org.

Stakeholder Forums and Workshops

Park Smart

A Forum to Raise the Bar on Good Parking Policy

Parking has been a hot topic in the news over the last year. Reading the headlines and blogs you'd think there were just two points of view: those who think free parking Downtown is an inalienable right, and those who want to force everyone out of their cars onto transit or bicycles. We think it's time to elevate the discussion about parking in Seattle and assess what we can learn from other cities to better manage the parking we have so that it supports a healthy, vibrant urban core. We've assembled a terrific panel that includes policy makers, national experts, transportation officials and a UW researcher to lead an informed discussion about the best approaches to mana

Bring a … m Rasmussen, chair of Seattle's Transpo

Featured Panelists:

L. Dennis Burns, CAPP, Kimley-Horn and Associates, Inc.
Dennis Burns is a senior practice builder and regional vice president for Kimley-Horn and Associates, Inc. Burns is a certified administrator of pubilc parking and has nearly 30 years of parking operations, management and consulting experience. His focus in recent years includes parking and transportation strategic planning, 'smart parking' system development and urban space management concepts. In 2010, Mr. Burns was the recipient of International Parking Institute's "Parking Professional of the Year," and was a featured speaker at the first-ever Green Gov Symposium in Washington, DC.

Rick Williams, BPM Development Company
Rick Williams is a transportation demand management expert from Portland, OR with more than 20 years of experience. From 1989-1994, he managed Portland's 3,500-stall Smart Park system and its 208-block downtown business improvement district. In 1995, Mr. Williams helped establish the Lloyd Transportation Management Association, and currently works both as its executive director and as an independent transportation management consultant for clients throughout North America.

Joining the panel will be **Seattle City Councilmember Tim Burgess**, sponsor of variable price parking legislation, and **Daniel J. Evans School of Public Affairs Senior Lecturer Daniel Carlson**, who specializes in community and economic development, and transportation and land use in metropolitan areas. **Seattle Department of Transportation Parking Operations and Traffic Permits Manager Mike Estey** will also discuss the City's new on-street parking policy.

Presented By:

Downtown Seattle Association · BOMA Seattle King County · City of Seattle · Commute Seattle · Great City · Seattle Hotel Association · Transportation Choices Coalition

Combine community education and stakeholder input into a community workshop!

This is also a great opportunity for collaborating with other community partners.

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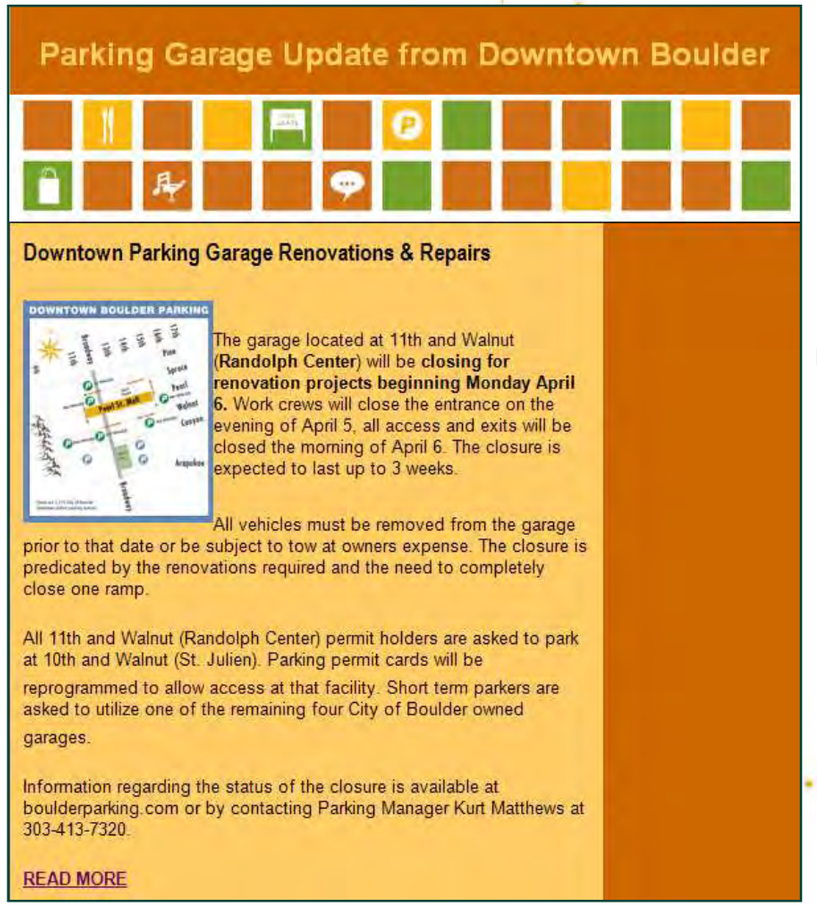
Keeping Your Customers Informed During Renovations / Repairs

Keeping customers informed, especially during significant garage repair and renovation projects, is important.

Developing a flexible format for information sharing on a regular basis is a preferred approach.



ex.

» Key Elements for a Garage Repair Update include:

- Names & locations of affected facilities
- Dates & times of impacts
- Duration & nature of impacts
- Alternative locations during construction/repair work
  - Provide different instructions for employees / contract parkers & visitors/short-term parkers if appropriate
- Where to go to get additional information

Where Did We Park?

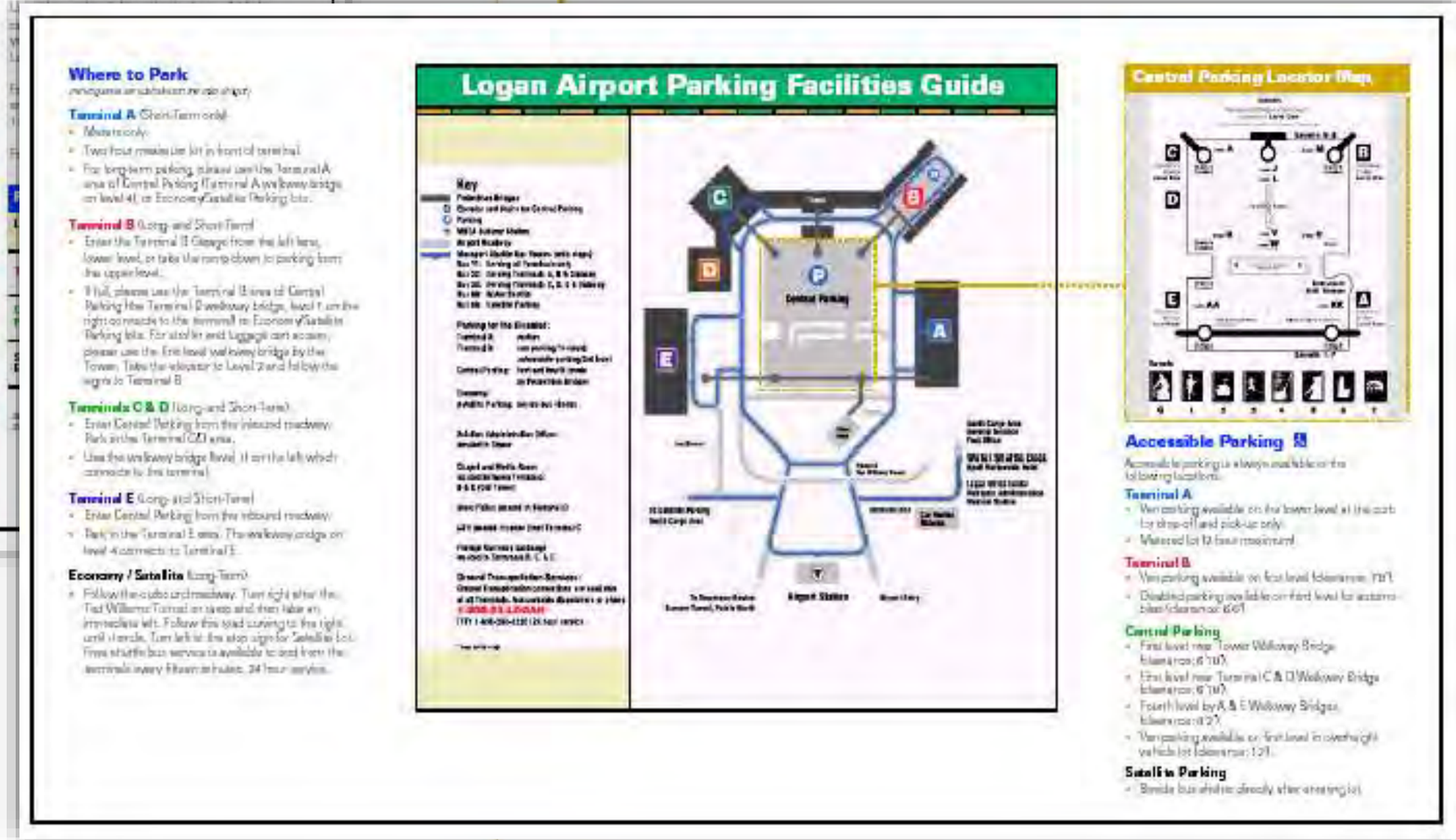
ex.

Parking orientation tools are very helpful in large parking garages especially if the customer is unfamiliar with the facility.

Massport Welcomes You to Logan International Airport Parking

Whether your trip is for business or pleasure, Massport's parking facilities and services are designed to make parking convenient, safe, affordable and helpful. Exciting changes at Logan are continuing to make your travels better than ever before.

Upon entering the airport, please check the parking availability sign on the inbound roadway. For updated parking information, call Massport's Parking Facilities Information Line at 617-561-1672, tune to Airport Radio 1650 AM within 5 miles of Logan, or visit our web site at www.massport.com.



Where to Park

Terminal A (Short-Term only)
- Motorcoach
- Two hour cruise car lot in front of terminal
- For long-term parking, please use the Terminal A area of Central Parking (Terminal A walkway bridge on level 4) or Economy/Satellite Parking lots.

Terminal B (Long- and Short-Term)
- Enter the Terminal B Garage from the left lane, lower level, or take the ramp down to parking from the upper level.
- If full, please use the Terminal B area of Central Parking (the Terminal B walkway bridge, level 4, on the right as you face the terminal) or Economy/Satellite Parking lots. For staff or rent luggage cart access, please use the 4th level walkway bridge by the Tower. Take the elevator to Level 2 and follow the signs to Terminal B.

Terminals C & D (Long- and Short-Term)
- Enter Central Parking from the inbound roadway. Park in the Terminal C/D area.
- Use the walkway bridge (level 4) on the left which connects to the terminal.

Terminal E (Long- and Short-Term)
- Enter Central Parking from the inbound roadway.
- Park in the Terminal E area. The walkway bridge on level 4 connects to Terminal E.

Economy / Satellite (Long-Term)
- Follow the outbound roadway. Turn right after the Ted Williams Tunnel on ramp and then take an immediate left. Follow this road curving to the right until it ends. Turn left at the stop sign for Satellite Lot. Free shuttle bus service is available to and from the terminals every fifteen minutes, 24 hour service.

Logan Airport Parking Facilities Guide

Central Parking Locator Map

Accessible Parking

Accessible parking is always available on the following locations:

Terminal A
- Van parking available on the lower level at the curb for drop-off and pick-up only.
- Metered for 12 hour maximum.

Terminal B
- Van parking available on first level (clearance: 7'0").
- Disabled parking available on third level for automobiles (clearance: 6'6").

Central Parking
- First level near Tower Walkway Bridge (clearance: 6'10").
- First level near Terminal C & D Walkway Bridge (clearance: 6'10").
- Fourth level by A & E Walkway Bridges (clearance: 6'2").
- Van parking available on first level in overheight vehicle lot (clearance: 7'2").

Satellite Parking
- Beside bus shelter directly after entering lot.

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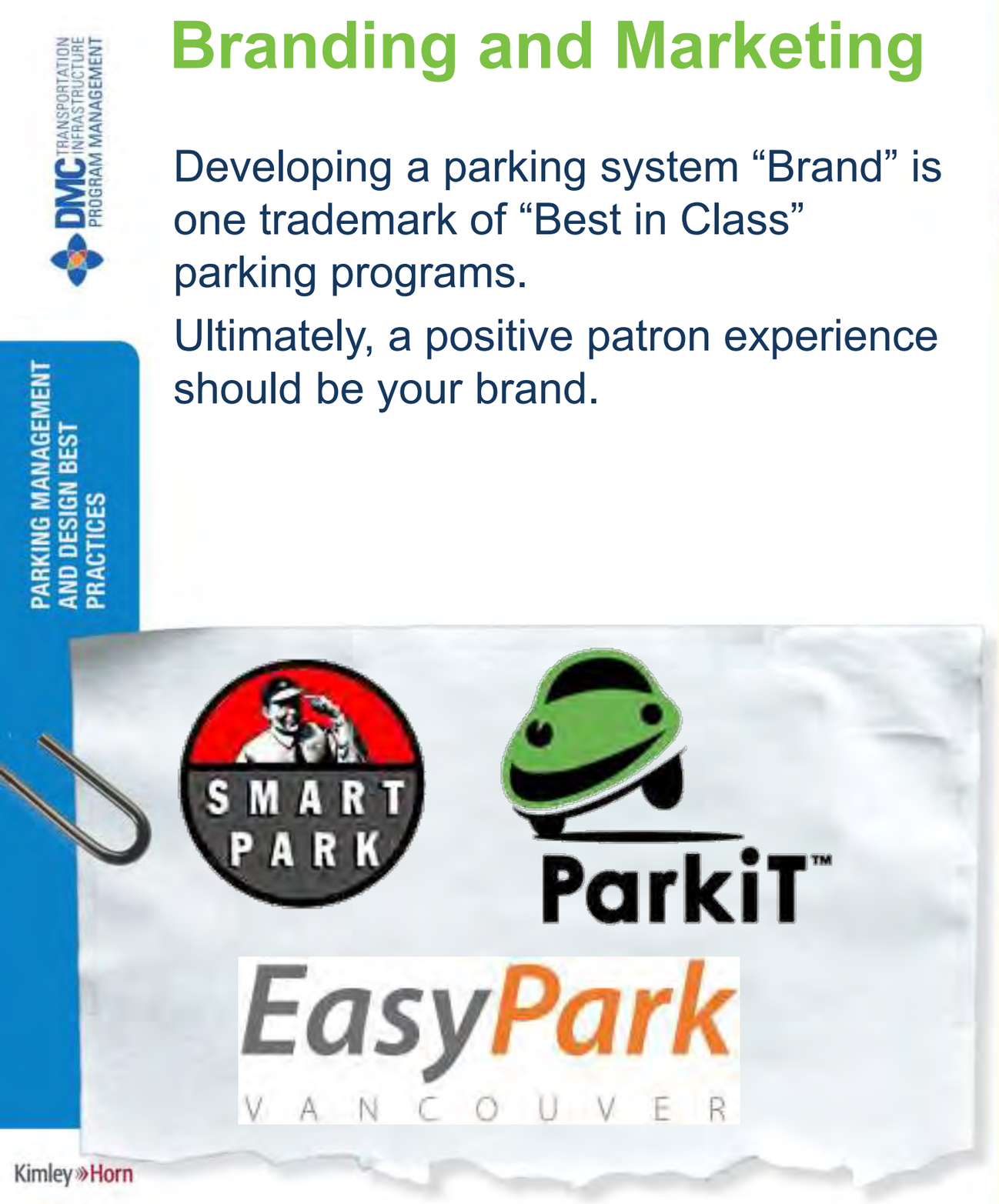
Parking Branding & Marketing "Comes of Age"

Branding and Marketing

Developing a parking system “Brand” is one trademark of “Best in Class” parking programs.

Ultimately, a positive patron experience should be your brand.



ex.

- The brand is more than just a logo.
- The brand should promote the image you want people to have of the system.
- It should be something you can say, such as “Easy Park” or “Park Smart”
- It should reinforce the positive aspects of the system – “Free and Easy Parking”, “Visit Downtown and Parking Is On Us”, etc.
- Use consistent signage and other branding tools to “tie the system together”.

Branded Programs

Branding all aspects of your program into unified whole makes your program look and feel more professional.

ex. » The EasyPark program from Vancouver is a great example of this approach.

EasyPark Programs:

EasyGreen
EasyPark's environmental initiatives.

EasyFlicks
'Shooting a movie in Vancouver?

EasyRider
EasyPark programs for 2-wheelers.

EasyAccess
EasyPark's easy accessibility.

EasySearch
Click here for parking lots and rates

EasyPay
Click here for secure online payment.

Violation Dispute
Click here to dispute a violation.

Parking Offices as a Retail Storefront?

As the parking industry matures, our interface with our customers is evolving.

Most parking offices had a distinctly "back office" feel to them in the past.

But some programs are beginning to change everything!

» The examples to the right are:

A. The Winnipeg Parking Authority

B. The Calgary Parking Authority

ex.

Map It!

Having an effective and easy to read parking map is basic asset for effectively communicating with customers.

ex.

- There are many examples of quality parking maps available.
- These maps from Downtown San Jose and New Haven Conn. have detailed information about parking facilities, downtown destinations, transit alternatives etc.
- The maps can also distinguish between public and private parking facilities and provide a useful orientation to the one-way streets.

The 30' Rule for Garage Entry Points

First impressions mean a lot and you never get a second chance to make one! So, what you see within the first 30' of a facility entrance sets the tone.

Make sure the first 30' creates a positive experience!

- Typical issues at facility entrances include:
  - Too much or poor quality signage
  - Signage and equipment in poor condition
  - Inadequate lighting
  - Dirty walls and curbs
  - Trash and debris

ex.

"Where would you rather park?"

or

Parking Receipt & Merchant Coupon!

Multi-space meters in “Pay & Display Mode” can print a 2-part receipt ticket. One part is displayed in the vehicle and the second part can be used as a merchant coupon or to receive a parking validation.

» This innovation is a good one for municipalities and merchants concerned about implementing paid parking.

ex.

LUKE

Integrated Access and Downtown Marketing

Downtown Long Beach Associates (always at the cutting edge!) have integrated Parking, Transportation and Downtown Management in their new "Ride-Park-Play" web page.

ex.

» The Innovative site features an interactive parking and route planning map as well as special links to:

- Downtown Long Beach Transportation
- Downtown Dining
- Downtown Shopping
- Downtown Attractions
- Downtown Calendar of Events

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Distinctive & Consistent Parking Signage

Fort Wayne, IN

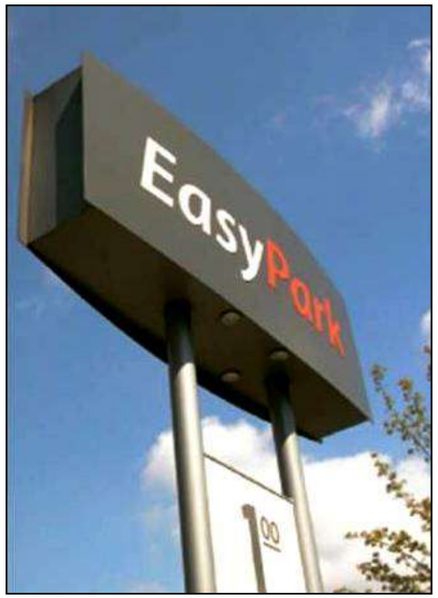
» Once you have created a high standard of service in your facilities, you want your patrons to associate that level of excellence with YOUR SYSTEM – consistent and distinctive signage helps tie it all together.

ex.

Portland, OR

Boulder, CO

Boise, ID



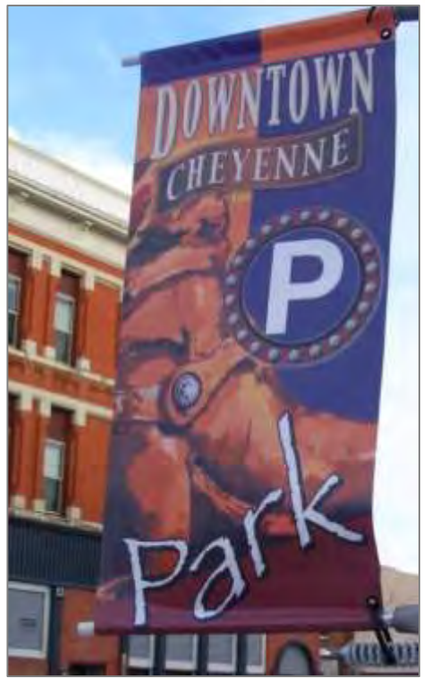
Vancouver, BC

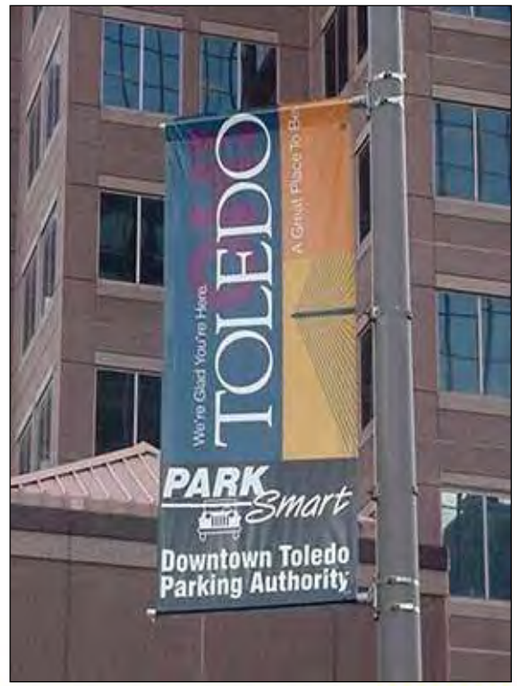
Collaborative Promotions

Marketing dollars can go further when parking programs collaborate and co-market with other downtown organizations.

» Examples include: adding parking system info to downtown maps & brochures, banners, wayfinding kiosks, print ads, etc.

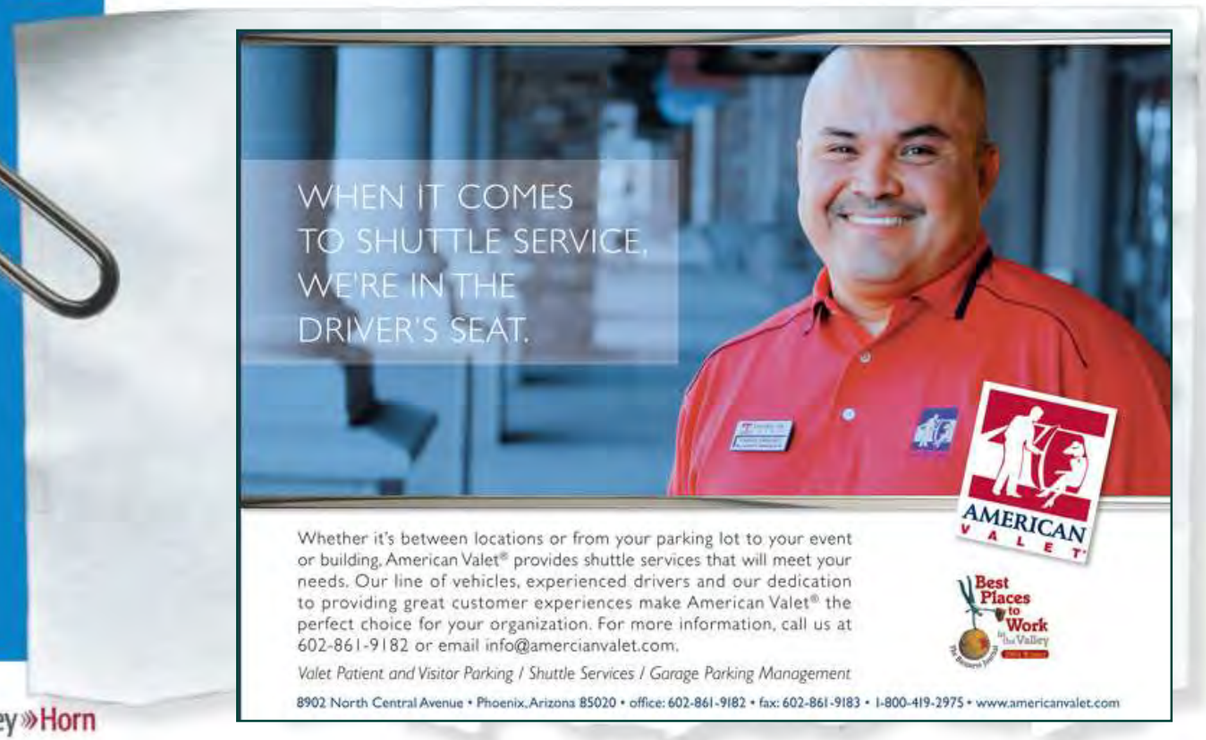
ex.





Program Marketing

Parking marketing programs that promote not only services, but their staff can be very effective. Happy and satisfied employees provide better service. Companies that provide high quality work environments provide better employees and thus better service.



ex.

- This message is not lost of Fortune 500 companies, nor on the parking industry customer service leaders.
- American Valet, based in Phoenix, AZ, has built their reputation on a strong commitment to both employee satisfaction/recognition and exemplary customer service.

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Promote Local Attractions on Meter Heads

If you still have traditional single space meters, why not make the most of them?

Advertise local attractions on the meter heads.

ex.

- Downtown Denver advertises for the Denver Zoo, the Museum of Nature and Science, the Denver Art Museum and the Denver Botanical Garden.
- Free on-street parking on Sundays is also promoted.

Attention Grabbers

OK, now really, who wouldn't want to park in the "Rockstar Parking Lot"?

- "Cityplace" is located in downtown Winnipeg near the new MTA Center which hosts a variety of events including hockey, concerts, etc.
- "Rockstar Parking" is a creative, attention getting marketing strategy for their closest surface parking lot.

ex.

Bollard Sleeves

Question: What is at the entrance to almost every parking area?

Answer: Bollards!

Why not turn these ubiquitous elements into an opportunity for advertising or facility promotion?

ex.

» Eliminating unsightly rusted bollards used to require regular maintenance and even then was often unsuccessful.

» Bollard sleeves are an inexpensive and easy solution to the problem of rusted bollards. Low-density polyethylene thermoplastic sleeves slide over existing guard posts for quick and easy installation.

» A new product (pictured above) includes solar powered lights.

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Celebrating Accomplishments

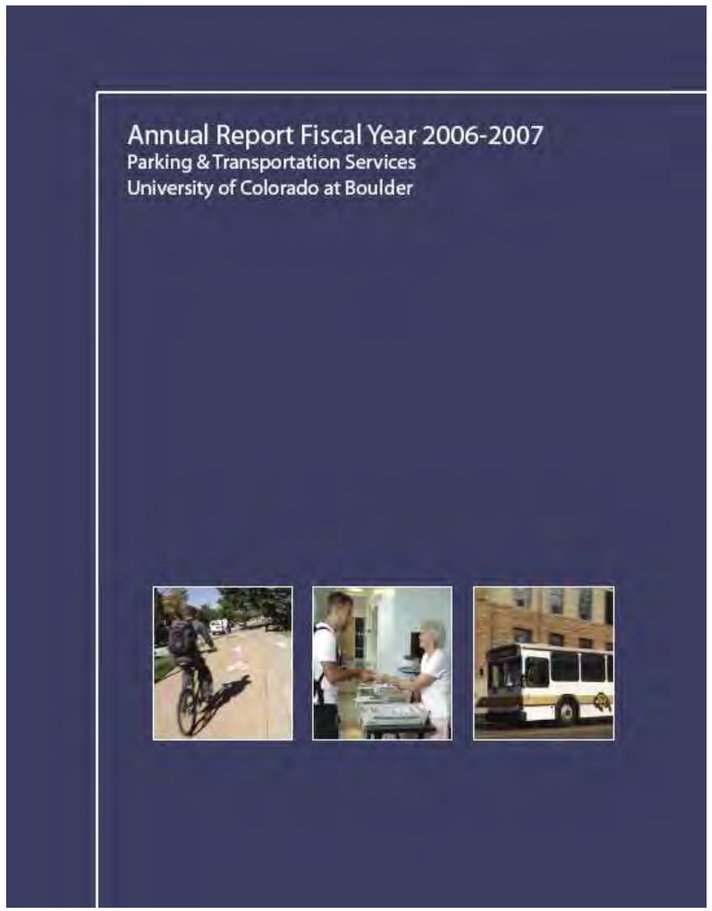
Annual Parking Reports

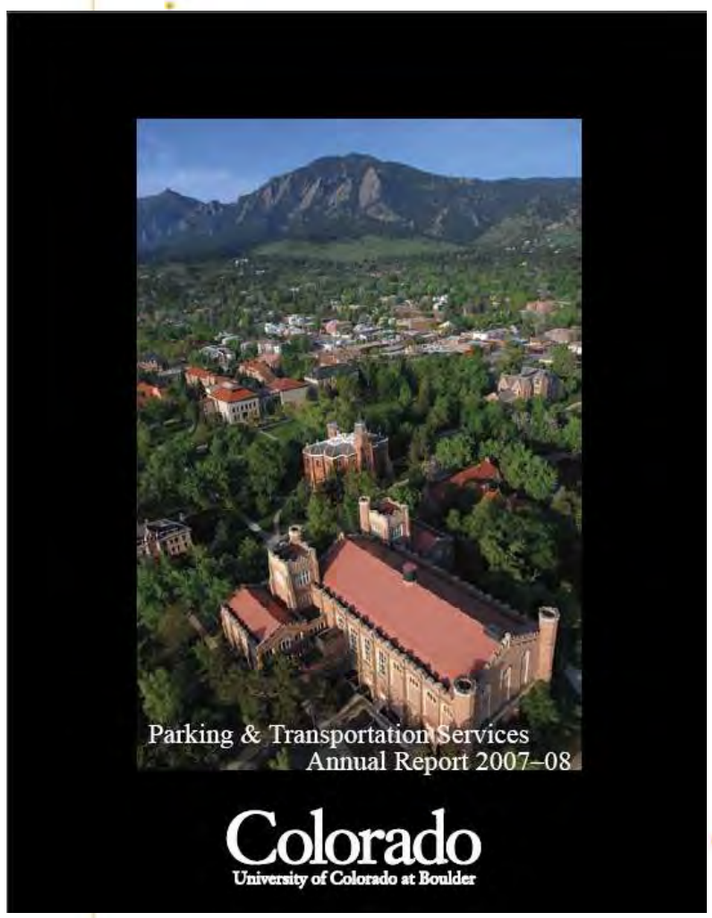
Developing an Annual Parking Report is an effective tool for communicating with both internal and external customer groups.

ex.

» Annual Parking Report Benefits:

- Identifies key departmental issues and challenges
- Promotes departmental achievements
- Documents the "state of parking"
- Builds confidence in the department
- Creates a historical record





Celebrating Program Accomplishments

The University of Washington created the piece below as part of a “strategic communications initiative”. They were facing great financial pressure and had an urgent need to raise parking rates to be able to pay for dramatic fare increases from the local transit agency.

The summary of program successes and accomplishments helped garner needed administrative support for an unpopular, but essential rate increase.

“U-PASS: 17 Years of Success - Almost 80% of the campus population -approximately 52,000 people - commutes to campus using a greener transportation mode than driving alone. One third chooses biking or walking - emissions-free commute options.”

COMMUTER SERVICES
a Transportation Services Program

UNIVERSITY OF WASHINGTON TRANSPORTATION SERVICES

ex.

» **U-PASS: 17 Years of Success**
- Creating Value for UW Commuters
- Creating Value for the Institution
- Reducing Carbon Emissions
- Improving Neighborhood Relations
- Serving as a Model

» A component of a larger “Strategic Communications Plan”

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New Facility Openings

Make Your New Facility Grand Opening An Event!

Few parking program activities are PR opportunities of this magnitude. Make the most of it!

- HOLLYWOOD -Parking at the Seminole Hard Rock Hotel & Casino in Hollywood is about to become a bit easier after the "smashing" grand opening of its brand new Winner's Way Parking Garage.
- In celebration of Wednesday's grand opening, the Seminole Hard Rock set the record for the "World's Largest Guitar Smash,".
- The 9-story "Winner's Way" garage provides an additional 2,400 covered parking spaces. It has 14 elevators, six escalators, a 351-foot-tall pedestrian bridge, a 164-foot-tall Casino bridge, and a car count system, all in a brightly lit environment.

ex.

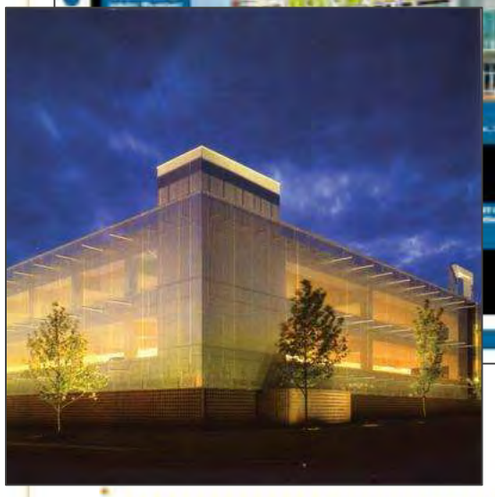
"Parking Is A Winner At Seminole Hard Rock Hotel & Casino!"

Awards and Recognition

Been recognized for your program excellence?

Well, don't keep it a secret!

- » **Issue Press Releases**
- » **Put out Banners**
- » **Develop a Presentation**
- » **Hold a Press Conference**
- » **Write an Article**



IPI INTERNATIONAL PARKING INSTITUTE ADVANCING THE PARKING PROFESSION

The International Parking Institute Announces Winners of 2010 Awards of Excellence Competition

Award of Excellence: University of Colorado, Boulder - Sustainability, Parking & Transportation, Boulder, Colo
University of Colorado at Boulder, Parking and Transportation Services

Project Team:

- University of Colorado, Boulder, Parking & Transportation Services, Boulder, Colo
- University of Colorado, Boulder, Environmental Center , Boulder, Colo

The University of Colorado, Boulder, is frequently recognized as one of the nation's greenest, in large part due to its Parking and Transportation Services. Despite a growing number of commuters, the campus continues to reduce its carbon impact through better use of scarce parking resources. Its Ecopass program provides free public transportation for employees, freeing over 1,000 parking spaces. The addition of more than 1,300 bike parking spaces in the past two years means that bike parking and vehicle parking spaces have reached parity. Two existing garages were renovated to reduce energy consumption; a third garage under construction will include electric vehicle charging stations.

Worst Parking Awards?

Looking for a little attention?

People love to talk and complain about parking.

Tap into our natural fascination with parking by creating your own local awards program!
(Something tells me there is no shortage of potential entries!)

Maybe the:

"Worst Parking Award" or
"Most Creative Parking Award".

ex.

» You might even celebrate diversity with a "Multi-Cultural Parking Award" – (Here's my entry!")

Conference Presentations

Giving back…

Share your successes and innovative ideas with your peers and in the process enhance your reputation and the prestige of your program and institution.

» **The 6 Benefits of Conference Presenting**

1. Recognition as an expert
2. Time away from the office
3. Acknowledgement of your accomplishments
4. Collaboration with your peers
5. Hone your communications skills and……

ex.

Media Relations/ Media Kit

One benefit of doing an Annual Parking Report is that it can be a great start on developing your parking program “media kit”.

Parking Media Kits might include:

- System/Facility fact sheets
- Statistical Info
- Comparative Info
- Photos
- Video Footage
  - Facilities, staff doing their jobs, etc.
- Bios of Key Staff

Develop the Media Kit “before a crisis”

- On your time table

ex.

Media Relations Tips:

- Make friends with local Media
- Keep your message simple
- Provide resources – visuals, photos, plans, stats
- If hosting a press event – keep presentation short
- No more than 5 minutes
- Then open it up for questions
- Have a written “press release”
- Have a copy available for reporters

Anniversaries

Don’t Forget Your Anniversary!

Program anniversaries are a natural opportunity to reflect back on your progress and celebrate your accomplishments!

» **3 Ideas for your celebration:**

1. Offer “free parking for a year” to one lucky person
2. Have a water balloon accuracy dropping contest from the roof of the garage
3. Bake a cake in the shape of parking deck!

ex.

Happy 75th Anniversary Parking Meter !

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The Virtual Environment

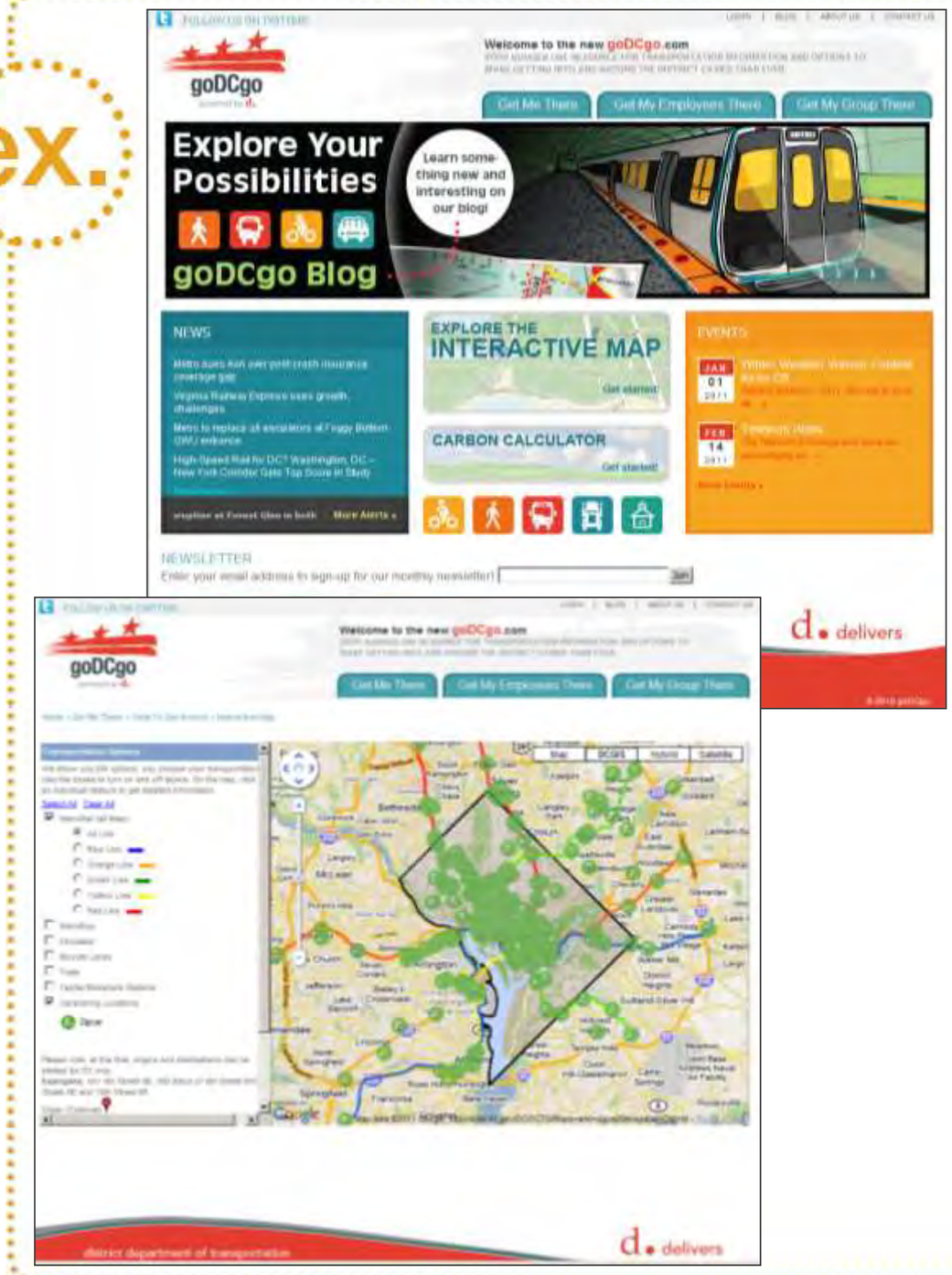
The Virtual Environment

Let's face it, the internet has changed everything! (and mostly for the good!)

This has forced us to come to terms with the fact that we have a new "virtual environment" that needs to be carefully designed, managed and maintained.

- » Our "Web Presence" says a lot about our organization
- » It is often the first point of contact with our programs
- » It can be an incredibly valuable tool for information dissemination, but it must be kept current
- » Parking is typically not "front and center" on institutional home pages. How easy is it to find your program information?
- » One of favorite sites from a transportation perspective the "go DC go.com" site

ex.



Flash Based Mapping Programs

Flash based mapping programs provide the ability to map out walking routes from parking locations on campus to specific destinations and could also be translated to walking times.

ex.

» Visit www.wisc.edu to see an example of this technology application.

- Click on the “Campus Map”
  - Ruler feature.

Recommended Website Elements

Website development has come a long way!

We now have a wide variety of tools and other webpage elements to choice from.

Some parking specialty items include:

- Carbon reduction calculators
- Parking facility construction cost estimator
- Ask the consultants

Some other favorites to consider include:

» News & Events
» Maps
» Events Calendars
» Construction Updates
» Did You Know?
» Weekly Polls
» Program FAQs
» Links to other sites/resources
» Job postings

Best Parking Website Features – Interactive Maps

On the “Go DC Go.com” interactive web-site map, by turning on the parking “layer” you can not only identify the location of various parking facilities, but also drill down to very detailed information about facility management, services offered, hours of operation, rates, etc.

» At the most detailed level, the data is just a link and detailed info is managed by the site owner, such as **Central Parking** in this example.

ex.

Best Parking Website Features – Parking Locators

Interactive web-site maps that allow you to turn on “layers” to relate various features is a very valuable parking and downtown web-site feature.

Examples of specialty transportation related layers include:

- Parking
- Bike Share Stations
- Transit Stops
- Circulator Stops and Routes
- Car Share Locations

Some other “layers could include:

» Attractions
» Major Buildings
» ATMs
» Restaurants
» Retail
» Government Facilities
» Art Galleries
» Coffee Shops

Best Parking Website Features – Parking Conditions Updates

The San Jose parking website offers a page that keeps customers informed of “current conditions” related to city operated parking facilities”.

» You can even sign up to get “parking condition updates” sent directly to your cell phone via text message.

» San Jose is also on the leading edge with parking guidance signage systems with real-time information.

Market Street

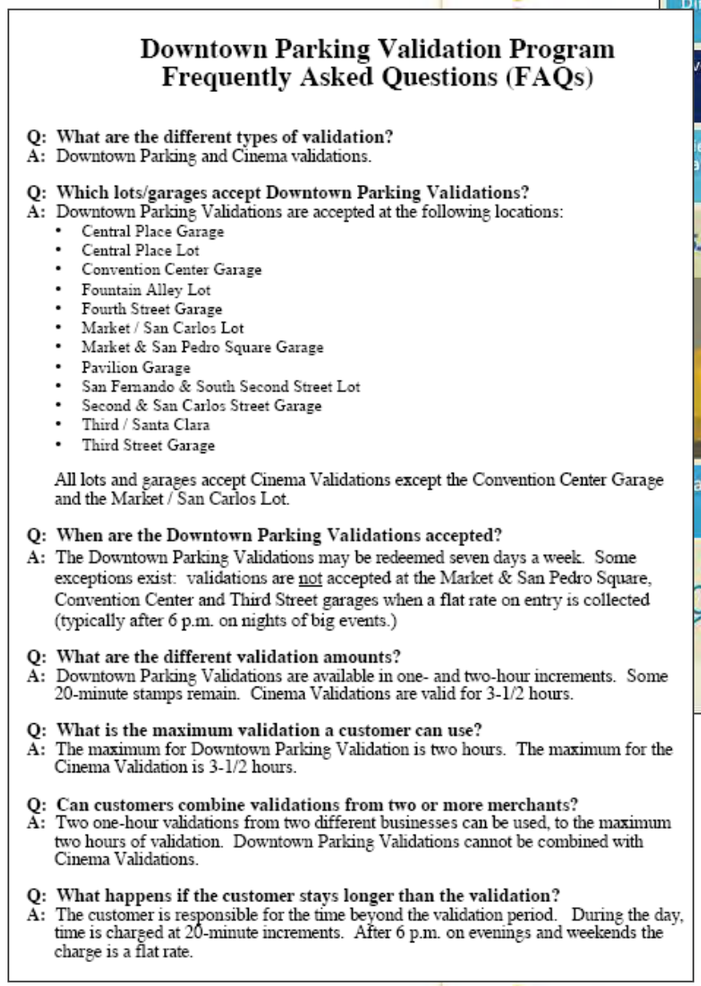
Santa Clara Street

Best Parking Website Features – FAQs

Many websites recognize that there are a variety of "commonly asked questions".

An FAQ (Frequently Asked Questions) section can be a helpful addition to many customers and reduce the number of phone calls your office staff has to answer.

ex.



Downtown Parking Validation Program
Frequently Asked Questions (FAQs)

Q: What are the different types of validation?
A: Downtown Parking and Cinema validations.

Q: Which lots/garages accept Downtown Parking Validations?
A: Downtown Parking Validations are accepted at the following locations:

- Central Place Garage
- Central Place Lot
- Convention Center Garage
- Fountain Alley Lot
- Fourth Street Garage
- Market / San Carlos Lot
- Market & San Pedro Square Garage
- Pavilion Garage
- San Fernando & South Second Street Lot
- Second & San Carlos Street Garage
- Third / Santa Clara
- Third Street Garage

All lots and garages accept Cinema Validations except the Convention Center Garage and the Market / San Carlos Lot.

Q: When are the Downtown Parking Validations accepted?
A: The Downtown Parking Validations may be redeemed seven days a week. Some exceptions exist: validations are not accepted at the Market & San Pedro Square, Convention Center and Third Street garages when a flat rate on entry is collected (typically after 6 p.m. on nights of big events.)

Q: What are the different validation amounts?
A: Downtown Parking Validations are available in one- and two-hour increments. Some 20-minute stamps remain. Cinema Validations are valid for 3-1/2 hours.

Q: What is the maximum validation a customer can use?
A: The maximum for Downtown Parking Validation is two hours. The maximum for the Cinema Validation is 3-1/2 hours.

Q: Can customers combine validations from two or more merchants?
A: Two one-hour validations from two different businesses can be used, to the maximum two hours of validation. Downtown Parking Validations cannot be combined with Cinema Validations.

Q: What happens if the customer stays longer than the validation?
A: The customer is responsible for the time beyond the validation period. During the day, time is charged at 20-minute increments. After 6 p.m. on evenings and weekends the charge is a flat rate.

Web-based Parking Locators

Searchable Parking Locator Map features on websites allow customers to zoom in on their areas of interest and get detailed parking location, contact info, maps, cost and sometimes parking availability information.

ex.

» Visit www.greenP.com to see an example of this website feature.

Ch. 9

Improving Customer Service

Quality Customer Service Programs

"Best in Class" parking programs have well defined customer service programs that typically include vehicle lock out assistance, dead battery assistance and vehicle location assistance at a minimum.

ex.

» Other key customer service areas include:

- Focus on employee training and hiring practices.
- Develop friendly, attentive, outgoing knowledgeable attendants.
- Increase personal contact between parking system manager, stake holders & customers.
- Institute performance measurements and utilize for company and employee incentives.
- Develop customer friendly payment options.

Quality Customer Service Programs Begin with Training

Excellent customer service is never an accident. It is a result of a defined prioritization by management, a dedication to making guests feel special and an investment in training.

ex.

IPI INTERNATIONAL PARKING INSTITUTE ADVANCING THE PARKING PROFESSION

MEETINGS & EVENTS | MEMBERSHIP SERVICES | PUBLICATIONS | PROFESSIONAL DEVELOPMENT

HOME PAGE > PROFESSIONAL DEVELOPMENT > ON-SITE TRAINING PROGRAMS

On-Site Training Programs

Employees are an organization's most valuable asset. An investment in staff training and education brings a high rate of return in job performance and satisfaction.

For more information, contact Lauri Chudoba at chudoba@parking.org or 540.371.7535.

Customer Service Training

Conflict Resolution Training

Customer Service Amenities –

A Requirement for Canadian Parking Association Certification

CPA ACS
Canadian Parking Association
Association canadienne du stationnement

ex.

Customer amenities provided by the Winnipeg Parking Authority.


THE PROGRAM

HOW THE PROGRAM WORKS

WHO BENEFITS

WHO CAN APPLY?

Kimley»Horn

SRF Consulting Group, Inc.

Specialized Reserve Spaces for Retail Customers

Understanding the special needs of your customers and providing for their special needs can boost sales of specialty programs.

ex.

» Examples include:

- Short-term spaces for quick turn-over customers such as “Coffee Customers”
- Quick and convenient “run–in / run-out” spaces for pre-prepared meal customers.
- Close-in, convenient spaces (generally next to accessible spaces) reserved for “Expectant Mothers”.

Lincoln's "Shopper Zones"

Reserving the most convenient off-street parking spaces for retail customers, Lincoln's new "Shopper Zones", takes this best practice to a new level!

ex.

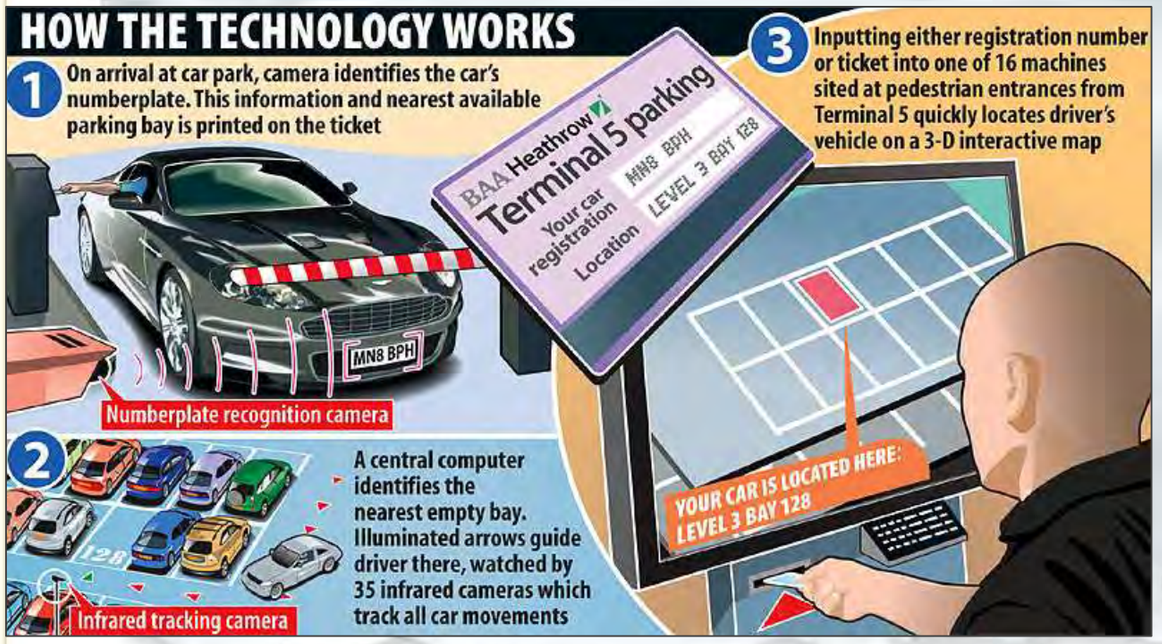
Parking Orientation Tools

Many facilities place “You parked on Level ___” cards at the elevator lobbies for patrons to take with them.

» Other systems have developed “Parking Pocket Pal” mini-brochures to provide orientation and parking services information to customers.

ex.

» London’s Heathrow Airport uses LPR technology to make finding your car even easier!



Enhanced Payment Options

One area that we can use to improve customer service in the parking world is to make “paying for parking” as easy and painless as possible. Because, let’s face it, nobody LIKES to pay for parking. But if is difficult to pay, that just makes it worse!

ex.

If accepting credit or debit card payments, be sure your systems are PCI certified!

Improved payment options include:

- Cash/Coin
- Credit/Debit Card Acceptance
- Community Cards (Debit)
- Cash-Key
- Pay-By-Cell Phone
- Pay-Pal (On-Line)
- Toll Tags
- “Sky Meter”

Ch.
10

Customer & Community Education

"Coffee with the Parking Guy"

The Winnipeg Downtown BIZ sponsored "Coffee with the Parking Guy"!

As a service to it's membership the BIZ would host monthly meetings connecting retailers, restaurateurs and other downtown business owners at a local coffee shop to the Winnipeg Parking Authority's chief administrator (& IPI's Parking Professional of the Year in 2010!).

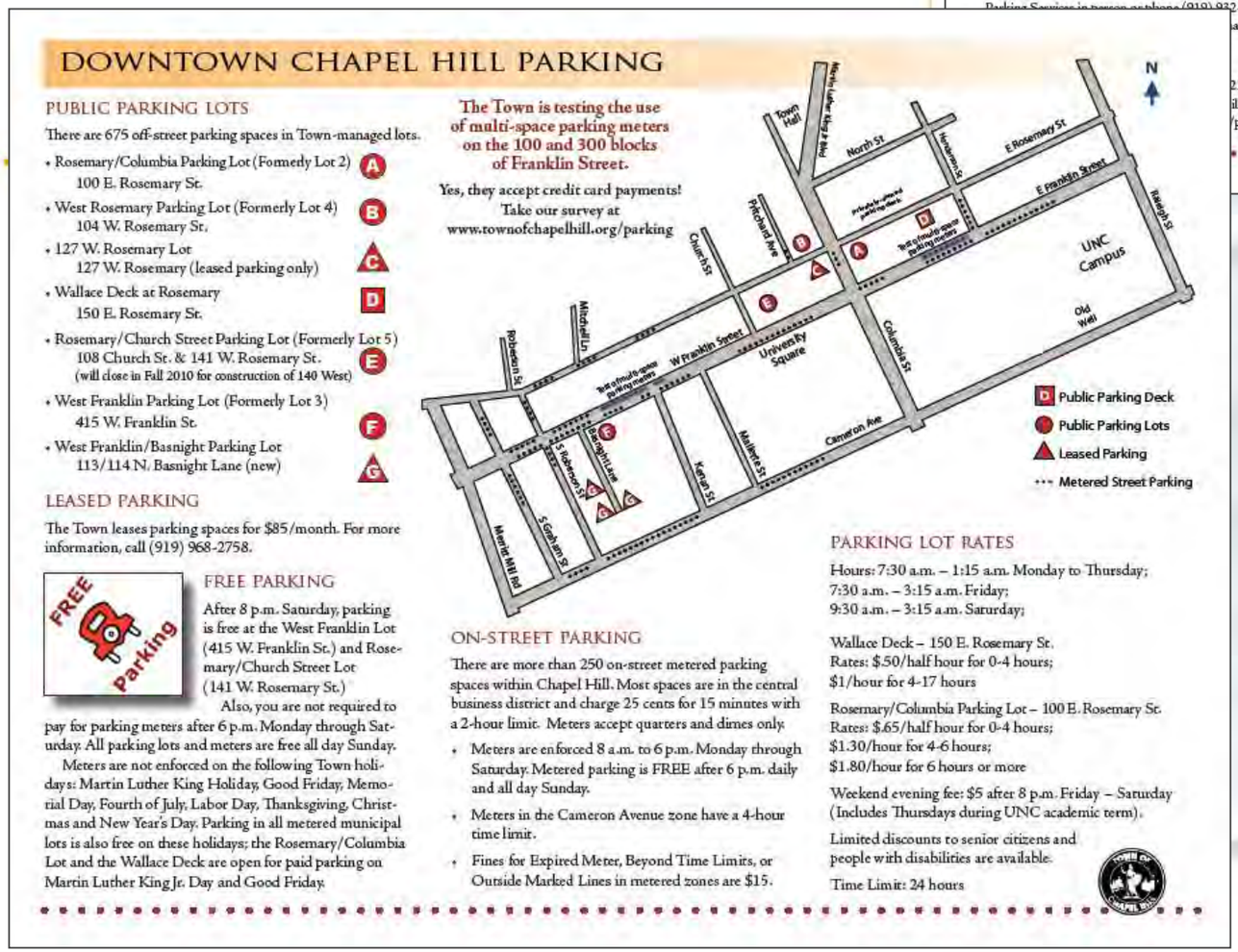
ex.

- This simple, but effective outreach strategy worked well in Winnipeg because of their smart and savvy parking administrator.
- Discussion were lively and sometimes a little intense. People can get passionate over parking.
- But in the end, it was a valuable learning experience and the educational benefits went in both directions.

Mr. David Hill, CAPP
IPI's 2010 "Parking Professional of the Year"

How To Park in Any City, USA

Having a succinct and accessible document that informs your customers "How to Park" is just good basic management.



DOWNTOWN CHAPEL HILL PARKING

PUBLIC PARKING LOTS

There are 675 off-street parking spaces in Town-managed lots.

- Rosemary/Columbia Parking Lot (Formerly Lot 2) A
  100 E. Rosemary St.
- West Rosemary Parking Lot (Formerly Lot 4) B
  104 W. Rosemary St.
- 127 W. Rosemary Lot C
  127 W. Rosemary (leased parking only)
- Wallace Deck at Rosemary D
  150 E. Rosemary St.
- Rosemary/Church Street Parking Lot (Formerly Lot 5) E
  108 Church St. & 141 W. Rosemary St.
  (will close in Fall 2010 for construction of 140 West)
- West Franklin Parking Lot (Formerly Lot 3) F
  415 W. Franklin St.
- West Franklin/Basnight Parking Lot G
  113/114 N. Basnight Lane (new)

LEASED PARKING

The Town leases parking spaces for $85/month. For more information, call (919) 968-2758.

FREE PARKING

After 8 p.m. Saturday, parking is free at the West Franklin Lot (415 W. Franklin St.) and Rosemary/Church Street Lot (141 W. Rosemary St.)

Also, you are not required to pay for parking meters after 6 p.m. Monday through Saturday. All parking lots and meters are free all day Sunday.

Meters are not enforced on the following Town holidays: Martin Luther King Holiday, Good Friday, Memorial Day, Fourth of July, Labor Day, Thanksgiving, Christmas and New Year's Day. Parking in all metered municipal lots is also free on these holidays; the Rosemary/Columbia Lot and the Wallace Deck are open for paid parking on Martin Luther King Jr. Day and Good Friday.

The Town is testing the use of multi-space parking meters on the 100 and 300 blocks of Franklin Street.

Yes, they accept credit card payments!
Take our survey at
www.townofchapelhill.org/parking

ON-STREET PARKING

There are more than 250 on-street metered parking spaces within Chapel Hill. Most spaces are in the central business district and charge 25 cents for 15 minutes with a 2-hour limit. Meters accept quarters and dimes only.

- Meters are enforced 8 a.m. to 6 p.m. Monday through Saturday. Metered parking is FREE after 6 p.m. daily and all day Sunday.
- Meters in the Cameron Avenue zone have a 4-hour time limit.
- Fines for Expired Meter, Beyond Time Limits, or Outside Marked Lines in metered zones are $15.

PARKING LOT RATES

Hours: 7:30 a.m. – 1:15 a.m. Monday to Thursday;
7:30 a.m. – 3:15 a.m. Friday;
9:30 a.m. – 3:15 a.m. Saturday;

Wallace Deck – 150 E. Rosemary St.
Rates: $.50/half hour for 0-4 hours;
$1/hour for 4-17 hours

Rosemary/Columbia Parking Lot – 100 E. Rosemary St.
Rates: $.65/half hour for 0-4 hours;
$1.30/hour for 4-6 hours;
$1.80/hour for 6 hours or more

Weekend evening fee: $5 after 8 p.m. Friday – Saturday (Includes Thursdays during UNC academic term).

Limited discounts to senior citizens and people with disabilities are available.

Time Limit: 24 hours

PARKING TICKETS

COURTESY TICKETS

Under our courtesy ticket system, first-time parking offenders who receive tickets for on-street metered parking violations may have their tickets waived. The goal of the courtesy ticket program is to ensure that the downtown is friendly to our visitors and business customers.

PARKING FINES

- Expired meter $15
- Parking over marked lines $15
- Parking in a handicap zone $200
- Parking within 15 feet of fire hydrant $100
- Parking within fire lane $100
- Other violations $50

Late Fees: $10 for 21 days after issuance and an additional $10 for each subsequent 14-day period, up to $20.

PAYING YOUR TICKET

Enclose the citation with a personal check, money order or cashier's check (do not send cash). Make checks payable to Town of Chapel Hill. Mail to Town of Chapel Hill Parking Services, 150 E. Rosemary St., Chapel Hill, NC 27514. Payments are accepted from 8:30 a.m. to 5 p.m. Monday to Friday at the Parking Services office, or by phone at (919) 932-2912. Payments may also be deposited in the Town's drop-box locations at Chapel Hill Town Hall, 405 Martin Luther King Jr. Blvd., or the Police Department, 838 Martin Luther King Jr. Blvd.

IF YOU LOSE YOUR TICKET

Paying your ticket is still your responsibility. Visit Parking Services in person or phone (919) 932-2912. ame of

21 days of
ll Parking
/parking.

TOWED OR IMMOBILIZED?

IMMOBILIZED VEHICLES

Vehicles illegally parked within the Town that have four or more outstanding parking citations are subject to having an immobilization device (commonly referred to as a "boot") attached to their vehicle.

REMOVING THE IMMOBILIZATION DEVICE

In order to have the device removed, please come to the parking office at 150 E. Rosemary St. between 8:30 a.m. and 4:30 p.m. Monday through Friday to settle the account and pay the $55 booting fee. Vehicles not claimed prior to 4:30 p.m. are subject to towing.

TOWED VEHICLES

It is rare for the Town of Chapel Hill to tow vehicles, but towing will be enforced when:

- Vehicles are parked in hazardous locations
- Vehicles are parked for more than 24 hours in a Town owned lot
- Vehicles have been booted and have not been released before 4:30 p.m.
- Vehicles have been booted on two or more occasions and owners have failed to settle their account.

RETRIEVING YOUR VEHICLE

Towed vehicles may be reclaimed from the vehicle impoundment area upon payment of the towing fee. In order to have your vehicle released, please go to the Chapel Hill Police Department, 828 Martin Luther King Jr. Blvd. Payment of the towing fee does not remove responsibility for the ticket that caused the tow or any outstanding, unpaid or overdue parking tickets.

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publicaffairs@townofchapelhill.org

Printed on recycled paper
Please recycle with white paper.

PARKING DOWNTOWN

The Parking Services office is located in the Wallace Parking Deck.
Open 8:30 a.m. - 5 p.m. Monday to Friday, except holidays.

150 E. Rosemary St.
Chapel Hill, NC 27514

Information: (919) 968-2758
Residential Permits & Citations:
(919) 932-2912
Fax: (919) 932-2926
E-mail: parking@townofchapelhill.org
Web: www.townofchapelhill.org/parking

Typical contents might include information on:

- » Office Location/Contact Info
- » Parking locations
- » Rates
- » On-Street Parking
- » Enforcement/Adjudication
- » Towed/Immobilized Vehicles

Kimley»Horn

SRF Consulting Group, Inc.

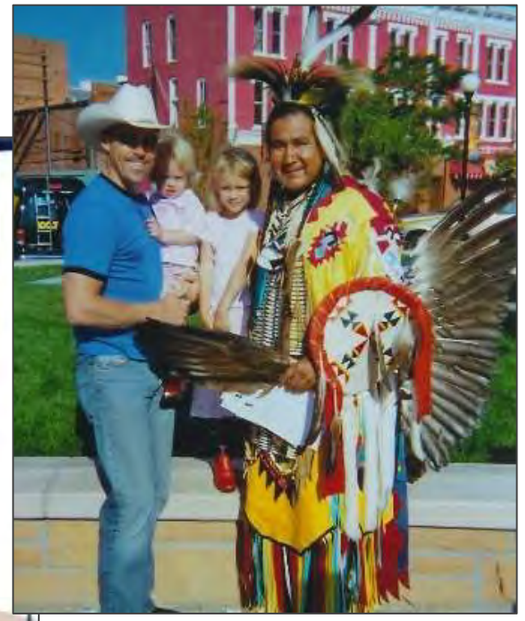
Howdy Pardner!

The “real problem” from a parking management perspective re: on-street parking is repeat offenders trying to take up what should be a short-term space for their longer term needs.

If this is true, why not make the penalty for occasional or first-time violators less harsh to mitigate the inherent negativity of parking enforcement.

ex.

- Why not take it one step further and let the first parking citation be an educational opportunity?
- That’s what they did in Cheyenne, WY with their innovative “Howdy Pardner!”program.
- This is one strategy to better align parking policy with the goals of creating a vital downtown.



» Using creative marketing Cheyenne crafted a parking citation envelope to be an educational piece that led off with the phrase “Howdy Pardner”.

» Message #1: Welcome and Thanks for Shopping Downtown!

» Message # 2: Need more than 2 hrs.? Here are some longer term parking options and other tips on how to parking legally in Downtown Cheyenne.

Secrets to Parking Success!

The collaborative effort between the Downtown Winnipeg Business Improvement Zone (BIZ) and the Winnipeg Parking Authority is aimed at helping you get around downtown easily by car, bike, bus and on foot.

» Getting around downtown and parking is easy with 32,000 parking spots, the free Downtown Spirit shuttle bus, 2 kilometres of indoor walkways, dozens of bus stops, and many bike racks.

ex.

Trends in Parking & Transportation

Taking a page from our Downtown Management professional's play book, tracking trends and program performance is a good way to keep our customers educated and aware.

ex.

» Trends to track might include:
  - » Community demographics
  - » Changes in land-use
  - » Parking supply & utilization
  - » Parking rates
  - » Community Investment/New Development
  - » Economic data
  - » Program financial performance
  - » Parking services, accomplishments and community reinvestment

New Technology Introduction –
On-Street Meter Upgrades

Once the decision has been made to upgrade the on-street meter system (or any other parking technology that the public will have direct interface with) it is important to develop a detailed implementation timeline including a public relations strategy.

ex.

- A typical implementation timeline would start early and would be structured with major milestone dates and specific action items.
- A sample implementation timeline is provided to the right:

Ch. 11

On-Street Parking Management Strategies

On-Street Parking - Policy Basics

There are a few basic principles related to on-street parking that most parking consultants, urban planners and downtown management professionals agree on. These include:

- On-street parking is a valuable, limited resource due to its convenience and proximity to businesses, therefore the primary management objective to promote space turnover for the benefit of the local merchants and the public.
- If you are going to have paid parking, charge for the on-street spaces first to promote turnover.
- If you have both on-street and off-street paid parking, the on-street rates should be higher than the off-street.
- Set on-street parking rates to a achieve a 15% vacancy per block face.
- Adopt the philosophy that parking should be " Friendly, not free"

ex.

» The application of parking management "rules and regulations" mandates a need for an enforcement function.

» The primary goals of an enforcement program should be:

- Have a well-defined set of policies and procedures
- Promote general (not absolute) compliance
- Be consistent, but "unpredictable" in enforcement routes and times.
- Leverage new technology to improve efficiency, effectiveness and productivity.

Primary Program Components

The following are a listing of major components of an effective on-street parking program:

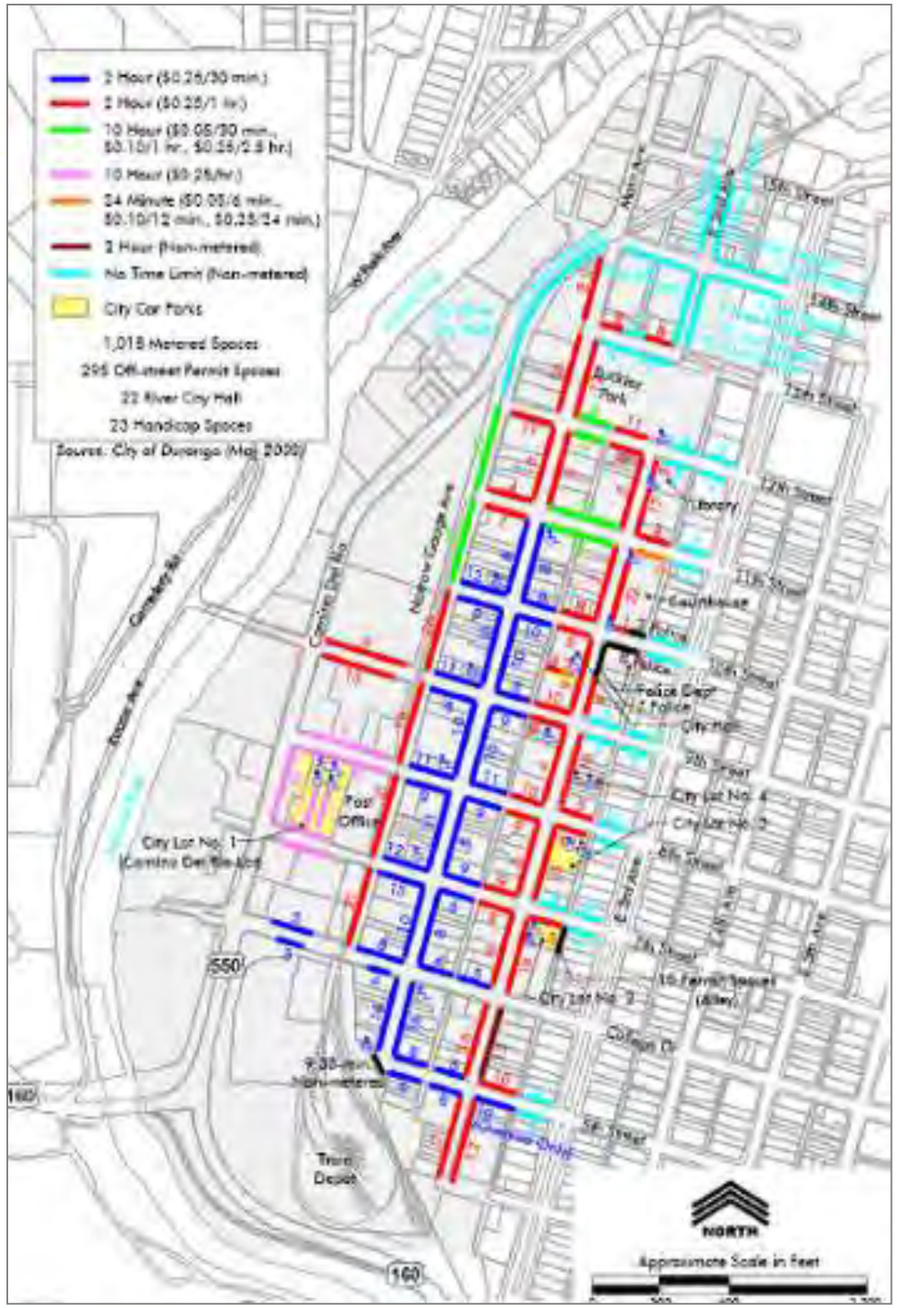
- » Legislative framework
- » Regulations/Fines
- » On-Street ADA Issues
- » Enforcement staffing and deployment
- » Citation Processing
- » Adjudication
- » Collections
- » Scofflaw strategies
- » Residential Permits

Mapping On-Street Parking Time Limits

On-Street parking time-limits should be mapped and changes tracked over time.

- » Mapping on-street time-limits is an important tool for staff education, and communicating with the public.
- » It is a fundamental tool for documenting resource usage, facilitates the analysis of trends and is an effective planning tool.
- » Tracking changes over time creates a record of management strategies that have been used in the past.

ex.



Monitor and Document On-Street Parking Utilization

Documenting on-street parking occupancy is another effective tool to understanding and managing your parking resources.

- » Routinely tracking on-street parking occupancy and documenting the results graphically provides valuable management data.
- » Often there is adequate parking supply despite a wide-spread perception that the parking supply is inadequate.
- » Documenting the true occupancy rates are the first step to effectively resolving parking problems (real or perceived) and can be an effective community educational tool.

ex.

On-Street Parking Utilization Data Analysis

When designing parking utilization data surveys consider the following:

- What are you really trying to find out?
- Do you need to survey all the spaces or can you use limited area sampling?
  - If sampling, what percent is adequate for statistically valid results?
- How survey many passes are needed?
- How frequently?
- What data do we need to collect?

ex.

City of _____

ON-STREET PARKING TURNOVER

Day and Date

Zone 6

Location	Space #	9am	9:30am	10am	10:30am	11am	11:30am	12pm	12:30pm	1p
5th & Santa Monica-Arizona	1									
5th & Santa Monica-Arizona	2									
5th & Santa Monica-Arizona	3									
5th & Santa Monica-Arizona	4									
5th & Santa Monica-Arizona	5									
5th & Santa Monica-Arizona	6									
5th & Santa Monica-Arizona	7									
5th & Santa Monica-Arizona	8									
5th & Santa Monica-Arizona	9									
5th & Santa Monica-Arizona	10									

City of _____

ON-STREET PARKING OCCUPANCY - SAMPLING

Day and Date

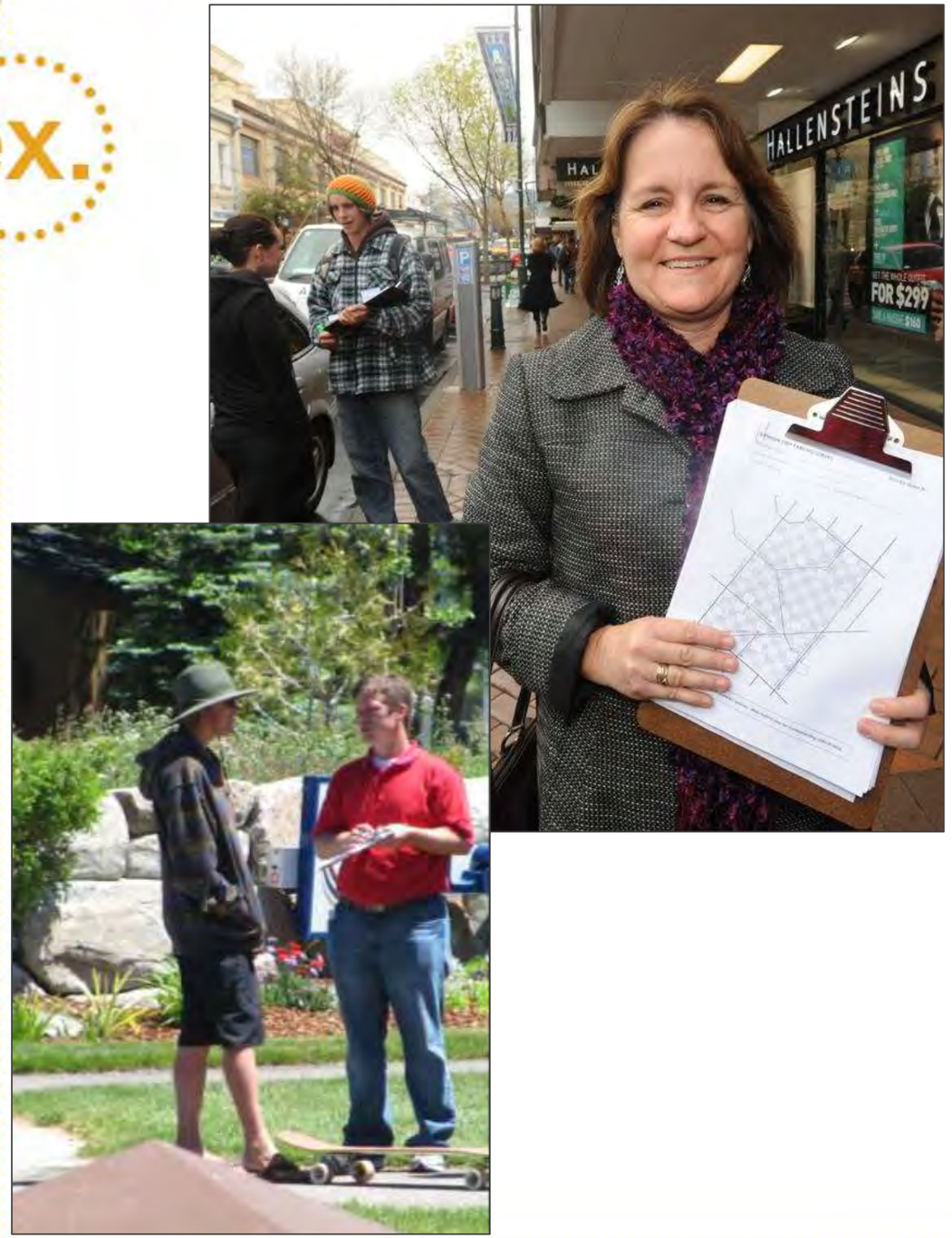
Block #	Spaces	8:00 AM	9:00 AM	10:00 AM	11:00 AM	NOON	1:00 PM	2:00 PM	3:00 PM	4:00 PM
1	6									
2	23									
3	12									
4	9									
5	27									
6	24									
7	65									
8	34									
9	2									
10	31									
11	25									
12	34									
13	56									
14	34									
15	38									
16	44									
17	41									
18	26									
19	23									
20	25									

On-Street Parking Utilization Data Analysis

On-Street Parking Surveys: What data can a parking space yield? (First Pass)

- » Regulation in effect
- » Occupied? (Y/N)
- » Vehicle category
- » Legal status
- » If illegal, ticketed? (Y/N)
- » Residency of occupant (requires full plate - optional)

ex.



On-Street Parking Utilization Data Analysis

What data can a parking space yield? (2nd, 3rd, 4th Pass)

- » Occupied? (Y/N)
- » Occupied by same vehicle?
- » Legal status (including overtime)
- » If illegal, ticketed? (Y/N)
- » Duration of occupancy

ex.

The High Cost of Employee Parking in Short-term Spaces

The following is one approach to quantifying the financial impact of employees taking up on-street spaces.

ex.

Fort Collins, CO Case Study

- There are approximately 8,400 employees in downtown Fort Collins.
- If only 5% of those workers use customer parking spaces, 420 spaces would be unavailable to shoppers.
- If each space turned over four times per day, they would accommodate 1,680 shopper trips.
- If each car carried 1.5 customers, there would be 2,520 customers.
- If a quarter those customers went elsewhere to shop and each customer spent $10.00, the total loss per day would be $6,300.

» Annualized at six shopping days each week, the total loss would amount to nearly $2 million in Downtown revenue.

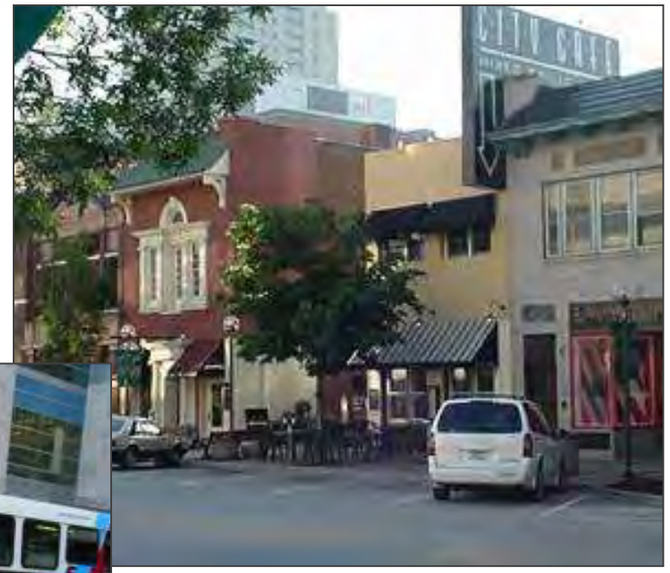
» Obviously this impacts the merchants, but it also impacts the municipality in terms of lost sales tax revenues.

Determining Appropriate Regulations

The following are factors to consider in developing on-street parking regulations and policies:

- Area density
- Area parking mix
- Transportation environment
- Adjacent land uses
- Types of businesses
- Is there a need for:
  - Meters (and what time restrictions and cost)
  - Loading zones
  - Valet zones
  - Permit parking in nearby residential areas

ex.



On-Street Parking Utilization Data Analysis

When analyzing parking utilization data the following are the key metrics to evaluate:

- Occupancy Rate
- Turnover Rate
- Average Duration
- Violation rate
- Capture rate (% ticketed)
- Average time to ticket/unticketed
- Disabled Placard usage
- Impact of non-residents

ex.

Standard Turnover Rate Analysis Output

Parking Space Type	Average Turnover	Average Duration	Number of Time Violations
30-Minute	6.39	43 Mins.	35
1-Hour	5.71	1 hr. 8 Mins.	63
2-Hour	4.17	1 hr. 10 Mins.	59
Disabled	2.00	1 hr. 7 Mins.	NA
Unlimited	3.23	1 hr. 52 Mins.	NA

On-Street Parking Utilization Data Analysis

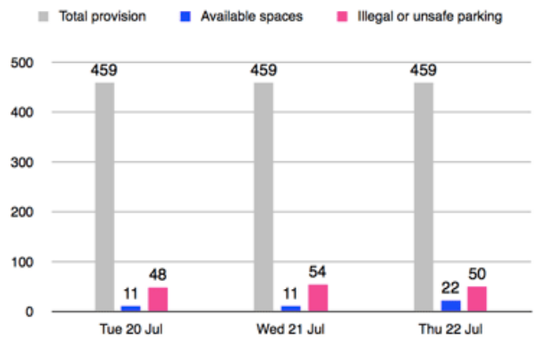
Central Business District - Acceptable Survey Metric Result Ranges

- Unpaid Legal Meter Occupancy Up to 15%
- Meter Violations Capture Rate – 33% overall and up to 40% in core areas
- Duration, or average length of Stay – 67% to 140% of the regulated duration

ex.

Community Parking Survey

Residents in the area have conducted a community parking survey to challenge what is being claimed by the developer. Our own calculations indicate that the transport requirements of the proposed development cannot be met by existing availability in the area.



The parking situation at 10pm on weeknights in July

Existing demand for on-street parking at peak periods, especially in the late evenings and overnight, already leads many drivers to park in unsafe or unsuitable positions such as blocking pavements or on junctions or yellow lines. This factor, which was not taken into account in the survey provided by the developer, illustrates the lack of suitable parking space.

On-Street Parking Utilization Data Analysis

ex.

Central Business District - Acceptable Survey Metric Result Ranges

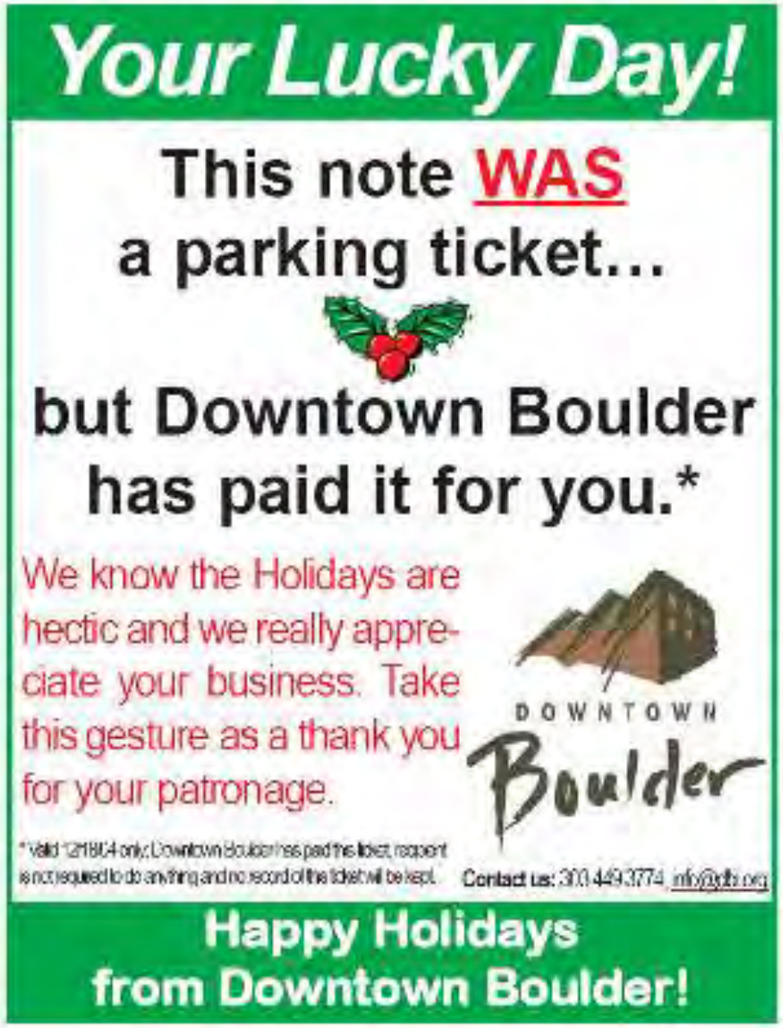
- Total Meter Occupancy –
  - Ideal = 85% average per block face
  - Upper limit: not above 93% to 95%
- Illegal Meter Occupancy – 5- 7%
- Paid Meter Occupancy – 60-85%

On-Street Parking Holiday Shopping Program

Holiday parking ticket amnesties and other forgiveness programs are tools to balance the need for parking enforcement with business encouragement through customer appreciation.

- The Downtown Association paid over $6,000 in customer's parking tickets over the Christmas holidays in Boulder last year.
- In other communities, the parking system simply suspends parking enforcement or replaces citations with holiday notices.

ex.



Wireless Hand-held Citation Issuance

The next generation of hand-held devices has allowed parking field personnel to have access real-time information.

ex.

- Examples include: Real-time scofflaw data for enforcement officers – If a vehicle owner has five outstanding citations and the sixth citation should generate vehicle “booting” - the officer in the field needs to know that this is the sixth citation.
- Roving maintenance staff can now be notified in the field via text message of “low tickets”, “ticket jams”, etc. before traffic backs up.

Wireless Hand-held Citation Issuance

The next generation of hand-held devices has allowed parking field personnel to have access real-time information.

» Examples include: Real-time scofflaw data for enforcement officers –

ex.

On-Street Parking Enforcement Program Components

- Legislative framework
- Regulations/Fines
- On-Street ADA Issues
- Enforcement staffing and deployment
- Citation Processing
- Adjudication
- Collections
- Scofflaw strategies

On-Street Parking – Demand-Based Pricing

Best-in-Class parking programs strive to understand the dynamics of parking utilization within a district, neighborhood or even on a block face level.

They invest the time and energy to generate reliable data on which to base policy decisions. This "data-driven" approach benefits everyone from politicians/policy makers to parking management staff and ultimately to customers and residents.

- The goals are to effectively manage a valuable and limited resource to achieve pre-defined goals.
- With more data available than ever before, parking professionals are in a better position to apply basic economic principles (supply/demand) to achieve targeted results.
- This "demand-based pricing" is being used to create better parking availability and reduce congestion during peak demand periods.

ex.

» New wireless technologies hold great promise in making these approaches to even effective and responsive.

» Linking on-street rates to off-street rates and options is the next critical step.

Real Time On-Street Management Information

San Francisco is implementing a federally funded pilot program of new on-street parking management technologies and approaches.

Benefits include:

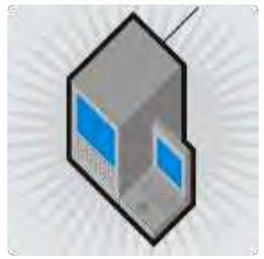
- » Find parking faster
- » Pay more easily
- » Avoid tickets
- » Less circling and fewer double-parked cars give us cleaner air and safer streets for bicyclists and pedestrians
- » With less traffic, public transit and emergency vehicles move more easily

Program Components

ex.

The Sensors

The Meters



Data Feed

Demand Responsive Pricing

SFpark- Overview:

- Using sensors, new meters, and real-time parking data to take the guesswork out of parking in the City.
- Makes parking easier to find and more convenient.
- Benefits will accrue to drivers, Muni riders, bicyclists, pedestrians, visitors, merchants and more.

Pay-By-Cell Phone

No coins to feed the meter? Your time is expiring, but your 3 blocks away? No problem – Pay with your cell phone!

ex.

» How Pay-By Cell Phone Works:

- Once an account is set up, a motorist finds a spot, parks the car, calls a toll-free number and keys in the spot's number.
- If a person is running late, he can remotely buy more parking time with another phone call (assuming it does not exceed the time limit).
- The bill is typically sent to a credit card.
- Customers receive a text message on their phones, warning them five minutes before their time is about to expire.

In-Car Meters

In-Car Meters can be programming for up to twenty time zones with different rates for each zone. They can be used with other systems or as a new "stand alone" system. Controlled parking areas can be increased by adding in-car meters only in fringe areas with no capital investment.

A new version adds time wirelessly via cell phone purchases.

ex.

» User Benefits –

- Convenience
- No need to carry coins or tokens
- System is fair - charging only for the actual time parked
- Motorists receives receipt whenever parking time is purchased
- Replaceable Battery

Meter Time Limit Stickers

If you still have traditional parking meters, the simple addition of meter time limit stickers can greatly improve the user friendliness of your on-street system, especially for the occasional user.

» Some systems use colored meter polls to indicate time limits, however, this assumes the customers are familiar with the color-coding system.

» The meter time limit stickers are more easily understood by first time visitors.

ex.

Public Relations – "Meter Angels"

Sometimes called the "Meter Angels" program, the Business Improvement District in Boulder will add 15 minutes of time to customer's meters and leave the note below on the vehicle's windshield.

ex.

- On one hand local businesses directly benefit from the parking space turn-over that an effective enforcement program helps provide.
- On the other hand no one likes to receive a parking ticket.
- This program aims at taking the edge off by providing a cushion for those who may be running just a little late.
- Even it the patron still receives a ticket, the effort by the BID is still appreciated.

Creating a Friendly "On-Street Personality"

If we think beyond the job of monitoring on-street parking and issuing citations to vehicles that are in violation of the rules, what else comes to mind?

» Many communities, in an attempt to create an enhanced sense of place and to make downtown a more desirable destination, are transforming "parking enforcement officers" into "Downtown Ambassadors".

» This expanded (and more positive role) can be very successful when a focus on creating a friendlier "On-Street Personality" is prioritized.

» This goes beyond the attitude of the ambassadors; it includes streetscape design, retail enhancements, pedestrian amenities, etc.

ex.

Progressive On-Street Parking Pricing

Progressive Pricing in Combination with the Elimination (or Extension) of Time Limits

- This strategy merges two cutting-edge on-street parking management strategies to provide more flexibility for a variety of trip purposes with different time limits while maintaining turnover.
- This strategy uses standard rates from one hour to two hours, and rates that increase for any period over two hours.
- The elimination of time limits could be used to increase utilization in under-performing areas by essentially changing the type of parking use permitted in an area.
- A modified approach could be to not fully eliminate time limits, but expand the time limits to allow longer stays (for example, from two hours to four hours).

ex.


IPI International Parking Institute Conference & Expo 2012

Implementing On-Street Market Based Rates

Michael Klein, CAPP
Executive Director Albany Parking Authority

Progressive On-Street Rates Eliminate Time Limits, Enhances Customer Service, Generates Turnover, Supports Economic Development, and Improves the Bottom Line

Presented at the June 2012 IPI Conference and Exposition

50 Years Advancing The Parking Profession

app.parking.org

Ch. 12

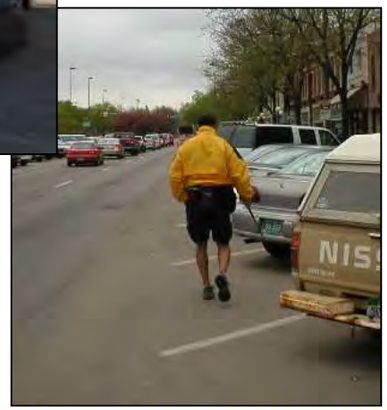
Effective Parking Enforcement Strategies

Enforcement Technology

The use of advanced parking enforcement technology can have a dramatic impact on the effectiveness and efficiency of your parking enforcement program.

ex.

- The use of License Plate Recognition (LPR) systems to automate the enforcement of time-limited areas through the use of efficient “electronic chalking” improves the accuracy and efficiency of enforcement efforts.
- These systems utilize GPS locators and generate real-time scofflaw lists.



On-Line, Real-time Citation Management Systems

The use of advanced parking enforcement citation management systems provide on-line, real-time information to parking enforcement officers on the street.

ex.

- This is critical to effective program implementation.
- It tells the officers which vehicles have previous citations and the status of their accounts.
- If the vehicle is “boot or tow eligible” due to its “scofflaw status”, the officer will know it in real time and be able to take the appropriate action based on departmental policy.

Fine Structures

Parking fine structures should be developed to address the specific problems you are trying solve.

» In the example to the right, the fine structure was modified to be more forgiving to infrequent violators (typically visitors) and more punitive on repeat offenders (typically employees parking in short-term spaces.

» In addition, incentives are built into the fine structure to promote prompt payment and thereby improve the “citation collection ratio”, a key program effectiveness benchmark.

ex.

Overtime violation within 12-month period	Current Amount	Proposed Amount	After 8 days fine increases to:
1st overtime	$10	Warning	N/A
2nd overtime	$20	$10	$20
3rd overtime	$40	$25	$50
4th overtime	N/A	$50	$75
5th overtime	N/A	$75	$100
6th or more…	N/A	$100	$150

On-Line Citation Payment Options

Allowing the payment of non-contested parking citations on-line improves customer service, increases your citation collection ratio (and therefore revenue) and improves collections processing efficiency.

ex.

- Helps meet goals of providing timely, customer oriented services.
- Accepts multiple payment options including credit cards.
- Simple, straightforward processing.

Separation of Duties in Parking Citation Adjudication

Just as the concept of "separation of duties" is a key auditing principle when evaluating program financial accounting, the same concept applies to parking citation adjudication (appeals processes).

ex.

» The agency/department that issues parking citations should not be the same entity that reviews and processes contested citations.

Ch. 13

Effective Facility Maintenance Practices

Hinged Light Poles

Many times parking systems know they have a few lights out, but it is expensive to bring in a bucket truck to change just one light, so they live with the liability until we have more than one light to replace better justifying the expense.

ex.

» Hinged light poles make it possible for two men to change out light bulbs without the expense of a bucket truck.

» This approach reduces liability, improves safety and reduces cost.

Striping Removal

Occasionally, due to operational changes, old parking stripes need to be removed. After trying several removal strategies the use of a 3M product called “Peel Away” proved most effective.

ex.

- Removal of the existing paint was initially attempted using high pressure water treatment alone.
- Chemical removal of the existing striping with MEK (Methyl Ethyl Ketone) proved ineffective and raised environmental/disposal concerns.
- Another option attempted was to try and paint over the stripes attempting to match the color of the concrete.

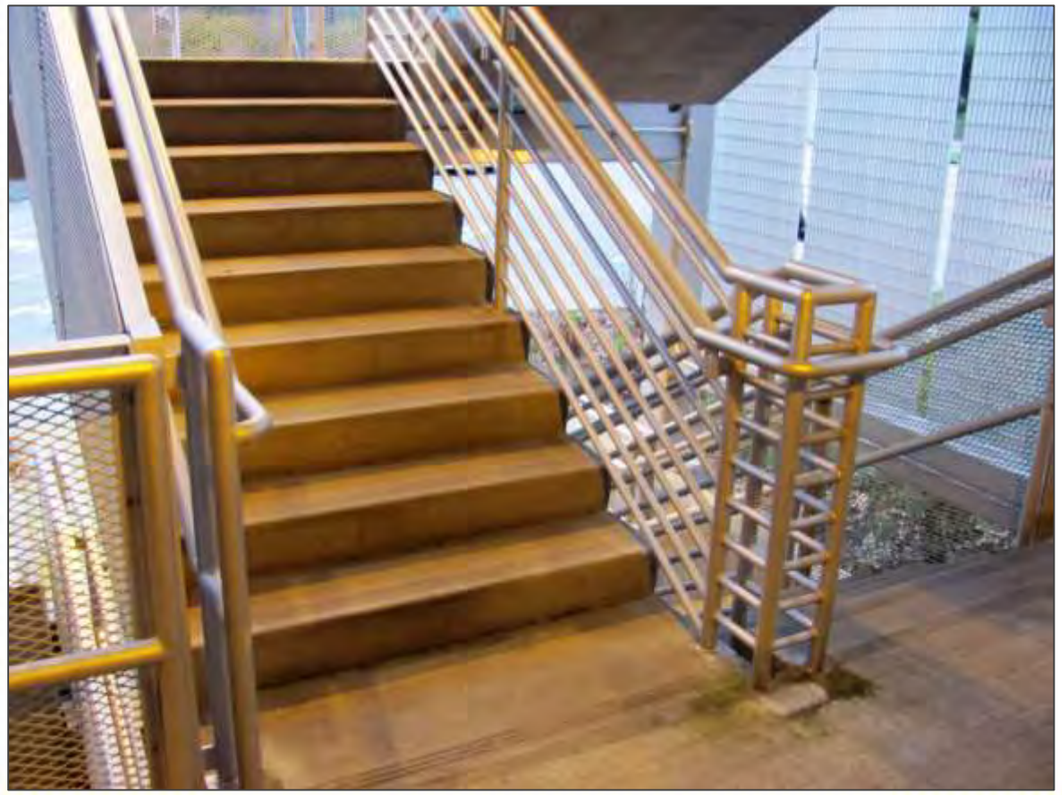
Invest in Maintenance Free Infrastructure

Traditional metal stair railings an other metal parking garage elements eventually rust and need to be painted.

An initial investment in stainless steel or galvanized metal elements can pay big dividends in the long run on maintenance savings and a better looking facility.

ex.

» Elimination of this type of maintenance headache is estimated to save a minimum of 80 maintenance man-hours per year per garage.



Bird Management

Avipel is a nuisance bird repellent.

The cost of Avipel is less expensive than other mechanical options. It also is easier to apply and more economical to the end user.

Endorsed by PITA and the American Human Society

ex.

» The material is applied to surfaces where birds land. The birds will then walk, stand, or roost on the material. As the bird preens it is inevitable that the bird will ingest the anthraquinone (referred to as AQ). This will cause a short-lived gut reaction that lasts for a short time. The bird will then realize that the AQ is noticeable through the UV light spectrum and associate the ill feeling with the UV sight and refrain from going to that area.

