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#### 总体规划 设计 技术 资产管理 我们的方案

停车解决方案的建议

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服务范围

市场部门
国际
总体规划
政府
综合用途
交通运输
商业
资产管理
高等院校
医疗保健
停车研究
可持续发展
技术
具体项目研究
韩国首尔市江东区
阿联酋沙迦
项目业绩
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# TIMOTHY H. HAAHS, P.E., AIA President/CEO

Timothy Haahs serves as President and CEO of TimHaahs, leading the firm's national and international professional services.

Focusing on master planning and mixed-use, his approach integrates parking as a critical component for project success, as well as community development and revitalization. Our firm specializes in planning – masterplanning for campuses, urban and high density areas, and transit related projects. Our plans and designs integrate the parking solution with the pedestrian experience – creating active and vibrant "people places".

Timothy Haahs 担任TimHaahs公司总裁兼首 席执行官,领导公司国内和国际的专业服 务。聚焦于总体规划和综合使用,他主张把 停车,社区发展和振兴相结合作为项目成功 的关键。公司专业于校园,市区,高密度人 群地区和与交通相关项目的总体规划。我 们的方案和设计将停车解决方案与行人体验 融合在一起 - 打造富有生机活力的"人气地 带"。



#### NOLI ALARCON, P.E. Vice President

Noli Alarcon has over 25 years experience specializing in the design and project management of complex parking and mixeduse structures. His expertise includes project management, structural, and restoration engineering design for complex multi-level structures.

Noli Alarcon在停车设计和项目管理以及 复合结构方面有超过25年的专业经验。他 精通于工程管理,结构和复杂多层次结构 修复工程设计。

Todd Helmer 是公司费城办事处副总裁,负

责管理和协调多个利益相关团队成员,为

复杂综合用途的停车场项目设计方案。



#### TODD HELMER, P.E. Vice President

Todd Helmer serves as Vice President for TimHaahs' Philadelphia office. Todd manages and coordinates multiple stakeholders, team members, and design disciplines for complex mixed-use and parking projects.

#### MICHAEL MARTINDILL Vice President

Mike Martindill manages TimHaahs' Atlanta operations. His experience helps clients take advantage of the latest trends in construction and finance. Mike focuses on innovative strategies in planning, financing, and operations to streamline the project cycle and generate successful, fast track projects.

Mike Martindill 负责 TimHaahs 亚特兰大的运 营管理,他凭借经验帮助客户利用建筑和金 融最新发展趋势的优势。Mike注重规划,金 融和运作方面的创新战略, 来合理化操作项 目周期,加快项目成功化进程。



#### JAMES ZULLO, AICP, CAPP, LEED AP Vice President

Jim Zullo serves as Vice President and director of TimHaahs' New Jersey office, including financial and project management. Jim specializes in studies, planning, and management of parking resources and infrastructure. Jim formerly served as Senior Director of Real Estate and Economic Development for New Jersey Transit.

Jim Zullo 担任 TimHaahs 新泽西办事处副总裁, 并负责财务和项目管理。Jim专门从事在管理停 车资源和基础设施的研究和规划。Jim曾担任新 泽西高级房地产和经济运输发展署署长。



#### **RACHEL YOKA, LEED AP** Vice President Strategic Business Planning & Sustainability

Rachel Yoka manages corporate and regional marketing for the firm nationwide and internationally. Rachel spearheads the TimHaahs' Sustainability Initiative – performing research on sustainable design, and developing training on sustainability and LEED.

Rachel Yoka 主导全国和国际范围内的公司和 区域市场营销管理, Rachel是TimHaahs负责 公司可持续性倡议-可持续设计研究与绿色 建筑开发培训的领导。



#### **KEVIN CARRIGAN, P.E., CAPP** Director of Engineering

Kevin Carrigan serves as Director of Engineering, leading TimHaahs' nationwide program in structural engineering. He leads complex engineering, expansion, and restoration projects. Mr. Carrigan leads the firm's Asset Management services, which offers asset protection through maintenance programs, condition appraisals, and restoration programs.