AVIPEL™

Environmental Responsibility

Mobile Parking Garage Cleaning Systems are designed for specific types of pressure washing or water jetting activities, designed to provide an affordable, safe method for quick, simple on-site treatment of the wastewater generated to remove contaminants, such as oil, grease, hydraulic fluids, trace metals, PCBs or paints.

ex.

» The basic components of these mobile systems include a pressure washer or water jetting equipment
- Heater (optional)
- Vacuum/Recovery System
- Waste Water Processor

Budget:
$0.05 – $0.12 per square ft.

Fluorescent Lamp Recycling

Spent Fluorescent Lamps Must be Properly Handled and Stored to Limit Mercury Exposure.

ex.

» Energy efficient fluorescent lamps can contribute to a cleaner environment, but they must be managed properly. For most us, fluorescent lamps present the single greatest risk of mercury exposure in the work place. Protect the health and safety of your employees and customers
  - » Reduce the soft costs of managing mercury waste
  - » Reduce your company's risk and liability
  - » Improve your regulatory compliance

Ch.
14

Facility and Equipment Protection Systems

Automated Pay Station Shelters

With the recent rapid growth of automated pay stations, shelter providers have begun developing special products to protect your investment and minimize repair expenses.

ex.

- These shelters are designed to increase equipment longevity by protecting them from rain and snow.
- Features include:
  - Translucent fiberglass roof
  - Tempered safety glass
  - Aluminum kick panels
  - Elevated wall panels to facilitate ventilation and drainage
  - Options to accommodate graphics and signage.

Collision Avoidance Alarms

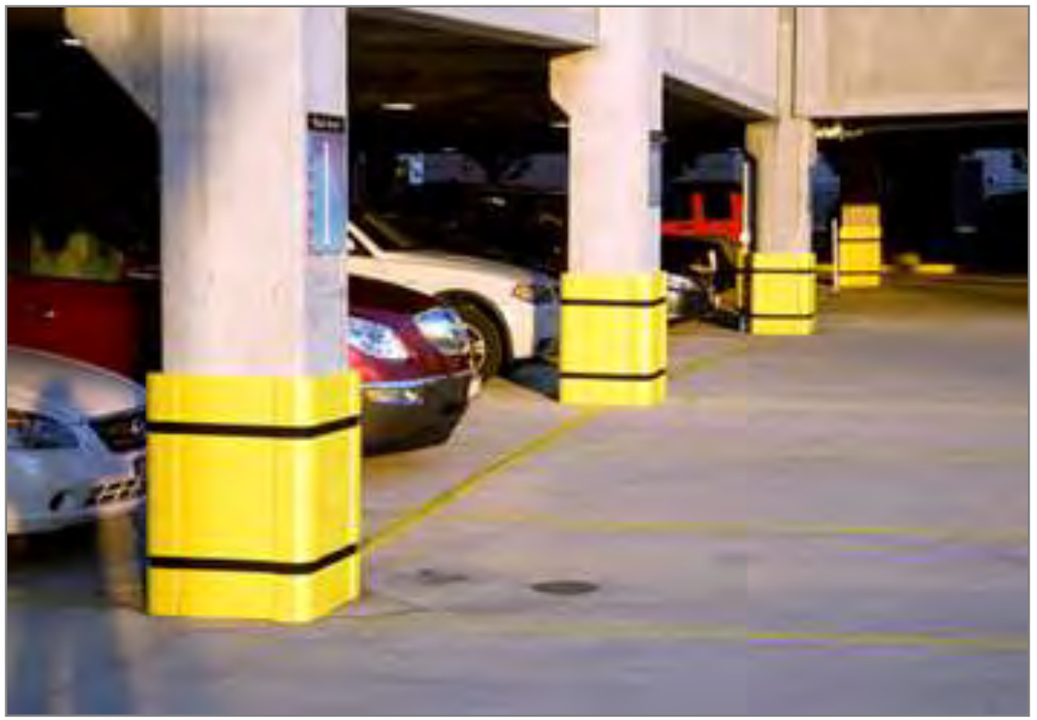
Collision avoidance alarm systems help prevent costly repairs and injuries caused by collisions between oversized vehicles in parking garages and other facilities.

ex.

- When installed in front of (and slightly below) roll up doors and overhead objects, any contact with the Watchman triggers a 120db siren and flashing red lights, warning forklift drivers and warehouse management before a collision occurs.
- In addition to overhead doors, the Watchman can be used to protect conveyor systems, canopies, walls, pipes, sprinklers, ducts and other overhead fixtures.
- The patented* Watchman can be purchased for a fraction of the average repair bill for a damaged overhead door, making it practical to equip your entire facility with this unique safety device.
- www.alvarado.com

Column & Vehicle Protection Systems

Products such as “Park Sentry” provide flexible and cost effective options to protect customer vehicles and concrete columns in parking structures.



ex.

- Protect square or rectangular concrete columns in parking garages without adding bulk to the column.
- Park Sentry creates a safe zone around the column, protecting both the column and vehicles from collision damage.
- It is scratch, abrasion and collision-resistant, and can be installed quickly without tools for immediate protection.
- www.sentrypro.com

Flex Posts

Flex post signs spring back to their original position after being hit. No sign, pavement or vehicle damage. No replacement required.

- Signs get hit.
- They bend. They break. They require replacement.
- They cost more than their purchase price.
- Their appearance impacts your professional image.

ex.

www.flexpost.net

Height Clearance

Parking structures have limited height restrictions. "Headache Bars" are the traditional solution. New electronic sensor systems detect over-height vehicles and activate flashing electronic signs to more effectively alert drivers.

» Electronic height detectors utilize an "electric eye" at a predefined height. If the sensor is tripped by an oversized vehicle a flashing over-height warning sign is activated.

ex.

Ch.
15

Valet Parking Best Practices

Centralized Downtown Valet Parking Programs

Park your car at any location, pick it up at any number of other locations. This best practice encourages downtown patrons to walk, shop and explore.

Successful programs have several elements in common:

- A consolidated, single-operator parking management agreement.
- The operator is selected via a competitive process.
- A detailed management agreement specifies City approved terms and service criteria.
- Supported by a well-defined Valet Parking Ordinance.
- Has well-defined valet station and signage standards.
- Leverages state-of-the-art valet management technology

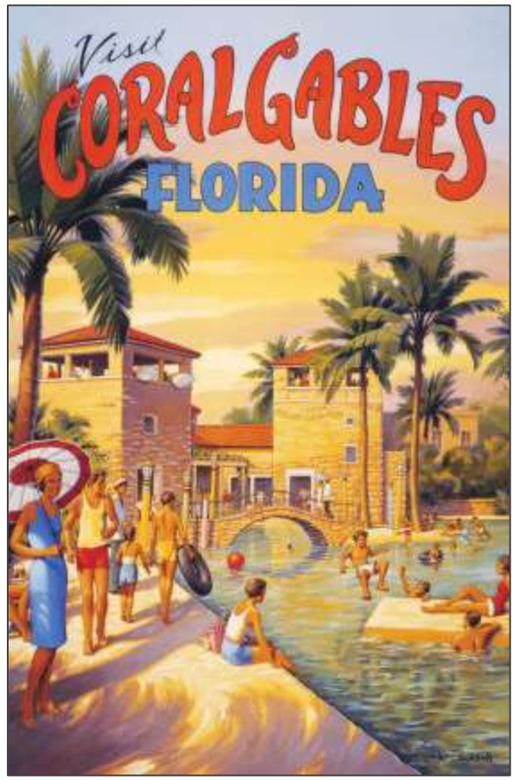
ex.

Centralized Downtown Valet Parking Programs

CASE STUDY:

Coral Gables, FL

Miracle Mile Shopping District



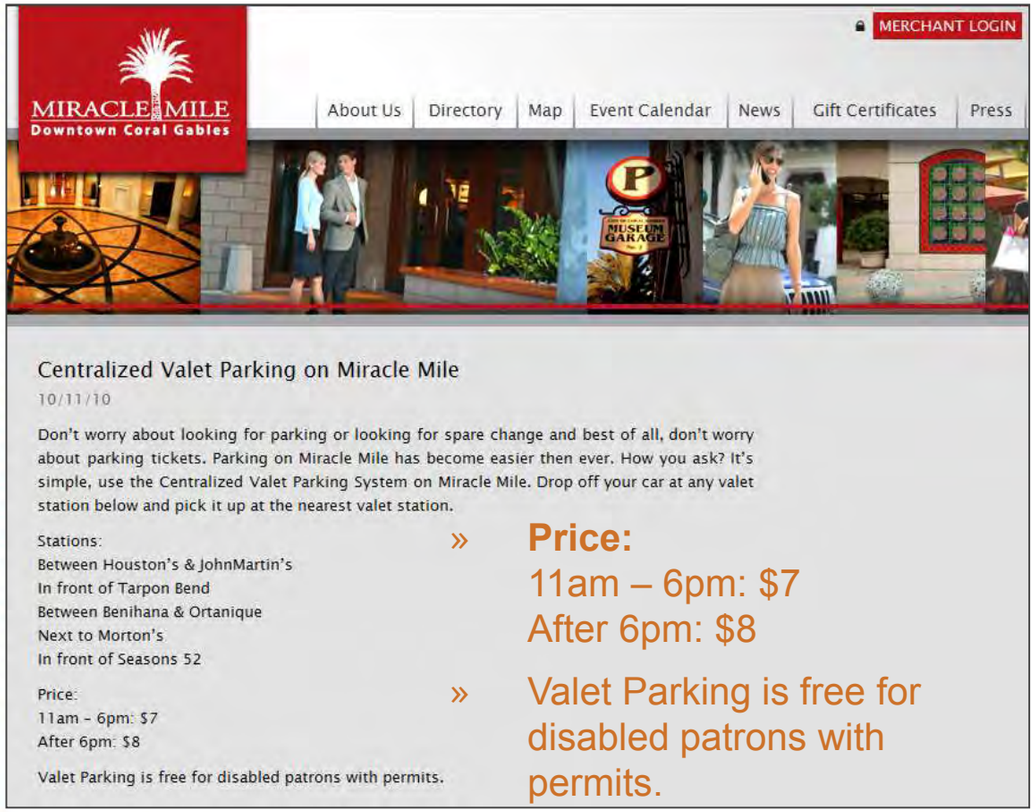
Webpage Introduction:

» Don't worry about looking for parking or looking for spare change and best of all, don't worry about parking tickets.

» Parking on Miracle Mile has become easier then ever. How you ask? It's simple, use the Centralized Valet Parking System on Miracle Mile. Drop off your car at any valet station below and pick it up at the nearest valet station.

ex.

» Valet Stations:
  - » Between Houston's & JohnMartin's
  - » In front of Tarpon Bend
  - » Between Benihana & Ortanique
  - » Next to Morton's
  - » In front of Seasons 52



» **Price:**
11am – 6pm: $7
After 6pm: $8

» Valet Parking is free for disabled patrons with permits.

Valet Express Program

Call ahead service for Valet operations to reduce waiting times for vehicle retrieval.

» Preprinted cards handed out upon arrival with local phone number to call 10-minutes prior to departure.

ex.

Advanced Valet Parking Management Practices

Self-serve Request Kiosks

The most popular casino valet systems are equipped with **high definition digital camera lane technology**, VIP Request kiosks, valet management software and even a mobile PC interface to keep management informed – real time!

- Self-serve Request Kiosks allow departing customer to initiate their vehicle retrieval simply by scanning their bar coded valet parking ticket at the built-in reader.
- Customers may wait inside a climate controlled space in view of the staging area until their vehicle is retrieved

ex.

- A dial-up request module allows visitors to request vehicles by cell phone or text message.

Advanced Valet Parking Management Practices

HDIP Digital Camera Interface

ex.

One of the more popular system modules is the HDIP Digital Camera Interface. It provides the comfort of knowing whether or not an alleged damage liability was incurred while the vehicle was in your care.

» No more guess work, irate customers and time consuming case building. Here, a picture is worth a thousand words.

Advanced Valet Parking Management Practices

HDIP Digital Camera Interface

Wireless Mobile Technology has become another popular tool and can be very effective in the right application.

» Hardware options range from a compact blue-tooth wireless scanner designed primarily to ‘time-stamp’ newly issued tickets in the lane, to full featured mobile PPT’s with built-in license plate recognition.

ex.

Advanced Valet Parking Management Practices

Valet Parking Management iPhone App

The new **iValetParc.net** could be a game-changer. It is a powerful, visually appealing and user-friendly valet parking management application.

ex.

» In addition to its wireless mobility, it also features an intelligent data management solution called ICDataFlow™ and revolutionary new VisualValet™ concept (patent pending).

STS service tracking systems.net

Kimley»Horn

SRF

Ch. 16

Parking Facility Safety & Security

Passive Security Design Features

Investing in “passive security” features pays dividends in the long run.

ex.

- Passive security is defined as any device or technique not requiring a human response, such as lighting, fencing, glass-backed elevators and stairwells, etc.
- Passive security is more cost effective, and if done well, contributes to a patron’s feeling of safety and comfort within a facility.

Parking Safety Escorts

Parking escorts for employees and downtown patrons is a much valued service in many communities.

ex.

- These programs are often done in collaboration with a Business Improvement District, a large downtown employer or with a consortium of downtown restaurants.
- In some cases, off-duty police are engaged to provide this service.

Secure Parking Deck Stairwells!

Eliminate potential “hiding places”.

Secure areas below stairwells for safety and to create additional secure storage area.

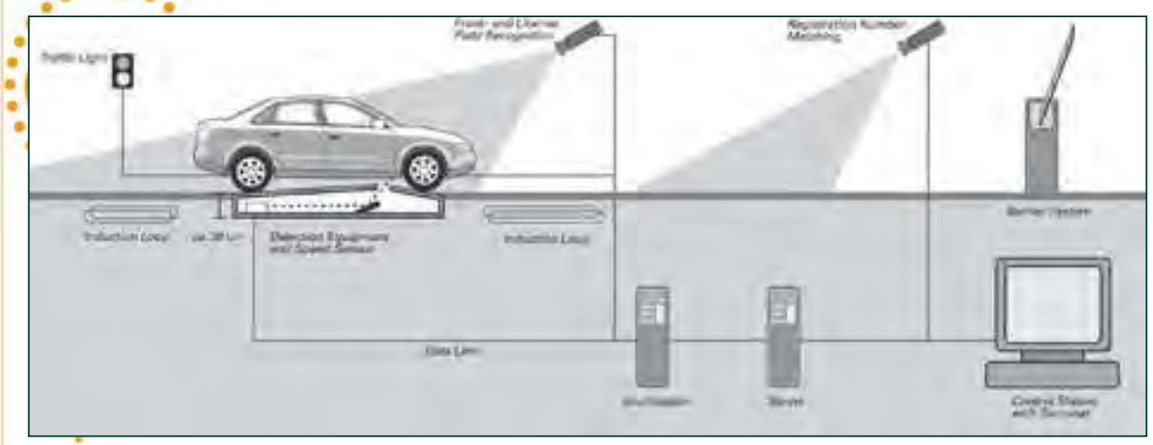
ex.

- Wire Mesh Protection Door with automatic closure and lock will limit access to roofs, basements and behind stairwells.
- It eliminates possible hiding areas and improves parking facility security.
- It also creates additional on-site secured storage areas.

Under Vehicle Monitoring Systems

In today's ever changing world, Security is on the minds of Industry Professionals.

In response to the security challenges in the parking environment, under vehicle monitoring systems are a new option to consider.



» BENEFITS

- Highly mobile for temporary applications with speeds up to 35 mph
- High resolution imagery with tremendous "zoom" capabilities
- Automated license plate capture with underside vehicle "matching"
- Extensive statistical analysis on collected vehicle data.

Ch. 17

Risk Reduction and Liability Limitation

Parking Lot Safety Products

1 in 5 accidents occur in parking lots!

» One way to defend against this is to provide devices help to enforce safer driving behavior, ensuring pedestrians and drivers are protected from the dangers often found in these areas.

» By using recycled materials, we can contribute to our program sustainability goals and enhance the longevity of these products.

ex.

» PARK –IT CAR STOPS

- Year Installed: 1998
- Year Photo Was Taken: August 2008
- Installation Location: Owensboro, KY
  - This is a photo of the Park-It Car Stops installed at a beauty salon in Owensboro, KY in 1998. Used to help guide vehicles when pulling into a parking stall, this installation was done on asphalt using rebar spikes and is 11 years old!

SAFESTPARKINGPRODUCTS.COM
PARKING LOT SAFETY SOLUTIONS
Division of GNR

Smart Gates

“Smart Gate Technology” incorporates non-contact safety sensors for parking barrier gates.

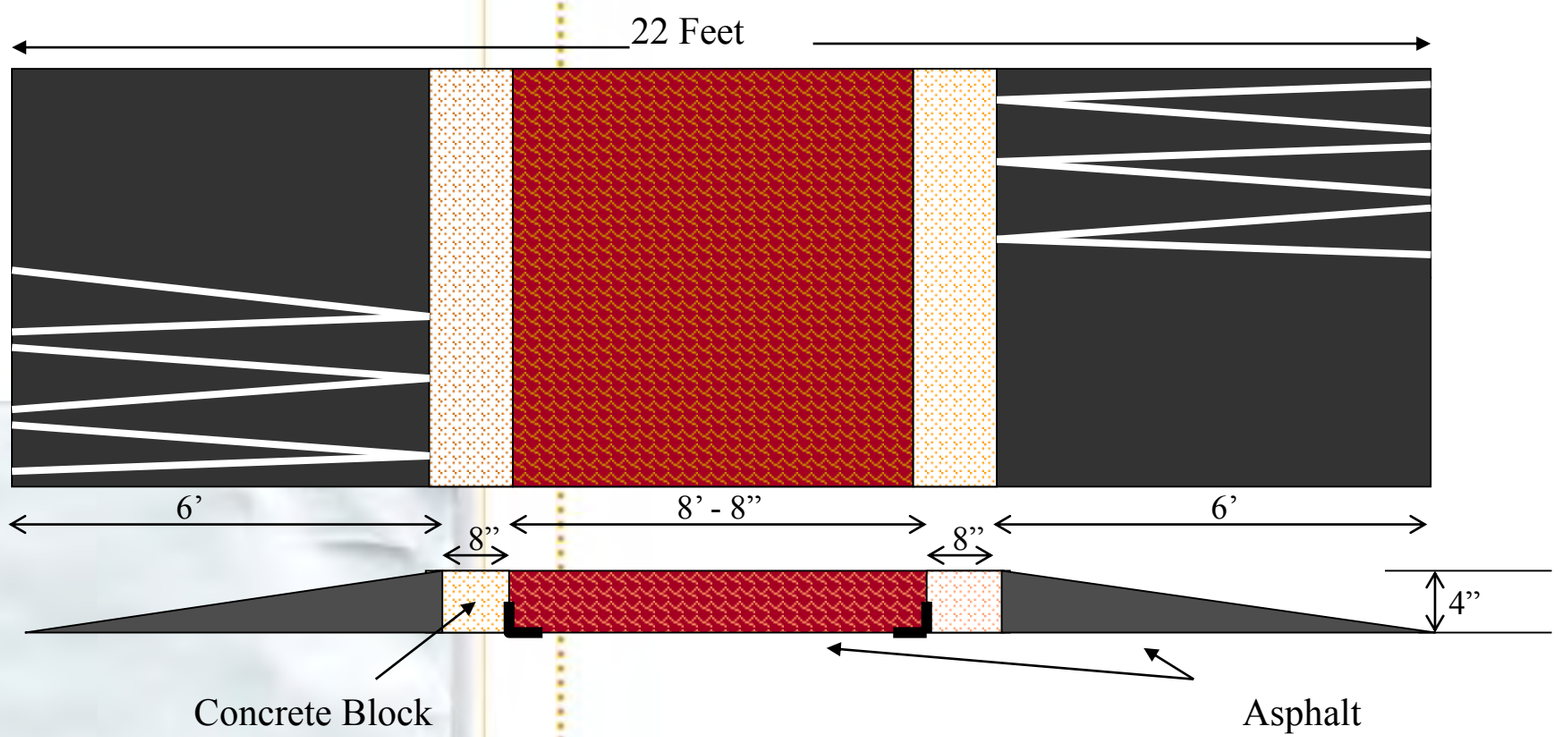
ex.

- This technology places protection in front of moving doors or gates by providing a non-contact safety field that moves with and precedes a gate arm or door to sense potential contact before it happens and prevent it.
- This technology can reduce damage claims due to alleged gate malfunctions.

Traffic Calming (Raised Crosswalk/Speedhump)

Raised crosswalks or “speedhumps” can enhance pedestrian safety in pedestrian/vehicular conflict areas.

ex.



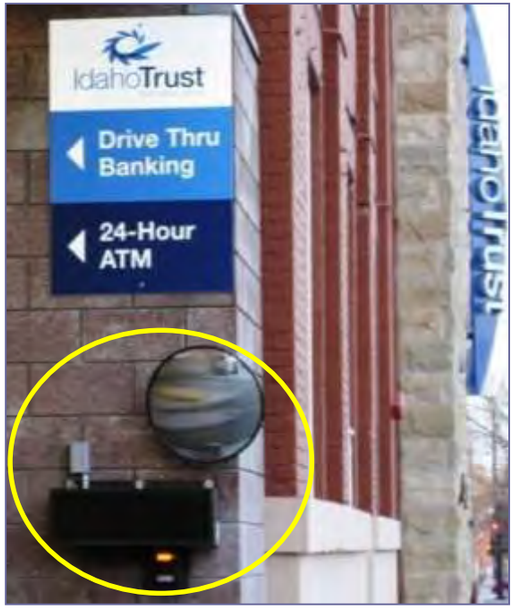
- This traffic calming strategy is primarily used in residential areas.
- One key to a successful “speedhump” is a large enough “table” for a full-size vehicle to fit on to reduce excessive vehicle bouncing.

Pedestrian Safety Options

Flashing Signs with audible signals activated by exit lane loop detectors alert pedestrians on the sidewalks approaching parking garage portals of on-coming vehicular traffic.

» Other pedestrian safety elements include signage and convex mirrors.

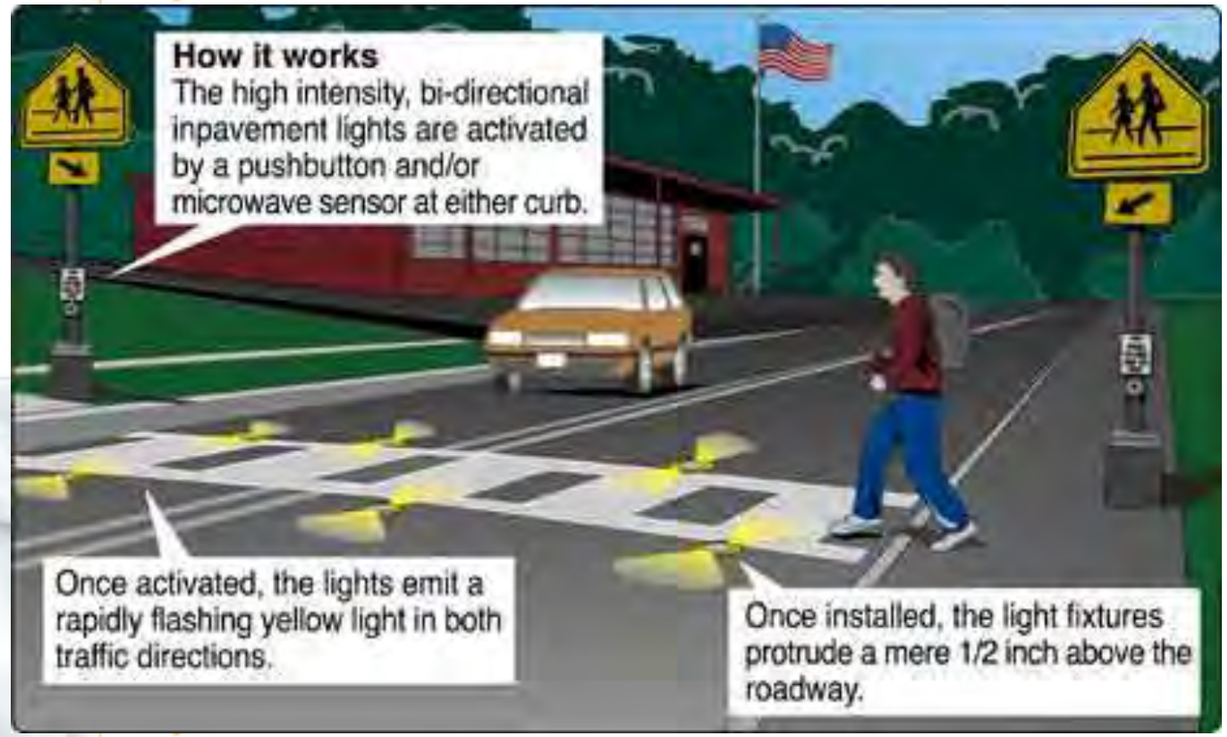
ex.



Pedestrian Safety

Lighted crosswalks activated by push button or microwave sensor enhances pedestrian safety.

ex.



Illuminated Gate Arms

Designed to provide exceptional visibility, particularly between dusk and dawn.

» Illuminated gate arms are a new feature, which offers safety advantages especially in areas with high pedestrian activity.

ex.

Hi Def Digital Camera Modules

The idea of documenting the physical condition of a vehicle in order to ascertain the origin of damage liability has become a valet industry best practice.

» However, the use of new High Definition IP Digital Camera Modules has taken this standard to the next level.

» In this case, a picture really is worth a thousand words!

ex.

FEATURES & BENEFITS

50% - 80% Claims Reduction

Pre-Existing Damage Assessment

Positive Valet Driver Identification

Missing Key Prevention

Instant Picture Recall

Search By Date/Time/Make/Plate/Name

Complete Case Report Generator

Indefinite Vehicle Data Storage

License Plate Recognition

Vehicle History File

Visual History File

Visual Screen Tools (Move, Capture, Zoom)

High Zoom Capabilities Without Pixelation

Mpeg Vehicle Scan Option

STS service tracking systems.net

Ch.
18

Residential Parking Permit Programs

Neighborhood Parking Permit Programs

A Neighborhood Permit Parking zone is a residential area where on street parking is restricted. NPP programs are developed as a tool to balance the needs of all who park on our streets, including residents, visitors and commuters.

- To be considered for an NPP zone, neighborhood residents assess their parking needs by working with the City to determine the feasibility of a potential parking permit zone.
- After at least 25 neighbors have applied by petition, the City initiates a multi-step process for development and approval of a new zone.

ex.

Boulder, CO

Ch. 19

Staff Development and Training

Library of Parking Reference Materials

Create a library of parking reference materials for staff training and development.

Recommended Parking Planning and Management Resource Library

The following is a basic bibliography of good parking planning, general management and marketing texts that can increase your staff's knowledge:

Parking Planning

i. Parking 101, A Parking Primer – International Parking Institute Fredericksburg, VA, 2002

ii. Parking 102, Parking Management ~ The Next Level – International Parking Institute Fredericksburg, VA, 2004

iii. Parking 103, Parking Management - Planning, Design & Operations – International Parking Institute Fredericksburg, VA, 2004

iv. Parking - Robert A. Weant and Herbert S. Levinson, Copyright - Eno Foundation for Transportation, Washington, DC, 19

v. Parking Structures, Planning Design, Chrest, Mary S. Smith, Sam Bhuyan, 2001

vi. The Dimensions of Parking - Various National Parking Association, Fourth

vii. Parking Generation – Institute of Tra Washington, DC, 1987

viii. The Parking Handbook for Small Co Institute of Transportation Engineers,

ix. Shared Parking Second Edition – St Institute, Mary S. Smith, Washington,

x. Lighting for Parking Facilities – Illumi Publ. No. RP-20-98, 2nd Edition, New

xi. Recommended Guidelines for Parki Parking Association, Publication No.

xii. Implementing Effective Travel Dem of Transportation Engineers, ITE Publ

Kimley-Horn and Associates, Inc.

Architectural Graphic Standards – American Institute of Architects, ISBN: 0471302574, Wiley John & Sons, Incorporated, Illustrated, 2000

The High Cost of Free Parking – Donald Shoup, American Planning Association, Planners Press, Chicago, ISBN: 1-884829-99-8, 2005

General Management

The Portable MBA – Eliot G.C. Collins, Mary Anne Devanna, John Wiley & Sons, New York, NY, 1990, ISBN: 0-471-61997-0

Good to Great – Jim Collins, Harper Business, New York, NY, ISBN: 0-06-662099-6, 2001

The Five Dysfunctions of a Team – Patrick Lencioni, Jossey-Bass, San Francisco, ISBN: 0-7879-6075-6, 2002

QBQ – "The Question Behind the Question" and Raising the Switch – John G. Miller, The Penguin Group, New York, NY, ISBN: 0-399-15295-4

The 4 Dimensional Manager – Julie Straw, Berrett-Koehler Publishers, Inc., San Francisco, ISBN: 1-57675-130-9

Downtown Management

Making Business Districts Work – David Feehan, MSW, Marvin D. Feit, PhD, The Haworth Press, Inc., Birmingham, NY, ISBN: 0-7890-2395-3

Economic Development

Economic Development in Local Government – Roger L. Kemp, McFarland and Company Publishers, Jefferson, NC, 1995, ISBN: 0-7864-0095-1

Marketing

Guerrilla Marketing – Jay Conrad Levinson, Houghton Mifflin, Company, Boston, 1993, ISBN: 0-395-64496-8

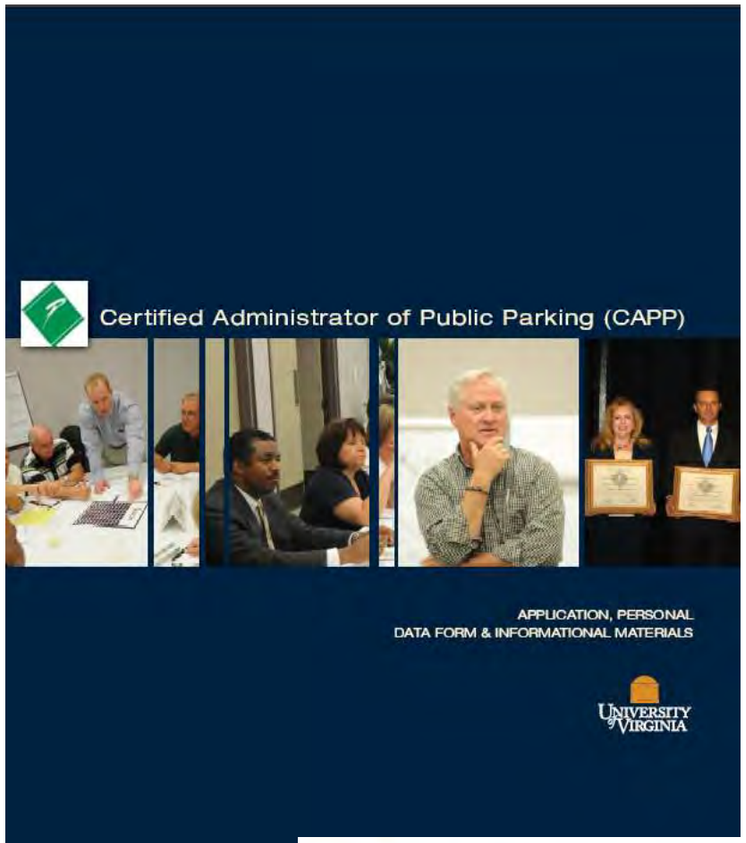
Waiting for Your Cat to Bark – "Persuading Customers When They Ignore Marketing" – Bryan E. Jeffrey Eisenberg, Nelson Business, Nashville, TN, ISBN: 0-7852-7897-1

Kimley-Horn and Associates, Inc.

- Slowly the parking industry is beginning to build up a good selection of text books in a variety of areas.
- Both the IPI and the NPA have some excellent publications on parking design, maintenance and management.
- Other groups such as the Urban Land Institute, the American Planning Association, the Eno Foundation, the International Downtown Association and the Transportation Research Board also have a variety of parking and transportation offerings.

Certified Administrator of Public Parking

The Certified Administrator of Public Parking program offered by the International Parking Institute is the most respected certification program in the parking industry.



"The CAPP Program is an outstanding program that is far superior to any other educational program in the industry."
-Greg Stormberg, CAPP, CPP

ex.

» **Why CAPP Certification?**
Parking and transportation services have become a major element affecting the lives and activities of millions of citizens in the United States, Canada and around the world. As an industry, parking now accounts for billions of dollars and more than a million jobs each year, and as a profession, it is now a serious career choice. As such, it demands continuous information and specialized training.

The International Parking Institute, and the University of Virginia, have combined their resources to create a rigorous program of professional training and examination culminating in the awarding of the designation, Certified Administration of Public Parking (CAPP).

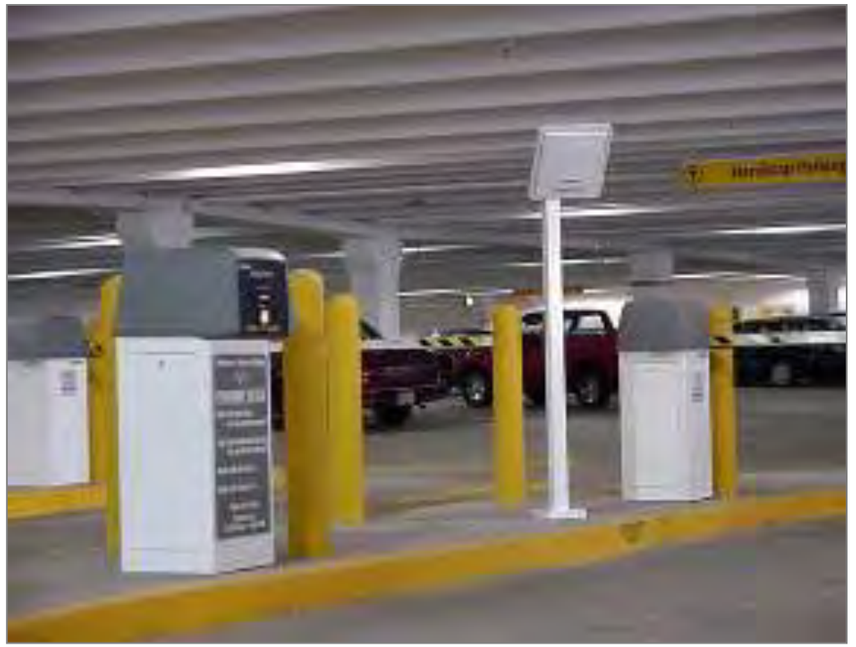
Ch.
20

Parking Access & Revenue Control Systems

Hands Free Access

Automatic Vehicle Identification (AVI) systems provide a more customer friendly system while improving security (no stopping, no rolling down windows and enhances driver safety by keeping their hand on the wheel and eyes on the road.) It also increases vehicle through-put during peak demand periods.

ex.

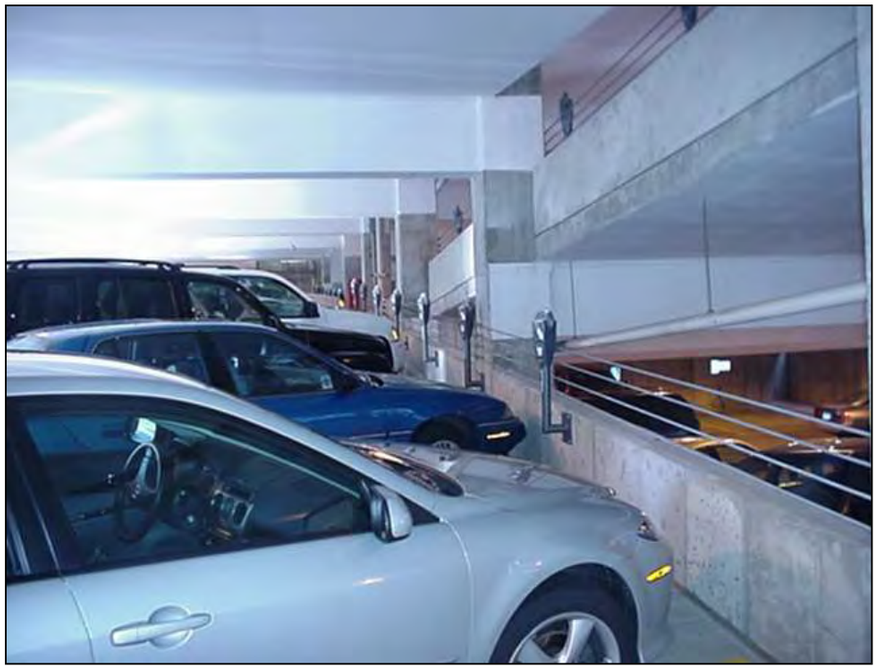


- » Radio signal from reader activates tag
- » Transponder reflects data
- » Reader processes data and
  - a. Opens gate if valid
  - b. Sends data to host CPU
- » Host processes data, and records transaction

Metered Transient Parking

For situations where there are only a limited number of transient spaces within a facility, controlling/charging for those spaces with meters can be a cost effective alternative to traditional exit cashiering.

ex.

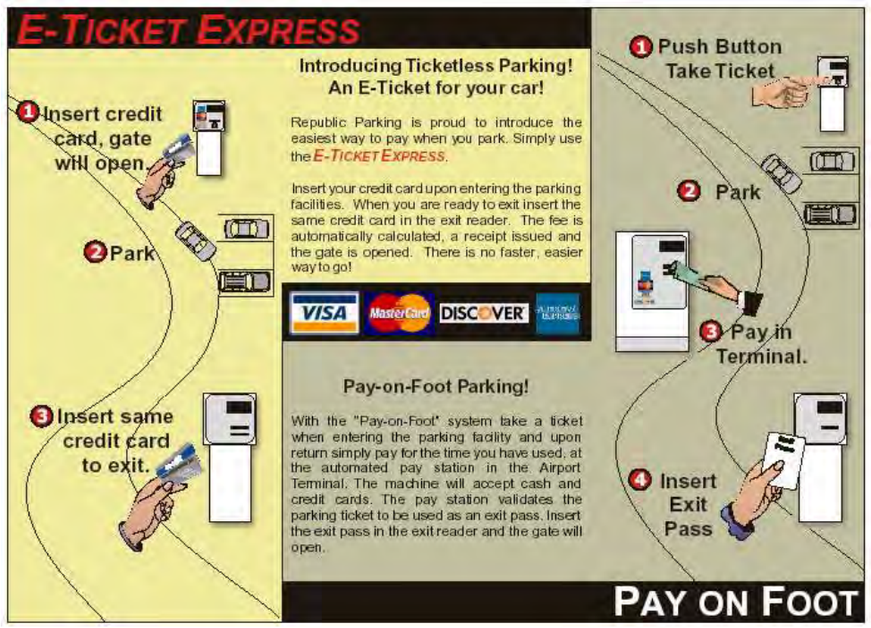


- In the facility to the right there were just over a hundred transient spaces available, the rest were reserved for monthly parkers. The revenue stream from the transient spaces would not have justified two shifts of exit cashiers, plus supervision, fee computers, booths and other capital items.
- Note that there are still staffing costs with this option as the meters need to be enforced.

Ticketless Parking

Ticketless parking provides several advantages to customers and parking systems – This strategy is also known as Credit Card In/Out. It can work in conjunction with other systems, such as pay-on-foot.

ex.



- This operational model offers customers the benefits of quick in and out and easy payment.
- The operational benefits are that it is attendantless, and therefore lowers operating costs and it is cashless, thereby reducing the potential for theft.
- The reduction in operating costs more than makes up for the minimal credit card fees.

Ch. 21

Parking Accounting and Auditing

Patron Fee Displays

While not new, patron fee displays remain an important customer service and revenue control feature in a cashiered facility.

It is important in locating the fee display that the cashiers cannot conceal the display, a factor that is often overlooked.

ex.

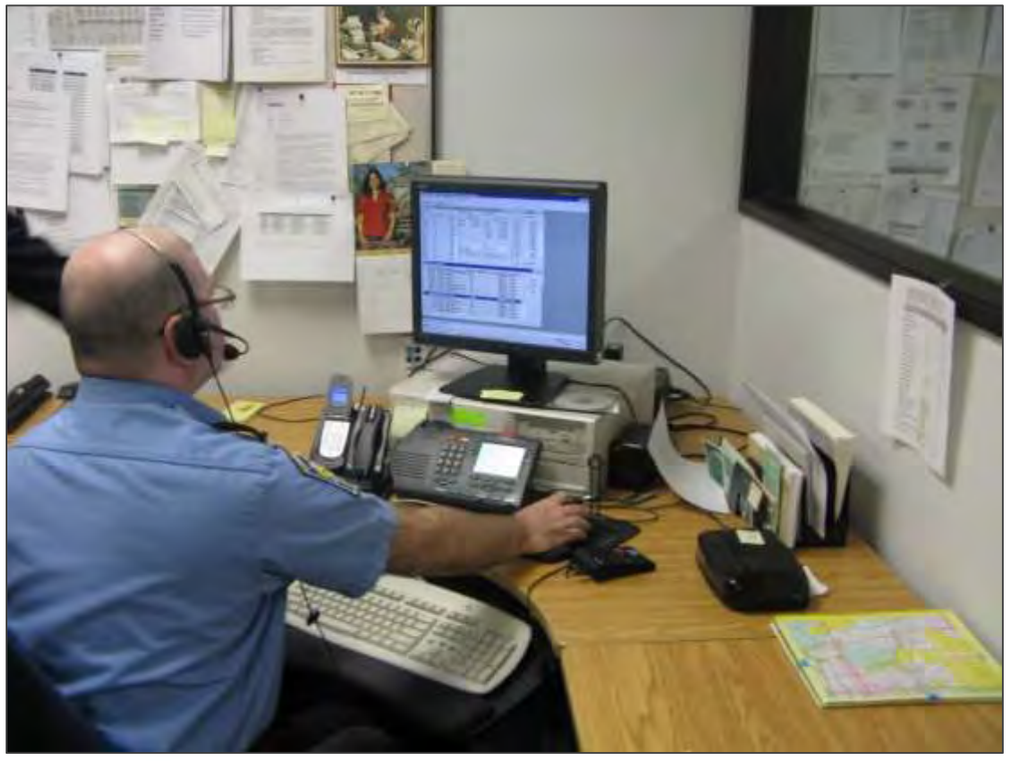
» BENEFITS

- An important revenue control feature
- Large, easy to read displays
- Custom messaging possible

Successful Revenue Control

is Partly a Matter of Organization and Detail Orientation

Effective auditing relies on detailed reviews of individual transactions.



ex.

- A systems based approach to auditing leads to program success and a culture of accountability.
- Increasingly, these processes are becoming more computerized, relying on programming audits and video license plate audits, etc.

Securing Access Control Equipment

Your parking equipment can be secured with electronic access controls without the need for on-site power. These controls can be installed in virtually any parking equipment, anywhere enhancing system security and providing improved audit capabilities.

ex.

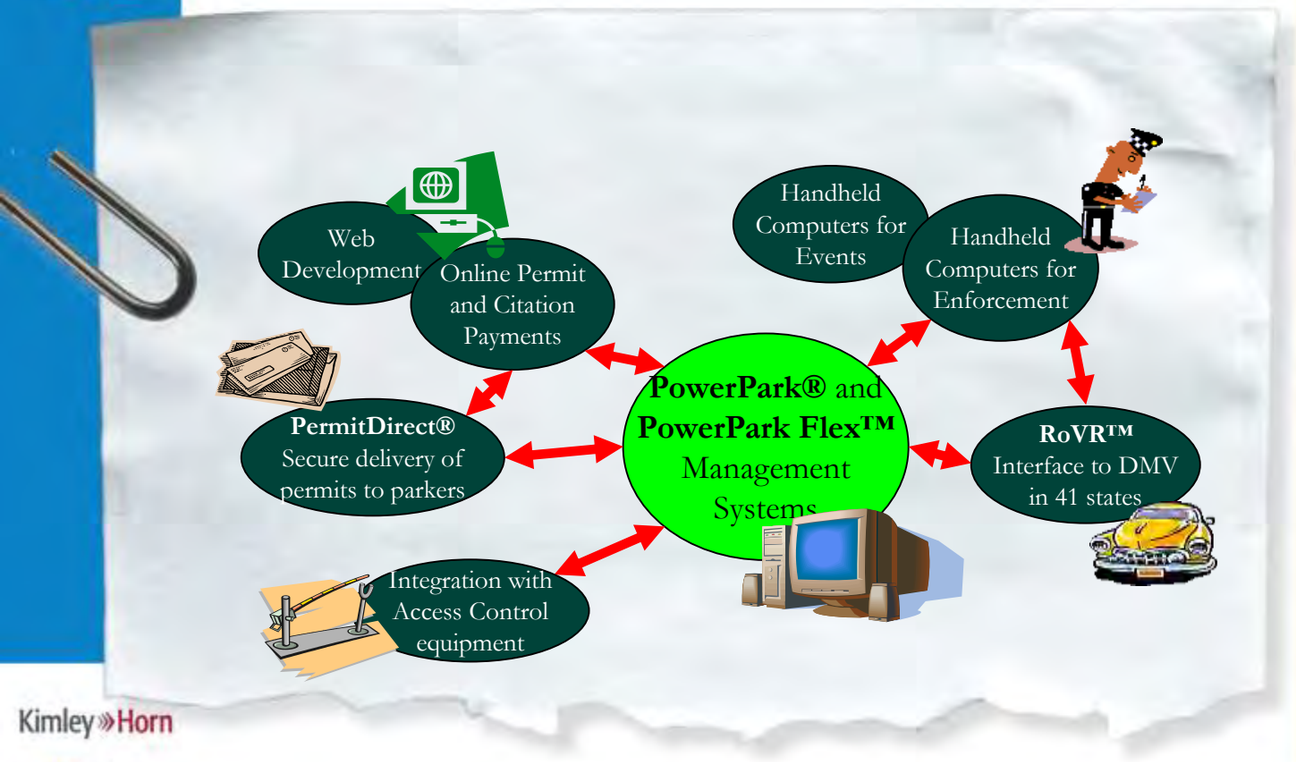
- BENEFITS;
  - Know and control who accesses or tries to access your equipment
    - Know how much cash was removed, by who and when
    - Easy online management, including reports
    - Minimize shrinkage
    - Eliminate the problem of lost or stolen keys
    - Minimize vandalism of locks
    - Compelling ROI- typically 30%+

Ch.
22

Leveraging New Technologies

Web-Based Management Platforms

Consistent management regardless of the type of parker (transient, monthly, residential, etc.) All aspects of parking management can now be integrated into a web-based management system.



ex.

» Management information at a glance: vehicles, citations, names, addresses, etc. on a single, clean, easy-to-read page.

» Open architecture allows sales/payment from anywhere.

Video Based Car Counting Systems

At SeaTac international Airport, just after the Daily Parking entrances, drivers see an electronic sign that tells them how many spaces are available on each floor.

Once you get to a floor, a sign will tell you how many spaces are open to the left or right.

Within each floor, more signs will tell you how many spaces are available in each four-row section.

ex.

» BENEFITS

- Reduced customer complaints
- Highly improved count accuracy
- Significant reduction in greenhouse gas emissions
- Extensive statistical analysis on collected vehicle data

Video Based Car Counting Systems

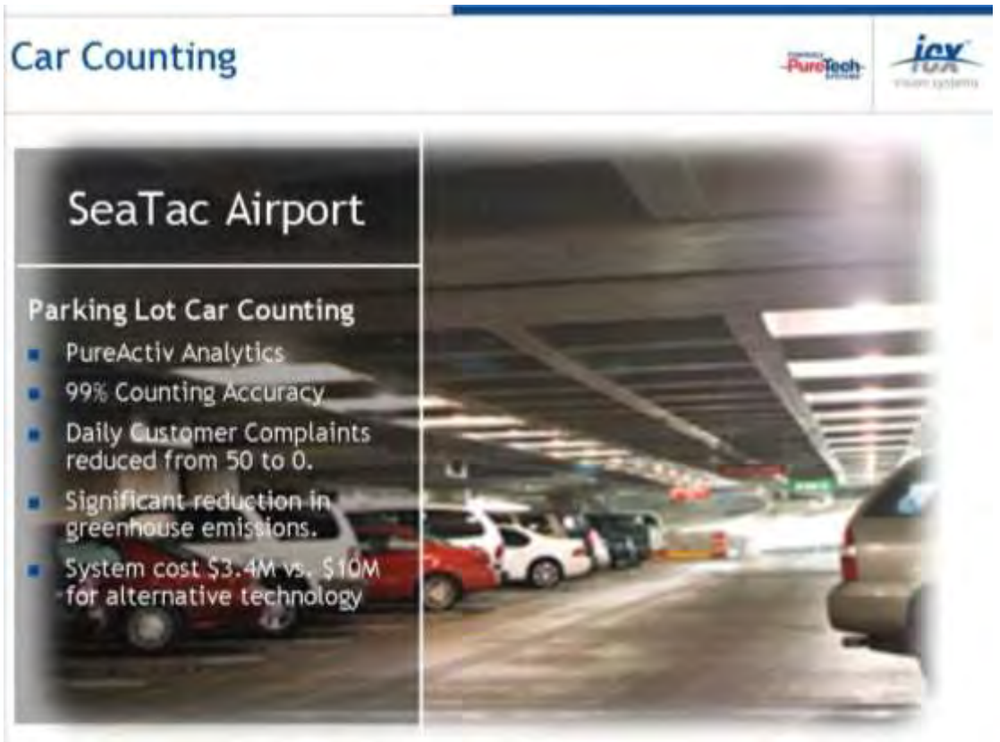
Utilizing video analytics as a vehicle count mechanism provides more data than simple loop detectors or other sensors. This new application has great potential going forward.

- Just after the Daily Parking entrances, drivers see an electronic sign that tells them how many spaces are available on each floor.
- Once you get to a floor, a sign will tell you how many spaces are open to the left or right.
- Finally, once you get an a floor, more signs will tell you how many spaces are available within each four-row section.

ex.

» BENEFITS

- Reduced customer complaints
- Highly improved count accuracy
- Significant reduction in greenhouse gas emissions
- Extensive statistical analysis on collected vehicle data



Parking Management Control Centers

As parking management programs get larger and more complex, communications, security and active systems monitoring becomes more important.

ex.

Many of the more sophisticated programs have created central dispatch and systems monitoring “control centers”.

Ch.
23

Signage and Wayfinding

Don’t Forget Your Manners?

Someone once said, “everything we really need to know, we learned in Kindergarten”

» Remember to welcome your guests and to always say “thank you”!

ex.

When It Comes to Signage, Less is Often More!

Contrast the two approaches below:

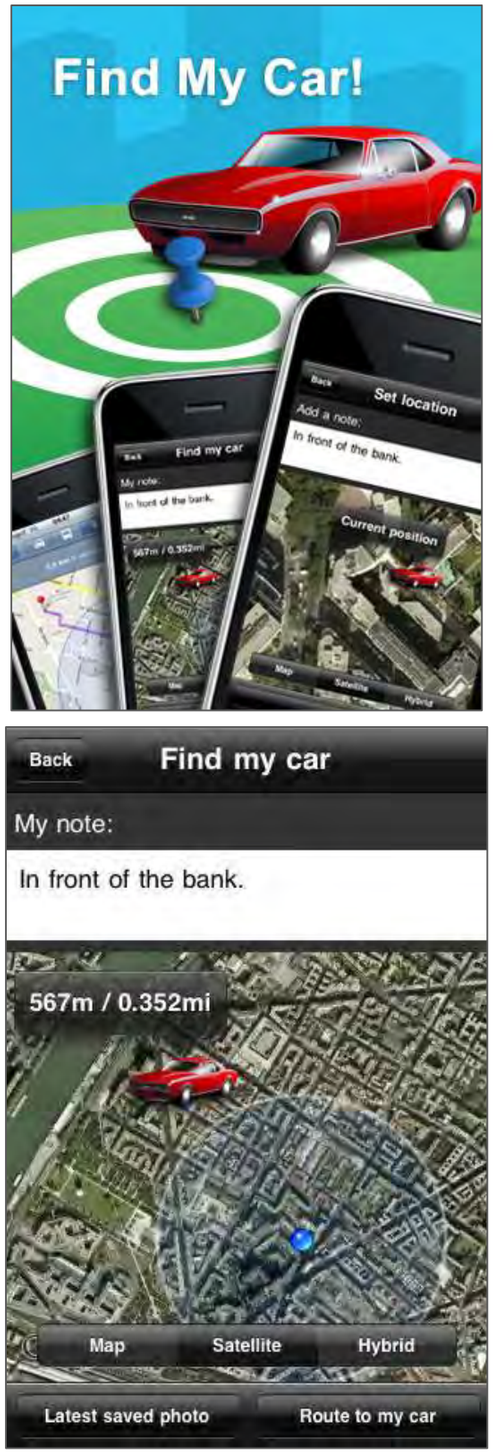
ex.

PICTOFORM

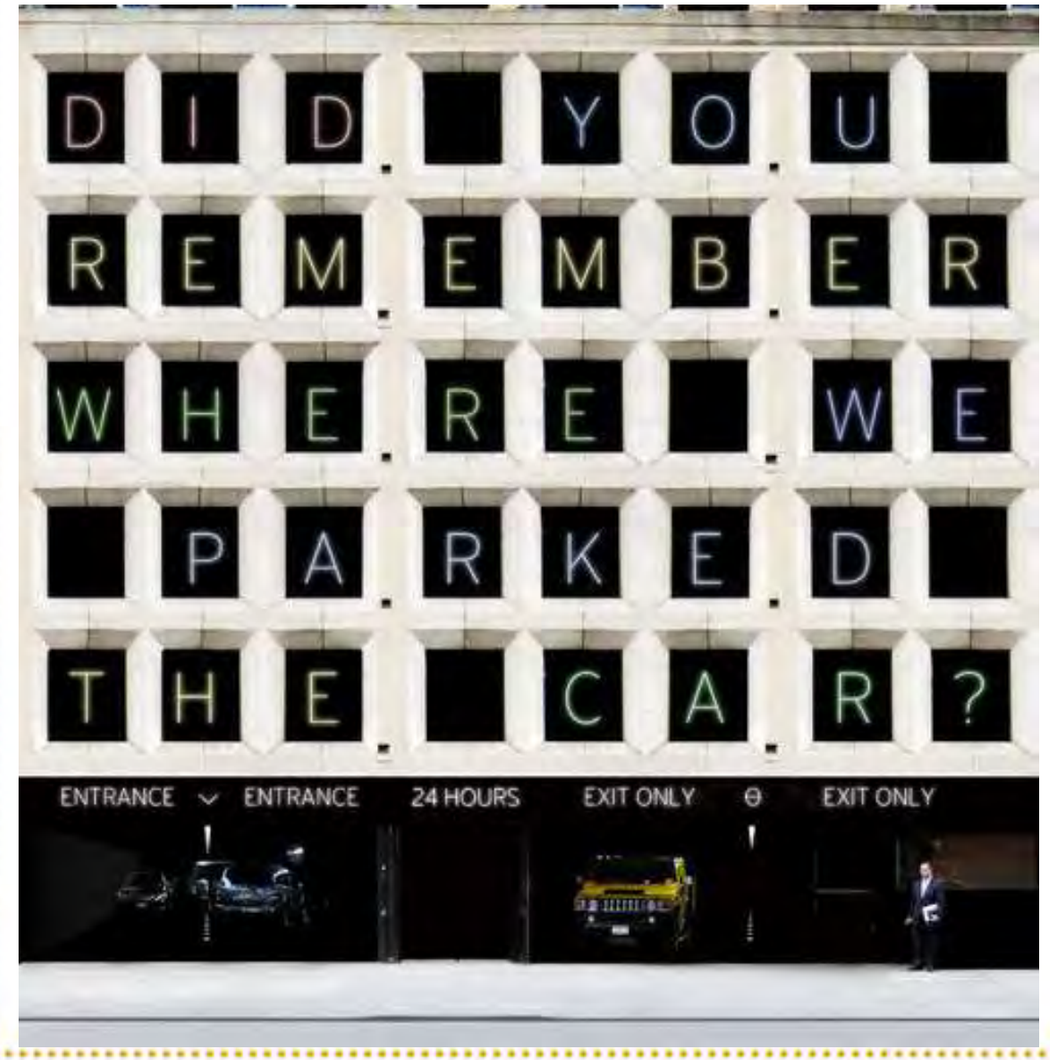
Where Did I Park?

Finding your car in a large parking facility is a common problem.

Signage and wayfinding are important, but for those that don't read signs, here's an App for you!



ex.

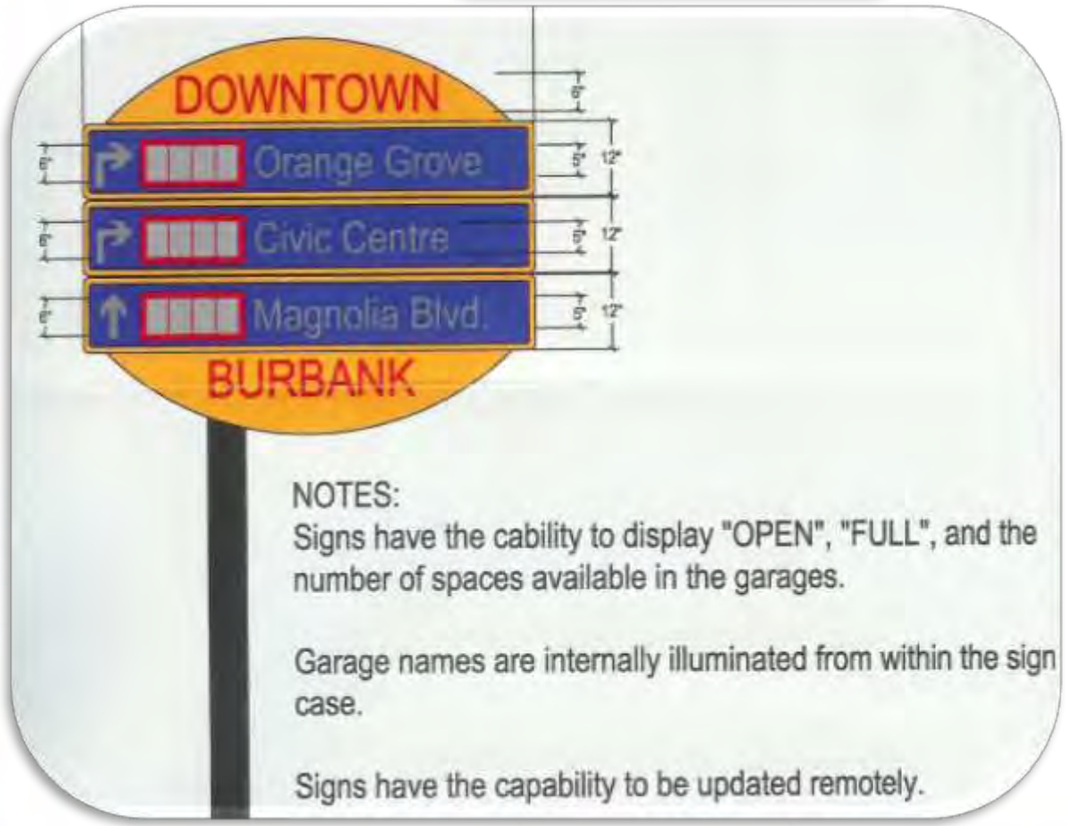


Parking Guidance Systems

The downtown wayfinding and signage program in Burbank, CA are designed to read by motorists. Font sizes are calculated to be read based on driving speeds.

- The variable message signs are internally illuminated for high visibility at nights.
- Burbank chose to only display “open” and “full” messages instead of specific space availability numbers.
- They also have the capability of being updated from remote locations.

ex.



Parking Guidance Systems

The downtown wayfinding and signage program in San Jose uses a combination of static elements with variable message components to display space availability.

» The signs also provide full panel variable message components to accommodate new destinations or special functions that may only occur on an occasional basis.

ex.

Integrating with Downtown Wayfinding

The downtown wayfinding and signage program in Tucson, AZ is organized by downtown districts.

Each district has it own unique icon, colors and graphics.

- Downtown merchants and related agencies were given a “graphics CD” so that they could integrate the wayfinding graphics into their marketing and advertising.
- This approach helps keep the graphic colors, fonts, icons, etc. consistent.

ex.

Integrating with Downtown Wayfinding

The downtown wayfinding and signage program in Fort Wayne, IN is organized by downtown districts and then by major activity centers/destinations.

ex.

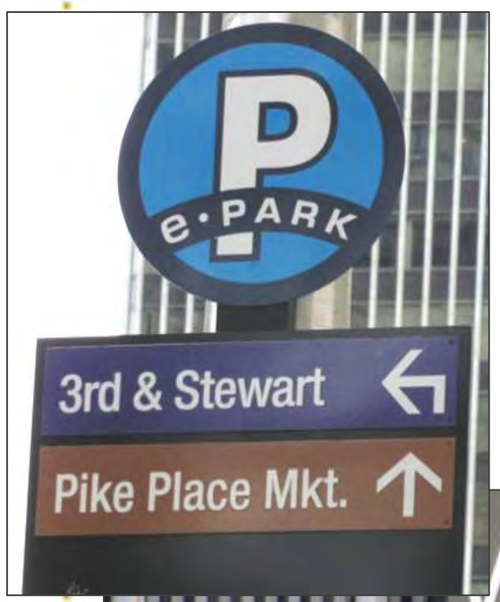
- Parking is addressed by a Green P with directional arrows that can be applied to specific destinations of district identifiers.
- This approach keeps the primary intent of the signage focused on primary destinations and allows for flexibility as parking options are added or change over time.

Parking Spaces Available Signage

Seattle's new "E-Park" program provides wayfinding and space availability information for a combined system of public and private short-term parking options in the downtown area.

The signage is a combination of static and variable message signs.

ex.



Super Graphics

Using “Super Graphics” to indicate garage level, elevator and stair locations, etc. is a fairly common, but very effective best practice.

- Using these graphics to orient parkers to surrounding streets is another recommended practice.

ex.

Color Banding and Consistency

Combining crisp, clean graphics, bright colors and ***"color bands"*** to indicate garage level, elevator and stair locations, is another effective best practice.

- » Color banding can tie sometimes confusing three dimensional environments together graphically.
- » They can more exactly differentiate where on level stops and another begins.
- » They can also "lead" patrons directly to destinations such as elevators.

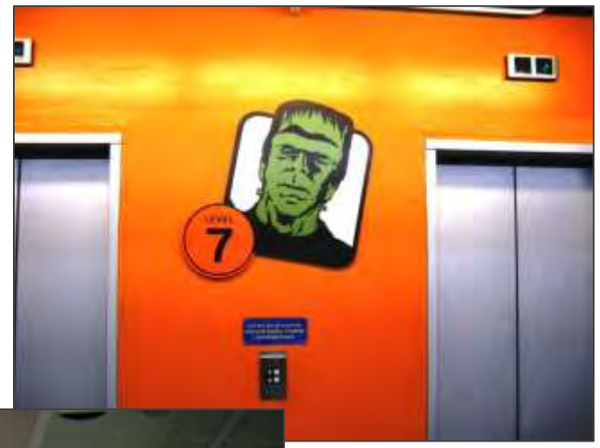
ex.

Garage Signage Principle # 1: I am parked on_____.

Fundamental parking signage principle # 1 is simple: When you step out of your vehicle in any space, You should be able to look around and be able to identify where you are parked (i.e., Level 4, Row A).

- This applies to parking lots as well as garages.
- The more creative and memorable the signage clues provided, the better.

ex.



2 Dimensional Art – 3-D Effects

Parking garages have many large blank walls.

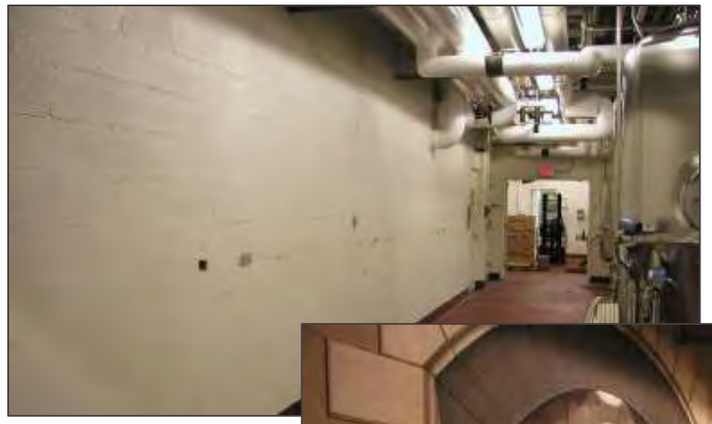
Consider this your “Canvas” for creating new and dramatic focal points using 2-Dimensional painted images with 3-D impacts.

ex.

Before:

After:

Before:



After:

Effective Use of Symbols and Pictograms

From the basic “Parking P Symbol” to international symbols to the creation of new pictograms to keep up with evolving technologies, graphics symbols have become an important part of how we communicate.

ex.

Reflective Text

The use of reflective lettering materials on internal parking directional signage improves readability, especially in below grade facilities.

ex.

Parking Signage

Can't get anyone to take your "No Parking" signage seriously?

Try a modest exaggeration.

ex.

» This sign caught my attention? (And no, I didn't park there.)

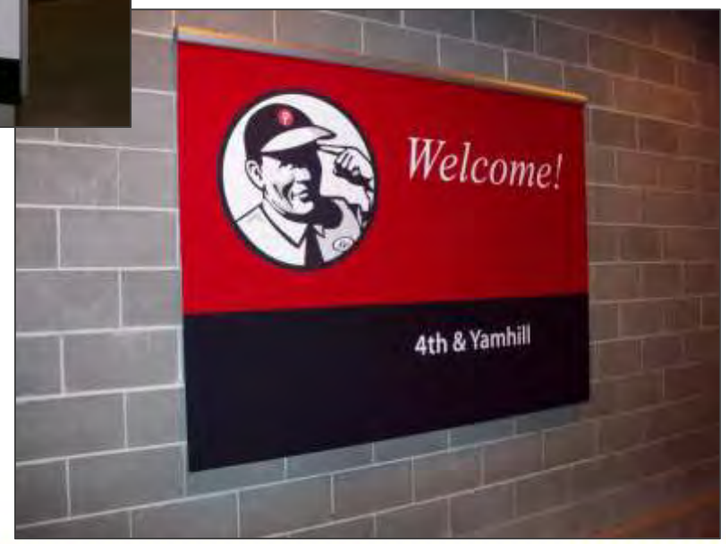
Well Designed Parking Signage and Graphics

Good design matters! What more is there to say?

Quality design and graphics speak for themselves and reflect positively on the program that made such a wise investment.

PICTOFORM

ex.



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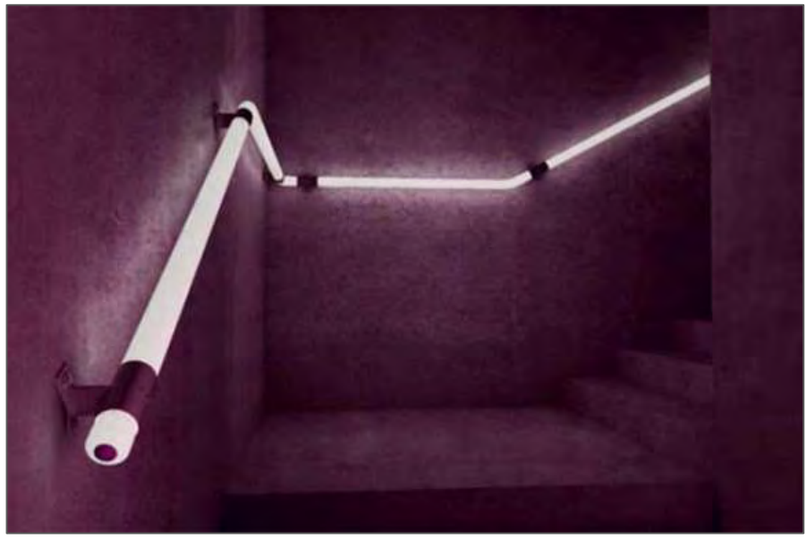
24

Enhancing the “Parking Experience”

Unique Touches!

Reminiscent of Luke Stairwalker, I mean Skywalker, here's a futuristic staircase handrail for the Jedi Master in all of us.



ex.

- The super cool LED-lit handrail by Croatia-based Zoran Sunjic is **perfect** for modern homes, restaurants and hot night clubs – even parking garages!
- Multifunctional, the rail lights the way, makes the passage safe, and adds a touch of fantasy.
- You can even color code to match your floors (OK, maybe not.)

Special Touches!

Understanding the needs of your customers and implementing services to meet their special needs is always a winning strategy.

ex.

- Reserving convenient spaces for specialty groups can help promote customer loyalty and appreciation.
- Its all about knowing your clientele!

Green It Up!

Add a planter or two. It's amazing the difference adding plants can make in the look and feel of a parking structure, especially around elevator lobbies and entry/exit plazas.

Green the whole roof if you really want to make an impact!

ex.

- At the Queensway Garage in Long Beach, planters are located at both entrance and exit plazas improving the look and feel of the parking environment. (Top left)
- Attention to little details at a City Parking Garage in Ottawa. (Top)
- If you do add significant landscaping above parking, be sure to hire a parking consultant to engineer it properly!

Add Color

The use of color is a tried and true mechanism for brightening up drab concrete structures and aiding in wayfinding.

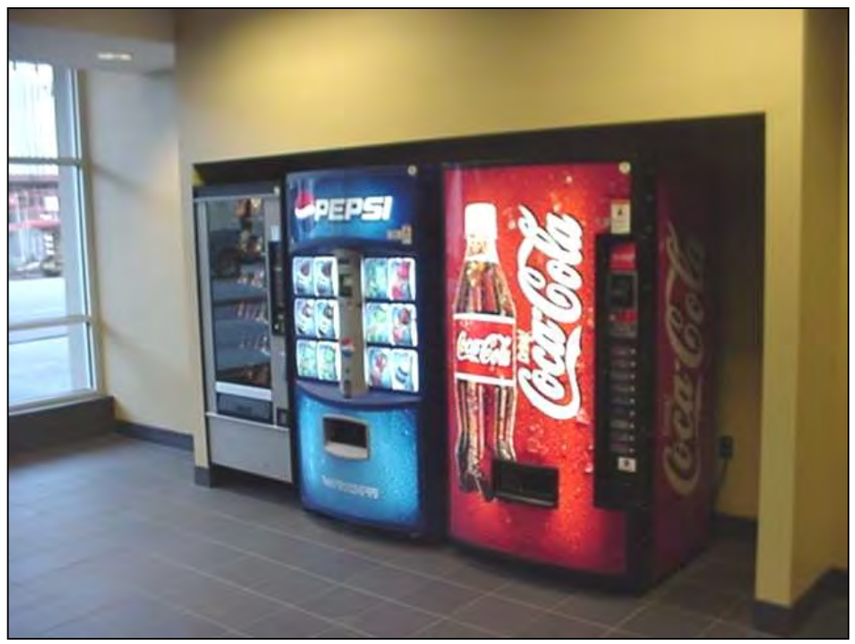
ex.

» In this example, the colors are associated with different vertical elements and where they lead.

Customer Amenities

Customer amenities in a parking structure can include a variety of offerings including drink machines, water fountains, snack machines, etc.

ex.



» It can also include special services such as dry cleaning drop-off, auto washing and detailing services, state vehicle inspection services, loaner “audio books”, etc.

Brighten it Up! Creative Level Theming and Wayfinding

Wayfinding aids such as “level theming” have helped make the parking environment more pleasant and interesting while providing the benefit of helping patrons remember where they parked their car.

ex.

Music In Your Parking Lots?

Some upscale shopping centers are keeping shoppers dancing all the way into the stores by providing music in the parking lots.

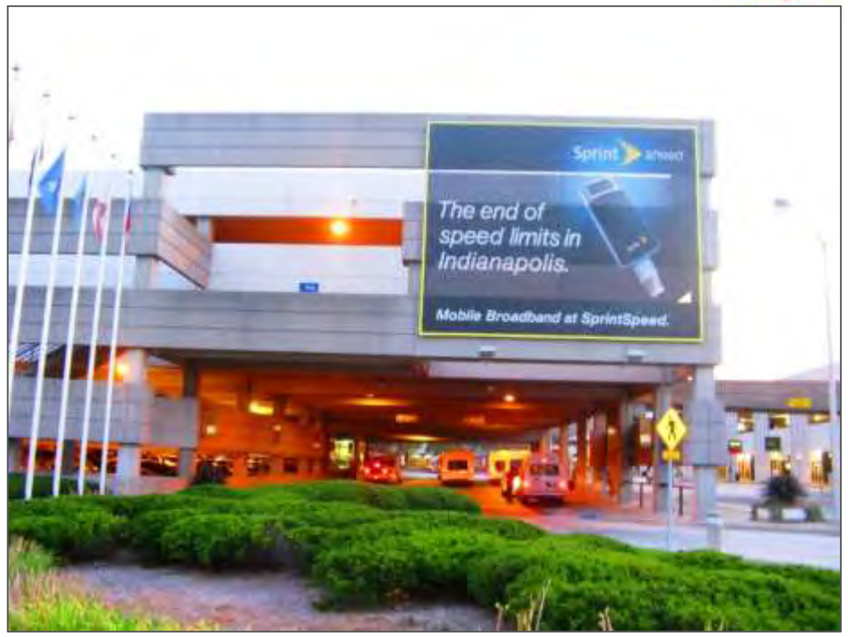
ex.

» Mall owners site a desire to “set a certain mood for their shoppers” and to put them in a positive state of mind.

Banners Can Add Color, Communications and Ad Revenues!

Some developers, hospitals and airports are taking advantage of high visibility space and cashing in on advertising potential.

ex.



» How many views per year do you think these locations generate?

Engaging Local Artists

Charlotte, NC (and Bank of America in particular) has been a leader in investing in creative level theming and wayfinding as well as well as engaging local artists.

7th Street Station Garage, Charlotte, NC

Roadway and Interchange Art

If we can do this for roadways, why not parking garages! Concrete can be a great creative medium.

ex.

Art as Urban Utilities Camouflage

The writing's on the wall…or, in this case, the utility box.

Graffiti art replaces gang graffiti and provides "street-art" for passersby.

ex.

» Urban art in the form of buildings is stenciled onto telecommunication power boxes and concrete surfaces throughout the streets of German cities. (Top 2)

» Stacked Lemon crates . (Middle)

» Musician's adorn a utility box in downtown Winnipeg. (Bottom)

Got a Blank Wall? – Add a Mural!

Parking programs can place a greater emphasis on public art. Blank walls can be an opportunity to showcase local artists, add a splash of color and interest and enliven dull parking environments.

ex.

- My favorite wall mural of all time is the girl I met on my first trip to Manhattan. I still think of her when I think of New York City (Left).
- There are too many great examples to show, but here are a few.

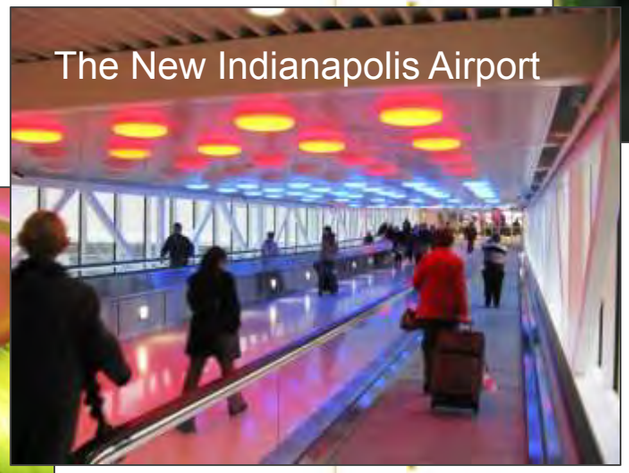
"Jazzed up" Pedestrian Pathways

Sometimes we have long corridors or tunnels connecting parking to it's primary demand generators. Problem?

No, an Opportunity!

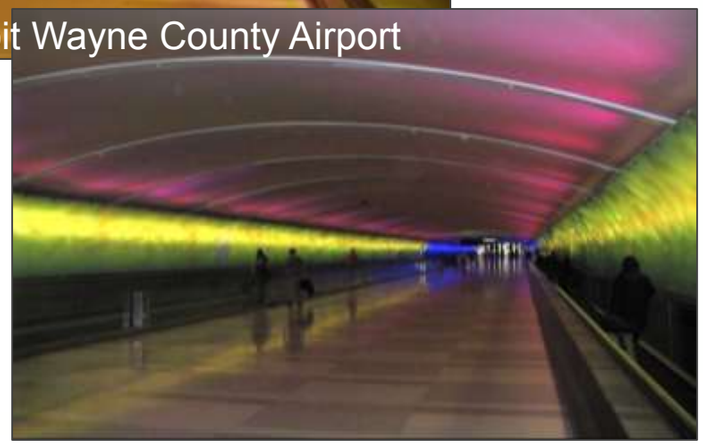
ex.

O'Hare Airport



The New Indianapolis Airport

Detroit Wayne County Airport

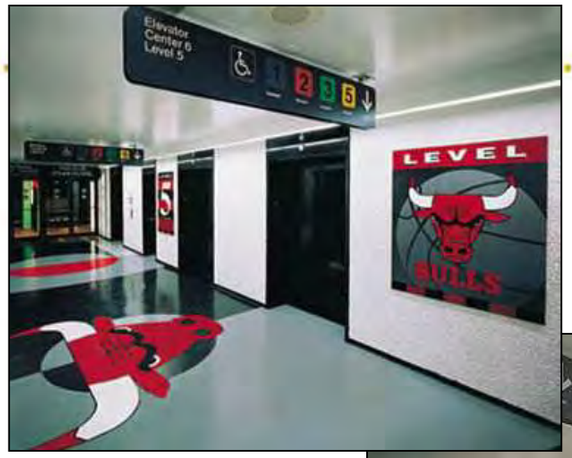


- Tunnels and connectors need not be dull or dark.
- These airport examples use dramatic and changing lighting, people movers, art, music or interesting "soundscapes" to create an interesting and positive experience.

Creative Level Theming as a Wayfinding Strategy

In addition to visual clues, some parking structures are also using music to remind patrons where they parked. A different style of music is used on each floor.

ex.

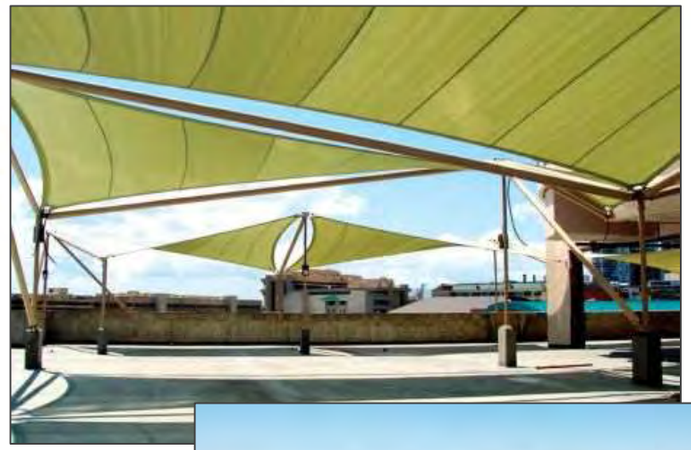


- O'Hare airport in Chicago (Standard Parking) was one of the first to use this wayfinding enhancement strategy.
- The music is reinforced on each floor by dramatic graphics - distinctive to the specific song being played on that floor - displayed in the elevator vestibules and throughout that level's parking bays.

Shade, Protect and Even Generate Power and Increased Revenue

Adding shade structures to surface lots parking or deck rooftop spaces to enhance customer service and increase utilization and parking revenues.

ex.



- The initial investment varies based on type of product, but generally runs in the $700 - $1,500 per space range with an average ROI in ranging from 1.5 – 2.8 years.
- Parking shade structures can also have integrated photovoltaic panels to generate solar power.

Dramatic Lighting – Now that makes a statement!

Lighting can set your facility apart from the background and create dramatic affects.

ex.

» Indirect lighting in parking facilities and be very effective and attractive. (Right – Parking Garage at the Museum of Art in Milwaukee, WI.)

Happy Holidays!

Nobody wants this experience at Christmas! (Especially Santa)

ex.

» Now this is a little more like it!

» And if you're really in the spirit!

Ch.
25

Revenue Enhancement Strategies]

Advertise On Your Tickets

Advertising on parking tickets, valet tickets and parking “booms” can effectively eliminate tickets expenses from your operating expense budget, as well as creating an opportunity to market downtown venues and attractions.

ex.

www.advertickets.com

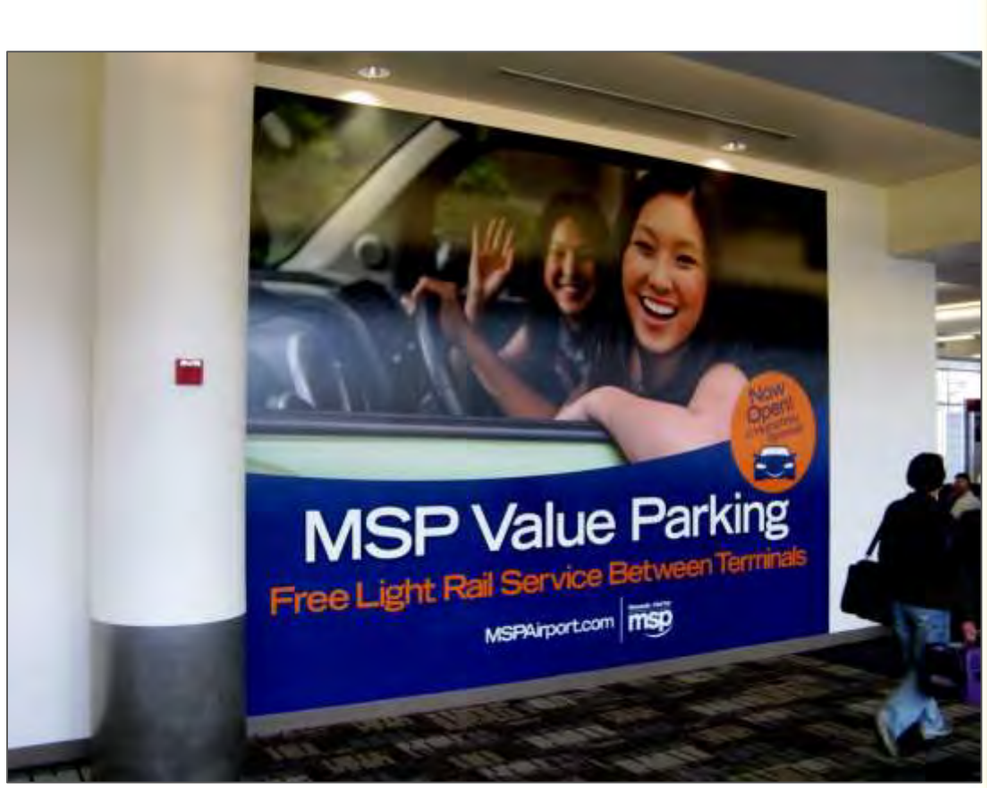
Kimley»Horn

SRF Consulting Group, Inc.

Advertise In Your Facilities

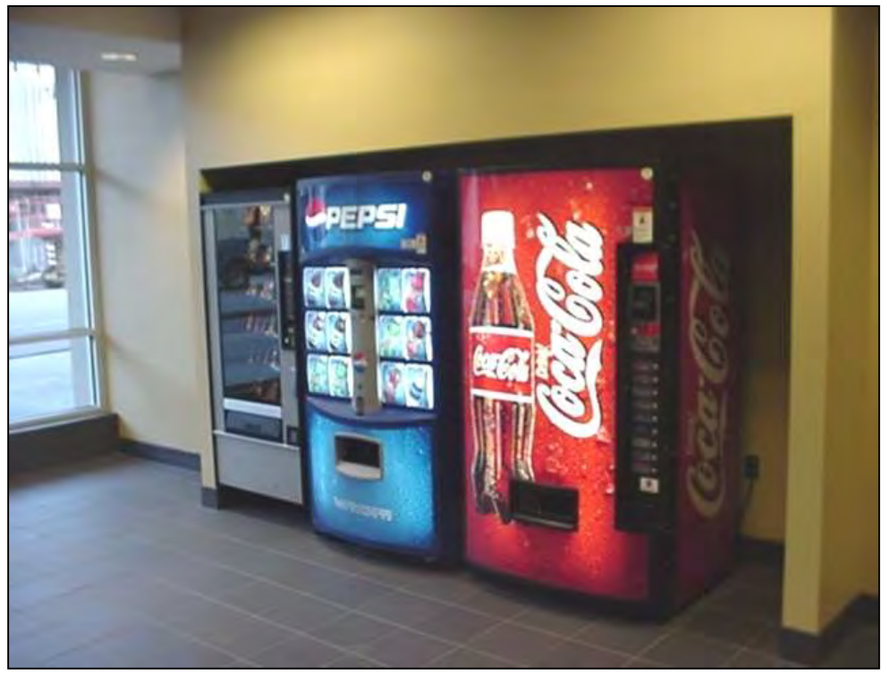
Advertising in elevator lobbies, sky-bridges and other areas with high levels of pedestrian traffic can generate additional parking program revenues. This can also be an effective way to promote parking programs and services.

ex.



Alternative Revenue Sources

There are several sources of alternative revenue available in parking systems, that most systems don't take full advantage of. These options often provide additional value to clients.



ex.

» Examples include advertising, drink and vending machines, ATM machines, etc.

» Another example is the provision of bike lockers, bike tire pumps, etc.

Parking Brokerage Services

Parkingspots.com connects those needing a parking spot with those renting parking spots. The service allows you to find parking close to downtown, the airport, your office, your home or wherever else you need it. Easy, affordable monthly rentals where you want, when you want!

ex.

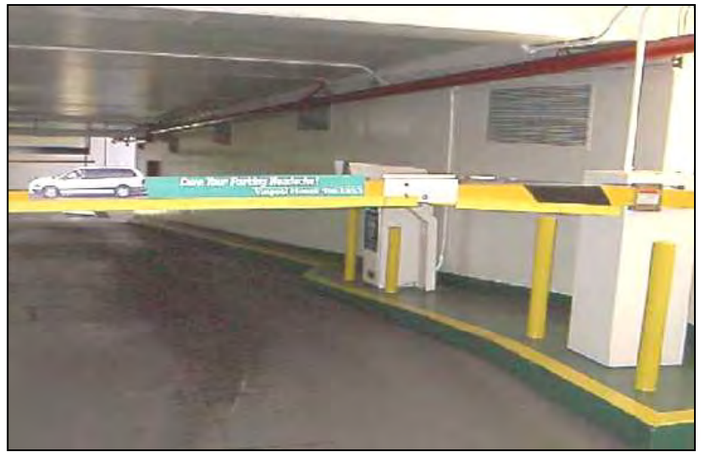
- Primarily focused on the US and Canadian markets Parkingspots.com is a virtual parking marketplace.
- Locate your ideal parking spot by city, by postal or zip or using Google maps.

Ad Walls

The use of “Ad Walls” is a good example of finding creative alternative revenue sources. It also adds color and interest to typically dull garage environments.

- This strategy can make use of a variety of surfaces including columns, beams and even gate arms.

ex.



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26

Expense Reduction Strategies

Automated Parking Systems

Labor Expenses

- Parking facility staffing can be the single largest expense item (ranging from 50% to 70%)
- This expense typically includes payroll, taxes, benefits, training, recruitment, etc.

➢ Winnipeg reduced labor by ~25% using pay-in-lane off peak

➢ Texas Medical Center reduced labor by more 35% using pay-on-foot

ex.

Opportunities to reduce labor expenses

» Use automated parking technologies
» Review lane activity to ensure efficient coverage
» Improve employee retention
» Review market pay rates
» Consider outsourcing
» Encourage cross-training
» Regularly review insurance/benefits costs
» Improve passive security
  ▸ Reduce staff needs and reduce liability

New High Efficiency Lighting Products

Recently, there have been significant improvements in the cost, performance, and application of LEDs for a variety of lighting applications.

The energy saving potential of LED lighting, as compared with conventional lighting, ranges from 50 to 90 percent.

ex.

» Additionally, LED lighting technology offers benefits of extended operating lifetime (up to 100,000 operating hours), small sizes to expand fixture design options, and improved optical quality and control.

Energy Conservation

Having separate electrical circuits for parking facility lights on the exterior side of parking bays as well as the roof level can save thousands of dollars per year in energy costs.

ex.

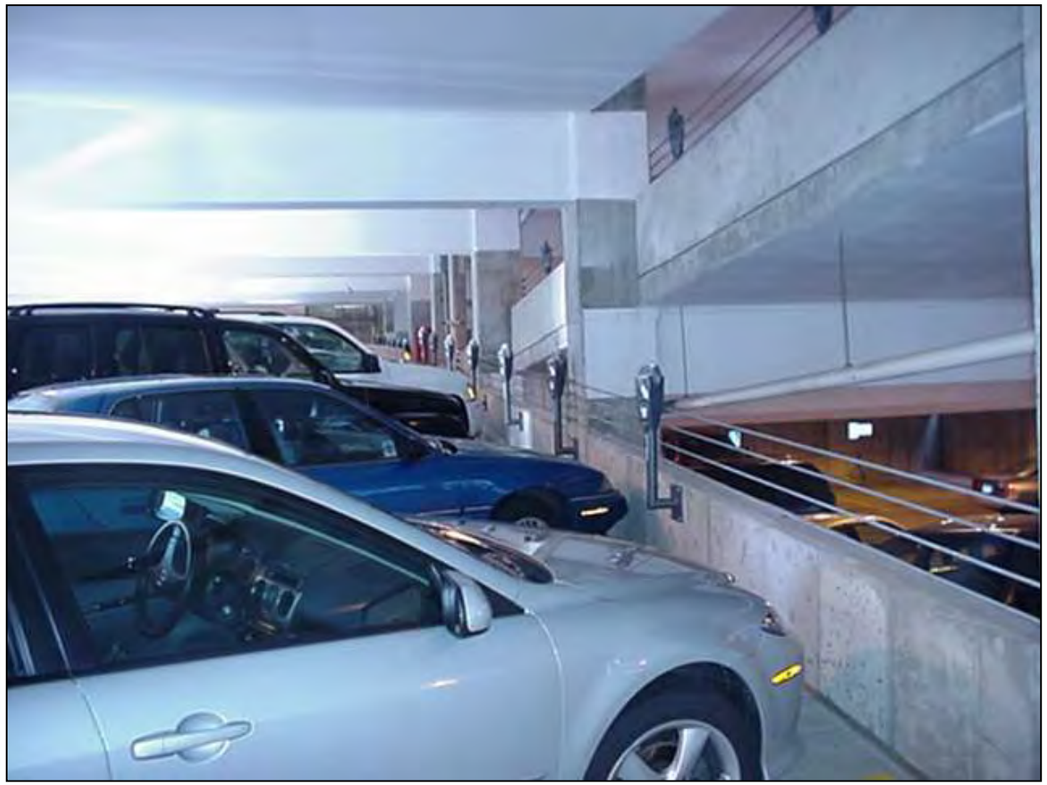
- The photo to the right shows an example of this best practice. The circled lamp is off during the daytime hours while the interior row of lights in the same bay remain on.
- In this application the exterior row of lights are tied to photo cells in the event light levels are reduced to a certain point such as during a thunder storm.

Limited Transient Customer Volume? Consider Meters.

For situations where there are only a limited number of transient spaces within a facility, controlling or charging for those spaces with meters can be a cost effective alternative to traditional exit cashiering.

- In a facility with less than 100 transient spaces (the rest were reserved for monthly parkers) the revenue stream from the transient spaces would not justify two shifts of exit cashiers, plus supervision, fee computers, booths and other capital items.
- In this case, installing meters was a more cost effective option.
- Note that there are still staffing costs with this option as the meters need to be enforced and the revenue collected.

ex.



Track Warranty Expiration Dates

Review equipment and facility related warranties

- Ensure necessary work is completed before warranties expire.
- Carolinas Medical Center saved $15,000 by scheduling a tour of parking deck expansion joints (with the expansion joint company representative) 6 months prior to warranty expiration.

ex.

- Damaged joints were documented with time/date stamped digital photos in a letter to the company.

Equipment Maintenance Contracts

Consider using equipment maintenance contracts only for more sophisticated equipment (Fee computers, ticket issuing machines, count systems, etc.)

ex.

» For less complex equipment (gates, etc.) train staff in-house and create a separate budget area for “equipment maintenance non-contract” for problems your staff can’t resolve.

» One hospital parking operation saved ~ $5,000 - $8,000 annually using this approach.

The Value of Preventative Maintenance

Don't forget about the value of and long-term savings associated with preventative maintenance...

- » Structural
- » Mechanical systems
- » Electrical systems
- » Parking equipment

ex.

- » Conduct periodic wash downs to remove chlorides and dirt/debris

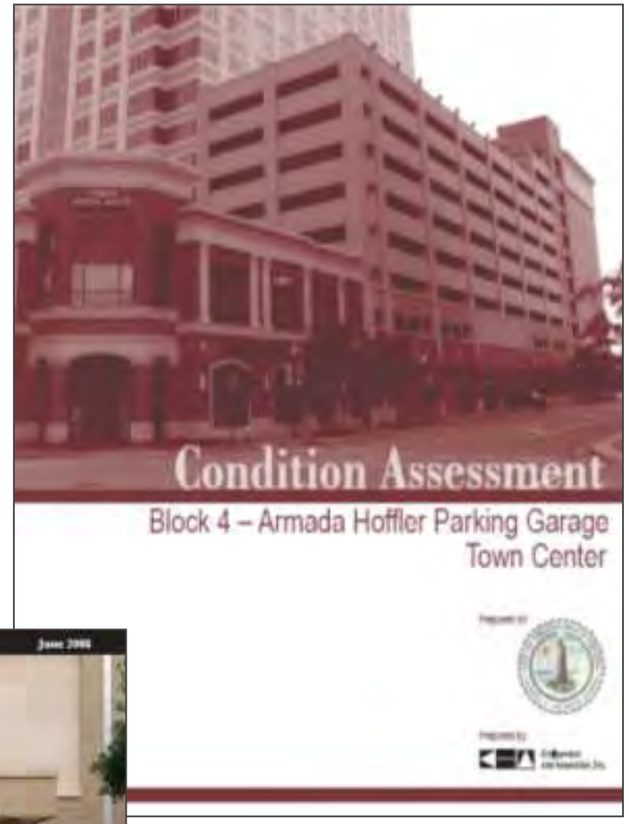
Regular Facility Structural Condition Appraisals

- a Good Long-term Investment

Invest in regular parking facility condition appraisals.

» These relatively inexpensive facility reviews can identify structural problems in advance of major problems that might impact operations (and therefore facility revenue or damage to customer vehicles).

ex.



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27

Special Programs and Promotions

Parking Coupons "Re-imagined"

Chinook Book – the popular green resource guide and coupon book – now has a high-tech sister: *Chinook Book* for iPhone, the world's first mobile coupon book.

For the first time ever, Chinook Book owners can now use their iPhone®, iPod touch® or iPad™ to save thousands of dollars at hundreds of local green businesses in the Seattle metro area.

» These e-coupons can even be used for parking and car share services at the University of Washington.

ex.

Available on the App Store

Discounted Parking to Attract Customers

If utilization of facilities is low, or if there is a desire to stimulate downtown activity, there are numerous ways in which parking can contribute to revitalization strategies.

ex.

Who Deserves A Little Something Extra?

It is a documented fact that women control the purse strings and account for the majority of consumer spending, so this practice can be made on the grounds of sound business philosophy.

ex.

- But perhaps more importantly, your own mother would approve of this policy (just ask her).

A Little Reminder Never Hurts!

Sure, we all know we should lock our car and take our keys, but …

- "I was just running in for a minute".
- "I was just picking up a prescription and was worried about my dad?.
- "I looked and there was no one around…"
- "It seemed like such a safe neighborhood".

» A little reminder might make all the difference.

ex.

First Hour Free Programs

First Hour Free programs are effective alternatives to traditional parking validation programs.

ex.

- In communities where we have assisted in implementing these programs we have seen increases in both revenue and facility utilization as well as positive community support.
- A thorough revenue assessment is recommended before undertaking a first-hour free program.
- Implementation of these programs are often accompanied with other adjustments to back-end parking rates.

On-Line Parking Coupons

Looking for a way to attract new customers, consider the time-tested use of coupons with an on-line spin - printed from a website.

ex.

- Placing coupons on your website or on the websites of related groups can be a positive way to invite new customers to your facilities.
- The coupons can also be used to promote new services.

Sponsorships/Fund Raising

Did you know that a parking lot, parking structure and/or light pole banner program could be a fundraiser for your parking system or downtown?

ex.

- Project Graphics assists municipalities, institutions and various civic organizations in developing or establishing parking structure and/or light pole banner displays as a repetitive source of revenue.
- Reviewing zoning requirements is recommended.
- www.projectgraphics.com

Contact Sylvia Klein
klein@projectgraphics.com
ph: 800-655-7311 x 314

V.I.P. Service Programs

Some parking systems have developed service programs through local vendors to provide "VIP" services for monthly customers.

Examples of VIP services include: Vehicle Washing/Detailing, Oil Changes, Dry Cleaning, etc.

ex.

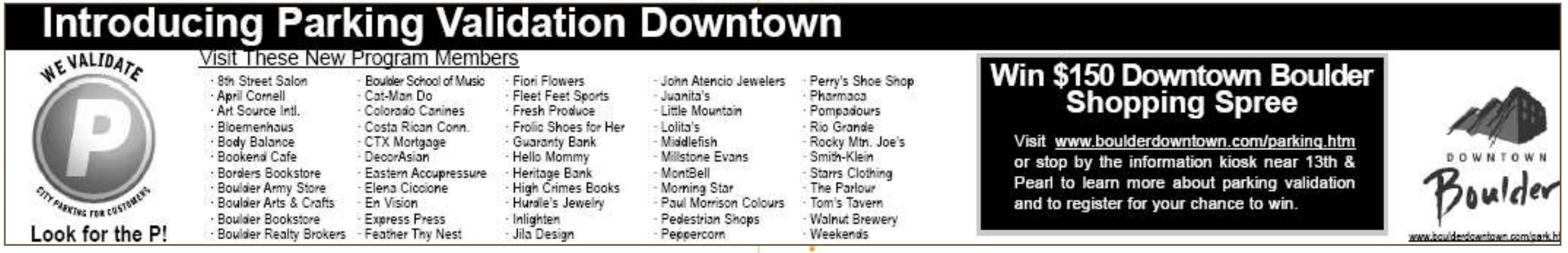
- The Downtown Toledo Parking Authority's VIP program directs customers to a specific area within their facilities and to a VIP Services Kiosk.
- A form is completed for the requested service and the vehicle keys are deposited in a security envelope.
- The requested service is completed while the customer is at work and the vehicle returned to the VIP area by a specified time.

Validation Program Promotions

Many communities have parking validation programs that are only honored by a handful of merchants. Like everything else, these programs need to be promoted to extend their reach and success.

ex.

- The development of validation program promotions supports participating merchants, increases awareness of the program and educates patrons as to program specifics.
- The promotion noted below placed bookmarks on customers windshields and offered a chance to win a $150 Downtown Shopping Spree.

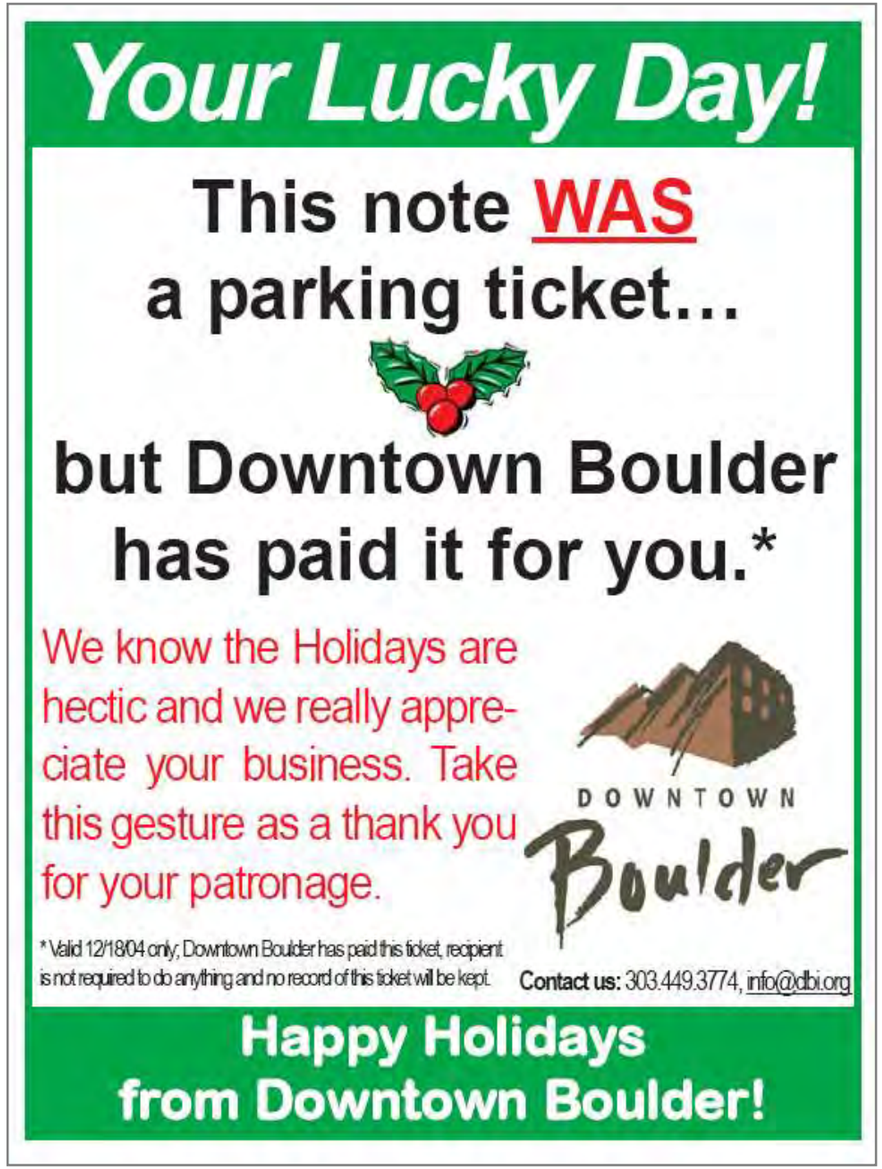


Your Lucky Day!

Holiday parking ticket amnesties and other forgiveness programs are tools to balance the need for parking enforcement with business encouragement through customer appreciation.

- The Downtown Association paid over $6,000 in customer's parking tickets over the Christmas holidays in Boulder.
- In other communities, the parking system simply suspends parking enforcement or replaces citations with holiday notices.

ex.



Family Friendly Parking!

If you are a parent with small children, you will love this idea!

IKEA located and designed a special a special parking area out of the main traffic flow especially for family parking.

- The “Family Friendly Parking” area is near the entrance and also near children’s play area that is just inside the door adjacent to this lot.
- The lot is essentially a cul-de-sac which also helps minimize traffic and eliminates cut-through traffic.

ex.

Mall of America Lets Shoppers Find Parking by Phone

While shoppers might still hunt fruitlessly for a parking space during the holidays, Minnesota's Mall of America is trying to minimize the hassle with parking updates on its website, Twitter feed and interactive road signs. Since Black Friday, the mall has offered a Web-based, color-coded map of its parking lots that shows how congested they are.

Ch.
28

Sustainable Parking Design & Management Strategies

Demand Responsive Parking Pricing

Why it is Important?

- Circling for parking accounts for approximately 30 percent of city driving.
- Reducing this traffic by helping drivers find parking benefits everyone.
- More parking availability makes streets less congested and safer.
- Meters that accept credit cards reduce frustration and the need for parking citations.
- Public transit riders, bicyclists, pedestrians, business owners, residents and visitors can all expect this application of progressive parking management policy to improve their quality of life in tangible ways.

ex.

» This approach optimizes the use of existing parking resources in a way that benefits both drivers as well as everyone who spends time in our great urban areas.

The Ultimate Goal:
Circle Less, Live Better, Safe the Earth!

Car Sharing meets Fleet Operations

The UCAR car sharing program provides faculty, staff and students instant access to a fleet of vehicles within walking distance from campus offices.

» The UCAR is a conveniently located and economically priced Fleet Services rental vehicle available for hourly rentals. The UCAR program is dedicated to supporting the short term transportation needs of the UW community for education, research, outreach and business.

ex.

» Trip tracking occurs automatically and billing is charged directly to a UW budget number. A copy of the receipt is sent to the reservation contact and department billing contact via email.

Recycled Rubber Products

24 million tires are being recycled per year through the creation of recycled rubber molded products. The great thing about this technology is that it not only helps to recycle and eliminate millions of scrap tires annually; products can be manufactured to fit various industries, some of which include: flooring, mats, playground surfaces, track and field footing, parking lot safety products & landscape mulch (pictured above).

- 100% recycled rubber wheel stops are a durable, reliable, long-lasting alternative to traditional concrete stops. Studies have shown that over a 10-year period, concrete wheel stops could cost six times more than recycled rubber models due to cracking & maintenance issues.

ex.

RUBBERFORM
RECYCLED PRODUCTS, LLC

Green Roofs

Boston's Prudential Center has been transformed in recent decades with the construction of new buildings, shopping arcades, and landscapes.

The most recent addition, the Mandarin Oriental Hotel, includes a public garden built in 2008 on the roof of a 1964 parking garage.

» To reduce loads on the existing structure, the soil rests on lightweight fills that include expanded shale and, in especially sensitive areas, stacked foam insulation panels.

ex.

» The half-acre garden stands in deliberate contrast to the buildings around it. Its native stone walls, reused brick pavement, and lush plantings give shoppers and hotel guests a chance to step outdoors and experience a taste of the New England landscape beyond the city.

Green Roofs (Sort of)

- Don't have the budget for a "true green roof"?
- No ability to support the extra weight?
- No ability to detain water?
- An inhospitable climate?
- No funds for the long-term maintenance of a traditional green roof?

» No Problem! – Schwartz made a plastic fantastic half Japanese Zen, half French Renaissance garden.

http://www.marthaschwartz.com/

ex.

Xeriscape

Xeriscaping is the practice of water conservation through creative landscaping.

ex.

» Benefits of Xeriscaping:

- Low water consumption
- Low maintenance
- Protects water quality
- Increases health and beauty of surroundings
- Decreases pest control needs

Solar Powered Parking Lot

A relatively new addition to our sustainable parking strategies is the introduction of individually powered solar parking lot lights.

» Each light pole/fixture is fed by an individual solar panel as pictured above.

ex.

Solar Parking Lot Light (S-SL27), from Greenshine has three solar panels and stronger light power, is a good solution for illumination of large areas.

Greenshine

The Eco Parking Lot

Bringing environmental technologies and green design practices under one roof is the Eco Parking Lot. The stylish design will incorporate green plantation and storm water remediation technology making it more efficient while maximizing greening potential.

ex.

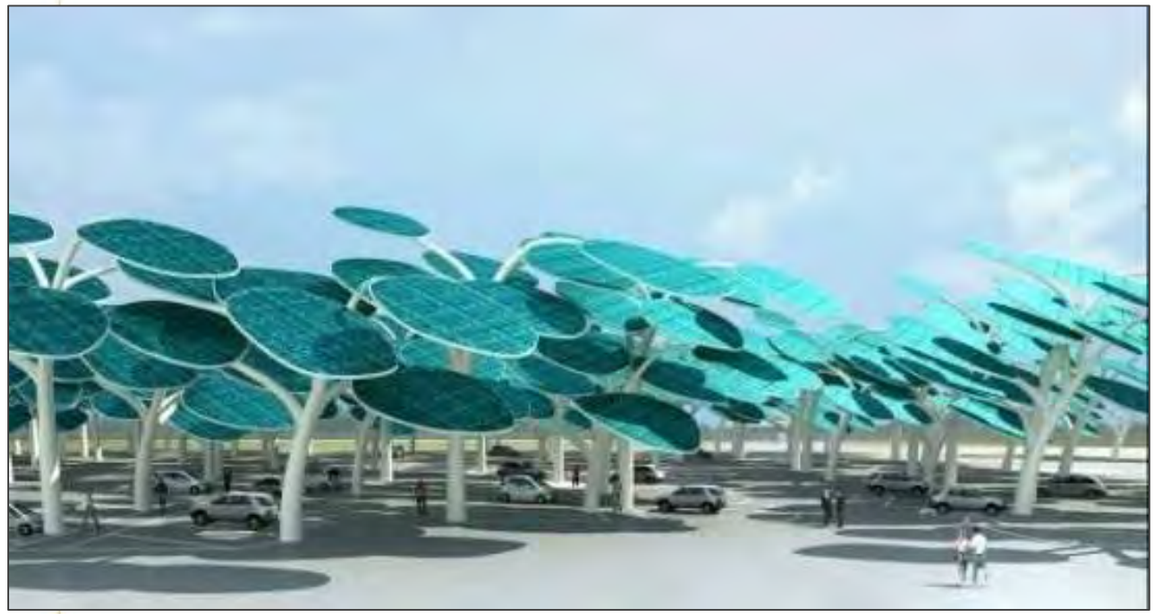
» This visual treat with special student parking will benefit the Community and city of Windsor.

Design: Green Corridor

More info:
www.greendiary.com

The Solar Forest Concept

As the name suggests, this concept brings trees like structures into action. The Solar Forest Concept consists of trees that are made up of photovoltaic leaves, whose sole purpose is to collect solar power.



ex.

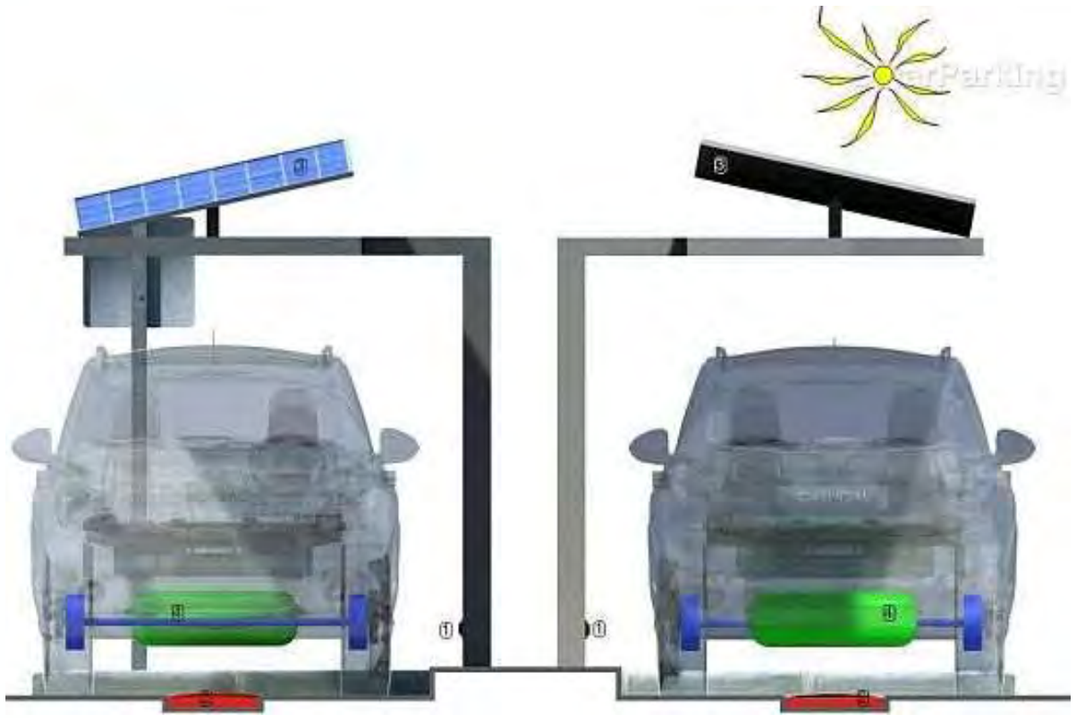
- At the “trunk” of each tree is a power outlet that is used to charge up electric vehicles.
- Apart from providing charge, the photovoltaic “leaves” also gives shade to the cars.

Designer: Neville Mars

More info:
www.greendiary.com

The Solar Parking Concept

Offering a dual solution to parking and charging of electric vehicles as well, the design proposes the wireless transmission of charge from the solar canopy to the charging coil embedded in the asphalt and later, to the car battery.



ex.

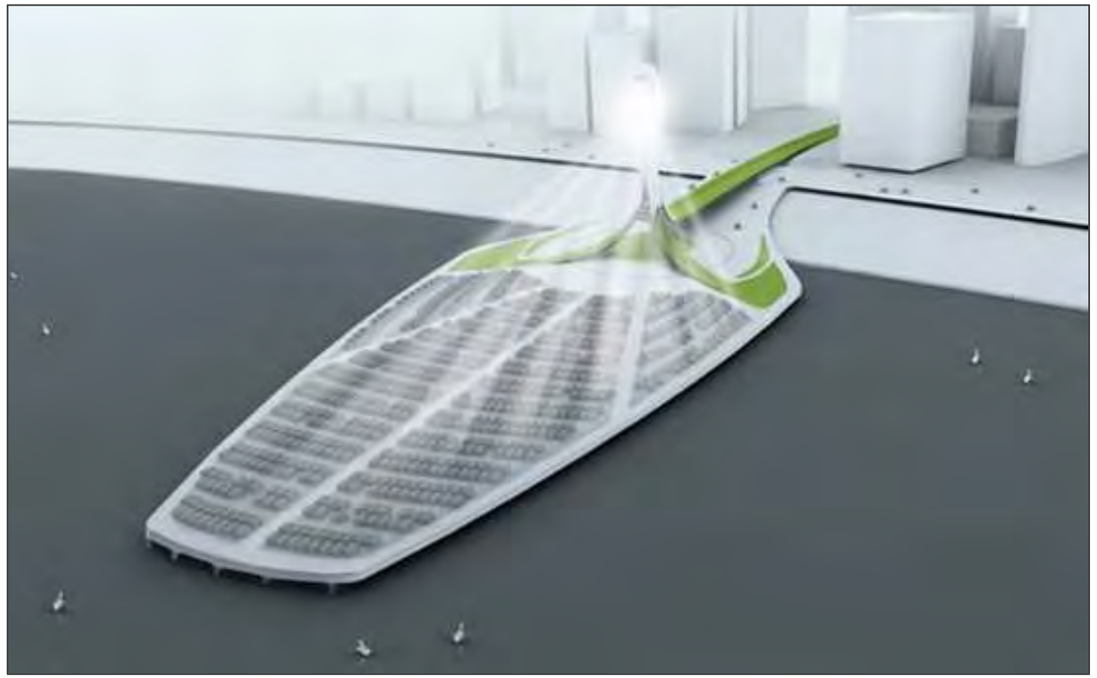
- After sensing an electric car parked, the parking system automatically starts the wireless charging process.
- Once the car's battery is full, the sensors embedded in the asphalt stop the charging process.

Designer: Nejur Andrei

More info:
www.greendiary.com

The Solasis Light Tower:

Here is a concept offshore parking area that generates solar energy to recharge electric cars and add valuable juice to the grid.



ex.

» This proposed renewable energy generating parking lot is equipped with a solar power concentrating tower that uses the windshields and hoods of cars as sun tracking and concentrating mirrors.

Designer: Klaud Wasiak and Yongbang Ho

More info:
www.greendiary.com

90 Degrees Vertical Parking System:

The 90 degrees vertical parking system, one-of-a-kind parking concept parks your car vertically.

ex.

- While you tuck your vehicles into the parking lot, the panels on the flip-side use solar panels to energize electric vehicle batteries.
- Along with power generation, the unique system allows three cars to park vertically where normally a single car is parked.

Designer: Baita Bueno

More info:
www.greendiary.com

Green P Parking System:

The concept is based on the decentralization of parking systems into many smaller spots that can be placed in unused spaces such as under flyovers and bridges.

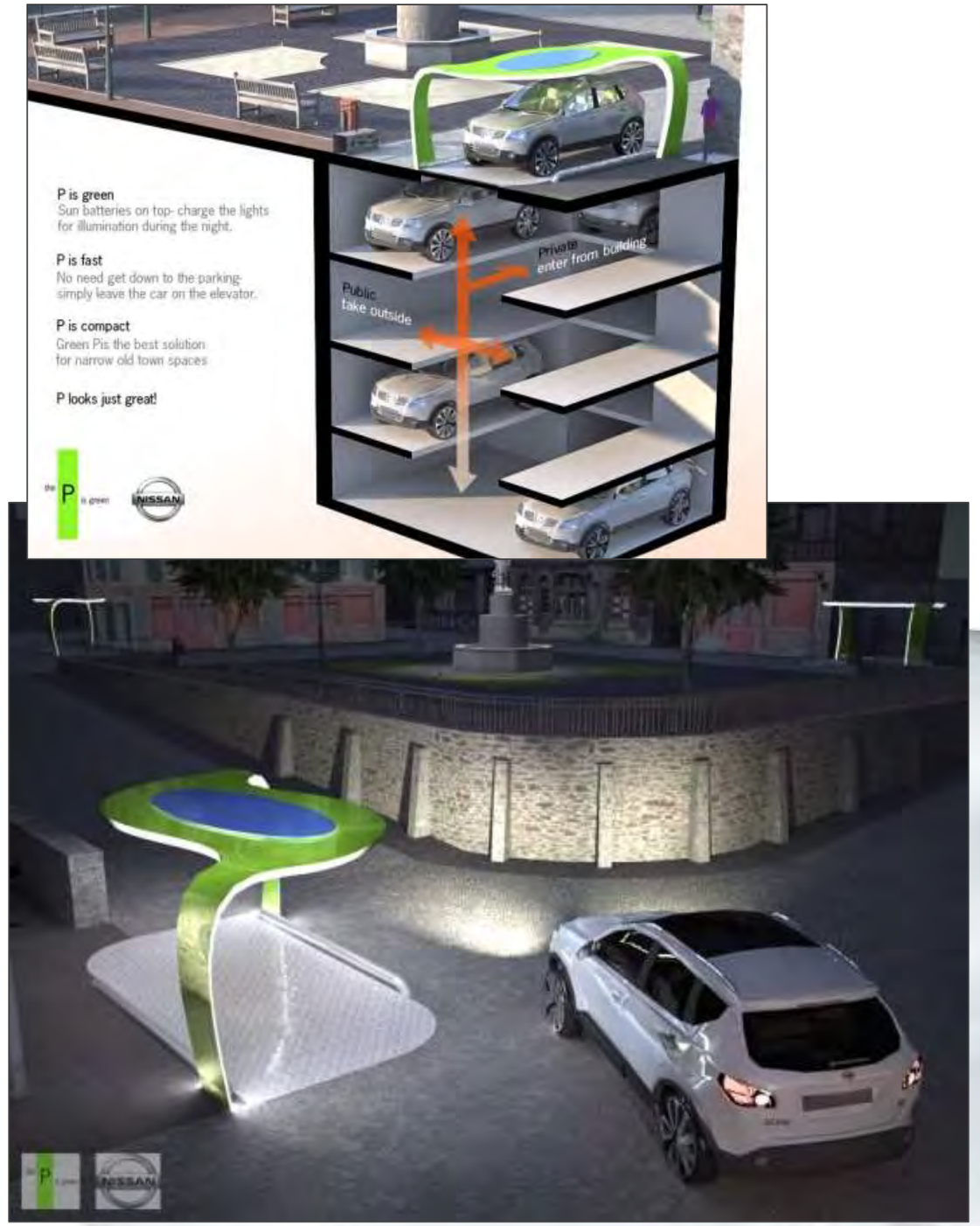
ex.

» The Green P system also includes a lighting system that can replace or supplement ordinary road lights by charging them with solar energy generated by panels installed on the Green P's roof.

Designers: Algis Berziunas and Laima Rimkute

More info:

www.greendiary.com



Energy Efficient Vehicle – Parking Perks

Some municipalities are offering free metered parking to residents whose vehicles get 50 miles per gallon, have low emissions or are powered by an alternative fuel.

ex.

Utah already offers an income tax credit of up to $3,000 for residents who buy clean fuel vehicles and some electric hybrids.

- Salt Lake City joins New Haven, CT; Fresno, CA, Boulder & Manitou Springs, CO and Albuquerque, NM, in the free parking meter program. In the last year, Austin, Texas, also approved a green vehicle incentive that provides $100 in free parking.
- Commuters in Baltimore who use low-emissions vehicles can also buy parking passes at city-owned garages at a discounted rate.

Electric Vehicle Recharging

Electric vehicle charging stations in parking facilities is coming. Also coming is a new concept of "Networked Charging Stations" that provides unique benefits when compared to non-networked charging stations.

Coulomb Technologies
Fueling the Electric Transportation Industry

- Benefits include:
  - A revenue stream to pay for electricity, capital equipment and maintenance
  - Ability for drivers to find unoccupied charging stations via web-enabled cell phones
  - Notification by SMS or email when charging is complete
  - Authenticated access to eliminate energy theft
  - Green House Gas savings calculation per driver and per fleet
  - Authorized energizing for safety
  - Remote monitoring and diagnostics for superior quality of service
  - Fleet vehicle management
  - Smart Grid load management

Monthly Parking – Unbundled!

Boulder's 20 Day Punch Card is…

- Convenient: Valid in all 5 City of Boulder parking garages.
- Affordable: 20 days of parking for only $200 ($10/day).
- Available: No wait list!

ex.

- Flexible: Only pay for days you drive! Great option for anyone who works in downtown a few days a week, utilizes alternative commuting modes or who is on the wait list for a garage permit.
  - Intent: Options, options, options! Our intent is to offer more options. It was designed for long term parking (parking all day not leaving, maybe 8-10 hours) in our garages for people who do not have a long term permit.
  - Purchase: The purchaser pays $200 and receives a plastic day pass.
  - Usage: The buyer takes a ticket at the entrance gate as a normal short term parker would and upon exit gives the entrance gate ticket and punch card to the booth attendant. The booth attendant punches the card, returns it to the customer and opens the gate for the customer to exit. The booth attendant uses a pre-programmed register key and runs the ticket through.

Hotel Parking Perk for Hybrids

Hotels are beginning to offer parking perks for guests parking hybrids or electric vehicles.

ex.

Parking charges are $ 33 for Valet Parking or $ 25 for Self Parking, prices effective June 1st.

As part of commitment to the environment, the Fairmont Banff Springs is pleased to offer complimentary parking to guests bringing a hybrid or electric vehicle.

» FREE PARKING FOR HYBRID CARS IN NEW YORK CITY

- Your stay in the heart of Times Square and the Broadway theater district will be exciting and relaxing knowing your parking is free. So bring you hybrid to our front door and receive complimentary parking during your stay.

Parking Guidance Systems

In today's complex marketplace, it's highly desirable to have all available parking spaces utilized in order to maximize driver satisfaction, enhance revenues and minimize greenhouse gas emissions.

ex.

Single Space

Level Counting

Facility Counting

Way Finding

» BENEFITS

▸ Parking Guidance Systems Provide:

- Assured Parking Availability
- Reduced Pollution and Congestion
- Advanced Notification to Drivers
- Control Parking Occupancy by Facility, Level, Zone or Individual Parking Space
- Economic, Environmental & Customer Friendly

Kimley»Horn

SRF

Car Share Programs

Moving downtown?

Don't need two cars any more?

Can't afford a car, but need one from time to time?

Car Sharing may be just what the doctor ordered!

ex.

- With Car Sharing you can rent a car for a designated period.
- Pick it up at a designated spot.
- Return it to a designated spot.
- Your access car opens & starts the car.
- Your credit card is billed.
- (No don't even have to fill it back up!)

Portable Bike Racks

How do you handle seasonal demand peaks for bike parking?

The creative folks at the Winnipeg Parking Authority created this “portable bike rack platform”.

ex.

- The base can be picked up by fork lift.
- The bike rack proper is protected by sturdy, high visibility bollards
- It can accommodate 6 – 8 bikes in a single on-street parking space.

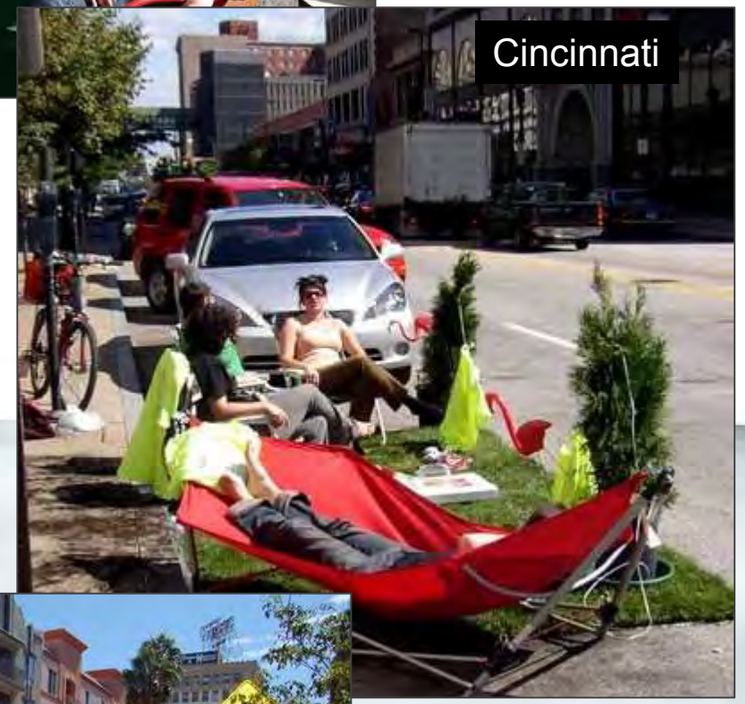
Parking Day is Catching On!

Park[ing] Day is a grassroots movement that is gaining momentum around the country!

Once a year, urban activists around the country convert a public parking space to a “mini park” for the day.

ex.

» Organizers call it “an opportunity for community members to engage passers-by, motorists, members of the press, city leadership and yes, even the authorities, in a rational and respectful dialogue of everything from our city’s parks and public space to the environment and allocation of land to mobility issues and local beautification projects.”



Ch.
29

Parking Facility Design and Construction

LEED Certified Parking

Yes, a parking garage can achieve a LEED Platinum certification! The University of Florida's new Southwest Parking Garage Complex includes a two story building made up of transportation, parking service, public safety offices and retail.

» The University of Florida's (UF) new $20 million Southwest Parking Garage Complex opened in September 2010.

ex.

Designed and built by the architectural firm Pierce, Goodwin, Alexander & Linville, the parking facility, which consists of a six-level, 313,000 square-foot parking garage that can accommodate up to 950 cars, along with an attached 52,000 square foot, two story building. A 12,000 square foot office building for the University is also included.

Decorative Asphalt Treatments

Traditional asphalt is popular for it's practicality, efficiency and low cost, but some find it boring and unattractive. Decorative asphalt has all the benefits, but adds the design potential of more expensive products.

IPC INTEGRATED PAVING CONCEPTS™

http://www.integratedpaving.com/

- The shopping experience doesn't start at the front door, it starts in the parking lots.
- Extend branding into the parking lot.
- Create positive 1st impressions

Eliminate Blind Corners

Improving site lines is one of the most effective means of reducing vehicular accidents in a parking structure.

- The photos to the right shows examples of how a cut out in a sheer wall improves visibility at a blind turn.
- The use of convex mirrors to improve visibility in turns or along pedestrian paths is another good example.

ex.

Entrances – Don't Hide Them!

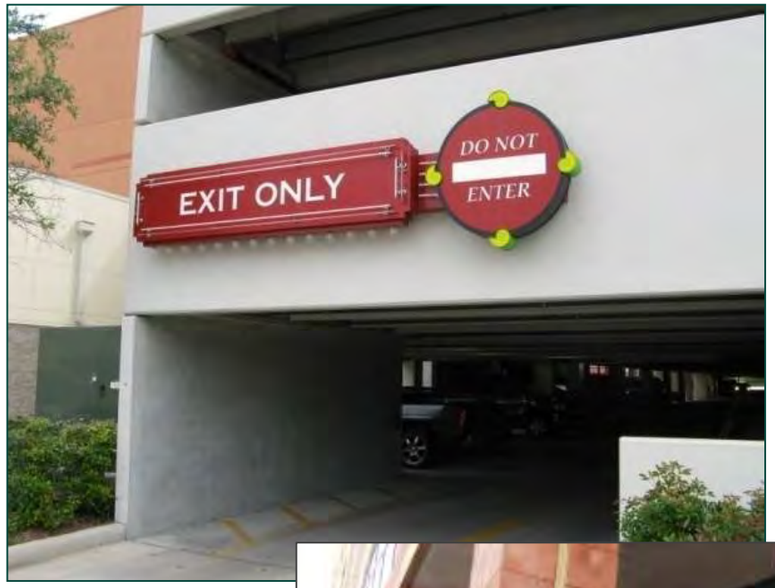
The trend towards wrapping parking structures with retail or office uses is a positive development, however, sometimes parking entrances can become hard to find.

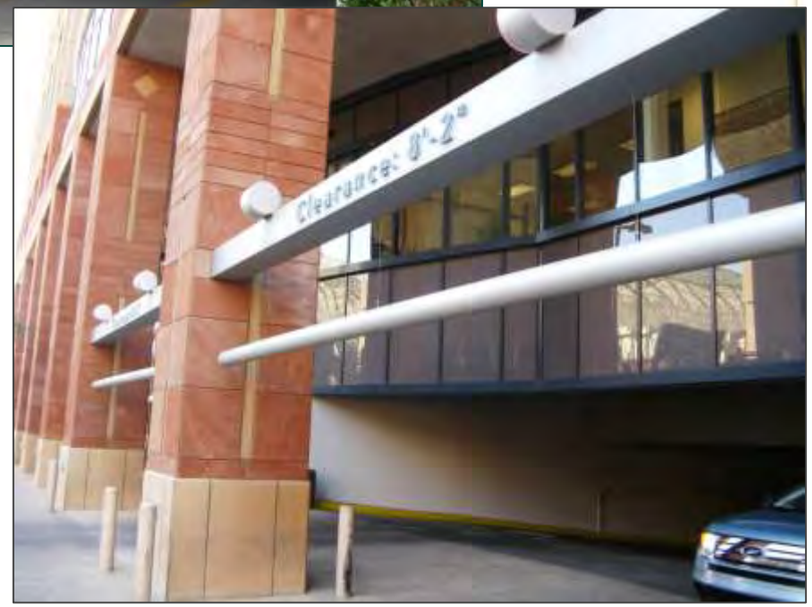
- This photo shows that while the parking structure may be all but invisible, the entry way can be effectively highlighted.
- The overhead signage is also supplemented with a curb mounted sign perpendicular to traffic flow to further improve visibility and wayfinding.

ex.

Illuminated Entry/Exit Signs

Illuminated entry/exit signs are important to ensure that customers know “entrances” from “exits” after dark.





ex.

- Whether illuminated from within or from external sources, this is an important safety and traffic control feature that is sometimes overlooked.
- Lighted entry/exit signs should also include illumination of clearance height information.

Lighten up!

Painting or staining the interior of parking structures is one of the best ways to improve the perception of customer safety and facility cleanliness.

Painting the underside of parking levels as well as vertical elements such as wall and columns increases lighting levels through improved reflectivity.

CANYON TONE STAIN®
PIGMENTED WATER-REPELLENT STAIN
WITH PLUSTEC® TECHNOLOGY

Technical Data & Application Instructions

PRODUCT DESCRIPTION

PHYSICAL PROPERTIES
TABLE I

BASIC USES

COLORS

WARRANTY

UNITED COATINGS

ex.

- Except from Paint/Stain Specification:
- Provide paint system consisting of two coats of a (white) water-base penetrating stain in accordance with Manufacturers recommendations.
- Approved stain systems are as follows:
  - H & C Concrete Stain AC1W, Glidden
  - W-1, Okon Inc.
  - Canyon Tone Stain “W”, United Coatings
  - Aquastain, Tamms Industries Co.
  - Or Approved Equivalent

Nested Parking Areas

With the trend toward more mixed-uses in parking structures, the need to create segregated parking areas within garages is becoming more common. One effective tool in accomplishing this is through the use of “nested parking areas”.

ex.

- The photo to the left shows a “secured and segregated” parking area for condo owners within a larger monthly parking structure used primarily by a large downtown technology center.
- In this case, separate AVI readers were installed and the readers programmed for residents.
- A separate pedestrian access gate and “California Style” swinging gates were installed to meet security requirements.

Parking Structure Pedestrian Safety

Areas that are adjacent to high volume traffic areas or entry/exit areas sometimes need special attention to protect pedestrians.

ex.

» The glass and metal gate system pictured here is one creative and effective option to consider.

Pedestrian Ways

In areas with high level of pedestrian traffic with parking garages, created protected pedestrian ways is a parking structure design best practice.

- » Although this option adds cost, it is an extremely positive customer amenity and an effective safety enhancement.
- » Care must be taken to ensure that ADA design parameters are taken into consideration.
- » A 44” minimum is required if the access aisle is used as a “means of egress”, 36” if not.

ex.

Maximizing Parking Capacity

In some environments there are peak parking demand periods that will require special efforts to accommodate all your customers.

» At the Hotel Del Coronado, a special parking row behind the standard parking configuration allows them to add an additional 10% capacity to the normal self parking lot.

» During peak demand periods, they will shift to a valet stack operations mode.

ex.

Transitional Lighting

Transitional lighting (additional lighting provided at facility entrances) is both practical and an important safety feature in parking structures.

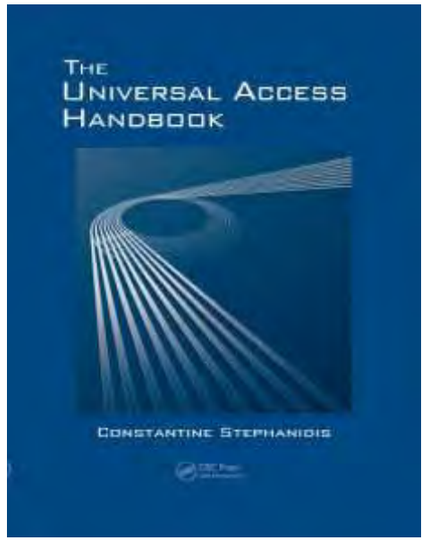
ex.

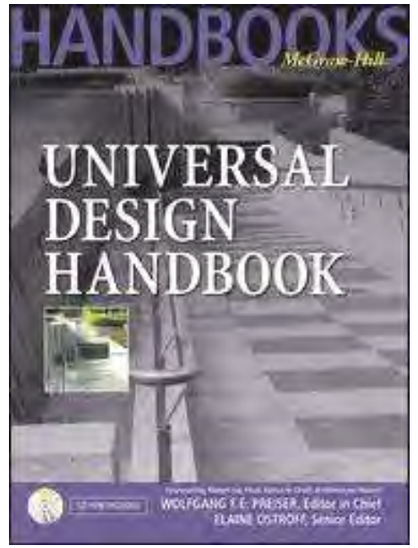
- The Illuminating Engineering Society of North America recommends a minimum of 50 foot candles for transitional lighting at parking facility entrances.
- Transitional lighting helps driver's eyes adjust from bright exterior conditions when entering the relatively dark conditions within a parking deck.

Universal Design

Universal design practices strive to eliminate accessibility issues through the incorporation of barrier free design strategies.

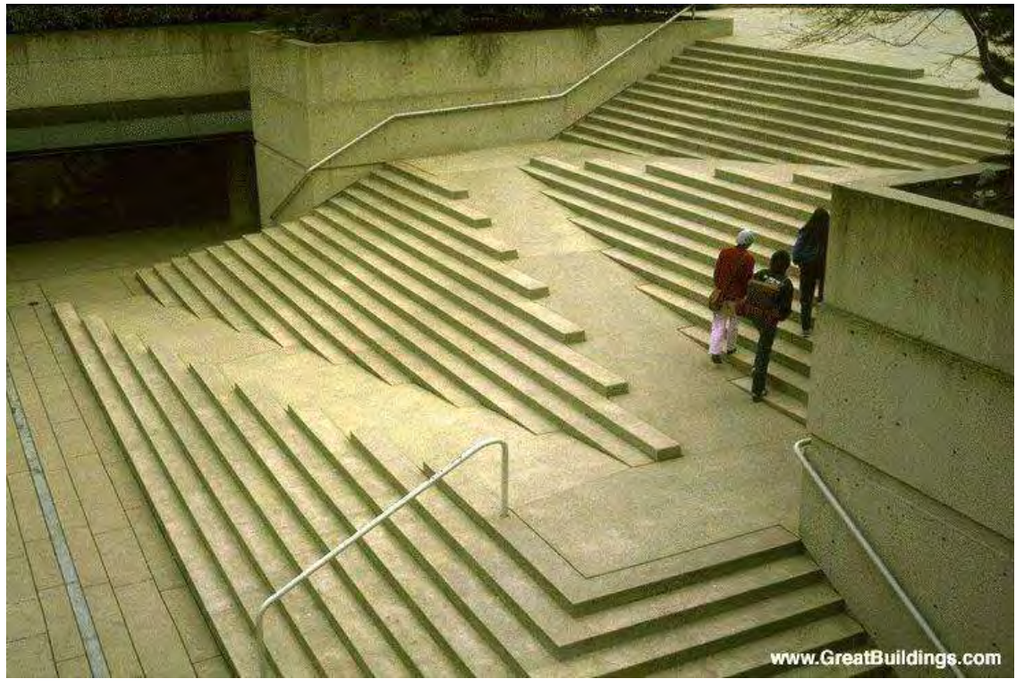
ex.





» Hands free parking through AVI systems is a non-traditional example of a universal design application.

» Other examples include, pay-by cell phone for on-street parking, audible cross-walk signals, voice activated elevator cabs, etc.



Parking Space Availability Signage

Single space monitoring systems with parking guidance signage make parking in large complex parking garages more user friendly.

These systems are being deployed in retail, airport, theme park and university environments.

ex.

- Baltimore Washington and Seatac International Airports were among the pioneers of this technology.
- Westfield mall at Century City installed an advanced parking guidance system in their large 2000 space below grade garage.

Creative External Architectural Treatments

To reinvigorate urban environments, some old parking garages are getting some interesting face-lifts!

ex.

Creative External Architectural Treatments

ex.

This award winning design shows just how far some architects will go in adapting their design to nature of the larger project.

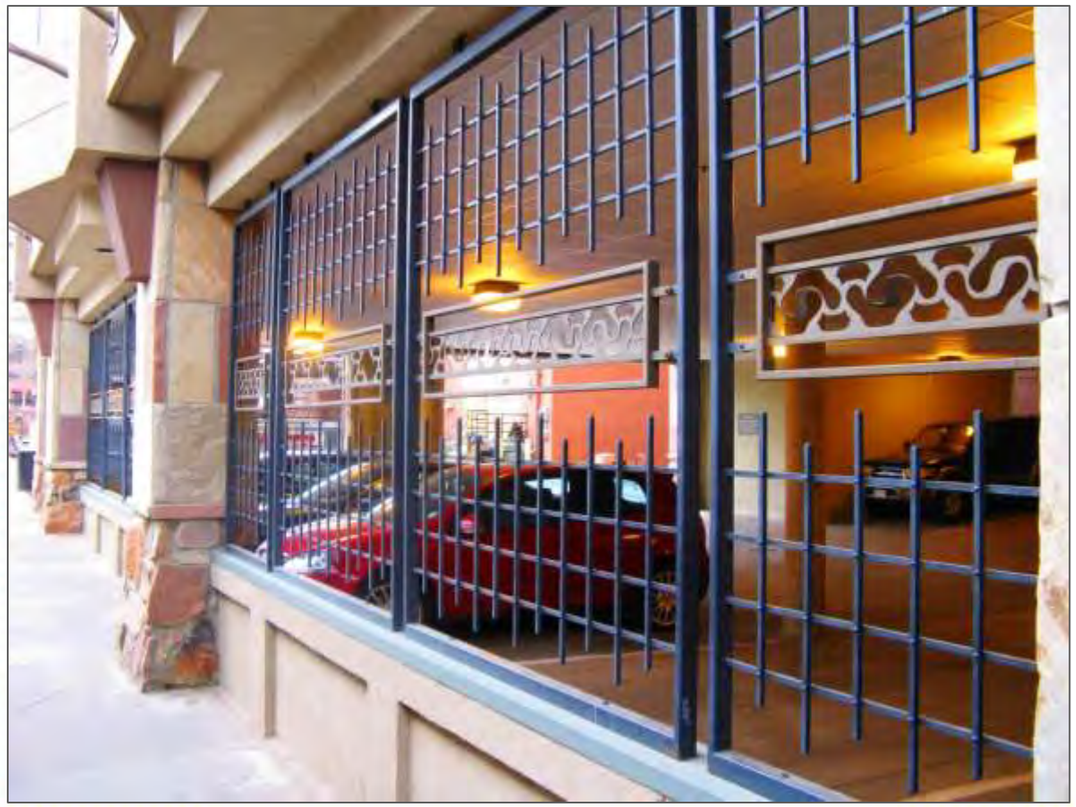
This “Library Parking Garage” in Kansa City won an IPI Award of Excellence”

Securing Ground Level

Restricting the number of access points is a parking facility design security best practice.

This photo shows that the goal of securing the ground floor can be done in an tasteful and attractive manner.

ex.



Alternative Garage "Skin Treatments"

One alternative to traditional pre-cast concrete panels are metal panels.

Potential Advantages Include:

- » Greater openness
- » Cost savings
- » Attractive look

ex.

Ch.
30

Specialized Parking Facility Types

Consolidated Rental Car Facilities

Some of the largest, most advanced and well designed parking facilities in the country today are Consolidate Rental Car Facilities supporting major airports.

ex.

- These facilities are multi-modal hubs, many are integrated with light rail or monorail systems.
- These facilities often times show the true potential for parking facilities “interior environment enhancements” as illustrated in the photo below.

Specialized Canopy Structures

While technically not a parking facility, the Helios House in LA is a great example of creative architectural treatments for canopies covering automobile related uses.

ex.

» This structure's visually arresting geometric construct is largely maintenance free non-rusting aluminum alloy.

Intermodal Parking and Transportation Facilities

These facilities are typically hubs for multiple forms of transportation including rail, bus, taxi and parking. By centralizing these services to one location, passengers are able to access their preferred means of transportation more easily. Passenger comfort and safety is also with the construction of an interior lobby and designated pick-up/drop-off areas out of the way of traffic.

ex.

» In addition, businesses located near these facilities are more visible and accessible to customers. This facility will also help make downtown more pedestrian-friendly and increase foot traffic to local businesses.

Airport Parking Garages

While airport parking garages come in many forms, there are some basic design criteria that tend to show up in airport parking facilities due to their basic functional needs.

» Some of these features include”

- Helical ramps to move large volumes of vehicles in short periods of time.
- A predominance of flat –floors to better serve customers with luggage.
- Large facilities requiring good wayfinding.
- Integration of light wells or other features to break up large facilities and provide orientation.
- External exit toll plazas
- Integrated multi-modal transportation elements
- Advanced access and revenue control systems

ex.

Mixed-Use Facilities

What is a mixed use facility? Simply a building or group of buildings in which you can work, shop and live. The integration of parking either in a “wrapped”, “stacked” or below grade fashion (or some combination) is common.

ex.

» Of course you’ll still want to get away from time to time to visit friends, explore cultural venues and take vacations but for these a rental through a “car sharing” system might make more sense. Proximity to transit and the addition of community bicycle programs is increasing commute options.

Event Parking Facilities

Some parking facilities may be designed primarily for office parking, but with an awareness that they will be used for special events as well.

Event parking requires a another level of planning and design to accommodate the acceptance of up-front payment and peak egress traffic flow.

ex.

» Double-threaded helix circulation systems with separate up-bound and down-bound traffic patterns are common to expedite the high traffic volumes.

Transit Oriented Development Parking Facilities

The "new urban village" concepts designed around a rail/transit stop offers a picture of the emerging preferred urban development land-use type of the near future.

These “transit oriented developments” are characterized by relatively dense development patterns, strong permanent transportation elements that will support a “live/work/learn/play” environment.

ex. » While some parking is generally provided in tends to be less in overall numbers, provided in structures and supported by multiple transport options.

Temporary Parking Structures

There are temporary, modular, one deck car park systems designed to virtually double the capacity of an existing or new surface area, by use of a free-standing deck installed in the short amount of time with minimal site disruption.

Pre-fabricated elements are installed on the surface without traditionally excavated foundations.

The finished structure can be disassembled and 100% re-assembled on another site in different configurations.

In many cases installation can be phased to retain spaces for an ongoing parking operation and its revenue stream.

ex.

» For environments where major design decisions are in flux, or an immediate loss of existing parking needs to be mitigated this temporary modular parking deck option has distinct advantages.

the original modular system to double parking areas

FAST PARK

Ch.
31

Automated Parking Facilities

High Density Vehicle Storage

There are products designed to meet higher-density parking requirements by providing more efficient space utilization through a variety of vehicle storage and retrieval options, from attended systems (valet) to fully automatic systems that require no human intervention.

ex.

» BENEFITS

- Designed or retrofitted in accordance with client specifications
- Cost-effective and can be installed with little to no site preparation; standard garage doors, facade siding and roofs can be used to enclose all systems
- Construction periods and costs are minimized - require no ramps or drive aisles
- Beneficial floor area ratio (FAR) – Systems regarded as one level in many cities

Boomerang
WE ENGINEER SOLUTIONS.

Mechanical Parking Structures – "Tray Systems"

Benefits of Automated Parking

- Automated Parking Saves Space
- Automated Parking systems allow vehicles to be stored without human intervention and allow for much greater vehicle density within a parking facility.
- By consuming roughly half the space of a conventional parking garage, automated parking brings value to real estate development projects in any of the following four ways:
  - » Saves Valuable Air Rights
  - » Reduces Expensive Excavation
  - » Fits More Cars
  - » Conserves Open Space

ex.

Unique Capabilities of the RoboticValet™

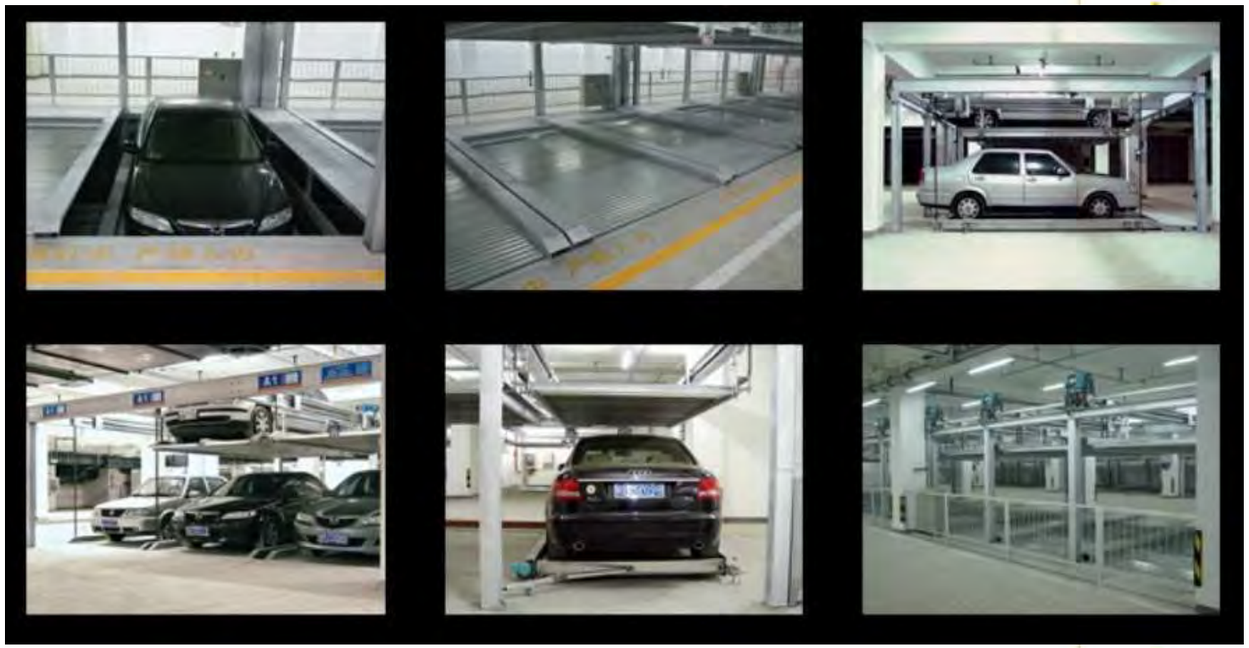
- » Robot lifts only the tray - nothing touches the vehicle
- » Rolls on solid concrete decks (new or retrofit)
- » Easy to maintain over long lifecycle
- » Moves underneath vehicles from any side
- » Transports vehicles in any direction
- » Rotates vehicles without a turntable
- » Lifts payloads up to ~7,000 lbs
- » Battery operated

Boomerang Patent Pending
PARKING SYSTEMS

Mechanical Parking Lift –Slide Systems”

Benefits of Automated Parking

- More efficient use of land
- Improved user security
- LEED credits available



ex.

Lift-Slide Systems

» 2 -15 levels, using hydraulic system

» 5 level using electric

» Suitable for all personal vehicles, SUVs, mini-vans, etc.)

» Semi-automatic operations

» Access card or PIN code

» Stand-alone structure or integrated into another structure

» Relocatable

» Can be configured with electric vehicle charging stations

» ISO 9001 Certified, LEED Credits and Innovative Design credits are available.

Boomerang Patent Pending
PARKING SYSTEMS

Ch.
32

Parking and Economic Development

Develop a Parking Policy Geared to Support Economic Development

Some innovative parking programs that consider themselves as integral partners in overall downtown revitalization efforts have developed their overall parking policy framework to be geared toward support community and economic development.

Tempe, AZ is one such City. To the right is the overall policy framework they adopted.

ex.

Parking/Economic development Principles

- » Consider Parking as One Element of a Larger Transportation System
- » Effective Parking Resource Management
- » Define "Parking Adequacy" within the Transportation Context of Downtown
- » Create a "Proposed Development Parking Assessment Tool"
- » Maintain Shared Parking as a Core Parking Planning Element
- » Integrate Parking Planning Into the Larger "Downtown Business Strategy" Context
- » Long-Term - Build Toward a "Self-Supporting Parking Enterprise Program
- » Define a Specific Targeted "Return on Parking Investment Ratio"

Parking Benefit Districts

The establishment of "parking benefit districts" can serve as a financing tool to support improvements in downtown areas while also addressing traffic congestion and parking constraints.

Within a parking benefit district, public parking spaces (both on and off-street) are charged an hourly rate designed to keep approximately 15 percent of parking spaces vacant..

ex.

Other Key Parking District Attributes

- Funds collected from parking charges are poured directly into improvements that make the district more attractive, such as sidewalks, landscaping, and other amenities or aesthetic improvements.
- New parking meter technologies have improved customer convenience (customers can pay remotely by credit card or cell phone), increased pricing flexibility (rates can be changed in real-time based on location, time of day, day of week, or level of occupancy), reduced streetscape clutter, and reduced operating costs

Ch.
33

Traffic Demand Management Strategies

INTRODUCTION/OVERVIEW

Transportation Demand Management (TDM) strategies are methods aimed at influencing the frequency, mode, time, route and length of travel of everyday people with the goal of increasing efficiency and sustainability of transportation facilities. TDM strategies typically include providing information on travel choices, financial incentive and disincentives, safe alternative travel facilities, regulating parking, marketing, flexing working schedules and any other program that makes the use of driving single occupied vehicle less attractive.

Our goals in the development and organization of this document were to provide a comprehensive categorization of TDM strategies, effectiveness and policy areas to make finding specific best practices easier for college campuses around the country. As is often the case when trying to categorize a wide range of items there are instances where one item might legitimately be placed in multiple categories. This document contains many strategies to reduce congestion and single occupancy vehicle challenges faced around campuses by providing alternatives and countermeasures.

The goal of any TDM plan is to reduce the dependency on personal vehicles to make daily trips to and from work/campus. The key to the success of these strategies is to have a sufficient number of alternatives and infrastructure that will replace the need of having a personal vehicle. Education and exposure also play a key role in making the commuters aware of the alternate travel options available.

A COMPREHENSIVE APPROACH TO PROGRAM DEVELOPMENT

In this report, TDM strategies are separated into categories based on functionality and type. Below are the categories in which each TDM strategy is classified:

Employee or University Support Actions

Financial Incentives or Disincentives

Alternative Work Arrangements

Infrastructure and Transportation Improvements

Transportation Services

EMPLOYER OR UNIVERSITY ACTIONS

VEHICLE RESTRICTIONS

Some college campuses regulate the number of vehicles by putting restrictions on students who can have vehicles on campus.

An example is a college not providing parking passes to freshman who live on campus.

Example of schools that don't allow freshmen to have vehicles on campus:

Stanford University

Old Dominion University

Grambling State University

University of Albany SUNY

Valparaiso University

EMPLOYER OR UNIVERSITY ACTIONS

RIDE-MATCHING

Ride-matching is a system that matches drivers and riders within their region. Ride-matching services connect prospective ridesharers that may otherwise have no way of connecting with one another.

These services are growing increasingly popular on college campuses and can be used as an on-demand service or as a long term service. Lyft is an on demand ride matching service that allows you to reserve, track and rate your driver through a mobile app.

Zimride is a ride matching service that connects users to drivers traveling the same route. Zimride is geared toward commuters and long term ride matching customers whereas Lyft, and similar services to Lyft, are geared toward short term ride matching.

Services

- Zimride
- Sidecar
- Uber
- Lyft
- Jitney

EMPLOYER OR UNIVERSITY ACTIONS

VARIABLE MARKET RATE FOR ON-STREET PARKING

Setting variable parking rates that fluctuate with demand.

Concept

Helps optimize parking availability

Frees up spaces for short-term users

Eliminate search traffic

Adjusted parking rates based on demand and location.

Increases price in high demand locations

EMPLOYER OR UNIVERSITY ACTIONS

UNBUNDLING PARKING

Unbundling parking includes separating the cost of parking from the rental purchase cost resulting in students having to pay for a parking space separate from their traditional residential cost. This encourages using other forms of transportation and reduces vehicular ownership.

- Universities and property managers can sell parking spaces at market value
- Reduces travel by 10-30%
- Encourages Universities to increase transit commuter rates among their students

EMPLOYER OR UNIVERSITY ACTIONS

CARSHARE

Carshare is a car sharing service that is an alternative to vehicle ownership. Carshare services are intended to make vehicles accessible to lower income students and students who only make occasional trips. Vehicles are reserved on a phone or personal computer, checked out for a designated amount of time and then the vehicle is returned to a dedicated spot where the car was picked up for the next person.

zipcar U for universities

EMPLOYER OR UNIVERSITY ACTIONS

PARKING TAXES and FEES

Parking taxes and fees can affect travel behavior by decreasing the amount of available parking, increasing the cost of parking, or encouraging employers and developers to pass the cost of parking onto drivers.

One time tax – One time tax paid by students for parking.

Stall tax – Annual tax per parking stall/space for students with vehicles.

Percentage of cost – Tax charge based on the cost to park.

Parking taxes designed to target specific types of parking behavior

- » Peak-hour
- » Commuter

Discounts

- » Early bird arrivals
- » Night owl departures

EMPLOYER OR UNIVERSITY ACTIONS

HIGH PARKING COST FOR SINGLE OCCUPANT VEHICLES (SOV)

Free parking is an incentive for driving alone. In order to penalize SOV's in some form, charging high parking rates will have an impact on the frequency of SOV's. Higher parking cost will increase the use of non-SOV's but motorist need alternative transportation options as well.

Increase the use of non-SOV modes.

EMPLOYER OR UNIVERSITY ACTIONS

PREFERENTIAL PARKING FOR RIDESHARE/CARPOOL/VANPOOL

"Preferential parking" means parking spaces designated or assigned for carpool and vanpool vehicles carrying commute passengers/students on a regular basis. These parking spaces are located in more convenient locations than parking spaces provided for single occupant vehicles.

Examples:

Marking spaces

Installing signs

EMPLOYER OR UNIVERSITY ACTIONS

PREFERENTIAL PARKING FOR RIDESHARE/CARPOOL/VANPOOL (CONTINUED)

The City of Portland (OR) requires that office, industrial, and institutional uses with minimum parking requirements over 20 spaces must reserve 5% of the spaces or 5 spaces, whichever is less, for carpools. The spaces must be the closest to the building entrance or elevator other than handicap spaces.

EMPLOYER OR UNIVERSITY ACTIONS

PAY FOR PARKING

Permits govern parking privileges by user, location, time and price incentives. The implementation of parking permits can help to better regulate parking demands. Parking permits also help to create a structured environment for regular motorist.

- Balances parking demands by user, time and location
- Promotes better utilization of parking facilities
- Faculty and staff required to pay for parking.

EMPLOYER OR UNIVERSITY ACTIONS

GUARANTEED RIDE HOME

Guaranteed Ride Home (GRH) programs provide a ride home for persons who use alternate modes of travel. This program serves as a backup plan for those who do not have a personal vehicle at work in the event they need to return home expectantly. These program are typically subsidized or sustained through vouchers and reimbursement.

Example

Parent needs to leave work to tend to a sick child at school.

Working/studying late

Emergency

EMPLOYER OR UNIVERSITY ACTIONS

INFORMATION CENTER

An information center is a great way to centralize the information available about current TDM strategies on campus.

Information examples

Current maps, routes, stops and schedules for public transit routes serving campus.

Telephone numbers and web sites for additional information.

Transportation information, ridesharing agencies and local transit companies.

EMPLOYER OR UNIVERSITY ACTIONS

EMPLOYEE TRANSPORTATION/TDM COORDINATOR

A TDM coordinator is a person(s) hired by the University responsible for organizing, coordinating, developing, managing and evaluating TDM efforts on the campus. Its is important for the TDM coordinator to educate and market to the students making them aware of the ongoing TDM efforts around campus.

EMPLOYER OR UNIVERSITY ACTIONS

ESTABLISH A TDM FUND

A TDM fund will help to fund the campus TDM program. TDM funds are a donation based campaigns in which faculty, staff, students and local businesses can join in to help support the efforts of reducing single occupancy vehicles.

EMPLOYER OR UNIVERSITY PROGRAMS

PUBLIC TRANSIT PROGRAM

Provides local public transportation the chance to partner with University students, faculty and staff in providing low-cost annual passes.

Implementation

Bought at discounted rate in bulk, then sold individually.

Built in cost included in tuition providing access to the whole student body.

DMC TRANSPORTATION INFRASTRUCTURE PROGRAM MANAGEMENT

EMPLOYER OR UNIVERSITY PROGRAMS

SAFEWALK PROGRAM

Safewalk program help to address safety issues from students on campus. Safewalk programs help to facilitate safe travels for students who do not feel comfortable walking alone late at night, between buildings, in dark places and to and from vehicles.

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PARKING MANAGEMENT AND DESIGN BEST PRACTICES

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DMC TRANSPORTATION INFRASTRUCTURE PROGRAM MANAGEMENT

EMPLOYER OR UNIVERSITY PROGRAMS

PARKING PERMIT BUYBACK

The parking permit buyback program is set up to get students to find alternative routes to commute. Current permit holders can trade in their parking passes for cash to bike, walk or rideshare to campus.

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EMPLOYER OR UNIVERSITY PROGRAMS

INCREASE PARKING PERMIT PRICES

Increasing the price of parking permits is a method to encourage alternatives to driving. An initial push to increase all prices would reduce the number of single occupant vehicle commutes to campus but providing a supply and demand based system that increases the prices of the most desirable parking permits would also help to reduce driving.

EMPLOYER OR UNIVERSITY PROGRAMS

ENCOURAGING BICYCLING AND WALKING

Encouraging bicycle and walking can be an effective and inexpensive way to reduce vehicle miles traveled on campus. With the help of community groups, advocacy organizations and municipal bicycling/pedestrian directors, programs can be organized to educate the campus on the benefits of bicycling and walking.

Activities

Discounts on bicycles

Maps

Campaigns

Education

EMPLOYER OR UNIVERSITY PROGRAMS

MARKETING

Marketing involves interacting and engaging with the student body to determine their needs and preferences. Marketing is a continuous process. The amount of knowledge the public has on the TDM strategies available plays a major role in their effectiveness.

EMPLOYER OR UNIVERSITY PROGRAMS

WORKSITE SERVICES

Worksite services reduce the need for traveling off campus.

Increasing restaurant and shopping options, medical treatment and on-site childcare are all options to reduce these trips.

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FINANCIAL INCENTIVES OR DISINCENTIVES

PARKING CASH OUT PROGRAM

A University based strategy which allows the University to charge students for parking while giving students a bonus or pay increase to offset the cost of parking. Students may use this increase to pay for parking or may choose an alternative mode and “pocket” the difference.

Parking Cash Out Benefits

Gives commuters a new choice

Rewards the alternatives to solo driving

Reduces vehicle trips

Costs employers very little

FINANCIAL INCENTIVES OR DISINCENTIVES

TRANSIT SUBSIDIES

Transit subsidies can help reduce the cost of taking transit by offering prepaid or discounted transit passes to students who agree to commute by transit.

FINANCIAL INCENTIVES OR DISINCENTIVES

TRANSPORTATION ALLOWANCES

These allowances are given to students who chose to use alternate forms of transportation to work. Theses commuters are allowed to use the allowances at their own discretions or offset the cost of commuting.

FINANCIAL INCENTIVES OR DISINCENTIVES

IN-KIND INCENTIVES

In-kind Incentives can be provided instead of cash. Free or discounted products can be provided to those who choose to use alternative methods of travel in the place of cash gifts.

Examples

Gas

Transit pass

Oil Changes

Other vehicle services

FINANCIAL INCENTIVES OR DISINCENTIVES

Business Travel Reimbursement

This program reimburses miles traveled for business trips for transportation modes other than vehicle miles. For any business trip needed, trips can also be reimbursed if alternate modes of travel are used. These modes need to be comparable in travel time and trip duration.

Alternate travel forms eligible for reimbursement

Bicycle

Bus

Transit

ALTERNATIVE WORK ARRANGEMENTS

FLEXTIME/FLEXIBLE SCHEDULE

When provided, flextime allows workers to adjust their commuting time away from peak periods. This provides the workers with a less stressful commute, allows flexibility for family activities and lowers the number of vehicles using the transportation system during peak times.

For example, rather than all employees/students working 8:00 to 4:30, some might work 7:30 to 4:00 and others 9:00 to 5:30.

ALTERNATIVE WORK ARRANGEMENTS

ALTERNATIVE WORK SCHEDULE

This strategy involves using alternate work hours for all students. Alternative work schedules are similar to flextime but alternative work schedules are structured for the whole campus.

Avoid peak commute times.

Students have less control over their schedule as flextime.

ALTERNATIVE WORK ARRANGEMENTS

COMPRESSED WORK WEEK

Enabling students to compress regularly scheduled classes into fewer days per week.

Students given opportunity to attend classes four (4) days a week or some other schedule arrangement.

Reduces commute travel.

Cons

- » Reduction in productivity
- » Reduction in total hours worked

ALTERNATIVE WORK ARRANGEMENTS

TELECOMMUTING

Allowing students to attend class from home or a non-office location one or more days a week. Telecommuting can also allow students to take courses and access materials from home or any location off the main campus.

Long distance learning

Online courses

Reduce congestion

Reduce parking cost

Video classes

INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

BIKE-SHARE

Bike-share programs provide a fleet of bicycles to the public for general use. Bicycles are used on a first-come, first-serve basis and are typically available through a subscriber membership.

Bike-share programs have become increasingly popular on college campuses and in urban areas to reduce the number of vehicles used for midday trips.

INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

BIKE INFRASTRUCTURE

Bicycle infrastructure improvements are similar to pedestrian improvements, although with a more limited range of users. Such enhancements benefit existing and new users, can increase cycling activity, and reduce driving.

Providing adequate bicycle facilities, including parking, showers, and other infrastructure, will encourage bicycle use as a daily form of transportation.

INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

BIKE LANES

Identify innovative interim solutions for improving design deficiencies and/or maintenance of important bicycle travel routes to assure a safer, more efficient bicycling environment.

Applications

Including bicycle lanes in new construction

Road diets (restriping roadway facilities to include bike lanes.)

Proper bicycle infrastructure enforcement.

Lanes need to be clearly separated from car traffic and violation by car drivers needs to be strictly enforced.

INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

BIKE LANES

- Shared lanes (Sharrows)
- Buffered lanes
- Cycle tracks
- Greenways
- Cyclist actuated signals

INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

BIKE BOXES

The bike box is an intersection safety design to prevent bicycle/car collisions, especially those between drivers turning right and bicyclists going straight. It is a green box on the road with a white bicycle symbol inside. It includes green bicycle lanes approaching and leading from the box.

Details

Increase safety when drivers are making right turns by allowing cyclists to move in front.

Increase safety by coloring the bike lane through the intersection.

Increase safety by reminding motorists to be alert for cyclists.

INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

BICYCLE FACILTY IMPROVEMENTS

Details

Increase quality of existing bicycle racks, address lack of weather protection

Increase supply of secure bicycle parking for long-term use

Secure campus parking for bikes, as well as shower and locker facilities that can also be made available for those who bike to

INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

PEDESTRIAN FACILTY IMPROVEMENTS

Providing enhanced pedestrian infrastructure and an improved environment increases safety and improves perception and participation in pedestrian commutes.

Cost are similar to that of bicycling and are generally associated with program expenses and facility improvements.

Details

- Wide sidewalks
- Shade
- Benches
- Beautification efforts
- Neighborhood connections
- Mixed land use patterns

INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

Universal Design

Universal Design means the design of products that can be used by as many people as possible. Designing for the individual with the most limitations often produces helpful improvements for inefficiencies that exist with current design, benefitting more than the individual with limitations.

Transit Oriented Development (TOD) Policy

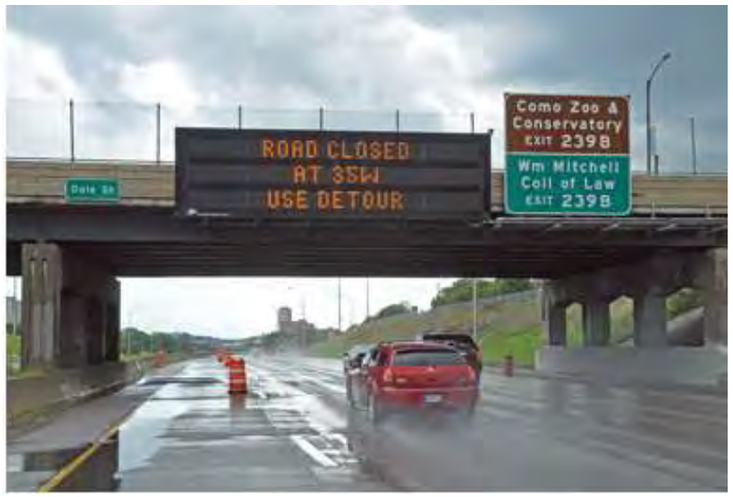
Transit Oriented Development (TOD) Policy Guidelines or a Transit Supportive Design Guide is necessary to provide infrastructure that makes transit an attractive and viable option. For example, transit stops that provide some shelter from the elements make access to transit more comfortable and less onerous.

INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

Intelligent Transportation Systems (ITS)

The use of ITS methods to alert motorists of disruptions to the transportation system can be helpful to the users of the system, and are highly effective tools for managing demand.

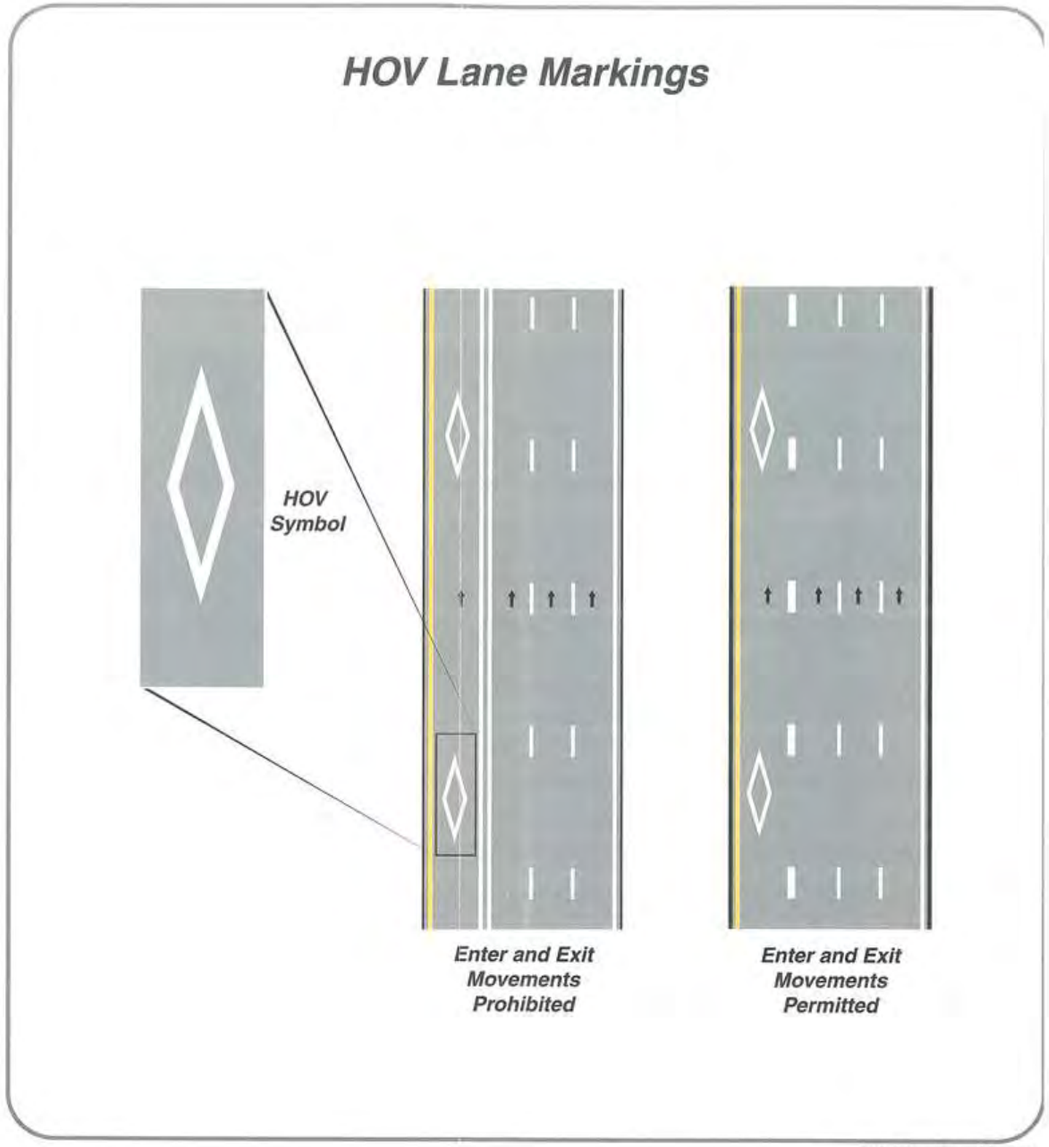
Telephone-based internet access
Variable message signs
Interconnected signals
Emergency vehicle preemption



INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

High Occupancy Vehicle (HOV) Lanes

HOV lanes are restrictive lanes that provide access carpools, vanpools, and transit. These lanes allow for optimize flow on the facility and are the most effective when the HOV lanes are separated, by a physical barrier, from lanes used by the general public.



Note: Drawings not to scale

DMC TRANSPORTATION INFRASTRUCTURE PROGRAM MANAGEMENT

DMC Transportation & Infrastructure Program
PARKING MANAGEMENT AND DESIGN BEST PRACTICES

INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

Fixed-Guideway /Limited-Access Transit Service

These facilities provide access to only the designated modes of travel. Transit services are successful because they do not have to compete with the congestion of the public roadways. This method gives an alternative to driving a personal car.

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INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

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Smart Growth/Land Use Policy

Managing the demand of travel often aligns well with managing development and growth to support sustainable development or livable communities and healthy environments where pedestrian are the most important design user. Designing for compact growth that is accessible by multiple modes or could be connected to existing services can be beneficial for managing transportation demand. Creating convenient access is key to having successful smart growth.

Smart growth practices

Eyes on the street – designing buildings with clear views to streets and sidewalks.

Traffic calming – create walkable/pedestrian friendly environments

Mixed use centers – to encourage pedestrian and bicycle travel.

Effective lighting – for shopping and pedestrian areas.

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INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

INCREASE ON-CAMPUS STUDENT HOUSING

Increasing the student housing on campus will reduce the traffic on campus due to reducing the need for a vehicle. An increase in student housing will reduce congestion during peak traffic conditions.

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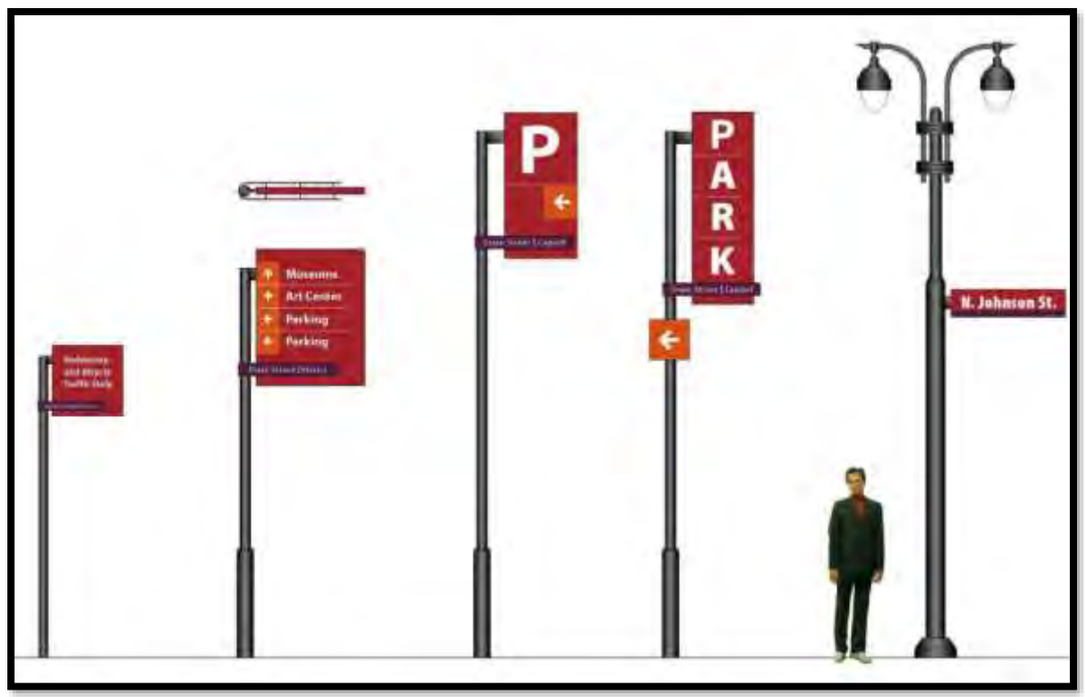
INFRASTRUCTURE AND TRANSPORTATION IMPROVEMENTS

WAYFINDING SIGNAGE

Tools used, including signs, books and maps, that give travelers multiple transportation options. Way finding signage encourages alternate modes of travel, creates an interactive experience and can improve the overall environment of a campus.



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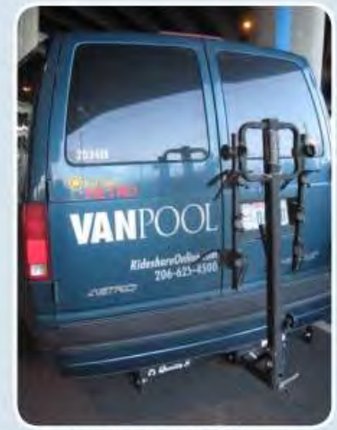
TRANSPORTATION SERVICES

VANPOOLING

Vanpooling is a strategy that encourages the use of large vehicles to transport large numbers of students. Vanpools can often be accomplished and successful by providing priority parking spaces for common destinations. Vanpools can allow off campus students to have a cheap and efficient way to get to campus.



Vanpools can be an effective employer based strategy.
Source: Nelson\Nygaard

Details

- Vans typically provided by the employer or operating costs are divided among members. Vans can be leased by the university.
- Cost of vanpooling programs are very similar to rideshare.
- Some vanpools are equipped with bicycle racks to support on-campus mobility for participants.
- Vanpooling typically transports ten or more persons.
- Most successful when transit services are limited

VANGO VANPOOL SERVICES

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TRANSPORTATION SERVICES

CARPOOLING

Carpooling is one of the most widely used and well know TDM strategies. The idea behind carpooling is to reduce the number of single occupancy vehicles (SOV's) into fewer vehicles. This consolidation will reduce congestion on commutes to and from campus. It allows simple commuters the opportunity to link up with a person of similar schedules and locations.

Details

Uses participants' own automobiles.

Limited to persons with rigid and similar schedules.

DMC TRANSPORTATION INFRASTRUCTURE PROGRAM MANAGEMENT

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PARKING MANAGEMENT AND DESIGN BEST PRACTICES

TRANSPORTATION SERVICES

SHUTTLE BUS

Shuttle Bus Services can be helpful to provide easy connections with nearby transit services or other important facilities. They can also provide an alternative mode for short midday trips, and can help alleviate on-campus congestion by providing access to an off-site parking facility.

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TRANSPORTATION SERVICES

UNIVERSITY VEHICLES

Providing a university vehicles is an additional way to encourage employees/students to use alternative modes of travel to work.

These vehicles can be used during the day for business travel since trips across campus or off-campus could be difficult without access to a personal vehicle. These vehicles can also be used for person trips and emergency on occasion.

UCAR

POLICY

COMMUTE TRIP REDUCTION (CRT) ACT

Law that aims at reducing traffic congestion, air pollution and petroleum fuel consumption.

Participation in Washington's CTR Law

- 1,000 worksites participating
- 530,000 commuters participation
- 154 million statewide vehicle miles reduced
- 69,000 metric tons of greenhouse gas

POLICY

Congestion Mitigation and Air Quality (CMAQ) Program

“The CMAQ program was implemented to support surface transportation projects and other related efforts that contribute air quality improvements and provide congestion relief.” Since some TDM strategies are provisions to reduce vehicle emissions, that are appropriate use of CMAQ funds. To obtain these funds it is important for each applying entity to identify eligible projects, prepare the required backup documentation, demonstrate the potential air quality benefits.

POLICY

OTHER FUNDING SOURCES

There are a number of state and local level funds available which are specific to a region to help fund TDM projects. It is up the campus to seek out energy conservation, non-motorized facilities, emissions reduction, pedestrian safety and other smart growth programs to partner with to obtain these funds. Funding is typically distributed based on competitive applications so it is vital to partner with an effective team that understands the scope of each program.

TDM EVALUATION

LEVELS OF EVALUATION

Finke and Schreffler, in the 2004 publication "*Using Multiple Assessment Levels For Evaluating Transportation Demand Management Projects: Monitoring And Evaluation Toolkit,"* outline six ways to evaluate the success of TDM strategies implemented.

- **Awareness**
- **Attitudes**
- **Participation**
- **Satisfaction**
- **Utilization**
- **Impacts**

TDM EVALUATION

PERFORMANCE METRICS

The University of Indiana-Bloomington came up with performance metrics to evaluate the goal of reducing the drive alone vehicles by 10 percent.

- Mode-Share - determine use by survey
- TDM/alternative transportation program use participation – registered carpools, membership in commuter club, etc.
- Greenhouse gas emissions – measure the reduction in greenhouse gases coming from the University
- Vehicle miles traveled
- Program awareness – finding how aware the pubic is on the new and existing TDM programs.

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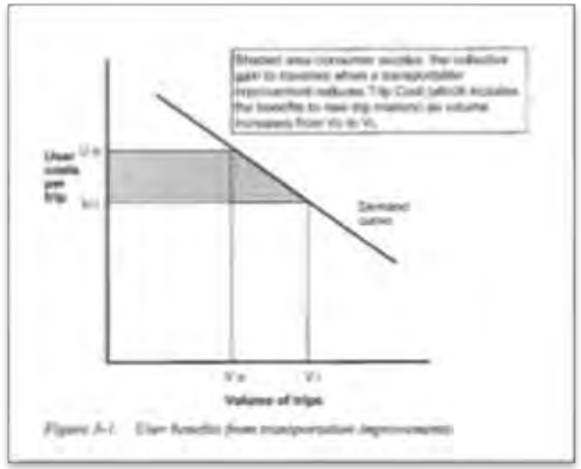
DMC Transportation & Infrastructure Program
PARKING MANAGEMENT AND DESIGN BEST PRACTICES

TDM EVALUATION

ECONOMIC EVALUATION

EcoNorthwest developed a seven (7) step evaluation process for economic sustainability. The evaluation "includes lifecycle cost analysis of impacts that are suitable for monetization, plus a rating system for impacts that are unsuited to monetization."



1) Describe each option
2) Define the analysis framework
3) Model and monetize impacts. (changes in congestion, crashes, road and parking facility costs, pollution emissions, etc.)
4) Calculate the total monetized benefits and costs for each year that is being considered and apply a discount value to future impacts.
5) Describe impacts that are unsuited for monetization.
6) Conduct sensitivity analysis to determine how changes in key assumptions affect outcomes.
7) Report result. Develop various ways to illustrate important differences between the options and describe their implications.

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TDM EVALUATION

EVALUATION OVERVIEW

The evaluation methods / models in this report are only a few methods used to measure the success of TMD strategies but it is up to the University determine the definitions of success in each situation. Each campus is different and success is dependent on campus needs and overall participation.

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Thank You!

Breaking News….

This just in….Congress has approved a new funding source for NASA.

Discussion

Appendix 3

City of Rochester Mobility Management and Parking Strategies – Peer City and Best Practices Research

Innovative Approaches to Municipal Parking and Access Management

Report Version: 1.0

Prepared for:

DMC Transportation & Infrastructure Program
City of Rochester, MN

Prepared by:

Date: 12/20/2016
DMC Project No.: Rochester J8618-J8622 Parking/TMA Study

Table of Contents

City of Rochester Mobility Management and Parking Strategies Best Practices Research

Introduction

This document provides three major elements for City and DMC staff to consider as we work to develop a cohesive and comprehensive parking and access management strategy for the City of Rochester:

1. A toolbox of parking and access management best practices.
    a. This "Tool Box" of parking management and design best practices has been compiled over several years and continues to evolve as the parking industry evolves. Our goals in the development and organization of this document were to provide a comprehensive categorization of parking planning, management and design areas to make finding specific best practices easier.
2. An overview of the approach being under taken in Boulder as a potential model
3. An extensive research effort on national (and in some cases, international) mobility and parking management best practices and

Parking and Access Management Best Practices Toolbox

Introduction

This separate document provides an extensive collection of parking and access management strategies in the following categories:

Ch. 20 - Parking Access and Revenue Control Systems

Ch. 21 - Parking Accounting and Auditing

Ch. 22 - Leveraging Technology

Ch. 23 - Signage and Wayfinding

Ch. 24 - Enhancing the "Parking Experience"

Ch. 25 - Revenue Enhancement Strategies

Ch. 26 - Expense Reduction Strategies

Ch. 27 - Special Programs and Promotions

Ch. 28 - Sustainable Parking Design & Management Strategies

Ch. 29 - Parking Facility Design and Construction

Ch. 30 - Specialized Parking Facility Types

Ch. 31 - Automated Parking Facilities

Ch. 32 - Parking and Economic Development

Ch. 33 – Transportation Demand Management Strategies

Potential Peer City / Approach to Parking and Access Management

Introduction

A recent project that Kimley-Horn has been actively involved in for the past two years and that has much applicability to the Rochester DMC planning efforts is a project from Boulder, CO referred to as the "Access Management and Parking Strategies" or "AMPS" project for short.

This document provides a potential model/approach for City and DMC staff to consider as we work to develop a cohesive and comprehensive parking and access management strategy for Rochester. If this approach resonates with City/DMC staff, a similar, but customized version will be developed for Rochester and built around the DMC guiding principles.

An Introduction to "AMPS"

Boulder's Access Management and Parking Strategy (AMPS) project is designed to update current access and parking management policies and programs and develop a new, citywide strategy to align with the city's sustainability goals.

The City of Boulder's parking management system has a long history. Parking meters were first installed on Pearl Street in 1946. Over the past decades, Boulder's parking system has evolved into a nationally recognized, district-based, multi-modal access system (autos, transit, bicycling and pedestrians) along with parking in order to meet city goals, support the viability of the city's historic commercial centers and maintain the livability of its neighborhoods.

The goal of AMPS is to evolve and continuously improve Boulder's citywide access and parking management strategies and programs tailored to address the unique character and needs of the different parts of the city.

What are Boulder's Key Issues?

Although the city of Boulder is a national leader when it comes to parking and access management, more work is needed to create a state of the art system that addresses new challenges:

- Boulder has one of the highest bike and transit use rates in the country, but more work is needed to meet our sustainability objectives and climate commitments
- Current regulations are out of date with respect to how much parking should be provided on certain sites considering the growing shift in travel behavior (more bike, transit and walking trips)
- While managing transportation demand has proven effective for private development, the city lacks the ability to enforce requirements
- The trend in lower car ownership among younger generations is causing the City to rethink future access and parking needs
- The need to create a parking and multimodal access system that works in both north Boulder and south Boulder
- Providing parking and multimodal access that works well for older adults, millennials, and everyone in between

What are the Goals of the AMPS Program?

Goal

Develop tools and strategies to evolve Boulder's access and parking management to a state of the art system reflecting the city's sustainability goals.

Another key goal of the AMPS project is to align parking and access management philosophies and programs with larger Citywide policies, goals and adopted plans.

Guiding Principles

The following AMPS project "Guiding Principles" provides a set of criteria that will be used to both guide the project in terms of overarching goals as well as to assess the relevance and appropriateness of specific best practices that will be evaluated and refined as tools to advance the City of Boulder's parking and access management programs.

- **Provide for All Transportation Modes and Safety**: Support a balance of all modes of access for a safe transportation system: pedestrian, bicycle, transit, and multiple forms of motorized vehicles—with the pedestrian at the center.
- **Customize Tools by Area:** Use of a toolbox with a variety of programs, policies, and initiatives customized for the unique needs and

character of the city's diverse neighborhoods both residential and commercial.

- **Support a Diversity of People:** Address the transportation needs of different people at all ages and stages of life and with different levels of mobility – residents, employees, employers, seniors, business owners, students and visitors.
- **Seek Solutions with Co-Benefits:** Find common ground and seek mutually supportive outcomes among community character, economic vitality, and community well-being with elegant solutions—those that achieve multiple objectives and have co-benefits.
- **Plan for the Present and Future:** While focusing on today's needs, develop solutions that address future demographic, economic, travel, and community design needs. Align with the city's Master Plans, including the updated Transportation Master Plan, as well as the city's Climate Commitment and Sustainability Framework.
- **Cultivate Partnerships:** Be open to collaboration and public and private partnerships to achieve desired outcomes.

What is the Focus of the AMPS Project?

To address the challenges noted above, AMPS will focus on the following seven "Focus Areas". Each focus area below is followed by a list of key topics to be explored within the focus areas. Some focus area tasks have some overlap with related areas. A more detailed description of these key topics or issues is provided in Appendix A.

1. District Management

A. This focus area explores the future of existing access and parking districts (Downtown, Boulder Junction, University Hill) as well as considering the formation of new districts.

B. Key Topics/Issues:

- Partnerships with private parking providers
- Integration between districts
- IPI's Parking Program Accreditation Initiative and the Green Parking Council's Garage Certification Program
- Consideration of how access districts could evolve to integrate with other types of districts: Eco Districts, Arts, Innovation, etc.
- District development projections
- Parking/access demand planning software
- Creation of new districts
- Car share/electric vehicle charging strategies to support access districts

- Public private partnerships

2. **On and Off-Street Parking**

   A. Investigates uses of public rights-of-way (e.g. Car-share parking, E-vehicle parking, neighborhood permit parking and the repurposing of parking spaces for uses such as bike parking or "Parklets"). Off-street parking (all surface lots and parking garages that are owned and managed by the districts) is also part of the discussion.

   B. Key Topics/Issues: - On-Street Parking
      - 72 hour parking limitation (abandoned vehicle policy)
      - Back-in angled parking to facilitate bike traffic
      - Protected bike lanes, Swapping bike land with parking areas
      - Loading zone management
      - Disabled parking designation and location
      - Use of time zones as a management tool in areas that do not warrant meters
      - Neighborhood parking permit programs (NPP)
      - On-street car share
      - Edge parking for commuters
      - City employee parking
      - Parklets

   C. Key Topics/Issues: - Off-Street Parking
      - Variable messaging signage / Parking guidance systems
      - Replacement of the parking access and revenue control (Gate access system) in the public garages
      - Incorporation of public art in parking facilities
      - Electric vehicle charging stations

3. **Transportation Demand Management (TDM)**

   A. Explores existing programs that reduce single occupant vehicle trips, including travel by transit, bikes, walking and car and van pool programs and new practices that could be adopted in Boulder.

   B. Key Topics/Issues:
      - Impact of RTD smart card on pricing
      - Last mile options – Car and Bike Share
      - Multi-modal access card for transit, parking and bike/car share programs
      - Enhanced pedestrian amenities
      - Expanded bike parking options
      - Bike corrals

- Implementation of Boulder Junction Access District (BJAD) TDM District
- Community-wide EcoPass program
- Parking "Cash Out"
- Alternative work schedules
- Car Pools/Van Pools

4. **Technology and Innovation**

   A. Assess parking access equipment (garages) for both internal systems (permitting, products, and reporting) and customer-focused technology to make parking more convenient and reduce the time needed to park.
   B. Key Topics/Issues:

      - Integration of existing five technology systems
      - Consideration of new technologies

5. **Code Requirements**

   A. Identify code improvements for parking requirements citywide (e.g. updating parking requirements for specific uses and updating the code to meet ADA requirements). Longer term code changes will respond to recent changes in travel behavior (e.g. increased bicycling and transit use) with new polices related to shared and unbundled parking.
   B. Key Topics/Issues:

      - Update off-street parking standards for standard, small car, and accessible parking stalls to create less complicated parking requirements that meet, but do not exceed, the parking needs of restaurants/taverns, warehouses, and industrial uses. Also, update RH-1 parking requirements to match that of RH-2 zoning districts.
      - Assess whether private property parking requirements should be by use instead of zone district.
      - Consider automatic parking reductions in addition or in lieu of current parking reduction process.
      - Consider parking maximums
      - Bike parking standards for new development
      - Reassess compact parking requirements and consider whether tandem spaces should count as parking in certain scenarios.
      - Allow parking spaces for car share/car pool/electric vehicles to be included in parking totals.
      - Create regulations for shared parking with cross access between or within Development Sites.

- Create Area Specific Requirements (not just zoning specific)(i.e. Student residential areas east of 28th)
- Assess other strategies to reduce superfluous parking supply or potentially not require minimum amount of parking on site, including but not limited to unbundling parking and additional on-street permit or metered parking.

6. **Enforcement**

A. Balances parking access and management through education, customer service and regulation in an effort to better serve those who live, work and visit the City of Boulder.
B. Key Topics/Issues:

- Title 9 Parking Enforcement Responsibility
- Expansion of LPR Enforcement
- Parking Ticket Fine Amounts in Relation to Parking Pricing
- Explore Graduated Parking Fines
- Develop an enhanced Parking Enforcement Operations and Training Manual
- Develop a parking enforcement program audit process

7. **Parking Pricing**

A. Analyzes parking pricing and enforcement fees (including variable and performance based pricing and graduated fines).
B. Key Topics/Issues:

- Parking Management through Pricing
- Pricing Considerations
- Cost of NPP Permits
- Variable or Performance-Based Pricing Options
- Parking Fine Amounts

The diagram below summarizes the overall project approach:

These objectives are completed through the following work plan. The work plan is organized by the eight Focus areas (seven AMPS focus areas plus a focus area related to communications and plan integration).

Communications and Community Outreach

In addition to the seven primary focus areas of the AMPS project, community outreach strategies are another major area of focus for the project team.

Three primary phases have been identified within the area of communications and community outreach. These three phases include:

- Inform, Educate and Engage
- Test Ideas, Inform and Engage
- Implement, Inform and Educate

For each of these phases, a combination of traditional outreach tools and strategies as well as a menu of new web-based/innovative tools and strategies are being explored. Examples of what is envisioned under each category are outlined below:

Traditional Outreach Tools and Strategies

- Board Meetings
- Presentations to Key Groups
- Open Houses/Charettes
- Individual Interviews
- Surveys
- "Coffee Talk" Listening Sessions
- Focus Groups
- Development of Project Info-Graphics

Web-based / Innovative Outreach Tools and Strategies

- Project Website
- Project Facebook Page
- Instagram "Your Point of View"
- "Common Place" / Polls Everywhere
- MindMixer
- Partnering Organization's Social Media Sites
- An Expert Advisory Panel
- Special Invited Experts on Specific Topics or Emerging Trends

Mobility and Parking Management Best Practices Research

Best Practices and Peer City Research Summary

The following information is a summary of the best practices and peer city research efforts conducted as part of our current program assessment and best practices documentation task for the DMC Parking and TMA Study.

Our intent with this document is present a broad range of mobility and parking management best practices that we will review with City staff after their initial review and identify those strategies that seem most applicable to the City and the DMC project. These selected strategies will be incorporated into a customized strategy for Rochester.

This research effort is primarily organized by the following major categories:

-  **Parking Management Strategies - On-Street**
-  **Parking Management Strategies - Off-Street**
-  **Technology and Innovation Strategies**
-  **Parking Enforcement Strategies**
-  **Pricing Strategies**
-  **Parking Code Strategies**
-  **TDM Strategies**
-  **District Management Strategies**

In some cases, the places where parking management and TDM innovations are occurring cannot truly be called "peer cities" due to their size or other factors, however, due to the advanced nature of many of Rochester's programs, we looked beyond programs of the same size or geographic

character. These innovative communities/programs were simply classified as "Cities We Can Learn From".

In addition, given the advanced and progressive nature of the programs currently in place in Rochester, many of the identified "best practices" may already be in place.

Parking Management Strategies - On-Street

Best Practice # 1

Strategy:

Evaluate the use and management of loading zones to improve loading efficiency and access to businesses

Description:

Understand how commercial loading zones are being used and determine if there is an opportunity to better manage loading zones so that carriers can access them quickly and easily, businesses are supported, and so that on-street parking operations aren't adversely impacted.

Action Items for Consideration:

- Review curb lane uses (location and management).
- Consider conducting a limited "Curb Lane Management Study" as a pilot program.
- Review of commercial loading activity (when, where, and for how long loading needs to occur)
- Consider developing a permitting system for use of loading zones. The use of "In-Car Meters" as the permit mechanism is being piloted in several cities and some are employing them for business/commercial accounts. More information on this use can be found at: **https://www.easyparkusa.com/business-commercial**.
- Review enforcement of loading zone regulations

Potential Sub-Strategies for Implementation:

- Convert loading zone space to on-street parking spaces at certain times of the day when delivery activity is low or non-existent

- Consolidate loading zones along the curb so that multiple businesses have access to centralized loading and the remainder of the space along the block is open for other curb lane uses
- Consider implementing loading zone permits. Match the needs of the carriers and businesses (e.g. have different permits available for purchase that allow carriers to access zones for various lengths of time)

Documented Results:

- Efficient use of curb space
- Better access to business for carriers
- Reduced conflicts with other curb lane users
- Reduced confusion on when and where to load and park
- Reduced citations related to illegal loading/unloading procedures
- Improved traffic flow since carriers are not blocking traffic to make deliveries

Stakeholder Engagement:

This strategy would require extensive outreach with the public, but particularly with business owners and commercial carriers to help determine how to appropriately manage loading zones.