#### **BRAD GIRESI, AIA, NCARB** Director of Design

Brad Giresi is responsible for conceptual design, design development, and translating project vision into renderings and other materials for high profile projects. Brad's project expertise includes the design, documentation and administration of parking facilities, corporate offices, residential construction and building renovations, with extensive practice in mixed-use and multi-family design.

#### **VICKY GAGLIANO, LEED AP** Parking Specialist

Vicky Gagliano currently serves the firm as a parking specialist. Her responsibilities include researching, analyzing, and recommending solutions to parking problems through the performance of parking supply/ demand, alternatives and site analysis, market and financial feasibility, shared parking, revenue control, and parking management studies.



#### **JANICE HAAHS, M.B.A** Vice President/CFO

Janice Haahs serves as CFO, providing financial management and review for each of TimHaahs' offices and corporate functions. She holds a Bachelors degree in Consumer Economics from Seoul National University and a Masters in Business Administration and Finance from Drexel University.

# Business Manager

## ASHLEY MCHUGH, PHR

Ashley McHugh serves as Business and Human Resources Manager, serving all offices, as well as corporate staff. Ashley leads the firm's recruitment programs and administers the firm's in-house professional development program, providing staff with extensive educational and growth opportunities.

Kevin Carrigan 作为工程总监, 负责 TimHaahs全国结构工程设计和资产管 理服务。他领导复杂的工程设计,扩 展和修复工程工作。负责公司的资产 管理服务, 通过维护项目, 状况评估, 恢复项目确保资产安全。

#### Brad Giressi负责概念设计,设计发 展,为高知名度的项目勾画效果图 及其它材料。他精通于利用大量的 综合用途和多户型设计的实践, 对 停车设施, 公司办公室, 住宅建筑 及装修的设计, 文件工作及管理。

Vicky Galiano目前是公司停车专家。她 的职责包括通过履行停车供应/需求, 选择方案, 现场分析, 市场和财务可行 性分析, 共享停车, 税收控制来研究, 分析及推荐停车问题的解决方案。

Janice Haahs为TimHaahs公司财务 总监,负责TimHaahs公司每个办事 处的金融管理和审查。她拥有汉城 国家大学经济学学士, Drexel大学工 商管理与金融管理硕士。

Ashley McHugh作为商业和人力资源 总监, 为所有办事处的员工提供服 务。管理领导公司的招聘计划和公 司内部专业发展计划,为员工提供 广泛的教育和成长机会。



- 2012 Delaware Valley Engineer of the Year • 2012年度特拉华谷最佳年度工程师
- 2011 Appointment as Distinguished Advisory Professor of Architecture, Inje University in South Korea 2011年被任命为韩国仁济大学特聘建筑教授
- 2011 Korean-American Scientists and Engineers Association (KSEA) Entrepreneur of the Year 2011年美籍韩裔科学家和工程师协会(KSEA)年度企业家
- ٠ 2011 ASCE Philadelphia Engineer of the Year 2011年ASCE费城最佳年度工程师
- 2011 International Parking Institute Chairman's Award 2011年国际停车协会主席奖
- 2010 ZweigWhite's Jerry Allen Courage in Leadership Award 2010年ZweigWhite Jerry Allen勇气领袖奖
- 2007 New Vision Youth Community Center, Appreciation Award 2007年新视野青年社区中心感谢奖
- 2007 A. J. Ward Achievement Ward, New Jersey Parking Institute 2007新泽西停车协会 A. J. Ward成就奖
- 2006 Entrepreneur of the Year, Real Estate and Construction, **Philadelphia Region** 2006年费城地区地产及建造界年度企业家
- ٠ 2003 Commonwealth of Pennsylvania House of Representatives Citation 2003 宾夕法尼亚州众议院褒扬
- 1998 Certificate of Special Congressional Recognition, 1998 国会众议院荣誉奖
- 1998 Blue Chip Enterprise Initiative® Award, MassMutual and US **Chamber of Commerce** 1998年万通和美国商会蓝筹创新型企业奖

#### 专题演讲



- 国际绿色建筑大会(2011年9月)
- Planning" (October 2011)
- (March 2011)
- 中东停车场研讨会(2010年10月)
- Seoul, Korea (April 2010)