Applicability/Similarity to Rochester

This strategy is applicable to Rochester because it involves efficient management of existing community resources to improve business operations, the users experience, and promote efficient use of the curb space. It can be tailored to meet the specific needs of the Rochester community.

This strategy supports City goals of economic development, preserving and improving community character, and improving the City's transportation network.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

To implement a change in management to the City's loading zones, (e.g. a cost to manage loading zones, such as requiring permits or having a special

meter rate for commercial use, regulating placement or time limits of commercial vehicles, etc.) will likely require the City to update their policies.

Cost Implications:

This strategy involves effectively leveraging already available community resources. The main cost of implementation might be in the stakeholder outreach, education, and communication.

References:

- Charlotte Center City Curb Lane Management Study (2011)
- New York City Off-Hour Delivery Program
- City of Houston

Best Practice # 2

Strategy:

Review implications of new federal regulations related to Accessible (ADA) Parking

Description:

On July 23, 2010, Attorney General Eric Holder signed final regulations adopting Americans with Disabilities Act Accessibility Guidelines (ADAAG) 2004 for the design and construction of accessible buildings and facilities. The following is a summary of the information provided on the Department of Justice (DOJ) website. It should be noted that the regulations also include other requirements beyond simply adopting ADAAG 2004; thus the DOJ calls the overall regulation the 2010 ADA Standards for Accessible Design (2010 Standards).

The additional elements in the 2010 Standards (which DOJ terms "supplemental requirements") appear to be in response to the most common lawsuits and otherwise contentious areas of enforcement since ADA first became effective. For example, there are updated regulations related to requiring property owners/managers to allow service animals, wheel chairs and other mobility aids such as Segways in buildings, as well as updated requirements regarding communication aids, interpreters etc.

The 2010 Standards will take effect six months from publication of the regulations in Federal Register. Compliance with ADAAG 2004 for new construction and alterations will be required 18 months from publication.[1]

[1] IPI – Department of Justice Adopts ADAAG 2004

Action Items for Consideration:

- All alterations to existing facilities: Alterations includes restoration as commonly defined in parking circles, as well as resurfacing of parking lots and any change to parking layout that occurs during resealing and restriping. These requirements have two parts: The actual planned restoration work aka "the alteration", and the path of travel to the area being altered.
    - If the alteration occurs after the trigger date, the alteration work must meet ADAAG 2004, even if it now meets 1991. For example, when parking lots are resurfaced and/or reconfigured after the trigger date, the parking layout has to be modified to meet the new requirement for 1 in 6 van stalls rather than the 91 requirement for 1 in 8 van stalls, unless it is structurally impracticable to do so. But even then the requirements should be met to the degree possible. For example, it would be structurally impracticable to provide the required 8'2" vehicular clearance for van stalls in a facility that does not now have that clearance. However 1 in 6 van stalls must still be provided, even without the required clearance. The reasoning is that many vehicles with side lifts requiring the larger stalls do not require the 8'2" clearance.
    - Path of Travel: ADA regulations require that improvements must also be made to the path of travel to the area being altered. For example, if the top level of the parking deck is being restored, there is an obligation to bring the path of travel to the top level up to ADAAG (1991 or 2004 according to the trigger date.) The limitation on how much must be spent on the path of travel is 20% of the cost of the alteration.
    - Safe Harbor: If the path of travel fully met the 1991 Standards before the trigger date, the "entity is not required to retrofit such elements to reflect incremental changes in the 2010 Standards solely because of an alteration to a primary function area served by that path of travel." In other words, no further improvements to the path of travel would be required if it met ADAAG 1991 before Feb/March 2012.
- Existing Facilities: ADA requires that property owners improve the areas of facilities where the public goes to receive goods and facilities3 that were constructed prior to January, 1993 to remove physical barriers. There is a different standard of care under the regulations for public entities (state and local governments and associated agencies) and private entities, under Titles II and III of the ADA, respectively.

Potential Sub-Strategies for Implementation:

- There is an excellent discussion of the differences between ADAAG 2004 and ADAAG 1991 posted on the DOJ website.[2]

Documented Results:

- Ensure compliance with ADA regulatory changes.

Stakeholder Engagement:

Changes in policy or regulations regarding handicap spaces or use of handicap placards should involve the handicap community, business owners, and the public.

Applicability/Similarity to Rochester:

This strategy is applicable to Rochester and all public entities providing public parking which is mandated to comply with Federal accessibility standards. Confirm whether the City has already begun incorporating these standards.

Replicability:

This strategy is not optional and a careful evaluation of new regulations is recommended.

Policy Implications:

Review any special legal conditions that may be applicable to the City of Rochester.

Cost Implications:

A review of all potential changes required by the new ADA regulations should be conducted and specific costs estimated and compared to ADA guidelines related to cost limitations (typically 20% of the cost of the total project.

References:

- IPI ADA Whitepaper
  https://www.parking.org/media/58516/ada%20standards%202010b.pdf
- Topic Guides on ADA Transportation:
  http://dredf.org/ADAtg/index.shtml

[2] http://www.ada.gov/regs2010/titleIII_2010/reg3_2010_appendix_b.htm

Best Practice # 3

Strategy:

Assess the Use of Time Zones as a Parking Management Tool in Lower Demand Areas

Description:

Parking does not always have to be regulated by prices. Regulation by time limits can be effective in areas where demands are not so high that they need to be managed by pricing. In general, time limits should be set to reflect parking demand. Some businesses thrive on shorter parking periods (30 – 60 minutes for dry cleaners or coffee shops, 1-2 hours for retail areas to allow customers to shop but also to encourage turnover, creating space for new customers); whereas other businesses or destinations need longer parking periods for their users such as theaters and dining establishments. Time limits should be appropriately set to allow users to park for the necessary amount of time to support the surrounding land uses.

Action Items for Consideration:

- This strategy could be used to push longer-term parkers further out from the core if restrictions were placed on time in the core and less restrictive on the periphery? Freeing parking up for business use/customers. Thus, accomplishing the goal of limiting access to day long parkers in the core and reducing vehicle travel into this zone/area. Research under what conditions might time zones without parking meters be an effective parking management strategy
- Understand the occupancies of the area in question to know when and where peaks occur
- Understand how long people are parking in an area
- Engage business owners to understand what time limits are suitable to support their business

Potential Sub-Strategies for Implementation:

Adjust time limits in certain areas to reflect the needs of that area. For instance, an area that caters to long-term parkers can have longer time limits (e.g. around schools, employee parking areas, evening parking). Likewise, there may be some areas that need very little time and businesses thrive from higher turnover rates.

Documented Results:

Maintains a level of availability along the curb. If it is determined that surrounding businesses and destinations have customers that only park for 1-2 hours, the parking time limits that reflect this ensure that people do not park for longer than necessary, creating more space along the curb for the next customer. As a result, users are able to find parking and businesses experience the amount of turnover necessary to support their business.

Stakeholder Engagement:

Any changes to the time limit structure should be clearly communicated to the public and other stakeholders through various methods of outreach (meetings, social media, media, etc.)

Applicability/Similarity to Rochester:

Time zone management is applicable to Rochester because it supports the City's goals of supporting area businesses by providing access to these destinations.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

Parking rules and regulations need to be considered and adopted. This strategy will likely trigger a change in the City's policies regarding time restrictions and how they are managed.

Cost Implications:

This strategy is relatively easy to implement since it does not require large investments in new technology or other infrastructure. It is a restructuring of how the parking is managed.

References:

- City of San Jose, Department of Transportation
- City of Austin, Downtown Austin Alliance

Best Practice #4

Strategy:

Coordinate On- and Off-Street Parking Rates

Description:

On- and off-street parking rates should be coordinated so that the parking facilities work together as a comprehensive system to achieve a common goal. For instance, the rates can be coordinated so that they encourage long-term parkers to use off-street facilities and short-term parkers to use on-street parking.

Parking fees, which often go to repay bonds, should be available from both on- and off-street, so off-street rates no longer stay tied to the loan repayment artificially inflating the rate.

Action Items for Consideration:

Review and compare existing on-street and off-street parking rates

Coordinate with off-street parking providers to establishing a coordinated rate structure

Potential Sub-Strategies for Implementation:
Adjust rates so that on-street rates are competitively priced with off-street rates to encourage parkers to park in the desired locations for the desired lengths of time

Documented Results:

Encourages parkers to park in off-street facilities if they are parking for longer periods of time

Creates more availability along the curb for those who need parking for quicker trips

Stakeholder Engagement:

This strategy will require extensive coordination with private off-street parking providers. Any changes to the rate structure should be clearly communicated to the public and other stakeholders through various methods of outreach (meetings, social media, media, etc.).

Applicability/Similarity to Rochester:

A coordinated parking system supports the City's goal of providing a balanced transportation system that uses the available parking supply efficiently and effectively.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

This strategy will require the City to reconsider their parking rules and regulations.

Cost Implications:

This strategy is relatively easy to implement since it does not require large investments in new technology or other infrastructure. It is a restructuring of how the parking is managed.

References:

- MTC Parking Code Guidance: Case Studies and Model Provisions (2012)
- City of Durham Comprehensive Parking Study

Best Practice # 5

Strategy:

Reassess On-Street Parking Limitation (Abandoned Vehicles)

Description:

Many cities have policies regarding abandoned vehicles. Commonly, vehicles are considered abandoned after 72 hours parked in one spot. As part of this project similar practices from other communities have been researched. A key consideration will be the balance between neighborhood livability and encouraging the use of other modes than driving. The following is a summary of the initial research:

Oregon DMV

- Vehicles in public right-of-ways that have not been moved in 72-hours are considered abandoned vehicles
- Anyone can report an abandoned vehicle towed and request removal
  - A posted notice must be affixed to the vehicle stating that if the vehicle is not removed, it will be towed
  - A form must also be filled out and signed that describes the vehicle to be towed, the location of the property the vehicle is on, and a statement saying that you have affixed a notice and waited 72 hours. This form must be provided to the towing agency.

References:

- http://www.oregon.gov/ODOT/DMV/pages/vehicle/abandoned.aspx

Washington State Department of Licensing

- Abandoned vehicles are considered vehicles that have been impounded by a registered tow truck operator and held in their possession for at least 120 consecutive hours
  - The last registered owner on record must pay all costs related to the abandoned vehicle
- **Reference Files:**
  - http://www.dol.wa.gov/vehicleregistration/abandoned.html

Texas Statutes

- A vehicle is considered abandoned when it has been left unattended on public property for more than 48 hours or left unattended for more than 24 on the right-of-way of a turnpike
- Notice shall be given to the last known owner of the vehicle on record by law enforcement
- If left unclaimed, the vehicle can be auctioned

Reference Files

- http://www.statutes.legis.state.tx.us/Docs/TN/htm/TN.683.htm

City of Durham, NC Code

- **An abandoned vehicle is that which:**
  - Has been left on any public street or highway for more than 7 days
  - Is left on city owned and operated property for more than 24 hours
  - Is left on private property without consent of owner, occupant, or lessee for longer than 2 hours
- Notice is given to the registered owner by the housing code administrator. Notice contains:
  - Description of vehicle
  - Location of vehicle
  - Violation
  - Procedure owner can follow to request a towing
  - Date the vehicle will be towed (if not requested)
  - Notice that the vehicle is subject to a lien
- If owner cannot be identified, a warning notice will be posted on the vehicle with the date it will be towed and number to contact. The vehicle will not be towed until 7 days have passed.

Reference Files

- http://durhamnc.gov/ich/cb/nis/Documents/Vehicle%20Ordinances%20(2).pdf

City of Maple Plain, Minnesota

- Abandoned vehicles are regulated because they can impact traffic, interfere on private property, and create safety and health hazards that impede the well-being of the public and contribute to public blight.

- A vehicle is considered abandoned if a vehicle has remained on public property for more than 48 hours or on private property for more than 96 hours.

Reference Files:

- http://www.mapleplain.com/vertical/sites/%7B1E07A900-35B0-4FBD-9A42-9B27B50AAA7E%7D/uploads/%7BA421E71E-FDE6-4A21-A1F7-1FD3F62B0ECB%7D.PDF

Center for Problem-Oriented Policing, University of Albany, Abandoned Vehicles Guide No. 53
(2008)

- Abandoned vehicles can be a hazard (waste and fluids from the vehicle leak and aren't disposed of properly), attract unlawful behavior (drug drops, prostitution), and uncleanliness (refuse, act as homeless shelter)

- Vehicles are typically considered abandoned due to:
  - Condition – damaged or missing parts, garbage in the vehicle
  - Missing or outdated license plates or registration
  - Length of time at location – short period of time on highways and limited-access roads and longer periods of time in parking facilities, and mid-length of time for on-street parking
- Time must elapse between the time the vehicle is tagged or reported as abandoned and when it is towed.

- When analyzing a community's abandoned vehicle problem, consider the following:
  - The location and time vehicles are being dumped
  - Number of abandoned vehicles and their condition
  - Are the places vehicles are being dumped being affected environmentally?

Action Items for Consideration:

- An abandoned vehicle policy using a 72-hour metric is consistent with several other communities and is greater than some cities and much less than others. It appears to strike a good balance.
- The range from other communities was between 24 hours and 7 days.
- Providing registered vehicle owners with a reasonable period of time to respond is an important consideration
- The longer vehicles stay on the street, they more it attracts unlawful behavior (according to law enforcement personnel and cause environmental issues (according to public works officials).
- Reducing the interval for removing abandoned cars can result in less vandalism and more vehicles being returned to owners (these results occurred in Michigan as a result of reducing the time from 48 hours to 24 hours).
- Balancing between the aesthetics of living cars on-street for longer periods of time with encouraging people not to drive and use modes other than cars.

Documented Results:

Metrics for evaluating abandoned vehicle policy effectiveness include:

- Fewer documented abandoned vehicles
- Fewer abandoned vehicles reports
- Reduced time between reports
- Fewer vehicles sold at government auction
- Fewer vehicles reported meeting the abandoned vehicles definition for your community
- Fewer complaints from owners of abandoned vehicles re: lack of notification, lack of time to respond, etc.

Stakeholder Engagement:

The public should be informed of any changes made regarding the law; however, the process of changing the law should require only the normal level of public involvement associated with changes of this sort.

Applicability/Similarity to Rochester:

Virtually all cities have some form of abandoned vehicle policies in place. The issue here is how long being an appropriate timeframe before a vehicle is considered abandoned. Review the City of Rochester's current policy position.

Replicability:
This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

Adjustments to the 72-hour limitation will require the City to review and update its policies and rules regarding abandoned vehicles.

Cost Implications:

Low cost to implement.

Best Practice # 6

Strategy:

Repurpose On-Street Parking Spaces

Description:

With an explosion of new uses for on-street parking (bike corrals, bike sharing, car-share, electric vehicles, parklets, etc.) research how other communities address the policy issues related to these potential changes in the use parking spaces in the public right-of-way.

Action Items for Consideration:

- Understand parking demands to determine appropriate locations where spaces can be repurposed. This might be in areas with mid- to low parking demands or areas with ample parking supply.
- Review the use and implementation standards of parklets (where to locate and how to manage)
- Review the use and implementation standards for on-street bicycle parking (e.g. bike corrals), (where to locate and how to manage)
- Review the use and implementation standards for EV charging stations (where to locate and how to manage)

Potential Sub-Strategies for Implementation:

- Consider appropriate and wanted uses to repurpose on-street parking in appropriate locations (e.g. parklets, charging stations, car sharing, bike parking, etc.)

Documented Results:

- On-Street Bike Parking: typically appropriate in a location that regularly sees more than 10 bicycles locked outside. Can hold approximately 20 bikes in one location and occupies 1-2 vehicular parking spaces

- **Parklets:** appropriate in areas with low parking occupancies. They expand park space, seating areas, green space, etc. of a community. Main benefit is that it maximizes the use of an otherwise underutilized space.

- **Car Share:** car share programs may occupy on-street parking spaces (the number depends on the size of the fleet), however they have been shown to reduce on-street parking demands because fewer people need to drive. In Hoboken, NJ, approximately 3,000 members have either decided to give up their personal vehicle or not purchase a car at all.

Stakeholder Engagement:

Engagement with stakeholders will play a major role in this strategy. The removal of on-street spaces is usually met with some contention and open, frequent communication needs to happen with surrounding land uses to gain support for the project. Education should also be a component of the stakeholder engagement. Businesses should be brought in to the conversation about the parking at their curb…frequently they're required to be a project sponsor of a parklet/conversion.

Applicability/Similarity to Rochester:

This strategy supports the City's goals of creating a sense of place, improving sustainability practices, and efficient management of the on-street parking supply. This strategy is applicable in many communities; however, the exact locations and implementation should be tailored to the City of Rochester to meet Rochester's needs.

Replicability:

Although able to be applied to the City, this strategy requires some design and area specific considerations that make this strategy more difficult to replicate in all desired areas.

Policy Implications:

The City may have to review their right-of-way rules and regulations to determine whether certain other uses are allowed on the street. This may involve adoption of new policies to allow these uses and determine standards for when these uses are appropriate, design standards, and a process for request and implementation of these uses.

Cost Implications:

This strategy has the potential to be more expensive because of the need for infrastructure, potential policy changes, coordination efforts, and potential technology related to the strategy.

References:

- City of Portland, Portland Bureau of Transportation
- City of Hoboken, Transportation and Parking
- "Data Show a City's Car Sharing May be Working..." The New York Times (2012)
- "2013 Seattle Free-Floating Car Share Pilot Program Report Prepared by the Seattle Department of Transportation" (2014)

Parking Management Strategies - Off-Street

Best Practice # 7

Strategy:

Develop relationships/potential partnerships with the owner's/operators of existing private parking assets as a cost effective and environmentally sensitive approach to improving parking supply/availability

Description:

As the public parking supply in the downtown gets tighter, it often the case that private parking supply is underutilized. There are two specific strategies that might be considered to increase the availability of publicly available parking by leveraging under-utilized private parking assets.

Downtown Seattle Parking Model

The first is a model jointly developed by the City of Seattle/The Downtown Seattle Association/Commute Seattle and the Metropolitan Improvement District which operates under the name "Downtown Seattle Parking" (www.downtownseattleparking.com). This partnership was created when the decision to remove the viaduct roadway from along the waterfront due to structural issues created by earthquake damage. Removal of the viaduct would also cause the loss of a significant amount of surface parking used primarily to support downtown retail. While the reality was that the loss of parking under the viaduct was not enough to create major parking issues overall, there would be localized parking shortages. The bigger issue was a perception of a lack of parking downtown and a perception that parking downtown was very expensive. Public opinion surveys ranked parking as one of the greatest barriers to coming downtown. Another factor in this equation was the fact that the City had not invested in many public off-street parking facilities, and therefore had very little ability to impact parking supply and/or pricing.

In response the City developed partnerships with private parking owners and operators and launched their E-Park Program – a system of variable message, parking wayfinding signs that included information on available spaces. This was followed by the Downtown Seattle Parking program that attempts to create a unified parking system and marketing program to promote a combination of parking and alternative transportation options, especially during anticipated 10 years of Waterfront construction. The Downtown Seattle Parking Program website also has excellent web-based maps and other resources documenting parking availability, location and rates. Recent improvements related to mobile-optimized websites have dramatically increased site usage. The program also invested heavily in paid advertising, extensive media coverage and a range of other outreach strategies to increase program awareness and utilization. Documented results included dramatic increases in garage utilization (upwards of 146% in some locations). Specific agreements are required for participating private garage partners, including agreements for reduced pricing during certain timeframes to help address the "perception of cost" and affordability issues.

Downtown Asheville Model

In Asheville, NC a downtown parking study conducted by Kimley-Horn and Associates confirmed the suspicion that the City's three public parking garages were approaching capacity. The study projected that another 1,000 spaces would be needed over a ten-year planning horizon within the study area. However, the study also made another interesting observation. While it was true that the City's three public parking facilities were over 90% utilized, these garages only represented 20% of the total parking supply in the downtown area. The remaining 80% of the supply was made up of private parking assets. The private parking resources (80% of the total supply) averaged a 50% utilization rate. A concept was advanced that the City could, in partnership with the private sector, develop a virtual "online market place" for the underutilized parking spaces. While the envisioned system might cost upwards of $1,000,000, that cost was approximately 1/25th of the cost of building a new parking garages to meet the long-term needs.

Action Items for Consideration:

- Assess private parking utilization rates
- Identify locations of available private parking resources
- Assess willingness of private parking owners/operator to participate
- Develop a strategy specific to Rochester
- Develop the framework for a pilot program

Documented Results:

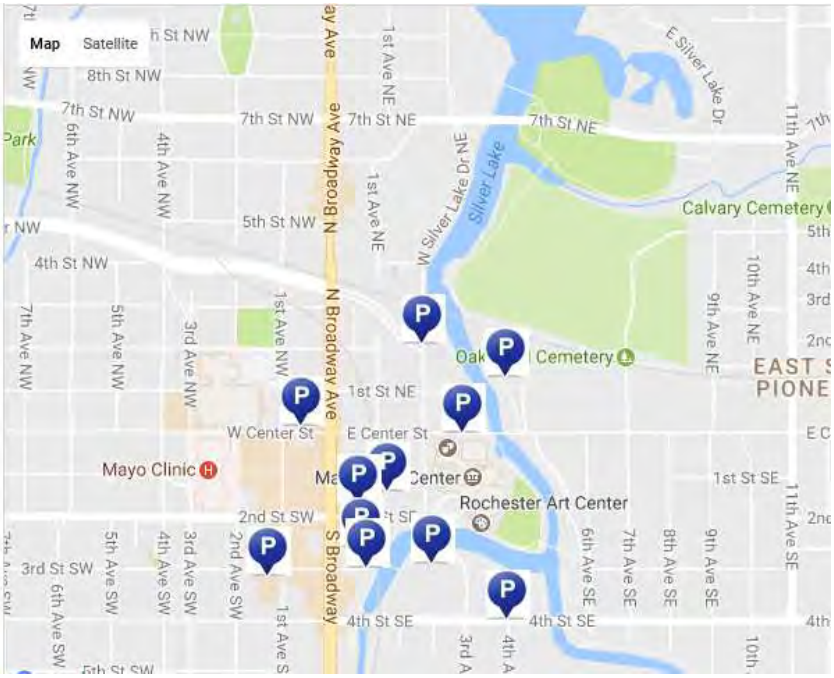
- Improved parking availability
- Better use of existing assets
- Environmental benefits related to not over-building parking supply
- Cost savings compared to new facility construction

Stakeholder Engagement:

This type of program innovation will require significant planning, research and stakeholder engagement to produce a plan and get buy-in. However, evidence from the Seattle program indicates the program could generate significant benefits for all parties.

Applicability/Similarity to Rochester:

This strategy is applicable to Rochester as a potential strategy to address parking supply issues without building additional public parking, by leveraging existing, underutilized resources first.



Replicability:

These strategies are still relative new and would require a certain degree of customization and experimentation.

Policy Implications:

While these strategies are aligned with many overall community goals, issues such as revenue sharing, city investment in a program that would benefit certain private business could create potential policy issues.

Cost Implications:

Compared to building new parking facilities this project could result in significant cost saving long-term, however an initial investment in system development, technology, marketing and community engagement would be required.

References:

Seattle Downtown Parking Presentation from IDA Conference 2014

www.downtownseattleparking.com

Best Practice # 8

Strategy:

Evaluate the use of "One Day Parking Permits"

Description:

Offering a single day parking permit for public garages may be a positive customer service amenity. This approach can simplify parking for visitors from out of town if businesses purchase them in advance and provide them to their guests. It can benefit the parking system by getting permits paid for in advance.

Another approach is to offer a single day parking through an on-line reservations system. This is done by the BART Program in San Francisco. The "Hercules Transit Center Single Day Reserved Parking Reservation System" is for patron's using the Hercules Transit Center. The following outlines this systems procedure:

- Have your license plate number available before continuing, if you do not have a plate number, use the last eight digits of your VIN number. Misentering your plate number will result in ticketing and billing for permits that may not be yours.
- Choose the desired station and desired dates of use from the menu. A computerized reservation system will determine whether permits are available at that station for the dates requested. Only 10 days of permits may be purchased at one time.

- If permits are available, you will be asked to supply the license number of the vehicle in which the permit will be displayed.
- Credit card information where parking fees will be billed. Your credit card statement will show REMIT-ONLINE as the payee. Renounced charges are subject to a $20 fee.
- You will be billed once each month (in areas) for all the single day permits you purchased during the prior month to the last card entered prior to billing. The billing to your card will reflect the total of ALL permits purchased during the prior month.
- Upon approval, print EACH permit FOR EACH day you have reserved on your home or office printer.
- Display ONLY ONE permit on dash of vehicle in parking area at authorized location.

The City of Palo Alto offers All-Day Visitor Parking Permits

- All Day Visitor Parking
    - Visitors may purchase a one-day permit. Permits are valid in all off-street parking lots and garages. All-day permits are not valid for on-street parking spaces.
    - All day permits may be purchased at Palo Alto Civic Center, 250 Hamilton Avenue on the first floor at Revenue Collections, or the first level of the Bryant Street and Cowper/Webster garages.
    - The cost is $17.50/day for downtown area and $7.00/day for California Avenue business district. Day permits for the California Business District may only be purchased at the Civic Center, Revenue Collections at this time.
    - Construction worker vehicles require a special on-street parking permit that can be purchased at the City of Palo Alto Development Center, 285 Hamilton Avenue and the cost for this permit is $76.00/space per week.

The City of Ann Arbor experimented with a similar system through a company called Parking Carma.

Action Items for Consideration:

- Determine rules related to permit issuance and usage.
- Identify where permits are valid and when

- Identify where and how permits can be obtained

Documented Results:

- Effective in high demand areas
- Provides reliability for those who need to park, but may come later in the day when parking may be full or harder to find.
- Rate can be higher to support the benefit of having a space guaranteed.
- Can be problematic if supply is overly tight and space cannot be guaranteed
- May require special equipment to secure/access reserved areas/spaces.

Stakeholder Engagement:

Market research should be conducted in advance to verify that there is sufficient demand for such as service. If implemented, this strategy would require education related to how the program functions, permit costs, special rules/regulations, etc.

Applicability/Similarity to Rochester:

This strategy may be applicable to Rochester if there is a demonstrated need for this type of service.

Replicability:

This strategy is replicable for any community.

Policy Implications:

This program addition is considered a relatively minor program option, which should not create significant policy issues.

Cost Implications:

A cost/benefit analysis is recommended re: the cost for developing or purchasing the parking reservation software. This approach may be supported by some pay-by-phone applications.

References:

- https://www.park-by-phone.com/daily/default.aspx?ownerid=hercules
- http://www.parkingcarma.com/

Best Practice # 9

Strategy:

Develop a Parking and Access Management Program Strategic Communications Plan and Annual Report Template

Description:

It is important to communicate program progress and goals with the public on a regular basis to keep them informed. A template for an annual report could be developed to communicate the progress, goals, and upcoming projects or improvements. A consistent template will streamline the process of developing the report as well as give the report a unique identity.

Action Items for Consideration:

- In developing an on-going strategic communication plan for your program, the following project goals should be assessed:
  Does it effectively support your goals?
- Does it honor the findings of your audience analysis?
- Do you have the resources necessary to complete the project?
- Can you execute in a way that aligns with your windows of opportunity?
- Can you execute in a way that allows for durability, easy updating, or adaptive reuse?

Documented Results:

- Improved communication with the public.
- The report can be used as an educational component to educate the public on the aspects of the parking system.
- Re-establishes City goals on a regular basis.

Stakeholder Engagement:

Stakeholder engagement to produce the report is likely minimal since it is a report that communicates the state of the parking program.

Applicability/Similarity to Rochester:

This strategy is applicable to the City because it involves continued communication of the City's programs and goals, thus supporting the goal to be an inclusive community.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

The City would not have to review or adopt new policies to produce a report of this nature. It may, however, help the City evaluate its goals and direction and highlight new policies or regulations that should be considered.

Cost Implications:

This strategy is relatively easy to implement since it does not require large investments in new technology or other infrastructure. It is a communication document of how the access management and parking systems are managed.

References:

Missoula Parking Commission Annual Report (2012)

Best Practice # 10

Strategy:

Explore the Concept of "Edge Parking" as Potential Commuter Parking Strategy

Description:

Remote parking and park and rides are nothing new, but with the growth in Transit Oriented Developments, in which less parking is being provided to increase the potential for development density, providing "storage parking" options that can be accessed by multiple modes is a topic that is gaining attention.

Action Items for Consideration:

- Analyze transit network and parking availability that supports those transit networks.
- Coordinate with transit providers to determine what types of parking would best support their users.
- Review land use codes and how they apply to transit.
- Analyze parking demands and ridership to understand how much parking should be provided.

- Ancillary items to consider could include connectivity for pedestrians and bicyclists.

Potential Sub-Strategies for Implementation:

- Consider shared parking agreements with nearby parking providers
- Consider changes to land use codes to reduce parking requirements
- Establish parking priority for van/carpools, carshare programs
- Implement paid or permitted parking to regulate high parking demands in facilities that serve transit.

Documented Results:

- Supports the use of transit because it provides a place for commuters to park their vehicles and take transit options to complete their trip.
- As parking facilities near transit providers become too heavily occupied, these sub-strategies can help to balance demands while still supporting transit user needs.

Stakeholder Engagement:

Stakeholders, particularly the transit providers and operators, need to be engaged to help determine what parking is appropriate and how to manage the parking.

Applicability/Similarity to Rochester:

This strategy supports the City's and the DMC's plan goals of supporting transit and other modes of transportation by providing sufficient parking to support the transit network and addressing the identified "portal capacity" issues.

Replicability:

Although able to be applied to the City, this strategy requires some design and area specific considerations that make this strategy more difficult to replicate in all desired areas.

Policy Implications:

This strategy would require that parking rules and regulations be considered and adopted as they relate to transit use. In some instances, it may require the reduction of parking requirements. But more so it may be in regards to how the parking is managed.

Cost Implications:

The cost for this strategy varies depending on what is needed. If parking facilities already exist and it is just a matter of managing them for the use of transit riders, then the cost might be relatively low. However, if new parking needs to be constructed, the price will be on the higher end.

References:

- "Smarter Parking at Transit Stations", Susan Shaheen and Charlene Kemmerer, (2007).
- "Guidelines for Providing Access to Public Transportation Stations". Transit Cooperative Research Program, Report 153.
- City of Seattle, Sound Transit
- Santa Clara Valley Transportation Authority

Best Practice # 11

Strategy:

Use Parking to Create a Sense of Place

Description:

Garages do not have to be the stereotypical structure with a less than appealing façade. There have been trends in many downtowns to design lots and garages so that they match the character of the surrounding area. In this way, garages can be part of the fabric of the community, rather than an eyesore. Additionally, off-street parking facilities can be designed to accommodate other uses when they are not being utilized. An example can be farmer's markets or other types of social activity on the weekend in a lot that is typically only used during the week.

Action Items for Consideration:

- Identify existing facilities that could incorporate some art, mixed uses, or otherwise support community needs.
- Adopt design guidelines and land use policies that encourage the integration of parking facilities into the fabric of the community.
- Consider access management guidelines to restrict the number of driveways for a parking facility.

Potential Sub-Strategies for Implementation:

- Incorporate art into parking garages.

- Incorporate mixed use into garages (e.g. retail, restaurant on first floor and parking above)
- Use lots to host community events when they aren't occupied (e.g. farmer's markets on the weekends)

Documented Results:

Integrating parking facilities into the character of the community has been gaining a lot of recent attention, particularly in downtown parking facilities. Having the ability to incorporate retail or restaurants in a parking facility makes the parking facility more attractive. Incorporating art or at least a decorative facade into the parking structure that matches the surrounding buildings helps to maintain the visual quality of the area.

Stakeholder Engagement:

The City should work with developers, parking providers, and internal city departments to determine appropriate guidelines for alternative uses and design guidelines for parking facilities.

Applicability/Similarity to Rochester:

This strategy supports the City's goals of creating a sense of place, maintaining and building upon the City's character, while supporting the transportation network.

Replicability:

Although able to be applied to the City, this strategy requires some design and area specific considerations that make this strategy more difficult to replicate in all desired areas.

Policy Implications:

This strategy would require that parking rules and regulations need to be considered and adopted, related to designing and construction of parking facilities and how those facilities can be incorporated into the community.

Cost Implications:

The cost for this strategy varies depending on what is needed. If the result is a restructuring of the parking policies, then the cost might be relatively low. If the City becomes more involved and decides to construct, redevelop, or add art or other uses to the facilities, it may be more expensive.

References:

- "Build a Better Burb How to Manual: Better Transit/Less Parking". Susan Weaver.

Best Practice # 12

Strategy:

Explore the "Brackets" System of Shared Parking

Description:

The "Brackets" concept takes a combination of mainstream ideas and packages them in a new way. The "Brackets" concept marries a shared parking strategy with signage/wayfinding, pedestrian pathways and landscape improvements that make it easier to find available parking, and more pleasing to walk from the designated parking areas to a range of possible destinations. This concept could be linked to more effectively utilizing private parking assets in an integrated system.

Action Items for Consideration:

- Coordinate with all off-street parking providers to determine their occupancies and best ways to navigate to their facility.
- Install new signage where appropriate to help people navigate to parking facilities. If the City desires the wayfinding system can be dynamic, allowing the number of available spaces to be shown. This would require additional coordination with parking providers to ensure that they count vehicles entering the facility and can share that information.
- Clearly identify each facility by name and/or visually (e.g. giving each facility a unique look).

Potential Sub-Strategies for Implementation:

- Facilitate shared parking between municipal lots and other parking providers
- Direct motorists to available parking with common signage, wayfinding and well landscaped pedestrian pathways. The use of mobile apps is another potential option to promote parking options and availability.
- Create an identify for each lot and tie the lots together in a systematic way.

Documented Results:

The Brackets have helped balance demands between off-street facilities that were easier to find (and therefore almost always full) and those that were less

easy to find (and therefore underutilized). As a result, the Brackets helped make better use of the parking that was already available.

Stakeholder Engagement:

Engagement for this task is mostly with the parking provider community to determine appropriate methods for wayfinding and identification. This relationship with the parking providers would have to be ongoing to maintain the system. The City could act as the facilitator that brings all parties to the table to discuss how this strategy would be best applied.

Applicability/Similarity to Rochester:

This strategy can be applied to the City of Rochester since it is more of a coordination and management strategy. The wayfinding system can be incorporated into other City wayfinding systems, should the City decide to move in that direction. Additionally, this strategy supports the City's goal of optimizing the existing parking supply.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

The key component of this strategy is cooperation among the various off-street parking providers. However, this strategy may require the City to consider their signage policies and update them if necessary, particularly if dynamic wayfinding is desired. The policies need to be supportive of the City's goals.

Cost Implications:

The cost to implement this strategy could vary; however, this strategy has opportunity for public/private partnerships that may alleviate some of the cost for the City. The cost would lie in installation of new signage and continued coordination.

References: "Main Street Brackets: Shared Parking Patchogue". Build a Better Burb.

Technology and Innovation Strategies

Best Practice # 13

Strategy:

Develop an Overview of Currently Available Parking Technology Options

Description:

If desired a review of currently available technologies, payment methods, and their implications for both the customer and program staff can be provided. It is also important to understand that more technology is not always better, but rather how that technology is used. A lot can be accomplished with efficiently used, minimal technology. Technologies for consideration could be in-car meters, various pay station options and add-ons. This would include a review of what benefits come with each type of technology. This strategy would help evaluate the different technologies available in Rochester and consider ways to integrate them into a comprehensive system.

Action Items for Consideration:

- Inventory the type of technology currently in use by the City and its add-on capabilities.
- Review City parking goals and determine whether the technology can accomplish the City's goals.
- Research existing parking technologies and their benefits.

Potential Sub-Strategies for Implementation:

- Implement add-on features to the existing technology in use (e.g. improved payment options, increased capabilities to collect parking data on the back-end to better analyze parking patterns, etc.)
- Install new technology to enable the City to meet their parking goals.

Documented Results:

Improved technology makes the parking system easier to manage from the City's perspective and easier to use from the user's perspective.

Stakeholder Engagement:

When reviewing available technology, it might be beneficial to understand how the system is used and what users would like changed to make the system better. To accomplish this, engagement with the public, users, and business owners is critical.

Applicability/Similarity to Rochester:

This strategy is applicable to the City because it involves a review and improvement of their technology. It helps support the City's goal of managing the existing parking system more efficiently and effectively.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

Since this strategy is to inventory and review available technology trends, it would likely not trigger any policy changes.

Cost Implications:

This strategy is relatively easy to implement since it does not require large investments in new technology or other infrastructure. It is an analysis of the parking system technology and potential restructuring of how the parking is managed through technology.

References:

- City of Phoenix On-Street Parking Study, Kimley-Horn and Associates (2012).
- Missoula Parking Commission Parking Pay Station Study: On-Street Parking Technology Overview, Kimley-Horn and Associates (2013).

Best Practice # 14

Strategy:

Review the Latest Developments in Parking Apps, Parking Availability Monitoring

Description:

Wireless communications are transforming the parking and transportation industry by providing new and powerful tools to improve information on transportation options, providing parking availability, parking pricing and trip planning.

There are a range of potential options in this area. The most technologically advanced (and most expensive) systems utilize wireless sensors embedded into the pavement to track utilization of on-street parking in real-time. (LA Express Park, SFpark, etc.). One use of this new on-street utilization data has been to inform demand-based parking pricing programs. The theory is that in areas with higher parking demand the price to park would increase, thus shifting demand to other on-street areas with more availability by offering a lower price point or to available off-street locations. This "balancing" of parking demand also has the effect of reducing congestion from vehicles "cruising for parking", improves the perception that parking is available by targeting a 15% vacancy rate for on-street spaces and has environmental benefits related to reducing vehicle emissions and vehicle miles traveled by reduced cruising. One of the systems with the most market share in this arena is the StreetLine system. ParkSight is a software module within the StreetLine system that provides extensive system data that can be used to drive parking analytics to help you better understand how your assets are being utilized and allowing better data-driven decisions. For more information visit: http://www.streetline.com/.

Other, less equipment dependent options are also on the market. For example, ParkMe is a mobile app that uses historical parking utilization data merged with a proprietary program/algorithm to provide potential parkers with data that estimates "the likelihood" of finding an available space based on historical patterns. For more information visit: http://www.parkme.com/.

There is an extensive amount of information available on this topic. A separate white paper has been provided with information on all the major programs currently being tested from around the country. Also, the SFpark program from San Francisco recently issued its evaluation report of the multi-million dollar, FHWA funded pilot project. This evaluation is also included in the research materials.

Action Items for Consideration:

- Research smart phone applications and implementation and data needs associated with smart phone or web-based parking tools.
- Document the latest technologies and applications related to parking and access management and explore potential pilot programs for those strategies most applicable to Rochester's current needs.
- Low or no-cost "pilot programs" are being offered by several of the major system providers and may be an option for Rochester to consider.

Potential Sub-Strategies for Implementation:

- Coordinate with all parking providers to obtain availability, rate, time limit, validations, and other necessary information that the City may want to provide on a map, website, or application.
- Review the City's goals to determine the best technology(ies) to use.
- In reviewing the major sensor-based programs from around the country, one key issue emerged. While having real-time utilization data for on-street parking was valuable, parking rate changes based on demand were not effective unless they could be communicated and understood by the public so that they could use the data to affect parking behavior changes. As a result, demand-based pricing changes that originally were tested on a weekly basis, shifted to monthly and eventually to a quarterly basis.
- Seattle has chosen to use a more traditional data collection process and make adjustments only once per year

Documented Results:

Use of maps, parking applications, and availability monitoring enable users to find parking easily, reducing the need to circle to find parking and thus reducing congestion and vehicular emissions. Additionally, users can make better decisions about where to park before they get in the car. Furthermore, identifying where parking is available or where it is cheapest can help to balance parking demands, both on- and off-street.

The SFpark Pilot Project Evaluation document published by the San Francisco Municipal Transportation Agency (SFMTA) is organized by the following chapters:

- Executive Summary
- Overview of SFpark
- Effectiveness of Parking Pricing
- Effectiveness of Parking Management
- Parking Enforcement
- Congestion and Environment
- Transit Performance
- Customer Experience
- Economic Vitality
- Financial Analysis
- Technology

Stakeholder Engagement:

This strategy requires coordination with all parking providers to obtain and update price, time limit information, availability, and other parking information that the City wishes to track and communicate to the public.

The public, parking users, and businesses should be engaged to solicit their input on which technologies they prefer.

Any implementation of new technology should be well advertised to the public and an educational component should be included in the outreach efforts to help people learn how to use the new technology.

Applicability/Similarity to Rochester:

This strategy is applicable to Rochester since it is a review and update of wireless parking technology. It supports the City's goals of effective and efficient management of the City's parking and transportation network.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

This strategy may require the City to evaluate their policies on the use of wireless technology.

Cost Implications:

The cost to implement this strategy involves extensive and ongoing coordination with parking providers as well as maintenance of the wireless technology in use.

References:

- SFPark Pilot Project Evaluation, SFMTA (2014)
- LA Express Park

Best Practice # 15

Strategy:

Multi-modal Apps and Payment Cards

Description:

Our cities are undergoing a dramatic shift in urban mobility. Changing demographics, economies, technologies, and environmental pressures have altered traditional travel demand to more sustainable transportation modes. The future of urban mobility, specifically in regard to public transit and shared-use mobility services (e.g., car sharing, bikesharing, and ridesharing), as well as multi-modal transportation. Multi-modal means having access to multiple modes in making a trip.

One aspect of what has been called "digitized" transportation access involves the use of "multi-modal apps and integrated transportation payment platforms".

Shared-use mobility services can complement public transit by addressing the first/last mile problem and, thereby, enable households to reduce their automobile dependence. Multi-modal trip making has created a new demand for enhanced integration among transportation options. At present, the clear majority of transportation systems require that travelers use transit smartcards, bikesharing key fobs, and car sharing mobile apps and/or smartcards to access modes independently. This can create a disarray of memberships and hardware. Instead, users need an integrated platform that enables them to seamlessly compare (cost, route, time spent, etc.) and access and pay for different transportation services.

The smartphone is playing an increasing role in multi-modal transportation. Mobile apps like RideScout (Now called Moovel) and Nimbler, which aggregate public transit and shared-use mobility services into one map, allow users to find the various modes available nearby and even book and pay for some. Similarly, Red Ride aggregates ridesharing, on-demand ride services, and car sharing services and enables users to find the closest vehicles available. These apps are on the forefront of "digitized" transportation access and are driving the emergence of "shared mobility" strategies.

Apart from the smartphone, RFID technology is also playing an increasing role in multi-modal transportation in the future. Unlike the smartphone, most public transit services, many car sharing, and several bikesharing providers currently enable user access through an RFID card, and some partnerships have already been formed.

Action Items for Consideration:

- **Review programs such as:**
    - Chicago Transit Authority (CTA) and I-Go Car sharing that have begun offering a joint car sharing and public transit pass.
    - New York, San Francisco, and Chicago, bikesharing systems are equipped with RFID card readers in anticipation of a multi-use RFID card.
    - Similarly, B-cycle bikesharing equipment, which can be found in over 15 cities across the United States, features RFID card readers.
    - In London, the Oyster card has set the precedent for RFID admission as cardholders can access local and regional forms of the transportation network with a single card, including the subway, light rail, regional rail, trolleys, and buses.
- While multi-modal RFID cards are already helping users access multiple transportation modes, they too have their limitations. Most apparent: RFID cards are unable to show expected trip times or give users an understanding of where the closest available bike sharing bicycle or car sharing vehicle is located. Recognizing this gap, the company TransitScreen developed a kiosk for public transit destinations that enables users to find which transportation options are available nearby. Hypothetically, a cardholder would be able to find their mode(s) of choice on TransitScreen – or a similar kiosk – and use a single RFID card to access them, regardless of the mode.

Potential Sub-Strategies for Implementation:

- Review transportation alternatives and evolving infrastructure
- Identify potential funding opportunities that, based on the trends, can help the City with transportation projects.
- Explore trends in the use of hybrids and electric cars

Documented Results:

Examples of this emerging trend include:

- Washington, DC-based Moovel integrates data from a host of different providers, including car share, bikeshare, fixed-route transit, and the burgeoning market of ride services.
- Commute Greener! (a platform for mobility management). UbiGo is a "mobility as a service" project that uses the platform. Both UbiGo and Commute Greener! are examples of innovative initiatives organized by the telematics service provider WirelessCar, a wholly owned subsidiary of the Volvo Group.
- The Las Vegas based company Zappos' Project 100, which aims to create a seamless network of 100 on-demand chauffeured Tesla sedans, 100 shared vehicles, 100 shared bikes, and 100 shared shuttle bus stops that a phone app would optimally assign to each subscriber who inputs a destination. This mixed mode "concierge" service could be the next level of the concept of mobility as a service.

Stakeholder Engagement:

Since this strategy is to review mobility trends, stakeholder engagement may be minimal. However, the City may wish to survey the public or other select groups to identify their preferences in regards to some results found in the analysis of the trends.

Applicability/Similarity to Rochester:

This strategy is applicable to the City of Rochester in that it is very well aligned with the City's transportation and environmental goals.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

A potential outcome of such a review could be to leverage this new technology trend to shape and influence commute behaviors, improve mode share and influence transportation practices and policies.

Cost Implications:

Costs will vary depending on the specific technologies employed, however the cost to the City could be minimal if its role is primarily an advocate of private sector initiatives.

References:

- Is The Future Of Urban Mobility Multi-Modal & Digitized Transportation Access? (Susan A. Shaheen, Co-Director, Transportation Sustainability Research Center, University of California, Berkeley and Matthew Christensen, Researcher, Transportation Sustainability Research Center, University of California, Berkeley) http://www.newcitiesfoundation.org/future-urban-mobility-multi-modal-digitized-transportation-access-2/
- "Next Stop, Innovation: What's Ahead for Urban Mobility?" Wharton Enterprise (2013)

Best Practice # 16

Strategy:

Explore Emerging Best Practices in Electric Vehicle Charging Stations

Description:

As the nation becomes more environmentally conscious, there has been a rise in the ownership and use of electric vehicles. To help support this trend, cities across the nation are looking to provide charging stations in appropriate locations, however this often raises issues of what is appropriate, how does this get incorporated into the utility network, and how can these stations be incorporated into the parking network (on- and off-street).

Action Items for Consideration:

- Identify appropriate number of and locations for charging stations (perhaps priority locations to encourage use of EVs).
- Provide various types of charging stations to enhance options (Levels 1-3).

- Determine a fee schedule or time limit for these spaces (e.g. Salt Lake City allows free parking at all charging stations, although considering implementing a fee for Level 3 stations. All stations are regulated by a 2-hour time limit and must be charging when parked).
- Identify the location and regulations of EV parking with signage.
- Post information on the location and use of EV stations on the City website.

Potential Sub-Strategies for Implementation:

- Identify potential funding sources to help fund EV charging station projects.
- Determine appropriate incentives to encourage use of Eves (e.g. priority parking spaces, reduced rates for EVs, extended time limits, etc.)

Documented Results:

Encourages the use of EVs, which can lower emissions caused by traffic and support other sustainability goals.

Stakeholder Engagement:

This strategy would require extensive outreach with the public, parking users, and business owners.

Applicability/Similarity to Rochester:

EV stations can be installed in any community interested and able to do so. This strategy is applicable to Rochester because it supports the City's sustainability initiatives.

In the future, more and more people will drive electric cars and will switch from one mode of transport to another – creating the need for more and varied parking options at transport hubs. To prepare for this mobility shift, the V-CHARGE consortium is working on a fully automated parking and charging system for electric cars at public car parks.

"The idea is that we can actually use technology to give people a better mix of public and private transport", explains Dr. Paul Furgale, scientific project manager for V-CHARGE and deputy director of the autonomous systems lab at the Swiss Federal Institute of Technology in Zurich.

Replicability:

This strategy can be replicated for the City of Rochester, however, the policies and practices that are implemented would have to be very specific not only to the City but to the corridor the practices are being implemented.

Policy Implications:

Implementation of EV charging stations would require a review, update and adoption of policy changes in regards to how EV stations are implemented, managed, regulated, and maintained.

Cost Implications:

This strategy has the potential to be more expensive because of the need for infrastructure, potential policy changes, coordination efforts, and potential technology related to the strategy.

References:

- City of Salt Lake
- City of Boston
- "Electric Vehicle Infrastructure Implementation by DOE Clean Cities". US Department of Energy
- "Project Get Ready", Rocky Mountain Institute. (2009)
- US Department of Energy, Plug-In Electric Vehicle Handbook for Public Charging Station Hosts
- San Jose Clean Air Parking Program

Best Practice # 17

Strategy:

Automated Parking Garages or Automated Vehicle Storage and Retrieval Systems (AVSRSs)

Description:

Automated parking is the automated storage, or parking, of vehicles with no human intervention. The technology used to do this is typically based on automated warehousing and there are several different technologies used in automated parking today.

From a driver's perspective, they simply park their vehicles in a parking module, somewhat like pulling into a single garage, and are guided to the correct parking position by sensors via a display sign. The drivers switch off their engines, all vehicle occupants leave the parking module, and the parking module door is closed to secure the module. Once the module is secured the vehicle is removed from the parking module and stored. When drivers return

and request their vehicles, their vehicles are returned to a parking module, usually facing the correct direction, ready to be driven away.

Since there is no requirement for ramps, driveways and personnel access to the parking areas, automated parking can typically park twice the number of vehicles in the same volume as conventional parking. Or, conversely, park the same number of vehicles in half the volume.

Some of the potential advantages of automated parking over conventional parking are:

- Reduced construction costs through less excavation, air rights saving and less construction time
- Reduced operating costs through accelerated depreciation, lower ventilation and lighting requirements, lower operator costs and reduced insurance premiums
- Reduced land cost due to smaller footprint
- Added value from the space gained providing more leasable or sellable real estate
- Improved entitlements for developers
- More LEED points available
- Safe and secure parking for drivers and their vehicles
- Less CO2 emissions and more green spaces
- All parking spaces can be ADA compliant

Source: http://automatedparking.com/

Action Items for Consideration:

- Automated garages are becoming much more prevalent and reliable, especially in China and other countries. While only a handful have been constructed in the US, the technological advances combined with the benefits and features noted above begin to make this option more attractive and viable for certain applications.

Documented Results:

Boomerang Parking Systems have developed mechanical parking structures leveraging "robotic devices" combined with a "Tray System" that offers the following benefits:

- Robot lifts only the tray - nothing touches the vehicle

- Rolls on solid concrete decks (new or retrofit)
- Easy to maintain over long lifecycle
- Moves underneath vehicles from any side
- Transports vehicles in any direction
- Rotates vehicles without a turntable
- Lifts payloads up to ~7,000 lbs.
- Battery operated

Stakeholder Engagement:

Prior to considering this design option for future public parking facilities, a good deal of public education and stakeholder feedback would be highly recommended.

Applicability/Similarity to Rochester:

This strategy may be most applicable to parking for residential or other developments with constrained sites.

Replicability:

This strategy can be replicated for the City of Rochester, however, the right set of site constraints, user mix and land uses would have to come together for this approach to be viable. A key issue remains system through-put at peak demand periods. However, under the right set of circumstances, the financial, operational and energy efficiency characteristic could make this an effective solution.

Policy Implications:

Given the relatively limited implementation of this technology in the US, this could be a politically risky and sensitive strategy. An investment in this cutting-edge technology would warrant a robust public dialogue, a stringent due diligence process and potentially a defined policy statement outlining the criteria to be used in the assessment/approval of this option if public funds are to be used.

Cost Implications:

This strategy can be cost effective under the right conditions.

References:

- http://automatedparking.com/
- http://boomerangsystems.com/

Best Practice # 18

Strategy:

Preparing for "Driverless Cars"

Description:

In the "innovations" category, the news is abuzz with talk of "driverless cars". A driverless car, also known as an autonomous car, driver-free car, self-driving car, or robot car is an autonomous vehicle capable of fulfilling the transportation capabilities of a traditional car. As an autonomous vehicle, it is capable of sensing its environment and navigating without human input. Robotic cars exist mainly as prototypes and demonstration systems. As of 2014, the only self-driving vehicles that are commercially available are open-air shuttles for pedestrian zones that operate at 12.5 miles per hour. By 2016, the City of Pittsburgh (and others) have begun authorizing self-driving cars on city streets as pilot programs.

Autonomous vehicles sense their surroundings with such techniques as radar, lidar, GPS, and computer vision. Advanced control systems interpret sensory information to identify appropriate navigation paths, as well as obstacles and relevant signage. Some autonomous vehicles update their maps based on sensory input, allowing the vehicles to keep track of their position even when conditions change or when they enter uncharted environments.

As of 2016, at least six U.S. states have passed laws permitting autonomous cars: Nevada, Florida, California, Michigan, Ohio and Pennsylvania. In Europe, cities in Belgium, France, Italy and the UK are planning to operate transport systems for driverless cars, and Germany, the Netherlands, and Spain have allowed testing robotic cars in traffic.

The Google Self-Driving Car is a project by Google that involves developing technology for autonomous cars. The software powering Google's cars is called Google Chauffeur. The project is currently being led by Google engineer Sebastian Thrun, former director of the Stanford Artificial Intelligence Laboratory and co-inventor of Google Street View.

Autonomous Car Parking

There are only a few minutes before your flight check-in closes, or before your train departs, but you now must spend precious time hunting for a free space at the airport or station car park. Imagine leaving your vehicle at the main entrance and letting the car do the rest on its own. Researchers from Germany, Italy, the UK and Switzerland are working on this, and successful tests took place at Stuttgart airport earlier this year. €5.6 million of EU funding is invested in the system which will be available in the coming years.

A Smartphone App to Leave and Get Back the Car

Drivers will be able to leave their car in front of the car park and use a smartphone app to trigger the parking process. The vehicle will connect with the car park's server and drive itself to the designated space. While in the garage, the car can also be programmed to go to a charging station. Upon returning, the driver uses the same app to summon the car – fully charged and ready to go.

Since GPS satellite signals don't always work inside garages, the scientists have developed a camera-based system based on their expertise in robotics and environment sensing. Safety is at the center of the project: the car is designed to avoid unexpected obstacles.

Dr Furgale believes the same technology could be used to develop autonomous parking systems for electric cars on city streets. "That will be more of a challenge", he says. "But once you have the maps in place, the rest of the technology will come together."

Obviously, this technology is still years away from widespread commercial applications, but then this whole concept was virtually unimaginable just a few years ago.

Action Items for Consideration:

Continue to monitor technological developments.

Documented Results:

None at this point.

Stakeholder Engagement:

None at this point.

Applicability/Similarity to Rochester:

Review draft document entitled: Parking Structure Future Proofing Design Concepts

Replicability:

This strategy can be replicated for the City of Rochester, however, the policies and practices that are implemented would have to be very specific not only to the City but to the corridor the practices are being implemented.

Policy Implications:

None at this point.

Cost Implications:

None at this point.

References:

- http://europa.eu/rapid/press-release_IP-14-894_en.htm
- http://en.wikipedia.org/wiki/Autonomous_car

Parking Enforcement Strategies

Best Practice # 19

Strategy:

Escalating Parking Fine Structures

Description:

Escalated parking fines allow cities to fine more heavily for a second offense, as opposed to a flat fine for each type of offense. Escalating or progressive fine structures are an effective strategy to put the focus on the "real enforcement problem". This strategy also has the potential to be less punitive to occasional violators and provide a greater opportunity for community education since people won't be as disgruntled toward enforcement and will learn how to properly park from the first offense experience.

When considering parking enforcement and parking fine structures, it is important to consider "What is the real problem we are trying to solve?" The real problem is keeping long-term parkers from parking in what should be short-term parking resources. Therefore, the occasional violator that was having fun shopping and over stayed his or her time limit is not the core problem - we can afford to be more forgiving to these types of violations. The real problem is habitual parking violators who know the rule, but are willing to take the risk of getting a citation because it outweighs cost or inconvenience of parking in a more appropriate location. One solution to this problem is an escalating fine structure. This approach places an emphasis on repeat offenders, while still remaining friendly to first-time customers and visitors.

Fort Collins, CO has had an escalating fine structure in place for several years. Key elements of this program include:

- The first citation is considered a warning and is viewed as an "educational opportunity".

- First citations are often accompanied by a brochure or other information teaching the violator "how to park legally".
    - A similar program in Cheyenne, WY, adopted more of a "marketing approach". The citation is called a "Howdy Partner" and begins with "You must not be from around these parts..." The brochure goes on to explain how to parking legally, provides information on on-street parking time limits, the location of off-street lots for longer term parking options, etc.
- Initial fine amounts are kept low, but quickly ramp up for repeat offenders.
- An incentive is also provided for the prompt payment of citations. If paid within a 2-week period the fine is stated amount on the citation. If payment is not made within the designated time period the fine amount increases.
- Perhaps the most interesting and innovative aspect of this program is that it has a built-in rolling 180-day timeframe whereby, if the violator has not received another citation, the first citation comes off their record. Eventually, if the violator modifies their behavior, they can get back down to original state and the level of the fine is lowered. This focus on changing bad behavior is what makes this program most effective.

Action Items for Consideration:

- Evaluate the existing fine rates
- Evaluate the types, frequency, and location (if possible) of violations
- Update enforcement technology to enable faster and more streamlined collection of violation information (e.g. license plate recognition technology)
- Balance the appropriate amount of parking. Goals include not requiring too much parking that consumes excess land and creating visual blight, but also avoid spillover impacts associated with requiring too little parking.
- Update parking design standards including the placement of car charging stations.

Potential Sub-Strategies for Implementation:

Review various enforcement technologies that would streamline and improve enforcement capabilities.

Documented Results:

A graduated fine structure that fines more heavily for repeat offenders has the effect of deterring people from making the same parking violation repeatedly. In addition, this type of structure, because it is more punitive towards repeat offenders, tends to educate parkers on the proper way to park.

Stakeholder Engagement:

Changes to the fine structure should be communicated to the public in advance. Communication materials can be used to educate the public on the proper ways to park.

Applicability/Similarity to Rochester:

This strategy can be applied to the City of Rochester through a re-evaluation of their fine structure. An escalating fine structure supports the City's goal managing the existing parking supply more effectively and efficiently. A fine structure that can promote compliance with parking regulations enables the parking system to work more effectively.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

This strategy will require the City to reconsider their parking fine structure and update new policies regarding the fine structure.

Cost Implications:

This strategy is relatively easy to implement since it does not require large investments in new technology or other infrastructure. It is a review of their rate structure for parking violations.

References:

- "Graduated Parking Fines", Donald Shoup. Los Angeles Times
- City of Claremont

Best Practice # 20

Strategy:

Develop an Enhanced Parking Enforcement Operations and Training Manual

Description:

Building on documented best practices from around the country, create a handbook/manual that documents current policies, procedures and practices and that is geared to train and support Parking Enforcement Officers in the effective and efficient performance of their required duties.

Action Items for Consideration:

- Document and assess existing policies and procedures
- Document departmental mission and key goals
- Define key duties and responsibilities by job class
- Define standards of conduct
- Define regulation regarding vehicle usage, radio protocols, enforcement systems, etc.

Potential Sub-Strategies for Implementation:

- Develop for use both as an operational manual and a training document.

Documented Results:

- Improves documentation of program operational policies and procedures
- Provides an effective tool for staff training and development
- Provides improved support for performance documentation and human resources issues if needed.

Stakeholder Engagement:

Low – This is primarily an internal document, however, having well defined policies and procedures can help in educating the public as needed.

Applicability/Similarity to Rochester:

This strategy can easily be applied to the City of Rochester. It is important for any enforcement agency to have well-defined rules and regulations in a format that can updated annually.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its general nature.

Policy Implications:

This strategy will require the City to review their parking enforcement policies and procedures and a regular basis. Any new policies, practices and/or technology advances should be updated in the manual. Significant changes or deviations from past policies should be highlighted and sent to program administrators for review. Significant changes should be approved by the appropriate governing boards.

Cost Implications:

This strategy is relatively easy to implement since it does not require large investments in new technology or other infrastructure. It is a review of their rate structure for parking violations.

References:

Kimley-Horn can provide upon request a sample Parking Enforcement Handbook as a starting point for the development of document specific to the City's program.

Best Practice # 21

Strategy:

Develop a parking enforcement program audit check-list for citation revenue, receivables management and permit operations

Description:

The development of a detailed audit checklist tool for assessing a municipal parking enforcement program is an identified program best practice. The goal is the establishment of audit standards and a process for reviewing and assessing compliance with Rochester specific rules, regulations and policies.

Action Items for Consideration:

- Ordering and Control of Citation Stock
- Control and Processing of Issued Citations
- Pursuit of Delinquent Citations
- Monitoring and Auditing of Parking Permit Operations

Potential Sub-Strategies for Implementation:

- Review various enforcement technologies as they impact program implementation and auditing.

Documented Results:

Development of an enforcement program audit checklist can provide an important quality control tool for assessing the detailed functions of a municipal parking enforcement program. Through the development of audit standards, auditors and administrators can note whether the program complies with established best practices or if the result is unclear.

Stakeholder Engagement:

Low – This is primarily an internal document, however, having well defined policies and procedures can help in educating the public as needed.

Applicability/Similarity to Rochester:

This strategy can easily be applied to the City of Rochester. It is important for any enforcement agency to have well-defined program auditing tools and standards that can updated annually or as new technology is implemented.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

None. This practice is strictly an internal process improvement tool.

Cost Implications:

Low.

References:

Kimley-Horn can provide upon request a draft document for the City's review. This tool was developed by evaluating several municipal parking enforcement programs. City staff is encouraged to review and amend specific elements of this tool to ensure that Rochester specific rules, regulations and policies are incorporated to the greatest degree possible.

Pricing Strategies

Best Practice # 22

Strategy:

Performance-Based or Variable Pricing

Description:

Performance-based pricing programs structure their rates based on the parking demands of the area. Locations with greater demands will have a higher rate, whereas locations with less demand will have a lower rate. The intent is to help distribute the high demands experienced into areas with lower demands to balance the system and create more availability. The intent is also to encourage turnover in areas with high demands to create more availability along the curb. Rates can be changed as frequently as the City wishes to change and technology allows. Cities like Seattle evaluate and potentially change their rates on an annual basis, whereas Los Angeles changes its rates every 4-6 weeks.

Because of the amount of interest and activity nationally around this topic a separate whitepaper on this topic has been provided. The paper covers the following programs:

- Primary Programs Reviewed
    a. SFPark
    b. LA Express Park
    c. Washington DC Pilot Programs
    d. NYC ParkSmart

- Secondary Programs Reviewed
    a. Albany, NY
    b. City of Manchester, NH
    c. Winnipeg, Manitoba, Canada
    d. City of Berkeley Value-Priced Parking and Transit Program
    e. Redwood City, CA

Action Items for Consideration:

- Conduct an occupancy and turnover counts of on-street parking spaces to determine locations of high and low demands (occupancy by block-face, time of day, and day of the week).
- Evaluate occupancy data, rates, time limits, and technology capabilities to identify appropriate ways to adjust the parking rates.
- Use all this information to determine the right price to obtain ~85% occupancy (an industry standard for optimal parking occupancy). The City may have to try a few pricing iterations to find the right level of pricing that helps to balance demands and improves turnover.

Potential Sub-Strategies for Implementation:

- Adjust parking rates appropriately to balance the parking demands throughout the system.
- Determine an appropriate frequency to review and adjust the rates. This may be dependent on the type of parking technology available and its capabilities (e.g. parking meters with sensors can collect real-time parking availability and relay that information and enable the City to adjust prices throughout the day based on the changing demands).
- Install new signage that clearly states the pricing rates and regulations.

Documented Results:

Results have shown that performance-based pricing encourages people to park in areas with more availability (lower rate) and improves turnover in areas with higher demands. Another result could be an increase in revenue. Not only because some rates may increase, but also because of increased turnover (more people paying meters) and increased compliance (because people may opt to park in areas with lower rates so they can park longer instead of parking illegally).

Stakeholder Engagement:

Because this strategy deals with rate adjustments for on-street parking, it should be communicated with the public openly and in advance of changes. It is critical that they understand the new system to prevent public pushback, to encourage proper use of parking, and educate the public on the intent of the change so that the changes have the greatest impact. Additionally, the public should be involved so they have an opportunity to provide their opinions on what is or isn't working and what their preferences are. The more the public and other community stakeholders are involved, the more

successful the program will be. Additionally, communications should be handled through various media (websites, newspapers, social media, radio, etc.)

Applicability/Similarity to Rochester:

This strategy speaks directly to Rochester's goal of managing the existing parking supply more effectively and efficiently. The City is already using pay station meter technology and pay-by-cell to optimize payment options. These technologies could be leveraged or optimized to implement a performance-based pricing structure. However, this strategy might require a paradigm shift in how the City manages parking and some back-end management adjustments to allow the City to collect and analyze meter data in a way that is conducive to setting prices based on demands.

Replicability:

This strategy can be replicated for the City of Rochester, however, the technology currently in use may have to be modified slightly to allow for this type of pricing structure.

Policy Implications:

This strategy will require the City to reconsider their parking rate structure and update new policies regarding the rate structure.

Cost Implications:

Because the City already has more advanced meter technology, the investment in technology may not be substantial. However, there may be costs with expanding the use of the technology and setting up programs on the back-end of the meter data collected to analyze parking conditions and change rates appropriately.

References:

- City of Seattle, Department of Transportation
- City of Seattle Performance-Based Parking Pricing Study (2011)
- SFPark Pilot Project Evaluation, SFMTA (2014)
- Washington, D.C. District Department of Transportation. Performance-Based Parking Pilots
- LA Express Park
- Redwood City, CA

Best Practice # 23

Strategy:

Progressive On-Street Parking Pricing

Description:

Rates in a progressive pricing structure are determined by the length of time a person remains parked. Instead of a flat rate per hour (e.g. $1 per hour with a 2-hour time limit), rates in a progressive pricing program elevate the longer a vehicle is parked. For instance, the first hour might be $1, but the second hour may be $2, and so on. The intent is to provide flexibility, by allowing those who want to park longer to be able to do so if they pay, while also creating more availability. The elevated rate structure deters people from parking long periods of time, thus creating more availability.

Action Items for Consideration:

- Conduct an occupancy and turnover counts of on-street parking spaces to determine locations of high and low demands (occupancy by block-face, time of day, and day of the week).
- Evaluate occupancy data, rates, time limits, and technology capabilities to identify appropriate ways to adjust the parking rates.
- Use all this information to determine the right price to obtain ~85% occupancy (an industry standard for optimal parking occupancy). The City may have to try a few pricing iterations to find the right level of pricing that helps to balance demands and improves turnover.

Potential Sub-Strategies for Implementation:

- Adjust parking rates appropriately to balance the parking demands throughout the system.
- Install new signage that clearly states the pricing rates and regulations.

Documented Results:

Results have shown that progressive pricing structures encourage turnover of vehicles due to the graduated rate structure (people don't want to have to pay more so they don't park for as long). This strategy is effective in managing the long-term parkers that can abuse a parking system by occupying priority spaces (spaces near destinations) for long periods of time (typically an issue seen with employees) and leaving no available parking for customers. The progressive rate structure allows people to park for if they want, however, the longer they park the higher the rate to park, and people are disinclined to continue to pay high fees for parking unless necessary. Another result is a

potential increase in revenues. Not only because of the increase in rates for long-term parkers, but also because of increased turnover (more people paying the meters).

Stakeholder Engagement:

Because this strategy deals with rate adjustments for on-street parking, it should be communicated with the public openly and in advance of changes. It is critical that they understand the new system to prevent public pushback, to encourage proper use of parking, and educate the public on the intent of the change so that the changes have the greatest impact. Additionally, the public should be involved so they have an opportunity to provide their opinions on what is or isn't working and what their preferences are. The more the public and other community stakeholders are involved, the more successful the program will be. Additionally, communications should be handled through various media (websites, newspapers, social media, radio, etc.)

Applicability/Similarity to Rochester:

This strategy speaks directly to Rochester's goal of managing the existing parking supply more effectively and efficiently. The City is already using pay station meter technology and pay-by-cell to optimize payment options. These technologies could be leveraged or optimized to implement a progressive pricing structure. However, this strategy might require a paradigm shift in how the City manages parking and some back-end management adjustments to allow the City to collect and analyze meter data so they can gauge how the progressive price structure is working (e.g. is it encouraging turnover? do the rates need to be adjusted higher or lower and during which hours of stay?).

Replicability:

This strategy can be replicated for the City of Rochester, however, the technology currently in use may have to be modified slightly to allow for this type of pricing structure.

Policy Implications:

This strategy will require the City to reconsider their parking rate structure and update new policies regarding the rate structure.

Cost Implications:

Because the City already has more advanced meter technology, the investment in technology may not be substantial. However, there may be costs with expanding the use of the technology and setting up programs on the back-end of the meter data collected to analyze parking conditions and change rates appropriately.

References:

- Albany Parking Authority
- "Implementing On-Street Market Based Rates", Presentation to IPI by Executive Director Albany Parking Authority (2012)
- Berkeley, CA (Elmwood District)

Best Practice # 24

Strategy:

Parking Taxes

Description:

There are a variety of types of parking taxes. Commercial parking taxes are a special tax on parking rental transactions. Per-space parking levies are a special property tax applied to parking facilities. Commercial parking taxes discourage the pricing of parking and concentrate impacts in a few areas. Per space levies distribute cost burdens more broadly, encourage property owners to manage parking supply more efficiently, and reduce sprawl. Although per-space levies are more challenging to implement they tend to support more strategic planning objectives.

Many experts advocate various types of transportation pricing reforms, including cost-based fees and taxes for the use of roads and parking facilities ("Market Reforms," VTPI, 2005). Such reforms can provide double dividends by raising revenues and helping to achieve other planning objectives such as reducing traffic congestion, air pollution and sprawl.

Vehicle parking is particularly appropriate for reform (Shoup, 2005). Current parking planning practices tend to favor generous parking supply and minimal parking prices, which have unintended and undesirable consequences: they increase development costs, reduce housing affordability, cause dispersed land use patterns (commonly called sprawl), and increase automobile travel which exacerbates various problems including traffic congestion, roadway costs, crashes and pollution emissions. As a result, many professional organizations and planners recommend parking planning and management reforms (Litman, 2006a).

One such reform is to tax parking activities and facilities. Parking taxes can raise funds and help achieve various planning objectives, including more compact development and increased use of alternative modes (Feitelson and Rotem, 2004). Because excessive parking supply has so many negative

impacts such taxes can provide significant benefits, particularly in growing urban areas where problems are greatest.

There are also practical reasons to tax parking. Such taxes are an appropriate source of revenue for local governments and public entities such as port districts and business improvement associations; they impose costs on property owners and motorists in specific areas and so can be considered a fair way to finance local transport services.

Types of Parking Taxes:

- Commercial Parking Taxes
    - Many jurisdictions impose a special sales tax on commercial parking transactions, called an ad valorem tax.
- Per Space or Area Levies
    - Some jurisdictions apply special taxes (called a levy) on parking facilities, based either on the number of spaces or their surface area. Such taxes can be structured to support specific planning objectives, such as applying a levy only on unpriced parking, to encourage property owners to price parking.

Action Items for Consideration:

- The tax base should be broad and well defined. A broad tax base spreads the financial burden and does not give certain groups a competitive advantage. For example, it is most equitable to tax publicly owned as well as private parking facilities.
- Before imposing special parking taxes, local governments should increase their own parking prices to market rates. Commercial operators tend to be more accepting of a parking tax if governments are already maximizing income from other parking-related revenue sources, such as meters and enforcement of parking regulations.
- Taxes and fees should be structured to avoid undesirable land use, travel or economic impacts, such as increased sprawl or reduced downtown competitiveness.
- Parking tax reforms should be part of overall parking and mobility management programs and coordinated between jurisdictions in a region.
- Exemptions and discounts should be well defined and audited to insure they apply as intended.

Potential Sub-Strategies for Implementation:

- If possible, require parking suppliers to pass taxes on to motorists, rather than absorb it.
- Enforcement should be fair, friendly and effective.
- Taxes should be structured for efficient compliance and auditing. When implementing a commercial parking tax, operators should be required to use a ticketing system that provides receipts and creates secure transaction records suitable for auditing.
- Establish an evaluation program, with before-and-after analysis, to determine the taxes impacts on parking supply and pricing, economic activity, traffic, and spillover problems.

Documented Results:

- Commercial Parking Taxes
    - The City of San Francisco imposes a 25% tax on all commercial off-street, nonresidential parking transactions ("any rent or charge required to be paid by the user or occupant of a parking space"). Revenues are divided between the city's general revenue, public transportation and senior citizen funds.
    - The City of Pittsburgh imposes a 31% parking tax (increased to 50% in 2005), the highest rate in the U.S. Parking operators indicated that they had could pass most the tax onto the users, but had absorbed some of the tax themselves.
- Per Space or Area Levies
    - In Sydney, a Parking Space Levy of AU$800 annual per stall is currently applied to parking in the central business district (CBD), and AU$400 per stall at other business districts. The levy applies to all privately owned, non-residential, off-street parking. It is prorated for parking facilities that are only used occasionally, such as church parking lots; property owners must maintain daily records indicating how often such space is used. The levy raises more than AU$40 million annually, which is dedicated to transportation projects and cannot be used for operating expenses.

- Vancouver, British Columbia, TransLink, the Vancouver, British Columbia regional transportation authority which builds and operates roads, transit facilities, bicycle facilities and other transport services, implemented a Parking Site Tax in 2006. The initial rate is $1.02 annually per square meter of non-residential parking facility, typically $25-$40 per space. Assessment, collection and enforcement of the tax utilizes the existing property tax framework, operated by BC Assessment, a provincial agency. The agency used aerial photos, digital mapping, municipal records and site visits to develop an inventory of non-residential parking facilities in the region. Exemptions include:
  - On-street parking.
  - Most buildings exempt from general property taxes (schools, churches, synagogues, etc.).
  - Parking facilities used for vehicle retail and rental business inventory storage, impounded vehicles, trailers of tractor-trailer units, vehicle servicing and fueling.
  - Parking facilities owned by TransLink (including Park & Ride lots).
  - Ferry loading queuing

Stakeholder Engagement:

Stakeholders, such as commercial parking operators, should be consulted to ensure that regulations, administrative procedures, and enforcement policies are efficient and fair.

Applicability/Similarity to Rochester:

Leveraging a parking tax to support other multi-modal alternatives seems very well aligned with Rochester's overall transportation and sustainability goals. However, taxes are never popular and significant public process would be required.

Replicability:

This strategy can be applied in several ways to be tailored to the specific goals of community. While the concept can be replicated, the key issues will be community acceptance and approval. This tactic is likely the most politically sensitive of all the best practice options, but it also has the potential to contribute positively to a wide range of community goals.

Policy Implications:

This strategy will have significant policy and political implications. Defining the specific type of tax, the reasons for the tax, the level of taxation and how the potential tax revenues would be used will all be key policy decisions if this strategy is advanced.

Cost Implications:

Costs for this strategy would involve investing significant council and administrative time to develop and implement the campaign to achieve the support needed to pass the legislation authorizing the new tax. Additional costs would be incurred to implement and collect the tax revenues. Ultimately, however, the tax would generate significant revenues to off-set implementation costs.

References:

- Parking Taxes, Evaluating Options and Impacts - Todd Litman, Victoria Transport Policy Institute

Parking Code Strategies

Best Practice # 25

Strategy:

Review and update of City adopted parking codes including parking generation rates

Description:

Identify the existing parking requirements within the City and identify potential parking code strategies to provide updated standards consistent with current and projected development trends, opportunities for parking reductions, parking placement while increasing the availability (usability) of land.

There is generally an economic disadvantage to providing too much parking (underutilization of properties, inefficient land use patterns) as there is with too little parking (actual and/or perceived lack of safe, convenient parking). Providing optimal parking that is convenient, safe and efficiently utilizes valuable land can enhance economic vitality and livability.

Action Items for Consideration:

- Review existing Parking Standards (required parking rates; minimum and maximum)
- Review of shared parking provisions including off-site and on-street parking.
- Review bicycle parking requirements.
- Review the City's existing land use and zoning standards (uses).
- Identify areas for Transit Oriented Development (TOD), Land Use and Parking Overlays.

Potential Sub-Strategies for Implementation:

- Amend City parking standards from zoning based to land use based (Note: already in process).
- Provide simplified, generalized listing of land use categories (broad based) versus use specific standard; include review of minimum and maximum parking standards.
- Provide development incentives for targeted parking standards and programs (e.g., designating a percentage of provided parking to public parking needs) (incentivized zoning and/or performance zoning standards).
- Simplification of the City's current code (ease of understanding and application of standards).
- Evaluate the placement and connectivity of parking spaces/areas to buildings and facilities.

Documented Results:

- Efficient use of developable land
- Improved application of parking standards
- Reduced variance and/or modification requests for parking reductions
- Code reflects current development practices and uses
- Encourages use of transit and alternative transportation measures
- Reduced storm water needs through reduced surface parking and/or implementation of LID measures

- Require appropriate amount of parking with goals of not requiring too much and consuming land, and creating visual blight, but also avoid spillover impacts associated with requiring too little parking.

Stakeholder Engagement:
This strategy would require outreach with the public, including targeted stakeholders including large land holdings, major employers and community/educational services, to identify future development, opinions on existing parking and other customer comments.

Applicability/Similarity to Rochester:

This strategy is applicable to Rochester because it involves updating the City's parking code which has typically had minor or targeted amendments as compared to a complete parking code review. It can and should be tailored to meet the specific needs of the Rochester community.
This strategy supports City goals of economic development, preserving and improving community character, and improving the City's transportation network.

See task report by Nelson Nygaard on Align Zoning and Parking Requirements with Growth & Mobility Vision / Updating Parking Requirements.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

To implement a change in the City's parking codes, will require the City to update their policies.

Cost Implications:

This strategy involves effectively leveraging already available community resources. The main cost of implementation might be in the stakeholder outreach, education, and communication, as well as staff resources (time).

References:

- City of Fort Collins, CO
- City of Arlington, VA (MobilityLab)
- City of Ann Arbor, MI
- City of Largo, FL
- Eugene, OR
- Portland, OR

- Madison, WI

TDM Strategies

Best Practice # 26

Strategy:

Explore "First and Last Mile Strategies" as Part of an Overall Mobility Management Strategy

Description:

First and last mile strategies are typically designed to help transit users access transit or final destinations. Strategies vary widely from infrastructure to policy to education. Successful programs will improve the user experience by supporting intuitive, safe and recognizable routes to and from transit stations/stops. There are no set standards but rather a menu of options. Common improvements include: intersection crossing improvements (crosswalks, bulb outs, raised crossings, scramble crossings, and mid-block crossings), signage (way finding, motor vehicle signalization/signage, real-time transit signage), pedestrian prioritized signal timing, lighting and streetscape improvements (street furniture and trees/landscaping), freeway underpass/overpass improvements, enhanced transit stops, sidewalks (completing gaps, surface improvements, widening, short cuts), using street space for bicycle and transit lanes, providing priority parking or waiting areas for "green" transportation, car and bike share stations/parking, carpool and vanpool parking, bike parking, and trail/off street path access.

Action Items for Consideration:

Consider reviewing efforts by the city of Los Angeles, which uses GIS mapping to determine missing pieces in the overall travel system. Maps of existing transit stops show 1/4- and 1/2-mile radii as well as existing transportation networks such as roads, transit routes, bus routes, sidewalks, accident locations, land use, and other pertinent layers. The layers have been used to determine what infrastructure improvements to utilize and how best to make transit stops easy to reach. If a strategic first and last mile program is pursued, a funding source would need to be identified.

Documented Results:

Initial program review did not yield information on specific outcomes of first and last mile strategies in terms of their impact on transit ridership and community mobility. Impacts would be likely to vary significantly depending on the strategy implemented. For example, shuttle services combined with subsidized transit passes could have a significant impact on transit ridership whereas installation of short lengths of sidewalk may have relatively limited impacts.

Stakeholder Engagement:

Integrate with larger community planning and transportation/transit development initiatives. Engage the public as well as private development sector to promote common goals and benefits of first and last mile strategies.

Applicability/Similarity to Rochester:

First and last mile strategies tie in with Rochester 's high bicycle and transit ridership and would be helpful in capturing additional transit riders. The strategies are important to encourage transit, bicycle, and pedestrian commuting. The infrastructure, policies, and educational components needed for a complete system are important throughout the city, not only near transit stations.

Replicability:

Examples of complete streets (pedestrian, bicycle, transit) policies and infrastructure can be found nationwide and internationally. Most strategies should be easily replicated in Rochester**.**

Policy Implications:

First and last mile strategies support broader policy directives related to clean air, health, and economic sustainability. By improving transit access and effectiveness, more people will likely opt to use transit, which in turn will reduce vehicle miles traveled and greenhouse gas emissions, integrate physical activity into daily commute patterns, and improve economic vitality by connecting people locally and to regional attractions/jobs.

Cost Implications:

Vary widely depending on measures implemented. Infrastructure improvements can be expensive while signage and educational efforts can be relatively inexpensive.

References:

- "First Last Mile Strategic Plan: Path Planning Guidelines": Los Angeles County Metropolitan Transportation Authority - Metro, 2013
- Pedestrian and Bicycle Information Center
- "Intermodal Transportation Planning and Development: A closer look at linking transit to bicycling and walking": Pedestrian and Bicycle Information Center Case Study for Tucson, Arizona.

Best Practice # 27

Strategy:

TDM Districts and Trip Reduction Ordinances or Trip Generation Allowance

Description:

TDM districts typically use overlay zones or other zoning requirements to encourage or enforce more stringent development regulations specific to TDM. The regulations can require employers and property owners to participate in TDM programs, implement TDM programs, and/or fund TDM programs. Funding is often collected through a property tax or its equivalent.

Action Items for Consideration:

Consider reviewing the following: St Louis has two overlay zones created specifically for TDM measures. Each of these zones have requirements for certain developments to provide various TDM measures such as a plan and outlined strategies. Furthermore, developments within these districts must pay a fee to help manage the district and TDM operations. Minneapolis has a pedestrian orientated overlay district. Within this district are two areas that require TDM plans for developments of certain sizes. Furthermore, all developments within the district must comply with requirements for bicycle parking and pedestrian infrastructure to facilitate pedestrian access, safety and circulation. San Mateo has a TOD district that promotes TOD development including enhanced pedestrian, bicycle, and transit facilities. Additionally, the TOD district requires developments of a certain size to create TDM programs that must include both short- and long-term trip and parking reduction goals. The TOD district details specific alternatives for TDM implementation, including transit pass subsidies, bicycle parking, and parking cash-out programs.

Documented Results:

Little data has been collected on the vehicle trip and parking reduction impacts associated with TDM districts. It can be difficult to separate TDM impacts from external variables such as walkability, level of transit service, density, etc.

Stakeholder Engagement:

Integrate with larger community planning and transportation/transit development initiatives to develop areas and methods to implement TDM strategies. Engage the public as well as private development sector to promote common goals.

Applicability/Similarity to Rochester:

Determining whether to create TDM districts, TMA's, zoning overlay districts, or other unique approaches will require Rochester to analyze current and proposed TDM implementation goals and outcomes.

Note: UrbanTrans is currently engaged to develop and implement these strategies.

Replicability:

There are several unique examples of how TDM measures are enforced in specific areas, as outlined. Additionally, Boulder Junction in Boulder, CO offers an example of a local TDM district that can be replicated.

Policy Implications:

Creating TDM districts, TMA zoning overlay districts, or other unique approaches will require different policy approaches and regulation. However, enhancing TDM strategies, outcome, and enforcement is a common policy thread within these.

Cost Implications:

Low to medium depending on city staff time used to develop new policies and monitor compliance.

References:

- City of St Louis Zoning Code. Article 4, Zoning Districts, Division 9 Travel Demand Management District, Section 36-321.
- City of Minneapolis Code of Ordinances. Chapter 551 of the Minneapolis Code of Ordinances relating to Zoning Code: Overlay Districts, Article II: Pedestrian Oriented PO Overlay District.

- City of San Mateo Zoning Code. 27.90 TOD District - Transit Oriented Development.

Best Practice # 28

Strategy:

Explore the Concept of Increasing Availability by Decreasing Demand

Description:

This strategy focuses on what can be done to encourage employers and existing property owners to implement TDM programs. This is separate from TDM regulations for new development. Employers and property owners can be encouraged or mandated to implement or participate in TDM programs. Incentives and requirements can be city-wide or geographically limited. California has been a leader in the implementation of mandates that require employers to implement or participate in TDM programs. Many other communities make TDM services available for free to employers to encourage them to implement TDM programs.

Action Items for Consideration:

Consider reviewing the following: The Bay Area Air Quality Management District recently passed Regulation 14, Rule 1, which requires employers with 50 or more employees to provide one of three options to employees: (1) pre-tax transit and vanpool fare purchases, (2) employer-paid transit and vanpool fares up to $75, or (3) employer provided transit service. Maryland and Minnesota both offer tax incentives to encourage employers to subsidize transit costs. The Maryland tax credit is worth up to $50 per employee per month. The Minnesota tax credit is worth up to 30% of the employer's expenditure on bus passes and vanpool fares.

Documented Results:

The Bay Area program is launching this month and no specific outcomes are yet known. The program has resulted in a significant increase in employer participation in the regional 511 program. No data were immediately available on the impacts of incentives on employer participation and funding of TDM programs. Data are available regarding the impacts of employer subsidized transit passes and TDM programs on travel choice, but data have not been collected regarding the impacts of government programs/mandates on employer uptake/funding of TDM programs.

Stakeholder Engagement:

Implementation of policies would require close coordination with employers and property owners. Financial incentives will require the identification of city funding sources or lobbying efforts to encourage state action.

Applicability/Similarity to Rochester:

The identified best practices are not directly applicable to Rochester. The free provision of TDM services to employers is already available.

Replicability:

With sufficient local, regional, and state support all examples could be implemented.

Policy Implications:

Depending on the action taken, significant policy changes could be required.

Cost Implications:

Current TDM programs (primarily provided by Mayo Clinic to date) could be expanded at a low cost depending on the degree of expansion. The provision of subsidies to encourage employer TDM programs could be expensive.

References:

- TDM and Telework Financial Incentives
- Regulation 14 Rule 1 Guidance

Best Practice # 29

Strategy:

Local Government's Role in Promoting Car Share

Description:

Car sharing is a model of car rental where people rent cars for short periods of time, often by the hour. Car share is typically most successful in high-density residential and commercial locations. There are an estimated 800,000 car share members in the United States. Cities have promoted car share through informal partnerships, marketing assistance, administrative assistance, the provision of parking, and grant/funding support.

Action Items for Consideration:

The following programs could be reviewed for additional information: Brookline and Cambridge, MA both provide marketing support; San Francisco requires some developers to make car share spaces available;

Denver provides incentives to developers to encourage the provision of private parking spaces; Denver and Hoboken have innovative programs to provide on-street parking spaces to car share providers; Arlington County, VA encourages car share through its TDM program and the inclusion of parking spaces on its transportation maps.

Documented Results:

Car Share programs have been found to reduce car ownership and parking demand. They can also serve as a "last-mile solution". One car share vehicle can typically remove four to five vehicles from the road. Car share's impacts on vehicle miles traveled are less clear.

Stakeholder Engagement:

Local government, car share operators, and communities must all work together when crafting car share policies, especially policies that provide parking locations in the public right of way.

Applicability/Similarity to Rochester:

Car share is applicable to Rochester because of its high pedestrian and transit use as well as the city's goals for environmental stewardship and traffic reduction. Successful examples already exist. Any government efforts would be likely to increase utilization and meet success.

Replicability:

Many examples of government agencies promoting car share can be implemented in Rochester. Examples that are linked to zoning would need to be reviewed to determine their legality in Rochester and Minnesota.

Policy Implications:

Depending on the strategies implemented, parking policies and regulations will need to be updated. Additionally, certain policies may require updates to the zoning code.

Cost Implications:

Low to High depending on funding and support provided by the City.

References:

- "TCRP Report 108: Car Sharing Where and How it Succeeds": Published in Washington DC by the Federal Transit Administration and the Transportation Research Board, 2005.
- "Contemporary Approaches to Parking Pricing: A Primer": U.S. Department of Transportation Federal Highway Administration 2012
- City and County of Denver

Best Practice # 30

Strategy:

Parking Cash-Out Programs

Description:

Parking cash out is a program that allows employees to opt out of having a parking space and instead receive compensation. The employer who owns or leases a space pays the employee not to park. The employee can then use this money to purchase transit fares or it can be kept as cash. An update to the Internal Revenue Code in 1998 supports parking cash out programs by allowing employers to offer commuters the option of taxable cash instead of tax-exempt subsidies for parking, transit, or vanpool. The federal tax code states "for 2014, the monthly limit on the amount that may be excluded from an employee's income for qualified parking benefits is $250. The combined monthly limit for transit passes and vanpooling expenses for 2014 is $130".

Employer costs are likely to increase slightly with cash out programs as employers must pay employment taxes on the cash employees receive if they do not use their payments for tax-deductible transportation expenses. Administrative costs will also be incurred but could potentially be offset by reductions in travel allowances or parking subsidies (i.e., charging employees who decline a cash-out offer a small fee for parking).

Action Items for Consideration:

Additional research could be conducted on existing cash-out programs. The states of California and Rhode Island have laws that require certain employers to offer cash-out programs. Both state laws effect employers with 50 or more employees. California's law is applicable only to leased parking spaces and does not affect employers that own their parking. Rhode Islands' law does not require a cash payment but rather a free transit pass in lieu of a parking space.

Documented Results:

Analysis by Donald Shoup found that parking cash-out programs in California reduced drive-alone trips from 76 percent to 63 percent of total commute trips at surveyed employers. A model created by De Borger and Wuyts using Belgian data to evaluate cash out estimated that cash out would reduce car commuting by 8.5 percent.

Stakeholder Engagement:

Work with city and business leaders to develop a policy that supports traffic and vehicle reduction goals but does not place too much burden on

employers. Identify the administrative burden that could be placed on employers and develop programs to help overcome those burdens.

Applicability/Similarity to Rochester:

Parking cash out programs support Rochester's alternative transportation system by encouraging employees to utilize transit and bicycling rather than driving. A more advanced and comprehensive version of this strategy has been developed for the Seattle Children's Hospital and is now a software program called LUUM. Mayo Clinic has been made aware of this program and put in touch with the former Seattle Children's Hospital Transportation Director for more information.

Replicability:

In some states, existing laws that regulate cash out are at the state level making them less replicable. However, opportunities are likely to exist to implement programs to encourage rather than mandate cash out programs. Additional research would be necessary to determine the legality of requiring cash out as an option.

Policy Implications:

Parking cash out supports policies of traffic and vehicle reduction as well as goals to increase transit and bicycle ridership. Excessive burdens to employers must be considered however.

Cost Implications:

Low to medium depending on enforcement and policy decisions.

References:

- "Contemporary Approaches to Parking Pricing: A Primer": U.S. Department of Transportation Federal Highway Administration 2012
- "Section 132(f) Qualified Transportation Fringe Benefit – Commuter Parking and Transit Benefit Plan Document"
- City of Santa Monica
- "Congress Okays Cash Out": Donald Shoup. The Institute of Transportation Studies at the University of California, Los Angeles, CA. 1998
- "California's Parking Cash Out Law" California Environmental Protection Agency
- State of Rhode Island Statute 37-5-7.1

Best Practice # 31

Strategy:

Adopt a Research and Educational Mission Relative to Promote All Modes of Transportation

Description:

Using the "Mobility Lab" model as guide, develop a robust TDM outreach, research and educational program to promote and continually reinforce multi-modal options. "Mobility Lab" is a very impressive component of the Arlington County Virginia Commuter Services program. It is perhaps the most advanced and comprehensive TDM program in the country and one which the City of Rochester could emulate in a number of ways. A review of the Mobility Lab program follows.

Overview:

- Mobility Lab is a leading U.S. voice of "transportation demand management" – moving people instead of cars – and works to create a shared national voice with clear calls to action from TDM agencies across the country.
- One of Mobility Lab's primary roles as a start-up think tank is to measure the impacts of TDM services in Arlington County, Virginia – frequently cited as a leader in the industry.
- Mobility Lab believes – through storytelling, original research, events, and strategic partnerships – we can effectively gain funding and prestige for a traditionally underfunded and little-known industry.
- TDM helps people use transit, ridesharing, walking, biking, and telework. It is cost-effective in guiding the design of our transportation and physical infrastructure so that alternatives to driving are naturally encouraged and our systems are better balanced.
- TDM thus underlies most of the important new initiatives of today: transit-oriented development, complete streets, walkable activity centers, livability and sustainability initiatives, and integrated corridor management.

Mission:

Mobility Lab nurtures innovations to a fundamental requirement of human life: transportation. It is a place of collaboration, education, and continuous improvement for moving people in more healthy, efficient, and sustainable ways.

Action Items for Consideration:

Mobility Lab is based on three pillars. Research. Collaboration. Communication:

- Research about how Arlington's transit-oriented development works. Mobility Lab is embedded within the living laboratory that is Arlington County Commuter Services. It produces and disseminates cutting-edge original transportation research that details why Arlington's roads are amazingly free of the traffic that clogs so many urban areas.

- Collaboration to bring about innovation. Mobility Lab functions as a convener and engager of top minds on transportation in the D.C. region, nationally, and internationally. They regularly hold online collaborations and events like Hack Days, Transportation Camp, and educational symposiums on topics ranging from sustainability to real-estate development and beyond.

- Communication about best practices. Mobility Lab is a leading online source for how communities can improve the lives of its citizens by making better transportation choices than the ones our society has been trained to embrace. Mobility Lab shares research, builds databases of readable, entertaining, and usable best practices.

More information is available at: http://mobilitylab.org/about-us/#sthash.6BZ2aoni.dpuf.

Documented Results:

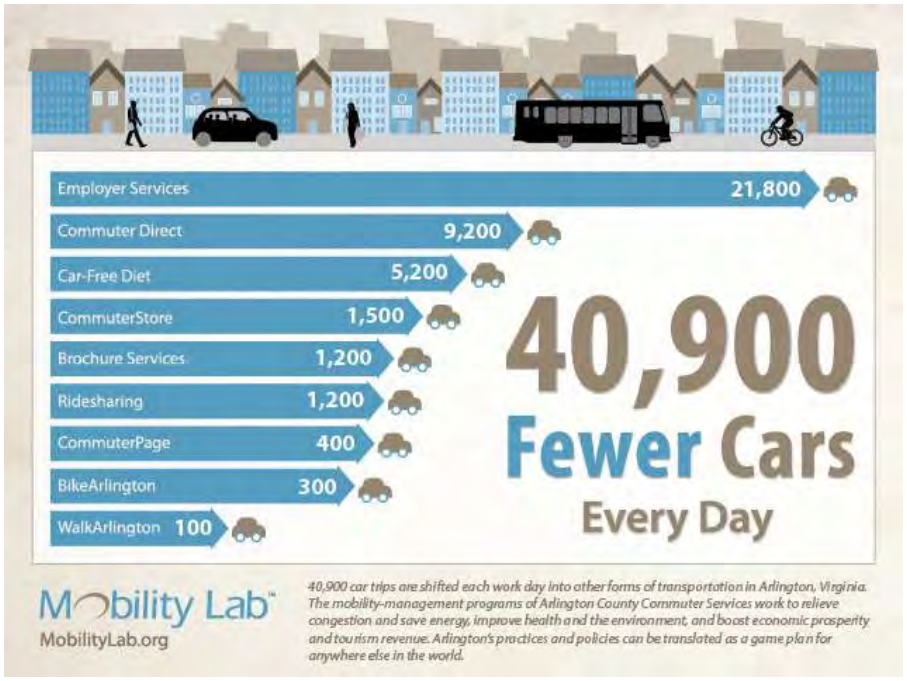
One of Mobility Lab's primary roles is to measure the impacts of Arlington County Commuter Services, showing that what we do works, and can be translated as a game plan for anywhere else in the world.