韩国研究所人类住区(KRIHS)国土资源部, 交通运输和海洋事务(MLTM)韩国汉城(2010年4月)

#### Asia-Pacific Economic Cooperation (APEC) / Association of Southeast Asian Nations (ASEAN) Joint Workshop (September, 2011)

亚太地区经济合作组织(APEC)/ 协会 东南亚国家联盟(东盟)联合研讨会(2011年9月)

#### United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), East Asia Low Carbon Green Growth Roadmap Meeting, Bangkok, Thailand (September 2010)

联合国亚洲和太平洋(亚太经社会)经济和社会委员会, 东亚低碳绿色增长路线图会议,泰国曼谷(2010年9月)

#### United Nations Economic and Social Commission for Asia and the Pacific, Fifth Policy Consultation Forum of The Seoul Initiative Network on Green Growth: City Development for Green Growth, Muju, Korea (July 2010)

联合国经济和社会委员会和亚洲太平洋,第五份汉城倡议"咨询论坛网络 上的绿色增长:市绿色增长的发展,韩国茂朱(2010年7月)

#### International Green Building Conference (September 2011)

#### World Green Energy Symposium: "Green Building and Urban

世界绿色能源研讨会:"绿色建筑与城市规划"(2011年10月)

#### • US-Korea Summit on Science and Engineering (August 2011)

韩美首脑会议上的科学与工程(2011年8月)

#### International Conference on Sustainable Design & Construction

可持续设计与施工国际会议(2011年3月)

#### • Middle East Parking Symposium (October 2010)

#### Korean Research Institute on Human Settlements (KRIHS) and Ministry of Land, Transportation and Maritime Affairs (MLTM),

# PROFILE

Timothy Haahs & Associates, Inc. understands the important role parking plays in development.

A multi-disciplined engineering and architectural firm, TimHaahs specializes in planning – masterplanning for campuses, urban and high density areas, and transit related projects - and providing design services for parking and mixed-use buildings.

TimHaahs' engineers, architects, and parking specialists focus on parking solutions, bringing a unique perspective to our clients in the corporate, government, healthcare, education, and transit markets.

Our approach to masterplanning high density and urban areas is to integrate the parking solution with the pedestrian experience creating active and vibrant "people places". For campuses, our primary focus is to create a sense of place and identity, built on shared gathering spaces; for transit related projects, we seek to maximize the shared-use of parking to create efficiency and economy.



TimHaahs建筑师事务所,理解停车场在项目开发中 担当的重要角色。

服务。

视角。





作为多元化工程和建筑公司, TimHaahs专业于校园, 城区, 高密度 区, 与交通相关项目的总体规划, 为停车和综合用途的建筑提供设计

TimHaahs的工程师,建筑师和停车专家们聚焦停车解决方案,为我们 在企业, 政府, 医疗保健, 教育及交通中转市场的客户带来了独特的

在高密度的市区,我们的总体规划做法在于整合解决停车方案与行人 体验,打造富有生机活力的"人气地带"。对于校园,我们的首要重 点是建立共享的聚会空间,创造一种地区定位认同感;对交通相关的 项目,我们争取最大限度地使用共享停车来创造经济和效率。







Our unique approach to a global challenge:

### PARKING is NOT about STORING CARS...



### it is about



Creating people places



Attracting more people to the city



Promoting tourism and economic growth



**Reducing carbon emissions,** traffic, and pollution



Making cities a better place to live and work

TimHaahs is leading the effort to transform our cities, our streets, and our parking.



TimHaahs 正领先着 -努力改造我们的城市,我们的街道,我们的停车场。

减少二氧化碳排放量, 交通阻塞及环境污染

让城市成为更适宜生活和工作的地方

# SUBACTOR STATES STATE

>> MASTER PLANNING	总体规划
>> DESIGN	设计
>> TECHNOLOGY	技术
>> ASSET MANAGEMENT	资产管理



VELLA DE

#### Site Analysis

- Examine multiple sites to determine the best place to build assets
- Determine where parking will be most highly utilized
- Evaluate positive and negative impacts to surrounding area, including congestion and road capacity
- Site structured parking to create successful cities and comm

#### Supply/Demand Analysis

- Analyze current parking supply and conditions in a geograph including street parking, lots, and garages, both public and p
- Calculate current demand for parking based on uses
- Analyze future demand based on proposed plans and development
- Recommend best practices to maximize land use

#### Feasibility Studies

- Examine a selected site to determine the best layout for park mixed-use buildings
- Determine the best program for the site (retail, office, housin parking, etc.)
- Evaluate the site to feasibly accommodate the proposed use
- Determine the best layout of all uses, including parking to lin construction cost

#### Shared Parking Analysis

- Analyze parking supply and demand study to create opportuto "share" parking (more than one car uses a single space in a
- Determine the best program to maximize sharing (retail, office housing, parking, etc.)
- Calculate the reduced demand for parking spaces based on complementary uses, such as office and housing
- Estimate construction cost savings as a resulting of building spaces and using them more often

#### Parking Consulting & Functional Design

- Using a selected site, determine the appropriate building for taking into account walkability, and best practices for planni
- With that footprint, determine how the garage functions insi including circulation, parking layout, ramping systems, entry exit, and more
- Determine possible structural systems for garage design, and offer services as experts in the design of parking

	选址分析
parking , uunities	<ul> <li>检查多个场地,确定最佳兴建停车场的地点</li> <li>确定在哪里停车场可被最大化利用</li> <li>评估对周围环境的正负面影响,包括交通拥塞和道路通行 能力</li> <li>为结构化停车场选址进而打造成功的城市和社区</li> </ul>
	供应/需求分析
hic area	
private	• 分析一个特定地域范围内当前的停车供需状况,包括公共
	和私营的路边停车处,停车场,停车库等
opment	• 计算当前停车使用需求
	<ul> <li>基丁拟队计划和开友分析木米的高米</li> <li>推若是住立施古安门庙土地利田价店是十化</li> </ul>
	正行现止入地方不分以上地的市所直接入出
king and	可行性研究
ng,	• 检查进空的地方 凹确定信左忆和党会田冷建筑是住左巨
	• 确定选址最佳方案(零售,写字楼,住宅,停车等)
25	• 评估该地点是否切实符合拟定用途
mit	<ul> <li>确定所有用途的最佳安排,包括停车场的布局以限制建造 的成本</li> </ul>
unities	共享停车分析
a day)	
ice,	<ul> <li>分析研究停车供需状况创造"共享"停车的机会(每日同 一车位供一辆以上汽车使用)</li> </ul>
shared	• 确定最佳方案实现最大程度共享(零售,办公,住宅,停 车等)
fewer	<ul> <li>在共享互补使用停车(办公停车和住宅停车)的基础上,计 算缩减的停车位需求</li> </ul>
	• 估算节省建筑空间和提高使用率带来的工程节约成本
1	
otprint,	停车场咨询和功能设计
ing	• 体田决定的地方 确定适当的建筑位置 老店到生行通行
side,	(C用処止的地点, س上包当的建筑位置, 考虑到少行进行 性, 确定最佳实施规划
y and	• 根据选定的建筑位置,确定车库内部功能,包括流通,停
	车场布局,斜坡系统,进出等等

#### • 为车库设计确定结构体系,并提供停车场专家设计服务



#### **DESIGN** 设计

Project Design Management

Mixed-Use and Parking Structure Design

Functional Design

Architectural Design

Structural Engineering

Sustainable Design

- Provide multidisciplinary services to design parking and mixed-use structures, from initial concepts through construction documentation
- Develop architectural concepts that reveal project vision
- Create full architectural and engineering project construction documents
- Provide excellent project management from planning through project completion
- Manage teams of expert subconsultants for related disciplines, including civil, mechanical, electrical, plumbing engineering and landscape architecture
- Integrate green building strategies and techniques
   into all designs
- Incorporate state-of-the-art technology and innovation in designs

- Evaluate current technology to determine advantages and applicable features
- Recommend appropriate technology for application according to project requireme
- Research innovations as they come to mark and evaluate potential applications, includi internet based and mobile applications, and comprehensive parking management system