ACCS produces annual reports that provide further information about their program results. Links to several of these annual reports are provided below:

Annual Reports

- ACCS Making an Impact 2012
- ACCS Making an Impact 2011
- ACCS Making an Impact 2010
- ACCS Making an Impact 2009
- ACCS Making an Impact 2008

- ACCS Annual Report 2005



Mobility Lab tracks the actions of ACCS programs. Here are the latest numbers, updated in July 2014: - See more at: http://mobilitylab.org/about-us/#sthash.6BZ2aoni.dpuf

Below is data from Fiscal Year 2011 (July 2010 through June 2011):

- 35,000,000 dollars in sales at CommuterDirect.com and at The Commuter Store®
- 24,524,604 dollars in fare media sales at the Commuter Information Center $9,331,370 dollars' worth of sales at The Commuter Store®
- 1,920,000 visits to CommuterPage.com® family of websites, including ArlingtonTransit.com
- 1,000,000 trips on Capital Bikeshare in year 1
- 600,000 transit timetables distributed
- 248,984 page views were logged at WashingtonAreaBikeForum.com
- 205,000 customers through The Commuter Store® doors
- 153,377 individual transactions and 986 corporate transactions processed at CommuterDirect.com.
- 131,397 employees reached through 661 employers by Arlington Transportation Partners

- 116,578 page views logged by 38,941 unique visitors at BikeArlington.com
- 79,750 tons of CO2 removed from the air every year
- 60,000 redesigned four-color Walkabouts brochures printed with updated text and maps for 18 Walkabout routes
- 50,000 Arlington County bike maps distributed
- 42,000 issues of Solutions newsletters and 1,160 e-Solutions issues distributed
- 29,000 phone calls at our call center
- 27,110 phone calls answered at the Commuter Information Center
- 19,111 people at 20 WalkArlington events including walking tours, workplace walks, health fairs, environmental expos, and school programs.
- 16,185 people at 53 Car-Free Diet events
- 10,000 people at 39 BikeArlington events
- 6,000 people reached at 48 transportation fairs
- 3,268 followers of Car-Free Diet on Twitter
- 3,237 pledges to go car-free
- 2,000 bikers checked in at Bike to Work Day rest stops in Arlington
- 1,000 bike light sets given away
- 307 Car-Free Diet Retail Partners
- 244 Personalized Commute Planners distributed
- 100 ART bus stops repaired or replaced due to vandalism, storms or accidents
- 48 transportation fairs attended reaching over 5,000 commuters.
- 42 site inspections of buildings for compliance
- 32 Redefine Your Commute campaign events conducted reaching over 6,000 commuters
- 20 walk events attracting 19,111 participants

- 14 new site plan properties assisted to comply with TDM requirements
- 10 Arlington businesses awarded the "Bicycle Friendly Business" status by the League of American Bicyclists
- 9 Confident City Cycling classes organized by BikeArlington with 169 attendees
- 6 TDM compliance reviews for residential site plan buildings completed
- 2 Car-free Diet Skeptics who went 30 days each without a car that was followed by thousands of people on a reality series show
- 1 new The Commuter Store®kiosk in Ballston
- See more at: http://mobilitylab.org/about-us/#sthash.q2edO8iV.dpuf

Stakeholder Engagement:

Mobility Lab also serves as a meeting place and the home of idea generation for:

- Transportation Techies DC monthly "Meetups"
- Technology-development fellowships such as the one that created TransitScreen
- Virginia Tech and American University transportation-focused students
- Crowdsourcing hackers for bike trip planning software and real-time transit screens
- Fairfax County (Virginia) Connector busline executives, and
- Roanoke (Virginia) transportation planners, to name a few.
- See more at: http://mobilitylab.org/about-us/#sthash.6BZ2aoni.dpuf

Applicability/Similarity to Rochester:

Developing in a program similar to Mobility Lab, while a daunting endeavor and a significant investment, seems a natural next step for Rochester and one that is very strongly aligned with the DMC's plan as well as overall community goals.

Replicability:

While programs like Mobility Lab and Portland's Metro (which has also adopted a similar education, research and outreach mission) provide good models, the effective implementation of such a program is a very difficult and potentially expensive task. However, the paybacks could also be significant in terms of congestion relief, progress toward climate commitment and transportation master plan goals.

Policy Implications:

This strategy seems very well aligned with Rochester's stated policy objectives, but it would need a significant funding mechanism. The parking tax strategy listed earlier in this document could provide that funding source.

Cost Implications:

Low to High depending on level of program development adopted.

References:

- Idea for Smarter Transit Fares Wins George Mason Competition - See more at: http://mobilitylab.org/tech/#sthash.VW7XCmBb.dpuf
- Hitchhiking Goes High Tech: The Story Behind CarmaHop's Upcoming Launch
- - See more at: http://mobilitylab.org/tech/#sthash.VW7XCmBb.dpuf
- The Technology Behind a New Kind of Travel Planning - See more at: http://mobilitylab.org/tech/#sthash.VW7XCmBb.dpuf
- Arlington County Building High-Tech Commute-Planning Software - See more at: http://mobilitylab.org/tech/#sthash.VW7XCmBb.dpuf
- An Open Data Standard Would Help Public Discover Bikesharing - See more at: http://mobilitylab.org/tech/#sthash.VW7XCmBb.dpuf
- Techies Work to Merge Data From Multiple Transit Agencies - See more at: http://mobilitylab.org/tech/#sthash.VW7XCmBb.dpuf
- Examining Mobility Innovations in the Sharing Economy - See more at: http://mobilitylab.org/tech/#sthash.VW7XCmBb.dpuf

District Management

Best Practice # 32

Strategy:

Livable Neighborhood Plans

Description:

1. West End District Development Plan (2013): The West End is a livable neighborhood that is similar in size to Rochester with 43,000 residents, 23,000 jobs and millions of visitors each year. It is a community that features a range of housing, land use, heritage buildings, transportation options, and amenities. Because demand for new development is growing, City staff have prepared a community plan to ensure that future growth in the West End meets the needs of the community. In 2013, community members supported a set of emerging and refined plan directions, including the West End Community Values, which helped shape the community plan. The plan focuses on neighborhood character, housing, local business, heritage, and transportation and parking. Watch the project overview video.
2. Greenest City 2020 Action Plan
3. Neighborhood Champions Network (NCN)

Applicable Sub-Categories:

- Building Partnerships between Local Governments & Non-Profit Organizations
- "Greening Downtown": Strategies for Institutionalizing Sustainability
- Guidelines for Expanding or Enhancing Existing Districts
- Important of District Context and Identity

Action Items for Consideration:

- Consider an Expert Panelist from the City of Vancouver

Potential Sub-Strategies for Implementation:

- Additional research into the formalized Neighborhood Champions Network (NCN) as a potential model for a formalized public participation process.
- Strong consideration should be given to the communication strategies that were used to provide information to the public about the plan's goals, implementation strategies and accomplishments. Both online and print materials were created in a visually-appealing, easy to understand design that is consistent among mediums and gives the project a high-quality, professional feel.
- Consider cost implication matrix model as a format for sharing information about public and private investment

Documented Results:

- West End District Plan was approved by City Council in 2013.
- Results from the NCN's work on the West End Plan can be found in the Supplemental Materials and on the NCN's website. See: http://vancouver.ca/home-property-development/neighbourhood-champions-network.aspx
- 2011-2014 Implementation Updates from the Greenest City 2020 Action Plan can be found in the Supplemental Materials.

Stakeholder Engagement:

The West End Plan included significant community engagement, which is detailed on the West End Community Plan page of the City of Vancouver's website. According to the site, "In an effort to improve outreach during the community planning process, the West End Neighborhood Champions Network (NCN) was formed to:

- Provide advice on matters of public involvement and
- Assist with outreach to encourage wide participation in the public engagement process.

The NCN is based on the principles that:

- Everyone is entitled to have a voice, and
- Processes and outcomes are more effective when a diversity of participants are able to contribute."

The model recognizes that communications channels have changed a lot in recent years, especially the way people engage with each other, with

businesses, and with government. The public is no longer as dependent on representatives to access information and to share their ideas. The role of NCN members was to participate in and encourage others to participate in engagement channels that are open to all. Members did not have special status in regards to influencing final policy or designs; however, they helped shape the engagement process itself.

Applicability/Similarity to Rochester

- The West End District area is similar in size to Rochester with 43,000 residents, 23,000 jobs and millions of annual visitors.
- The West End is diverse, walkable, and densely populated. It is situated on peninsula and nearly surrounded by water. The West End is comprised of a vibrant Central Business District and four main commercial districts.
- The City is on track to bring its GHG emissions 5% below 1990 levels, 93% of the electricity generated is from renewable sources and the City has shifted its investment to supporting alternate modes rather than building new roads.

Replicability:

Despite their difference in size, the City of Vancouver and the City of Rochester have many parallels in their overall community values, respect for diversity of residents and desire to invest inauthentic community engagement. The information provided on the creation of the West End Plan (on the City's website) provides a detailed overview of planning and implementation strategies. Additionally, the City has done an effective job of communicating about its multitude of planning efforts in a succinct way on its website. The layout, format and information included on the West End and Greenest City 2020 Action Plan page (especially the implementation updates) are very user (citizen) friendly. Examples are provided in the Supplemental Materials. The West End Plan aligns with and supports the City's "Greenest City 2020 Action Plan" which aims to make Vancouver the "greenest City in the world". The West End Plan also aligns with the City's housing and homeless action plan, as well as the City's larger neighborhood planning efforts. The West End plan aligns closely with the DMC plan's Guiding Principles as well, especially the desire to plan for both the present and the future, supporting a diversity of people (the West End is one of Vancouver's most diverse areas) and providing for all modes safely.

Policy Implications:

The West End plan included a variety of recommendations that have policy implications outlined in both the West End Plan and the Greenest City 2020 Action Plan. A sampling of those include:

- Establishment of the NCN
- Developing financing tools to help bridge the gap between where the City currently stands with relation to energy efficiency and its goals

Other policies that are currently being explored by the City include: expanding support for car sharing; better management of on-street parking; unbundling the cost of parking from housing; and working with partners to encourage work-from home and other programs that reduce the need for vehicle trips.

Cost Implications:

West End Plan: A detailed matrix of cost implications and funding strategies are laid out on Page 119-120 of the plan (provided in the Supplemental Materials). A high-level breakdown includes 25% of costs covered by the City (through utility bills and property taxes), 50% from Community Amenity Contributions (CACs), Citywide Development Cost Levies (DCL's) and direct contributions provided by developers and 25% from donations, in-kind contributions from community partnering organizations.

References:

- IDA Awards of Excellence Submission: West End Community Development Plan (2014)
- West End Plan video
- West End Plan website
- Neighborhood Champions Network webpage
- Greenest City 2020 Action Plan webpage
- Livable Laneways

Best Practice # 33

Strategy:

Integrated Downtown Management and TDM Programs, - getDowntown

Description:

City of Ann Arbor's getDowntown Program. Founded in 1999, the getDowntown Program is a partnership between the Ann Arbor Transportation Authority, the Ann Arbor Downtown Development Authority, and the City of Ann Arbor. The program provides commuting programs and services to employees and employers in downtown Ann Arbor. Programs and services include the go!pass, the Commuter Challenge and Commuter Club, bike locker rentals, free commuting assistance to downtown employees and employers, commuting materials, Zipcars and more. getDowntown has its own staff and board.

Applicable Sub-Categories:

- Building Partnerships between Local Governments & Non-Profit Organizations

Action Items for Consideration:

- Further research into structure of getDowntown program's organizational structure, funding streams and effectiveness as a public-private partnership
- Review process for collecting feedback from those that utilizing the program's services and participate in program sponsored events as a possible model

Documented Results:

The getDowntown team periodically conducts surveys to garner information from regional employees. They also conduct a bi-annual Program Study and create an annual Commuter Challenge Report that includes information and statistics regarding downtown commuting choices in Ann Arbor, including the amount of CO2 emissions saved, participant calories burned and decrease in SOV trips. Program Study and Commuter Challenge Report results can be found in the Supplemental Materials.

Stakeholder Engagement:

The getDowntown program sponsors events throughout the year to educate residents on commuting options and to incentive the use of alternate modes (i.e., "Conquer the Cold" Commuting Challenge, Green Fair and Commuter

Challenge). The Program Study Survey also provides stakeholders with an annual opportunity to provide feedback on the services. The program also uses a variety of mediums to engage with users including YouTube, social media, blogging and participation incentive partnerships with local businesses. Sample marketing/promotional items from these programs can be found in the Supplemental Materials.

Applicability/Similarity to Rochester:

- Rochester should consider Ann Arbor as a Peer City
- College town (University of Michigan)
- Similar weather
- Nationally recognized; award winning for livability
- Deep commitment to community "brand as a bohemian, politically aware, culturally active, 'hip' and exciting place unlike any other"
- Desire to maximize existing infrastructure
- Successful public transit system in place with "TheRide." TheRide had 6.6M riders and ridership was 4th highest in the nation in 2012

Replicability:

- The City of Rochester already has a good foundation on which to build a program similar to getDowntown. Additional investments in staff time, marketing and event program coordination would be needed. Additionally, increase engagement with existing organizations like Mayo Clinic would help leverage/extend the reach of existing City staff.
- Aligns with Sustainability Framework and overall DMC Plan Guiding Principles
- Goals to decrease SOVs, CO2 emissions, and GHG emissions
- Encourages the cultivation of partnerships between the public and private sectors
- Offers a variety of transportation options to fit the needs of community members
- Promotes physical health and well-being

Policy Implications:

- Encourages increased partnership between the City and private economic and community development organizations like the Rochester Downtown Alliance.

Cost Implications:

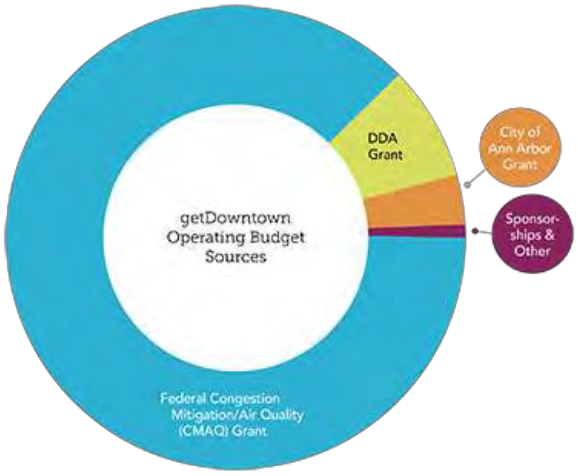
Total program budget is $261,000/year with a FY 2014 breakdown of funding in the following amounts:

- $212,000 CMAQ
- 40,000 Ann Arbor Downtown Development Authority
- 7,100 City of Ann Arbor

The program receives a small amount of sponsorships and other revenue from bike lockers. Of the $261,000 budget, salaries and wages account for $140,000. The remaining funds go directly to programming.

References:

- DDA Development and TIF Plan 2003-2033
- Phone call with getDowntown staff member Nancy Shore
- Supplemental Materials include: Commuter Challenge Infographic; Commuter Challenge Brochure; getDowntown Commuter Survey Results (2012)\



Best Practice # 34

Strategy:

Neighborhood Partnering Program

Description:

Neighborhood Partnering Program: In support of Imagine Austin, the Neighborhood Partnering Program (NPP) provides opportunities for community and neighborhood organizations to affect public improvements by sharing in the costs of those efforts with the City of Austin government. The Neighborhood Partnering Program consists of four subprograms:

1. The Neighborhood Cost Share Program (NCSP): The program assists neighborhood groups in developing, resourcing, and executing small- to medium-sized improvement projects in the City's right of way or on City-owned property. Cost sharing can be achieved through cash contributions, in-kind contributions, or donated labor)

2. The Grant Assistance Program (GAP) will provide City matching funds that will enable applicants to meet cost sharing or matching requirements for external grant opportunities

3. The Parking Benefit Project Proposal Program (PBPPP) assists the associated neighborhood organization identify, scope, and coordinate local improvement projects for which Parking Benefit District revenue can be dedicated and

4. The Adopt-A-Median Program (AAMP) provides an approval mechanism for community groups interested in adopting, beautifying and maintaining a median or other right-of-way areas

Brazos Tech District: "Brazos Technology District is a coalition of tech businesses in downtown Austin, Texas working together to solve common problems — minimizing transportation woes, improving our urban space, and creating better sense of community". With 3,000 high tech employees located along the Brazos Street corridor, the Brazos Tech District is addressing three areas:

- Community building
- Transportation solutions
- Expanding food options

Lead Entity/Entities:

1. City of Austin, Public Works Department; other partners include: University Area Partners
2. Brazos Tech District

Applicable Sub-Categories:

- Building Partnerships between Local Governments & Non-Profit Organizations
- Guidelines for Expanding or Enhancing Existing Districts
- The Important of District Context and Identity

Action Items for Consideration:

- Detailed review of the Neighborhood Partnering and Neighborhood Cost Sharing Program processes as potential models for cost-sharing initiatives with growing districts/neighborhoods
- Engage tech community in conversation about a concept like the Brazos Tech District. This could be done in conjunction with an educational session on Innovation Districts to both provide information about district development beyond the CBD and encourage the investment of private seed funding for such district development.

Documented Results:

- Neighborhood Partnering Program: Names, descriptions and photos of successful Neighborhood Partnering Program projects 2011-2014
- Parking Benefit District: In the pilot program's first year, meters generated $163,000 for the PBD; over $40,000 was devoted to streetscaping projects, including sidewalk and curb enhancements, benches, crosswalks, transit shelters and bike lanes. In the first three months following the West Campus first full-scale PBD launch, the district generated $119,500 in meter revenues, a remarkable increase over the pilot and more than was estimated. Of this amount after city expenses, $28,000 was returned to the district. Moreover, thanks to its use of Austin's Neighborhood Partnering Program, the PBD received a matching benefit, resulting in $56,000 for more focused streetscape projects including sidewalks, trees and benches to accommodate pedestrian and bicycle traffic. These improvements have been doubly beneficial thanks to the city's work with retail and

commercial users to encourage the use of non-automobile transportation in the area.

Stakeholder Engagement:

- The City of Austin uses the "SpeakUp" platform for online community conversation provided by Granicus and is similar to (but less functional) than sites like "Mind Mixer" or similar on-line community forum sites.
- Neighborhoods that are interested in applying for the Neighborhood Partnering Program can request a presentation online through the City's website
- Funding requests for the NPP are heavily weighted (20/100 total points) based on level of community participation in the application

Applicability/Similarity to Rochester:

- College town
- Abundance of distinct, active neighborhoods and commercial districts
- Strong culture of community engagement
- High presence of entrepreneurs, tech community and startups
- Strong bicycle culture
- Known for being an active community
- High commitment to quality of life

Replicability:

While Austin is a much larger community with a much bigger City budget, the median income and median property value in Rochester is similar. Also similar to Austin, Rochester has a very dense presence of high-tech, medical growth companies (due to the Mayo Clinic) and an established commitment to public/private partnership which can help leverage and extend public investment.

Policy Implications:

- With its adoption of "Imagine Austin" master plan, the City of Austin is working to identify itself as a City of "complete communities that provide access by foot, bike, transit and car to jobs, shopping, learning, open space, recreation, and other amenities and services.

- City of Austin established a Parking Benefit District ordinance in 2011.

Cost Implications:

1. The NPP is a cost-sharing program with the City of Austin. Project requests can range from $500 - $500,000. A full outline of the program's cost-sharing breakdown can be found in the Supplemental Material.

2. Campus Parking Benefit District: City of Austin received $43,275 US Environmental Protection Agency grant to pilot

References:

- Neighborhood Partnering Program website
- Neighborhood Partnering Program videos (available in both English and Spanish)
- The Connector
- Brazos Tech District

Best Practice # 35

Strategy:

Neighborhood District Parking Management Plans

Description:

City of Houston Neighborhood District Parking Management Plans

The City of Houston's District Parking Management Program was developed by Kimley-Horn while under contract with the City of Houston for a larger Parking Strategic Plan (2012-2014). The goal of the program was to engage with the neighborhoods surrounding the Central Business District in the developing district specific parking management solutions, and included the neighborhoods of Montrose, Washington Avenue, EaDo, Rice Village, Central Business District and the Museum District. The program was designed as a template so that the City's Parking Management Division could work directly with the local neighborhoods/districts to help them achieve their larger neighborhood development and management goals through the development and implementation of neighborhood district specific parking management programs and parking/transportation related investments.

Lead Entity/Entities:

City of Houston Parking Management Division (PMD) in partnership with neighborhood/district associations/leadership

Applicable Sub-Categories:

- Guidelines for the Creation of New Districts
- The Important of District Context and Identity
- Fostering Coordination/Collaboration between Districts

Action Items for Consideration

Review and evaluate the format for neighborhood district assessment and engagement used in Houston. An overview and flowchart is provided in the supplemental reference materials.

Potential Sub-Strategies for Implementation

- Create a parking management plan concept.
- Address parking comprehensively for the entire district.
- Establish goals and objectives for parking to support short-term and long-term development plans for the district.
- Create effective district communication mechanism to improve user information and marketing.
- Ensure that parking standards conform with adopted urban form and design goals.
- Establish parking maximums, instead of, or in addition to, parking minimums.
- Consider establishing a parking cap within a district to limit the amount of land dedicated to automobile storage.
- Maintain and optimize parking that already exists in a district, before taking on costly addition of new parking facilities.
- Encourage shared parking among neighboring businesses.

Documented Results

The Houston Washington Avenue area implemented a Parking Benefit district in 2013, installing new multi-space smart meters and implementing a revenue sharing plan with the district. Initial revenues available for district sharing after the first 6 months were approximately $60,000. A copy of

the parking benefit district ordinance for the Washington Avenue area is provided in the supplemental reference materials.

Neighborhood District Parking Management plans are currently in process for the Rice Village, Museum and East Downtown districts.

Stakeholder Engagement

The neighborhood district parking management plan process used in Houston utilizes the following steps:

- Defining Neighborhood Context
- Current Conditions Overview
- Neighborhood Parking Resources and Market Conditions
- Economic Development Initiatives
- Community Values and Goals
- Historical, Cultural, Religious, Social Values
- Key Issues Identification
- Funding Tools, Resources & Potential Partner Organizations
- Parking and Mobility Management Specific Issues
    - On-Street Parking
    - Off-Street Parking
    - Valet Ordinances
    - Events Management
    - Parking Planning/Coordination with City Planning
    - Parking & Economic Development
    - Legal & Regulatory Issues
    - Urban Planning Initiatives
    - Multi-Modal Issues

Applicability/Similarity to Rochester:

Rochester should identify Houston as a "City We Can Learn From"

Replicability:

High replicability

Policy Issues:

Prior to embarking on a similar initiative, ensure that the potential policy issues such as parking revenue sharing, are considered prior to opening discussions. Ensure that staff resource availability and funding sources are available to see the initiative through or be open with the neighborhood districts that resources are limited up front.

Cost Implications:

The initial costs for initiative a neighborhood parking management plan is relatively low if done in-house. If a consultant is engaged to lead the process and generate an initial report/action plan a budget of $25K is recommended per area.

References:

- Houston Parking Benefit presentation (August 2014)
- City of Houston website (cityofhouston.gov/parking)
- City of Houston Neighborhood Parking Management District Process Flowchart
- Washington Avenue Parking Benefit District Ordinance

Best Practice # 36

Strategy:

Seattle's Urban Village Strategy for Neighborhood Development

Lead Entity/Entities:

City of Seattle, Department of Neighborhoods

Description:

Seattle's Urban Village Strategy for Neighborhood Development

In 1994 the City adopted the Comprehensive Plan in compliance with the State of Washington's Growth Management Act (GMA). The City's Comprehensive Plan promotes an "Urban Village Strategy" to concentrate growth in areas of the city already zoned to accommodate substantial additional development. As part of this process the City identified several "Urban Centers" and "Urban Villages" throughout the city where growth would be encouraged and concentrated. Subsequently, the City Council conducted "sub-area planning" through an extensive neighborhood planning process for 38 neighborhoods created by nearly 20,000 community members. The plans identified over 4,200 actions recommended by these

neighborhoods to ensure that they will continue to thrive and improve as Seattle grows over the next 20 years in ways that meet their commitments under the State's Growth Management Act. Of the 2,358 projects identified in the plans, more than 87 percent have been finished or are under way.

Action Items for Consideration:

- Consider an Expert Panelist from the Seattle Department of Neighborhoods
- Further research of the "Adoption Matrix" and lead agency "implementer" model as possible format for implementation of DMC Parking and TMA recommendations

Applicable Sub-Categories:

- Guidelines for the Creation of New Districts

Potential Sub-Strategies for Implementation:

Additional research into the formalized Neighborhoods Outreach and Engagement Program, specifically the roles and funding for the Public Outreach and Engagement Liaisons and Neighborhood District Coordinators as a potential model for a formalized public participation process.

Documented Results:

Transportation projects were the largest category of projects identified in the neighborhood planning process. Locally identified transportation projects became critical parts of city-wide plans for transit, biking and pedestrian safety. Today, 80% of the transportation projects outlined in the neighborhood plans have been built or are currently being built. Additionally, the City has invested $11M to improved streets and $13.5M in transportation projects. A recent survey of Seattle residents found that 93 percent said neighborhood plans had improved their communities.

Stakeholder Engagement:

Public engagement for the Neighborhood Planning Process was handed through the Seattle Department of Neighborhoods Outreach and Engagement Program. The Program was designed to increase access to information, resources, and civic processes for the diverse groups and individuals in each neighborhood, including historically underrepresented populations. The Program's work is implemented by Public Outreach and Engagement Liaisons and Neighborhood District Coordinators, a team of professionals located in offices throughout Seattle who serve as resources and liaisons for community members. Together they assist other city departments in their outreach and engagement needs ensuring that city

government provides information to all community members, forges connections, fosters relationships, and receives rich, diverse, and meaningful civic participation.

Applicability/Similarity to Rochester:

- Rochester should identify Seattle as a "City We Can Learn From"
- Abundance of distinct, active neighborhoods and commercial districts
- Strong culture of community engagement
- High presence of entrepreneurs, tech community and startups
- Strong bicycle culture
- Known for being an active community
- High commitment to quality of life

Replicability:

Despite their difference in size, the City of Seattle and the City of Rochester have many parallels in their overall community values, respect for diversity of residents and desire to invest inauthentic community engagement. The City of Seattle's Neighborhood Planning Process has been recognized for its unique "bottom-up approach", an approach that would align well with the high level of community participation that exists in Rochester.

Aligns with several of the DMC Plan's Guiding Principles.

Additionally, the City of Seattle's ability to create a planning framework that aims to balance a process that is managed by the City and whose recommendations are ultimately approved by the Council that at the same time feels grassroots in nature encourages the cultivation of authentic and productive partnerships between the public and private sectors.

Policy Implications:

The Neighborhood Planning Process began in 1995 with a City resolution calling for a partnership between the City and its neighborhoods to improve the quality of life while embracing the City's Urban Village Strategy, and concluded in 1999 with the City Council's adoption of broad policies from each neighborhood plan into the Comprehensive Plan chapter on Neighborhood Plans. The City also "recognized" the plans created by each neighborhood as "reflecting the wishes of the neighborhood," and adopted an Approval and Adoption Matrix for each plan that listed the recommendations from the plan, identified a lead agency as "implementer", and included a City response about the likelihood of implementation.

Cost Implications:

As part of its mission, the Seattle Department of Neighborhoods (DON) also manages the Neighborhood Matching Fund (NMF), which provides grants to preserve and enhance the City's diverse neighborhoods. DON has four lines of business:

1. The Community Building Division delivers technical assistance, support services, and programs in neighborhoods,
2. to strengthen local communities, engage residents in neighborhood improvement, leverage resources and
3. Complete neighborhood-initiated projects. The programs that support this work include:

- P-Patch Community Gardens;
- Neighborhood District Coordinators;
- Major Institutions and Schools;
- Historic Preservation;
- Neighborhood Planning Outreach; and
- Neighborhood Matching Fund (NMF)

A complete overview of the Department of Neighborhood's 2014 budget can be found in the Supplemental Material.

References:

- City of Seattle website
- Seattle Neighborhood News article (2009)
- Department of Neighborhood's Budget Overview 2014

Best Practice # 37

Strategy:

Industry Cluster Development

Description:

Portland Cluster Development

An industry cluster is a group of geographically concentrated, inter-related firms. Companies that locate in a cluster benefit from a skilled labor force, increased innovation, coordinated advocacy efforts, high-quality supply chains, and knowledge spillover. Clusters interact in ways that establish competitive advantages through the creation and incorporation of new knowledge into products and the processes that produce them. PDC understands the importance of building strong clusters, and that's why we support initiatives that strengthen cooperation and competitive advantages for Portland companies. The Portland Development Commission (PDC) targets clusters that are part of the traded sector, meaning that they sell to markets outside the region, bringing new money into the community. By focusing on clusters PDC can:

- Deploy limited resources in a strategic and catalytic fashion.
- Develop a deep understanding of factors influencing competitiveness.
- Interact with groups of firms rather than conduct isolated transactions.
- Facilitate industry-led innovation and interventions.
- Foster the alignment of resources among regional and state partners.

Objectives for Organizing Portland Clusters:

- Convene critical players in cluster eco-system.
- Develop detailed market analyses for each cluster defining actual market opportunities.
- Develop and implement industry-driven action plans
- Create self-sustaining momentum within clusters
- Lead Entity/Entities:
- Portland Development Commission (PDC)

Applicable Sub-Categories:

- Guidelines for the Creation of New Districts
- Guidelines for Expanding or Enhancing Existing Districts

Action Items for Consideration:

- Consider an Expert Panelist from the Portland Development Commission
- Identify potential cluster sectors
- Identify and begin conversations with key partners/cluster/sector leadership

Potential Sub-Strategies for Implementation:

Similar to Vancouver and Seattle, further research on the public participation model in Portland with specific focus on the structure of the NED Leadership Group and how it works with the Ad-Hoc Citizen Advisory Committees is recommended. Creating a sustainable and consistent model for public participation would be beneficial both in terms of saved staff time and increased consistency/understanding of the process for stakeholders.

Documented Results:

Portland has identified four main industry concentrations to which it directs staff and financial resources, including:

- Athletic & Outdoor
- Clean Teach
- Advanced Manufacturing
- Software

Each cluster area also has its own webpage that outlines recent news for the cluster, economic impact of the cluster focus, top PDC initiatives in that cluster area and a downloadable strategy document specific to the cluster. Examples can be found in the reference section.

Stakeholder Engagement:

In October 2013, PDC updated its public participation policy to tailor its public outreach and involvement to reflect both the agency's mission and its organizational capacity. PDC's main approaches to engage the community will encompass:

1. The NED Leadership Group. The charge of this approximately 30-member group is to guide the implementation of the NED Strategy.

2. The Central City Budget Advisory Committee. This approximately 15-member committee will advise PDC during the budget development process, focusing on projects, programs, and activities in the Central City Urban Renewal Areas (URAs).

3. Citizen Advisory Committees. PDC has a process for creating, managing, and staffing one-time and ongoing citizen advisory committees to advise and inform PDC on significant projects and activities.

Additionally, PDC is actively involved with social media outreach including Facebook, Twitter, Flickr and YouTube.

Applicability/Similarity to Rochester:

- Rochester should identify Portland as a "City We Can Learn From"
- Nationally recognized; award winning for livability
- Strong culture of community engagement
- High presence of entrepreneurs, tech community and startups
- Strong bicycle culture
- Known for being an active community
- High commitment to quality of life

Replicability:

The cities of Rochester and Portland share a similar "vibe" and reputation as hip, diverse, creative and a magnet for high-tech jobs and active people. Similar to Portland, Rochester has a strong presence of high-tech, high growth companies (especially for a community of its size) and an established commitment to public/private partnership which can help leverage and extend public

investment. Additionally, with the presence of budding commercial districts beyond the CBD, the cluster concept would be a good model to explore for encouraging targeted growth in specific industry areas that would support the City's larger economic development goals.

1. Similar to Rochester, the City of Portland has a strong commitment to building a sustainable economy. The focus of its economic development strategy is to align its strategic partners behind three key goals:

    a. Stimulate neighborhood business vitality,

    b. Maximize competitiveness and

    c. Drive urban innovation. Additional information about the strategies under each focus area can be found in reference #6 (Economic Development Strategy Presentation).

This strategy aligns with several of the DMC Plan's Guiding Principles.

Policy Implications:

Public Participation Policy, Updated 2013

Cost Implications:

According to the PDC"s 3-Year Status Report: Approximately $74.8 million of direct financial assistance to support business and job growth in Portland – largely in the form of multi-year loans and tax abatements – has leveraged $745 million in private and federal government investments and produced an estimated 4,748 construction jobs. A breakdown of estimated jobs created, public financial assistance, private Investment and leveraged ratio of investment from Economic Development-Related Programs from July 2009 - July 2012 can be found on page 3 of reference # 7 (Portland Economic Development Strategy).

References:

- Portland Development Commission Community Engagement website
- PDC Cluster information
- Sample Cluster Industry Report (for Athletic & Outdoor Cluster) (PDF)
- PDC Cluster information
- Economic Development Strategy Presentation (PDF)
- Portland Economic Development Strategy 3-Year Status Report (PDF)

Best Practice # 38

Strategy:

Innovation Districts

Description:

Innovation Districts: Case Study Boston, MA

For the past 50 years, the landscape of innovation has been dominated by places like Silicon Valley—suburban corridors of spatially isolated corporate campuses, accessible only by car, with little emphasis on the quality of life or on integrating work, housing, and recreation. A new complementary urban model is now emerging, giving rise to what we and others are calling "innovation districts." These districts, by our definition, are geographic areas where leading-edge anchor institutions and companies cluster and connect with start-ups, business incubators, and accelerators. They are also physically compact, transit-accessible, and technically-wired and offer mixed-use housing, office, and retail. Innovation districts are the manifestation of mega-trends altering the location preferences of people and firms and, in the process, re-conceiving the very link between economy shaping, place making and social networking. In recent years, a rising number of innovative firms and talented workers are choosing to congregate and co-locate in compact, amenity-rich enclaves in the cores of central cities. Rather than building on green-field sites, marquee companies in knowledge-intensive sectors are locating key facilities close to other firms, research labs, and universities so that they can share ideas and practice "open innovation."

Lead Entity/Entities:

City of Boston, Office of the Mayor Tom Menino

Applicable Sub-Categories:

- Guidelines for Expanding or Enhancing Existing Districts
- District Certification and Designations

Action Items for Consideration:

- Consider an Expert Panelist from community where successful Innovation District exists
- Identify potential partnering entities and institutions (both public and private)
- Identify existing districts/neighborhoods/activity centers that align with one of the three main models for Innovation District

development with a specific focus on the Anchor District model, perhaps in partnership with UMR.

Documented Results:

Case Study: Boston, MA: The Innovation District is Mayor Thomas M. Menino's initiative to transform 1,000 acres of the South Boston waterfront into an urban environment that fosters innovation, collaboration, and entrepreneurship. In the three years since the initiative began, the area has grown rapidly. The growth is spread across a diverse range of companies in different sectors and at different scales. Here are selected highlights of all we've accomplished in just a few short years:

New Jobs

- Added over 5,000 new jobs in over 200 new companies
- Technology companies have contributed 30% of new job growth
- 21% of new jobs are in creative industries like design and advertising
- Greentech + life sciences are growing, with 16% of new jobs in these sectors

New Companies

- Of the new companies, 11% are in the education and non-profit sectors
- 40% of new companies are sharing space in co-working spaces and incubators
- 25% of new companies are small scale, with 10 employees or fewer

Stakeholder Engagement:

Creating an Innovation District is a highly collaborative and stakeholder intensive process. After researching dozens of Innovation Districts across the world, researchers at The Brookings Institute determined that a "collaborative leadership network" is key to creating a district. A collaborative leadership network is a collection of leaders from key institutions, firms, and sectors who regularly and formally cooperate on the design, delivery, marketing, and governance of the district (i.e. City governments, nonprofit economic development groups, private developers, for profit businesses). Practitioners reflected that to bring innovation to scale—i.e. beyond the boundaries of individual organizations and firms—has required leaders from disparate institutions to encourage idea sharing across researchers, firms, universities, and supportive organizations. Likewise, physically remaking a place in the service of innovative growth and

expanding employment and educational opportunities for low-income residents has required leaders to think and act in a multi-dimensional fashion, across multiple sectors and communities.

Applicability/Similarity to Rochester:

While the creation of "Innovation Districts" typically adhere to three general models, the model most applicable to Rochester appears to be the "Anchor Plus" model. The "Anchor Plus" model, primarily found in the downtowns and mid-towns of central cities, is where large scale mixed-use development is centered around major anchor institutions and a rich base of related firms, entrepreneurs and spin-off companies involved in the commercialization of innovation. Additionally, innovation districts can reduce carbon emissions and drive denser residential and employment patterns at a time of growing concern with environmentally unsustainable development. Innovation districts are potential engines for sustainable development since they embrace residential and employment density via the strategic use of transit, historic buildings, traditional street grids, and existing infrastructure. Some districts are going further by using renewable energy as their primary power source and by transforming their buildings, streets, and parks into living labs to test cutting edge sustainable projects in concert with technology firms and entrepreneurs.

Replicability:

Globally, Barcelona, Berlin, London, Medellin, Montreal, Seoul, Stockholm and Toronto contain examples of evolving districts. In the United States, districts are emerging near anchor institutions in the downtowns and midtowns of cities like Atlanta, Baltimore, Buffalo, Cambridge, Cleveland, Detroit, Houston, Philadelphia, Pittsburgh, St. Louis, and San Diego. They are developing in Boston, Brooklyn, Chicago, Portland, Providence, San Francisco and Seattle where underutilized areas (particularly older industrial areas) are being re-imagined and remade. Still others are taking shape in the transformation of traditional exurban science parks like Research Triangle Park in Raleigh-Durham, which are scrambling to meet demand for more urbanized, vibrant work and living environments. Innovation districts represent a radical departure from traditional economic development

Policy Implications:

While Innovation Districts are still a relatively new trend, their design and implementation has been driven/led by a variety of individuals and institutions, both public and private. For example:

- Mayors & Local Governments (Boston, Barcelona, Stockholm)
- Real Estate Developers and Land Owners (Seattle, Brooklyn)

- Incubators, Accelerators and Other Economic Cultivators (Barcelona, Cambridge, St. Louis)

Cost Implications:

Due to the various types of models used to create an Innovation District, the financing tools and public investments used can be distinct. Districts can use a variety of special taxing districts, seed funding, infrastructure development, and grants. This demonstrates the possibility of multiple methods of achieving similar outcomes depending on the resources available in each city. For example, Barcelona concentrated its efforts on five high-tech areas, whereas Toronto focused on biomedical and financial industries. Boston, however, chose not to target specific industries, instead allowing different industries to grow naturally.

References:

- "The Rise of Innovation Districts: A New Geography of Innovation in America", a report for the Metropolitan Policy Program of the Brookings Institute by Bruce Katz and Julie Wagner (May 2014)
- Boston's Innovation District website
- Michigan Municipal League

Best Practice # 39

Strategy:

Neighborhood Parking Programs

Description:

Often time residential areas that are near busy commercial areas experience spillover and parking problems where customers occupy spaces, leaving minimal spaces for the residents and their visitors. To combat this, many cities implement a permit program specifically for neighborhoods so that they residents are ensured a parking space.

Action Items for Consideration:

- Review new practices related to residential permit programs. Specifically, evaluate how neighborhood parking demand is documented, how the effectiveness of existing policies is assessed, how new blocks/areas are added or modified.
- Research potential program innovations that attempt to be more proactive in regards to program adjustments.
- Review how pricing is structured for different types of permits.
- Review the potential introduction of parking charges in residential developments, through separating or "unbundling" the cost of parking from rents or sale prices.
- Assess concepts such as "rent rebates" or discounts to residents who own fewer vehicles and do not use their allocated parking spaces.

Potential Sub-Strategies for Implementation:

- Implement paid meters in appropriate neighborhoods (and the residents agree with it). Have the meter revenue fund improvement projects within that neighborhood.
- Evaluate each neighborhood requesting a permitted zone to have unique regulations that meet their needs. For instance, one neighborhood may be fine with allowing customer parking for a 2-hour time limit, whereas others may not allow any parking on the street without a valid permit.
- Create a simple online permitting process where people can apply for permits and request that their neighborhood be part of the program.

Documented Results:

NPP programs find a balance between customer demands and residential parking demands. The types of programs vary from city to city, however, they have effectively balanced parking demands in those areas.

Stakeholder Engagement:

Revamping this program would require continuous and open outreach with neighborhood representatives and residents. Furthermore, information.

Applicability/Similarity to Rochester:

The City currently has neighborhood parking permit programs in place. The program could be reviewed and adjustments made to improve the program in how it is applied, application processes, and other management components of the program.

Replicability:

This strategy is not tailored to any specific type of area or community. It can be replicated easily because of its broad nature and ability to be molded to the specific needs of the community.

Policy Implications:

This strategy will require the City to reconsider their permit program and its applicability to the City's neighborhoods.

Cost Implications:

Costs for this strategy may involve a revamping of the permitting structure and online services to ease the permitting and application processes.

References:

- City of Seattle, Department of Transportation
  City of Charlotte, Department of Transportation

Best Practice # 40

Strategy:

Transit Oriented Corridors

Description:

Assess best practices related to the creation of effective TOD Corridors or Transit Oriented Corridors (TOCs). Below is summary of a TOC planning process including planning goals/desired outcomes:

1. Comprehensively planning and designing a collection of transit oriented developments (TOD) at a corridor, or TOC scale can optimize many key benefits, such as:
    - Higher corridor internal trip capture rates
    - More balanced ridership flows
    - Maximize the person miles per hour on a corridor
    - More effective coordination between transit investments and public and/or private development initiatives
2. A key process goal is to better understand the relationship between transit use and key TOC/TOD components, including:
    - TOC/TOD densities and both peak & off peak ridership rates
    - TOC/TOD land use synergies and balanced, bi-directional transit travel
    - Reduced Greenhouse Gas emissions, energy consumption, and other benefits associated with improved travel efficiencies
3. Another key process goal is to refine stakeholder's and planner's understanding and application of the TOC/TOD perspective to leverage the following objectives:
    - Corridors more effectively capture natural travel patterns
    - Easier to effectively coordinate transportation, land use and urban design at a sub- regional/corridor level, as opposed to a regional level

See reference document: "Central Corridor TOD Investment Framework: A Corridor Implementation Strategy December, 2010"

Center for Transit-Oriented Development

The Center for Transit-Oriented Development (CTOD) is the only national nonprofit effort dedicated to providing best practices, research and tools to support market-based transit-oriented development.

CTOD partners with both the public and private market sectors to strategize about ways to encourage the development of high performing communities around transit stations and to build transit systems that maximize development potential. CTOD works to integrate local and regional planning, generate new tools for economic development, real estate and investment issues, improve affordability and livability for all members of the community, and respond to imperatives for climate change and sustainability. The Center for TOD is a partnership of Reconnecting America, the Center for Neighborhood Technology, and Strategic Economics.

For more information go to CTOD's website at www.ctod.org. Several reference documents from the Center for Transit-Oriented Development are provided for review including:

- http://www.reconnectingamerica.org/assets/Uploads/tod101full.pdf
- http://ctod.org/pdfs/tod201.pdf
- http://puff.lbl.gov/transportation/transportation/pdf/ra-tod-202.pdf
- http://www.fta.dot.gov/documents/RA_TOD206_IntercityRail_6.6.13.pdf
- http://www.reconnectingamerica.org/resource-center/browse-research/2008/tod-202-transit-employment-increasing-transit-s-share-of-the-commute-trip/
- http://www.crcog.org/publications/TransportationDocs/Transit/NHHS/TOD%20Resources/(2)BestPracticesLibrary8-8.pdf

Minneapolis/St. Paul - Central Corridor Project

Another example of an effective TOD corridor planning project is the Central Corridor between downtown St. Paul and Minneapolis. This eleven-mile light rail corridor will run on University and Washington Avenues linking with the Hiawatha light rail line and the new Northstar commuter rail line.

The key take-away from this project is the idea of a coordinated investment framework for the Central Corridor, in order to strategically coordinate investments and maximize the value of new light rail transit for surrounding

neighborhoods. The Central Corridor Funders Collaborative (CCFC) supported this planning process and the creation of a Central Corridor Working Group, which consisted of representatives from the City of St. Paul, the City of Minneapolis, Ramsey County, Hennepin County, the Metropolitan Council, and the Minnesota Housing Finance Agency.

The purpose of the Central Corridor Investment Framework is to identify critical challenges and opportunities associated with TOD-supportive investments that might otherwise be missed by individual jurisdictions and participants. The framework provides a comprehensive summary of all of the corridor-wide key investments necessary to fulfill the visions contained in local community-based plans. It is intended to help in establishing a coordinated voice in support of future corridor-wide funding needs, clarify strategies for various funding partners, and provide information to support individual jurisdiction funding requests and private investments. The referenced report (Central Corridor TOD Investment Framework: A Corridor Implementation Strategy December, 2010) summarizes the results of this effort.

Arlington County Corridor

Arlington County is arguably the nation's best TOD success story of the past 30 years. Located directly across the Potomac River from Washington, D.C., Arlington County attracts many visitors to sights such as Arlington National Cemetery and the Pentagon. Since the 1970s, it has also become an increasingly popular place to live, work, and shop due in part to high-density development along its two Metrorail corridors: Rosslyn-Ballston and Jefferson Davis.

A conscious decision by county planners, officials and citizens to locate the Metrorail along two major arterials (Wilson Boulevard and Fairfax Drive) instead of down the median of Interstate 66 created opportunities for both public and private development. Superb transit access coupled with connect thoroughfares ensured that trains, buses, cars, and pedestrians could easily reach neighborhoods that surround stations. Since Metrorail began operating in Arlington County in the late 1970s, it has become a popular origin and destination for residents and visitors alike.

Through a combination of strategic planning and market forces, each of Arlington County's Metrorail stations has taken on a specialized function: Rosslyn, Ballston, Crystal City serve as business centers, Court House has emerged as a governmental center, Pentagon City has become a regional shopping center, Clarendon functions as an "urban village" with shops and restaurants, and Virginia Square has a cultural and educational focus. Of the nearly 190,000 people living in Arlington County, 26 percent reside in Metrorail corridors even though they comprise only 8 percent of land area.

Since 1960, over 31 million square feet of gross floor area (GFA) of office space and nearly 30,000 residential units have been constructed in the county, and over three-quarters of these amounts have been in Metrorail corridors. Arlington County today boasts one of the highest percentages of transit use in the region with 39.3 percent of Metrorail corridor residents commuting to work by public transit.

Documented Results:

The cumulative effects of joint development and corridor planning over the past 4 decades in Arlington County are revealed by smart growth and ridership statistics.

Arlington County planners understood that Metrorail provided an unprecedented opportunity to shape future growth and proceeded to introduce various strategies — targeted infrastructure improvements, incentive zoning, development proffers, permissive and as-of-right zoning — to entice private investments around stations. After preparing countywide and station-area plans on desired land-use outcomes, density and setback configurations, and circulation systems, zoning classifications were changed and developments that complied with these classifications could proceed unencumbered. The ability of complying developers to create TODs "as-of-right" was particularly important for it meant developers could line up capital, secure loans, incur upfront costs, and phase-in construction without the fear of local government "changing its mind."

Understanding Transportation and Land Use Interactions at the Station and Corridor Scales

Here are the initial findings of this research:

- Diversity, as represented by The Mixed Use Entropy index shows a statistically significant relationship to AM Boardings
- Density, as shown by Employees per acre shows a significant relationship with AM Boardings
- Parking spaces shows a statistically significant negative relationship

And finally, when selecting stations without parking spaces there were some interesting findings between several dimensions and AM peak hour boardings, as follows:

- The mixture of land use entropy index of the shows up as both significant and positively correlated with AM peak hour boardings.
- Population density is significant, and negatively correlated

- As the time to drive to downtown SF goes up, AM boardings go down

Stakeholder Engagement:

The Creative Districts program is heavily stakeholder driven. Indeed, one of the most important qualifiers for the program is to demonstrate extensive stakeholder engagement across all sectors in the community and to be able to show their support and role in the district's development and growth. The state has successfully worked with these districts, providing funding, training in support as they work towards sustainability.

Applicable Sub-Categories:

- District Certification and Designations

Applicability/Similarity to Rochester:

The City of Rochester is currently working on a mile-wide corridor that runs east from Folsom Street to 75th Street along Arapahoe Avenue. The project is set to run through 2015.

Replicability:

The approaches to TOD Corridor planning in the examples and reference documents provided can be adopted to apply to any corridor planning project.

Policy Implications:

Limited. The corridor project is already approved; these planning and implementation recommendations should support the policy decisions already approved.

Cost Implications:

Limited. The referenced examples and planning process elements highlighted in the attached could be integrated into the East Arapaho project with minimal cost.

References:

- Central Corridor TOD Investment Framework: A Corridor Implementation Strategy December, 2010
- City of Sparks Nevada, TOD Corridor Master Plan

Peer Cities Research Summary

Peer Cities Research Overview

The following review of "Peer Cities" and "Cities We Can Learn From" focuses on issues related to parking and access management strategies that relate to the DMC Guiding Principles. The distinction between "peer cities" and "cities we can learn from" relates to the fact that while some cities that are not technically "peer cities" in terms of size or other factors, they are the cities that are implementing advanced access management and parking strategies that Rochester may benefit from reviewing.

Peer Cities

Ann Arbor, Michigan

Introduction:

The City of Ann Arbor is located in Michigan approximately 45 miles west of Detroit, with a population of 116,121 people (2012). The City is home to the University of Michigan that claims 40,000 students and offers a "small town feel with big city amenities". Local attractions include a large variety of restaurants, museums that include hands on exhibits and art as well as local history, botanical gardens and an arboretum.

The most significant aspect of the Ann Arbor program from the perspective of Rochester's DMC project is their "integrated downtown management and TDM program known as "get Downtown".

"getDowntown":

The City of Ann Arbor's "getDowntown" program was founded in 1999, the "getDowntown" program is a partnership between the Ann Arbor Transportation Authority, the Ann Arbor Downtown Development Authority, and the City of Ann Arbor. The program provides commuting programs and services to employees and employers in downtown Ann Arbor. Programs and services include the go!pass, the Commuter Challenge and Commuter Club, bike locker rentals, free commuting assistance to downtown employees and employers, commuting materials, Zipcars and more. "getDowntown" has its own staff and board.

This program was covered above in the Best Practice Review section (Best Practice # 33). Below is additional peer city information in the selected focus areas:

District Management:

Parking and Access Management Services in Ann Arbor has a "vertically integrated" organizational model (all parking and access management services are managed by on entity). The Downtown Development Authority of the City of Ann Arbor (DDA) is a public corporation responsible for the management, operations, maintenance, capital and financial obligations with respect to Ann Arbor parking systems. The DDA manages all parking facilities and on street, metered parking spaces owned or leased by the City and DDA within the DDA parking area.

On- and Off-street Parking:

Public parking is conveniently located in the downtown area and there are 50 businesses that will validate parking for their customers. The City's Downtown Development Association (DDA) manages six parking structures and nine metered lots, all located throughout downtown. They include attended and automated parking lots that also provide motorcycle/moped and scooter parking. The parking lots and garages average about 475 parking spaces and there are approximately 1,750 metered, on-street parking spaces around the downtown area. These locations are mapped on the City's website, with additional information on the parking regulations, such as price, enforcement hours, and numbers to call for additional information or questions.

- Day-to-day on and off-street parking management is outsourced to a private parking management firm minimizing the need for city staff with higher benefit costs.
- Newer multi-space meter technology reduces the number of meters, thus decluttering the street scape and providing more customer payment options.
- The new meter technology also offers improved management data for tracking parking demand and turnover.

Technology Innovation:

Ann Arbor has become a laboratory for wireless vehicle communications as the University of Michigan continues with its study of vehicle to vehicle and vehicle to infrastructure technology. The experiment started in 2012 with approximately 2,800 vehicles and a grant from USDOT. The current plan is to equip 9,000 vehicles (10% of the City's driving population) to be part of the experiment and eventually grow that number to include 20,000 vehicles. As the vehicles make the daily trips the onboard equipment records data

through communication with other vehicles and buildings. The data is then downloaded by the University, for analysis. The technology may be used to reduce accidents, congestion and make vehicle transport a large interconnected system.

Transportation Demand Management:

An important strategy for the City is the encouragement of a menu of transportation choices for downtown visitors, residents, customers, employees, and others, who can select their preferred means to come downtown based on factors such as cost, convenience, and environmental interests. The City has a number of programs in place that help to reduce reliance on the single-occupancy vehicle.

- Bicycle – on the City's map on the transportation website, the location of downtown bicycle parking is mapped. Additionally, a person can scroll over the symbol on the map to see what type of bike parking it is (e.g. inverted U).
- Zipcars – zipcar car sharing services are provided on the University of Michigan campus. The system helps people on campus get around the City without having to rely on a personal vehicle.
- Electric Vehicle Parking and Charging Stations – The City has 18 EV charging stations throughout downtown. There is no additional charge to charge a vehicle at a station. The type of stations, location, and availability of the stations are presented on the DDA's website.

Code Requirements:

The City of Arbor has specific parking provisions and programs that are established a part of their zoning and code requirements, as listed below.

- Provides that lots located in the downtown zoning districts are considered special parking districts and subject to five (5) standards including:
  - To encourage alternative modes of transportation, the parking demand for office buildings were dropped from 4 to 3 per 1,000sf.
  - A maximum parking demand ratio was implemented for many land uses.
  - Bicycle Parking is required for many (most) land uses.
  - For downtown projects, developers are not required to provide parking for up to 400% of FAR.

  - For some mixed-use land uses, 700% of FAR is allowed and parking is required for FAR above 400%.
  - Public parking structures may provide for required off-street parking for developments

- The City permits deferred parking requirements allowing owners to "defer" up to 40% of the required parking spaces shown on an approved site plan until such time as the parking is determined to be needed (not needed).

- Parking standards and ratios are maximum standards. However, the City does permit additional parking to be provided if, "it does not increase impervious surfaces beyond that which would be provided by meeting the maximum parking required. Examples of additional parking may include, but not be limited to, under-structure parking, rooftop parking, or structured parking above a surface parking lot."

- In addition, a number of the City's neighborhoods participate in a Residential Parking Permit Program. This program allows vehicles owned by residents to park in an RPP neighborhood for the posted time limit without being ticketed.

As noted on the DDA interactive web-based map, "The Ann Arbor DDA works to promote downtown vitality. An important strategy is the encouragement of a menu of transportation choices for downtown visitors, residents, customers, employees, and others, who can select their preferred means to come downtown based on factors such as cost, convenience, and environmental interests. Use the interactive map to find locations and information about downtown parking and transportation options."

Parking Pricing:

The City manages six parking structures and 1,750 metered spaces (includes metered on-street spaces and metered lots) within Downtown and near University of Michigan. The off-street parking locations are managed mainly through their parking rate structure that varies by location.

Major Parking Structures

There are 6 larger parking structures downtown. They are $1.10/hour, unless indicated otherwise.

- Ann & Ashley Parking Structure (hourly parking until 4 pm, $3 flat rate entry fee after 4 pm M-F & all day Sat.)

- Liberty Square (Tally Hall) Parking Structure (hourly parking until 3 pm, $3 flat rate entry fee after 3 pm M-F & all day Sat.)

Metered Lots

- There are 9 metered lots throughout the downtown. Cost: $1.40/hour, Monday through Saturday, 8am-6pm. Free on evenings, Sundays and all federal holidays observed by City employees.

Attended Lots and Automated Lots

- Rates: $1.30/hour for the first three hours. $1.50/hour, after the first three hours.

Motorcycle/Moped & Scooter Parking

- Motorcycle and moped scooter parking is currently available free of charge in designated areas throughout the DDA District and the U of M Campus. Locations include: the Fourth and William structure (off the Fourth Avenue entrance), the Maynard Structure (off Thompson St. entrance), the Forest structure (off of Forest St.) and in the Ann and Ashley structure (off of Ashley St).

The metered spaces are managed by the rates and enforcement. Additionally, the City has upgraded many of their existing coin-operated meters to "e-park" solar-powered and smart meters. The new meters provide patrons with additional payment methods and the City with the ability to collect turnover data and restrict overfeeding of meters. These strategies improve availability of parking and enable the City to better monitor and manage parking demand.

Austin, Texas

Introduction:

The City of Austin has a population of approximately 842,592 people (2012) with a vibrant downtown area. In the downtown area the City strives to improve the parking system to improve access for patrons.

On- and Off-street Parking:

The City of Austin has multiple best practices in place to assist in managing their on- and off-street parking system, including the following:

- The City uses new parking meters, residential parking permits, and Parking Benefit Districts to manage the parking availability within various areas of City. There are approximately 9,900 spaces operated by new multi-space pay-and-display and single-space parking meters. These meters provided multiple benefits to the City including the ability to better manage the parking demand, encourage turnover in high demand areas, reduce clutter on the sidewalks, and provide multiple payment methods for patrons.
- The residential parking permit structure was implemented to help protect on-street parking for residents and their guests. Residential areas that surround the Downtown experienced spillover making it difficult to find parking. The residential parking permit program enables residents to establish an area where parked vehicles are required to have a permit.
- Additionally, the City established Parking Benefit Districts in neighborhood where residents or business owners sought the City to install metered spaces. The desire was to improve parking availability within their neighborhoods. In an identified Parking Benefit District, the City will install multi-space meters and use the revenue to make landscaping, sidewalk, and parking improvements within the district.

These strategies assist the City in being able to manage parking availability, manage spillover into residential areas, and provide a parking balance between residents and patrons.

Technology Innovation:

The City of Austin uses new smart multi-space pay-and-display and single space meters that provide multiple payment methods for patrons, restrict time limit, and collect turnover and occupancy data. This new technology increases turnover in on-street parking spaces and the ability to manage parking availability.

Transportation Demand Management:

The City has implemented a carshare system and shared parking permits to encourage sustainability by reducing vehicle miles traveled. The carshare system was implemented through the City partnering with Car2Go and Zipcar. The program lets members have access to a vehicle on as-needed basis without having to own and park a personal vehicle.

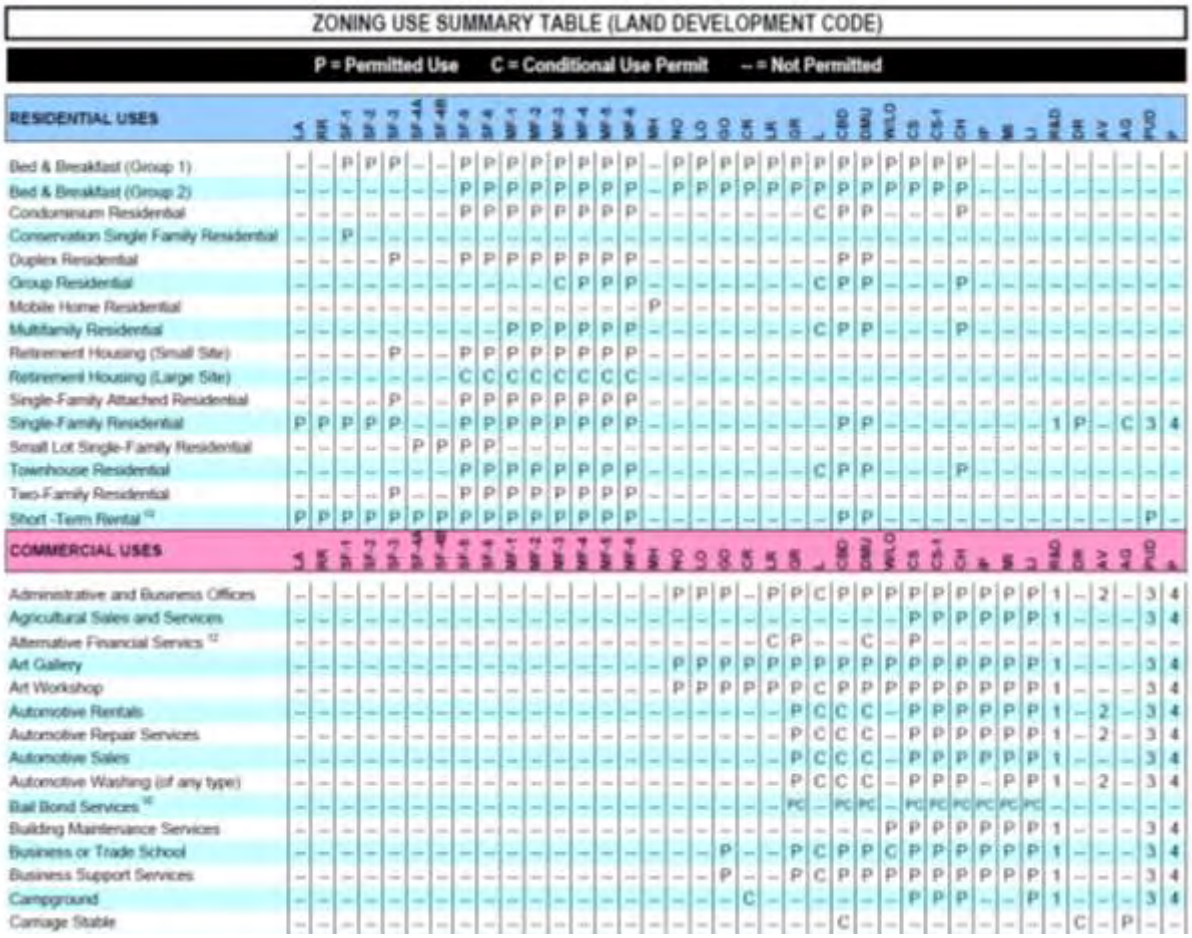
Also, the City has established a shared parking permit program. The program lets developers apply for a permit to share parking either in new or existing facility. The application must contain at least two or more of the City defined land uses. These strategies aim at reducing the number of personal vehicles needed within the downtown area as well parking spaces needed.

Code Requirements:

Zoning is the division of land within a jurisdiction into separate districts within which uses are permitted, prohibited or permitted with conditions. Brief definitions of the different types of uses and structures as relates to zoning are explained here. Zoning establishes site regulations, such as building heights, bulk (density/floor-to-area ratio), setbacks, building coverage, impervious cover, etc. Zoning is a power granted to municipalities by the State in order to promote public health, safety, morals, or general welfare, and to protect and preserve places and areas of historical, cultural, or architectural importance and significance.

Zoning Districts are established to promote compatible patterns of land use within the city limits. Zoning districts also establish site development regulations and performance standards appropriate to the purposes and the uses allowed in each district. Distinct zoning districts exist for residential, office, retail and industrial uses. Furthermore, specific use restrictions, site development regulations or performance standards may apply to zoning districts combined with special overlay or combining districts.

As part of the zoning process, appropriate land uses for an area are identified based on such factors as the intensity, density, height of a proposed project, surrounding land uses, traffic impacts and access to a site, environmental concerns and overall compatibility. An illustration of Compatibility: Height and Setbacks shows how compatibility applies to surrounding properties



ZONING USE SUMMARY TABLE (LAND DEVELOPMENT CODE)

P = Permitted Use C = Conditional Use Permit -- = Not Permitted

RESIDENTIAL USES	LA	RR	SF-1	SF-2	SF-3	SF-4A	SF-4B	SF-5	SF-6	MF-1	MF-2	MF-3	MF-4	MF-5	MF-6	MH	NO	LO	GO	CR	LR	GR	L	CBD	DMU	WLD	CS	CS-1	CH	P	ME	IJ	RMD	DR	AV	AG	PUD	*
Bed & Breakfast (Group 1)	–	–	P	P	P	–	–	P	P	P	P	P	P	P	P	–	P	P	P	P	P	P	P	P	P	P	P	P	P	–	–	–	–	–	–	–	–
Bed & Breakfast (Group 2)	–	–	–	–	–	–	–	P	P	P	P	P	P	P	P	–	P	P	P	P	P	P	P	P	P	P	P	P	P	–	–	–	–	–	–	–	–
Condominium Residential	–	–	–	–	–	–	–	P	P	P	P	P	P	P	P	–	–	–	–	–	–	–	C	P	P	–	–	–	P	–	–	–	–	–	–	–	–
Conservation Single Family Residential	–	–	P	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Duplex Residential	–	–	–	–	P	–	–	P	P	P	P	P	P	P	P	–	–	–	–	–	–	–	–	P	P	–	–	–	–	–	–	–	–	–	–	–	–
Group Residential	–	–	–	–	–	–	–	–	–	–	–	C	P	P	P	–	–	–	–	–	–	–	C	P	P	–	–	–	P	–	–	–	–	–	–	–	–
Mobile Home Residential	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Multifamily Residential	–	–	–	–	–	–	–	–	P	P	P	P	P	P	P	–	–	–	–	–	–	–	C	P	P	–	–	–	P	–	–	–	–	–	–	–	–
Retirement Housing (Small Site)	–	–	–	–	P	–	–	P	P	P	P	P	P	P	P	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Retirement Housing (Large Site)	–	–	–	–	–	–	–	C	C	C	C	C	C	C	C	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Single-Family Attached Residential	–	–	–	–	P	–	–	P	P	P	P	P	P	P	P	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Single-Family Residential	P	P	P	P	P	–	–	P	P	P	P	P	P	P	P	–	–	–	–	–	–	–	–	P	P	–	–	–	–	–	–	–	1	P	–	C	3	4
Small Lot Single-Family Residential	–	–	–	–	–	P	P	P	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Townhouse Residential	–	–	–	–	–	–	–	P	P	P	P	P	P	P	P	–	–	–	–	–	–	–	C	P	P	–	–	–	P	–	–	–	–	–	–	–	–
Two-Family Residential	–	–	–	–	P	–	–	P	P	P	P	P	P	P	P	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Short -Term Rental [1]	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	–	–	–	–	–	–	–	–	P	P	–	–	–	–	–	–	–	–	–	–	P	–
COMMERCIAL USES	**LA**	**RR**	**SF-1**	**SF-2**	**SF-3**	**SF-4A**	**SF-4B**	**SF-5**	**SF-6**	**MF-1**	**MF-2**	**MF-3**	**MF-4**	**MF-5**	**MF-6**	**MH**	**NO**	**LO**	**GO**	**CR**	**LR**	**GR**	**L**	**CBD**	**DMU**	**WLD**	**CS**	**CS-1**	**CH**	**P**	**ME**	**IJ**	**RMD**	**DR**	**AV**	**AG**	**PUD**	*
Administrative and Business Offices	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	P	P	–	P	P	C	P	P	P	P	P	P	P	P	1	–	2	–	3	4
Agricultural Sales and Services	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	P	P	P	P	P	1	–	–	–	3	4
Alternative Financial Services [2]	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	C	P	–	–	C	–	P	–	–	–	–	–	–	–	–	–	–
Art Gallery	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	1	–	–	–	3	4
Art Workshop	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	P	P	P	P	P	C	P	P	P	P	P	P	P	P	1	–	–	–	3	4
Automotive Rentals	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	C	C	C	–	P	P	P	P	P	1	–	2	–	3	4
Automotive Repair Services	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	C	C	C	–	P	P	P	P	P	1	–	2	–	3	4
Automotive Sales	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	C	C	C	–	P	P	P	P	P	1	–	–	–	3	4
Automotive Washing (of any type)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	C	C	C	–	P	P	P	–	P	1	–	2	–	3	4
Bail Bond Services [3]	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	PC	–	PC	PC	–	PC	PC	PC	PC	PC	–	–	–	–	–	–
Building Maintenance Services	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	P	P	P	P	P	1	–	–	–	3	4
Business or Trade School	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	–	–	P	C	P	P	C	P	P	P	P	P	1	–	–	–	3	4
Business Support Services	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	–	–	P	C	P	P	P	P	P	P	P	P	1	–	–	–	3	4
Campground	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	C	–	–	–	–	–	–	P	P	P	–	–	P	1	–	–	–	3	4
Carriage Stable	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	C	–	–	–	–	–	–	–	–	–	–	C	–	P	–	–

Austin has detailed Zoning Use Summary Table (Land Development Code) that effectively summarizes a very complex set of codes into a relatively understandable format. (see sample below). The summary table is organized by uses (residential, commercial, industrial, etc.) and references the various land use codes as being either a "permitted use", "conditional use" or as "not permitted".

The City of Austin's Planning and Development Review website offers a range of helpful web-based resources including the following:

- Schedule an inspection online or by phone (Click here for instructions on how to schedule an inspection)
- Search for land development cases, building plan reviews, permits and inspections (Click here for an Information Search Guide)
- Forms and Applications
- Access public records (Council Agendas, Minutes, Ordinances, Resolutions, Municipal Election, Utility District documents)

- Office of the City Clerk
- Look up neighborhood associations on the City's Community Registry
- Adopted Neighborhood Planning Areas (Links to adopted neighborhood plans, future land use maps (FLUMs), and related plan amendments (ordinance numbers)
- Browse through various terms in the Planning/Development Glossary
- Zoning Program
- Zoning Profile Tool

They also offer the following instructional videos:

- *Land Use and Development* - These training videos provide an overview of City of Austin's development services including regulations, development review, permitting, inspections, trees and recognizing the impact of development.
- *Watershed Protection Ordinance* - These training videos provide an overview of the basic concepts of the Erosion Hazard Zone requirements of the Watershed Protection Ordinance and an overview of the Watershed Protection Ordinance's rules regarding floodplain modification.

In the area of "Geographic Information Resources", the city provides:

- Development GIS Viewer - GIS tool featuring views to Development, Planning, Zoning, Drainage and Floodplain information.
- GIS Data Downloads
- Watershed Locator Viewer
- Zoning Profile Tool
- All City of Austin GIS Web Map Viewers

In the area of "City Code Information" the City provides:

- Austin Online Code Library
- Austin, Texas - Code of Ordinances •Standards and Standard Specifications

- Technical Criteria Manuals
- Specific Area Regulations (North Burnet/Gateway, Lamar/Justin, MLK, Plaza Saltillo)
- Building Technical Code Interpretations
- Proposed Land Development Code Amendments

Miscellaneous

- Development Review General Case Number System Guide
- How to Research Your House
- How to select a Contractor

The City also offers a training video related to design standards and mixed use development. The video focuses on the standards used to raise the quality of nonresidential and mixed use development in Austin by providing minimum standards for site and building design. The video can be accessed at: https://www3.ci.austin.tx.us/dsmu/.

The City of Austin's Zoning Code website also provides a useful section called: **In My Neighborhood** which provides links and other resources related to larger community planning, community outreach resources and other data. The links associated with the: "In My Neighborhood" section includes:

- Media Contacts
- Social Media
- Contact Us
- Subscribe to Email Newsletters
- Data Portal
- SpeakUp Austin
- AustinGo
- Open Government Resources
- Council Meeting Information Center
- Boards and Commissions Information
- Public Information Request Form

Berkeley, CA

Introduction:

Berkeley is a city on the east shore of San Francisco Bay in northern Alameda County, California which is named after the eighteenth-century bishop and philosopher George Berkeley. It borders the cities of Oakland and Emeryville to the south and the city of Albany and unincorporated community of Kensington to the north. Its eastern border with Contra Costa County generally follows the ridge of the Berkeley Hills. Its population at the 2010 census was determined to be 112,580. It is one of the most politically liberal cities in the United States.

The City of Berkeley provides parking for residents and visitors, as set forth by local parking ordinances. This Parking Information site contains information regarding parking garages and lots, parking restrictions, parking permits, and parking fines.

On- and Off-street Parking:

Parking Meters
Parking meters were installed in the City of Berkeley in response to the growing problem of parking congestion. Over the years, parking meters have evolved from all-mechanical, to digital, to state-of-the-art smart meters we use today to assist businesses by limiting the amount of time a motorist may park in a space, thus creating turn-over of available curbside parking for short-term visitors and customers. Motorists seeking long-term parking (over 90-minutes, all-day, or commuter parking) can find more favorable pricing in the City's Off-street parking garages and lots.

Currently City of Berkeley is using three types of meters, the Calé multi-space meter (EZ Park Pay Stations), the IPS single-space meter, and the Duncan Solution single-space meter, to monitor over 3700 parking spaces. All meters accept nickels, dimes, quarters. The Calé Multi-space and IPS single-spaces meters also accept small one-dollar coins, credit and debit cards with Visa and MasterCard logos.

Parking Meter Rates
Standard Parking Rate

On October 13, 2009, the Berkeley City Council passed Resolution 7,109—N.S. establishing the current standard citywide meter rate at $1.50 per hour for on-street meters.

Off Street Parking (Garages & Lots)

The City of Berkeley owns and operates three public parking garages and two off-street parking lots. The Center Street, Telegraph Channing and Oxford parking facilities are all conveniently located and fully automated parking garages. Each garage accepts coin, currency and credit card (Visa, MasterCard) payment methods, at pay-on-foot (POF) machines within the facilities. As an alternative option, patrons may use their credit card upon garage entry at the gate arms to gain access and upon exit use the "same" credit card at the gate arms to exit to expedite their parking experience.

The surface parking lots are the Berkeley Way Lot located on Berkeley Way between Milvia and Shattuck Avenue and the Elmwood Lot on Russell Street just west of College Avenue. Both parking lots use pay-and-display EZ Park Paystations for parking fee payments. The Park EZ stations accept coins and credit cards (Visa and MasterCard).

Transportation Demand Management:

Other Access and Mobility Plans

The City of Berkeley Transportation Website also offers link to the following plans:

- Pedestrian Master Plan - Berkeley Pedestrian Master Plan
- Berkeley Bike Plan - Berkeley Bike Plan
- Transit and Commuter Info –
    - Commuter Programs & Public Transportation
    - Guide to Low Emission Vehicles
    - TDM Management Study
    - Travel Choice
    - Bicycling and Walking-Maps and Guides

Public Works Transportation Division supports many commuter programs to help Berkeley residents, students and employees reduce their dependence on single-occupant automobile commuting. This web site provides information on the following:

- The Tax Relief Action to Cut Commuter Carbon (TRACC) :
    - Commuter Benefit Services for Employers
    - Sample Enrollment Forms
    - Frequently Asked Questions (PDF)

  - Information about commute benefits in other languages (via SFEnvironment web site)

- Commute Programs:
  - Guaranteed Ride Home Program
  - Ridematching for carpools and vanpools
  - Transportation Programs at UC Berkeley

- Transit Information:
  - 511 Transit Information (or dial 511)
  - Getting There on Transit: San Francisco Bay Area Route Maps and Popular Destinations
  - Clipper, the Bay Area's Smart Card for Transit
  - AC Transit Local and Transbay Bus Service
  - Other Bus Services in Berkeley
  - Paratransit Services
  - Rail Service in Berkeley ◦Bay Area Rapid Transit (BART)
  - Capitol Corridor (train service from San Jose to Sacramento)
  - Connecting AMTRAK passenger rail services

Technology Innovation:

goBerkeley Parking Pilot (launched: October 15, 2013)

On July 2, 2013, the City Council passed Resolution 66,245-N.S. and Ordinance No. 7,305 – N.S. that adopted value pricing approaches to develop on-and off-street parking management , demand-responsive pricing by time-of-day and day-of-week, progressive (escalating hourly) pricing, and price coordination between off-street and on-street parking rates to encourage short-term on-street and longer-term parking off street.

Zones within the goBerkeley Pilot Program are comprised of approximately 2000 parking spaces. There are 3 different hourly parking rate structures: Premium 2-hour, Premium 3-hour (escalating), and Value 8-hour.

The goBerkeley program launched on October 15, 2013. Based on parking demand patterns, rates and time limits were adjusted on June 2, 2014.

The links below will provide additional information about the goBerkeley program:

- Parking Meter Zone Fact Sheet
- go Berkeley Pilot Parking Rates and Locations (pdf)
- go Berkeley Parking Zone Map

- Standard Citywide Parking Rates and Locations (pdf)

Fort Collins, CO

Introduction:

The City of Fort Collins has a population of approximately 148,612 people (2012) and manages approximately 5,572 on- and off-street public parking spaces throughout the City. There are an additional 4,865 off-street spaces that are operated by private businesses.

On- and Off-street Parking:

In general, the on-street parking in the core of downtown has 2-hour time limits, while the parking around the periphery of downtown has free, open, all-day parking. On the map below, the 2-hour parking is shown in the light green while the free, open, all-day parking is shown in light blue.

In the Downtown area, the City of Fort Collins has two parking structures and five surface lots available for both hourly and permit parking. Hourly rates for parking structures are $1 per hour, with the first hour free. The Residential

The City invested in a Parking Strategic Plan as an element of larger Downtown Strategic Plan in 2004. The Parking Strategic Plan was updated in 2011. The following summarizes some of the strategic plan program elements:

1. Comprehensive Approach

   One important key to the success of this plan is the need for a "comprehensive approach to parking planning and plan implementation". It is important to recognize the inter-related nature of the plan elements and how they relate to each other. While it may

be tempting to take a single recommendation and consider it in isolation, this approach is much less likely to advance the parking program. It is the comprehensive and balanced approach of this plan, integrating parking management, urban planning, mobility management, economic development and long-term funding strategies, that is at the heart of this plan. Attempting to implement specific elements in a stand-alone fashion reduces the probability of achieving the desired results. (Randy and Timothy to rewrite)

2. Leverage Public Parking Investment to Stimulate Targeted Private Development

Public parking investment can be a powerful economic development incentive to help spur private development of projects that align with adopted community strategic goals. Other key goals of this policy include:

- Provide better distribution of public parking assets through public/private partnerships
- The creation of new public parking capacity to promote smaller adaptive reuse and in-fill projects
- Develop guidelines to inform an expectation of a return on public sector parking investments

3. Development-related Parking Management Strategies

The City's development-related parking management strategies will support and be consistent with the economic health and urban design principles in Plan Fort Collins and other adopted plans. In general, that means parking strategies must be sustainable while being fully integrated as an element of community and economic development strategies.

- Coordinate and consolidate parking into shared locations
- Integrate parking planning into the larger "Downtown Business Strategy" context Define development project value—direct and indirect economic benefits
    - Define development project value—advancement of community/master plan goals
    - Provide criteria for when to offer incentives
    - Tie incentives to promotion of community supported goals
    - Utilize tools such as the "Parking Demand Model"
- Designate a public entity to coordinate all new parking proposals and promote public-private partnerships for new parking infrastructure
- Implement development parking impact fees for the construction of new parking
- Parking management will support the development-related goals of the Mason Corridor and the Downtown River District

- Review and, if necessary, revise City codes to ensure parking supports City goals for the Downtown

4. Employee Parking & Garage Usage Guidelines

    - Off-street parking in garages or surface lots will be managed primarily as areas for Downtown employee parking.
        - Provide incentives and disincentives to shift employees away from parking in high-demand locations
        - Promote better utilization of parking garages and other off-street spaces through innovative permit programs and the involvement/cooperation of Downtown businesses
        - Off-street garages and surface lots should also be managed to accommodate parking for the public as a less expensive option to on-street parking
    - Develop a strategy for construction of new parking infrastructure when existing infrastructure and programs are insufficient to meet parking demand, but only in a manner that is coordinated with the on-street parking management program

5. Residential/Neighborhood Parking

    Residents in neighborhoods near commercial areas or CSU should have preferential access to the on-street parking on their block face.

    - Residents benefiting from a parking permit program will be expected to bear a reasonable amount of the costs of providing and administering the preferential access
    - Develop criteria to determine when a residential permit program will be implemented, such as what percentage of residents must agree to the program before it is put in place
    - Develop other residential permit program criteria, such as how to verify residency, pricing of permits, and number of permits per residence

6. Integrated Access Management Approach

    Parking management programs will support an integrated, multi-modal approach to Downtown access. Parking programs should emphasize good urban design, walkability, and strong support for transportation alternatives.

        - Optimize the use of existing parking resources before building new facilities
        - Encourage downtown employers to provide mobility options and programs to reduce parking demand
        - Establish a program for the installation, maintenance, and replacement of bike racks and covered bike parking in the public right of way

- Develop criteria for the placement and use of electric vehicle charging stations in public facilities, both on- and off-street
- Implement a program that encourages the use of car-pool and fuel-efficient/ low-emission vehicles through preferential parking spaces in public facilities, both on- and off-street
- Provide large vehicle parking within walking distance of Downtown for visitors arriving by private bus and recreational vehicles
- Identify and focus on "synergistic strategies and programs" that can solve multiple parking and transportation problems with one solution or application. Create a performance measurement program to evaluate parking policies and strategies

7. Enhancing the Downtown Experience

   Customer service will be the top-priority focus in the delivery of the Downtown parking experience.

   - Develop a clear and identifiable marketing, education and communication strategy for the parking program.
   - Utilize new technologies that enhance the customer experience, such as cell-phone apps that identify available parking spaces.
   - Fines and enforcement should take a "common sense" approach to creating compliance and safety. Revenue generation is not the primary motivation for the enforcement program.
   - Parking facilities should be attractive, clean, safe, easy to use, and inviting.
   - Provide ways for customers and visitors to park on-street for longer than two hours without encouraging Downtown employees to use the on-street parking.

Zoning Code Requirements:

The City is progressive in their current parking codes and requirements using maximum parking standards as well as required bicycle parking; the City does not require a minimum parking standard. The City's code takes into consideration the availability of shared parking as well as on-street parking for owners when calculating the maximum required parking for a specific use(s). Note, where on-street or shared parking is not available, the City permits an increase in the maximum parking standard of 20 percent. In addition, the City uses a simplified listing (generalized categories) of non-residential uses as compared to either zoning or use specific standards.

In order to further support the City's Transit Oriented Development (TOD) standards, reduced maximum parking standards are provided for residential uses within the district. The TOD standards generally result in an

approximate 30 percent reduction in the parking standard (Note: this standard is referenced as a minimum standard not a maximum standard).

The City also allows for Alternative Compliance which permits owners to request alternative compliance parking ratio plans generally accompanied by either a traffic impact study or other relevant data. Measures specific to an alternative compliance approach include the following:

- Shared parking;
- Off-site parking;
- Parking pricing;
- Transit pass program;
- Unbundling parking spaces from residential dwelling units;
- Rideshare, guaranteed ride home programs, car sharing, shuttle services;
- Enhancements that encourage bicycle and pedestrian mobility; and
- Other verifiable parking demand reduction measures.

These strategies assist the City in promoting shared parking and alternative modes of transportation through their zoning and code requirements.

Madison, WI

Introduction:

The City of Madison has a population of approximately 240,323 people (2012). The City manages a parking system that includes approximately 18 parking garages and lots that vary in parking rates. The parking program is organized as a "parking utility".

On- and Off-street Parking:

- The City has manages on- and off-street parking spaces. To assist the City in managing their parking system they have implemented single- and multi-spaced meters in addition to preferential residential districts.
- Current Parking Availability – The City now offers on-line feature that provides data on current parking space availability in six of their parking garages.
- The City of Madison Parking Utility and Metric Meters have installed multi-space meters in the downtown area. These meters provide the option to use a credit card as well as coins. You may pay for any multi-space controlled parking space at any multi-space metered pay station.
- The City's multi-space parking meters have recently added a new "over-payment prevention and pre-payment features".
    - As part of a continuing effort to improve the functionality of the Multi-Space Metered Pay Stations in the City of Madison, the Parking Utility has upgraded the pay-station software to include over-payment prevention and pre-payment features.
    - Payment will only be accepted during the hours of enforcement which are 8 am to 6 pm, Monday through Saturday.
    - Any payment made between 6 am and 7:59 am is considered a pre-payment and will be applied beginning at 8 am.
    - Payment will not be accepted prior to 6am or after 6 pm. Payment will not be accepted during other time periods when parking is prohibited.
    - Any payment made with credit or debit card will auto-complete (see below) with an expiration time of 6 pm if the amount entered would extend parking beyond 6 pm, subject to time limits. The card will only be charged for the time that falls within the enforcement limits.
    - Any payment made with coin will auto-complete (see below) with an expiration time of 6 pm once a sufficient number of coins have been entered to extend parking to 6 pm, subject to time

limits. Any additional coins entered will be released to the coin return.
  - If a space is within a restricted zone, any transaction which attempts to purchase parking beginning when the space is unrestricted and extending into the restricted time period will auto-complete with an expiration time that corresponds to the end of legal parking.
  - Some off-street facilities are enforced and require payment 24 hours a day, seven days a week.
  - The City also recently implemented an auto-complete feature installed on multi-space metered pay stations
    - Credit / Debit Card Transactions: Once the maximum allowable parking time is displayed during a credit / debit card transaction, either by pressing the blue buttons or by pressing the blue "MAX" button, the receipt will print automatically, completing the transaction.
    - Coin Transactions: Once a sufficient number of coins have been deposited to pay for the maximum allowable parking time at the space number entered, the receipt will print automatically, completing the transaction.
    - All Transactions: The automatic printing of the parking receipt indicates that the maximum allowable parking time for the space number entered has been purchased. Under these circumstances ONLY there is no need to press the green button.
    - For detailed step-by-step instructions see this page: How to use the multi-space metered pay stations.

- The City also offers Park and Walk locations that have a reduced parking rate and longer parking times.

- Residential permit parking districts were established in residential areas that have a high on-street parking demand. These districts were implemented to make it easier for residents and their guests to find spaces in close proximity to their resident and are signed as residential parking only.

  - Residential Parking Permit system improvements:
    - The permit costs $21.00 for the Sept. 1, 2014 to Aug. 31, 2015 period. Replacement permits cost $5.00.
    - The purpose of the Residential Parking Permit Program is to provide residents the opportunity for the limited storing of vehicles on public streets to the partial exclusion of commuter vehicles.

- People who live in an area covered by the Residential Parking Permit Program may purchase permits from the Madison Parking Division Office. These permits allow residents of that area to exceed the posted one or two hour parking limit on the street.
- Several permit parking areas in the Central Business District are very crowded due to a large number of vehicle owners living in the area and there being only a few streets suitable for residential parking. Therefore, the permits allow residents of an area to park for longer than one or two hours when they find a space.
- A Residential Parking Permit does NOT guarantee you a parking place. It allows you the right to park IF you find a parking space.
- We suggest that residents of Areas 1, 2, 3, 4, 5, and 9 seek alternatives to on-street parking for their vehicles. The number of permits issued is greater than the number of on-street parking spaces available in these areas. Map of Residential Parking Permit Areas (PDF)

o Electric Vehicle Charging Stations In City Of Madison Parking Facilities:
  - Eight electric vehicle charging stations are now available in City of Madison parking facilities
  - Madison Gas and Electric has provided 8 Electric Vehicle Charging Stations (EVCS) in City of Madison parking facilities as part of a pilot program to study their use and reliability.
  - These stations are available in the following locations:
    - Overture Center Garage 318 W. Mifflin St.
    - Capitol Square North Garage 218 E. Mifflin St.
    - State Street Campus Garage, Lake Street entrance 415 Lake St.
    - Wingra Parking Lot 1701 Monroe St.
  - Each facility listed above contains one ADA (Americans with Disabilities Act) compliant charging station and one station available to the general public. During the pilot phase of this project charging is available at no cost. Visit the Madison Gas and Electric website to set up an account:

www.mge.com/my_mge/serviceforms/EVChargingStudy.htm

Transportation Demand Management:

Current TDM Programs and Activities

The Madison Area MPO employs a full-time ridesharing coordinator whose responsibilities include coordinating public and private employer programs, ride-matching services, and staffing a Ridesharing Coordinating Committee, which coordinates the ridesharing and alternative transportation promotion activities of the various governmental agencies involved in such efforts. Along with the MPO, these include the Wisconsin Department of Transportation, Wisconsin Department of Administration, Metro Transit, UW-Madison, Dane County, and the City of Madison.

Madison Area MPO Rideshare Etc. Program

The Madison Area MPO sponsors the Rideshare Etc. program to implement on-site TDM/Ridesharing programs primarily at the larger public and private work sites in the Madison area. Information and assistance is provided to employers to tailor programming activities to their work site and to provide ongoing support. The program maintains a database of over 1,500 carpoolers, as well as information on Metro Transit bus routes, State Vanpool Program routes, Park-and-Ride lots, and bicycle facilities. In addition, marketing materials are distributed, including brochures, displays, and radio messages.

In the fall of 2006, Web-based ride matching was added to provide an additional tool for commuters interested in interactively accessing information about alternative modes of transportation for commuting. The Rideshare Etc. program service area covers 48 counties in south central Wisconsin and Northern Illinois.

The employer-sponsored programs generally consist of naming a company ridesharing coordinator, distributing in-house publicity, providing ride-matching services, and setting up a ridesharing booth to be used in conjunction with question-and-answer periods to assist employees to start ridesharing and/or utilize other alternative transportation. Employee surveys are sometimes conducted. Assistance and information is also provided on implementation of incentives/disincentives for employees to use alternative transportation.

Employer-based TDM programs are generally the most effective in reducing single occupant vehicle trips, and work trips are the easiest to shift to

alternative transportation modes. TDM strategies can be chosen to meet the specific needs of the employees based upon the worksite characteristics and the employees' demographic and travel characteristics. In addition, a corporate "culture" can be created that reinforces the TDM message.

In 2005, it is estimated that the direct impacts of the Rideshare Etc. program resulted in a reduction of 18.9 million vehicle miles of travel (VMT), over 2,000 required parking spaces, and 47 and 38 tons of smog-producing nitrogen oxide (NOx) and volatile organic compound emissions respectively, and resulted in savings by workers of over $4.5 million in commuting costs.

Transit Incentives

Commuter Choice Program Metro Transit offers a Commuter Choice Program whereby employers purchase bus passes or tickets from Metro for their employees. This allows employees to purchase the bus pass/tickets at a pre-tax rate. Employers have the option of subsidizing all or part of the cost of the pass/tickets. Employers benefit through reduced payroll taxes and can deduct the cost of providing the transit benefit as a business expense. Around 25-30 employers currently participate in the program, including the State of Wisconsin.

Group Unlimited Bus Pass Program

This is a program negotiated by Metro with the major universities and employers whereby the university or employer purchases heavily discounted passes for all of its students or employees regardless of whether they choose to participate in the program. The passes are then generally provided to students/employees for free or a modest cost. The price of the passes is based upon anticipated ridership considering the employer location, available bus service, etc. For small employers, the program could be negotiated with a transportation management association, if one were created for an employment site. Metro has negotiated student bus pass programs with UW Madison, Edgewood College, and MATC. In the case of UW and MATC, the schools then charge all students a semester fee for the bus pass, which allows unlimited use of all Metro bus routes. The UW program was expanded in 2002 to cover employees, including UW Hospital & Clinics employees. Metro has also negotiated an unlimited ride pass program with the City of Madison and Saint Mary's Hospital for its employees and is in the process of setting up a program for Meriter Hospital employees. Employees receive free bus passes. Metro has also begun discussions with Wisconsin Department of Administration (WisDOA) staff about a possible program for all state employees.

By providing free bus service for all students/employees, the unlimited ride pass program provides a large financial incentive for riding the bus. The incentive is much greater than with the Commute Choice program for employers. Passes are free or heavily discounted and passes are available for all employees versus only those who choose to participate as with the Commute Choice program. This may persuade some employees to try taking the bus, at least on some days. The bus pass programs have been hugely successful in boosting transit ridership.

Regional Transportation Plan 2030 101 November 2006

Smart Commute Initiative

Smart Commute is a loan program that gives homebuyers the chance to qualify for a larger mortgage if they purchase a home along a Metro route. Participating lenders are able to add a portion of the homeowner's potential transportation savings ($200 per month for one wage-earner households, $250 per month for two wage-earner households) to their qualifying income. Program participants are also eligible for other benefits by program sponsors, including a trial membership to Community Car of Madison, a member-based, car sharing organization (see information on next page). There are four banks that currently participate in the program.

Guaranteed Ride Home Program

The Guaranteed Ride Home program provides taxi vouchers to support commuters that use an alternative mode of transportation so they are not stranded at work if an emergency comes up and they need to get home quickly. Research has shown that lack of access to transportation in an emergency has been a barrier to using the bus, carpooling, vanpooling, or bicycling to work.

The program is available to participants in the MPO's Rideshare Etc. Program and is jointly administered by the Madison Area MPO and the Dane County Highway & Transportation Department and funded by the Department. The program provides vouchers good for up to $35 per ride for a maximum of three rides per year. UW-Madison Transportation Services has a guaranteed ride home program for UW employees who do not drive to work. Employees can get a taxicab ride or fleet vehicle escort (for those living more than 30 miles away) up to three times every six months. The Wisconsin Department of Administration also provides transportation home for vanpool participants in emergency situations.

State Vanpool Program

The Wisconsin Department of Administration administers a State Employee Vanpool Program to provide vanpool services to major employment sites. There are currently 72 vanpools in operation with most traveling to downtown and the UW campus. Other destinations include Hill Farms and the Fish Hatchery Road/Greenway Cross area. Riders pay a fare calculated to cover operating and capital costs. A minimum of one state employee is required on each van, but non-state employees are also welcome to ride.

UW-Madison Program

UW-Madison employs a TDM coordinator and has a comprehensive TDM program covering all alternative modes of transportation. The university provides free campus bus service, funds Metro Route 53, which provides park-and-ride service to campus from the UW Research Park, and contracts with Metro for unlimited ride pass programs for employees and students. Bus passes are free for employees, while students pay a low semester student fee ($35 for 2006-'07) for the pass. The UW Medical School provides frequent shuttle service between the hospital and the East and West side UW clinics. UW also has a flex parking system for many lots whereby employees receive a refund for days they do not park on campus.

Bicycle Programs

Assistance is available to employers on how to facilitate the needs of bicycle commuters as well as how to promote and encourage bicycling. The Madison Area MPO ridesharing coordinator provides bicycle maps and other information as part of employer-sponsored programs and works with the City of Madison's Bicycle Program Coordinator. The Wisconsin Bicycle Federation is also available as a resource and has conducted employer programs in the past as part of grant projects. UW-Madison employs a Bicycle Coordinator to promote bicycling on campus. The university also has a bike ambassador program to promote bicycling and walking through a variety of avenues such as safety clinics, bike maintenance/repair classes, and bike tours. Dane County has a limited number of bicycle lockers available for rent downtown. The City of Madison has bicycles available for use by city employees. Metro Transit has bicycle racks on all its buses and they are very popular and heavily used.

Community Car Program

Community Car is a member-based car sharing organization that provides cars by the hour for individuals and organizations. Members share access to a fleet of high gas-mileage and hybrid gas-electric vehicles located in reserved parking spots in the central Madison area. Car sharing is for people who do

not need a car every day and are able to walk, bus, bicycle, or carpool for the majority of their transportation needs.

Parking Management

Studies have shown that the availability of free parking is one of the most important factors in an employee's decision on whether or not to use an alternative mode of transportation to work. This was confirmed in interviews conducted with Madison and Milwaukee area employers as part of a 2002 WisDOT-sponsored study evaluating subsidized transit passes, pre-tax transit benefits, and parking cash-out programs in Wisconsin.

Managing parking supply and cost is most feasible downtown and on the UW-Madison campus due to limited land availability. It also may be possible at other high intensity activity/ employment centers with structured parking. However, parking management is a complex balancing act. Parking policies that discourage solo driving help to mitigate traffic congestion downtown and the quality of the neighborhoods. They also reduce the need for the city and university to provide expensive parking facilities, using up limited land. On the other hand, adequate provision must be made for parking that is not too expensive in order for the city to maintain downtown as a retail and employment center and for the university to attract and keep qualified employees.

Downtown Madison Parking

The City of Madison owns five downtown parking ramps and four surface parking lots with a total combined parking capacity of around 3,850 spaces. Dane County owns a downtown parking ramp with a capacity of 1,000 spaces and the State of Wisconsin owns the Monona Terrace Convention Center ramp with a normal capacity of around 550 spaces. In addition, there are numerous private parking facilities downtown that offer daily and monthly parking.

The most recent public parking capacity additions include the construction of the convention center ramp and the addition of 400 spaces in the State Street-Capitol (Dayton) ramp. A new mid-State Street ramp has been proposed on the Buckeye parking lot site off Gorham Street, but no agreement has been reached on project details. The City is also exploring the possibility of combining the ramp with a mixed-use development.

Around 10% of the parking spaces in the City of Madison ramps and lots are reserved. Monthly parking rates for these spaces vary by location from $100 to $133. The city also charges an extra $15-$23 per month to non-residents. By comparison, in 1980 the monthly rate was $49. The rate for non-reserved spaces in the parking ramps is $0.70 to $1.10 per hour, depending upon the

ramp. Three increases in parking rates have been instituted since 2002 in order to generate revenue for the planned reconstruction of the Government East ramp and construction of a planned mid-State Street ramp.

There are waiting lists for the monthly spaces at the ramps, however the city has limited the number of monthly spaces as part of its policy to encourage downtown commuters to use alternative modes of travel. The parking rate at the Dane County ramp for non-employees is $0.75 per hour. The parking rate at the Convention Center ramp for non-employees is $1.10 per hour with a daily maximum of $12.50. Qualifying state employees who do not receive an assigned parking space as part of their employment pay $74 per month.

Rates at private parking ramps in the downtown area are comparable.

Zoning Code Requirements:

The City of Madison has fairly progressive parking standards as part of their zoning code.

The Statement of Purpose outlines the overall goals which include:

- Establishing minimum and maximum parking requirements, and standards for the layout and design of parking spaces, lots and structures.
- It also includes shared parking incentives, and reduction of off-street parking in favor of transit or other travel modes.
- The standards in this section are intended to:
    - Encourage reduction of surface parking as a means of reducing dependence on private automobiles and reducing the pollution and congestion that are associated with automobile use.
    - Encourage reduction of impervious surface to control run-off.
    - Encourage reduction of surface parking as a means of fostering more compact development patterns and encouraging transit, bicycle and pedestrian circulation.
    - Minimize the adverse effects of off-street parking and loading on adjacent properties.
    - Minimize spillover on-street parking in neighborhoods.
    - Encourage shared parking arrangements that will support mixed-use development and compact development patterns.
    - Encourage bicycle circulation by providing bicycle connections, adequate parking, and storage space for bicycles.
    - Encourage parking locations that do not disrupt Madison's traditional streetscape.

- Certain districts do not require off-street parking, as set forth in Table 28I-2.
- Where off-street parking is required, Table 28I-3 establishes the minimum number of automobile parking spaces required, the maximum number of automobile parking spaces permitted, and the minimum number of bicycle parking spaces required, for the uses indicated. Off-street parking may be waived or reduced under specific conditions, as set forth in Table 28I-4.
- No Minimum Parking Required.
- In the Central area, as defined, and the following districts, there is no specified minimum requirement for off-street parking of automobiles, with the exceptions specified in Table 28I-2 below.
- Maximum parking and bicycle parking requirements apply as specified in Table 28I-3.
- For conditional uses, parking requirements may be established as a condition of approval.
- Chapter 28 of the Madison Zoning Code can be found at: https://library.municode.com/HTML/50000/Chapter%2028%20-%20Zoning%20Code.pdf

Palo Alto, California

Introduction:

Palo Alto is a charter city located in the northwest corner of Santa Clara County, California, in the San Francisco Bay Area of the United States. The city shares its borders with East Palo Alto, Mountain View, Los Altos, Los Altos Hills, Stanford, Portola Valley, and Menlo Park. It is named after a coast redwood tree called El Palo Alto.

As of the 2010 census, the city's total resident population is 64,403. Palo Alto is one of the most expensive cities in the United States and its residents are among the most educated in the country. Downtown Palo Alto is a regional retail and entertainment attraction center with vibrant professional office and service commercial center.

Parking is provided for visitors and customers in the Downtown Business District and California Avenue Business District on the street, in off-street parking lots and in parking garages.