工程设计管理 综合使用和停车场 结构设计 功能设计 建筑设计 结构工程 可持续发展设计

- 从最初的概念到施工文件,为设计停车场和综合用途建筑
   提供全方位,多领域的服务
- 展现项目远景的建筑概念开发
- 创建完整的建筑和工程项目施工文件
- 从规划到工程实施竣工,提供卓越的项目管理
- 专业承包商团队相关规范管理,包括土木、机械、电气、
   管道工程及景观建筑规范
- 在所有涉及中融入绿色建筑策略及设计技巧
- 在设计中纳入最先进的设计和创新技术

- 评估当前的技术来确定项目的优点和实施物
- 根据项目的要求,推荐合适的应用程序技
- 研究进入市场的新事物,评估它们潜在的/
   包括互联网,移动通信技术的应用和综合(
   管理系统

#### 技术 **TECHNOLOGY**

Technology Consulting

nt	On Street Management Consulting
ket ing	Wayfinding Systems and Signage Design
d ems	Parking Access and Revenue Control

持点	技术咨询
术	路内停车管理和咨询
应用,	导航系统和标识设计
11 — 20	停车场出入和收费控制



#### MANAGEMENT 资产管理

Condition Appraisal

**Restoration Engineering** 

Life Cycle Cost Analysis

**Operational Consulting** 

Garage Beautification

Comprehensive Maintenance Program

- Evaluate structural, functional and aesthetic conditions of existing facilities
- Identify areas requiring restoration, improvement and beautification to enhance facility use and revenue generation
- Provide engineering and architectural documentation for restoration and design improvements
- Recommend and plan for future improvements to extend the service life of the building
- Create comprehensive maintenance plans for projects, clients, or cities to maintain building assets

条件评价

修复工程

生命周期成本分析

运营咨询

车库美化

全面维护计划

- 评估现有设施的结构,功能和美观状况 •
- 确定需要恢复,改善和美化的方面,以提高设施的使用和创收
- 为恢复和改善设计提供工程和建筑文件 •
- 为今后的改进提建议和计划,以延长建筑物的使用寿命 •
- 为项目、客户或城市建立全面的保养维修计划以维护建筑资产



# **OUR APPROACH**

### Best Practices for Parking Planning and Design in

# China

Implementing Convenient, Cost Effective Solutions

#### 中国停车规划和设计的最佳实践 实施最方便,最具有成本效益的解决方案



Development patterns throughout the world have become increasingly inefficient and unsustainable, driven by economic and population growth. Development has resulted in urban and suburban sprawl, encouraged by building new roads and expanding highways to support this pattern. This cycle has resulted in unsustainable development, severe traffic congestion, air pollution, and negative social impacts. These trends created cities, towns and neighborhoods that are unable to sustain themselves without a significant dependence on automobiles, highways, and fossil fuels – in other words, "brown growth".

The lack of comprehensive strategic planning has resulted in complex negative impacts to long-term economic development, environmental quality, and social issues. Many countries are attempting to overcome these challenges, as well as trying to reverse the environmental damage.

Planners, designers, governments, and development agencies must work together to develop and integrate practical planning strategies and policies. TimHaahs understands that it is important to use the lessons learned over years of poor development, to create communities capable of supporting continued economic growth. Moving forward, the implementation of these practices can help to guide policy and development decisions to promote more efficient, attractive and selfsustaining communities. 随着经济和人口增长, 世界各地的发展模式已变得越来越 低效和不可持续。加之为支持这种模式而新建道路和扩展 高速公路,发展已经导致了市区和郊区的蔓延。这种循环 导致了不可持续的发展,严重的交通拥堵,空气污染及负 面的社会影响。这些趋势下创造的城市,城镇和街区缺少 对汽车、公路和燃料的严重依赖便不能自我持续发展 - 换 句话说,成为"棕色增长"。