The City actively monitors parking in and around the Downtown and is committed to work with commercial and residential interests to balance the demands of parking with measures to minimize its impacts on adjacent residential communities. The following are some program elements:

- Free parking is provided for visitors and customers in the downtown area and California Avenue business district on the street, in off-street parking lots and in parking garages.
- Two-hour parking is provided in on-street spaces and in surface lots.
- Three-hour parking is provided in parking garages except in designated permit areas.
- Residential Preferential Parking (RPP): The Downtown Palo Alto Residential Preferential Parking (RPP) Program is being developed in response to concerns about non-resident parking in residential neighborhoods. The Downtown RPP Stakeholder group is in the process of finalizing their recommendations to City Staff for the design of the Downtown RPP.
- Enforcement of parking regulations is conducted from 8 a.m. to 5 p.m., Monday through Friday. Enforcement is NOT in effect before and after those times and on weekends and holidays. Restricted areas such as red curbs, spaces designated for persons with disabilities and any other locations prohibited by law are always in effect. Parking time limits are also enforced in signed two-hour on-street parking

areas outside the Color Zone starting from the south side of Forest Avenue in downtown area.

- Color Zone Parking:
  - The core business district of downtown Palo Alto is divided into four color-coded parking zones: Purple, Coral, Lime and Blue. Once the time limit expires in a given color zone you must move your vehicle out of that zone. Vehicles will be ticketed if they are reparked in the same color zone within the same enforcement day.
  - Example: You park in a 2-hour space on the street in the Lime Zone at noon. (You may repark within the Lime Zone only during your initial two hours should you need to.) However, if you leave before the 2 hours are up, you cannot repark later that same day. Your car must leave the Lime Zone by 2 p.m. You may park in any other Color Zone except the Lime Zone, which you are now leaving.
  - Thirty-minute green parking zones, yellow commercial loading zones, white passenger loading zones and blue disability designated spaces are exempt from the color zone reparking requirement.
  - Click the link below to view the downtown Color Zone parking map: http://www.cityofpaloalto.org/civicax/filebank/documents/3904

Permit Parking for Employers and Employees

- Downtown Business District
  - Employees of businesses in the downtown parking assessment district may purchase quarterly or annual permits for long-term parking in any of the nine off-street parking lots and garages. Parking permits are issued for these locations and are $466.00/year, $146.50/quarter or $17.50/day:
  - Transferable Permits are also available for the following garages: Webster Cowper (WC), Bryant Lytton (SL), and Civic Center (CC). Transferable permits are sold to one individual and can be used on multiple vehicles. Transferable permits are sold at a two-quarter maximum. Visit Revenue Collections on the first floor of the Palo Alto Civic Center or call (650) 329-2252 for more information.
- California Business District:
  - Employees of businesses in the California Business District may purchase quarterly or annual permits for long-term parking in any of the seven off street parking lots and garages. Parking permits are issued for these locations and are $149.00/year, $49.00/quarter or $8.00/day. Transferable permits are also available.

- All Day Visitor Parking
  - Visitors may purchase a one-day permit. Permits are valid in all off-street parking lots and garages. All-day permits are not valid for on-street parking spaces.
  - All day permits may be purchased at Palo Alto Civic Center, 250 Hamilton Avenue on the first floor at Revenue Collections, or the first level of the Bryant Street and Cowper/Webster garages.
  - The cost is $17.50/day for downtown area and $7.00/day for California Avenue business district. Day permits for the California Business District may only be purchased at the Civic Center, Revenue Collections at this time.
  - Construction worker vehicles require a special on-street parking permit that can be purchased at the City of Palo Alto Development Center, 285 Hamilton Avenue and the cost for this permit is $76.00/space per week.
- Downtown Cap Study
  - In 1986, the City of Palo Alto conducted a Downtown Study, which examined parking, traffic and land use conditions in the Downtown area. The original study area included the Downtown Commercial area and surrounding residential neighborhoods in the periphery study area.
  - Because of the Study, the Downtown zoning regulations were made generally more restrictive. A Downtown development cap policy was also adopted.
    - This policy restricted future non-residential development (office, retail, etc.) to a total of 350,000 square feet beyond what was in existence or approved in the Downtown ("CD Zone") area as of May 1986.
    - CD development regulations were to be re-evaluated when new development reached 235,000 square feet.
    - There were a number of other specific policies related to parking, traffic and growth in the CD area as well.
    - The Development Cap Study will evaluate the potential development and its impacts on downtown and nearby residential areas in two phases: a "data and impacts" phase (Phase 1) and a "policy" phase (Phase 2). Phase 1 will include a detailed review of existing traffic and parking conditions in and around the Downtown area, as well as projection of future conditions based on existing zoning requirements.

Transportation Demand Management:

The City of Palo Alto is embarking on two trial Transportation Demand Management Systems.

Caltrain Go Pass Program: From now until the end of 2014, any regularly-benefited City employee working at any Downtown location (Civic Center, Downtown Library or the Development Center) may receive a free Caltrain Go Pass for turning in their parking permit.

The Go Pass is available anywhere on Caltrain 24 hours a day, 7 days per week. To sign up, email gopass@cityofpaloalto.org.

TwoGo Rideshare: From now until the end of 2014, if you work for the City of Palo Alto or anywhere in Downtown Palo Alto, you can try SAP's powerful rideshare software – which helps you find carpooling opportunities in your community - for free!

If you are a City of Palo Alto employee, register for TwoGo by following these simple instructions:

1. Go to www.twogo.com and sign up

2. Enter your name, City of Palo Alto email, and phone number using the following format: +1 (650) 999-9999

3. Enter home address or preferred pick up point

4. Validate your email address

Email rideshare@cityofpaloalto.org with any additional questions!

If you are not a City employee but work in Downtown Palo Alto and would like to participate in the program, email rideshare@cityofpaloalto.org and we will get you signed up!"

Each employee/participant assumes all risks associated with the Twogo Program ("Program") and the City makes no representation or warranties regarding the Program and expressly disclaims any and all liability, losses, damages, claims, demands, causes of action, costs, obligations, or injuries arising from or connected with any employee's participation in the Program.

Zoning Code Requirements:

On September 11, 2007, the Palo Alto City Council approved the final revisions to the City's comprehensive update of the Zoning

Ordinance, Title 18 of the Municipal Code. The ordinance includes a new format for the code, with a more extensive use of tables and updated definitions. Also included are context-based design criteria (form-based coding) for multi-family, commercial, mixed use, and pedestrian-transit oriented development. A PDF version of the Zoning Ordinance is also provided for easier viewing, downloading, and printing. Links to background issues papers and a history of the Palo Alto Zoning Ordinance are provided below.

http://www.amlegal.com/nxt/gateway.dll/California/paloalto_ca/paloaltomunicipalcode?f=templates$fn=default.htm$3.0$vid=amlegal:paloalto_ca

There are several interesting "discussion documents" located at:

http://www.cityofpaloalto.org/gov/topics/projects/landuse/zoning.asp

These documents inform some of the major elements that were debated during zoning code update process. For further information on the development of the ordinance and continuing amendments, please contact the Department of Planning and Community Environment at 650-329-2441.

Santa Monica, California

Introduction:

Santa Monica is a beachfront city in western Los Angeles County, California, United States. The city is named after the Christian saint, Monica. Situated on Santa Monica Bay, it is bordered on three sides by the city of Los Angeles. The Census Bureau 2010 population for Santa Monica is 89,736.

Partly because of its agreeable climate, Santa Monica had become a famed resort town by the early 20th century. The city has experienced a boom since the late 1980s through the revitalization of its downtown core and significant job growth and increased tourism.

On- and Off-street Parking:

The City uses current technology and real-time information to keep cars moving on major boulevards and limit the impact of regional traffic on local streets. This includes a comprehensive street wayfinding system, including signs directing motorists to off-street parking and displaying real time parking availability at many public parking facilities including parking meters. Parking rates reflect the value of parking and are set to ensure that spaces are available when needed.

Real-time parking availability can be found by clicking the link below:
http://www.parkme.com/widget/?lat=34.01680622427998&lng=-118.49805856483461&tracker=a6870aea-21dc-11e2-ba1b-12313d150ae9&zoom=17

Pricing Strategies:

All City Parking Rates and Fees can be found at the link below:

http://www.smgov.net/uploadedFiles/Departments/PCD/Transportation/Motorists-Parking/Parking-Rates.pdf

Residential Permit Parking

Preferential Parking Permits limit on-street parking to make it easier for residents and their guests to find a parking space near their home. Proof of residency at an eligible address must be provided in order to purchase a Resident or Visitor permit. Effective October 1, 2013 the City has adopted new Preferential Parking Permit rates for all Resident and Visitor permits.

The Customer Web Portal can be used by existing residential permit customers to renew permits, access their permit accounts, or look up parking citation information. Residents with active permit accounts may also print One-Day Temporary Guest Parking Permits online for household guests.

Beach Parking

City of Santa Monica beach lots are open for public parking from sunrise to sunset only, with the exception of the Pier lot which is open until 2 AM. The daily parking fee ranges from $6 to $15 per day depending on the season and location of the lot. Meters are available for short term parking. Frequent beachgoers may purchase beach parking permits on a monthly, semi-annual, or annual basis. Residents living near the beach may be eligible for Overnight Resident Beach Parking Permits.

Downtown Parking Structures

Parking Structures 1 through 9 and the Civic Center structure and lot are open 24 hours per day, 7 days per week. The Main Library garage is open from 8 AM to 11 PM, seven days per week. The hourly rates can be found here.

All monthly passes for the downtown structures are sold out. To renew an existing pass, please call Central Parking System at (310) 576-4743 or visit their office at 1444 4th Street, downstairs from Parking Structure 5.

Electric Vehicle Charging and Alt Fuel Vehicles

Priority Parking Rules:

WHITE and GREEN clean air decals are currently valid through January 1, 2019. White, green and ZEV decals allow you to park in any on-street, metered parking space in Santa Monica without charge for the maximum amount of time allowed by that meter. In other words, if you're at a 2-hour meter, you can park there free for 2 hours—but beyond that, you're subject to ticketing for overstaying your welcome. Clean Air Vehicle decals are issued by the state.

- Conventionally Fueled Vehicle Information:
  - Choose Partial Zero Emission Vehicles (PZEV) or Super Ultra Low Emission Vehicles (SULEV).
- Drive Clean Buying Guide and Zero Emission Vehicle (ZEV) Buying Information
  - http://driveclean.ca.gov/

- Cleanest & Meanest Vehicles
  - http://www.greenercars.org/highlights.htm
  - http://www.epa.gov/greenvehicle/
- Alternative Fueled Vehicles
  - http://www.afdc.energy.gov/
  - http://www.cngvc.org/

- Santa Monica EV Charging Locations

Level 2 Chargers in Santa Monica open to the public

On-Street Meters

Santa Monica parking meters accept payment by both credit card and coins. The City uses parking meter sensors to help ensure that users do not exceed the posted maximum time limit, thereby allowing us to better manage the limited supply of on-street parking that is always in high demand.

Parking meter time limits and enforcement hours are being changed for most meters in the Downtown district in 2014. More information can be found here.8.3 Square Miles

Parking Program Statistics

- 6,418 Parking Meters
- 46 Off-Street locations; 14,200 Off-Street parking spaces
- Administrated 80,000 Parking Permits annually
- Processed Over 300,000 Parking Citations annually
- Parked over 21 Million Cars annually

Reasons for Parking Program Transformation

- Managing Parking Resources
- Real Estate does not grow but parking demand grows overnight. Increasing turnovers is the only immediate solution
- Traffic Management
- Use pricing and time limit strategies to allocate cars to park in less congested and low turnover areas
- Operational Efficiency
- Serve more while decreasing labor costs. Use automation and technology solutions to replace basic labor duties
- Sustainability
- Shared-use Sustainable Parking Facilities; Minimize trips searching for parking spaces
- Proactive Compliance with On-going Development Projects
- As more development projects come to the city, parking demand will grow rapidly. Be ready and be prepared for the parking needs
- Revenue Enhancement
- Bi-product. However, projects generating revenue is easier to justify in cost and obtaining resources.

Technology and Innovation:

Projects Implemented in the Past 5 Years

- Online Permit Renewal
- Parking Permit Database Uploaded to Enforcement Devices
- Real-Time Car Count System with Monument Signs, Web-page, and Phone App
- Credit Card Acceptance at Entire Parking Program
- Smart Meters with Sensors at All 6,418 On-Street Parking Spaces with Time Limit, Reset, and Anti-Refeed Function
- 65 Multi-Spaces Meters at All Off-Street Parking Lots
- Bicycle Valet Program

- Automation in All Parking Structures with Centralized Control Panel
- Online Pre-Sale System for Events
- Electronic Depository
- Transit Pass and Monthly Parking Keycard Integration
- Bicycle Centers
- Built a $41 million LEED Certified Parking Structure

Recently Implemented Policies and Procedures

- Parking and Recreation Shared-Use Policy
- Large Scale Event Parking and Traffic Management Procedures
- Citywide On-Street and Off-Street Parking Rates Adjustments
- Citywide Parking Meters Time Limit Study and Adjustments
- All Day and Employee Parking Reallocation
- 3 Hour Time Limit Parking Spaces in Parking Structures
- Remove Free Disabled Parking in Off-Street Parking Facilities
- Seasonal and Event Parking Pricing

Results and Benefits

- Data Mining
  - Traffic Engineering and Coordination
  - Policy Implementation
  - Pricing Justification , Seasonal Pricing, and Event Parking Implementations
  - Providing Information and Communication with Stakeholders
- Efficiency
  - Customer Self-served , Decrease Foot Traffic at Parking Desk
  - Enhanced Space Finding Ability
- Revenue Control
  - All Cash Revenue is Traceable and Reconcilable
  - Less Cash Changes Hand with Electronic Transactions
- Decreased Labor Cost
  - Less Collection and Deposit Preparation Labor
  - Automation Decreased Cashier Labor Cost
- Enhance Sustainability
  - Energy and Lighting Efficient Parking Structure
  - Bicycle Parking Experience

  - Allocate Low Turnover Parking Group to Low Occupied Location
  - Incentivize Public Transit Use
  - Utilize Unused Parking Spaces During Low Season
  - Higher Turnovers, Increased Availability, Less Car Trips, Less Traffic, Less Idling, Less Carbon Monoxide
  - Recycle Rain Water Run-offs from Parking Facilities
- Parking Meters and Wireless Sensor Investment
  - Enhance overall parking experience
  - Reset parking meter after each vehicle departure
  - Develop a system that integrates with off-street parking
  - Enhance parking rate and policies programming capability
  - Collect accurate data; political decision supported by data
  - A customer focus tool
  - Improve public acceptance
- 90 Day Meter/Sensor Trial Results
  - 150 meters with in-ground sensors for 90 days trial program
  - Tested all capable functions
    - Reset
    - Time Limit (Anti Meter Re-feeding)
    - Data export
  - Justify R.O.I and Identify Resource –How to pay for it?
    - Reset + Rate Adjustment = Revenue Enhancement = Installation Pay Back + Operating Cost
  - Stakeholder support and City Council approval
  - Install 6,000 meters with in-ground sensors in two phases
    - Phrase I – meter heads – 6 weeks
    - Phrase II – in-ground sensors – 16 weeks
    - Originally was a two years project
    - Fine tuning – never ends
  - Lessons Learned
    - Request an assigned project manager
    - Assign field staff to monitor progress of the project
    - Put together an installation schedule and target completion date
    - Continue identifying tuning issues
    - Identify high traffic and problematic zones
    - Communicate with community and stakeholders
    - Prepare consistent responses to general public feedback
    - Develop a preventive maintenance plan
- Principles Established
  - Using Parking to Manage Traffic
  - Develop a Intelligent Transportation System
  - Data Mining
  - Guidance System
  - Dynamic Parking Pricing; by time, event, and zone
  - Parking Policy Adoption

- New Time Limit Studies
- New Enforcement Hours Implementation
- All drivers responsible for their own parking fee
- Land Use and Circulation Element (LUCE)
- Create higher turnover in existing parking instead of continuing to build more
- Decrease vehicle trips with Transportation Demand Management Effort
- Manage Parking by efficient pricing

Cities We Can Learn From

Portland, Oregon

Introduction:

Portland is the largest city in the U.S. state of Oregon, near the confluence of the Willamette and Columbia rivers. According to the 2010 Census, it had a population of 583,776, estimated to have reached 609,456 in 2013, making it the 29th most populous city in the United States and the third most populous city in the Pacific Northwest region (after Seattle, Washington; and Vancouver, British Columbia, Canada). Approximately 2,314,554 people live in the Portland metropolitan area (MSA), the 19th most populous MSA in the United States.

Portland was incorporated in 1851 and is the county seat of Multnomah County.[10] The city has a commission-based government headed by a mayor and four other commissioners as well as Metro, a distinctive regional government. The city is noted for its superior land-use planning and investment in light rail. Because of its public transportation networks and efficient land-use planning, Portland has been recognized as one of the most environmentally conscious cities in the world.

The City of Portland Bureau of Transportation is a community partner in shaping a livable city. The Bureau plans, builds, manages and maintains an effective and safe transportation system that provides people and businesses access and mobility. The Bureau's motto is: "We keep Portland moving".

The Bureau offers a wide range of programs including the following:

- SmartTrips
- Ten Toe Express walking campaign
- Portland By Cycle
- Activities and events calendar
- Women on Bikes
- SmartTrips newsletters
- Portland Transportation Resource Guide
- Information about the variety of ways to get around Portland.
- Road Etiquette

- Helpful tips, whether you go by car or bike - plus explanations of Portland's roadway markings
- Family Biking Guide
  - SE Portland Bike/Walk Map
  - NE Portland Bike/Walk Map
  - North Portland Bike/Walk Map
  - NW Portland Bike/Walk Map
  - SW Portland Bike/Walk map
- Car Sharing
- TriMet (bus and MAX light rail)
- Portland Streetcar
- Portland Aerial Tram

The Portland Bureau of Transportation's annual budget is summarized in the table below:

PBOT Funding 2013-14: At a Glance
September 11, 2013

Funding Source	City General Fund	Fees	City Agencies	Grants	Parking	Gas Tax	Bonds
FY13-14 Budgeted Amount	$8.7m	$20.8m	$30.1m	$25.9m	$45.1m	$57.1m	$9.3m
Description	• Property taxes, business licenses, and utility license and franchise fees • PBOT receives less than two percent of the City General Fund	• Permits issued to builders, developers and private citizens using public space • Transportation System Development Charges	• Transportation and parking services provided to other city bureaus ○ PBOT Maintenance contracts with Bureau of Environmental Services, Bureau of Parks & Recreation and Water Bureau ○ PBOT Parking contracts with Police Bureau	• Federal, state and local grants • Portland Development Commission	• Parking meters • Parking permits • Parking citations • SmartPark garages • SmartPark garage commercial space leases	• Gasoline, diesel and other fuel taxes; motor carrier weight-mile charges, and driver and motor vehicle registration and titling fees • Three sources: ○ Oregon's gas tax based on city population ○ Multnomah County's share of Oregon's gas tax based on vehicle registrations ○ Multnomah County's local gas tax	• City of Portland bond sales are one-time revenue sources that are paid back with interest over time
Restrictions for Use	• Streetlights, per City Council decision	• Full cost recovery for services charged a fee • Transportation System Development Charges fund projects approved by City Council	• Full cost recovery for services authorized in intergovernmental agreements	• Specific programs or projects authorized by grant agreements	• On-street parking revenues are unrestricted and spent at the discretion of PBOT as approved by City Council • Off-street parking revenues pay SmartPark costs first; then additional revenues are spent bureau-wide	• Cannot be spent on mass transit and enforcement • One percent must be spent on alternative transportation modes	• For 2013-14, a $9.3 million bond will pay: ○ $2.3m for Streetcar Close the Loop ○ $4.5m for LED Light Replacement ○ $1.5m for Northwest Parking ○ $1m for Parking Pay Stations

A more detailed overview of the Portland Bureau of Transportation FY 13-14 Adopted Budget can be found at: http://www.portlandoregon.gov/transportation/article/481578.

A few highlights include:

- A major program component is made up of Basic Operations and Maintenance. This function equates to $77.8M or 39.7% of the budget and includes the following:
    - Street Preservation maintains arterial and local streets, investigates pavement problems (repaving, pothole repair, fog and crack seal) and responds to hazards.
    - Traffic Safety and Control provides electrical maintenance for signals/streetlights/beacons, traffic control signs, parking signs, street name signs, traffic design engineering, safety evaluations, traffic control plans, street lighting services, and traffic signal operations & timing.
    - Street Cleaning provides residential/arterial street sweeping, leaf removal, transit mall & light rail area cleaning, street area landscaping, green space maintenance and emergency response for de-icing streets.
    - Bridges and Other Structures inspects PBOT's 157 bridges, 555 retaining walls and 188 public stairways and applies findings to maintenance prioritization.
    - Sidewalk Maintenance is responsible for sidewalk corners, ADA ramps, sidewalk posting & inspection, and limited sidewalk and curb repairs.
    - Recycling Operations processes asphalt, old concrete, street debris and leaves to produce usable products such as aggregate, rock, gravel, compost, sand and asphalt patch material.
    - Environmental System Maintenance inspects and cleans the sewer system; paid for by BES.
- The Capital Improvement Program budget equals $58.4M or 29.8% of the annual budget.
    - The CIP program is primarily funded by $34.4M in grants and bonds for specific projects, and PBOT contributes a small $10M towards match on the grant-funded projects.
    - The larger projects in FY 13-14 include: Portland-Milwaukie Light Rail, Sellwood Bridge, Ramona/Holgate Street Improvements, Division Streetscape, 136th Avenue Sidewalk Improvements, Williams Street Improvements, and the LED Lighting project.
    - The CIP program also includes $7.6M in GTR committed to existing projects not completed in prior years, as well as $4M in projects for other city agencies. Nearly $14M of the CIP is dedicated to reconstruction projects.
- Annual parking revenues account for $26.1M or 13.3% of the budget.
    - PBOT provides both On-Street Parking and Off-Street Parking Garages. The on-street parking is monitored through enforcement officers. PBOT contracts with Central Parking for operations of the parking garages.
- Active Transportation account for $4.5M or 2.3%.

  - This program coordinates pedestrian, bicycle and transit related activities with constant engagement with the community. They build and promote a network with access for all Portlanders, regardless of age, ability, income level, race or ethnicity. Specific programs include Sunday Parkways, Safe Routes to School and Smart Trips.
- Streetcar & Tram Operations account for $10.3M or 5.3%.
  - The Streetcar is funded through a combination of Fees, Tri-Met, Sponsorships, Fare revenue and GTR. The GTR component is $4.8M. The Tram is 100% cost-recovery through fare revenue and is operated in partnership with OHSU.

SmartPark Program

SmartPark Garages

To make parking faster and easier at SmartPark garages, in 2012 major upgrades were made at five of the six convenient downtown Portland garages.

Parking Pay Stations

New paystations for daily parkers were installed along with automated gates at exit lanes. The garage modernization effort was done to ease peak time traffic congestion and improve customers' parking experience at SmartPark.

Cashiers are no longer available at garage exit lanes, but please know that help is always available. All paystations and exit lanes have push-button intercoms should you need assistance. In addition, each garage has a customer service representative on duty.

Except for O'Bryant Square, all SmartPark garages now have easy-to-operate automated pay-on-foot paystations.

The SmartPark garage automation project utilizes: Amano McGann Pay-On-Foot Central Paystations (accepting cash, credit/debit cards, validation vouchers, and coupons) and Credit Card Only Central Paystations (accepting credit/debit cards, validation vouchers, and coupons) installed on the ground level near all elevators.

New exit lane credit card only paystations are located at each garage exit lane.

Intercom and camera systems are installed at each paystation. For customer service, simply press the intercom button on the paystation. When the button is pressed, a live person will be available for assistance.

The access card readers for monthly parking customers remain unchanged.

Funding - The garage automation project was funded by parking garage revenue.

Electric Vehicle Charging

SmartPark offers electric vehicle (EV) charging stations at the following garages:

- 4th and Yamhill (three charging stations on Level 8)
- 3rd and Alder (two charging stations on Blue Level 3)
- 10th and Yamhill (four charging stations on Level 2)

The charging fees are currently $1 for Blink Members and $2 for Blink Guests. Please note there are no membership fees. See www.BlinkNetwork.com for details.

Metered Parking

The City of Portland has four parking meter districts: Downtown, Lloyd, Marquam Hill, and Central Eastside. These districts contain approximately 9,000 metered spaces with various parking rates and hours of operation. All metered parking spaces have various time limits that are displayed on signs near the spaces. Except in city parks, all districts observe the same holidays when parking is free.

Presently, Portland is using two types of meters - the Single-Space and the SmartMeter (paystation) to monitor approximately 9,700 spaces. Single-space meters accept nickels, dimes, and quarters. SmartMeters accept nickels, dimes, quarters, the small dollar coin, and credit/debit cards as payment.

If a SmartMeter is broken you must still provide proof of payment, so purchase a receipt from the nearest machine. If a single-space meter is broken, you may park your vehicle for the time limit of that meter; after that you must move your vehicle from the block face.

Bike Parking Corrals

The Portland Bureau of Transportation today announced that New Seasons Market at 4034 SE Hawthorne Boulevard is the site of the 100th bicycle parking corral in the city. The installation is a milestone in a program that has helped Portland businesses increase on-street customer parking ten-fold in the last nine years.

Bicycle corrals provide efficient use of the street for bicycle parking in areas with high demand. Corrals typically can park 12 to 24 bicycles in the same space as one to two cars. The bike corral at the Hawthorne New Seasons is the Bureau's 100th installation, far surpassing the number of on-street bike parking facilities in any other US city. View a list of all 100 businesses and bike parking corral locations and a map of all 100 installations.

Most of Portland's bicycle parking is provided in bike racks on the sidewalk. However, in a growing number of commercial areas the high demand for bicycle parking is too much for the sidewalk. In other cases, local businesses simply prefer bicycles in the parking strip rather than autos in order to attract a customer base that is turning more to the bicycles for transportation. In all cases, corrals are installed at the express request or cooperation of the adjacent businesses.

Altogether, Portland businesses and the city have replaced 163 auto parking spaces with 1,644 bicycle parking spaces. The Transportation Bureau continues to respond to business requests as bike parking demand increases, and currently has 98 additional applications under review.

<u>Transportation Demand Management:</u>

The City of Portland has a wide range of TDM programs. One item of interest is the City's "Employer Transportation Tool Kit". This document discusses why should businesses invest in sustainable transportation for its employees?

It includes "Easy & Essential Strategies" and also focuses on education as education lies at the core of changing commute behavior and new employees are likely to be more receptive.

The City's SmartTrips Business program will also conduct a free marketing program at individual work sites.

The employee education program includes:

- Providing transportation options information with new to all employees annually

- Conducting commute challenges to encourage employees to try sustainable incentives
- Promoting car sharing because members drive less, are less likely to own vehicles and have more choices for getting around during the work day. Plus, Zipcar provides your employees a discounted membership price and driving rates at no cost to you.
- Providing interactive web sites.
- Promote the elimination of free parking for employees.

Promoting transportation options is a low-cost benefit for your employees and a tax advantage for your company. Even small transportation benefits can increase employee recruitment and retention, while providing better access for customers.

The Employer Transportation Tool Kit can be downloaded at the following location:

http://www.portlandoregon.gov/transportation/article/400752

SmartTrips Business

SmartTrips Business is a Portland Bureau of Transportation outreach program that promotes transportation options for employers, commuters, and customers. SmartTrips Business encourages affordable, sustainable transportation. SmartTrips Business partners with Portland employers citywide to promote commuting choices and to encourage neighbors to walk and bicycle to local businesses. The program offers businesses a suite of transportation resources, including a free installed bike rack, employee commute options kits, neighborhood biking and walking maps for customers, and customized workshops for employees.

The SmartTrips Business Annual Report can be downloaded at: http://www.portlandoregon.gov/transportation/article/382810.

Transportation System Performance Monitoring

The monitoring of system performance has long been a part of operational management of the transportation system. A more recent trend is to apply performance monitoring to the evaluation of transportation policy and planning objectives. The benefits of performance monitoring in transportation planning include:

- Measurement of and feedback on existing policies and plans
- Informed decision making

- Increased accountability through periodic reporting

The Transportation System Plan (TSP) incorporates a set of performance indicators and measures to monitor the results of the plan over its 20-year span. These serve as the dynamic link between TSP policies and plan implementation by providing a periodic feedback and update process to ensure the TSP satisfies the City's transportation and land use goals.

Performance monitoring satisfies mandated benchmarks specified by the State Transportation Planning Rule (TPR). It also provides criteria for advancing major capital improvements from the TSP into the capital improvement program (CIP). For more detail, including specific modal target and other performance metrics see the Transportation System Plan article located at:

http://www.portlandoregon.gov/transportation/article/370492.

San Francisco, California

Introduction:

San Francisco, officially the City and County of San Francisco, is the cultural center and a leading financial hub of the San Francisco Bay Area and Northern California.

The only consolidated city-county in California, San Francisco encompasses a land area of about 46.9 square miles on the northern end of the San Francisco Peninsula, giving it a density of about 17,867 people per square mile. It is the most densely settled large city (population greater than 200,000) in the state of California and the second-most densely populated major city in the United States after New York City. San Francisco is the fourth-most populous city in California, after Los Angeles, San Diego and San Jose, and the 14th-most populous city in the United States—with a Census-estimated 2013 population of 837,442. The city is also the financial and cultural hub of the larger San Jose-San Francisco-Oakland combined statistical area, with a population of 8.5 million.

Transportation Strategic Plan

The San Francisco Municipal Transportation Agency (SFMTA) developed a program Strategic Plan in 2013. The plans tag line is:

"San Francisco: great city, excellent transportation choices."

The following are some of the high level elements of the plan:

Mission Statement

- The SFMTA plans, designs, builds, operates, regulates, and maintains one of the most diverse transportation networks in the world. In addition to the four modes of transportation (transit, walking, bicycling and driving, which includes private vehicles, taxis, carsharing, on-and off-street parking and commercial vehicles), the Agency directly oversees five transit modes (bus, trolley bus, light rail, historic streetcar, and cable car), in addition to overseeing paratransit service, which serves individuals unable to use fixed-route transit service.

Core Values For the Transportation Network:

- Transit First: Transit, walking, bicycling, taxi, carsharing, and ridesharing have the highest priority
- Complete and Green Streets: Streets are designed and managed to be attractive, inviting public spaces for people

- Green, Clean, and Quiet Mobility: Use the greenest, most efficient, and quietest technologies available
- Social Equity and Access: Prioritize the most affordable and accessible modes

Core Values for the Transportation Team:

- Leadership: Realizing and implementing the vision to the fullest
- Teamwork: Working together in partnership to provide excellent customer service
- Integrity: Working with the highest standards of honesty and ethics
- Accountability: Taking joint responsibility to set and meet or exceed the Agency's goals
- Effectiveness: Achieving results through collaboration and efficient use of resources
- Respect: Holding those with and for whom we work in high esteem and regard

Strategic Goals:

The Strategic Plan's four overarching goals will shape how the Agency prioritizes its attention, resources and staff over the next six fiscal years.

- Create a safer transportation experience for everyone.
- Make transit, walking, bicycling, taxi, ridesharing and carsharing the preferred means of travel.
- Improve the environment and quality of life in San Francisco.
- Create a workplace that delivers outstanding service.

FY2013-FY2018 SFMTA Strategic Plan

By 2035, San Francisco is projected to have an approximate 15 percent growth in population and a 25 percent growth in employment. This growth requires us to re-think our resources and tools to meet the city's quality of life objectives. SFMTA can leverage its multi-modality to facilitate big picture planning, design, construction, operations and overall funding management to implement complete streets projects that make non-auto modes more attractive to all residents, workers and visitors to San Francisco.

Under the FY2013-FY2018 SFMTA Strategic Plan, the SFMTA committed to a mode share goal of 50 percent auto and 50 percent non-auto (transit, bicycling, walking and taxi) for all trips by 2018. Meeting this mode shift goal will put the SFMTA and the city as a whole on track to meet the transportation needs of future residents, employees and visitors.

Modal & Programmatic Strategies

Taking a closer look at each of the transportation modes in San Francisco, the SFMTA is currently studying the needs, benefits and costs to enhance each mode network in the city. With a focus on improving safety, encouraging mode shift and improving the quality of life in San Francisco, these strategies layout how the SFMTA and the City and County of San Francisco can achieve the 2018 mode split goal.

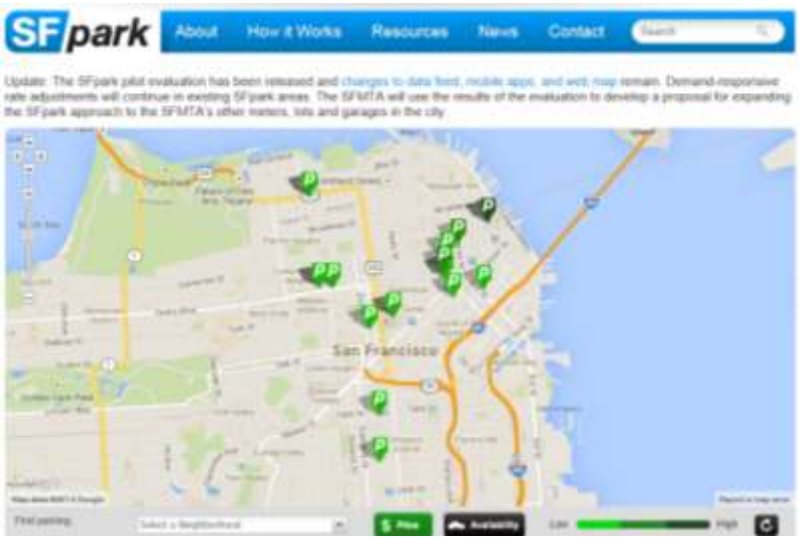
Strategic Plan Metrics Reports

Strategic Plan Metrics Reports measure the SFMTA's progress toward meeting its goals, including Service Standards mandated by Proposition E. These metric reports are delivered monthly to the SFMTA Board's Policy and Governance Committee. The link below provides access to the September 2014 Metrics Report. All other reports are available on-line.

http://www.sfmta.com/sites/default/files/Strategic%20Plan%20Metrics%20Report%20-%20September%202014%20FINAL.pdf

SFpark

SFMTA established SFpark to use new technologies and policies to improve parking in San Francisco. Reducing traffic by helping drivers find parking benefits everyone. More parking availability makes streets less congested and safer. Meters that accept credit and debit cards reduce frustration and parking citations. Circle less, live more - see the Project Description for more information about SFpark, including real-time parking information and the SFpark smart phone app.



The SFpark pilot evaluation has been released and changes to data feed, mobile apps, and web map remain. Demand-responsive rate adjustments will continue in existing SFpark areas. The SFMTA will use the results of the evaluation to develop a proposal for expanding the SFpark approach to the SFMTA's other meters, lots and garages in the city.

How SFpark Works

SFpark works by using smart pricing so that drivers can quickly find open spaces. To help achieve the right level of parking availability, SFpark periodically adjusts meter and garage pricing up and down to match demand. Demand-responsive pricing encourages drivers to park in underused areas and garages, reducing demand in overused areas. Through SFpark, demand-responsive pricing works to readjust parking patterns in the city so that parking is easier to find.

What are the major elements of SFpark?

- Demand-responsive pricing to create parking availability
- Longer time limits at parking meters to make parking more convenient
- Meters that make it easy to pay by accepting credit cards and other forms of payment
- Garage facility upgrades to make garages more convenient

What are the benefits of SFpark?

- Convenient parking. Drivers can find and pay for parking more easily.
- Fewer parking tickets. Longer time limits and meters that make it easy to pay will help drivers avoid parking tickets.
- Improved economic vitality. Improving access to commercial areas will foster economic activity in San Francisco's downtown and neighborhood commercial districts.
- Faster and more reliable Muni service. Muni can be faster and more reliable when double-parking and congestion are reduced.
- Safer streets. Less circling means less traffic and fewer distracted drivers, leading to fewer car, bicycle and pedestrian collisions.
- Better air quality and reduced greenhouse gas emissions. Less circling means less traffic, driving and pollution.

How many meters and garages are covered by SFpark?

- 7,000 of San Francisco's 28,800 metered spaces.
- 12,250 spaces in 15 of the 20 parking garages that the SFMTA manages.

How is SFpark funded?

- Funding for SFpark project comes primarily from a $19.8 million grant from the U.S. Department of Transportation's Urban Partnership Program.

Is SFpark a way for the City to raise revenue?

- No. The primary goal of SFpark is to improve parking availability. Hourly parking rates have increased in high-demand areas and at high-demand times but rates are also decreasing in low-demand areas and times. While parking meter revenues may increase, parking ticket revenue will decrease due to longer time limits and new meters that make it easy to pay. By reducing circling and double-parking, SFpark will help the SFMTA reduce Muni costs by speeding up buses and streetcars.

Has the SFpark approach to parking management been tested elsewhere?

- While several cities have implemented some elements of SFpark, San Francisco is the first city to put in place a full package of smart parking management technology and policies in such an extensive

area. SFpark will be carefully evaluated so its benefits can be extended throughout San Francisco as well as to other cities.

If the goal is to create the right level of parking availability, why relax time limits?

- At most SFpark meters, the time limit for regular parking is four hours; and some meters have no time limit at all. SFpark emphasizes the use of demand-responsive pricing to achieve parking availability goals rather than time limits to achieve a vague turnover goal, recognizing that turnover is simply a strategy to achieve availability. Easing time limit restrictions makes parking more convenient for drivers, but it does not mean that all people will park longer. Extended time limits simply allow individuals to park longer if they want to.

Will SFpark drive people and business away from the City?

- No. Surveys show that drivers in the Bay Area place a high value on parking convenience. Right now, some people don't shop in San Francisco because they feel parking is too hard to find. SFpark's goal is to make parking easier and more convenient. The price of parking will be the lowest price possible to achieve the availability target. Time limits are also longer and the new meters make it easier to pay, helping change perceptions about parking in San Francisco.

Won't the SFpark app encourage drivers to use their smartphones while driving?

- SFpark is intended to create an environment that leads to fewer distracted drivers, improving safety for all users of the road. Every time the SFpark app launches, customers see a warning message reminding them that using a smartphone while driving is dangerous and against the law. While the app is open, it shows an additional reminder if the phone is detected moving faster than 10 miles per hour.

The smartphone app and web map are expected to be accessed before a trip begins or to be operated by a passenger if accessed while in motion. SFMTA strongly discourages illegal use of the SFpark app including accessing the app while driving.

How can I get parking information on my phone if I don't have an iPhone or Android?

- Parking information is available on SFpark.org as well as on the iPhone and Android apps. In addition to the apps provided by the SFMTA, outside developers are using the SFpark data feed to create other apps.

- For those who do not use smart phones, the region's 511 system offers on-street parking and garage availability and rate information. SFpark no longer provides garage information via text message because of low service usage.

The pilot phase

SFpark has tested its new parking management system at 7,000 of San Francisco's 28,800 metered spaces and 12,250 spaces in 15 of 20 City-owned parking garages. Federal funding through the Department of Transportation's Urban Partnership Program pays for 80 percent of the SFpark project. After collecting data to measure the goals of the pilot, analysis and evaluation of the pilot is underway; look for the full evaluation report in spring 2014.

Resources

As a federally funded demonstration, SFpark publicly shares extensive information about the project. This information may be of interest to customers, the press, academics and city administrators considering how to manage parking. Project documents, maps, images and data are available for download here: http://sfpark.org/resources-overview/. Examples of available resources include:

- Maps
  - Featured Resources
    - On-street parking census data and map (April 2014)
    - Meter rate adjustment overview maps, August 2013
    - Meter rate adjustment overview maps, April 2013
- Images
  - Featured Resources
    - Android app screenshots with phone
    - Photos of new SF*park* parking garage wayfinding signs
    - iPhone app screenshots with iPhone

- Documents
  - Featured Resources
    - On-street parking census data and map (April 2014)
    - Estimating parking occupancy using meter payment data
- Videos
  - Featured Resources

        - ITS America Smart Parking Symposium video
        - SPUR MFAC Award video
        - SF*park* overview video
- Data
    - Featured Resources
        - On-street parking census data and map (April 2014)
        - Meter rate adjustment spreadsheet, August 2013
        - Garage rate adjustment spreadsheet, April 2013

Pilot Program Evaluation

The SFpark pilot program evaluation report is a very well done and comprehensive document. The full report can be downloaded at the link below:

http://direct.sfpark.org/wp-content/uploads/eval/SFpark_Pilot_Project_Evaluation.pdf

The following is an outline of its contents.

- Executive summary
- Overview of SFpark.
- Effectiveness of Parking Pricing
- Effectiveness of Parking Management
- Parking Enforcement
- Congestion and Environment
- Transit Performance
- Customer Experience
- Economic Vitality
- Financial Analysis
- Technology

Transportation Demand Management:

Transportation Demand Management (TDM) is a layer of policies, programs, information, services, and tools that work with the transportation infrastructure and operations to support the use of sustainable modes for all trips. Together, TDM strategies result in reducing the need to rely on single occupant vehicle (SOV) trips and can help reduce households' need for car ownership. The goal of TDM is to help households, employees, and visitors make more of their trips on transit, by bike or on foot, or in shared vehicles like taxis and carshare cars. Not only do TDM strategies reduce congestion, they improve the utilization of existing services and can result in cost savings to companies and individuals.

San Francisco has one of the most dynamic economies and beautiful environments in the world. It is also the center of one of the most congested and most expensive regions in the nation and is experiencing a growing demand for transportation. Simply put, we cannot accommodate the increasing demand for travel within the city through driving—limited roadway space, as well as the impacts of driving on public health and the environment, makes the increased proportional use of the other modes more critical to ensure and enhance our quality of life.

The SFMTA's goal is that at least fifty percent of all trips should be made by these sustainable modes by 2018. TDM policies, projects, and programs support this goal by making it more convenient, cost-effective, and easier to take transit, walk, bicycle, taxi, car sharing or ride sharing for more trips.

TDM programs function in several key ways:

- Provide easy to understand information about all travel choices
- Use marketing and incentives to shift trips to more sustainable modes
- Influence land use to improve viability of sustainable modes
- Use market pricing to balance transportation demand

SFMTA TDM PROGRAM FRAMEWORK

The SFMTA's broad portfolio of services allows it to look at the big picture of transportation and seize those opportunities and partnerships with three strategic TDM focus areas:

- Land use and policy coordination
- Citywide parking demand management
- Customer oriented travel choice marketing, education and outreach

Land-use/TDM Policy Coordination:

- The SFMTA partners with land-use agencies to ensure mixed land-use planning that result in developments with small street block sizes, activated ground floors, facilities that promote sustainable modes of travel. The goals of this work are to:
- Minimizing distances between jobs, housing and services to minimize the need for driving trips
- Create the demand for, and viability of high quality transit, bicycle and walking opportunities to shift demand from driving
- These development designs also create new opportunities for private investment to support the city's transportation choices by:
- Investing development funds into transit, bicycle and walking infrastructure through cost savings from reduced parking
- Including transit passes, and bike sharing and carsharing memberships as part of housing costs
- Unbundling parking and requiring peak hour parking access fees for commercial uses when garage entries and exits have the most impact on the transportation network
- Citywide parking demand management: Managing parking well is one of the most powerful strategies to affect travel choices. The SFMTA leverages the existing and new development designs to manage congestion, auto trips and VMT generation by:
- Managing on-street and off-street parking pricing to ensure optimal usage and availability
- Removing policies that encourage driving to congested areas/ periods of the day
- Promoting incentives to reduce on-site auto parking
- Supporting shared trips through policies that support taxis, car sharing, scooter sharing, and bicycle sharing to scale on our streets, in garages, and in new developments
- Investing money generated from parking fees into the sustainable transportation system
- Multi-modal marketing, education, and outreach programs: Clear information, promotion and encouragement can shift trips for residents, workers, students, and visitors. The SFMTA is pursuing communication strategies including:

- User-friendly information about transit routes, payment, and availability
- Wayfinding signage designed for people on foot, on bike, and on transit
- Multi-media encouragement campaigns in partnership with businesses and other institutions
- Targeted education campaigns about transportation options

Transportation Demand Management Programs

Examples of TDM programs currently underway in San Francisco include:

- SFpark: collects and distributes real-time information about where on-street and off-street parking is available, so that car drivers can quickly find parking spaces. To help achieve the right level of parking availability, SFpark periodically adjusts meter and garage pricing to match the level of demand, which encourages drivers to park in underutilized areas and garages, reducing demand in overused areas.
- Travel Time Reduction Program: These delay-reducing treatments on the Muni Rapid Network make transit more reliable and appealing for customers.
- Wayfinding: Temporary installations for special events (like Fleet Week 2012 an America's Cup 2013) and permanent installations (Balboa Park station, Muni Metro hub stations) provide information about destinations and transit hubs for people on foot and on bike
- Fast Pass, Class Pass programs: Reduced price monthly and semester Muni passes make transit even more affordable.
- Bicycle Sharing: San Francisco is piloting a network of shared bicycles for short-term use.
- NextMuni: Provides real-time information at bus stops, on the web, and on smart phones.
- Emergency ride home program: Provides a guaranteed ride home in case of emergency for those who travel to work by bike, on foot, in a carpool, or in transit.
- San Francisco Rideshare: Provides carpool and vanpool trip matching service.
- Safe Routes to School: Promotes safe walking and biking to school.

- TDM for Tourism: Working with the travel and tourism industry to promote transit, walking, biking and other sustainable modes for recreational and business visitors. Visitor-focused maps, communications, and transit passes and cards.
- Commuter Shuttles Pilot: A pilot that would test sharing a limited number of Muni stops with commuter shuttles through a permit program.
- Commute By Bike: A pilot education, encouragement, and technical assistance program that works with employers on the bike network to increase bike commuting among employees.
- TDM Partners Program: A multi-agency collaboration to pilot new programs with private sector partners to reduce drive-alone trips. Pilots include parking cash-out and parking management and innovative ridesharing programs.
- TDM for special events: Strategies to promote sustainable travel for special event trips. These include collaborations with regional transit agencies on communications, provision of enhanced transit, temporary wayfinding, satellite parking, and inclusion of transit fare in tickets/passes.

Seattle, Washington

Introduction:

Seattle is a coastal seaport city and the seat of King County, in the U.S. state of Washington. With an estimated 652,405 residents as of 2013, Seattle is the largest city in the Pacific Northwest region of North America and the fastest-growing major city in the United States. The Seattle metropolitan area of around 3.6 million inhabitants is the 15th largest metropolitan area in the United States. The city is situated on a narrow isthmus between Puget Sound (an inlet of the Pacific Ocean) and Lake Washington, about 100 miles (160 km) south of the Canada–United States border. A major gateway for trade with Asia, Seattle is the 8th largest port in the United States and 9th largest in North America in terms of container handling.

Program Summary:

On- and Off-street Parking Management:

Parking is a key piece of the transportation puzzle. As a limited resource that's often in high demand, SDOT manages on-street parking to: Balance competing needs (transit, customers, residents, shared vehicles),

- *Move people and goods efficiently,*
- *Support business district vitality, and*
- *Create livable neighborhoods.*

SDOT has a variety of programs and projects in place to meet these goals Parking responsibilities are spread throughout the city, so we work closely with Seattle Police Department Parking Enforcement, Department of Planning and Development (off-street parking), the Municipal Court, Finance and Administrative Services, and others.

Specific parking programs/resources include:

- RPZ permit
- Temporary no parking zones
- Request a disabled parking space
- Request a loading zone
- Truck permits
- Carpool permits

- Report a pay station problem
- Paint your driveway curb
- Request a disabled parking placard
- Report an abandoned vehicle
- Contact Parking Enforcement\
- Find out if your car has been towed
- Pay a parking ticket
- Find out about the scofflaw booting program

Parking Rate Changes

SDOT adjusts rates, time limits and paid hours of operation in order to:

- Help customers reliably find parking within easy walking distance of their destinations, while ensuring spaces are well used
- Conserve fuel, reduce emissions, and lessen traffic congestion from drivers circling in search of parking
- Increase access to businesses by ensuring turnover of parked cars

Based on City policy, SDOT's goal is to have one to two available spaces on a block throughout the day, which translates to a target occupancy range of 70% – 85%. At that occupancy, parking is well utilized, and customers and visitors can reliably find an available space.

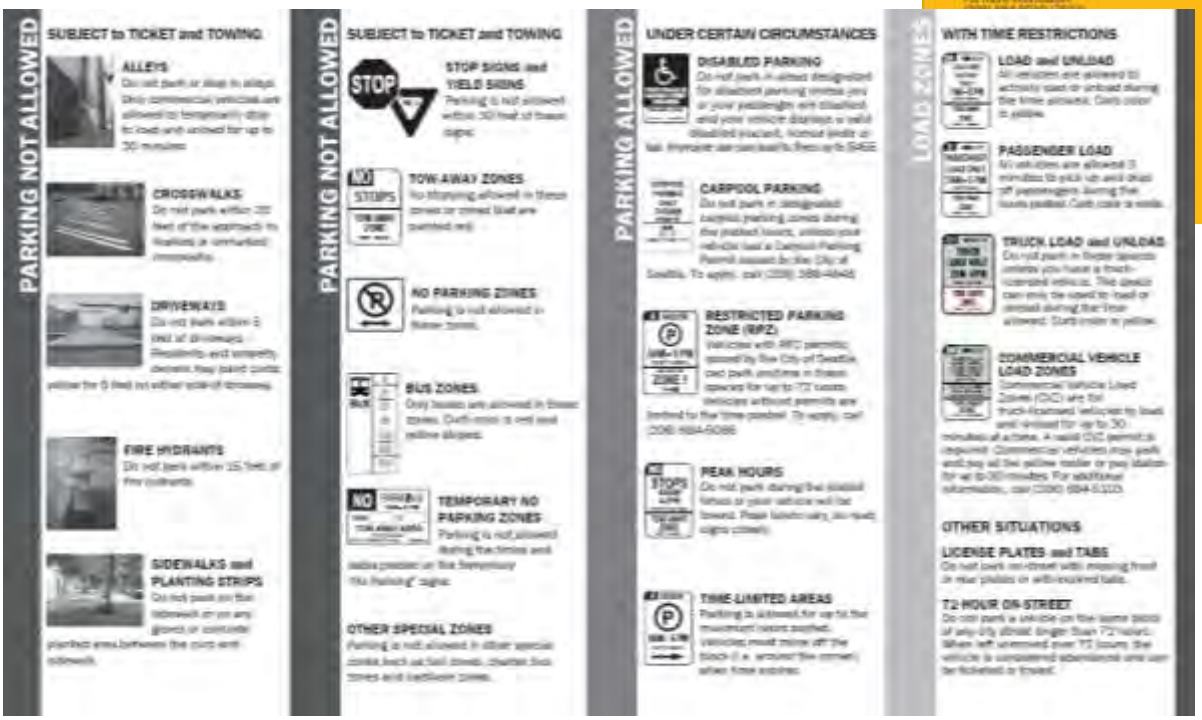
An interactive map provides current parking rates and time limits. The information in this map is updated as changes occur. A parking survey data collection effort is completed annually and is used to update parking pricing based on demand.

A video discussing updates to parking rates is provided on the SDOT website.

Can I Park Here? Brochure

The "Can I Park Here: brochure provides 22 ways to avoid getting a parking ticket and other handy parking info.

SDOT has a variety of programs and projects in place to meet these goals (learn more via links to the left). Parking responsibilities are spread throughout the city, so we work closely with Seattle Police Department Parking Enforcement, Department of Planning and Development (off-street parking), the Municipal Court, Finance and Administrative Services, and others.



Kimley»Horn SRF Consulting Group, Inc.

Seattle's Innovative E-Park Program

When you visit downtown, e-Park signs help you find parking faster. The signs let you know how many spaces are available in twelve garages throughout the Downtown Retail Core, Pike Place Market, Pioneer Square and central Waterfront neighborhoods.

Look for dynamic signs at key downtown points to guide you to participating garages with available spaces. The signs tell how many spaces are currently available in each garage. Real-time parking information takes the guesswork out of parking and helps reduce congestion, leaving you more time to enjoy all that downtown has to offer.

A video describing the e-Park program can be seen at:

http://www.youtube.com/watch?v=4d5Ng-LSwEY&feature=player_embedded

e-Park System Basics

- What is e-Park?
  - E-Park is a parking guidance system that helps visitors to downtown find parking faster.
- What is the purpose of e-Park?
  - As Downtown Seattle loses street parking to construction, we need to maintain convenient access to parking for customers and visitors. e-Park helps traffic flow and supports downtown commerce by helping customers and visitors find parking more quickly.
- How does e-Park work?
  - At key entrance points to downtown, dynamic signs displaying real-time parking information guide customers and visitors towards participating garages that have available spaces. Wayfinding signs confirm that drivers are on the right path.
  - Smart phones users can readily access e-Park data by bookmarking www.seattle.gov/eparkmobile, so that real-time space counts are always handy.
  - Parking customers can also plan ahead by going to www.seattle.gov/parkingmap to get more information about where to park downtown from an online, interactive citywide parking map. The Seattle Parking Map displays on-street parking

information and garage and lot locations, rates, and hours of operation.

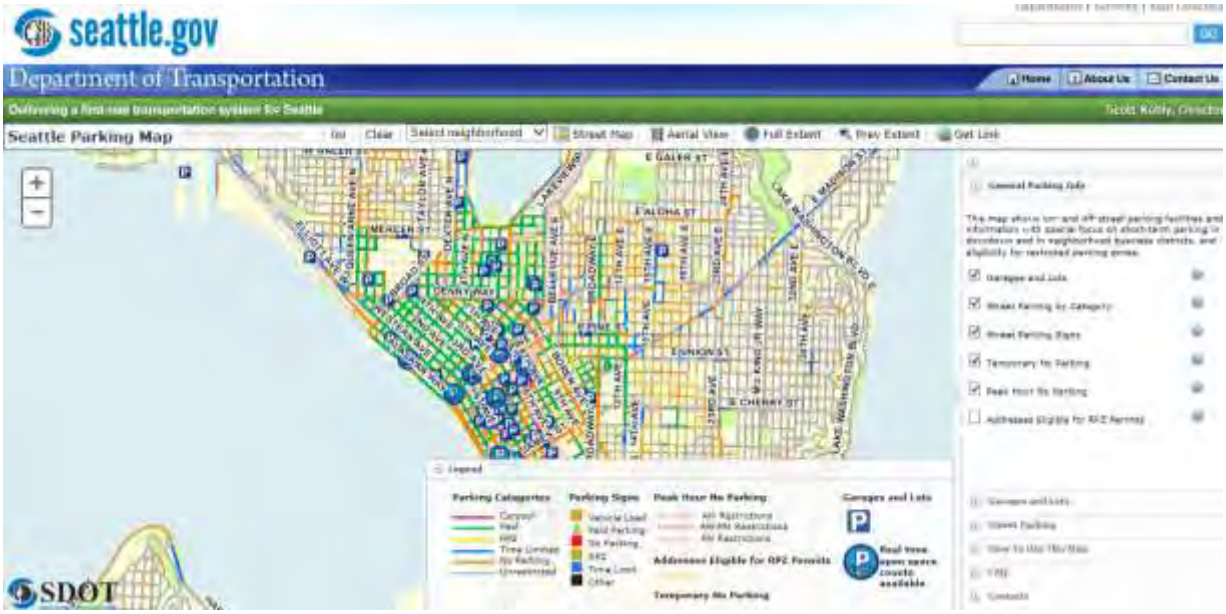
- How many garages are participating in the program?
  - Twelve garages throughout the Retail District Central Waterfront, Pioneer Square, and Pike Place Market destination areas are now participating in e-Park. Collectively, these garages have over 7,000 parking spaces.
- How were the participating garages chosen?
  - The City reached out to garages in the downtown core that could provide real-time information about space availability and had an interest in partnering. About half of the garages in the program are in Pioneer Square and the Central Waterfront; neighborhoods where on-street parking has been impacted by the SR-99 Tunnel Project and the Seawall Reconstruction Project.
- Are the prices comparable to other garages?
  - The e-Park signs and Seattle Parking Map are meant to assist drivers in finding available parking and planning their trip ahead of time online. Other than Pacific Place, the city does not own these facilities or set their rates and hours of operation.
  - Rate information for many garages in the Central Waterfront and Pioneer Square areas can be found at http://downtownseattleparking.com
- How do drivers use it?
  - There are two ways to use e-Park:
    - Drivers can plan ahead by going online to www.seattle.gov/eparkmobile or www.seattle.gov/parkingmap to plan their trip and find where to park.
    - Dynamic signs with an e-Park logo are located at major routes into Downtown. As drivers follow the signs and get closer to participating garages, they will see additional signs that list garage names and the number of spaces available. An e-Park sign with space availability will also be at the garage entrance. Dynamic signs and real-time information make finding parking downtown easy.
- Who is it intended for?
  - Short term parkers – meaning visitors to downtown using parking for less than four hours.
- Why is it focused on short-term parking?
  - The SR-99 Deep Bore Tunnel Project and Elliott Bay Seawall Replacement Project require use of the on-street spaces under the Viaduct for traffic routing and construction staging purposes. By the time the Alaskan Way Viaduct is removed in 2016, over 600 on-street spaces under the Viaduct will have also been removed. These are short-term spaces for customers and visitors. e-Park uses existing parking garages to help those coming downtown to shop, eat, see the dentist and make other short visits by guiding

them to alternate short-term spaces available in off-street parking garages.

- What has the City invested in e-Park?
  - The downtown retail program, which started in September 2010, cost about $2.5 million and was primarily funded by City bonds. The 2013-2014 expansion underway now costs about $1.5 million. Partner garages are responsible for making technology upgrades as needed to integrate into the city electronic guidance parking system. Pioneer Square and Central Waterfront garages were added in partnership with the Washington State Department of Transportation (WSDOT).
- What other cities are doing this program?
  - Guidance system technology is commonly used throughout European cities. It is increasingly being adopted in U.S. cities, including Los Angeles, San Jose, San Francisco, California and Portland, Oregon. Seattle's e-Park program is unique because of our partnership with privately owned garages.
- Where does this project fit into citywide goals?
  - e-Park is a key program in meeting City goals to move people and goods and contribute to vibrant neighborhoods. By improving information available to parkers and helping them find parking faster, e-Park reduces congestion and pollution caused by motorists circling for a parking space.

Seattle On-Line Parking Map

This map shows on- and off-street parking facilities and information with special focus on short-term parking in downtown and in neighborhood business districts, and eligibility for restricted parking zones.



Curb Use Priorities in Seattle

Curb space is part of the public street system, and as such it is a public good that is available for all people to use. The Seattle Department of Transportation regulates the use of curb space to address competing needs, to assist in moving people and goods more efficiently, to support the vitality of business districts, and to create liveable neighborhoods. The Department prioritizes the uses for curb space as follows (click here for definitions of common parking terminology)

In residential areas the priorities for curb space use are:

- Transit use (bus stops and spaces for bus layover),
- Passenger and commercial vehicle loading zones,
- Parking for local residents and for shared vehicles, and vehicular capacity.

In business or commercial areas, including blocks with mixed-use buildings containing residential units, the priorities for curb space use are:

- Transit use (bus stops and spaces for bus layover),
- Passenger and commercial vehicle loading zones,
- Short-term customer parking (time limit signs and paid parking typically for 1- or 2-hours);
- Parking for shared vehicles, and vehicular capacity.

The Department strives to balance the diverse and competing needs for curb spaces uses, and considers the adjacent land uses both in terms of each specific block as well as the larger surrounding area. In general the City's priorities (as present in the Comprehensive Plan and other similar documents) do not support the use of on-street parking for long-term commuter parking.

SeaPark is SDOT's Performance-Based Parking Pricing Program

Since late 2010, SDOT has set on-street parking rates and hours of operation based on occupancy data to achieve a goal of one to two spaces available per block for visitor and shopper access. We believe we can improve the parking experience by aiding people in finding parking faster, which also means less circling traffic congestion and vehicle emissions.

SDOT conducts an annual paid parking study that is used for the data analysis in rate-setting. The City adopted Seattle Municipal Code 11.16.121 in late 2010 and conducted a Performance-Based Parking Pricing Study in 2011.

The 2011 Performance-Based Parking Pricing Study, conducted by Kimley-Horn and Associates can be found at the link below:

http://www.seattle.gov/transportation/parking/docs/SDOT_PbPP_FinRpt.pdf

Seattle's Transportation Options Program

SDOT's Transportation Options program provides a variety of services to help residents, employers, building managers, and developers access tools and resources for getting around Seattle. Our programs include:

- The Way to Go Program provides resources and information to residents and visitors on Seattle's transportation options.

- The NavSeattle Program is for residential building managers and developers. The program connects Seattle's growing multifamily residential sector to resources for promoting a building's transportation amenities.
    - SDOT's Pilot Program to Promote Transportation Options in Multifamily Residential Buildings
    - NavSeattleTo make sure Seattle residents have the information they need to get around, we're launching the NavSeattle pilot program in 2014. The program will connect multifamily developers and building managers with transportation information, resources, and services to share with current and future residents. The goal of the NavSeattle pilot is to promote transportation options in areas of the city where they're most accessible so that as we grow as a city, we continue to address issues of air quality, congestion, and affordability.
    - In 2014 SDOT's NavSeattle pilot will work with a small group of buildings in Seattle's Urban Villages to develop the strategies listed below.
    - NavSeattle Pilot Strategies
        - Ensure Building Managers Know about Nearby Transportation Options
        - Provide Comprehensive Transportation Information to Tenants
        - Hold Events to Promote Transportation Options
        - Provide Transportation Memberships & Passes
        - Provide Discounts and Materials to Promote Nearby Businesses & Services

        - Install Digital Wayfinding/Trip Planning Amenities
        - Ensure Quality Bike Parking Access
        - Evaluate Building Vehicle Parking Management Strategies
- The Commute Trip Reduction Program (CTR) supports employers in promoting transportation options to reduce congestion and air pollution.
    - SDOT's Program for Employers to Promote Transportation Options for Employees
    - The City of Seattle's CTR program is a partnership that connects employers with the resources they need to provide innovative transportation programming for their employees. For over twenty years, this partnership has helped employers provide transportation benefits for commuters whose travel choices make significant contributions to reducing air pollution, traffic congestion and energy consumption. It has yielded great results with 64% of commuters from participating businesses now using transit, walking, carpooling, bicycling, or telecommuting. The city aims to grow this partnership with businesses and continue to reduce the number of commuters driving alone. To learn more about the benefits and services provided to employers participating in the CTR program click here
    - The Seattle Department of Transportation (SDOT) works with local and regional partners to assist CTR employers with reaching their goals. SDOT partners with Commute Seattle to provide CTR services to all employers located in Seattle's Center City.
- The Transportation Management Program (TMP) assists owners and managers of large buildings in developing and evaluating building-wide transportation programs.
    - SDOT's Program to Promote Transportation Options in Large Buildings
    - Transportation Management Programs (TMP) play an important role in helping Seattle achieve its transportation goals by reducing drive-alone trips. Similar to the Commute Trip Reduction Program, the City works with property owners and managers to help implement strategies to facilitate their tenants' use of travel options including transit, walking, carpooling, and bicycling. However, while CTR applies to large employers, TMPs apply to all of the tenants in a particular building.
    - The Department of Planning and Development (DPD) and SDOT share responsibility for working with the developers and property managers to create and implement effective TMPs. Successful programs can include a variety of different elements, such as:
        - A centralized information center that displays information about different travel options
        - Free parking for carpools and vanpools
        - Pedestrian and bicycle wayfinding signs to trails and transit stops

- Transit pass subsidies to employees who work at the site
- Bike parking and on-site locker and shower facilities

Los Angeles, California

Introduction:

Los Angeles, meaning The Angels, officially the City of Los Angeles, often known by its initials L.A., is the most populous city in the U.S. state of California and the second-most populous in the United States, after New York City, with a population at the 2010 United States Census of 3,792,621. It has a land area of 469 square miles, and is located in Southern California.

The city is the focal point of the larger Los Angeles–Long Beach–Anaheim metropolitan statistical area and Greater Los Angeles Area region, which contain 13 million and over 18 million people in combined statistical area respectively as of 2010, making it one of the most populous metropolitan areas in the world and the second-largest in the United States. Los Angeles is also the seat of Los Angeles County, the most populated and one of the most ethnically diverse counties in the United States, while the entire Los Angeles area itself has been recognized as the most diverse of the nation's largest cities.

Downtown Los Angeles has assumed center stage with its LA Express Park program as the Department of Transportation has revamped the city's parking operations to realize its goals of increasing the availability of public parking spaces and decreasing traffic congestion and pollution.

A 4.5-square-mile area in downtown supports LA Express Park™, a program that fuses technology and demand-based pricing into an innovative parking management strategy. Created as one component of the Los Angeles Congestion Reduction Demonstration with $15 million in grants from the U.S. Department of Transportation and $3.5 million in city funds, the program uses technology to help the city realize its goals of increasing the availability of limited parking spaces, reducing traffic congestion and air pollution, and encouraging use of alternative modes of transportation. LA Express Park™ launched on May 21, 2012.

Program Goals

LA Express Park™ was created to make traveling and parking downtown easier by making more parking available in the area and by giving drivers several ways to find where parking is available.

Program Features

The LA Express Park™ program in downtown Los Angeles incorporates several elements as key components: new parking meter technology; parking space vehicle sensors; a real-time parking guidance system; an integrated parking management system; and the LADOT Parking Management Center.

The Use of Demand-Based Pricing

Demand-based pricing is a concept used to better match the availability of parking spaces to the demand for those spaces. When demand for parking is low, rates are low. When demand is high, rates increase. The concept helps motorists decide when to make trips and whether to use alternative modes of transportation based on where there is available parking and how much it will cost.

The goal of this innovative project is to make driving and parking in downtown Los Angeles easier. Save time, park smarter.

Program Features and Benefits

Features include:

- Smartphone apps
- Changeable message signs
- Cruising for a parking spot is reduced
- Reduced cruising = reduced traffic congestion
- Reduced traffic congestion = Reduced emissions + Improved travel times for other modes particularly transit
- Demand-based pricing increases parking availability:
    - Adds one or two spaces per block
    - Reduces driver frustration
    - Better utilization of underused garage parking
    - Park Smarter
    - Real-time parking information available:
        - LA Express Park website
        - Smartphone apps

    - Go511
    - Changeable message signs
- Paying for parking is easier with options:
    - Coins
    - Credit & debit cards
    - Mobile apps and NFC on Smartphones
    - Can add time to your meter using Smartphone apps
    - LA Express Park will result in more effective use of the on-street parking supply and improved economic activity from more open spaces

Program Area

Parking Meter Technology

- Pay stations serve multiple parking spaces on a single block
- Single-space meters accept a variety of payment methods
- Expanded payment options include debit/credit cards, coins and cell phone payment
- Parking rates depend upon parking demand, time of day and length of stay

Parking Guidance System

- Changeable message sign
- Changeable message signs display key information for available parking spaces at select locations
- Drivers with cell phones can tap into the system to find spaces using voice-recognition software
- Web-enabled applications for Smart Phones such as Blackberry's and iPhones access system

Vehicle Sensors

- Sensors placed in parking spaces tabulate parking space occupancy and relate data to the parking management system
- Occupancy data is integrated with meter data to support optimized rates, time limits and hours of operation
- Information helps LADOT traffic officers set enforcement priorities to ensure compliance

Parking Management System

- Stores all transaction and occupancy data
- Performs advanced analysis to assist in setting parking rates, limits and hours of operation
- Provides parking and meter data to LADOT staff to optimize operations

Parking Management Center

Currently operating in the City, it displays real-time information from LADOT's parking pilot programs

A summary of accomplishments is provided in the project reference files in a presentation entitled: ExpressPark™ Intelligent Parking Management for Downtown Los Angeles.

Charlotte, North Carolina

Introduction:

Charlotte is the largest city in the state of North Carolina and the seat of Mecklenburg County. In 2013, the estimated population of Charlotte according to the U.S. Census Bureau was 792,862 making it the 16th largest city in the United States based on population. The Charlotte metropolitan area ranks 23rd largest in the US and had a 2013 population of 2,335,358. The Charlotte metropolitan area is part of a sixteen-county market region or combined statistical area with a 2013 U.S. Census population estimate of 2,493,040.

The city is a major U.S. financial center, with both Bank of America and Wells Fargo's East Coast operations headquartered in the city.

Charlotte's Center City has undergone dramatic growth and change over the past decade. From the development of new cultural venues and educational institutions to beautiful parks, walkable streets, and new housing, restaurants and shops, the evolution has been remarkable.

These changes have resulted from many successful planning efforts, collaborative partnerships, and strategic investments by the public and private sectors. Combined, they have led to the rebirth of Center City as a vibrant focal point of a thriving region.

Charlotte Center City 2020 Vision Plan

In 2010 the creation of the Charlotte Center City 2020 Vision Plan became a critical strategy to ensure a promising future for Center City and the greater region. A cooperative effort among the City of Charlotte, Mecklenburg County, and Charlotte Center City Partners, the 2020 Vision Plan is a comprehensive, strategic plan that provides a "big picture" framework and unifying vision for Center City growth and development.

The Charlotte Center City 2020 Vision Plan sets forth a bold vision for the future that is unique to this modern, livable and gracious City. It provides a

set of innovative, transformative strategies that chart the course for achieving the vision. And it outlines implementation actions and can be downloaded from the link below:

http://files.charlottecentercity.org/2020-VisionPlan.pdf

Plan Recommendations Summary

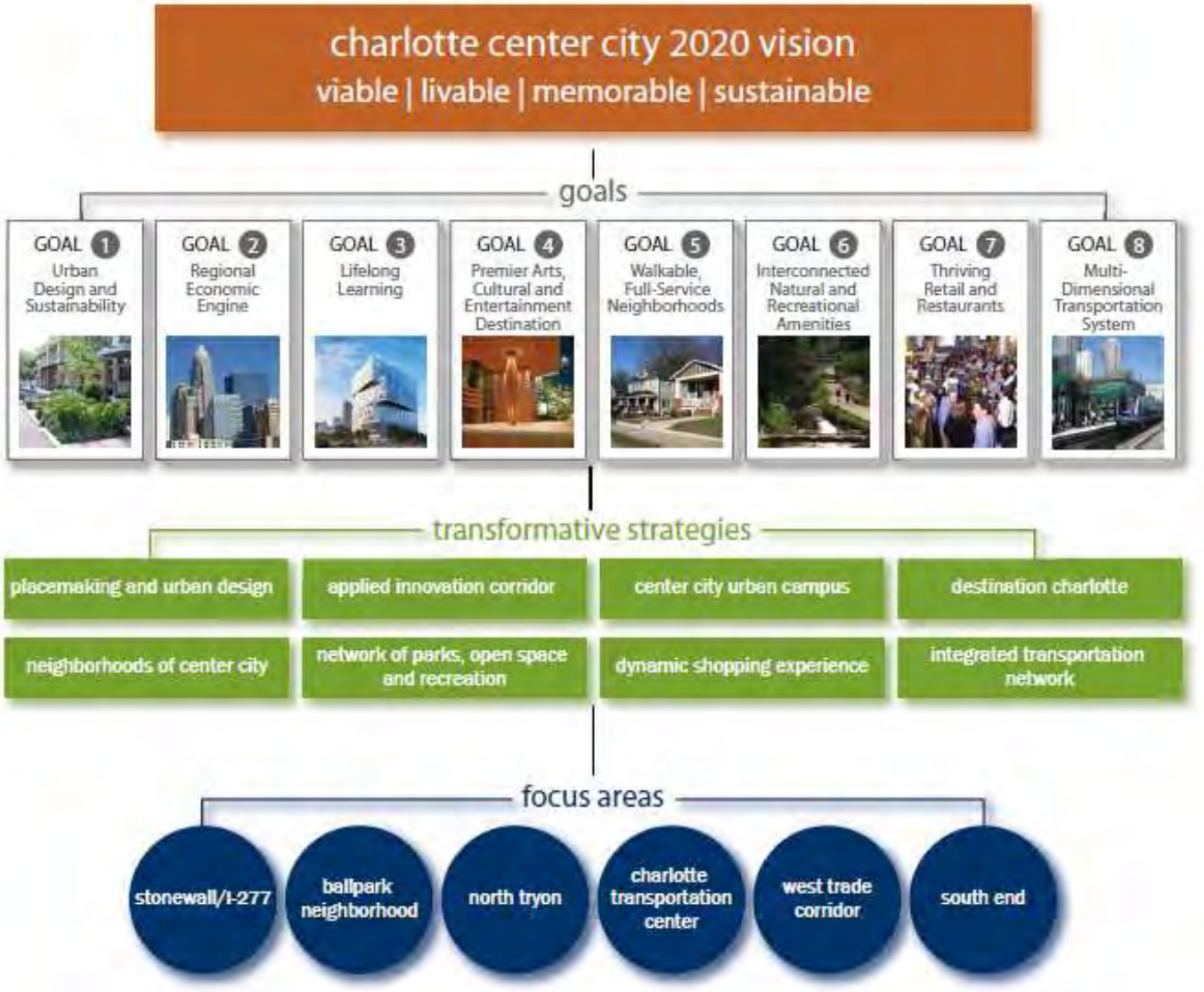
The 2020 Vision Plan recommendations are strategic, broadly supported directions that will together transform the future of Center City. They build upon the Vision Framework as well as the goals and actions of past planning initiatives.

The recommendations respond to goals articulated by Envision: Charlotte—the public-private collaboration that is leading Charlotte to become a global model for environmental sustainability. The recommendations are also derived from community outreach, specific design analysis, best practices research and technical studies that were conducted throughout the 2020 Vision Plan process. The plan was created by the lead firm MIG with partners MIG, Cole Jenest & Stone, Kimley-Horn & Associates, Inc. and Wray Ward.

Goals - Vision Framework Diagram

The Vision Framework Diagram below illustrates how the Vision and Goals inform and guide the 2020 Vision Plan recommendations. As described, the Vision and Goals are a synthesis of the community input received throughout the planning process. Together they represent the desired future for Center City.

The remaining elements of the Vision Framework Diagram highlight the specific recommendations that are described in detail in the following chapters. The recommendations articulate what, where and how the vision will become a reality. Chapter 3 outlines eight Transformative Strategies that will propel Center City toward achieving the Goals with a collection of specific projects, policies and programs. Chapter 4 details six Focus Areas for future development and redevelopment that will catalyze significant change in support of the 2020 Vision. Together, the elements of the Vision Framework Diagram chart the course for the next decade of growth and prosperity in Charlotte Center City.



On- and Off-street Parking:

On-Street Parking

The City's On-Street parking program is known as Park-It!

The Park It! On-street Parking Program is a public/private partnership between the Charlotte Department of Transportation and Standard Parking Plus. SP+ manages the day-to-day operations. There are 1,100 metered spaces downtown; this does not include non-metered spaces. Digital Payment Technologies "Luke" meter accept credit cards, debit cards, coins and the Charlotte Coin. Meters rates vary according to locations. Most

metered spaces, located in high-demand areas, are $0.25 for each 15 minutes. Those located on the perimeter of the city are $0.50 per hour.

Meters are monitored from 7am to 6 pm, Monday through Friday, except for weekends and most holidays. Meters on South Blvd. are enforced 24 hours a day, seven days a week (parking signs and stickers attached to parking meters warn motorists of the 24-hour enforcement). Park It! agents enforce parking rules in the Center City area on weekends and during special events.

Off-Street Parking:

Almost all the off-street parking in Charlotte is privately owned.

A private firm "AboutParking.com" which started in Charlotte created a web-based information platform that provides a comprehensive resource for all parking location in and around Charlotte. You can search for convenient hourly, daily and monthly parking by address, business or landmark. Many locations offer online payment, so you can reserve your space ahead of time! To view this interesting website visit: *http://www.aboutparking.com/*.

The About Parking program has now expanded to other cities as well including:

Atlanta, Boston, Buffalo, Chicago, Cleveland, Columbus, Dayton, Denver, Kansas City, Houston, Los Angeles, Minneapolis/St. Paul, New York, Orlando, Philadelphia and Tampa.

Transportation Demand Management:

Charlotte is one city referenced in a document entitled "Integrating TDM into the Planning and Development Process". This document can be referenced at:
http://www.icommutesd.com/documents/tdmstudy_may2012_webversion_000.pdf

Charlotte also has a nicely done Cycling Guide which can be downloaded at:
http://charmeck.org/city/charlotte/Transportation/PedBike/Documents/2011%20Charlotte%20Cycling%20Guide%20Combined%20Final.pdf

Another document produced by the Charlotte DOT is called: Bicycling to Healthy Living. A link to this document is provided below:
http://charmeck.org/city/charlotte/Transportation/PedBike/Documents/BikeHealthyLiving.pdf

Curb Lane Management Study

The City of Charlotte has recently initiated a project to improve the on-street parking experience in Uptown. The project aims to find a new and more consistent method for communicating current and future parking policies. The on-street parking system has been evolving to keep pace with Uptown growth. That growth has brought some substantial changes over time including the addition of new parking spaces, removal of others, balancing parking with loading and valet services and new ways of metering and paying for parking. With all of this change, the existing system is in need of reevaluation to reduce confusion and add consistency throughout Uptown.

The Curb Lane Management Study was completed in July of 2011 and can be viewed at the following link:
http://charmeck.org/city/charlotte/Transportation/Parking/Documents/small%20CLMS_FinalRepor_11_0211.pdf

Recommendations include the following:

- Standardize the usage of curb space from block to block.
- Clarify curb use rules through improved signage.
- Establish public parking spaces that don't transition to other uses at night.
- Increase the number of on-street public parking spaces.
- Develop pilot projects that test the recommended concepts.
- Traffic and parking use on Tryon Street

The CDOT implemented recommendations from the Curb Lane Management Study on Tryon Street. So far, the new signage and designation of curb use has been a success. Next steps are to implement the recommendations on all Center City Streets. Staff will:

- Evaluate streets as development occurs, and adjust uses as dictated by those changes.
- Evaluate and change curb use as the City converts some streets from one-way to two-way operation.
- Implement recommendations on all streets in the Center City as resources allow.

- Review by citizen/business request, and implement identified changes if doing so does not create confusion for motorists.

Prior to implementing the pilot project, a "pre-pilot" sign mock-up was tested for two days in December of 2011 on two blocks of Martin Luther King Jr. Boulevard. There were 187 respondents. Participants were encouraged to drive along the street where temporary signs were installed and to take an online survey about on-street parking signs. Two different types of signs were tested. This test was critical in determining which type of signs should be installed for the official pilot test.

Though the pilot includes three streets in Center City, the Tryon Street portion of the pilot project will bring the most changes, notably:

- The rush hour restrictions will be removed. Motorists will be able to park 24 hours a day. Currently, motorists cannot park on-street from 7-9 a.m. or 4-6 p.m.
- Public parking will never transition to other uses at night as they do today.
- Motorists will notice additional public parking spaces on-street.
- Finally, motorists will see new signs that are intended to help clarify where a motorist can and cannot park on each block.

Zoning Code Requirements:

In 2013, the Charlotte-Mecklenburg Planning Department undertook a comprehensive assessment of the Charlotte Zoning Ordinance, along with a consultant team led by Clarion Associates, and including Kittelson & Associates and Opticos Design.

The project focused on how well the current Zoning Ordinance implements City policies and plans, such as the Centers, Corridors, and Wedges growth framework, the General Development Policies, and recent area plans. The project also looks at best practices for zoning in other communities (both in North Carolina and throughout the nation), and suggests a range of possible new zoning and land use tools to improve the Zoning Ordinance and better achieve Charlotte's planning and development goals.

The project resulted in two main reports:

Zoning Ordinance Assessment Report. The assessment report provides a more detailed overview of the project and identifies how well the Zoning Ordinance is equipped to implement adopted plans and policies, as well as

other strengths and weaknesses of the ordinance. A link to this report is provided below.

http://charmeck.org/city/charlotte/planning/Documents/ZOPA.pdf

Zoning Ordinance Approach Report. This document looks at best practices for zoning ordinances generally and possible tools for an updated Charlotte Zoning Ordinance in the future, whether as a result of incremental updates or a major comprehensive revision. A link to this report is provided below.

http://charmeck.org/city/charlotte/citymanager/CommunicationstoCouncil/Memo%20attachments/Zoning%20approach%20report.pdf

Raleigh, North Carolina

Introduction:

Raleigh is the capital of the state of North Carolina as well as the seat of Wake County. Raleigh is known as the "City of Oaks" for its many oak trees, which line the streets in the heart of the city. The city covers a land area of 142.8 square miles. The U.S. Census Bureau estimates the city's population to be 431,746 as of July 1, 2013. It is also one of the fastest-growing cities in the country.

Raleigh is home to North Carolina State University and is part of the Research Triangle area, together with Durham (home of Duke University) and Chapel Hill (home of University of North Carolina at Chapel Hill). The "Triangle" nickname originated after the 1959 creation of the Research Triangle Park, located in Durham & Wake Counties partway between the three cities and their universities. The Research Triangle region encompasses the U.S. Census Bureau's Raleigh-Durham-Chapel Hill Combined Statistical Area (CSA), which had an estimated population of 2,037,430 in 2013. The Raleigh Metropolitan Statistical Area (MSA) had an estimated population of 1,214,516 in 2013.

Zoning Code Requirements:

The City of Raleigh developed a handbook intended to be a guide to interested citizens and others who wish greater familiarity with zoning in Raleigh. The actual legal document that establishes and describes the zoning districts is the Raleigh City Code, Volume II, Part 10 Chapter 2. The Zoning Code, not this guide, is the ultimate authority regarding zoning in Raleigh.

The Raleigh Zoning Handbook can be downloaded from the following link:

http://www.raleighnc.gov/business/content/PlanDev/Articles/Zoning/ZoningandRezoning.html

The City of Raleigh is in the process of rezoning approximately 30% of the City. This rezoning will update the official zoning map to reflect the new zoning districts adopted in the Unified Development Ordinance (UDO). The UDO is a complete rewrite of the existing zoning code, which governs land use. Below is a link to the draft UDO and an interactive map that allows users to view existing and proposed zoning districts.

http://www.raleighnc.gov/content/extra/Books/PlanDev/UnifiedDevelopmentOrdinance/

Odense and Copenhagen, Denmark

Introduction:

Odense (Danish pronunciation: [ˈoðˀnˌsə] is the third largest city in Denmark. It has a population of 172,512 as of January 2014, and is the main city of the island of Funen. Odense has close associations with Hans Christian Andersen who is remembered above all for his fairy tales. He was born in the city in 1805 and spent his childhood years there.

There has been human settlement in the Odense area for over 4,000 years, although the name was not mentioned in writing until 988, and by 1070, it had already grown into a thriving city. Canute IV of Denmark, generally considered to be the last Viking king, was murdered by unruly peasants in Odense's St Alban's Priory on 10 July 1086. Although the city was burned in 1249 following a royal rivalry, it quickly recovered and flourished as a centre of commerce in the Middle Ages.

After a period of decline, large-scale plans for development were made during the 18th century, which led to the rebuilding of Odense Palace and the building of a canal to the Port of Odense, facilitating trade. In 1865, one of the largest railway terminals in Denmark was built, further increasing the population and commerce, and by 1900, Odense had reached a population of 35,000. Odense's Odinstårnet was the second tallest tower in Europe when built in 1935 but was destroyed by the Nazis during World War II. The University of Southern Denmark was established in 1966.

In the present day, Odense remains the commercial hub of Funen, and has a notable shopping district with a diversity of stores. Several major industries are located in the city including the Albani Brewery and GASA, Denmark's major dealer in vegetables, fruits and flowers. The city is home to Odense Palace, erected by King Frederick IV who died there in 1730, the Odense Theatre, the Odense Symphony Orchestra, and the Hans Christian Andersen Museum, situated in the house that was the birthplace of Hans Christian Andersen. In sports, Odense has a number of football clubs including OB, BM, B1909, and B1913, the Odense Bulldogs professional ice hockey team, and the city also hosts the H.C. Andersen Marathon. Odense is served by Odense Airport and Odense station, which lies on the line between Copenhagen and the Jutland peninsula.

Awards, Strategies and Best Practices

"A Green and Sustainable Society"

Creating a green and sustainable society is one of the key goals for Denmark. More than 20 per cent of Denmark's energy already comes from renewable

energy, and the goal is to reach 100 per cent by 2050. Much of the renewable energy comes from wind turbines, where Denmark is a world leader when it comes to developing new technology.

The Danish cycling culture is another example of a green and sustainable society and Copenhagen alone has around 400 km of cycle paths, and about 40 per cent of the capital's population commute to work by bicycle.

Odense - Denmark's National Cycle City

The Ministry of Transport has named Odense Denmark's National Cycle City. It's a 4-year project with the primary goal of increasing the share of cyclists and the number of bicycle trips in Odense and continuously improving the safety for cyclists. The Ministry of Transport, the Road Directorate and Odense Municipality support the project.

The goal of the project is very ambitious, since Odense already has the country's highest share of cyclists and longest bicycle trips. Up through the 90s, Odense experienced a growth in bicycle trips of approximately 50 percent, and a simultaneous drop in accidents of approximately 20 percent.

There are still many problems that need to be solved, so Odense's cycling potential is still not fully exploited. There are many short trips where the bicycle could replace the car.

Therefore, Odense is focusing not only on continued expansion of the infrastructure, but also on issues like safety, fun experiences, rights, accessibility, service, maintenance and quality. Odense strives to be a lab and a model city for inspiration in Denmark as well as abroad.

Bicycle Demonstration Projects and Promotional Campaigns

More than 50 demonstration projects were conducted between 1999 and 2002. These projects involve a combination of means, such as top priority to bicycles, campaigns etc.

The first trip of the day often determines the means of transportation the rest of the day. This made it important to put focus on parents and how they transport their kids.

Promotional campaigns play a crucial part of the strategy of Odense Cycle City. Experiences in Odense clearly show that it is crucial continuously to accompany investments in physical improvements for cycle traffic with campaigns in order to promote, motivate and secure cycling. Furthermore, through campaigns it is possible to communicate with the inhabitants and promote bicycling as a liberating, fun and well function transportation form which creates social activities for the whole family.

Campaigns in Odense Cycle City are defined by a high degree of activity and self-participation of the members involved - the strategy is to engage the participants physically in order to "reach" them mentally. Thus, highly expensive written material only plays a minor role in the campaigns. Instead focus is placed on action, social experiences and person-to-person contact between campaign staff and participants.

Promotional campaigns in Odense Cycle City are always tested in a small scale the 1st year. The experiences and evaluation from this then make up for a campaign in full-scale the 2nd year. Campaigns are all held at very low costs thus close co-operation with private companies and sponsorships plays a crucial part. Odense Cycle City also puts great effort to seek an anchoring of the campaigns within the organizations/institutions involved.

Many of the campaigns are directed towards children and young people - the philosophy is that it is easier to establish good than to change bad traffic habits. These campaigns focus on transport to and from day care institutions or schools thereby also addressing the near family as well as the staff in the institutions. By addressing the secondary target group the hope is to create role models and good ambassadors for the children.

Campaigns for children rule out any finger wagging, instead the tone is focused on the many rewards like fun, experiences and freedom the bicycle gives - whether the children cycle alone or together with their parents.

The success of such campaigns depends on the participants' engagement and motivation therefore happenings, smaller gifts, rewards and competitions play a large part. The contact staff in the institutions or schools is especially gifted in order to engage their help.

Competitions during the campaigns can often be divided into two areas: group competition and individual competition. Group competition creates a positive pressure as well as a social feeling within the group and is especially effective in relation to full-scale campaigns. Individual competition often maintains the engagement during the campaign and focuses on creativity and mental hygiene of the individual.

Free Wheeling - a campaign directed towards students in 6th/7th grade and their families

Free Wheeling is based on a large group competition combined with many smaller individual competitions. These competitions are accompanied with educational material plus a large number of smaller activities and happenings.

In the group competition the students are all equipped with a cycle computer on their bike. Each class then competes with one another. Bicycles are

offered to students with no bikes and full service is offered during the competition to secure safety. Most of the material, gifts and equipment are sponsored.

The campaign has been launched as a test campaign this spring, i.e. 1 school has participated in order to collect valuable information for next year. The campaign has been very promising and half of the community's 35 schools have already signed up for next year.

Green Wave for Cyclists

All technology in the road system applies to cars, for instance traffic lights at intersections, parking search systems, and directions. In Odense, they actively question and debate this unequal prioritization, and they are the first city in the world to have introduced a special "green wave" for cyclists between two intersections controlled by traffic lights. (See a video of the "Green Wave" application at: http://www.youtube.com/watch?v=mEOakvjuIEs)

In addition, we have reversed the priority in places where cyclists cross roads with light traffic. That means that cars have to stop for cyclists.

Bike Parking Quality and Design

Odense has established more than 2000 new bicycle parking spaces over the past two years. Each solution stresses beauty, aesthetics, and particularly design and functionality.

At Odense Central Station, there is underground bike parking that features video surveillance, music, special locking arrangements, water fountains, baggage lockers and showcases for bicycle equipment. In addition, the parking area also features Denmark's most spectacular bike store with quality bikes and equipment, bike rental and a repair shop.

Bicycle Festival

The town hall square hosts an annual bicycle festival, and there is no admission for low quality bikes - in other words, no bikes under 400 Euro.

Bicycle Path Maintenance

Quality also extends to the upkeep of all bicycle paths in Odense. This means that tasks like putting down even surfaces, keeping the paths free from dirt, garbage, broken glass and so on, and snow clearing is carried out at the same high level as on the largest roads in the municipality.

The municipal road inspectors also inspect all bike paths regularly - on bike, of course. Odense has also formed a special "bicycle-reporting-group" who ride around with digital cameras and mobile phones observing and reporting

information to the municipal service departments so that all problems can be fixed promptly.

Odense: Masterplan for Sustainable Mobility

With a unique approach Odense Municipality has submitted a masterplan for sustainable transport solutions that are intended to lead the way towards the goal of CO2-neutrality in 2025. It is a comprehensive strategy that at once aims to reduce car traffic in the inner city and increase individual mobility through improved conditions for pedestrians, cyclists and public transportation. Odense already occupies a prominent position among the world's cycling cities, and the new master plan can be seen as an effort to consolidate this position.

Under the motto "playing is living" Odense municipality has presented its vision for the coming 10 years. An important link in the long-term strategy is the development of Odense as a sustainable and healthy city, which means that sustainability becomes an integral part of all political decision making. The ambition is to be CO2 neutral in 2025 and the three primary areas that will ensure the fulfilment of that ambition are traffic, energy and construction. In 2008, the municipality presented its Plan for Traffic and Mobility that provides a comprehensive sustainable solution to traffic related challenges.

The aim is to change habits through a network of bike trails, pedestrian passages and alternative transportation options that offer viable, sustainable alternatives to driving. Car traffic in the city centre will be reduced significantly by closing the busy Thomas B. Thriges Gade and converting the whole area into a coherent urban space. By shifting traffic from cars onto streets, alleys and pathways, the activity and, as a consequence, the diversity of social life in the area is increased. And by turning motorists into cyclists and pedestrians, you reap the double rewards of a greener environment and healthier citizens. In this way The Plan for Traffic and Mobility connects with municipal policies for both culture and health.

Mobility is an important principle of the vision, since Odenses goal is to create the best possible conditions for pedestrians, cyclists and public transportation. Odense is one of the world's leading bike cities and already has a well-developed infrastructure, while the public transportation system still has room for improvement. The municipality does not regard the public transportation system as a business but, rather, as a service and an environmental effort to be integrated into urban development. This offset allows the municipality to make a coordinated effort that encourages the use of public transport. Junctions that connect the various means of transport, parking facilities at the motorway with connection to busses and bicycles, and

bicycle parking and "share bikes" at the outskirts of the city are all strategies to reduce car traffic in the inner part of the city.

Overall the ambition is to have 60% more bike rides and 60% fewer traffic deaths in 2025, to increase the travels by public transport with 200%, to reduce driving in the city with 25%, to have 75% less people burdened by harmful pollution and 90% less burdened by traffic noise.

Cycling Solutions

Odense will reinforce its image as an active and healthy Bike City, which was created in a large scale project from 1999-2002 that both increased the number of bike rides and reduced the number of traffic accidents by 20%. Measured in years the health of the citizens of Odense increased with 2131 years in that period. With a 510 kilometres long network, 90% of the city's planned cycle trails are already established, but the safety and passability of cyclists still need improvement. This will come through the establishment of speed zones in the city centre, prioritized cycle routes, "green waves" and exemptions for cyclists in one-way traffic. One idea is to allow cyclists to turn right at red lights - what is otherwise known as a California Roll.

Intelligent Traffic Systems (ITS) is another solution. Odense already has bike barometers that count the total number of cyclists in the city. These must be extended with information about temperature, weather, expected time of arrival, etc. By placing sensors in bicycle racks, active signs and SMS services can provide information on vacancy.

Another strategy is the introduction of public "share bikes", which could ease the transition from car to bicycle for commuters. By supplying the bikes with a chip, it is possible to book a bike online in advance, which makes it easier to plan trips in conjunction with public transportation. This could be financed by the sale of public advertising space. It is estimated that there is a need for approx. 500 share bikes in Odense, which are to be located at 30-60 sites in the centre, at the railway station area, at schools, universities and hospitals.

”Parking Routes” (P-Route)

The attempt to keep cars out of the city centre represents a break from 50 years of urban planning. Now Odense city centre will be divided in to four zones, and motorists have to travel in and out of the same zone. When driving between the zones is not possible, the municipality expects that most people will chose walking or public transportation to get around in the city centre. With the transformation of the Thomas B. Thriges Gade, a plan for the redistribution of traffic is necessary. The solution is the establishment of a P-route (Parking route) on surrounding streets. The route encircles the city centre and will guide motorists to the nearest car parks. Since this solution

entails an increase in traffic on smaller streets, noise and air pollution are inevitable consequences. Noise pollution can largely be countered by a decrease in the top speed (see below), whereas air pollution is deemed a necessary, initial cost in the attempt to improve the competitiveness of sustainable means of transportation and clear the centre of car traffic.

Noise Pollution Reduction

A noise increase of 6-10 decibel will be experienced as a doubling of the level of sound. However, if there are two equally powerful sources of noise, the volume is not doubled. Rather, it is 3 decibels higher than the noise sources separately. If traffic on a street in a city area is doubled, the increase in noise will be approx. 3 decibels. If the speed limit on the same street is lowered by 10 km/h, the noise level is reduced by 2.5 decibels. In this way the level of noise will be almost unchanged if traffic on a road is doubled while the speed limit is lowered by 10 km/h.

"Energy Strategy 2050"

The Danish Government recently unveiled its "Energy Strategy 2050", which describes how the country can achieve its independence from coal, oil and gas by 2050 and significantly reduce its greenhouse gas emissions.

The energy strategy contains a raft of initiatives that will reduce the energy industry's use of fossil fuels by 33 percent in 2020, compared with 2009. The reduction will put Denmark well on its way to complete independence of fossil fuels by 2050.

> *"Denmark is the first country to present such a specific and ambitious strategy for achieving independence from fossil fuels,"* says Minister for Climate and Energy Lykke Friis.

The strategy calls for a significant increase in renewable energy obtained from wind, biomass and biogas which over the next decade will increase the share of renewables to 33 percent of energy consumption, if the initiatives in the strategy are implemented. Doing so would place Denmark among the top three countries in the world in terms of overall increase in renewable energy as a share of total energy consumption. Part of the increase would also rely on increasing use of biogas for heat, and a number of new initiatives will be put forth in order to promote the production of biogas.

By 2020, construction of new offshore wind turbines at the Kriegers Flak wind farm, coastal wind turbines and land-based turbines will approximately double the wind power production in Denmark. Wind power alone is expected to cover more than 40 percent of overall electricity consumption by 2020, compared with about 20 percent today. By 2020 more than 60 percent of electricity consumption will by covered by renewable energy. Meanwhile, strengthened energy efficiency efforts will reduce gross energy use by 6 percent in 2020, compared with 2006 levels. In reaching the goal, Denmark will meet the energy efficiency goals set out in the 2008 energy agreement, and the country will retain its position as a world leader in the area.

The strategy offers an economically responsible path to the conversion of the Danish energy supply, and includes specific initiatives, that are all fully financed and which will not damage the nation's competitiveness. Homeowners will experience moderate increases in the costs of heat and electricity, but will also be given opportunities to lower their energy expenses through greater efficiency. Companies can expect added expenses amounting to 0.1 percent of the rise in their gross revenue growth by 2020.

Minister for Climate and Energy Lykke Friis underscores that the costs of converting from fossil fuels to green energy should also been seen in the light of expected increases in the cost of fossil fuels.

> *"No one is saying that carrying out major investments in energy efficiency and expanding our use of renewable energy is going to be free. But the alternative: Continued dependence on fossil fuels will, as all signs indicate, only become more expensive in the years to come. Converting to*

renewable energy will shield Denmark from the effects of increasing energy prices."

"This is no small task, however. Over the next 40 years, we need to cut our consumption of coal, oil and gas four times faster than we have over the past 40 years. The government's energy strategy shows that this can be done without burdening state finances and without eroding businesses' competitiveness. And, if we are smart, converting to renewable energy will also give us new opportunities to increase our exports of green energy technology at a time when the global market for such products is growing."

Read the Energy Strategy here

Further information on the Danish Energy Strategy 2050 is available here and on the Danish Energy Agency's website

You can read the joint statement by Chris Huhne, UK Secretary of State for Energy and Climate Change, and Dr. Lykke Friis, Danish Minister for Climate and Energy here

Contact: Press secretary Jesper Zølck Felbo, Danish Ministry of Climate and Energy, +45 5087 4881 Or Deputy Director Kristian Møller, Danish Energy Agency, +45 3392 6667

Copenhagen's Bike Plan

During the Odense research we also came across an impressive document from Copenhagen. Copenhagen's Bicycle Plan: A BETTER **BICYCLE** CITY A MORE **LIVEABLE** CITY is briefly introduced below and link to the plan is provided.

Introduction

A bicycle-friendly city is a city with more space, less noise, cleaner air, healthier citizens and a better economy. It's a city that is a nicer place to be in and where individuals have a higher quality of life. Where accessibility is high and there is a short route from thought to action if one wants to head out into nature, participate in cultural or sports activities or buy locally.

Bicycle traffic is therefore not a singular goal but rather an effective tool to use when creating a livable city with space for diversity and development. Fortunately, it pays off to invest in urban cycling. Increased cycling levels give society less congestion, fewer sick days, longer life expectancy, less wear and tear on the roads and less pollution. Cycling initiatives are also inexpensive compared with other transport investments.

The eyes of the world are already focused on Copenhagen – The City of Cyclists. By continuing the ambitious work towards becoming the world's best cycling city, we maintain the many positive stories about the city. Stories that brand Copenhagen as a livable, innovative, sustainable and democratic city with a political will to lead the way in the battle for an improved quality of life for the citizens. By aiming to be the best in the world we can show the way for other cities around the world and raise the bar for what is possible in the area of urban cycling.

The plan can be viewed at the following link:
http://kk.sites.itera.dk/apps/kk_pub2/pdf/823_Bg65v7UH2t.pdf

The plan contains a wealth of strategies and success metrics.

Freiburg, Germany

Introduction:

The City of Freiburg is internationally well known for its environmental approach and its extensive use of solar energy and other renewable sources. Freiburg Green City can share experiences gained over many years and showcase a multitude of effective technical and organizational solutions related to sustainable energy and transportation management.

Freiburg, a city of about 220,000 people and 155 km^2 of land, is located in the southwest corner of Germany, at the edge of the Black Forest and near the borders with France and Switzerland. It was founded in the year 1120, and through centuries of growth and modernization still maintains its old world charm and surrounding beauty.

With its large academic community, Freiburg was an early stronghold of the Green Movement in the 1970s. A successful protest against a nearby nuclear power plant is thought to be the galvanizing moment.

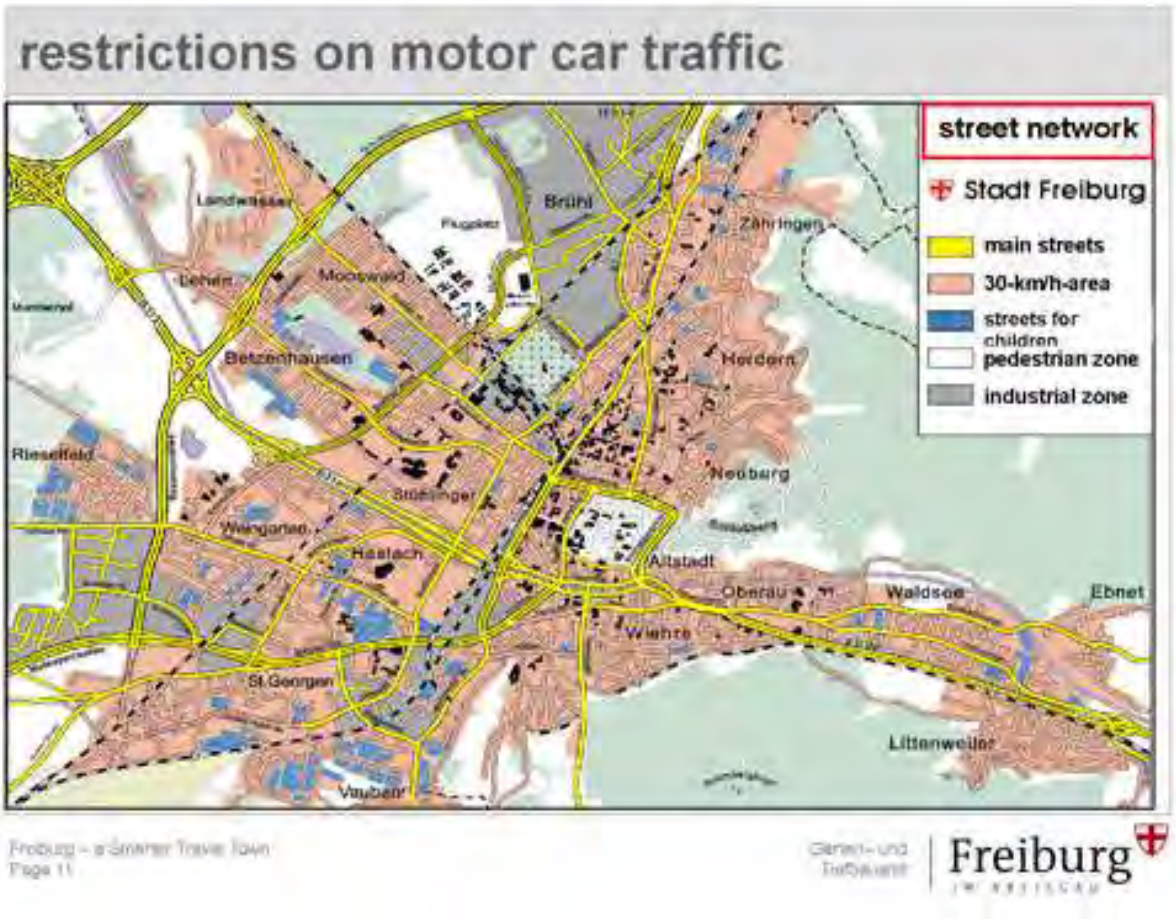
Freiburg promotes itself as a Green city—especially in the areas of transportation, energy, waste management, land conservation, and green economics—and the city has won various national and international environmental awards. In the areas of energy and green economics, it is particularly outstanding.

Transportation

Freiburg was heavily bombed during World War II; little remained of the city center besides the cathedral. It was decided to rebuild without altering the city's character, following the old street plan and architectural style. As the roads were rebuilt, they were widened just enough for a tram track, not for more lanes of cars.

In 1969 Freiburg devised its first integrated traffic management plan and cycle path network. The plan aims to improve mobility while reducing traffic and benefitting the environment and is updated every 10 years. It prioritizes traffic avoidance and gives preference to environment-friendly modes of transport such as walking, cycling, and public transit. Traffic avoidance is achieved in conjunction with urban planning that makes Freiburg a city of "short distances"—a compact city with strong neighborhood centers where people's needs are within walking distance.

In 1973 the entire city center was converted to a pedestrian zone (shown in white on the map below).



Source: Schick, n.d.

The public transit network has been steadily expanded and modernized since 1972. Today the tramway network comprises 30 km and is connected to the 168 km of city bus routes as well as to the regional railway system. 70% of the population lives within 500 meters of a tram stop, and the trains appear every 7.5 minutes during rush hours. Besides working to make public transport convenient, fast, reliable and comfortable, the city administration also made it cheap. In 1984 the city-wide Environmental Card was introduced for 38 DM per month (US$13 at the time) for unlimited travel within the urban network (tram and bus). A monthly ticket had previously cost 50 DM.

In 1991 the Environmental Card was replaced with a RegioCard. The current price is 47 euros (US$61) per month. The RegioCard allows passengers unlimited use of not only Freiburg's urban transit but also public transport in the whole region—about 2,900 km of routes of 17 different transportation companies, plus the tracks of the German Rail. In its first year alone, the card is credited with increasing regional public transit trips by 26,400 while the

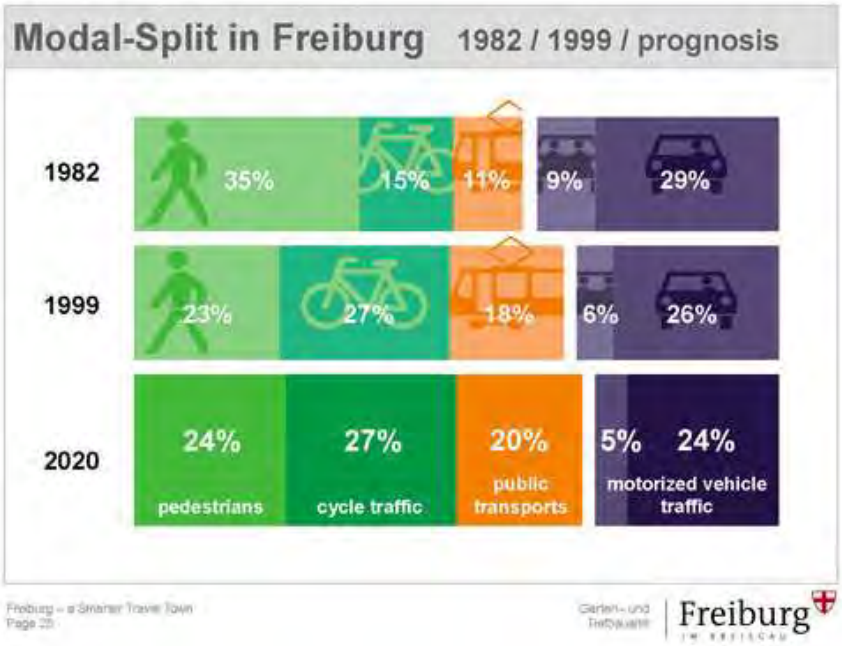
number of car trips fell by 29,000. Besides this, there is a policy that any ticket for a concert, sports event, fair, or big conference also serves as a ticket for public transport.

City tram

Source: Schick, n.d.

Freiburg's administration has developed over 400 km of cycle paths. This includes bike-friendly streets, streetside bikepaths, and separate bikepaths (along the river Dreisam). About 9,000 bicycle parking spaces were also developed, including "bike and ride" lots at transit stations. Cycling is promoted with free maps and other information.

As a result of all this, between 1982 and 1999, the contribution of cycling to the city's volume of traffic increased from 15% to 28% and public transport from 11% to 18%, while miles travelled by car fell from 38% to 30% of the total (see chart below).



Source: Schick, n.d.

Another notable aspect of Freiburg's transport policy is traffic calming. As the map above shows, for most streets (other than main streets) the speed limit is 30 km (19 mi) per hour.

On some streets (shown in blue) cars can travel no faster than walking speed, and children are allowed to play in the streets. Residents may apply for this status for their street by petitioning the city's Department of Civil Engineering.

Parking space management also contributes to the reduction of motor vehicle traffic. Multi-story garages are located at the edge of residential districts and at major mass transit stations. The new district of Vauban is one extreme example of parking space management. Parking there is limited to garages on the outskirts of the neighborhood. Each parking space costs 18,000 Euro (approx. US$23,000). To avoid this cost, some people are said to lie about owning a car in their annual declarations. But officially there are about 250 motor vehicles per 1,000 Vauban residents, compared to 423 for Freiburg as a whole (and 500 for Germany).

Car-sharing is also encouraged. About 140 vehicles currently are available through the Freiburger Auto-Gemeinschaft e.V. Members have occasional use of a car for big shopping trips or going to the mountains for skiing. They also receive a yearly free pass for public transport within the city, and a 50% discount on national rail tickets.

Looking to the future, the official "traffic development plan 2020", after consideration of various scenarios and their costs, includes 4 measures for pedestrian traffic, 13 for bicycle traffic, 12 for city public transport, 7 for regional public transport, and 19 for motor vehicles.

Energy

Freiburg's progressive energy policy has its roots in the early 1970s, when the state of Baden-Württemberg's plan to build a nuclear power plant in the town of Wyhl, just 30 km away, provoked intense protest among Freiburg residents. Thomas Dresel (who is now the city environmental manager) recalls that there was widespread civil disobedience; the conflict began to look like a "civil war." Dresel says that as the protesters stood there in the mud (created by police water cannons), they began to ponder the question, If not nukes, then what? The plan was dropped in 1975, and in the years since then Freiburg has sought to become a model of sustainable energy development. The Chernobyl disaster of 1986 and concern over acid rain damaging the Black Forest—and more recently concern regarding climate change—strengthened the determination to find alternatives to nuclear and fossil fuel energy. Germany's national energy policy, such as the decision to phase out nuclear power and the 2001 federal renewable energy law, which requires utilities to buy power from independent producers, promote such a policy as well.

Freiburg's energy policy has three basic pillars: Energy saving, efficient technologies, and renewable energy sources.

Energy Saving

In 1992, Freiburg's building design standards were amended to require that all new houses built on city land (or land sold by the city) use no more than 65 kilowatt-hours of heating energy per square meter per year, compared to the national standard of 75 kWh/m^2/yr. This adds about 3% to the cost of the house, but the energy savings make it worthwhile in a short time. It is estimated that the standard reduces heating oil consumption from 12-15 liters to 6.5 liters per square meter. The entire new districts of Vauban and Rieselfeld were built according to this standard.

To improve energy efficiency in existing buildings, Freiburg instituted a support program for home insulation and energy retrofits. About 1.2 million Euros in subsidies were provided in 2002-2008, complementing about 14 million Euros of investments. Reduction of energy consumption averaged 38% per building. Most municipal buildings (e.g., schools, offices) were also retrofitted.

In 2008, after the federal government revised its standard downward, so did Freiburg—to ensure that the city stays at the forefront of low-energy development. A two-step revision was to be implemented in 2009 and 2011 to move new housing even closer to the "passive house" standard of just 15 kWh/m2/yr. These cost 10% more to build, but can achieve an 80-90% reduction in energy consumption.

Efficient Technology

Chief among the efficient technologies developed in Freiburg (in fact, the only one mentioned in the literature) is combined heat and power (CHP). As the name implies, CHP produces both electricity and heat by capturing the waste heat from electricity production to generate more electricity and useful heat, e.g., for district heating systems. About 50% of Freiburg's electricity is now produced with CHP (compared to just 3% in 1993). There are 14 large-scale CHP plants and about 90 small-scale CHP plants (e.g., at the city theater and indoor swimming pools). The two large-scale plants located near landfills use landfill gas as fuel. The others use natural gas, biogas, geothermal, wood chips, and/or heating oil. Vauban's CHP plant, for example, uses 80% wood chips and 20% natural gas to provide the district with electricity and heat. An important concomitant development is new district heating systems which can replace individual oil or gas burning furnaces.

CHP plant in Vauban
Source: Wörner n.d.

The increase in CHP's share from 3% to 50% has enabled Freiburg to reduce its reliance on nuclear power from 60% to 30%--and provides local heating at the same time.

Renewable Energy Sources

Renewables at Freiburg's disposal include solar, wind, hydropower, and biomass. (Geothermal is also a possibility, but its use to date has been negligible.)

Solar

Solar energy is by far the most visible renewable resource used in Freiburg. The city is home to approximately 400 photovoltaic installations on both public and private buildings. Prominent among these are:

- The 19-story façade of the main train station
- The roof of the convention center
- The roof of the soccer stadium
- The Solarsiedlung (Solar Settlement) and its neighboring Solarschiff (Solar Ship) business park
- The Solar Factory (SolarFabrik)
- The "Heliotrope," a structure that rotates to follow the sun
- The roof of the city's waste management offices and its recycling center

Solar Settlement and business park
Source: Website plusenergiehaus.de

Heliotrope
Source: Wörner n.d.

SolarFabrik
Source: Freiburg Wirtschaft Touristik u. Messe GmbH

Currently Freiburg's 150,000 m^2 of photovoltaic cells produce over 10 million kWh/year. The 60 "plus-energy" homes of the Solar Settlement create more energy than they consume, and earn 6,000 euros per year for their residents.

Solar thermal (mostly hot water) panels cover 16,000 m^2, but their total contribution to Freiburg's energy supply has not been quantified.

Wind

Unlike coastal or plains areas, Freiburg is not ideally suited for wind energy, since it is in a hilly, wooded area. Still, there are five windmills situated on hilltops within the city's boundaries, producing an average of 14 million kWh/year.

Windmills near Freiburg
Source: Ökostromgruppe Freiburg

Hydropower

The Dreisam River runs through Freiburg, but there are no major hydropower stations. Small, eco-friendly run-of-the-river facilities are on the river and on smaller canals and streams. Hydropower generation within Freiburg amounts to about 1.9 million kWh/year, but the regional utility,Badenova, also imports hydropower. According to Badenova literature, the 120,000 customers who selected "regiostrom basis"—a slightly more expensive, nuclear-free alternative to conventional power—receive half their electricity from hydropower plants in Switzerland and Austria, and half from CHP plants. The 10,000 customers who selected "regiostrom aktiv" are guaranteed 100% electricity from renewable resources—a hydropower plant in Norway. The 1.8 euro-cents per kWh extra they pay goes to the regiostrom fund for developing more renewable energy.

Since January 2009, according to badenova, Freiburg's 60 trams have been running on 100% renewable energy (80% hydropower and 20% a mix of other renewables).

Biomass

With 16.6 million kWh/year, biomass has the largest share of Freiburg's renewable electricity generation. The Black Forest provides an ample supply of wood chips and wood pellets (much of it waste from woodworking industries). The Solar Factory burns rape seed oil in its CHP plant.

A more exciting innovation is the development of biogas. Through a joint venture of private and city-owned waste management companies, the organic waste from Freiburg's households is fed into a digester that produces biogas and compost. The biogas is burned in a CHP plant to produce about 7 million kWh of electricity, plus heat. In 2009, Badenova subsidiary WÄRMEPLUS switched all three of Freiburg's indoor swimming pools to biogas for their CHP generators. The same year, Badenova began work on three of five planned biogas projects in the region, using mainly corn silage and cow manure as the feedstock. One of the projects is an existing biogas plant where Badenova is adding a refinery to improve the quality of the gas by removing the high carbon dioxide content, making it equivalent to regular natural gas. The gas will be used in CHP plants to produce electricity and heat, but it will also be mixed with conventional natural gas to create "BIO 10," a 10% biogas mixture. This is especially important because since 2008, any homeowner who modernizes his/her heating system must switch to at least 10% renewable energy for heat. On a smaller and more experimental scale, one apartment building in Vauban is equipped with vacuum toilets connected to a biogas digester; in 8 years of experience it seems to work satisfactorily.

Unfortunately, Freiburg's total electricity demand is well over 1,000 million kWh/year, so despite all the efforts described above, only 3.7% of the city's electricity comes from locally generated, renewable resources. This is the same percentage as in 2005, and far short of the 10% goal set by the city council in 2004. However, if solar water heating and imported renewables were included, the number would be much higher. Mayor Salomon expects that the CO_2 emissions reduction report (goal: 40% reduction versus 1992 by 2030) will yield much better results, since it includes heat and transportation as well as electricity, and has a much longer timeline.

Land Conservation

Freiburg is also "green" in appearance. It is home to Germany's largest communal forest, covering over 40% of the municipal territory. The forest is home to Germany's tallest tree—a 63-meter douglas fir. It has a surprisingly

diverse terrain and ecosystems—from high mountains to boggy lowlands. About 44% of the forest is used as an "environmentally appropriate economic forest." Wood is harvested at a rate of 35,000 m^3, which is about three-fourths of the amount that grows back in a year. Monocropping is avoided; there is no clearcutting and no use of pesticides. For this sustainable management Freiburg's Forestry Office earned certification from the Forest Stewardship Council, and its timber can be marketed with the FSC eco-label. The remaining 56% of the city forest are nature conservation areas—50% managed and 6% wild.

Freiburg's city forest
Source: Inspirenation 2008

According to the Forestry Office, besides providing wood, and jobs in the forestry and woodworking sectors, the city forest has a wide variety of beneficial functions. It:

- serves as the city's "green lungs" and cleans the air

- moderates temperature
- protects the soil
- stores water
- is a natural and free recreational resource
- provides habitat for wildlife, including rare and endangered species
- gives food from deer, wild pigs, and goats
- beautifies the landscape

Besides the 5,000 hectares of forest, Freiburg has over 600 hectares of parks and 160 playgrounds providing greenery, recreation, and biodiversity. The parks range from the carefully manicured and flowery site of a former international flower show, to the more unkempt nature conservation areas. Pesticides are not used, and only indigenous trees and shrubs are planted. Changing the lawn mowing schedule from 12 times to only twice a year has "markedly revived the biodiversity in the meadows." 22,000 trees were planted in the parks, and the same number along streets.

Park with bike path along the Dreisam River
Source: City of Freiburg (n.d.)

There are also 3,800 small garden allotments on the outskirts of the city, which serve as private oases for the city dwellers as well as a source of fresh fruits and vegetables. The number is expected to increase, according to the new land use plan.

All this green space is the result of deliberate urban planning that seeks to keep development compact while accommodating population growth. In the

new neighborhoods of Vauban and Rieselfeld, for example, the homes are four- to five-story apartment buildings instead of single-family houses, allowing for more green space. (In the Rieselfeld district, 240 hectares were designated as landscape conservation area and only 78 hectares for residential development.) Shops and offices are located on the ground floor of the apartment buildings, allowing residents easy access, on foot or bicycle, to their daily needs—so that "no supermarkets will be constructed on green meadows." The urban planning has been participatory. For the new Land Use Plan 2020, citizens formed 19 working groups to discuss potential construction areas and make recommendations to the city council.

Green Economy

Renewable energy production is encouraged with tax credits from the federal government and subsidies from the regional utility (Badenova provides 200 euros for solar water heaters and 900 euros for photovoltaic systems). But especially noteworthy as an economic model are grassroots financing schemes that allow concerned citizens to invest directly in renewable energy resources. For example, through one local association for the promotion of renewable energy (fesa, or Förderverein Energie und Solar Agentur e.V.), citizens invested over 6 million Euros in 9 windmills, 8 photovoltaic arrays (including the soccer stadium), 1 hydropower plant, and a major energy conservation retrofit project at the Staudinger public school. Investors get a return on their investment and, in the case of the soccer stadium, free season tickets. Under the heading "with us one can buy power plants," Badenova (2009) describes four such plans, the most recent of which bundles wind, hydro, and solar power due to a dearth of new wind sites.`

Thus Mayor Dieter Salomon credits the citizens themselves for Freiburg's success:

"Freiburg has developed its profile from eco-capital into the leading centre of competence for alternative energy. The city's many small and large scale alternative energy facilities exist thanks to the dedication of the citizens – citizens who equip their own houses with solar panels, hold shares of communal facilities and order regionally produced electricity from renewable energy through our local energy supplier Badenova" (Inspirenation 2008).

Freiburg has become the European Union's "Solar Valley," similar to California's Silicon Valley. The economic benefits are especially noticeable in the sectors of manufacturing, research and education, and tourism. Overall the "environmental economy" employs nearly 10,000 people in 1,500 businesses, generating 500 million euros per year.

Freiburg companies produce not only state-of-the-art solar cells, but also the machinery needed to manufacture the cells. Companies such as Solarfabrik, Concentrix Solar, SolarMarkt, and Solarstrom are served by a wide web of suppliers and service providers. One exciting new development is Concentrix's creation of solar cells that double the efficiency of photovoltaics by using lenses to concentrate the solar radiation. Overall about 80 business operations employ over 1,000 people in the solar technology industry.

A network of prestigious research institutions has developed in Freiburg, most notably the Fraunhofer Institute for Solar Energy Systems (Europe's largest solar research institute) and the Ökoinstitut. The International Solar Energy Society (a worldwide organization) has its headquarters in Freiburg. According to the City of Freiburg, Centers of private and public research investigating renewable energy resources, such as the Fraunhofer Institute for Solar Energy Systems, function as a center of gravity, around which hundreds of spin-off companies, service providers and organizations are based. These include the Solar Factory, the Regio Freiburg Energy Agency, consultancies, solar architects, a zero-emission hotel and the Future Workshop of the Chamber of Crafts. Also the farmers, foresters and organic vintners profit from the research done in the region by institutions such as the Viticulture Institute, the Forest Research Institute or the Albert Ludwigs University.

The city frequently hosts international conferences that serve the transfer of science and technology. The Photovoltaics Industry Forum was held in 2007, and the Intersolar conference was held in Freiburg every year from 2000 to 2008 (with 53,000 visitors in its last year). Intersolar moved to Munich, but the Gebäude-Energie-Technik (Building Energy Technology) fair takes its place. The city also hosts the annual Freiburg Solar Summits which attract people from around the world.

Environmental education is another booming business. According to the City of Freiburg, in the field of environmental education alone, 700 new jobs were created, among which was a university chair of environmental economics. In the scope of the Solar University, which obtained the status of an elite university in 2007, an Interdisciplinary Centre for Renewable Energies and an international masters study course "Renewable Energy Management (M.sc.)" have been established.

There is also a Solar Training Center for technicians and installers. Environmental education in schools (e.g. the Fraunhofer program for 9th and 10th graders) and outdoors (e.g., forest trails, deer park, and the Eco-Station at Seepark) encourages environmental consciousness in the younger generation.

Besides all the researchers, conference-goers, and students who come to Freiburg from around the world, the city's green reputation also attracts eco-tourists. Even from as far away as China, South Korea, and Japan, eco-tourists—equipped with solar city maps and bicycles—enjoy the "solar tour."

At least seven of the EcoTipping Points "ingredients for success" are apparent in Freiburg:

1. ***Outside stimulation and facilitation.*** The planned nuclear plant at Wyhl in the early 1970s is said to have been a catalyst for Freiburg's Green Movement. More recently, federal policies regarding waste management and renewable energy promoted Freiburg's progress toward being a Green City. The European Union's directive regarding combined heat and power undoubtedly also played a role.

2. ***Strong democratic local institutions and enduring commitment of local leadership.*** Freiburg's democratically elected mayor and city council, and the various local agencies, set crucial policy in the areas of transportation, energy, waste management, and land use. They also invest money and create jobs that further more environmental protection. Direct citizen participation is important especially in land use planning and energy investments. Participatory decision-making at the neighborhood level governs the Vauban neighborhood.

3. ***Co-adaptation between social system and ecosystem.*** The overall strategy for Freiburg's development has always been to provide for the needs of the people while minimizing environmental harm. Recent improvements in human behavior (e.g., recycling and using public transit) benefit the ecosystem even more. And the green economy ensures that people and land prosper together.

4. ***Letting nature do the work.*** Freiburg is working hard to maximize the use of sunshine for heating homes, heating water, and generating electricity. The large communal forest also provides valuable environmental services.

5. ***Transforming waste into resources***. Freiburg's extensive recycling system makes use of almost every conceivable waste. Paper, plastics, tin cans, glass, and even corks are converted to new raw materials. Energy is derived from wastes such as landfill gas, wood chips, waste heat (CHP), and organic household waste, which in addition provides a high-quality compost for gardens.

6. ***Overcoming social obstacles.*** Freiburgers battled the state government over nuclear power decades ago, and now the problem is wind power. The "Black-Yellow Coalition" (Christian Democrats and Free Democrats) that rules the state of Baden-Württemberg is said to have a "wind blockade policy." (The state government could change in the March 2011 elections.) Also, there seems to be conflict over wind with the regional energy planning authority. Moreover, a "Black-Yellow Coalition" is currently in power at the national level. The federal government recently decided to slow down the phase-out of nuclear power.

7. ***Building resilience.*** Thanks to its green economy, plus another ingredient we notice in many stories—community solidarity and pride—Freiburg is likely to remain a Green City.

Awards, Strategies and Best Practices

City of Vision Award

- The City of Freiburg is often called Germany's "ecological capital" and has been recognized internationally as one of the world's most livable, sustainable and child-friendly cities. In 1993, IMCL awarded the City of Freiburg the IMCL City of Vision Award. Since then, Freiburg has received numerous awards for its leadership in sustainable transportation planning, promotion of walking and biking, traffic calming mechanisms, human scale mixed-use development, renewable energy, protection of nature, and sustainability.\\

Study Tours

- The City of Freiburg disseminates their innovations and improvements in livability and sustainability in recent years by organizing the 2013 City of Vision Study Tour.

"City of Short Distances"

- Not only retaining and enhancing the beauty, walkability, mixed use and vibrancy of its historic city, Freiburg planning over the last 40 years has emphasized biking, walking and public transit, traffic calming, and mixed-use human-scale development to create a "city of short distances". Numerous sustainability measures such as regional heating, recycling, and low-energy buildings have been implemented. Regional planning has focused development within city boundaries, and thus prevented sprawl. Historic castles, villages and towns have been protected. A strong emphasis is placed by Germany, Switzerland and France on ensuring ecological standards and protecting the diversity of vineyards, orchards and farms that produce the region's renowned specialty items.

"City Carpet"

- Freiburg is a delightful city to study for all those concerned with city livability. Cities around the world have much to learn from details such as Freiburg's "city carpet" (paving throughout the pedestrian zone); bicycle network planning and bike services; public transit design and linking policies; principles for developing new urban neighborhoods; traffic calming details (Wohnstrasse, Verkehrsberuhigung), etc.

Appropriate Architecture

- In 1944 most of Freiburg was destroyed in an air raid. Only a few buildings remained. The cathedral, fortunately, was untouched, surrounded by rubble. After the war, the decision was made to rebuild the city on the medieval street plan, maintaining the irregular narrow streets, and to reconstruct buildings as far as possible to retain the medieval scale and feeling of the old city. In this way, Freiburg's decision was atypical for European cities, most of which chose to follow modern planning concepts, widening and straightening streets to accommodate cars.

- Only a few of the most significant historic buildings, such as the city hall (Rathaus) and grain storehouse were rebuilt as they had been before. All others were built on the original building lines and within the original building envelope, not as replicas, but as modern buildings in the spirit of the medieval city. Some buildings constructed in 1952 preserved the city's historic character so well that they are already placed under preservation law.

- The economic boom of the '60s, which changed the face of so many German cities with high-rise buildings, the attempts to preserve the historic feeling of the city gave way to an attitude of modernism. Some very inappropriate, glass and steel department stores, and parking garages were built at this time, with flat roofs and horizontal strip windows.

- City regulations were able to prevent high-rise buildings in the old city, and to prevent the use of steel, glass and concrete facades for most large department stores. Gradually, the city was able to compromise with architects to obtain facades that reflected the historic structure of the city by breaking a large façade into smaller units, adding window apertures in the wall surface, and a pitched roof.

- In the '70s design guidelines were drawn up. By and large, these were accepted. New designs were asked to conform to the traditional building type: the roof should be as steeply pitched as the original building on that site, with roof ridge parallel to the street; the eaves should be very clearly defined, as they were in the medieval buildings; windows should be apertures within the solid wall surface, and they should be openable. Dormer windows were permitted to utilize the considerable space beneath the roof. Greater flexibility was permitted in the design of rear facades, in order to permit balconies and roof terraces.

Urban Renewal Prototype

- At the end of the '60s a major program was initiated to maintain and increase the residential population in the inner city. The area of Konviktstrasse is particularly interesting. The street has been largely rebuilt, but the scale and character of the medieval street still remains. A prototype of appropriate urban renewal was carried out. The city did not permit amalgamation of the small building lots, but bought the properties and sold each lot to a different individual, with the injunction that they must build and live in the buildings themselves, and that each owner must employ a different architect.

- It was assumed that these houses would not be built exactly as before but that they should be clearly new buildings, varied in style, but following the principles of Freiburg's traditional architecture. The various architectural designs had to be considerate of their neighboring buildings. Each architect was required to submit drawings and a model, and these were compiled to see how the ensemble would look.

- The street became such a popular place to live that by the end of the '70s architects were competing with each other to design a unique facade. Nevertheless, the designs balance each other, and the ensemble is very pleasing.

Residential Incorporated into Parking Structures

- Parking was one of the chief problems for residents and business people. The area behind Konviktstrasse, which had previously been the site of the city wall and some additional housing, was therefore used to provide parking. The city constructed a three story garage with six hundred spaces. On top of the stepped roof of the garage the city identified twenty-two sites for townhouses, each with its own garden area. Each of these sites was also sold to different individuals, who were also required to hire different architects to design appropriate dwellings following the traditional principles. From Konviktstrasse, one would not guess that a parking garage exists; the houses appear to have been built on the slopes of the Schlossberg hill. Indeed, from these row houses one steps across a bridge and is directly on a trail that connects through the Schlossberg woods to the rest of the Black Forest.

Development of "Pedestrian Zones"

- Freiburg was one of the first German cities to close the city center to traffic. As early as 1949 cars were banned from five small side streets off Kaiser Joseph Strasse, the main shopping street, but it was not until l971, after the construction of a ring road around the city center, that the city undertook a very careful evaluation of goals and priorities for the future of the city.

- In Freiburg, as in many other cities in the '60s, families were moving out to the suburbs, shopping centers were being developed around the periphery, and traffic in the city center had become a major problem, threatening the quality of life for those living in, and visiting the city center.

- It was decided that "the attempt should, and had to be made to put a stop to the impending depopulation of the city center". It was agreed that the city must be livable for the community. Residential accommodations, and workshops had to be increased. The historic and cultural significance of the city had to be restored. These goals included improvements in Freiburg's market function, and streetscape.

- In order to make the city center the unquestionable focus of economic and business life in the region, and to improve the quality of life for everyone who lived, worked, visited or enjoyed themselves in the city, it was decided that the center should become a traffic free zone. The pedestrian zone, the Freiburgers decided, should encourage promenading and social life. It should provide for meetings, and exchanges of opinions and ideas. That is the life of the city; for that, the heart of the city must offer ideal settings.

- This important definition of goals and priorities prepared the way for the City Council's decision in 1972 to close Kaiser Joseph Strasse to traffic. Until then, this street was used as the major north-south traffic route and carried 22,000 vehicles per day. Finally, in 1973, after much preparatory redesign and repaving, all the main streets and almost all the side streets in the city center were closed to traffic.

- The pedestrianized city center was intended in 1972 to be an experiment. Most citizens were always in favor of the idea, but some business groups opposed it. It was not until 1986 that the "experiment" concluded, when a consensus in favor of the pedestrian zone had clearly emerged.
- The streets were repaved, for the most part, with natural stone. Trees, fountains, seats, lamps and art objects were installed. Commercial elements, such as showcases and kiosks, which were common in pedestrian zones created in other cities during the '60s, were not wanted here.
- The city paid very special attention to the repaving of the streets and squares. Kerbs and asphalt were removed from all streets, and natural stone paving - reddish quartzite, black basalt, granite, red porphyry, and pebbles from the river Rhein - were used almost without exception in the medieval city center.

- Indeed, the floor of the city has been treated as the city's "carpet". It is a work of art, and exhibits fine craftsmanship. Geometric and flower designs, historic, cultural and business symbols, executed by traditional artisans working with the different colored stones, pebbles and mosaics emphasize the unique character of each street, stimulate a sense of history, and prompt fantasy and imagination.

- On the square outside the town hall are pebble mosaics representing the emblems of Freiburg's sister cities, Besançon, France; Guildford, United Kingdom; Innsbruck, Austria; Padua, Italy; Madison, Wisconsin; Lwow, Ukraine; and Matsuyama, Japan. Institutions, commercial buildings and churches are invited to sponsor a pebble mosaic in the pavement at their entrance; a bakery may be identified by a pretzel, a pharmacy by a pestle and mortar, a cafe by a cup and saucer, a tailor by a pair of scissors. In this way, the business reaches out into the street and extends its jurisdiction into what, in other cities, is a no-man's land. The pavement becomes personalized.
- These pavement designs demonstrate that the Freiburgers value artistic craftsmanship, and that imagination, patience, humor, and the ability to create something that will last for generations are qualities that are highly valued. The sense of civic pride and responsibility are very strong in Freiburg.

- During the pedestrianization process, Freiburg took the opportunity to reopen the "Bächle", the little streams that run off the mountains through the streets of the old city. These streams had provided the drainage system dating from the fourteenth century, but had been covered up to make the streets accessible for vehicles.
- On hot days these tiny rivulets are very refreshing: many people paddle to cool hot feet; and children find the swift flowing water irresistible for all kinds of games. The pedestrian zone has proved

immensely popular, and economically very healthy. Indeed, the pedestrian streets are so successful that some shopkeepers and residents on streets with traffic also demand to become traffic free.

Transportation Planning

- Closing the center of the city to private vehicles made public transportation by tramway and bus much more attractive. The tramway system runs through the main shopping streets and, without the delays caused by private vehicles, the trams are able to run much more efficiently. As a result of pedestrianization, therefore, more people began using public transportation because it could take them quickly and comfortably into, and across the city center. As a result of this increased use, it became possible to further improve the service and extend the routes.
- In Freiburg, transportation planning aims to reduce motorized traffic by means of integrating urban development and transportation planning to achieve a "city of short distances". The goal is to reduce automobile traffic by increasing use of the more healthy and sustainable modes of transportation, walking, biking and public transit. While it is recognized that use of the automobile is necessary in some circumstances, it is carefully regulated in an environmentally and urban-friendly manner.

- Transportation planners make use of five mechanisms to encourage healthy and sustainable transportation modes: 1. Extension of the public transportation network; 2. Traffic restraint; 3. Channeling individual motorized vehicle traffic; 4. Parking space management; and 5. Promotion of cycling.

- Early plans had proposed moving public transportation into tunnels beneath the pedestrian streets. These plans were abandoned for cost reasons, and it is now thought that the visibility of trams and busses on the main street also keeps public transportation more attractive. They are relatively noiseless, and limited to a maximum speed of 25 kilometers per hour.

"Urban Environmental Protection Ticket" ("Green Ticket")

- In 1984 a new philosophy for local public transportation was developed. An "urban environmental protection ticket" was introduced. This was a monthly season ticket, usable on all busses and trams, and was offered at 25% discount to everyone. When the number of passengers rose it became possible for new streetcar lines to be opened and new equipment to be installed.

Street Cars and Light Rail Service

- In 2012, the streetcar (Strassenbahn) extends 19 miles (30 km) from Kaiser Joseph Strasse at the heart of the pedestrian zone to eight different destinations in surrounding neighborhoods. They provide a regular service every 7.5 minutes at rush hours and carry 70% of public transit users. An additional four new lines are proposed to provide greater interconnectivity. The regional light rail service runs every 30 minutes from the city center to surrounding towns. This connects to the national train system and bus system at the main train station.

Regionalizing Public Transportation

- Freiburg's public transportation company joined with all the public transportation companies in the region to form a single transportation company. It is now possible to purchase a monthly ticket for unlimited use on all regional busses and trams, including trains and busses of the national system "Bundesbahn". This has made it as easy to travel by public transportation to the surrounding mountains and lakes of the Black Forest as it is to go shopping. Fifty-six bus routes and eight railway lines are included in the system. The ticket is transferable, and can be used by several passengers simultaneously. This ticket is called the "Regional environmental

protection ticket" or the "Green ticket", and is intended to encourage as many people as possible to leave the car at home and travel by the much more ecological public transportation system.

Bicycle Restrictions

- It was decided in Freiburg that bicycles would be too disruptive to pedestrians within the main pedestrian areas. Riding bicycles, therefore, is not allowed on Kaiser Joseph Strasse, Münsterplatz, Augustinerplatz, or Rathausplatz. Bicyclists are permitted to ride on some pedestrian streets, but not others, and sometimes they are only permitted in one direction.

Bike Parking

- Within the pedestrian zone, there are 50 bike parking lots. Bicycle parking is provided at primary, elementary and high schools as well as at all university buildings. Safe bike parking places are provided in the surrounding neighborhoods at streetcar, local railway and bus stops, often with protective roofs. At the main railway station, a large three story bicycle station has been constructed, providing bike parking, maintenance and rental services. Throughout Freiburg, it was estimated in 2009 that 60,000 bike parking spaces were available.

Separated Bike Paths

- An extensive network (450 kilometers) of bicycle paths has been created. At first, paths to surrounding villages were intended for both bicyclists and pedestrians. It became clear that the speed of bicycles made these paths unsafe for pedestrians, to now, wherever possible, separate paths have been created for both. These routes run along the banks of the river Dreisam, around fields, through woods, and beside roads. Within the city, separate bike paths are often created next to sidewalks, protected from traffic by planting strips where space allows.

Bike Boxes at Intersections / Cycle Streets

- Bicycle lanes have also been created on the road, clearly marked with solid white lines and bike symbols. At intersections, special care is taken to bring bicyclists to the front in “bike boxes”, permitting them to cross before motorized vehicles. Occasionally, in order to complete and connect the bicycle network, quiet streets have been designated as “Cycle Streets” the give priority to bicyclists.

Parking Pricing and Residential Parking Permits

- Use of the automobile has been made less attractive by parking space management. Within the center city, parking garages cost almost $3 per hour (Euros 2.20). In immediately adjacent neighborhoods, parking costs $2 per house (Euros 1.60). Neighborhoods where residents are required to obtain parking permits are being extended.

"Play Streets or Living Streets"

- Many streets have been traffic calmed by removing some parking areas to make way for trees and plants, seating areas, and outdoor restaurants. Throughout most of the city, a 30 kilometer per hour speed limit is in place, and many short streets and small neighborhoods have been designated as "Play Streets" or "Living Streets" (Wohnstrasse). In these streets, speed limit is reduced to walking speed, and only residents or delivery vehicles are permitted to park.

Farmers' Markets

- Freiburg has one of the most extensive and successful farmers' markets in Europe, which takes place on the large Münsterplatz that encircles the cathedral. At least half of the market, on the north side of the cathedral, consists of local farmers and gardeners selling their own produce.

- While the market takes place every morning from 7:00 a.m. until 1:00 p.m., Saturday is the busiest day, when the square is filled to overflowing. Around the edge of the Münsterplatz are many outdoor cafes, inns and restaurants which, from mid-morning on, provide light refreshment and traditional fare. By noon during fine weather every table and chair is occupied. Many have been shopping; others come because this is the liveliest place to meet friends.

- The market has a very festive spirit, with its colorful umbrellas and overflowing baskets of fruit, flowers and vegetables. For the Freiburg citizens, this is an important weekly social ritual, an opportunity not only to buy the best and freshest produce of the region, but more significantly, to meet friends and acquaintances. Many people, including city officials, business people, university professors and students can regularly be found at the Saturday market. This farmers' market plays a very important role in Freiburg's social life.

Festivals and Street Entertainers

- Celebration and festivity are cherished in Freiburg. Hardly a week goes by without some festival in the center of town or in one of the neighborhoods. The annual carnival celebration, "Fasnet" revives a centuries old tradition of masked and costumed performances in the streets. Thirty-three fools' guilds take part in the celebrations, and there is a "Hemdglunker" procession, which leads to the storming of city hall.

- Many new festivals were introduced during the '70s: in 1973 a Christmas market was inaugurated on the Rathausplatz in front of city hall; in 1970 the wine growers' cooperative societies began a festival called "Freiburg Wine Days" for the last weekend in June on the Münsterplatz; in mid-August there are nine days of Wine Tasting, "Weinkost" of all the wines grown within the boundaries of Freiburg. In addition there is an Old City Festival, a Beer Festival, the "Oberlinden Hock", and various neighborhood festivals.

- Street entertainers are welcomed in Freiburg. Saturday afternoons are especially lively, when music of all kinds, from medieval and baroque music, classical Spanish guitar and Indian sitar music, to folk music from Ireland, America and Peru, jazz and rock music, as well as clowns, acrobats, and other performers fill the streets and squares of the old city.

Renewable Energy, Solar Industry, Photo-voltaics, and Water Quality

- Spurred by research at the University, and a population eager to put into practice principles of ecology and sustainability, Freiburg has become a leader in innovative sustainable energy, with solar, wind and hydro-power industries, co-generation and district energy systems.

- Water quality has long been a focus of planning, with extensive use of permeable ground surfaces (rather than asphalt), bioswales, and green roofs. To encourage permeable ground surfaces, property owners are charged a stormwater fee according to the percentage of their land that is permeable.

- The two new urban neighborhoods, Rieselfeld and Vauban have been built using low energy construction and passive and active solar design methods, as well as a strong community participation process in the planning.

New Urban Neighborhood Design Principles

- The population of Freiburg increased rapidly in the '90s, largely due to the migration from former East German States. Freiburg's response was to plan a complete new city quarter, called Rieselfeld, for a population of 12,000 on seventy-eight hectares at Freiburg's western edge. The city wanted to ensure that this new neighborhood would be designed on the most advanced ecological principles.

- The land had originally been used as the municipal sewage farm, but was closed in 1980 when the sewage system was connected to a regional treatment system. At that time, the intention was to protect the landscape and ecology of the area. However, the need for housing was so great that the city decided to use one quarter of the area for the new neighborhood, and to maintain the rest as a nature conservancy area.

- The city wanted to avoid the social problems often associated with large scale housing developments, and to ensure that they did not repeat the planning mistakes made in the adjacent district of Weingarten. Here, modern planning principles had been used in the

construction of a predominantly social housing district of high-rise apartment blocks. The combination of poor planning principles, absence of urban texture, and ghettoization of lower income families had created a neighborhood with distinct social problems.

- The city paid much attention to defining equitable and sustainable planning principles to form the basis for Rieselfeld. They invited experts in planning, social sciences, transportation, ecological planning, energy, housing, and other fields to advise them and to help shape the guidelines for the conceptual plan competition.

Seven principles were considered of prime importance:

- **Human Scale**: In its architecture, and urban space design, the new neighborhood should be built to a human scale. There should be a clear differentiation between public, semi-public and private spaces. Public spaces should be defined by continuous urban fabric - shop/houses or terraced houses - along the street to a maximum of five or six stories.

- **Identity:** Since the social stability of a district depends on residents identifying with their neighborhood, the neighborhood must have a good image, with its own unique and consistent character.

- **Social structure:** From the beginning the neighborhood must have a balanced social structure. This means that while social housing is an important element, it must be balanced by market rate housing.

- **Infrastructure:** For the neighborhood to have its own identity it must contain all the essential infrastructure. Shops, schools, kindergarten, health care and senior services, work places, restaurants, churches, sports and other facilities must all be included.

- **Transportation:** It is of the highest priority to encourage use of public transportation; the new district must be connected to the city center and other parts of Freiburg by tramway and bus.

- **Ecology:** Ecological principles must influence architectural design and urban design. Buildings should make use of passive solar energy, solar collectors and photo-voltaics.

- **Community participation:** It is important to develop a process of community participation in the planning and building designs for the new neighborhood.

District Planning

- In 1992 a competition for the conceptual plan was held. The first prize winner, a planning firm from Freiburg, worked with the City of Freiburg to further refine the plan to reflect as closely as possible the city's planning principles.\
- The street layout is roughly orthogonal with the main street carrying the Strassenbahn connection to the city center running down the middle of the site. The main street contains most of the commercial activities, with a large supermarket at either end, and a diversity of smaller shops, cafes and restaurants between them. It has wide sidewalks, separate bike lanes, vehicle lanes, and the Strassenbahn running down the middle along a green sward.
- While the emphasis is placed on public transit, walking and biking, the automobile has not been banned from Rieselfeld. Almost all apartment buildings and condos have underground parking; row houses and townhouses have parking in adjacent alleys.

- "Wohnstrasse" abound throughout the area. In these streets, traffic can go no faster than a pedestrian. There are no sidewalks because the whole width of the street must be shared by playing children, adults socializing, bikes and cars. This requires all users to be mindful of others in the space. In addition, there are numerous lanes, paths and trails that are for pedestrians and bikes only.
- The urban fabric consists primarily of a classical block structure reminiscent of some of Freiburg's best loved 19th century neighborhoods (though in a modern style of architecture), and two to

four-story town houses. Rieselfeld was the first district in Germany to require stringent energy saving measures for housing construction in the entire district, and builders were encouraged to use passive solar design features. Across the whole neighborhood there is a minimum amount of sealed paving: rainwater seepage is facilitated through natural ground surfaces and a rainwater conservation system.

Green Streets and Green Spaces

- Much attention was paid to making the streets and outdoor natural areas safe for children to explore and range on their own, and hospitable for children's play. Green streets, and green spaces within and between the blocks are filled with natural playgrounds, small streams, ponds, community gardens and wild areas. Nature reigns supreme.

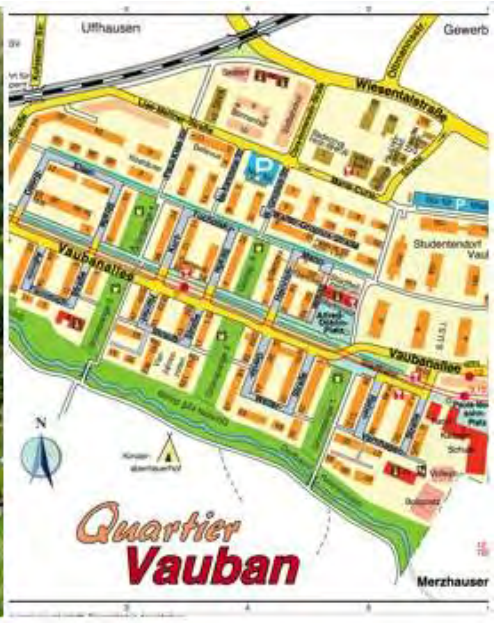
- The city established a municipal project management team, headed by Klaus Siegl, under the direction of the Erster Bürgermeister Dr. Sven von Ungern-Sternberg to manage the whole development. Since the city owned the land, they were able to sell small parcels to developers, building contractors and individual owners and thereby finance the provision of services.

- Major housing construction was not undertaken until the necessary infrastructure was in place. This meant that the tramway was in place, a kindergarten and shops, including a grocery, were completed to coincide with when the first residents moved in. Major community

resources at the center of the development now include a grammar school, a media center, and a multi-cultural church that provides many meeting rooms for diverse religious observances. The development broke ground in December 1994. The neighborhood was built in sections and finally completed in July 2010.

Green Neighborhoods: Vauban

- In 1992, the French Vauban military barracks were decommissioned. The city of Freiburg bought the land and decided to develop it as a high density neighborhood for a population of 5,000. The land was heavily wooded, and the idea developed to create a "green" neighborhood – a place where residents could live in a park, not in a parking lot. The barracks were less than 3 kilometers from the city center, with a good bus connection and easily accessible by bike. As with Rieselfeld, it was also decided to connect Vauban to the city center with a new tram line.



- The Vauban lands offered several advantages for transformation into a new type of garden suburb, but at a higher density. It was adjacent to existing city services and many offices and job locations were easily accessible on foot or by bike. On the south side, it was close to hills and woods attractive for recreation. It was therefore decided to build a new neighborhood at the greatest possible density compatible with ecological and social sustainability.

- It was felt that a high standard of livability would only be achieved in such a dense neighborhood if the streets and public spaces were relieved of the burden of automobile traffic. An important criteria, therefore, was to remove the automobile from the neighborhood as much as possible.

- Planning for pedestrians and bicyclists took first priority. This meant that shops, services and work places had to be located within walking or biking distance. Bus lines stopped at the entrance to Vauban, and a tramway was constructed along the neighborhood's main street.

<u>"Promotion of a "Car-Free" Life-Style"</u>

- The comfort and safety of children, handicapped persons and elders was prioritized over the comfort of the car driver. Residents were protected from the noise and air pollution caused by cars by the provision of large parking structures at the entrances to Vauban. These ensure parking is available within 300 meters of every home. While there are a small number of parking spaces available throughout the neighborhood, it was emphasized that this neighborhood would be ideal for those who wished to live without a car, or who did not need to have their car parked inside, or in front of their home. In Freiburg, 35 – 40% of households do not own a car. Many of these have consciously chosen a car-free life style, so it was felt that the time was right to create a neighborhood that was, as far as possible, car-free. Delivery and emergency vehicles, of course, have access to every dwelling.

Advantages of a "Car-Free Neighborhood"

- A car-free neighborhood was also considered to offer ecological and economic advantages:
    - residents would walk on the streets more, thus get more exercise and be healthier;
    - without cars, the air would be cleaner, and thus healthier;
    - residents would be more likely to get to see each other, talk, and get to know each other in the public realm;
    - they would develop a stronger connection to their neighborhood and to the community.
    - It was considered especially important to ensure that the street adjacent to the elementary school and Kindergarten should have minimal car traffic.
    - By not providing underground parking for every dwelling, construction costs would also be lower, reducing costs for owners and renters.
- It was planned that east of the main street, Merzhauserstrasse, approximately 20% of residents would have parking available near their homes, either underground or in parking structures. West of Merzhauserstrasse, the area is divided into four quadrants, each of which would provide parking for approximately 25% of residents within the quadrant. Other residents would be able to park in the parking structures at the periphery of Vauban.
- Since the neighborhood was constructed in phases, planners were able to test out their estimates as to the number of parking places desired near the homes, and adjust their planning as they progressed.
- The land was divided into comparatively small parcels, enabling individuals to build for themselves and own their own home. This was a deliberate effort to encourage diversity of architectural forms that would reflect the diversity of the population.
- On Merzhauserstrasse a mixed-use solar building was constructed, with shops at street level and south-facing low energy apartments above. Row houses behind this building are constructed on principles of passive solar design. Active solar panels on the roof allow these

houses to produce more energy than they need, which is traded back to the energy company.

- This research incorporates references from: Freiburg-im-Breisgau, Germany, in Livable Cities Observed (1995) by Suzanne H. Crowhurst Lennard and Henry L. Lennard
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Conclusion and Next Steps

This initial research into best practices organized by the key parking and access management "Focus Areas" is intended to provide a range of options for staff, City officials and community stakeholders to consider as the first step in a process of refining and prioritizing the key action items that will be fleshed out in the City of Rochester/DMC Parking and TMA study project

Parking and Economic Development

A Policy Approach to Linking Parking and Economic Development

Report Version: 1.0

Prepared for:

DMC Transportation & Infrastructure Program
City of Rochester, MN

Prepared by:

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DMC Project No. Rochester J8618-J8622 Parking/TMA Study

Table of Contents

Parking as Economic Development Support

Introduction

During a set of meetings in November 2016 with City and Mayo Clinic transportation staff to assess current parking and access management programs, the DMC Plan guiding principle of developing "a comprehensive strategy to drive economic development and investment" was discussed. During that discussion, a policy document developed by Kimley-Horn focused on how parking can potentially be used as a tool to support and complement economic development policy was mentioned, with the group expressing interest in the concept. This report is being provided as a resource document for staff to review. If the City staff feel this approach has merit and chooses to pursue a version of this approach for the Rochester community, we will develop a customized approach that will be tailored specifically for the City of Rochester in support of the larger DMC plan.

Having a well-defined and shared vision relative to preferred or targeted types of development is an important first step in this recommended approach. This task report will also focus on the development of general guidelines related to parking and economic development incentives as well as the development of specific policies to better align parking and mobility asset development and management to support community and economic development goals.

Purpose

Development of a policy linking parking development and management as a key element of community and economic development policies can be an effective strategy. This document suggests strategies and approaches to leverage parking and access management investments as part of an overall downtown business development strategy and encourages shared parking and shared mobility as key elements to support the larger DMC transportation vision.

To promote the effective management of existing and future public parking resources, a consolidated parking management organization will continue to be strongly supported. The parking management program will be a key partner for creating 'balanced and sustainable community access strategy" i.e. the parking department will take a more holistic approach to overall downtown access, developing policies and practices that support a more multi-modal approach.

Integration of good urban design principles relative to parking facility design will also be prioritized. The goals of this policy element are to better integrate parking infrastructure into the urban fabric and to contribute to a compact, walkable and vibrant downtown – this includes parking structure design criteria such as street-level activation, a preference for mixed use parking developments, LEED Silver building certification, etc."

Section 2: Parking as a Development Catalyst

Parking garages can serve as important catalysts in the preservation or redevelopment of downtown centers. In the case of Rochester and the DMC Plan, the identification of parking development sites to serve visitors/patients in the downtown core combined with a peripheral employee parking/transit connector strategy are also key concepts to be refined.

Well designed, well located garages can become part of the revitalization of theater and shopping districts, help make downtown housing more attractive, and arrest the flight of retail and customers to suburban malls. In Rochester, the issue of roadway "portal capacity" and developing parking in concert with the larger transit system framework are specific local issues to be addressed. This leads to discussion of concepts such as "mobility hubs" where parking reservoirs are developed in conjunction with intermodal transit facilities and other amenities designed to remove barriers to remote parking and transit system usage. Examples of these potential amenities include such elements as integrated day-care, grocery/convenience stores and other amenities.

Contemporary, functional garages can be an asset to a city and its inhabitants, and can make visiting downtown more appealing. There are three key elements to consider: the driver, the pedestrian, and the context. Older parking structures have tended to focus on the car, the maximum number of spaces per floor, and driving patterns. This leaves out the pedestrian and the area context elements.

A parking structure may be the first and last experience associated with a visit to downtown, so it needs to facilitate the transition from driver to pedestrian, from roadway to streetscape and back again to create a positive experience for those in driver/pedestrian roles. Successful urban parking structures address movement in a way that makes people wish to return. As part of the "Heart of the City" (urban design) element of the current planning work, the idea of elevating parking or intermodal facility "interior environment enhancements" should be given serious consideration.

For pedestrians, two significant considerations are safety and security. A parking garage needs good lighting with no hiding spaces. Structural elements should not block views, so drivers exiting their cars can see exactly where to go to get to the elevator or stairway. Visitors to the urban garage need clear connections that orient them to downtown destinations. The building itself is a sign. Stairway and elevator placement and design should offer these strong connections.

For drivers, tight dimensions, poor maneuverability, or unclear markers as to where and how to turn to find spaces might work for an employee garage or a commuter garage where people come in early in the morning and know exactly what they must do to find their parking space, but will not work for shoppers, theater goers and other visitors who do not park in a garage regularly. Drivers must be able to easily maneuver through the garage and find parking spaces, which should be generous enough to allow for easy parking.

Parking garages should also address their context. How will the structure be integrated with historic buildings, ongoing developments, and open spaces, while providing enough flexibility to accommodate future growth and changes? Density, traffic, and pedestrian patterns; adjacencies; design guidelines; historic building codes; urban fabric; and neighborhood impact are all important factors to consider.

Parking structure design can also involve street and sidewalk enhancements as well as provide related public amenities that reinforce pedestrian vitality, such as parkways, plazas, courtyards, bicycle and commuter facilities, and retail and commercial uses. In addition, the materials used and the scale of the garage in relation to existing buildings are important to consider, as well as the integration of the structure through high-quality design and the incorporation of retail.

As towns and cities grow denser, and efforts are made to create pedestrian-friendly, thriving downtowns, these once utilitarian structures are playing a more significant and integrated role in new development.

Section 3: Parking as an Economic Development Incentive – General Guidelines

The following are general guidelines and considerations that should be evaluated when developing policies related to leveraging parking as an economic development element. Developing the philosophical underpinnings of these policies that are consistent with larger City development goals is an important foundation if overall economic

development policies are to be consistent and aligned with larger community values and strategic plan objectives. The following guidelines are presented as a starting point for discussion purposes with the expectation that they will be reviewed and refined by City staff and elected officials before any official policy recommendations are put forward.

Parking can be a very powerful development incentive but must be applied in a fair and consistent manner that advances the larger community strategic goals. The following issues are examples of the type of criteria that we recommend as part of the assessment for either committing a significant number of existing parking resources or the development of future parking assets as an element of a development partnership. A companion "Task Report" that accompanies this report entitled "An Update of Parking Requirements Reform" delves into the issues of "How much parking is enough?" for evolving urban areas and transit oriented developments.

When evaluating whether the City will consider an investment in parking to encourage or incentivize a new development project, the following standard set of questions should be answered upfront:

Alignment with DMC Guiding Principles

While many of the elements below reflect basic municipal development review process and goals, special attention should be focused on the degree to which proposed development projects are in alignment with the adopted DMC development and transportation vision as well as community economic development goals.

1. Does the proposed development contribute to economic health of the downtown/community and DMC Guiding Principles? Describe the envisioned contributions.

2. Does the proposed development project include prioritized or highly valued development goals or program elements supported by the City of Rochester and the and DMC vision?

3. Are the proposed land-uses or combination of land-uses associated with this project appropriate the specific area?

4. Is the proposed development project in alignment with the DMC master plan and/or downtown strategic plan?

5. Does the proposed development project incorporate special elements valued by the City, DMC, Mayo Clinic and other community groups/plans? If yes, specify.

6. Has the City/County Planning Department reviewed and endorsed the proposed development plan?

7. Does the proposed development project create any unusual or unacceptable parking or traffic impacts ("portal capacity" issues)?

8. Is the developer willing to create new parking assets in accordance with proposed City parking structure design guidelines (a draft of these recommended design guidelines is a separate deliverable provided as part of this study) to ensure compliance with downtown development standards and parking structure design best practices?

9. Has the initial economic development impact of the project been estimated? What is the anticipated project impact in the following areas?

a. New jobs for downtown?
b. Jobs retained in downtown?
c. Increase in property taxes/TIF Contributions?
d. Estimated increase in sales tax revenue?
e. Stimulation of additional development?
f. Stimulation of additional support jobs?
g. Support of existing retail, restaurant and other existing service providers?

10. Is participation in this development project appropriate and consistent with the downtown masterplan or the "Downtown Experience Plan"? If so, please describe.

Parking System Support/Program Management – General Guidelines

Beyond the parking focus of the guidelines below, promotion of shared parking, shared mobility strategies and active transportation elements are critical to the development of multi-modal transportation vision for downtown Rochester.

Below are another set of questions which addresses the potential impact of proposed development deals as they relate to the existing parking management program. Supporting and enhancing the financial and operational influence of the parking and access management program going forward should be a priority as this function can have an important impact on the health and vitality of an effective urban environment.

1.Will this project generate additional parking revenue to support or contribute positively to the City's parking program?

a. If yes, specify:

i. Estimated visitor/patient parking spaces: _____
ii. Estimated spaces contracted: _____
iii. Estimated annual revenue: _____

2. Does this proposed development project create any new or unusual operating expenses that might negatively impact the City's parking program?

3. Are there opportunities for the City's parking program to operate any new parking capacity for a management fee? Is this desirable relative to this specific project?

4. Is the net financial impact of this project the City's parking program projected to be positive?

5. Are the activities proposed, relative to participation in this development opportunity, in compliance with the City's parking program bond covenant requirements/restrictions?

6. Are there opportunities for partnership/collaboration with the developer or property management firms relative to other downtown parking program goals?

a. Does this project create any possible public use of spaces after typical weekday work hours, weekends, holidays, etc.?

b. Does this project create any possible shared parking opportunities?

7. Does this development project create any special conditions that undermine the financial or market position of the City's parking program?

Section 4: Draft Parking Policy Purpose

Policy Statement and Purpose

"The City of Rochester parking policy will embrace a comprehensive approach that emphasizes leveraging parking infrastructure investment as a key element of community and economic development. Parking investments, made as part of an overall downtown business development strategy, should carry an expectation of a 5 to1 return on public funds invested. To achieve this level of return, projects that offer significant shared parking benefits are strongly encouraged.

The preferred approach for future City parking development will be through public-private partnerships with private developers when the proposed development projects are well aligned with the downtown master plan vision and land-use plans. Rather than building separate public parking assets, the City envisions partnering with private development projects in which the private development will provide adequate parking for their proposed combination of land uses at approximately ___ parking spaces per 1,000 square feet of development overall (it is recommended that this ratio be calibrated in Rochester to correspond with the "portal capacity" calculations as a key parking planning benchmark going forward). The City will develop additional public parking within sub district areas as part of private developments based on the specific location and availability of other public parking in the immediate vicinity reflecting the need for additional visitor / patient / customer parking with employee parking pushed to peripheral or remote parking options).

By jointly developing parking on those projects within the downtown core, the costs of major parking development elements (foundations, stair towers, elevators, mechanical systems, etc.) can be shared creating significant cost saving benefits for both parties compared to doing separate developments and thus providing an additional incentive for the proposed development to occur. Beyond incentivizing quality developments that support the development vision of downtown, the development of some amount of public parking with the new development is designed to provide additional public parking to support anticipated adaptive reuse and in-fill projects that are likely to occur in the immediate area of the new development.

For development projects that are complementary to the downtown vision, provide positive contributions to community and economic development objectives the joint development of shared parking assets provides the following benefits:

- This approach reduces development costs for both the developer and the City
- This approach encourages the use of shared parking and reduces the overall amount of parking required in the downtown
- Ideally, the City would manage the jointly developed parking facility ensuring consistent, high quality parking management and promoting use of parking access and revenue control systems that the community is already familiar with (improving ease of use).
- The jointly developed parking facility would be designed in accordance with City developed parking design guidelines to ensure high quality design standards reflecting industry best practices. (See design guidelines provided as part of this study).
- By providing a supply of public parking in conjunction with the new development (to support additional in-fill development and adaptive reuse of other adjacent properties) this approach will ultimately provide a better distributed public parking supply for hourly parkers and retail support throughout the downtown.

To promote the effective management of existing and future public parking resources, a consolidated parking management organization will continue to be strongly supported. The parking management program will be a key partner for creating 'balanced and sustainable community access strategy" i.e. the parking department will take a more holistic approach to overall downtown access, developing policies and practices that support a more multi-modal approach.

Integration of good urban design principles relative to parking facility design will also be prioritized. The goals of this policy element are to better integrate parking infrastructure into the urban fabric and to contribute to a compact, walkable and vibrant downtown – this includes parking structure design criteria such as street-level activation, a preference for mixed use parking developments, LEED Silver building certification, etc."

Primary Policy Elements

The three central elements of the recommended parking policy relate to linking the parking strategy to community and economic development. These primary policy elements are:

1. Integrating parking planning into a larger "Downtown Business Strategy" context.

2. Setting an expectation of 5 to1 return on parking investments as part of an overall downtown economic development strategy

3. Supporting a consolidated and "vertically integrated" parking and access management program.

The companion "Task Report" mentioned earlier entitled "An Update of Parking Requirements Reform" provide examples of successful policy implementation and lessons learned from other communities.

Communities interviewed for this study recommend a flexible mindset, leveraging new parking technologies to achieve enhanced operational efficiencies, parking revenues and customer service. They also support having a parking investment strategy which includes minimizing risk on the part of the public-sector partner, and setting an expectation of a targeted return on parking investments.

New Program Initiatives and Strategic Direction

The City, Mayo Clinic and the DMC are already moving in the proper strategic direction. A few more significant initiatives are noted below that could contribute positively to the City of Rochester:

- The existence of a well-managed and "vertically integrated" parking program (consolidated off-street parking management with on-street resource management and parking enforcement). In fact, it should be emphasized that the City of Rochester already surpasses most communities in this regard as it not only has an existing "vertically integrated" parking program, but one that also is integrated with the community transit agency management. This is a somewhat unique and incredibly valuable arrangement; it is also a solid foundation upon which an enhanced and more comprehensive "access management" program can be built for the future.

- Updating parking and mobility planning information and adding new planning tools/ capabilities (parking demand model, parking policy

refinement, multi-modal/shared mobility/TDM program development etc.)

- Identifying and addressing specific parking issues such as:

  1. On-street time limits
  2. Better aligning on-street and off-street pricing and policies
  3. Assessment of city employee parking / TDM policies, etc.

- Assessing investments in new on-street technologies that offer enhanced customer payment options and greater convenience
- Promoting a broader focus on sustainable community access strategies by creating a more balanced combination of parking, transportation and shared mobility options, etc.
- Development of an overall parking strategy/set of policies to support community and economic development.

Parking Policy Development

One of the main objectives of this study is the development of a strategic parking policy as it relates to the use of parking as a potential catalyst element in support of downtown development. This includes policy guidance related to parking investment and the use of parking as a potential development incentive.

The overall study will also include task reports and GIS based tools to better track, manage and understand parking supply/demand on an on-going basis (Park+ model), provision of parking garage design guidelines to ensure high quality facility design in conjunction with potential private sector partners, and current planning information and recommended zoning and parking requirements to help "right-size" parking supply in urban environments, as well as supporting new shared mobility strategies.

Section 5: Recommended Parking Policy Overview

The recommended parking development policy for the City of Rochester builds upon its significant investment in parking infrastructure. The City should continue to view parking as important civic infrastructure and carefully consider parking as one of several potential incentive options related to attracting new community investment.

The recommended approach encourages several fundamental philosophical and related policy considerations and provides several new parking analysis

tools. One of the primary guiding principles of the recommended parking policy is to view parking development projects and the resulting infrastructure as true "investments".

As with any other type of investment, there should be an expectation of a specific return for public dollars invested. Based on successful strategies from around the country, a 5 to 1 return is recommended as a goal. For example, if the City were to invest $10,000,000 in a new parking facility, the expected return on this investment would be at least $50,000,000 in private sector investment. This is one means of leveraging parking investment as a tool for community and economic development.

Two of the key lessons learned from communities where this model has been successfully applied include:

1. A reinforcement of the importance of "shared parking" as a central component of the strategy. This is important because the ability to leverage complementary (as opposed to overlapping) peak parking accumulation factors[1] allows the sharing of spaces between land uses and thereby allows the garage to support more private sector development projects. This greatly enhances the chances of attaining the 5 to 1 return on investment goal.

2. Recognize the importance of retaining ownership and control of parking assets (i.e., leasing the spaces, not "giving them away").

This approach also encourages a broader assessment of the economic impacts of proposed development projects, including: initial project value, jobs creation (short-term and long-term), property tax impacts, estimated sales tax contributions, and potential for stimulating additional development or community investment.

Key Parking Policy Principles

"The City of Rochester parking policy will embrace a comprehensive approach that emphasizes:

- Leveraging parking infrastructure investment and enhanced parking management as a key element of community and economic development.
- Integration of parking planning into the larger "Downtown Business Strategy" context.
- Setting an expectation of 5-to-1 return on parking investments as part of the overall downtown business development strategy.
- Ensuring effective management of existing public parking resources.
- Supporting a "vertically integrated" and consolidated parking management organization.
- Promoting a 'balanced and sustainable community access strategy'.
- Integration of good urban design principles relative to parking facility design to better integrate parking infrastructure into the urban fabric – this includes criteria such as street-level activation, mixed use parking development, LEED certification, etc.

The new "parking demand model" (Park + Model), developed as part of this study, provides the City with updated parking planning data on an on-going basis as a tool to support the recommended parking policies.

Section 6: Recommended Parking Policy

This section lays out eight recommended parking policies. Each policy is presented in the following format:

- A "policy statement"
- A stated policy purpose
- Key issues related to the policy, and
- Supporting tools

The eight recommended parking policies include:

- Policy #1– Maintain Ownership of Parking Assets & Grow the System
- Policy # 2 – Set an Expectation of a 5-to-1 Return on Parking Investments
- Policy # 3 – Strongly Support the Concept of "Shared Parking"
- Policy # 4 – Leverage Parking Investment to Support New Development Opportunities
- Policy # 5 – Support a Consolidated Parking Management Organization to Promote Effective and Customer Friendly Parking Management
- Policy # 6 – Develop a robust parking planning function
- Policy # 7 – Create a Balanced and Sustainable Community Access Strategy
- Policy # 8 – Promote a "Park Once – Pedestrians First" Approach for Downtown Rochester and integrate Good Urban Design Principles Relative to Parking Facility Design

Policy #1 - Maintain Ownership of Parking Assets & Grow the System

- To better leverage parking infrastructure investment as a key element of community and economic development and to develop a more effective downtown development support system, the City should, over time, maintain public parking assets to be approximately 40% of the total parking supply. To achieve this long-term goal, it is critical that ownership of public parking assets be maintained. The City may have

more than 40% of the total parking supply downtown currently. The 40% target has two major goals:

1. By allowing the private supply to increase, this means less parking that the City would have to fund. To achieve this desired outcome, it will be important to let the parking prices increase to market levels to create more of a financial incentive for the private sector to begin to see these investments as financially feasible. Allowing parking pricing to rise to "market levels" (as opposed to artificially subsidizing public parking rates) will also help promote desired mode split goals. It is also important for the private sector to realize that the City will no longer continue to build parking as they have in the past (thus the importance of having a well-defined new public parking policy).

2. Maintaining a significant share of the overall parking market (40%) is important in that the City will still have adequate resources to influence market rates and set a high standard of operational excellence as a community benchmark.

Purpose:

- Many successful parking districts view parking as *essential infrastructure* and because of this have over-built supply in strategic locations and then worked on multiple tracks to stimulate community development to "grow into it". Being ahead of the supply curve is not a bad thing. Who would want to build a water system, for example, with only enough capacity to handle the demand of the current population.

- Another approach is to consider the "idealized build out" of the downtown based on a comprehensive downtown plan, then develop your parking development plan to support the desired build out. This approach should be guided by two major principles – first, keep the public parking supply at approximately 40% of the total parking supply - this provides flexibility relative to attracting new development and creates the capacity to address uses in the realm of the "public good". In the case of Rochester, the issues of developing a high quality urban environment and recognizing the "portal capacity" issues related to potential traffic congestion are also key concerns. Second, understand that typically more of your parking investment needs to be made on the front end of the process.

- The CCDC/"BoDo" example cited in the companion "Task Report" entitled "An Update of Parking Requirements Reform" delves into the

issues of "How much parking is enough?" for evolving urban areas and transit oriented developments. The same case study also illustrates the need to maintain ownership and control of public parking assets. It is important to note that the development of the Myrtle Street parking garage was done with public funds to effectively support the eastern half of the BoDo mixed-use development (specifically the cinema and the new Hampton Inn Suites), but that CCDC retained ownership of the parking garage. The shared parking nature of the hotel parking needs meant that parking would always be available to the hotel without handing over ownership of any spaces or creating long-term exclusive use rights. A memorandum of understanding combined with a practical reality of the parking usage has been satisfactory for all parties.

- This approach should be coupled with "creating places where people want to be". The combination of integrated parking into the urban form (all your parking should be in convenient, mixed-use facilities with activated street-level uses) and a make a concentrated effort on "place making" and public realm improvements.

Key Issues:

- Manage public parking resources to ensure optimum utilization
- Implicit in this goal is the need to maintain ownership and control of public parking assets

Supporting Tools:

- Craft a "Community Vision" document for downtown development goals from the recommendation of recent community plans such as retail plans, housing strategies, public space plans, transportation plans, etc.

Policy # 2 - Set an expectation of a 5-to-1 return on parking investments

- City policy should set an expectation of a 5 to1 return on parking investments. These investments will provide community infrastructure to support a variety of private sector developments equaling or exceeding 5 times the investment value of the parking facility.

Purpose:

- We often do not look at parking or other infrastructure investments in quite the same way as we do other investments, such as stocks or our 401-K. However, there are some downtown development agencies and urban renewal districts that have begun setting an expectation of a defined return on infrastructure investments. To be a true development

partner, the city needs to think about investment returns and what it means to the community and inducing additional economic development.

- This policy was effectively implemented in Boise Idaho. CCDC had a stated goal of a 5 to 1 return on parking investments. With the recent completion of the so called "BoDo" (Boise Downtown) project, they leveraged $15.5 million dollars in public infrastructure investment (The Civic Center parking garage [$8,000,000], the Myrtle street garage [$6,000,000] and a $1,500,000 investment in streetscapes) in return for $87,000,000 in private development – a 5.61 return on investment. (See case studies at the end of this document.

Key Issues:

- Better leverage parking and transportation investments
- Utilize parking investment to catalyze other community and economic development
- Establish policy goals re: parking investments
- Educate developers on the preferred types of development desired by the community
- Establish an expected return on infrastructure investment

Supporting Tools:

- Recommended "Community Vision" Document

Policy # 3 - Strongly support the concept of "Shared Parking

- To achieve the desired return on investment (Policy 2), the concept of "Shared Parking is crucial. City policy should strongly support the concept of "Shared Parking". Projects that provide shared parking benefits should be strongly encouraged and even incentivized as they help the City achieve the desired 5 to 1 parking investment goal. It should be noted, however, that deals that allow excessive restrictions on the use of shared spaces, reduce the value and effectiveness of this policy and therefore should be avoided.

Purpose:

- As part of the parking support policies being proposed, maximizing the benefits of shared parking is an important consideration. Because of the cost of investing in structured parking, it is in the City's best interest to get the most benefit from these public fund investments. The effective application of shared parking strategies, where applicable, can extend the

reach and impact of investments in public parking and greatly contribute to achieving the recommended 5 to 1 return on infrastructure investments.

Key Issues:

- Maximize returns on public parking investment
- Optimize use of existing parking resources
- Extend reach of existing parking resources
- Promote more sustainable parking and transportation strategies

Supporting Tools:

- Parking Demand Model
- Shared Parking Model

Policy # 4 – Leverage Parking Investment to Support New Development Opportunities

- City parking investments should be used to support and incent new development opportunities, but City parking assets should be leased (with limited restrictions), and not given away or sold.

Purpose:

- While parking is supported as a tool to leverage further investment in downtown Rochester, there are right ways and wrong ways to use it if the ultimate goal is to build an effective parking management program to support the long-term health of the City. When evaluating parking as a potential development incentive, ask the following questions:

    1. Does this arrangement give away or sell City owned assets?
    2. Does this arrangement restrict the shared-use of City parking assets?
    3. Prior to offering parking assets as an incentive, has an assessment been developed to quantify the value of the parking assets in both current and future dollars? Have future parking revenues been factored into the assessment. Have costs to replace the parking assets in the future been factored into the assessment?

4. If parking is offered as a development incentive, does the value of the development project elements at least equal the value of the parking assets relinquished (if applicable)?

5. Are there other economic development incentives that would be equally as effective in moving the deal forward without negatively impacting the development of a strong public parking system?

- If the answer to any of these questions is "No", the proposal should be reconsidered or at least be given extra scrutiny.

1. If a decision is being considered that violates the principles above, has a "City desired benefit" been identified and negotiated to offset the loss of the parking investment?

Policy # 5 – Support a Consolidated Parking and Access Management Organization and Promote Effective and Customer Friendly Parking Management

- The City should ensure effective management of existing public parking resources. There are several strategies for achieving this multi-dimensional goal, chief among them is supporting and strengthening the consolidated parking management organization under the City, stabilizing the public parking supply over time to be approximately 40% of total parking and establishing a long-term goal of creating a self-supporting parking enterprise.

Purpose:

- It has been demonstrated that a parking system that is "vertically integrated" (centrally managed as a single operating agency) and that controls, at a minimum, off-street public parking, on-street parking and parking enforcement can, over time become a self-supporting and self-sustaining venture. In fact, there are many examples of programs that not only cover their operating and maintenance costs, but also debt service, facility and system maintenance reserves and even set aside funds for future parking facility development, provide funding for alternative transportation programs or provide revenues back into the City's general fund.

- In addition to developing a strong, self-sustaining parking program primarily funded by user fees, this investment in parking and access management can generate additional benefits when directed by an

organization that is focused on community development or downtown revitalization. Some of the most advanced, progressive and successful parking management programs in the country today utilize this model. Examples include:

1. Boulder, CO (Parking District Model)
2. Capital City Development Corporation, Boise, ID (Urban Renewal District)
3. Ann Arbor, MI (Downtown Development Authority)
4. Downtown Tempe Community, Inc., (Business Improvement District)
5. City of Fort Collins, CO (Vertically Integrated City Department Model)

Key Issues:

- Have a defined focus on parking management and a comprehensive parking management strategy that is used as a tool to promote overall urban district management
- Create well-defined parking management policies and procedures
- Create a parking planning program element with defined parking planning and management criteria, metrics and benchmarks

Supporting Tools:

- Development of a "dual mission philosophy" in which parking and access management policy supports larger downtown district vitality and development
- Parking Demand Model
- Adopt a set of parking management internal benchmarks
- See recommended parking management benchmarks

Policy # 6 – Develop a Robust Parking and Access Management Planning Function

- Within the consolidated City Parking and Access Management Program, a special focus on the development of a robust parking planning function is recommended. Using the new "Parking Demand Model" tool, the City

should plan future public parking investments on a "quadrant basis" or similar "district basis". The demand model tool provides the capability to keep parking supply, utilization and even land-use data up to date. Keeping this data current is a key policy objective as this will greatly enhance the City's ability to effectively assess the parking dimensions of new development proposals as well as to plan for future parking needs.

Purpose:

- Use the new parking demand model to create "customized parking assessments" for proposed development projects by selecting an area around the proposed development site (typically defined by walking distance tolerance).
- Create a definition of "parking adequacy" specific to the City of Rochester (the Park+ Model can help define this). Develop specific parking criteria for each of the four downtown quadrants or special parking districts. Monitor these base planning numbers on a regular basis.
- As the parking supply and community access patterns change over time, adapt parking and transportation strategies to improve access, enhance the customer experience and increase event success and attendance through better communications, coordination with Police and traffic enforcement, and by being responsive to feedback from businesses and stakeholders.
- Consider not only the localized demands created by a specific development, but also how that development's parking needs align with the needs of the specific quadrant or district it is located in. Consider a variety of parking needs including a range of employee parking options; short, intermediate and long-term parking options; retail support parking; special events parking; etc.

Key Issues:

- Understanding of parking needs/issues and ongoing monitoring (data driven management)
- Documentation and assessment of localized parking demand issues ("parking hot-spots")
- Staying "ahead of the curve" relative to parking needs

- Utilize the new parking demand model tool to provide more effective parking analysis related to new development projects

Supporting Tools:

- Parking Demand Model

Policy # 7 - Create a Balanced and Sustainable Community Access Strategy

- The parking and access management program will be a partner for success in achieving a 'balanced and sustainable community access strategy'. Coordination and collaboration with local transit development, DMC, Mayo Clinic, State, County and other large employers is essential. "Demand side strategies" should be given equal importance to "supply-side strategies". Work collaboratively with these agencies to create a tool to monitor progress in decreasing single occupant vehicle usage (i.e., develop a "Mode Split Monitoring Report").

- Development of a community educational forum for on-going promotion of the benefits of TDM, Shared Mobility and other demand management strategies as they relate to community development and quality of life issues will be another important program element.

Purpose:

- Eliminate the all-too-common issue of putting parking into its own "silo". The focus should be on developing an "integrated access management strategy for downtown" that supports other community goals such as: "walkability", congestion management, public safety, promotion of alternative transportation modes, environmental responsibility, and the creation of "places for people".

Key Issues:

- Define the key elements of a comprehensive and integrated transportation/access management strategy for the community

- Define key metrics and access management strategy goals

- Develop measurement strategies and tools

- Conduct measurements and establish the current baseline in primary access categories such as parking, transit, light rail, bikes, walking, carpools/vanpools, etc.

- Parking specific criteria might include: parking supply/demand, public vs. private supply, Tempe specific public parking demand ratios, on-street utilization (for example – manage to achieve 15% availability), parking supply within walking distance to key demand generators, etc.

Supporting Tools:

- Parking Demand Model

1. See sample report outputs

- Transit and Metro Rail Monthly Ridership Reports

    1. Local Boardings per Weekday
    2. Local Boardings per Mile
    3. Express Boardings per Weekday
    4. Average Express Boardings per Trip

Policies # 8 – Promote a "Park Once" Approach for Downtown Rochester and Integrate Good Urban Design Principles Relative to Parking Facility Design

- The City and DMC will actively promote the integration of good urban design principles relative to parking facility design to better integrate parking infrastructure into the urban fabric – this includes criteria such as requiring street-level activation, preferences for mixed use parking development, LEED or Green Garage certification for all future mixed-use parking facilities, etc. The concept of peripheral and remote parking for employees is another key concept that supports this principle in Rochester.

Purpose:

- Urban design is often mistakenly treated only as a "beautification filter" that people put on at the end of a development approval process. From the beginning of a development proposal, urban design needs to be understood as the "product output" to ensure "value" is simultaneously understood and weighed with "cost".

- Public sector development of its parking "products" can produce a public benefit [physical and financial]. The same can be true for private sector parking "product" development. Purely utilitarian-looking and operating parking facilities can be an economic liability, no matter what was spent on it. Similarly, a facility designed aesthetically, but not for function will negatively affect surrounding development. Conversely, a parking property [lot or structure] that is designed to a high standard to look good and work well is an economic development benefit

- Promoting walkability and offering multiple options to move around the downtown without driving and parking multiple times promotes less traffic, congestion, pollution and better supports local businesses.

Key Issues:

- Community education of transportation options
- Special event parking information
- Evaluate creative alternative transportation options

Supporting Tools:

- Periodic pedestrian surveys
- Parking Facility Design Guidelines

Section 7: Policy Application Example

Let's take the recent investment in the City Hall parking garage in Tempe, AZ as an example of how the recommended policy might be applied.

The public City Hall garage represented a $22,000,000 investment. Using the 5 to 1 ROI guideline, a return of $110,000,000 in private sector investment would be targeted.

In the image to the right, up to seven potential development sites were located within a reasonable proximity to the new City Hall Garage.

The number of projects this garage could support depends on several variables such as project size, proximity to the parking facility, types of users and significantly the combination of land uses.

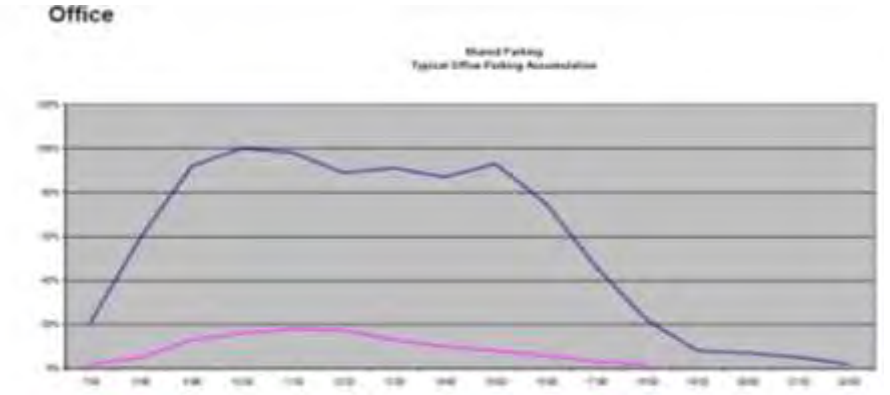
This is significant because of the combination of land-uses defines the potential for shared parking. Certain land-uses, because they offer complementary (i.e., not overlapping) peak parking demand periods can provide for greater shared parking benefits.

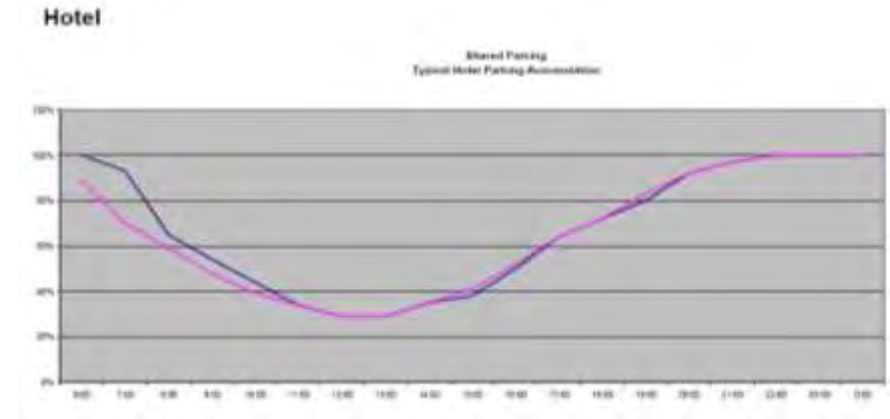
One of the best examples of these "complementary land-uses" is hotels. Because the typical peak parking accumulation for hotels occurs overnight as opposed to an office use which has its parking accumulation peak between 10:00 AM and 3:00 PM.

Consider this theoretical development scenario:

Development Description: A moderate sized mixed-use development containing office, retail and hotel uses.			
Land Use	**Units**	**Parking Demand Ratio**	**Stand-alone Parking Requirement**
Office	90,000 Sq. Ft.	4 spaces / 1,000 Sq. Ft.	360 spaces
Retail	10,000 Sq. Ft.	4 spaces / 1,000 Sq. Ft.	40 spaces
Hotel	200 Rooms	1.25 spaces / Room	250 space
Total:			**650 spaces**

The following graphs illustrate the typical parking accumulation patterns for office and hotel. The patterns for office and hotel are virtually inverse of each other. That is to say they have "complementary" as opposed to "overlapping" peak parking accumulation patterns.



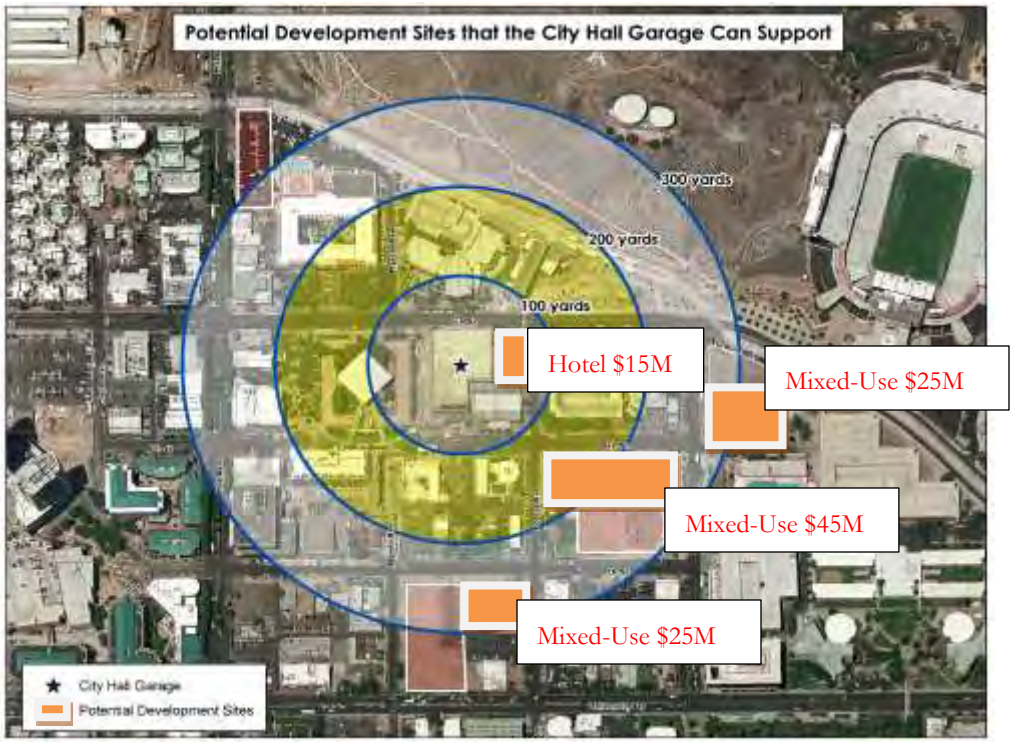


Through the application of shared parking, virtually, the entire 250 space hotel parking requirement could be accommodated in the parking provided for the other uses. Let's assume that the hotel will have management, operations and some restaurant staff on duty during the day. Still, it would be reasonable to assume that, for this specific development, that a parking demand reduction of 200 spaces could be applied.

Through application of shared parking, a 200 space reduction from the original 650 spaces can be achieved. 200 spaces at a construction cost of $30,000 per space equals an investment value of $6,000,000. Because the hotel can be accommodated in off-peak demand periods that means that the 200 spaces can accommodate another development to help achieve our investment target – assuming that the control of the spaces has not been taken out of the equation by assigning ownership or legal control to another entity. If this is done, the City must view this as a loss not only of the investment in the spaces ($6,000,000) but also the potential loss of another $25,000,000 - $35,000,000 development project that could have been supported by these 200 spaces.

It is important to encourage a true development partnership when structuring these deals. As a partnership, these deals are about more than just providing developer incentives or making the project more profitable. Identifying and balancing the City's goals and return on investment is also key element of any partnership.

The illustration below shows four potential development projects that could be supported by the investment made in the City Hall garage.



This is not saying that the City Hall garage can fully support these developments on its own, but allowing access to a certain number of leased spaces at market rates, combined with the shared parking benefits from one or more hotels, the City could get very close to achieving to desired return on investment, which translates into significant community and economic development. The key point is that assigning exclusive use agreements or other practices that significantly restrict parking space usage could mean a significant reduction in new community investment.

The recommended parking development policy for the City of Rochester builds upon its history of recognizing the importance of investment in parking infrastructure. The City should continue to view parking as important civic infrastructure and to consider parking as a key element in proposed development deals. The illustration below, from Sacramento, CA, shows their results in having a defined business recruitment and development strategy. Each of these developments had a synergistic effect on other downtown developments. This example can be related to Rochester in two ways. First, it illustrates a community that had a specific "business recruitment strategy" (this concept is discussed under "Successful Strategies" in the companion task report mentioned above) and two, the numbers associated with these real-life projects in Sacramento reinforces the conservative nature of the estimates used in the City Hall Garage example above and reinforces the achievability of the recommended 5 to 1 return on parking investment policy.

Four key projects were funded and facilitated by Economic Development's Downtown Development arm and key strategic partners. They've created a synergistic effect on other developments downtown, in Midtown and in surrounding areas. Collectively, these projects will add **440 jobs** and **$2.9 million to the tax base.**

Project	Total investment	Estimated new annual revenue	Significance
Sheraton Hotel/ Parking Garage sale	$130 million	$600,000	Sale produced a $50 million windfall of additional resources for the city and redevelopment agency; a portion of the money was used for further reinvestment on K Street.
The Cosmopolitan cabaret and restaurant	$15.4 million	$550,000	Activated a major corner at 10th and K streets, complementing other attractions nearby, including the Crest Theater, Ella Restaurant, IMAX and the newly opened Citizen Hotel.
Citizen Hotel	$70.2 million	$1.6 million	As one of the first high-rise buildings in Sacramento's history, the renovated Cal West Building was transformed into the Citizen Hotel, the first-ever boutique hotel in the central business district.
Orleans Hotel condominiums	$13.9 million	$150,000	The newly constructed condo project is a re-creation of the 1800s-era building. This will activate 2nd Street in Old Sacramento and bring in residents to Sacramento's historic district. Within the first three months of opening, more than 30 percent of the 24 condos are leased and a restaurant is slated for the end of 2009.

Section 8: Additional Recommendations to Maximize the Benefits of the Recommended Parking Policies

- Parking programs are most successful when the overall philosophies, policies and programs are aligned with a larger set of community strategic goals. The creation of a defined shared vision for the downtown - whether through the creation of a new downtown master plan or the assembly of elements from multiple existing plans – can be an important element for ensuring that parking and transportation support systems are developed in a manner to most effectively help the community achieve its overall goals.

- Based on the defined and shared vision for downtown, it is important to develop a specific "Downtown Business Strategy". The downtown business strategy establishes specific targets for housing, office, retail and hotel development within the downtown district(s). This business strategy should be built upon the shared vision for the downtown and incorporates recommendations from a variety of sources such as downtown housing strategies, retail studies, transportation plans, City comprehensive plans, zoning plans, etc.).

In conjunction with this strategy, the creation of "Business Strategy Scorecard" as tool is helpful for reinforcing the primary strategy goals and documenting progress and accomplishments. A template for such a "scorecard" is provided at the end of this document.

With the knowledge of specific business recruitment strategies, the parking program could play useful role in collaborating with City economic development staff related to quantifying the potential parking impacts of these targeted developments, especially with the addition of new Park+ parking demand model.

Parking as an Economic Development Strategy

"Leveraging Parking Development to Catalyze Additional Community Development"

Having a well-defined and shared vision relative to preferred or targeted types of development is a key first step in the process.

Parking can also be used as a "Platform" to achieve a variety of other community goals, beyond parking infrastructure.

Consider Parking as a Platform to Support These Other Potential Community Priorities:

Downtown Residential Development

Urban Parks/Green Space

Activated Street Level Retail with Office or Residential Above

Public Art / Local Artist Community Engagement

Sustainable Development / Renewable Energy

Introduction

The idea that parking can be an effective economic development strategy has gained greater and greater acceptance as innovative programs from around the country have proven this concept with many successful examples. We have documented several of these case studies in this white paper.

However, as the principles have become more accepted many clients are asking us how they can take this concept to the next level.

- What new trends are emerging?
- What are the specific strategies that have proven to be most successful?
- What are realistic 'return on investment' ratios?

Successful Strategies

Downtown Business Strategy Scorecard Approach Aligned with Parking Policy Objectives

For the agencies or departments charged with downtown development and revitalization, recognize the need for both a long-term strategic plan and a specific, action-oriented business strategy to guide decisions on the use of

CCDC Business Strategy Scorecard - 2006

Land Use	*10-Year Baseline Targets*	*Completed 2005*	*Completed 2006*	*Percent of Target Completed by Year End 2006*	*Projects in the Pipeline*
	2005-2015				
Office Projects (in square feet)	**800,000**				
Plaza 121 *SWC of 9th & Idaho"*		3,000			
Front 5 *NWC of 5th & Broad"*		16,741			
11th and Myrtle Center *SWC of 11th & Myrtle*		24,500			
BoDo *Blocks between Myrtle, Front, 9th & Capitol*		53,830			
Banner Bank Building *NEC of 10th & Bannock*			170,425		
Ada County Justice Center *417 S. 6th"*			12,254		
Idaho Independent Bank *NEC of 5th & Broad* **					70,485
Metropolitan *Between 15th & 16th, Idaho & Bannock*					18,000
Aspen *South of Front between 8th & 9th*					5,609
Sustainable Community No. 1					73,000
Total New Office Square Footage		**98,071**	**182,679**	**35.1%**	**167,094**
Apartment Projects (in units)	**800**				
Civic Plaza Apts*** *(190 & 252 E. Front)*		299			
Capitol Terrace Apts *East of 8th between Idaho & Main*					94
Total New Apt Units		**299**	**0**	**0%**	**94**
Condominium Projects (in units)	**550**				
Gem Building *NEC of 10th & Idaho"-"*					9
Cityside Lofts *SEC of 13th & Myrtle"*					77
Paradigm *SEC of 5th & Broad*					32
The Jefferson *SEC of 4th & Jefferson*					42
Metropolitan *Between 15th & 16th, Idaho & Bannock*					86
Aspen *Front Street between 8th and 9th*					70
Royal Plaza *NWC of 11th & Main* **					26
417 S. 8th St."-"*					8
O.W. Smith Building *410 S. 8th St.* **					11
Grand Avenue Homes **					20
Sustainable Community No. 1					100
Boise Place					138
Total New Condo Units		**0**	**0**	**0%**	**619**
Retail Projects (in square feet)	**200,000**				
Plaza 121 *SWC of 9th & Idaho*		3,400			
BoDo *Blocks between Myrtle, Front, 9th & Capitol*		135,204			
Banner Bank Building *NEC of 10th & Bannock*			14,665		
Leku Ona *NWC of 6th & Grove"*			3,000		
417 S. 8th St. **					4,500
O.W. Smith Building *410 S. 8th St.* **					4,500
Metropolitan *Between 15th & 16th, Idaho & Bannock*					18,000
Aspen (Kimball) *Front Street between 8th and 9th*					4,409
Royal Plaza *NWC of 11th & Main* **					6,500
Sustainable Community No. 1					20,000
Total New Retail Square Footage		**138,604**	**17,665**	**78.1%**	**57,909**
Hotel Projects (in rooms)	**250**				
Hampton Inn & Suites *NWC Capitol & Myrtle*			186		
Leku Ona		5			
Total New Hotel Rooms		**5**	**186**	**76%**	**191**
*Remodel vs.new construction					
**Projects under construction at year end 2006.					
***This project was completed in 2004, the year in which the Business Strategy was adopted. Although the targets are for 2005-2015, the project is counted toward targets given the size of the project and the amount of investment CCDC made to move this project forward.					

public resources. One approach to developing a downtown business strategy is to establish specific targets for housing, office, retail and hotel development within the urban districts. This business strategy would ideally reflect the shared vision for the downtown and the community at large as defined in a downtown strategic or master plan.