缺乏全面的战略规划已经对长期的经济发展,环境质量和 社会问题产生了复杂的负面影响。许多国家都在试图克服 这些挑战并试图扭转环境的破坏。

规划师,设计师,政府和发展机构必须共同开发和整合切 实可行的规划策略和政策。 TimHaahs理解到重要的是吸取 数年来不良开发的经验教训来创建能够支持经济持续增长 的社区。展望未来,实施这些做法可以帮助引导政策及开 发决定,以提升更有效率,吸引力和自我维持的社区。

# Reducing pollution, congestion, and carbon emissions

Concern over climate change and carbon emissions has become a worldwide concern. Governments and citizens now recognize the massive scale and potential impact of climate change. Much of the focus on climate change centers on private automobile use. Automobiles generate as much as 70% of carbon emissions. The impact of the private automobile, including emissions and land use, must be addressed, and on a worldwide scale.

Parking also consumes land that could be put to a higher and better use. Cars play a critical role in the economy of nations and cities, and will continue to do so. Our challenge is to plan and create cities that are responsive to the current environmental situation. This challenge extends to semi-urban, suburban and residential areas, and may be even more complex due to sprawl and a lack of transportation choices.

One concept critical to reducing traffic congestion is walkability. The presence and quality of footpaths, sidewalks or pedestrian right-of-ways, roadway conditions and traffic, land use, and building accessibility each have an impact. As the number of cars in traffic decrease (because of the accessibility of mass transit), walkability increases. Pedestrian activity can be a generator for further "people places" and economic activity. At first glance, structured parking may not be directly related to walkability. However, if residents have convenient, safe, and attractive parking, supported by street level retail and other amenities, all within a five minute walk of their home, they have a valuable opportunity to change their parking patterns, as well as their lifestyle.



#### 减少污染,交通挤塞和碳排放量

气候变化和碳排放已被世界广泛关注。现在各国政府和市民已 经认识到了气候变化的庞大规模及潜在的影响。私人汽车的使 用是气候变化的重点中心。汽车产生的碳排放量高达70%。私 人汽车造成的影响,包括尾气排放和土地占用,必须在全世界 范围内加以强调。

停车场也消耗可以投入更高可以更好使用的土地。 汽车正在 并将继续在国家和城市的经济中发挥关键作用。我们的挑战是 规划和创建顺应当前环境状况的城市。这一挑战延伸到近郊地 区,城区和住宅区,由于扩张和缺乏交通选择, 甚至可能有更 为复杂的蔓延。

减少交通挤塞的一个关键概念是步行通行性。人行道, 行人的 权利,道路和交通状况, 土地使用及建筑物通行性,其中每项 及其通行质量都会产生影响。由于汽车流量的减少(因为公共 交通便利),步行人数增加。行人活动可以进一步激活"人气 地带"及其经济活动。

乍一看,结构化停车场可能不直接相关行走。但是,如果居民 有距家5分钟的步行路程方便,安全并美观的停车场,而且有路 边零售和其他辅助设施,他们就有一个宝贵的机会,改变他们 的停车模式,以及他们的生活方式。

# A Framework for Sustainable Growth and Development

Policy development and master planning can be utilized effectively to promote long term objectives for urban development. TimHaahs focuses on a two-pronged master planning effort including large scale development based on mass transit, and neighborhoodscale development with structured parking, commercial and retail elements to create "town centers".

#### **Transit-Oriented Development**

The role of mass transit and alternative transportation choices are critical to achieving the vision of a walkable, dense urban environment that provides a "live-work-play" community. Aligning large scale master planning efforts with substantial transit-oriented development at subway stations will create replicable urban centers. These urban centers will serve as destinations for residents, businesses, and visitors to the district, and help to craft a community identity. Creating destinations – or "people places" – near mass transit with structured parking will encourage both transit use and pedestrian activity.

These urban nodes may feature cultural sites; museums and luxury dining and shopping. Street level retail increases the willingness of people to walk. Program elements (such as office, retail, restaurant, hotel, and cultural amenities) should be carefully selected to complement surrounding uses and neighborhoods.

#### 促进可持续增长和开发的框架

建议

可以有效利用政策发展和总体规划来促进城市发展的长远目标。TimHaahs专注于双管齐下的总体规划工作,包括大规模开发大容量公共运输,和发展社区规模的结构化停车场,加上商业和零售 - 创建"城镇中心"。

#### 公交导向发展

大容量公共运输和交通的替代选择所发挥的作用,对于实现一 个适合步行的密集城市环境,并提供一个 "生活,工作,休 闲" 式社区的愿景来说至关重要。并帮助形成社区的认同感。 创建许多目的地 - 或众多"人气地带"- 靠近公共交通及有组 织的停车场将鼓励人们采用公共交通和步行。

这些城市节点对文化遗址,博物馆,豪华餐饮和购物起重要作 用。街道旁零售业使人们更意愿步行。应仔细选择计划内容( 例如写字楼,零售商铺,餐厅,酒店,以及文化设施)使之补 充社区的周边功能。





#### Neighborhood-Scale Development

Neighborhood-scale master planning plays a vital role in changing the landscape of cities. It features structured parking, commercial and retail elements to create urban, mixed-use "town centers." These smaller, more replicable developments can utilize existing housing, office, and highway infrastructure to create smaller development nodes that offer a mix of uses and promote economic and social benefits.

Using shared-use structured parking, these centers maximize parking space utilization and reduce the parking required to serve multiple uses.

#### Successful by Design – Mixing Uses

Mixed-use development with structured parking requires careful planning and a balanced mix of uses.

Successful developments often feature recognizable, attractive places including gardens, walking pathways, pocket parks, water features, plazas, and outdoor performance areas. These amenities connect visitors to the outdoors, and encourage them to return. Additional elements include sidewalks, lighting, and attractive landscaping.

#### **Policy Recommendations**

Master plans and conceptual plans should promote development and innovation. These concepts should also provide a solid foundation to guide governments and private developers to create effective planning and design solutions. This framework seeks to achieve multiple success factors, including:

- Creating vibrant destinations
- Maximizing the use of alternative modes of transportation
- Reducing dependence on the automobile
- Increasing the livability and quality of life

#### 社区规模开发

在改变城市景观过程中社区的总体规划起着至关重要的作用。 其特点是结构化停车场, 商业和零售单元共同组成城市, 及综 合用途的"城镇中心"。这些更小, 更容易复制的开发方式可 利用现有的住房, 办公室, 高速公路基础设施, 创造更小的开 发功能节点, 提供综合使用功能并提高经济和社会效益。

这些中心使用共享结构化停车,最大限度地提高车位的利用 率,以满足多种用途的停车

#### 成功设计 - 综合用途

结构化停车场的综合用途开发要求周密的规划,并达到综合用途的一个平衡。

成功的开发往往具有的可识别的特色, 吸引人的地方包括花园,步行通道,小型公园,水景,广场,和户外表演区。这些 市容建筑设施连接游客与户外,并便于他们返回。附加的设计 元素包括人行道,照明,及吸引人的景观设计。

#### 政策建议

总体规划与概念方案应当促进开发与创新。这些概念也应提供 一个坚实的基础来引导政府及私人开发商来创造有效的规划设 计解决方案。该框架旨在实现多个成功的方面,包括:

- 创造充满生气的目的地
- 最大限度地利用替代的运输方式
- 减少对汽车的依赖
- 提高宜居度和生活质量

#### PARKING SOLUTION PROPOSAL 停车 解决方案 建议



# Comprehensive Parking Management to Reduce Auto Dependency and Traffic

Creating an effective system to manage transportation, traffic, and parking requires an integrated approach. This approach requires:

- Collective sense of future development goals and the strategies to achieve them.
- Development of mixed-use to enliven the streetscape and create destinations.
- Structured parking that creates order and reduces the traffic burden.
- Increasing density to reduce parking demand and decrease congestion.
- Framework for mixed-use developments.
- Policies to increase pedestrian pathways and walkability.
- Comprehensive parking management and enforcement.

Comprehensive parking management serves a critical role, binding and reinforcing each of the elements described above. A coordinated effort to manage parking demand facilitates mixeduse, density, planning frameworks, and walkability. By focusing on all of these best practices, governments can capitalize and build on the gains achieved in each area.