In conjunction with this strategy, the creation of a "Business Strategy Scorecard" is helpful for reinforcing the primary strategy goals and documenting progress and accomplishments. To the right is an example from another US downtown.

As part of this Downtown Rochester parking study we have provided a model business score card that also incorporates several key parking elements.

In addition to the standard business score card documentation, this tool has columns to reinforce the following goals:

1. Identification of projects that reflect defined downtown master plan goals. Targeting specific development projects that move the forward the shared vision of downtown is especially important for helping the district achieve its desired goals. There are often many potential development projects to consider, but prioritizing those projects that help move the community forward in the desired direction and deserve special consideration can provide justification for providing reasonable incentives. Understanding which projects are most valued by the community or are most likely to be developed, can be useful in determining if parking will be considered as a potential development incentive. If parking is to be considered as a primary incentive, use of the parking demand model to help quantify short-term and long-term impacts, including the potential need for funding additional parking supply, is important.

Another important dimension of this approach is that by having a defined set of community or district development goals, City is educating the development community on the types of projects that the City and downtown district will respond positively. In other communities, the better developers will actively seek out community development plans and attempt to align their overall project components to contribute to the defined district vision in the hopes of streamlining the development approval process. When this works, everyone wins.

A "Business Strategy Scorecard Template" is provided as an appendix to this report.

Best Practices Research:

Innovative municipal parking programs, urban redevelopment agencies, business improvement districts and downtown development authorities have led the charge as it relates to leveraging investments in strategic parking and mixed-use facility development as a key strategy to improve their communities and stimulate additional economic development opportunities.

A key trend we have identified is that many of these parking programs have developed more advanced and sophisticated planning capabilities in recent years. They have well defined "parking analysis zones" within their downtowns and actively monitor changes to off-street parking supply and demand. They also have begun measuring and tracking changes to on-street utilization. Using creative and demand-based pricing and regulation strategies (time-limits, special permitting strategies, etc.) they are beginning to manage their limited on-street resources to maximize their value by more effectively promoting turn-over. Dr. Donald Shoup, Distinguished Research Professor, from the Department of Urban Planning, UCLA recommends using parking pricing to achieve a goal of an on-street vacancy rate of 15%. This has had the related effect of also increasing off-street parking revenues.

These advances in planning and management are being combined with another, and perhaps more important trend – a philosophy that aims at making parking (and therefore the "overall downtown experience") more visitor friendly. It is important to note that "friendly" does not equal "free". Parking is never free, even when there is no direct charge to the customer – someone somewhere is paying the price for providing not only the space, but the electricity, the maintenance, the cleaning, etc.

As part of the research effort for this project we focused on identifying new or creative approaches to using parking as a tool for economic development.

Following are a series of case studies including comments from the developing agencies about "lessons learned".

Case Studies

Case Study # 1

The Ashley Mews Project

Ann Arbor, Michigan

Ashley Mews was one of the first downtown developments in Ann Arbor since the early 1980's. The city owned a piece of land at the intersection of Main/Packard and wanted to sell it for redevelopment with the goal of seeing at least some affordable housing units (80% of AMI) included as part of the project.

The Ann Arbor Downtown Development Authority (DDA) helped facilitate the conversation between the City & the developer (Syndeco is the real estate arm of Detroit Edison). Final arrangement had a 9-story office building with first floor retail and penthouses on the top, and approx. 50 stacked townhouses of which 8 are permanently affordable.

The developer brought 120 of their own underground parking spaces, but needed 100 more parking spaces plus some gap financing. The DDA provided some funds toward the affordable housing units and additional funds toward the project's pedestrian improvements to make the numbers work.

"We gained a wonderful mixed use project that made it possible for Detroit Edison to bring 400-500 high paying jobs (the building houses all the energy company's subsidiaries such as Detroit Edison Nuclear, Detroit Edison Wind, etc.) plus more than 50 new downtown residents (the penthouses were a slower sale because the space wasn't built out and residents clearly had trouble understanding what $1 million was buying them)."

Lesson Learned:

1) The City must know what it wants upfront in a development deal like this (improved neighborhoods, promotion of shared parking, alignment with

larger development vision, etc.) so we can understand if it's worth providing a limited public asset (lots of public parking spaces) to accomplish their goal.

2) If possible, use these public/private arrangements to clean up previous mistakes (before the DDA took over parking, the City had given away parking permits in a contract for 3 renewable 20 year terms at the cost of operations plus bond payments. The bond payments were ending. If we hadn't revised the agreement the developer would have been paying $10-20/month for permits that cost other downtown users $100/month).

3) Consider all the elements that can make a project work, not just the parking elements.

Supporting Documents:

1. Ashely Mews Development Agreement
2. Ashely Mews Parking Agreement
3. Ashely Mews Planned Unit Development (PUD) Agreement

Case Study # 2

"BoDo" Development

Capital City Development Corporation, Boise, Idaho

The Capital City Development Corporation (CCDC) is the urban renewal agency in Boise, Idaho. The CCDC manages four separate districts in the downtown area as well as managing the off-street public parking system.

CCDC has a stated goal of a 5 to 1 return on infrastructure investments. With the recent completion of the so called "BoDo" (Boise Downtown) project, they leveraged $15.5 million dollars in public infrastructure investment (The Civic Center parking garage [$8,000,000], the Myrtle street garage [$6,000,000] and a $1,500,000 investment in streetscapes) in return for $87,000,000 in private development – a 5.61 return on investment!

Beyond this initial success, the "BoDo" project also generated

another $650,000 in tax increment financing revenues that the CCDC will reinvest in downtown and the project is generating an additional 1,000 parkers per day for an estimated $800,000 in additional parking revenue per year. It is also worth noting that the "BoDo" project brought several targeted types of development to the downtown including a 17-story residential development, a multi-plex cinema and a new hotel.

Lessons Learned:

1. CCDC has successfully used "parking development as a catalyst for other development"
2. They have a defined expectation (5 to 1) relative to parking and other infrastructure investments.
3. Their standard agreement is a "blank page". Be flexible. Consider all options,
4. Housing/Residential development projects have more spin-off benefits.
5. Their parking strategy was based on an "idealized build out" of the downtown based on the downtown master plan. Their parking development plan is designed to support the desired build out.
6. Goals: Keep the public parking supply between 30 – 40% of the total parking supply & realize that more parking investment is needed on the front end of the process.

Case Study #3

Village Green

Ann Arbor, Michigan

Village Green is the Ann Arbor DDA's most recent development project. The City distributed an RFP to sell/redevelop the site of our oldest parking structure. The Village Green project was selected and plans include a multi-story apartment building with an underground public parking structure.

The development agreement was much simpler than the Ashley Mews Project discussed previously. The DDA formulated early what it was willing to provide to make this deal work ($100K per unit for up to 4 units of affordable housing to 60% AMI = $400,000 and exact dollar amounts for what it would pay to have the underground parking structure constructed ($35,000/above ground space + $45,000/below ground space). This

eliminated negotiations later on, as the developer bids on the property were made knowing that these were the only two sources of local funds for the project. This potentially relates to Rochester in terms of how development incentives related to parking are structured on the front end of deal development.

Lessons Learned:

1) If the developer is building a public parking structure as part of this public/private development, come to an agreement up front on what the DDA or City is willing to pay per parking space since it is virtually impossible to delineate what is/isn't part of an underground parking structure (earlier developers wanted to charge the DDA for their construction crane costs, all costs to bring utilities to the site, etc.) Once this price is established, it makes it easier to sort between various bids for the site since the variables are reduced.

2) The DDA /Village Green parking agreement had us providing 73 spaces for monthly parking + 73 flex parking spaces, leaving some number for public parking. The flex parking numbers made the banks happier about providing financing since the project has more parking spaces per unit - even though the flex spaces can only be used at night.

Supporting Documents:

1. Village Green Parking Agreement

APPENDICES:

Appendix A: Sample Development Agreements

Appendix B: Business Strategy Scorecard Template

Appendix C: Sample Development Review Documents

Appendix D: Recommended Parking Management Internal Benchmarks

[1] For more detail on this concept see the ULI Shared Parking model.

CITY OF ANN ARBOR, MICHIGAN

100 North Fifth Avenue, P.O. Box 8647, Ann Arbor, Michigan 48107-8647
Phone (734) 994-2670
FAX (734) 994-4954
http://www.a2gov.org

Office of The City Attorney

October 12, 2007

Susan Pollay
Executive Director
Downtown Development Authority
150 S. Fifth Avenue, Suite 301
Ann Arbor, MI 48104

Dear Susan:

Enclosed for your records is one fully executed copy of the Parking Agreement between the City of Ann Arbor and Village Green Residential Properties, L.L.C. I have also enclosed a copy of the approved City Council Resolution authorizing the execution of the Agreement.

Copies of the documents have been provided to legal counsel for Village Green and are on file with the City Clerk.

With the approval and execution of the Parking Agreement this pre-requisite to exercising Village Green's Option Agreement with the City is completed. The remaining pre-requisites must be completed by February 2008, unless an extension is granted by the City Administrator as provided under the Option terms.

Thank you for continued assistance in bringing this Project to closing.

Sincerely,

Mary Joan Fales
Senior Assistant City Attorney

Enc. (2)

PARKING AGREEMENT

The CITY OF ANN ARBOR, 100 North Fifth Avenue, P.O. Box 8647, Ann Arbor, Michigan 48107-8647 (hereinafter "CITY"), the ANN ARBOR DOWNTOWN DEVELOPMENT AUTHORITY, 150 South Fifth Avenue, Suite 301, Ann Arbor, Michigan 48104 (hereinafter "DDA"), and the VILLAGE GREEN RESIDENTIAL PROPERTIES, L.L.C. 30833 Northwestern Highway, Suite 300, Farmington Hills, Michigan 48334 (hereinafter "VILLAGE GREEN"), in consideration of the mutual promises contained herein, agree as follows this 3 day of October 2007:

1. Factual Background

A. The CITY requested proposals for the redevelopment of City-owned property located at First and Washington Streets in Ann Arbor for the purpose of providing residential units and public parking facilities.

B. VILLAGE GREEN has been determined by the CITY to be the appropriate developer of said units and facilities, which will be developed within a single structure (hereinafter "the Project") with the parking facilities below and the residential units above.

C. The CITY will acquire said parking facilities after they have been constructed by VILLAGE GREEN pursuant to required CITY reviews and inspections.

D. The DDA has agreed to contribute funds toward the acquisition of said parking facilities, and will manage said facilities pursuant to agreement with the CITY after construction is completed.

E. The CITY will permit VILLAGE GREEN to occupy a specified number of spaces in said parking facilities for parking and storage during construction of said residential units, and thereafter for use by occupants of said residential units. It is the expectation of the parties that the parking facilities will be completed prior to completion of the residential units.

F. The purpose of this Parking Agreement is to specify the conditions for construction, conveyance, financing and use of said parking facilities.

2. Construction of Parking Facilities

A. Plans and Specifications. VILLAGE GREEN will submit plans for the project for review by the CITY pursuant to City Planned Unit Development ordinances, regulations and administrative procedures. Prior to submission of said plans, VILLAGE GREEN will confer with the CITY and the DDA regarding details of the Project. The parking facilities shall contain no fewer than 205 spaces (although it is anticipated by all the parties that final design submitted for review and approval will allow for a range of 230-260 parking spaces and the interconnection of all parking decks), provide for bicycle parking and storage as specified in the City site plan requirements, and alternate transportation users short term (i.e., zip car) parking, be designed and constructed for a minimum useful life of 75 years (i.e., number of years before first major structural repair required) with maximum protection against salt degradation. Plans and Specifications for Project shall be mutually agreed upon between VILLAGE GREEN and the

DDA, provided that at a minimum such plans and specifications shall meet or exceed applicable standards set forth in the *Guide for Design of Durable Parking Structures,* American Concrete Institute (ACI) 362.

B. Insurance and Indemnity. VILLAGE GREEN will procure or cause to be procured insurance satisfactory to the CITY and the DDA insuring the CITY and the DDA from liability for damage to person or property or contractual liability arising in whole or in part from action or inaction by, or in behalf of, VILLAGE GREEN in the construction of the Project. VILLAGE GREEN will indemnify and hold the CITY and the DDA harmless from any such liability.

VILLAGE GREEN shall take all necessary and reasonable precautions to protect the safety of the public during construction. It shall continuously maintain adequate protection of all work from damage, and shall take all necessary and reasonable precautions to adequately protect all public and private property from injury or loss arising in connection with the construction of the parking facilities. It shall make good any damage, injury or loss to its work and to public and private property resulting from lack of reasonable protective precautions, except as may be due to or caused by agents or employees of the City. VILLAGE GREEN shall obtain and maintain sufficient insurance to cover damage to itself, its contractors and any City property at the site by any cause.

3. Transfer of Ownership

A. The Project will be developed as a condominium, with one unit consisting of the Project's residential units and a second unit consisting of the parking facilities, with general common elements (i.e., stairwells, elevators/elevator lobby areas, and similar shared space and/or systems) Necessary condominium documents setting forth the particulars of each condominium units, shared general common elements and the rights and responsibilities of each of the condominium owners will be prepared by the CITY and/or the DDA, in consultation with VILLAGE GREEN and shall be subject to necessary approvals of all parties. VILLAGE GREEN agrees to reimburse the City and/or the DDA for all legal costs incurred by the CITY, including without limitation in-house City legal staff costs and outside legal counsel fees, in preparation of the condominium documents. Each party agrees to take all reasonable steps to minimize costs and fees in the preparation of condominium documents by assigning and/or engaging experienced legal counsel/surveyors/engineers/project personnel in complex condominium projects. VILLAGE GREEN agrees to establish a project retainer for legal costs in an amount not less than $40,000.00 to be expensed against and/or reimburse the City for costs and fees. If the established project retainer is determined prior to the transfer of ownership to be inadequate by the City, on receipt of written notice of such inadequacy and reasons for it, VILLAGE GREEN agrees it will, within thirty (30) days of notice, increase the then current balance of the project retainer to cover the existing or anticipated shortfall. VILLAGE GREEN shall be entitled to any remainder of the project retainer after all City and/or DDA costs have been reimbursed.

B. Ownership of the parking facilities will be transferred to the CITY, by assignment to the CITY of the appropriate condominium unit, upon substantial completion of those facilities, substantial completion occurring when (i) the parking facilities are completed in all material respects in accordance with approved plans and specifications, excluding only punch list items

which do not materially affect the use and occupancy of the parking facilities, and (ii) all required permits have been issued by relevant governmental agencies for use of the parking facilities for their intended purpose, excluding only punch list items which do not materially affect the use and occupancy of the parking facilities. Transfer of ownership to the CITY shall not relieve VILLAGE GREEN of the obligation to complete punch list items and finalize any required permits outstanding as a result of any punch list.

C. The CITY and/or the DDA will assume responsibility for management and maintenance of the parking facilities upon transfer of ownership of those facilities to the CITY, except as provided in Section 5(c) below. If the DDA management responsibility for the parking facilities is for any reason terminated, whether as a result of the termination or amendment of the Master Lease between the City and the DDA, the DDA is dissolved by action of the City or operation of law, or any other reason, the rights and obligations of the DDA under this Agreement shall transfer to and become the obligation of the City and VILLAGE GREEN'S rights and obligations under this Agreement will not be affected in any way by the transfer of the rights and obligations to the City.

4. Payment

All project construction costs shall be the obligation of VILLAGE GREEN, provided, however, that upon transfer of ownership of the parking facilities to the CITY, DDA will pay directly to VILLAGE GREEN $35,000.00 for each parking space entirely or in part constructed above grade excavated, and $45,000.00 for each parking space entirely constructed below grade. Below grade parking shall be defined as a parking space determined to be situated completely below the lowest point on the site as currently excavated, which point has been determined as 809 feet. For purposes of this Agreement, a parking space is defined as a three-dimensional area, which includes the floor, walls and ceiling of each parking space. The DDA financial commitment under this provision is inclusive of all project costs to construct the total number of parking spaces designed and built and is not limited to minimum number of spaces specified in Article 2A (i.e. DDA is committed to purchase all of the parking spaces built and delivered by Village Green).

5. Use of Parking Facilities

A. Upon substantial completion of the residential units of the Project (substantial completion being defined in Section 3(B)), the CITY will issue permits to VILLAGE GREEN for up to 73 parking spaces to be assigned standard (i.e., 24/7 access) monthly parking permits in the parking facilities (the specific number to be determined by VILLAGE GREEN and the location to be determined by the CITY and/or the DDA), for a period of twenty (20) years. VILLAGE GREEN shall have the option to renew this Agreement for four successive additional terms of five (5) years each, provided written notice of renewal is provided to the CITY not less than 6 months prior to the end of the term. Renewal of the Agreement by the City shall be subject to the following (i) VILLAGE GREEN is in full compliance with all terms of this Parking Agreement on the last day of the then current term, and has not demonstrated a pattern of repeated or cumulative breaches and defaults of the terms of this Parking Agreement during the expiring term. Repeated or cumulative breaches include but are not limited to three (3) or

more successive payments more than thirty (30) days late in any calendar year, (ii) CITY/DDA retain the unrestricted right to renegotiate the number of permits and/or payment terms for permits issued to VILLAGE GREEN during the renewal term; and (iii) VILLAGE GREEN is not in default of any obligation under the Condominium Agreement between VILLAGE GREEN and the CITY.

In addition, VILLAGE GREEN may request additional permits for the use of condominium residents be issued to VILLAGE GREEN for overnight/limited access monthly parking (i.e., flex parking) for up to 73 parking spaces to be used at another City-owned parking facility(s) with monthly permits located in downtown Ann Arbor. Overnight/limited access monthly parking permits may only be used from 3:30 p.m. to 9:00 a.m., and will not allow entry to the designated parking structure during restricted hours. Permit holders will be subject to Overnight/Limited Access Monthly Parking Permit Rules in effect at the time the permit is issued and will remain subject to Overnight/Limited Access Monthly Parking Permit Rules, as amended by from time to time, for whatever period the permit is in effect.

VILLAGE GREEN shall be solely responsible for distribution of permits among and between the occupants of the residential units of the Project. Permits issued under this Section shall only be made available for use by the occupants of the residential units of the Project.

B. VILLAGE GREEN shall pay to the DDA the following fees for each permit issued under this Agreement ("Permit Fee"): (i) an initial fee for the issuance of a card required to obtain access under the permit, which fee shall be at the then prevailing charge for such access cards, (ii) a monthly fee at the then prevailing charge as established by the DDA and the City for a standard monthly permit, and (iii) a monthly contract surcharge in addition to the standard monthly permit fee. . The contract surcharge shall initially be Thirty and no/100 dollars ($30.00) Twelve months from the issuance of the first permit under this Agreement, and continuing on an annual basis thereafter during the term of the Agreement effective the anniversary date of the issuance date of the first permit or such other date as established by the DDA and/or the City, the contract surcharge will be increased by the rate of inflation then prevailing. The monthly permit fee for an overnight/limited access monthly parking permit shall initially be Thirty and no/100 dollars ($30.00). The City and/or the DDA shall have the right, from time to time during the term of the Agreement, to revise the Permit Fees payable by VILLAGE GREEN under this Agreement to correspond to authorized changes to the then prevailing rates by a written notice delivered at least sixty (60) days prior to the effective date of such revision. For purposes of this Agreement, the prevailing rate for a parking space in a City-owned parking facility will be the rate generally charged to individuals on an arm's length basis for monthly parking permits. VILLAGE GREEN shall pay the DDA the total of the Permit Fees for each permit issued under this Agreement on a monthly basis, in a single lump sum, not later than the first day of the calendar month for which such permits are issued. The Permit Fees for each calendar month shall be payable for all permits issued by the DDA for that calendar month regardless of whether or not VILLAGE GREEN has distributed the permit to an occupant of a residential unit for use that month or whether permit holder has reimbursed VILLAGE GREEN for that permit fee. Failure to make timely payments consistent with this Section will be subject to the established late fee procedures by the DDA.

C. Prior to substantial completion of the residential units, VILLAGE GREEN may use up to73 spaces in the parking facility, at a location approved by the CITY and/or the DDA,

for the parking of construction-related vehicles and/or the storage of construction materials, provided, however, that VILLAGE GREEN shall be responsible for the maintenance of said spaces subject to ordinary wear and tear. VILLAGE GREEN shall pay to the DDA the following fees for each permit issued and/or space occupied, in whole or in part, under this Section: (i) an initial fee for the issuance of any card required to obtain access under the permit, which fee shall be at the then prevailing charge for such access cards, and (ii) a monthly permit fee for each calendar month during which the permit is issued to or space occupied, in whole or in part by VILLAGE GREEN. The monthly permit fee for temporary construction vehicle parking/construction materials storage shall be the same permit fee payable for a standard monthly parking permit. VILLAGE GREEN shall be solely responsible for payment of these fees regardless of whether it retains the permits for its use, assigns permits to its contractors for construction vehicle parking or uses the designated location and the spaces comprising that location for storage of construction materials.

D. VILLAGE GREEN may at any time during the term of this Agreement reduce the number of permits to which it is entitled on written notice to the DDA. Any such reduction shall be considered permanent unless otherwise agreed to in writing, and at its discretion, by the DDA and/or the City.

E. If during the term of this Agreement, renovations or repairs are required to the parking facilities, the DDA shall use its best efforts to minimize the effect of such repairs or renovations upon the utilization of the permits under this Agreement. If despite such best efforts, the utilization of some or all of those permits must be temporarily suspended, then the DDA shall use its best efforts to arrange for alternative parking arrangements for the affected permit holders at the nearest available City-owned parking facility with monthly permits. VILLAGE GREEN will remain liable to the DDA for all Permit Fees accrued under this Agreement except for spaces that are not available for use by VILLAGE GREEN as a result of ongoing repairs or restoration.

6. Default/Termination. The following will constitute events of default VILLAGE GREEN under this Agreement.

A. The failure by VILLAGE GREEN to pay any Permit Fees after the date for payment specified in Section 5(B), which shall be considered a "Monetary Breach" hereunder, and the failure to remedy that breach within fourteen (14) days after the date that the DDA delivers written notice to VILLAGE GREEN identifying such breach and demanding payment of the full amount owning; or

B. The breach by VILLAGE GREEN of any other commitment under this Agreement, which shall be considered a "Non-Monetary Breach" hereunder, and the failure to remedy that breach within thirty (30) days after the date that the DDA delivers written notice identifying such breach and demanding such remedial action. However, if the Non-Monetary Breach cannot reasonably be cured with such thirty (30) days, and if VILLAGE GREEN furnishes a written response to the City and the DDA within such thirty (30) days explaining the need for more time to cure the breach, and if such explanation is reasonably satisfactory to the City, then the City will grant VILLAGE GREEN such additional time to cure that Non-Monetary Breach as may be reasonably necessary under the circumstances, provided that VILLAGE GREEN must attempt to accomplish the cure of such breach in a reasonably diligent manner.

C. Upon the occurrence of an event of default, the DDA, by further written notice to VILLAGE GREEN, may terminate this Agreement effective thirty (30) days following the day of delivery of such notice. In such event, the obligation of the DDA to issue permits for the parking facilities will terminate as of the effective date of such termination, VILLAGE GREEN will remain liable to the DDA for all Permit Fees accrued under this Agreement through the effective date of termination and VILLAGE GREEN will remain liable to the DDA for any damages incurred by the DDA or the City as a result of such default, provided, however, than any claims by the DDA for lost revenues (as distinguished from other damages incurred by the DDA) due to VILLAGE GREEN'S failure to utilize and pay for permits issued and/or available pursuant to this Agreement will be limited to accrued but unpaid Permit Fees through the effective date of termination plus the total of all Permit Fees for a period of one hundred twenty (120) days after the date of termination for the number of permits in effect on the date of termination plus any interest accruing thereon in accordance with Section 5(B).

7. Assignment. Except for the transfer of this Agreement to an operating company in which Jonathan Holtzman shall be the managing member, directly or through an entity of entities controlled by him, VILLAGE GREEN may not assign its obligations under this Agreement without written approval of the CITY and the DDA.

8. Binding Effect. This Agreement is binding upon the successors and assigns of the parties.

9. Amendment. This Agreement may be amended only by written agreement of the parties.

10. Applicable Law. This Agreement shall be construed in accordance with the laws of Michigan.

11. Counterparts. This Agreement may be executed in counterparts, each of which will be deemed an original.

12. No Third-Party Beneficiaries. This Agreement is executed only for the benefit of the named parties, and no third-party beneficiaries are created by this Agreement.

13. Authorization. Any individual executing this Agreement in behalf of an entity warrants that he or she has authority to bind said entity to this Agreement.

14. Notice. Any notice required under this Agreement shall be provided by first-class mail or hand delivery as follows:

If to VILLAGE GREEN:
30833 Northwestern Highway
Suite 300
Farmington Hills, MI 48334

If to the CITY:
City of Ann Arbor
100 N. Fifth Avenue, POB 8647
Ann Arbor, Michigan 48107-8647
Attn: CFO
cc: City Attorney

If to the DDA:
Ann Arbor Downtown Development Authority
150 S. Fifth Avenue, Suite 301
Ann Arbor, MI 48104
Attn: Executive Director

15. Realignment of Parcel; Utility Easement. This Agreement is being executed approximately simultaneously with a certain Option Agreement (the "Option") between the City and Village Green relative to the land (the "Land") upon which the Project will be constructed. Pursuant to the Option, Village Green may not exercise its right to purchase such Land until such time as certain conditions, including the execution of this Parking Agreement, have been met. Under the terms of the Option Agreement, the City is obligated to use its best reasonable efforts to acquire certain additional property and facilitate the relocation of a transformer located within the abutting alley with Detroit Edison Co. (DTE). The parties acknowledge and agree that this Agreement is contingent on (i) the completion of the acquisition of the adjacent property and reconfiguration of the property to be conveyed to VILLAGE GREEN to include the additional acquired property, and (ii) the execution and delivery of any and all easement agreements necessary for the relocation of the electrical transformers. It is understood that DTE must petition, and the City Administration shall assist in facilitating the petition, to City Council for the granting of any and all such easement agreements.

The parties hereby execute this Agreement as of the date above.

VILLAGE GREEN RESIDENTIAL PROPERTIES, L.L.C.

By: _____
Jonathan Holtzman
Its: Manager

CITY OF ANN ARBOR

By: _____
John Hieftje, Mayor

By: _____
Jacqueline Beaudry, Clerk

Approved as to Substance:

_____
Roger W. Fraser, City Administrator

Approved as to Form:

_____
Stephen K. Postema, City Attorney

ANN ARBOR DOWNTOWN DEVELOPMENT AUTHORITY

By: _____
Its: CHAIRMAN

Approved as to Substance:

_____
Susan Pollay, Executive Director

R-453-9-07

RESOLUTION TO APPROVE PARKING AGREEMENT WITH VILLAGE GREEN RESIDENTIAL PROPERTIES, L.L.C.

Whereas, Village Green Residential Properties, L.L.C. ("Village Green") was selected in response to RFP No. 621 to redevelop the City-owned property located at First and Washington Streets, Ann Arbor;

Whereas, City Council Resolution R-71-2-07 approved an Option Agreement for Purchase of Land with Village Green;

Whereas, Under the terms of the Option Agreement, Village Green may not be exercised by Village Green until all necessary approvals and supporting agreements have been negotiated, approved and executed, including a Parking Agreement between Village Green, the DDA and the City;

Whereas, The City Administration, the DDA, and Village Green have reached agreement on the rights, duties and responsibilities of each of the parties in connection with the construction of a parking structure and the operation and maintenance of the private and public parking spaces comprising the parking structure; and

Whereas, The DDA Board approved the Parking Agreement on September 5, 2007;

RESOLVED, That City Council approve the Parking Agreement between Village Green, the DDA, and the City for the construction of a parking structure and the operation and maintenance of private and public parking spaces comprising the parking structure as part of the Ann Arbor City Apartments development project; and

RESOLVED, That the Mayor and City Clerk are authorized and directed to execute the Parking Agreement after approval as to substance by the City Administrator and approval as to form by the City Attorney.

Submitted: Finance and Administrative Services
Date: September 24, 2007

Approved: City Attorney

APPROVED
BY ANN ARBOR CITY COUNCIL

September 24, 2007

CITY CLERK
ANN ARBOR, MI

MEMORANDUM

TO: Mayor and City Council

FROM: Tom Crawford, Chief Financial Officer

DATE: September 24, 2007

SUBJECT: Resolution to Approve Parking Agreement with Village Green Residential Properties, L.L.C.

Attached for your review and approval is the negotiated Parking Agreement with Village Green Residential Properties, L.L.C. in connection with the redevelopment of the City-owned property at First and Washington.

City Council previously approved an Option Agreement to purchase the City-owned property at First and Washington with Village Green Residential Properties, L.L.C. (R-71-2-07). Under the terms of the Option Agreement, the Option may not be exercised by Village Green until all necessary approvals and supporting agreements have been negotiated, approved and executed. A Parking Agreement with the City and the Ann Arbor Downtown Development Authority (DDA) is the first of the supporting agreements to be negotiated and submitted for approval by the DDA and the City.

The Parking Agreement identifying the rights, duties and responsibilities of each of the parties in connection with the construction of a parking structure and the operation and maintenance of the private and public parking spaces comprising the parking structure. The Parking Agreement addresses the goals for redevelopment of the site by replacing public parking spaces on the site and incorporating alternative transportation space (i.e., zip car parking, bicycle storage).

The DDA approved the Parking Agreement at its regular meeting on September 5, 2007.

Approval of the Parking Agreement is recommended.

Prepared by: Mary Joan Fales, Senior Assistant City Attorney
Reviewed by: Tom Crawford, CFO
Approved by: Roger W. Fraser, City Administrator

Attachment: DDA Resolution

RESOLUTION OF SUPPORT FOR A PARKING CONTRACT BETWEEN THE CITY OF ANN ARBOR AND VILLAGE GREEN

Whereas, The City of Ann Arbor owns a parcel of land at the corner of First and Washington Streets and it issued RFP #621 for the sale and redevelopment of this property;

Whereas, The primary goals of the RFP were to:

- Increase downtown residential density and diversity
- Replace public parking spaces on this site
- Maximize the financial return to the City for the sale of the land
- Maximize TIF revenue to the Ann Arbor Downtown Development Authority (DDA) for the redevelopment of this site;

Whereas, Three proposals were received and Village Green Companies was determined by the City to be the appropriate developer of the residential units on this site;

Whereas, City and DDA staff have worked with Village Green representatives to prepare a proposed parking agreement between the City, DDA, and Village Green on this site which includes the following elements:

- Village Green will construct no fewer than 205 parking spaces on this site. The number may actually range between 230 and 260 parking spaces, and optimally may even exceed that number.
- Village Green will also provide for bicycle parking as required under code plus alternative transportation (i.e. Zip Car) parking as part of this development.
- The building will be a condominium and a condominium agreement will be arranged between the two parties with details providing for common area maintenance and use.
- The DD will pay for all parking spaces and the City will own all parking spaces which will be one unit of this condominium. The DDA will pay $35,000 for each parking space determined to be entirely or in part located above the lowest area of the site as currently excavated, which is determined to be 809 feet. The DDA will pay $45,000 for each parking space determined to be entirely located below 809 feet. A parking structure parking space is defined to include the floor, walls and ceiling of each space.
- Village Green will contract with the City for 73 parking spaces out of the total using a standard contract formula that requires them to pay the standard monthly permit fee (currently $125/month) plus a monthly surcharge which is initially set at $30/month. This monthly surcharge will increase annually by the rate of inflation. Village Green will also pay a deposit for each permit card issued.
- Village Green may also request additional "overnight/off-peak" monthly permits for its residents at another City-owned facility.

Whereas, The DDA/City Partnerships Committee recommends approval of this parking agreement;

RESOLVED, The DDA approves the recommendations as set forward by the DDA/City Partnerships Committee, subject to review and comment by the DDA Attorney, and recommends approval of this agreement by the City.

A vote on the motion showed:
AYES: Boren, Collins, DeVarti, Greff , Gunn, Hall, Hieftje, Hewitt, Lowenstein, Smith, Splitt
NAYES: None
Absent: None
Abstentions: Mouat
The motion carried.
September 5, 2007

Rochester DMC Business Strategy Scorecard

With Parking Support Data

DMC TRANSPORTATION INFRASTRUCTURE PROGRAM MANAGEMENT

Appendix 4b

Land Use	10 Year Baseline Targets	Beginning Year	Completed Year	Percent of Target Completed by Year-End 2010	Projects in the Pipeline	Targeted Priority Aligned with DT Master Plan*	Shared Parking Applicable?	Public Parking Investment w/in 3 Blocks
Office Projects (in square feet)						Yes / No	Yes/Limited/No	Available Spaces:
Project # 1 - Name								
- Brief Description								
- Address								
Project # 2 - Name								
- Brief Description								
- Address								
Project # 3 - Name								
- Brief Description								
- Address								
Project # 4 - Name								
- Brief Description								
- Address								
Project # 5 - Name								
- Brief Description								
- Address								
Apartment Projects (in units)						Yes / No	Yes/Limited/No	Available Spaces:
Project # 1 - Name								
- Brief Description								
- Address								
Project # 2 - Name								
- Brief Description								
- Address								
Condominum Projects (in units)						Yes / No	Yes/Limited/No	Available Spaces:
Project # 1 - Name								
- Brief Description								
- Address								
Project # 2 - Name								
- Brief Description								
- Address								
Retail Projects (in square feet)						Yes / No	Yes/Limited/No	Available Spaces:
Project # 1 - Name								
- Brief Description								
- Address								
Project # 2 - Name								
- Brief Description								
- Address								
Hotel Projects (in square feet)						Yes / No	Yes/Limited/No	Available Spaces:
Project # 1 - Name								
- Brief Description								
- Address								
Project # 2 - Name								
- Brief Description								
- Address								
TOTALS:								

Notes:

* A "Yes" Qualifies the project as eligible for special development incentive consideration.

August 21, 2006

To: Administration Committee

From: Maurice J. Anderson, President, Toronto Parking Authority ("TPA")

Subject: **Sale of Stratified Portion of 30 Alvin Avenue – Municipal Carpark 12 (Ward 22 –St. Paul's)**

Purpose:

To obtain City Council approval for the sale of development rights at Carpark 12, 30 Alvin Avenue, to Wittington Properties Limited ("Wittington") and the construction of an underground public parking garage containing approximately 209 parking spaces within the redeveloped site, together with other lands owned by Wittington. Although the site allows for a mixed use development, the redevelopment will be primarily residential.

Financial Implications and Impact Statement:

The TPA will be paid by Wittington, $21,100,000 for the sale of the development rights and Wittington will construct an underground parking garage at a total cost estimated to be $8,459,000, to be paid by the TPA from the proceeds of the sale to Wittington upon completion of construction and turnover of the public parking garage. In addition, TPA has anticipated an allowance of approximately $540,000 for equipment, consultants' fees and other associated costs. The TPA will be paid additional consideration in the form of an annual contribution of $100,000 per year for 40 years from the condominium corporation in addition to the one time payment from Wittington as mentioned above.

No funding is required for this project.

The Deputy City Manager and Chief Financial Officer has reviewed and concurs with the financial implications and impact statement contained in this report.

Recommendations:

It is recommended that:

(1) City Council approve a transaction between the TPA and Wittington Properties Limited involving a conveyance to Wittington of a stratified interest in the City-owned lands declared surplus located at 30 Alvin Avenue for a base sale price of $21,100,000.00 for the purpose of constructing a development on a combined site comprised of 30 Alvin Avenue together with adjacent lands owned by Wittington at 1481, 1491 and 1501 Yonge Street and 25 and 27 Heath Street East, and the construction of a public parking garage to TPA specifications within a stratified portion of the combined Wittington and TPA sites, on the terms and conditions outlined in Appendix A to this report;

(2) City Council approve the acquisition of a stratified fee simple interest in a portion of the lands owned by Wittington set out in (1) above to accommodate the public parking garage within the combined site, and the construction of a public parking garage having approximately 209 parking spaces within the City-owned stratified fee simple interest, for which the TPA will pay Wittington an estimated construction cost of $8,459,000 and at an estimated total cost to the TPA, including construction, equipment and soft costs, not to exceed $9 million on the terms and conditions outlined in this report. The costs are being funded from the sale proceeds of the development rights.

(3) The appropriate City Officials be authorized to execute all necessary documents including a Temporary Parking Lease, Reciprocal Cost Sharing and Easement Agreement, Construction Procedures Agreement, and all necessary transfers and undertakings.

Background:

At its meeting of April 11, 2005 (minute #05-057), the TPA Board authorized staff to proceed with a request for proposals to retain a real estate broker to manage the marketing of the disposition for development of 30 Alvin Avenue (Municipal Carpark 12). CB Richard Ellis was awarded the assignment.

The property was taken to market during the summer of 2005 and proposals were submitted by potential developers. Three developers, The Lancer Group, Wittington Properties Limited and The SDR Group/Mady Development, were shortlisted. Both qualitative and quantitative factors were considered to determine which proposal was best suited for the development of the site. A planning and financial consultant was retained to review the proposals. The proposals were evaluated based on planning principles including density projections, impact of chosen uses and the financial benefit to the City and the TPA. After careful consideration, Wittington was determined to be the preferred proponent.

An Agreement of Purchase and Sale was executed on February 2, 2006 between the TPA and Wittington as amended by an amending agreement dated June 15, 2006. The agreement contains conditions in favour of the TPA and Wittington which the parties are working to satisfy, one of which is obtaining Council approval of the transaction. Upon execution of the agreement, Wittington began conducting its due diligence. Wittington's plan is to combine 30 Alvin with 1481, 1491 and 1501 Yonge Street and 25 and 27 Heath Street East.

Prior to, and during the due diligence phase, TPA staff continued discussions with the consultants and City staff to assess the merits of the proposed development with Wittington to assure ourselves that they are the best option. The following professionals have been engaged or approached regarding various issues described in this report:

- R.E. Millward & Associates, provided development and planning services and reviewed the qualitative and quantitative factors of the potential developers.

- City Planning was consulted to advise about the limitations and restrictions inherent with the area and specific site. In conjunction with Mr. Millward's evaluation, Ted Tyndorf, currently Executive Director Urban Planning at the City of Toronto, has reviewed the proposed development.
- Integris Real Estate Counsellors was also retained to provide a financial evaluation of the development and analyze the proposals to identify which offer is the most beneficial.
- cm2r (curran maccabe ravindran ross inc.), a construction cost management consultant, has been retained to verify the costs associated with the construction of the TPA underground parking garage which were provided by Wittington's consultants and contractors.
- Terrapex Environmental Ltd, providing environmental consulting services, and MacLeod Dixon LLP, providing environmental legal advice, were consulted to advise us on matters relating to Wittington's due diligence and the site's environmental and soil composition analysis.
- The Toronto Transit Commission has also been involved with the development plans in order to address their concerns with the St. Clair Avenue subway station and accommodation of the TTC's Fire Ventilation Upgrade Program.

The Declaration of Surplus, entitled 30 Alvin Avenue, Municipal Carpark 12 (Ward 22 –St. Paul's), Administration Committee Report 5, Clause 17 was brought to City Council and was approved at its meeting on July 25, 26 and 27, 2006.

We have met with the local councillor and he is supportive of this transaction.

Comments:

The following is a summary of issues related to the recommended approval of the Agreement of Purchase and Sale.

Site Location and Particulars

The subject property is located in the northeast quadrant of Yonge Street and St. Clair Avenue East. The site is bound by Alvin Avenue to the east, residential to the north, retail to the west fronting Yonge Street and office buildings to the south fronting St. Clair Avenue East.

Municipal Carpark 12 contains 188 surface parking spaces, of which 22 parking spaces are leased from an adjacent landowner at 1521 Yonge Street and do not form part of the agreement or the development.

A second municipal lot, Carpark 223, at 1501 Yonge St., located adjacent to CP 12, has an additional 37 parking spaces and is also leased, although in this instance the owner is Wittington. Wittington owns a substantial part of the block in which Carpark 12 is located. They control residential to the north, retail to the west and an office building to the south.

Parking Supply and Demand

This is an area that currently has an adequate supply of parking. Although the current capacity of this carpark is sufficient to meet the parking needs of the subject area, the additional 20 spaces will ensure that the future parking needs of the area will be met.

Toronto Transit Commission

The TTC has identified the property as a potential site for its improvements in the area for the TTC Fire Ventilation Upgrade Program. Wittington has been cooperative and have incorporated any requirements of the TTC within their development plans and a resolution is being negotiated to both parties' satisfaction. The Agreement of Purchase and Sale is conditional on the Purchaser being satisfied with respect to the TTC's requirements and entering into an agreement in respect of such requirements.

Summary of Agreement of Purchase and Sale

1. Purchase Price - $21,100,000. Payable on Closing which shall take place on or before 12 months following satisfaction or waiver of the vendor's conditions.

2. Purchase Price for Additional Density – The price was determined on the basis of the estimated development density for the combined site. If Wittington obtains approval to construct a larger development, in addition to the base purchase price, the TPA will receive $60 per square foot of additional density over 550,000 square feet multiplied by the TPA's proportionate share determined as a ratio of the area of Carpark 12 to the area of the combined properties as currently owned.

3. Deposits – The initial deposits of $250,000 have been paid and upon TPA waiver of the conditions, a further $750,000 is payable.

4. Temporary lease back – following closing but until such time as Wittington requires access to the site to commence construction, it will lease to the City and the TPA, the existing surface parking facility at 30 Alvin Avenue. Terms would be basic rent free with the TPA continuing to receive all revenue and be responsible for the payment of all operating expenses.

5. Lost Revenue during Construction – Wittington will pay the TPA $70,000 per month to compensate for its lost income during the period of construction, offset by any revenue resulting from operating parking on a portion of the site, or if alternative parking in the vicinity can be found to replace any spaces lost during construction.

6. Parking Garage Construction and Costs – Wittington will construct an underground parking garage which will include 200 spaces built to TPA specifications at a cost not to exceed $40,000 per space. Additional spaces are to be acquired at a price of approximately $51,000 per space. Based on the current design of 209 spaces, the total construction cost of the public parking garage is estimated at $8,459,000. The TPA will pay Wittington for the cost of the public parking garage at the time that construction has been completed and is turned over to the TPA to operate. It is anticipated such turnover will take place not later than 36 months following the commencement of construction.

7. Additional Payments – The TPA has agreed that the public parking garage will be available for use by visitors to the condominium who will pay the posted parking fee. In return, an additional amount of $100,000 per year will be paid to the TPA commencing on the date of registration of the first residential condominium forming part of the Project and continuing for a total of 40 years.
8. Construction Security – Wittington is required to provide a performance bond and a labour and material bond in respect of the excavation, shoring, forming and concrete, electrical, mechanical and waterproofing contracts, related to the anticipated cost of constructing the public parking garage.

9. Purchaser's Conditions – The Purchaser has waived all conditions with the exception of that which relates to the TTC with respect to the property. The date for satisfaction or waiver of this remaining condition is extended until 6 months after waiver of the TPA's conditions to enable the Purchaser and the TTC to enter into a binding agreement with respect to TTC's requirements.

10. Vendor's Conditions – The agreement contained several conditions in favour of the TPA, including the approval of the terms of this transaction by City Council.

11. Reciprocal Cost Sharing and Easement Agreement – As with all of the TPA's agreements involving a redevelopment in which we include a public parking garage, it will be necessary for the City to grant and receive mutual easements with the developer and related rights in favour of each party in order to allow for the proper operation of the project upon completion and to provide for the sharing of maintenance responsibilities and costs.

12. Restrictive Covenant – Development of the entire project (TPA and Wittington's lands) will not exceed 550,000sf plus the existing gross floor area on the Purchaser's Property within the buildings known municipally as 1481 and 1491 Yonge Street (not to exceed 40,000 square feet).

13. Wittington has acknowledged and agreed that nothing contained in the agreement shall in any manner limit or restrict the normal exercise of discretion by the various municipal departments and officials or fetter the discretion of City Council in any way, including the consideration of Wittington's development application.

Financial Analysis

TPA's financial consultant has reviewed Wittington's proposal and verified that it is financially the best option for this redevelopment. The TPA will achieve Net Proceeds (proceeds after payment of the garage) of approximately $16,100,000 from Wittington.

Furthermore, Wittington's proposal provides a number of financial benefits that add value for the TPA compared to other bidders.

1. Earlier payment of Proceeds – Wittington is prepared to pay the purchase price in full on Closing which is anticipated to take place 12 months after the satisfaction or waiver of Purchaser's Conditions as opposed to 18 months after, as it would be for the other bidders. We expect to receive payment in late 2007. Full payment by Wittington will be made to the TPA prior to completion of the development, which

allows the TPA to earn interest on the amount paid and also provides an added element of security by receiving payment earlier.

2. Risk – The risk of the corporate entity has also been evaluated. Understanding the risks involved when developing a multi-million dollar project, the chance of default is also considered. In such a case, the possibility of achieving any compensation varies depending on the corporate entities financial situation. Wittington's financial situation as disclosed to the TPA has been evaluated as favourable, and more than adequate to cover any financial exposure to the TPA, and therefore, less risk in achieving compensation in the event of default.

3. Additional Proceeds paid annually – Additional compensation to the TPA is made by annual payments of $100,000 for 40 years. This payment is consideration for the potential cost savings to the Purchaser by virtue of the use of the Public Parking Garage to fulfill the visitor parking requirement.

An internal financial analysis was prepared to determine the cost to the TPA of converting the surface parking lot to a garage. Taking a conservative approach, we assumed revenue on a per space basis would decrease by 40% due to the conversion of suface parking to an underground garage. Although a garage is projected to generate positive income, the potential decrease was capitalized to compensate for any loss in income. Including a risk premium and any loss in income due to a closure for development, our internal analysis indicates a minimum consideration of approximately $19,000,000 was required to sell and develop this site. In other words, for the TPA to accept a lower income and take on any risks associated with developing this site, a Purchase Price of $19,000,000 was considered the minimum compensation required.

An appraisal was obtained and the sale price is well above the market value.

Advantage of the Wittington proposal

- Purchase Price of $21,100,000 exceeds the TPA's minimum requirement for considering conversion from a surface lot to an underground garage at 30 Alvin Avenue.
- By combining additional lands surrounding the subject property, a better design and density can be achieved, providing advantages with accessibility and improvements.
- A connection to the subway and retail stores through Wittington's existing development is planned.
- Accommodation of the TTC's Fire Ventilation Upgrade Program is facilitated with Wittington.
- Working with a financially secure corporate entity.
- With Wittington's head office located adjacent to the site, the developer has a vested interest in assuring the project is successful and visually appealing.
- The TPA's planning consultant has reviewed and evaluated the proposal and confirmed Wittington's proposal has the best and most achievable design. The consultant has concluded that a considerable amount of thought has gone into the built form and its placement on site such as the proposed towers being slender in comparison with the other schemes, thereby lessening their shadowing impacts. In addition, they concur that on its own, 30 Alvin does not provide the design or density advantage, compared to the result of combining adjacent sites which Wittington's proposal has the advantage of doing.

Funding

In our analysis of the funding for this project, and in the larger context of our 5-year capital budget, we have budgeted to spend $9 million which would be funded from the $21.1 million proceeds from the sale of the stratified interest in the City-owned lands.

However, due to the mechanics of the income sharing arrangement we have with the City, the proceeds will be paid to the City as their 75% share of our net income. The 25% share that the TPA will retain will not be sufficient to fund the purchase of the garage spaces.

The TPA requests that in the fiscal year that the proceeds of sale of the stratified interest in the City-owned lands are received, the TPA may reduce the City's calculated share of our net income for that year by $9 million to fund the construction of the garage spaces committed to under the agreement. To the extent that these funds, combined with other TPA funds, are more than is required to fund our 5-year capital program any excess will be returned to the City as part of our annual ongoing practice of returning funds to the City that are surplus to our working capital and 5-year capital budget funding needs.

Conclusions:

The approval of the transaction with Wittington Properties Limited will provide net proceeds to the TPA, providing capital to fund acquisitions in other areas of the City where there are parking shortfalls as well as continuing to service the parking requirements in the Yonge and St Clair area. Seventy five percent of the proceeds of this development will be paid to the City.

For the reasons noted above, we recommend that City Council approve the recommendations of this report.

Attachment:
Location Map

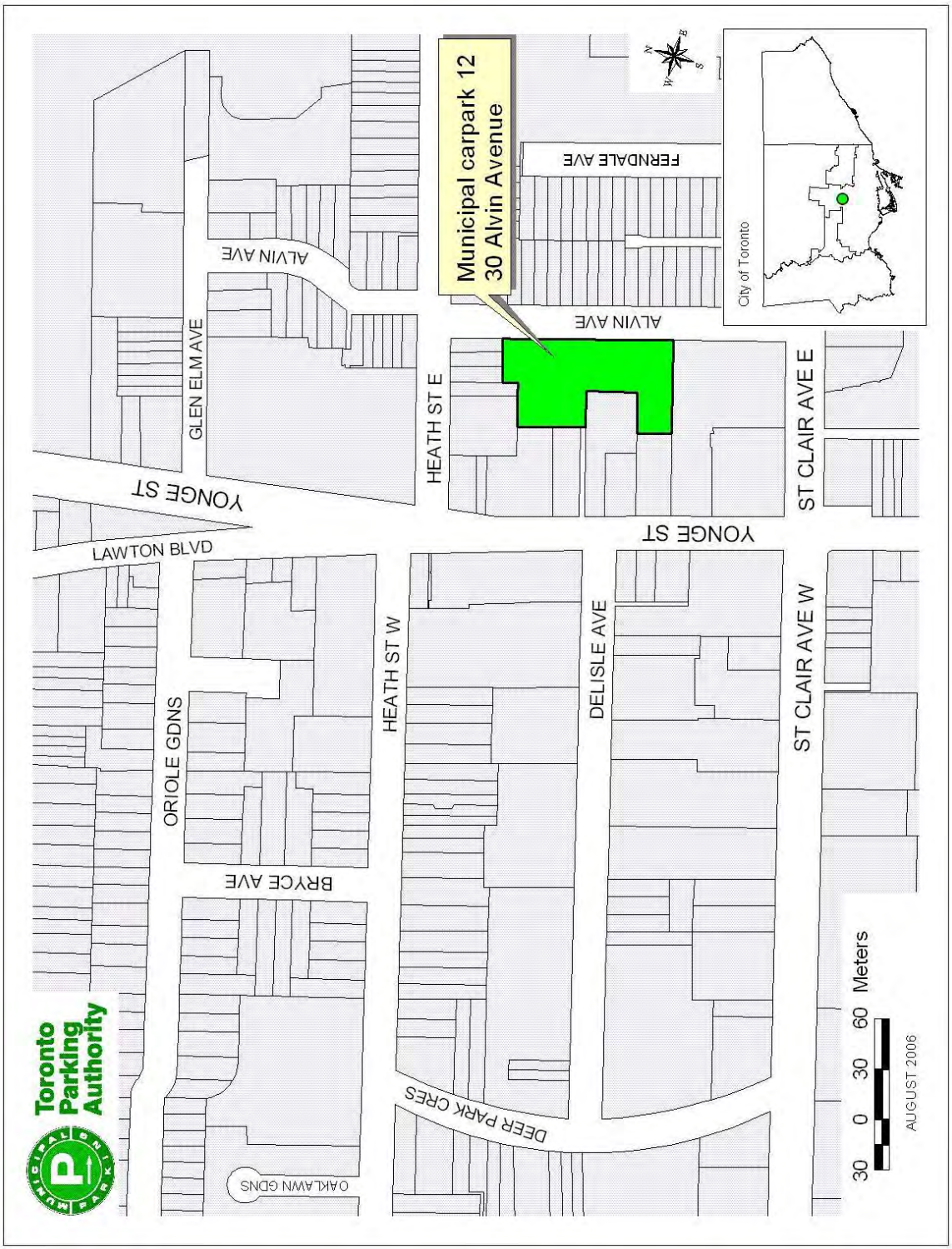
Contact:

Maurice J. Anderson, President
Telephone: (416) 393-7276
Facsimile: (416) 393-7352

Lorne Persiko, Vice President, Development & Marketing
Telephone: (416) 393-7294
Facsimile: (416) 393-7352

Maurice J. Anderson
President

Location Map



DEVELOPMENT AGREEMENT

THIS DEVELOPMENT AGREEMENT ("Agreement") made and entered into this _____ day of April, 2000 is by and between **SYNDECO REALTY CORPORATION**, a Michigan corporation, whose address is 660 Plaza Drive, Suite 2300, Detroit, Michigan 48226 ("Developer"), and **ANN ARBOR DOWNTOWN DEVELOPMENT AUTHORITY**, a public corporation organized and existing pursuant to Act 197, Public Acts of Michigan, 1975 whose address is 100 North Fifth Avenue, P.O. Box 8647, Ann Arbor, Michigan 48107 ("DDA").

PRELIMINARY STATEMENT

Developer proposes to construct a mixed-use development of residential, retail and office uses on the property described in Exhibit "A", attached hereto and made a part hereof by reference thereto ("Property"). Developer has applied to the City of Ann Arbor ("City") for approval of the Ashley Mews Planned Unit Development ("PUD") to accommodate the construction of such mixed uses within one (1) unified and cohesive development in a manner and with a physical configuration that optimizes the use of the Property. The Property is located within the Downtown Area and the City Planning Commission has determined during a public hearing on the PUD that it is desirable to develop the Property in the manner described above. On October 18, 1999, the City approved the PUD subject to the contingency stated in the resolution of approval.

As part of an Option Agreement with the City ("Option Agreement"), attached hereto as Exhibit "B" and made a part hereof by reference thereto, Developer proposes to acquire part of the Property from the City and, in turn, sell to the City (or its designee) eight (8) residential units ("Units") to be resold by the City (or its designee) for "affordable housing" upon such terms and conditions as the City (or its designee), in its sole and absolute discretion, shall determine.

Developer will sell the Units to the City (or its designee) at a price that is substantially less than the projected market price for the Units.

As part of the PUD, Developer shall construct significant public access pedestrian improvements, including, but not limited to, the mews (pedestrian walkway between South Main and South Ashley streets), brick walkways, an outdoor seating area, and extensive landscaping in the approximate quantities described in Exhibit "C", attached hereto and made a part hereof by reference thereto ("Pedestrian Improvements").

Finally, as part of the PUD, Developer shall provide not less than one hundred twenty (120) spaces of underground parking without public subsidy.

NOW, THEREFORE, in consideration of the mutual promises contained herein, and other good and valuable consideration, receipt whereof is hereby severally acknowledged, Developer and DDA hereby agree as follows:

1. DDA Commitments. Subject to satisfaction of each of the conditions specified in Section 1(c), the DDA commits to the following:

binder copy (also filed under Syndeco)

(a) The DDA shall pay to the Developer the sum of Five Hundred Eighty-Nine Thousand Eight Hundred ($589,800) Dollars to fund part of the cost of the construction of the Pedestrian Improvements, payable in three (3) installments as follows:

(i) One Hundred Thousand ($100,000) Dollars on or before the later of (A) June 30, 2000; (B) ten (10) days after the date that Luckenbach Ziegelman Architects PLLC (the "Architect") delivers a written certification to the DDA confirming that the construction of the PUD is more than one-sixth (1/6) completed.

(ii) Three Hundred Thousand ($300,000) Dollars on or before the later of (A) December 31, 2000 or (B) ten (10) days after the date that the Architect delivers a written certification to the DDA confirming that the construction of the PUD is more than two-thirds (2/3) completed.

(iii) One Hundred Eighty-Nine Thousand Eight Hundred ($189,800) Dollars on or before the later of (A) September 30, 2001 or (B) ten (10) days following the date that the Architect delivers a written certification to the DDA confirming that the PUD is substantially completed in accordance with the PUD.

(b) DDA shall pay to Developer the sum of Seventy-Five Thousand ($75,000) Dollars from the DDA's Housing Fund to defray in part the Developer's lost revenue with respect to the sale of the Units to the City (or its designee) for affordable housing. This sum shall be paid in two (2) installments as follows:

(i) Thirty-Seven Thousand Five Hundred ($37,500) Dollars upon the closing of the sale of the first (1st) Unit by Developer to the City (or its designee); and

(ii) Thirty-seven Thousand Five Hundred ($37,500) Dollars upon the closing of the sale of the eighth (8th) Unit by Developer to the City (or its designee).

(c) The commitments of the DDA in this Section 2 are subject to satisfaction (or a waiver in writing by the DDA), of each of the following conditions on or before each of the following dates:

(i) Prior to or concurrent with the signing of this Agreement, the Developer and the City shall have signed and become bound by the PUD Development Agreement attached hereto as Exhibit "D" and made a part hereof by reference thereto;

(ii) Prior to or concurrent with the signing of this Agreement, the DDA and the Developer shall have signed and become bound by the Parking Permit Agreement in the form of Exhibit "E", attached hereto and made a part hereof by reference thereto;

(iii) Prior to or concurrent with the signing of this Agreement, the Developer shall sign and become bound by and the City shall have accepted the

Easement Agreement in the from of Exhibit "F", attached hereto and made part hereof by reference thereto;

(iv) Prior to or concurrent with the signing of this Agreement, the DDA and Detroit Edison Company shall have signed and become bound by, and the City shall have acknowledged and accepted, the Addendum to Parking Structure Agreement in the form of Exhibit "G", attached hereto and made part hereof by reference thereto; and

(v) Prior to the signing of this Agreement, the Developer shall have commenced construction of the PUD.

Unless each of these conditions is satisfied (or waived in writing by the appropriate party), on or before the date specified above for such condition, then this Agreement, and all of commitments of the DDA and the Developer in this Agreement, shall be null, void and of no further force or effect.

2. Developer shall make no assignment under this Agreement without the prior written consent of DDA, which consent shall not be unreasonably withheld, delayed or conditioned: provided, however that Developer may assign this Agreement to Ashley Mews, LLC and/or Syndeco Plaza, L.L.C., each of which is a Michigan limited liability company, controlled by Developer. In the event of any such permitted assignment, (a) Developer shall notify the DDA of the assignment in advance and in writing, (b) Developer, Ashley Mews, LLC and/or Syndeco Plaza, L.L.C. shall each individually be fully liable for the performance of the obligations of Developer under this Agreement and (c) the document of assignment shall specifically confirm the joint liability described in Subsection 2 (b) .

3. The Developer acknowledges that the DDA is making the financial commitments in Sections 1(a) and 1(b) in reliance upon the commitments of the Developer in Paragraph P-2, P-4 or P-7 of the PUD Development Agreement, Paragraphs 12 and 15 of the Option Agreement or any Paragraph of the Easement Agreement (the "Commitment Paragraphs"). The Developer will notify the DDA in writing in advance of any proposed agreement with the City to cancel or to amend any Commitment Paragraph. Moreover, if that cancellation or amendment materially alters the obligations of the Developer under the affected Commitment Paragraph, then, unless such cancellation or amendment is approved by the DDA in its discretion, the DDA will be released from any future payment obligations under Sections 1(a) and 1(b).

4. The Developer shall indemnify and hold the DDA and the City harmless from and against any claims, losses, liabilities, damages or expenses (including attorney fees) suffered or incurred by the DDA and/or the City which are based upon or result from any acts or omissions of the Developer, its employees, agents, subcontractors or business invitees in the design, construction, maintenance, occupancy, use or operation of the PUD.

5. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their permitted successors and assigns.

6. The signatories on behalf of the parties hereto hereby represent and warrant to the other parties hereto that they are duly authorized to execute and deliver this Agreement on

behalf of such party and that this Agreement is binding upon and enforceable against such party.

7. All notices permitted or required under this Agreement shall be in writing and addressed to the parties at their addresses set forth above. Any such notice shall be sent by certified mail, return receipt requested, express overnight delivery requiring a signed delivery receipt, delivered personally or sent by facsimile. Any notice sent by certified mail, return receipt requested, shall be deemed delivered on the third (3rd) business day after mailing. Any notice sent by express overnight delivery shall be deemed delivered on the following business day after delivering such notice to the carrier. Any notice given by personal delivery or by facsimile prior to 5:00 p.m. shall be deemed delivered on the date of such delivery or, if 5:00 p.m. or later, on the next business day. Any notice which a party fails or refuses to accept shall be deemed delivered on the date of such failure or refusal. The parties hereto may change their addresses for notice purposes by a notice sent in accordance with the provisions of this Agreement, but no such address shall be a post office box.

8. This Agreement shall be interpreted and construed in accordance with the laws of the State of Michigan.

9. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original but all of which together shall constitute but one and the same Agreement.

10. This Agreement constitutes the entire Agreement between the parties hereto pertaining to the subject matter hereof and supersedes all negotiations, preliminary agreements and prior to contemporaneous discussions and understandings of the parties hereto in connection with the subject matter hereto.

11. No amendment, change or modification of any of the terms, provisions or conditions of this Agreement shall be effective unless made in writing and signed or initialed on behalf of the parties hereto by their duly authorized representatives.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

DEVELOPER:

SYNDECO REALTY CORPORATION,
a Michigan corporation

By:_____
Printed Name: Paul W. Potter
Its: President

DDA:

ANN ARBOR DOWNTOWN DEVELOPMENT AUTHORITY, a public corporation under Act 197, 1975 Public Acts

By:_____
Printed Name: Lorri Sipes
Its: Chairman

EXHIBIT "A"

PUD LEGAL DESCRIPTION

Commencing at the Northeast corner of Block 4 South, Range 3 East, "Original Plat of the Village (now City) of Ann Arbor", Washtenaw County, Michigan, as recorded in Transcripts, pages 152 and 153, Washtenaw County Records; thence S 00°10'30" E 95.67 feet along the East line of said Block 4 and the West line of South Main Street to the POINT OF BEGINNING; thence continuing S 00°10'30" E 351.73 feet along said East line and said West line; thence S 89°50'00" W 263.06 feet to a point on the West line of said Block 4 and the East line of South Ashley Street; thence N 00°16"10" W 297.00 feet along said West line and said East line; thence N 89°50'00" E 115.24 feet; thence N 00°12'45" W 54.73 feet; thence N 89°50'00" E 148.34 feet to the Point of Beginning. Being Lots 4, 5, 6, 11, 12, 13 and 14 and a part of Lots 2, 3, 7, 10 and 15, and a part of a vacated alley, all in Block 4 South, Range 3 East of said "Original Plat of the Village (now City) of Ann Arbor".

EXHIBIT "B"

OPTION AGREEMENT

EXHIBIT "C"

PEDESTRIAN IMPROVEMENTS

		QUANTITY/UNIT
MAIN STREET		
Site Improvement	Concrete Sidewalk	2810 SF
	Brick Pavers	1976 SF
	Concrete Curb and Gutter	375 LF
	Bike Hoops	6 EA
Landscaping	Large Trees (3 ½" caliper)	8 EA
	Seed and Mulch	888 SF
	Planters 6'x10'x12' high	4 EA
	Irrigation at Beds and Planters	1
	Tree Lights	1 LF
ASHLEY STREET		
Site Improvement	Concrete Sidewalk	1426 SF
	Brick Pavers	50 SF
	Concrete Curb and Gutter	343 LF
Landscaping	Large Trees (3 ½" caliper)	9 EA
	Seed and Mulch	320 SF
	Irrigation at Beds and Planters	1
OUTDOOR SEATING AREA		
Site Improvements	Stairs at Plaza	305 LF
	Handrails at Site Stairs	30 LF
	Brick Pavers	2154 SF
	Waterproofing at Plaza	2154 SF
	Planter Wall	104 LF
	Trash Receptacles	1 EA
	Benches	2 EA
Landscaping	Large Trees (3 ½" caliper)	3 EA
	Planting Beds	240 SF
	Irrigation at Beds and Planters	1

MEWS WORK		QUANTITY/UNIT
Site Improvements	Site Stairs	225 LF
	Handrails at Site Stairs	45 LF
	Concrete Sidewalk	324 SF
	Brick Pavers	7641 SF
	Granite Curbs	195 LF
	Planter Wall	236 LF
	Trash Receptacles	5 EA
	Benches	4 EA
Landscaping	Large Trees (3 ½" caliper)	12 EA
	Planting Beds	3120 SF
	Seed and Mulch	3970 SF
	Trellis	616 SF
	Bushes	850 LF
	Irrigation at Beds and Planters	1
	Decorative Lights	12 EA

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EXHIBIT "D"

PUD DEVELOPMENT AGREEMENT

EXHIBIT "E"

PARKING PERMIT AGREEMENT

EXHIBIT "F"

EASEMENT AGREEMENT

EXHIBIT "G"

ADDENDUM TO PARKING STRUCTURE AGREEMENT

PARKING PERMIT AGREEMENT

THIS PARKING PERMIT AGREEMENT ("Agreement") made and entered into this 12th day of ~~April~~ June, 2000 is by and between **SYNDECO REALTY CORPORATION**, a Michigan corporation, whose address is 660 Plaza Drive, Suite 2300, Detroit, Michigan 48226 ("Developer"), **ANN ARBOR DOWNTOWN DEVELOPMENT AUTHORITY**, a public corporation organized and existing pursuant to Act 197, Public Acts of Michigan, 1975, whose address is 100 North Fifth Avenue, P.O. Box 8647, Ann Arbor, Michigan 48107 ("DDA") and the **CITY OF ANN ARBOR**, a Michigan municipal corporation, whose address is 100 North Fifth Avenue, Ann Arbor, Michigan 48104 (the "City").

PRELIMINARY STATEMENT

Developer proposes to construct a mixed-use development of residential, retail and office uses on the property described in Exhibit "A", attached hereto and made a part hereof by reference thereto ("Property"). Developer has applied to the City for approval of the Ashley Mews Planned Unit Development ("PUD") to accommodate the construction of such mixed uses within one (1) unified and cohesive development in a manner and with a physical configuration that optimizes the use of the Property. The Property is located within the Downtown Area and the City Planning Commission has determined during a public hearing on the PUD that it is desirable to develop the Property in the manner described above.

As part of an Option Agreement with the City ("Option Agreement"), Developer proposes to acquire part of the Property from the City and, in turn, sell to the City (or its designee) eight (8) residential units ("Units") to be resold by the City (or its designee) for "affordable housing" upon such terms and conditions as the City (or its designee), in its sole and absolute discretion, shall determine.

As part of a Development Agreement between the Developer and the DDA (the "Syndeco Development Agreement"), the Developer is making specified commitments to the DDA regarding the construction of the PUD and the DDA is making specified financial commitments to the Developer relating to that construction.

As a condition to the commitments of the Developer under the Syndeco Development Agreement, the DDA has committed to the Developer to make available for use by occupants of the PUD specified parking in the Williams & Fourth Street Parking Structure owned by the City and managed by the DDA (the "Structure").

NOW, THEREFORE, in consideration of the mutual promises contained herein, and other good and valuable consideration, receipt whereof is hereby severally acknowledged, the Developer, the DDA and the City hereby agree as follows:

1. Subject to the conditions specified in Section 2, the DDA will make parking available at the Structure upon the following terms and conditions:

(a) The term during which the parking will be made available at the Structure (the "Term") will be for a period of twenty (20) years, beginning on the date specified by Developer by written notice to the DDA, which notice shall be delivered by the Developer

to the DDA not less than one hundred twenty (120) days prior to the first day of the Term. The Developer will use good faith efforts to advise the DDA of the projected commencement date of the Term at least six (6) months prior to that effective date.

(b) During the Term, the DDA will issue to the Developer parking permits (the "Permits") for one hundred (100) spaces at the Structure, subject to the right of the Developer, at any time and from time to time, to reduce the number of Permits by delivery of notice to the DDA at least one hundred twenty (120) days prior to the effective date of such reduction. The Developer acknowledges, however, that unless otherwise agreed in writing by DDA, any such reduction will be permanent and that the Developer will not have the right to require a restoration of the Permits eliminated by reason of any such reduction.

(c) The Permits issued to the Developer by the DDA for the Structure will be available for use only by individuals who for the periods to which the Permits apply are residential occupants of the PUD or by individuals who for the period to which the Permits apply are employees of businesses which are business occupants of the PUD (the "Permit Holders"). The Developer, on or before the first day of the Term, shall provide a schedule to the DDA of each Permit Holder and the vehicle for which the Permit will be utilized (a "Permit Schedule"). On a quarterly basis thereafter, not later than the thirtieth (30th) day of each calendar quarter, the Developer shall deliver to the DDA an update of the Permit Schedule of the Permit Holders as of the first (1st) day of that calendar quarter. (If as of the date of any Permit Schedule, any Permit is not assigned for use by a specific Permit Holder, then the Developer shall confirm that fact in such Permit Schedule and, promptly after that Permit is assigned to a specific Permit Holder, shall supplement the Permit Schedule with the name of that Permit Holder to whom that Permit is assigned and the vehicle for which that Permit will be utilized.) Each Permit Holder, in the use of the Structure, will comply with all applicable ordinances of the City and will comply with all rules and regulations adopted by the DDA for use of the Structure to the extent that such rules and regulations are applicable to all holders of Permits for the Structure and such rules and regulations have been furnished by the DDA to the Developer.

(d) The Developer shall pay to the DDA the following fees for each Permit issued under this Agreement (the "Permit Fee"): (i) an initial fee for the issuance of a card required to obtain access under the Permit and (ii) a monthly fee for each calendar month during which the Permit is issued. The Permit Fees will equal the then prevailing rates for parking permits at the Structure. The DDA, not later than sixty (60) days prior to the commencement of the Term, shall advise the Developer in writing of the then prevailing rates which will provide the basis for the Permit Fees. The DDA will have the right, from time to time during the Term, to revise the Permit Fees payable by the Developer under this Agreement to correspond to authorized changes in the then prevailing rates by a written notice delivered at least sixty (60) days prior to the effective date of such revision. For purposes of this Agreement, the prevailing rate for a parking space in the Structure will be the rate generally charged to individuals an arm's length basis for monthly parking permits in the Structure. If no other monthly parking permits are issued for the Structure, then the prevailing rate will be the rate which is charged for monthly parking permits in the parking structure operated by the DDA or the City which is nearest the Structure.

(e) The Developer shall pay to the DDA the Permit Fees for each Permit issued under this Agreement on a monthly basis, not later than the first day of the calendar month immediately preceding the calendar month for which such Permit is issued. (For example, for Permits applicable to the month of August, the payment by the Developer shall be made to the DDA on or before the immediately preceding July 1st.) The Permit Fee for each calendar month will be payable for all Permits issued by the DDA under this Agreement for that month, irrespective of whether the Developer has assigned that Permit to a Permit Holder for use during that month and irrespective of whether the Permit Holder has reimbursed the Developer for that Permit Fee. Any Permit Fee not paid by the Developer on or before its due date will bear interest at the prime rate (as published by Comerica Bank or its successor) plus three percent (3%) from its due date to its date of payment.

If during the Term, renovations or repairs are required to the Structure, the DDA shall use its best efforts to minimize the effect of such repairs or renovations upon the utilization of the Permits issued under this Agreement. If, despite such best efforts, the utilization of some or all of those Permits must be temporarily suspended, then the DDA shall use its best efforts to arrange for alternative parking arrangements for the affected Permit Holders at the nearest available locations. If during the Term, the DDA permanently discontinues parking at the Structure, then the DDA shall give written notice to the Developer as far in advance as possible of such discontinuance and shall use its best efforts to provide alternative parking for the affected Permit Holders at other locations.

2. Conditions to Effectiveness. The commitment of the DDA to issue Permits to the Developer for the Structure on the terms specified in Section 1 is subject to the satisfaction (or waiver in writing by the DDA) of each of the following conditions on or before the following dates:

(a) The Developer shall have satisfied each of its commitments under the Syndeco Development Agreement on or before the date specified for satisfaction of such commitment in the Syndeco Development Agreement; and

(b) The Developer, by written notice to the DDA pursuant to Section 1(a), shall have activated the Term of this Agreement as of a date on or before November 30, 2002.

Unless each of the above conditions is satisfied on or before the date specified above for such condition, then all rights and obligations of the DDA and the Developer in this Agreement shall be null, void and of no further force or effect.

3. Default/Termination. The following will constitute events of default by the Developer under this Agreement:

(a) The failure by the Developer to pay any Permit Fees within thirty (30) days after the date for payment specified in Section 1(e); or

(b) The breach by the Developer of any commitment under this Agreement and the failure to remedy that breach within thirty (30) days after the date that the DDA delivers written notice identifying such breach and demanding such remedial action.

Upon the occurrence of an event of default, the DDA, by further written notice to the Developer, may terminate this Agreement effective thirty (30) days following the day of delivery of such notice. In such event, the obligation of the DDA to issue Permits for the Structure will terminate as of the effective date of such termination, the Developer will remain liable to the DDA for all Permit Fees accrued under this Agreement through the effective date of termination and the Developer will remain liable to the DDA for any damages incurred by the DDA or the City as a result of such default; provided, however, that any claims by the DDA for lost revenues (as distinguished from other damages which may be incurred by the DDA) due to Developer's failure to utilize and pay for Permits issuable pursuant to this Agreement will be limited to accrued but unpaid Permit Fees through the effective date of termination plus the total of all Permit Fees for a period of one hundred twenty (120) days after the date of termination for the number of Permits in effect on the date of termination plus any interest accruing thereon in accordance with Section 1(e).

4. Assignment. Developer shall make no assignment under this Agreement without the prior written consent of DDA, which consent shall not be unreasonably withheld, delayed or conditioned; provided, however, that the Developer may assign its rights under this Agreement to Ashley Mews, L.L.C. and/or Syndeco Plaza, L.L.C., each of which is a Michigan limited liability company and is controlled by Developer. In the event of any such permitted assignment, (a) Developer shall notify the DDA of the assignment in advance and in writing, (b) Developer, Ashley Mews, L.L.C. and/or Syndeco Plaza, L.L.C. will each individually be fully liable for the performance of the obligations of the Developer under this Agreement and (c) the document of assignment shall specifically confirm the joint liability described in Subsection 4 (b).

5. City Confirmation. The City acknowledges and consents to the terms of this Agreement and confirms that the execution of this Agreement by the DDA and the performance by the DDA of its obligations under this Agreement does not and will not create any default by the DDA under the Master Lease. Except as stated below in Section 6, the City shall have no obligations under this Agreement to the Developer.

6. City Assumption of DDA Rights and Obligations. If the DDA management responsibility for the Structure is for any reason terminated, whether as a result of the termination or amendment of the Master Lease, the DDA is dissolved by action of the City or operation of law, or any other reason, the rights and obligations of the DDA under this Agreement shall transfer to and become the obligation of the City and the Developer's rights and obligations under this Agreement will not be affected in any way by the transfer of the rights and obligations to the City.

7. Binding Effect. This Agreement is binding upon and shall inure to the benefit of the parties hereto and their permitted successors and assigns.

8. Notices. All notices permitted or required under this Agreement shall be in writing and addressed to the parties at their addresses set forth above. Any such notice shall be sent by certified mail, return receipt requested, express overnight delivery requiring a signed delivery receipt, delivered personally or sent by facsimile. Any notice sent by certified mail,

return receipt requested, will be deemed delivered on the third (3rd) business day after mailing. Any notice sent by express overnight delivery will be deemed delivered on the following business day after delivering such notice to the carrier. Any notice given by personal delivery or by facsimile prior to 5:00 p.m. will be deemed delivered on the date of such delivery or, if 5:00 p.m. or later, on the next business day. Any notice which a party fails or refuses to accept will be deemed delivered on the date of such failure or refusal. The parties hereto may change their addresses for notice purposes by a notice sent in accordance with the provisions of this Agreement, but no such address shall be a post office box.

9. Authority. The signatories on behalf of the parties hereto hereby represent and warrant to the other parties hereto that they are duly authorized to execute and deliver this Agreement on behalf of such party and that this Agreement is binding upon and enforceable against such party.

10. Applicable Law. This Agreement shall be interpreted and construed in accordance with the laws of the State of Michigan.

11. Counterparts. This Agreement may be executed in one or more counterparts, each of which will be deemed an original but all of which together shall constitute but one and the same Agreement.

12. Entire Agreement. This Agreement constitutes the entire Agreement between the parties hereto pertaining to the subject matter hereof and supersedes all negotiations, preliminary agreements and prior to contemporaneous discussions and understandings of the parties hereto in connection with the subject matter hereto.

13. Amendments. No amendment, change or modification of any of the terms, provisions or conditions of this Agreement will be effective unless made in writing and signed or initialed on behalf of the parties hereto by their duly authorized representatives.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

DEVELOPER:

SYNDECO REALTY CORPORATION,
a Michigan corporation

By: _____
Printed Name: Paul W. Potter
Its: President

DDA:

ANN ARBOR DOWNTOWN DEVELOPMENT AUTHORITY, a public corporation pursuant to Act 197, Public Acts of Michigan 1975

By: Lorri D Sipes
Printed Name: Lorri Sipes
Its: Chairman
and

By: Susan Pollay
Susan Pollay, Secretary

CITY:

CITY OF ANN ARBOR
a Michigan municipal corporation

By: David B Sheldon
Ingrid B. Sheldon, Mayor

and

By: Yvonne Ca
~~W. Northcross~~, City Clerk
Yvonne Carl, Interim

APPROVED AS TO SUBSTANCE:

By: N B L 6.8.07
Neal G. Berlin, City Administrator

APPROVED AS TO FORM:

By: Abigail Elias 6-8-07
Abigail Elias, City Attorney

EXHIBIT "A"

PUD LEGAL DESCRIPTION

Commencing at the Northeast corner of Block 4 South, Range 3 East, "Original Plat of the Village (now City) of Ann Arbor", Washtenaw County, Michigan, as recorded in Transcripts, pages 152 and 153, Washtenaw County Records; thence S 00°10'30" E 95.67 feet along the East line of said Block 4 and the West line of South Main Street to the POINT OF BEGINNING; thence continuing S 00°10'30" E 351.73 feet along said East line and said West line; thence S 89°50'00" W 263.06 feet to a point on the West line of said Block 4 and the East line of South Ashley Street; thence N 00°16"10" W 297.00 feet along said West line and said East line; thence N 89°50'00" E 115.24 feet; thence N 00°12'45" W 54.73 feet; thence N 89°50'00" E 148.34 feet to the Point of Beginning. Being Lots 4, 5, 6, 11, 12, 13 and 14 and a part of Lots 2, 3, 7, 10 and 15, and a part of a vacated alley, all in Block 4 South, Range 3 East of said "Original Plat of the Village (now City) of Ann Arbor".

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Page: 1 of 7
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Peggy M. Haines - Washtenaw Co. AG L-3917 P-880

Appendix 4f

ASHLEY MEWS PUD DEVELOPMENT AGREEMENT

THIS AGREEMENT, made this 18th day of October, 1999, by and between the City of Ann Arbor, a Michigan Municipal Corporation, hereinafter called the CITY, with principal address at 100 North Fifth Avenue, Ann Arbor, Michigan 48107, and Ashley Mews, LLC, a Michigan limited liability company, with principal address at 660 Plaza Drive, Suite 2300, Detroit, Michigan 48226, hereinafter called the PROPRIETOR, witnesses that:

WHEREAS, the PROPRIETOR owns certain land in the City of Ann Arbor, described below and site planned as the Ashley Mews PUD (Planned Unit Development), and

WHEREAS, the PROPRIETOR has caused certain land in the City of Ann Arbor, described below, to be surveyed, mapped and site planned as Ashley Mews PUD, and desires PUD site plan approval thereof, and

WHEREAS, the PROPRIETOR desires to build or use certain public improvements with and without the necessity of special assessments by the CITY, and

WHEREAS, the CITY desires to insure that all of the customary municipal improvements required by pertinent CITY ordinances and regulations be properly made, and that the PROPRIETOR will install these improvements prior to any occupancy permits being issued.

THE PROPRIETOR HEREBY AGREES

(P-1) To prepare and submit to the CITY for approval six copies of detailed plans and specifications ("the Plans") prepared by a registered professional engineer for construction of private storm sewers and storm water management system, public water main, and public sidewalks, including but not limited to the sidewalk referenced in P-4, below, and streetlights with the understanding that no work on said improvements shall be commenced until the Plans have been approved by the City Administrator or designee, and to provide such other relevant information to CITY departments as shall be reasonably required.

(P-2) To construct all improvements set forth in Paragraph P-1 of this Agreement in accordance with the approved Plans and to repair all defects in the public improvements which develop within one year from the date of acceptance thereof by the CITY. If the PROPRIETOR fails to construct the improvements, the CITY may send notice via first class mail to the PROPRIETOR at the address listed above requiring it to commence and complete the improvements in the notice within the time set forth in the notice. The CITY may cause the work to be completed at the expense of the PROPRIETOR if the work is not completed by the PROPRIETOR within the time set forth in the notice. The cost of the work shall be a lien on the Property and may be collected as a single lot assessment as provided in Chapter 13 of the Ann Arbor City Ordinances.

(P-3) To cause to be maintained Public Liability Insurance and Property Damage Insurance in the minimum amount of $1,000,000 per occurrence and naming the CITY as named insured to protect and

indemnify the CITY against any claims for damage due to public use of sidewalks in the development prior to final written acceptance by the CITY of the sidewalks, including but not limited to the sidewalk referenced in P-4, below. Evidence of such insurance shall be provided to the City Clerk's Office before the issuance of any permits and shall remain in full force and effect during construction and until notice of acceptance of the public improvements by the CITY.

(P-4) To convey to the CITY, before issuance of the first building permit (except for demolition permits), a perpetual easement of not less than 6,800 square feet in area and located approximately as illustrated on Exhibit A (attached), in which area PROPRIETOR shall construct a sidewalk. The easement shall allow cross-site continuous access for pedestrians between South Main and South Ashley Streets upon acceptance of the sidewalk by the CITY. This sidewalk shall be maintained in perpetuity by the developer or successor condominium association.

(P-5) The Ashley Mews PUD shall be built in a single phase, by initially commencing the site work and infrastructure for the entire PUD. Construction of the high-rise and low-rise components shall be sequenced in accordance with good construction practice, except that no certificates of occupancy for either component may be granted until building permits have been obtained and construction beyond the initial site and infrastructure work has commenced for the other component.

(P-6) For the benefit of the residents of the PROPRIETOR'S development, to make a park contribution of $22, 400.00 to the CITY Parks and Recreation Department for improvements to Wurster Park prior to the issuance of building permits.

(P-7) To create an association composed of all owners of Ashley Mews PUD, membership in which shall be required by covenants and restrictions in the recorded Master Deed. The association shall be responsible for insuring perpetual maintenance and ownership of the landscape materials, exterior lighting, seating structures, driveways, on-site storm water management system, and all other common elements.

(P-8) After construction of the private on-site storm water management system, to maintain it until non-developer co-owners elect one or more directors to the Association's board of directors. Thereafter, by provision in the master deed for the Ashley Mews PUD, the Association shall own and maintain the storm water management system. Any proposed changes to the storm water management system must be approved by the Building Department. If the PROPRIETOR or Association, as appropriate, fails to maintain the detention areas, the CITY may send notice via first class mail to the PROPRIETOR, or Association, at the address listed above, requiring it to commence and complete the maintenance stated in the notice within the time set forth in the notice. The CITY may cause the work to be completed at the expense of the PROPRIETOR or Association if the work is not completed by the PROPRIETOR or Association, as appropriate, within the time set forth in the notice. Every owner of a portion of the property, including co-owners of condominium units, shall pay a pro-rata share of the cost of the maintenance work. That portion of the cost of the maintenance work attributable to each lot or condominium unit shall be a lien on that Property and may be collected as a single lot assessment as provided in Chapter 13 of the City of Ann Arbor Code of Ordinances.

(P-9) To obtain, prior to issuance of the first building permit (except for demolition permits) for the low-rise component as shown on Exhibit A (attached), a Conditional Letter of Map Revision Based on Fill (CLOMR-F) from the Federal Emergency Management Agency (FEMA) and to provide a copy to the CITY, or, in the alternative, to apply for and receive approval of an amended site plan that eliminates the unit(s) which, if built, would require revision of the FEMA map. Prior to the issuance of a certificate of occupancy for any unit in the low-rise component, the PROPRIETOR shall obtain a Letter of Map Revision Based on Fill (LOMR-F) from FEMA for completed changes in the floodplain elevation and furnish a copy to the CITY, unless PROPRIETOR has applied for and received approval of an amended site plan that eliminates the unit(s) which, if built, would require revision of the FEMA map.

(P-10) To prepare and submit to the Planning Department one copy of the Master Deed prior to issuance of building permits, with the exception that demolition permits may be issued to PROPRIETOR before delivery of a copy of the Master Deed to the Planning Department.

(P-11) PROPRIETOR represents to the CITY and warrants that PROPRIETOR is the sole title holder in fee simple of the land described below except for any mortgage, easements and deed restrictions of record and that the persons signing below on behalf of PROPRIETOR have legal authority and capacity to enter into this agreement for PROPRIETOR.

(P-12) This agreement shall be interpreted, enforced and governed under the laws of the State of Michigan and City of Ann Arbor Code of Ordinances.

(P-13) PROPRIETOR acknowledges that failure to comply with the above paragraphs may result in a stop work order for any previously-issued building permits and be grounds for the CITY to deny issuing building permits, certificates of occupancy, or permits of any kind until satisfactory completion of the above paragraphs.

(P-14) To pay for the cost of recording this document with the Washtenaw County Register of Deeds.

THE CITY HEREBY AGREES:

(C-1) In consideration of the above undertakings, to approve the Ashley Mews PUD site plan.

(C-2) To use the park contribution described above for improvements to Wurster Park.

(C-3) To provide timely and reasonable CITY inspections as may be required during construction.

(C-4) To record this agreement with the Washtenaw County Register of Deeds.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals the day first above written. This agreement is not intended to create a contractual right for third parties. It may be enforced, amended, or rescinded only by the parties and their successors in interest. The obligations of the PROPRIETOR contained in this agreement shall be binding on the successors and assigns in ownership of the following-described parcels:

Commencing at the Northeast corner of Block 4 South, Range 3 East, "Original Plat of the Village (now City) of Ann Arbor," Washtenaw County, Michigan, as recorded in Transcripts, pages 152 and 153, Washtenaw County Records; thence S 00°10'30" E 95.67 feet along the East line of said Block 4 and the West line of South Main Street to the POINT OF BEGINNING; thence continuing S 00°10'30" E 351.73 feet along said East line and said West line; thence S 89°50'00" W 263.06 feet to a point on the West line of said Block 4 and the East line of South Ashley Street; thence N 00°16'10" W 297.00 feet along said West line and said East line; thence N 89°50'00" E 115.24 feet; thence N 00°12'45" W 54.73 feet; thence N 89°50'00" E 148.34 feet to the Point of Beginning. Being Lots 4, 5, 6, 11, 12, 13 and 14 and a part of Lots 2, 3, 7, 10 and 15, and a part of a vacated alley, all in Block 4 South, Range 3 East of said "Original Plat of the Village (now City) of Ann Arbor" and containing 1.98 acres of land, more or less. Begin subject to easements and restrictions of record, if any.
(Assessor's Parcel Nos. 09-24-411-006, 015, 021, 022, 035, 035)

CITY OF ANN ARBOR
100 North Fifth Avenue
Ann Arbor, Michigan 48107

Witnesses:

ALEXIS MARCARELLO

ALEXIS MARCARELLO

By: _____
Ingrid B. Sheldon, Mayor

By: _____
W. Northcross, City Clerk

Approved as to Substance:

11.29.99

Neal G. Berlin, City Administrator

Approved as to Form:

11-24-99

Abigail Elias, City Attorney

KDL

ASHLEY MEWS LLC

By Syndeco Realty Corporation
A Michigan Corporation
Its Member

Witnesses:

Carrie L. Person

Scott E. Munzel

By: _____
Paul W. Potter
Its President

STATE OF MICHIGAN)
) ss:
County of Washtenaw)

On this 3rd day of December, 1999, before me personally appeared Ingrid B. Sheldon, Mayor, and W. Northcross, Clerk of the City of Ann Arbor, a Michigan Municipal Corporation, to me known to be the persons who executed this foregoing instrument, and to me known to be such Mayor and Clerk of said Corporation, and acknowledged that they executed the foregoing instrument as such officers as the free act and deed of said Corporation by its authority.

Laurie Grimston Hogan

NOTARY PUBLIC
Washtenaw County, Michigan
My Commission Expires: _____

LAURIE GRIMSTON HOGAN
Notary Public, Washtenaw County, MI
My Commission Expires Nov 29, 2002

STATE OF MICHIGAN)
) ss:
County of Washtenaw)

On this 19th day of November, 1999, before me personally appeared Paul W. Potter, President of Syndeco Realty Corporation, Member of Ashley Mews LLC, to me known to be the person who executed the foregoing instrument, and acknowledged that he executed the foregoing instrument as his free act and deed.

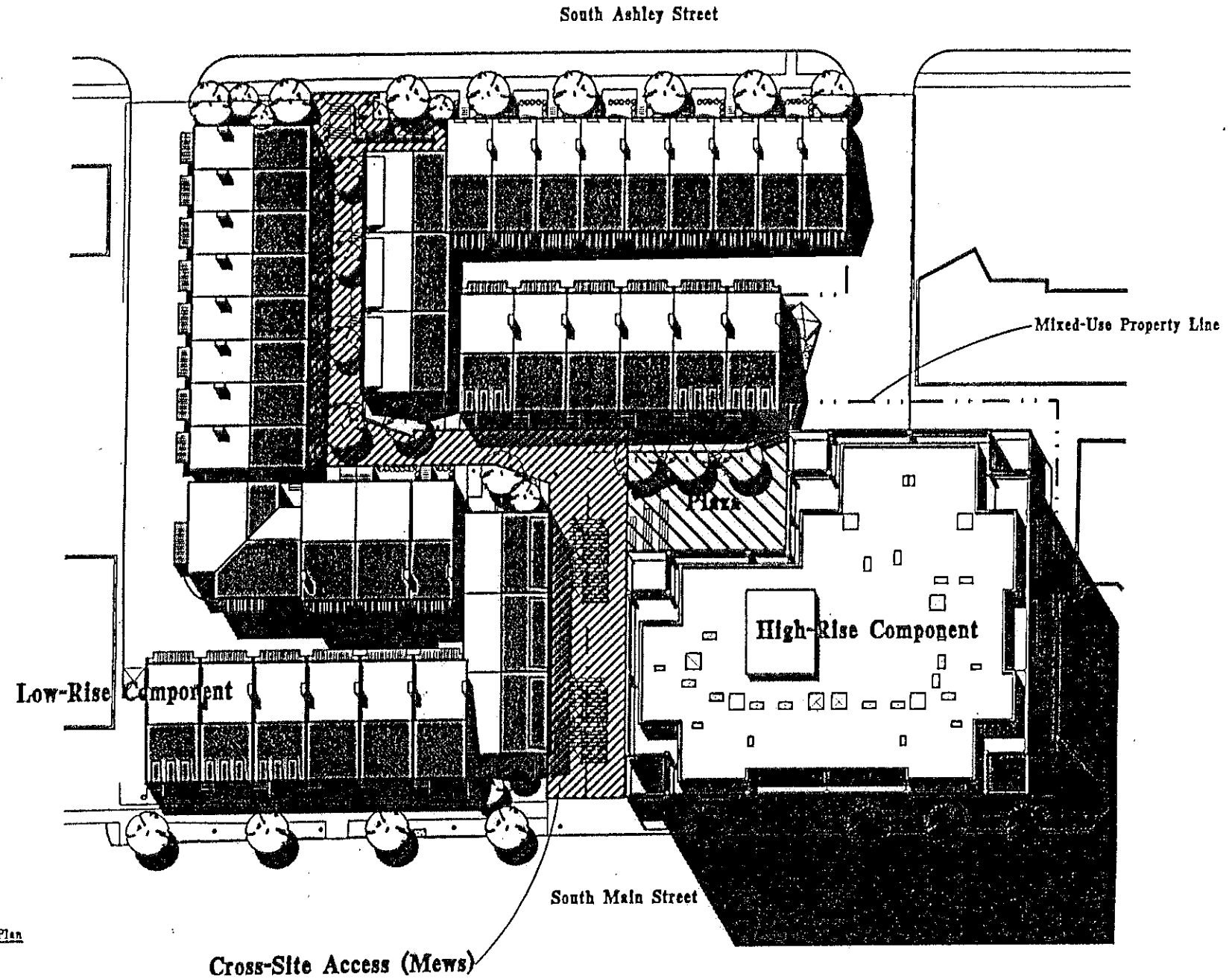
Carrie L. Persons

CARRIE L. PERSONS
NOTARY PUBLIC – WASHTENAW COUNTY, MI
MY COMMISSION EXPIRES 11/15/2000

NOTARY PUBLIC
Washtenaw County, Michigan
My Commission Expires: _____

DRAFTED BY: Karen Popek Hart, Planning Director
Ann Arbor City Planning Department
Post Office Box 8647
Ann Arbor, Michigan 48107
(734) 994-2800

10/18/99
DJ/lhf



Site Plan

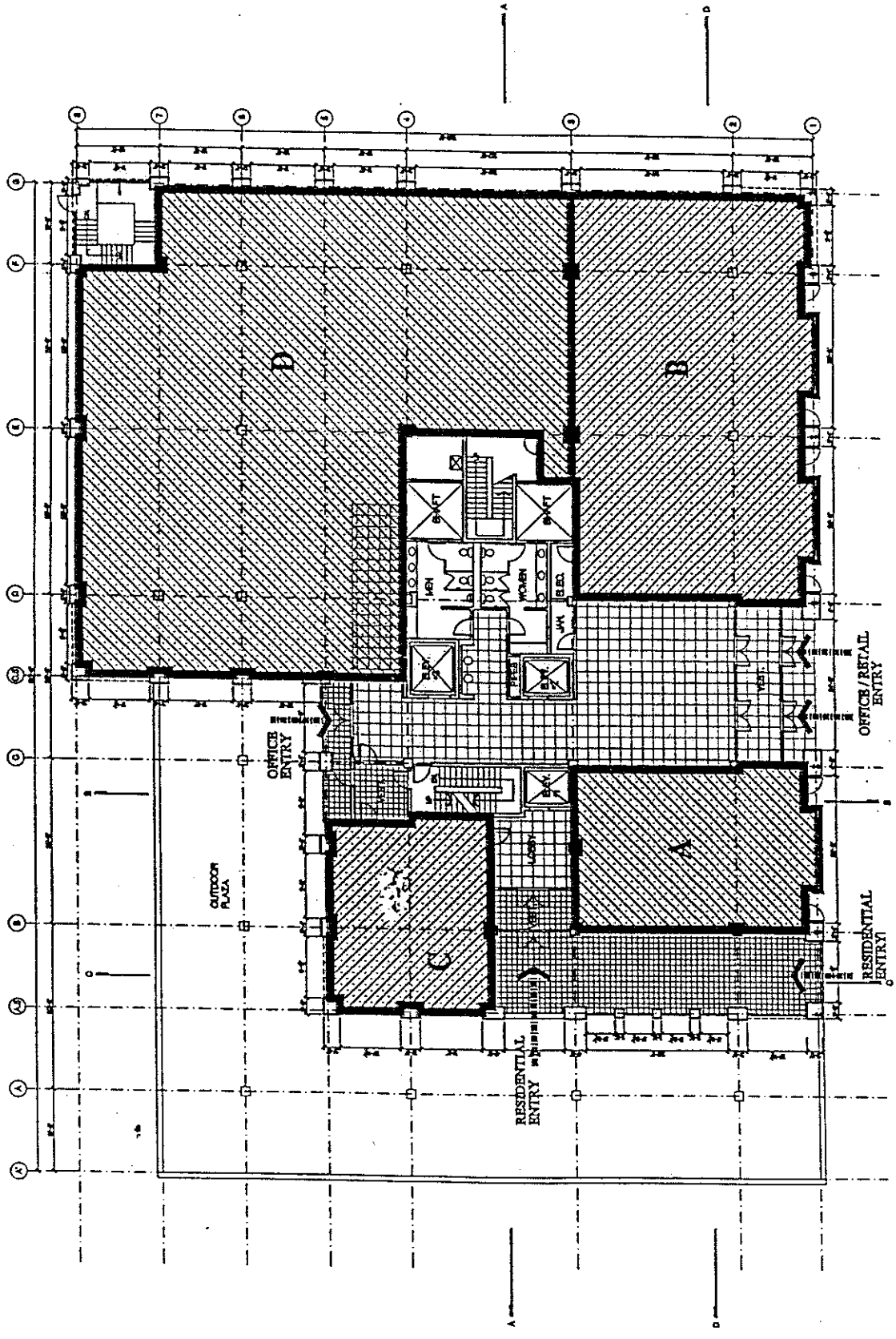
Exhibit A

Luckenbach Ziegelman Architects PLLC

GAi

Ashley Mews

EXHIBIT B



Ground Floor Usage

Main Floor Plan

EXHIBIT "E"

PARKING PERMIT AGREEMENT