#### Common elements include:

- **Technology** innovations and applications to manage parking and traffic based on new technology, including web based applications and comprehensive systems
- Public Structured Parking and Surface Lots (Off-Street Operations) – general operational rules, regulations, policy, and guidelines regarding parking structures and lots.
- Private Structured Parking and Surface Lots (Off-Street
   Operations) general operational rules, regulations, policy, and guidelines regarding parking structures and lots.
- On-Street Operations general operational rules, regulations, policy, and guidelines regarding surface parking on roadway networks, both publicly and privately owned.
- Rate Structures a comprehensive approach to fees/charges, including both on-street parking and off-street parking to incentivize off-street parking when appropriate.

#### 全方位停车管理以降低对汽车和交通的依赖

建立一套有效的管理运输、交通和停车场的系统需要一套整合性的方法。这一方法要求:

- 未来的发展目标的集体意识和实现目标的策略
- 综合用途开发以活跃街景并创建目的地
- 结构化的停车场带来良好秩序并减少交通负担
- 提高密度来减少停车需求和减少拥塞
- 综合用途框架开发
- 提高行人通行性和步行便利度的政策
- 综合停车场管理和执法

结合和强化以上描述的各项,综合停车场管理起着关键性作 用。通过实施这些最佳管理方法,政府可建立并运用每个领域 取得的成果。

#### 共同的要素包括:

- 技术-基于新技术的停车和交通管理技术革新应用,包括
   网络应用和综合系统
- 公共结构性化停车场和地表停车场(路外运营) 有关
   停车场结构及停车场运营总则,规定,政策和指导方针
- 私人结构性停车场和地表停车场(路外运营) 有关停车
   场结构及停车场运营总则,规定,政策和指导方针
- 路内操作 有关公共及私人基于车联网地表停车场的运营总则,规定,政策和指导方针
- 费率结构 一套行之有效的规费/收费方法,包括路内 停车和路外停车收费,在适当的时候鼓励路外停车



- Shared-Use Applications utilizing and creating shared-use strategies designed to maximize parking resources and drive density
- Enforcement regulations tailored to specific government needs, objectives, and culture, and the system, staff, and mechanisms to enforce them and incentivize desired parking and traffic patterns.
- Technology and Parking Access and Revenue Control (PARCS) – a district-wide approach to PARCS equipment and technology, such as pay and display equipment and programming, and cell phone payment.
- Maintenance general guidelines for the cleaning and regular maintenance of on-and off-street facilities, to properly care for and plan for necessary repair and restoration issues.

#### City Beautification and Improvement

Architecture and parking design have evolved considerably, and are still evolving. Big gray concrete "boxes" for parking have transformed into extensions of the destinations served, creating a "gateway" for the patron. Garages (mixed-use or not) now feature attractive façades, landscaping and lobby designs.

- Carefully consider the aesthetics and architecture.
- Utilize the creation of a new building to define streetscapes, utilizing landscaping and hardscape features.
- Create setbacks to provide walkable sidewalks and pedestrian pathways, to encourage walking.
- Design lobbies and towers to create architectural elements.
- Consider sustainable and "green" design features and technology to enhance building design. "Green" roofs, cool roofs, renewable energy, and recycled materials add significant value.
- Utilize smart technology choices to increase efficiency and convenience.
- Creating an attractive façades add value to the building and downtown/neighborhood.

- 共享停车应用 利用和创造共享停车战略设计,以最 大化利用停车资源和行车密度
- 执法行动 针对政府的具体需求,目标,文化,系
   统,人员,实施机制制定法规,以激励实现理想的停
   车和交通模式
- 停车场的访问和收入控制(PARCS系统)技术 -利用
   地区范围的PARCS系统设备和技术,例如支付及显示
   设备和程序,手机支付等
- 维护 路内路外设施的清洁及日常保养总则,妥善规划停车场必要的修护和修复事宜

#### 城市美化和亮化

建筑物和停车场的设计已有相当大的发展,仍在不断进 化。从大的灰色混凝土"匣子"式的停车场已经演化为目 的地各种服务的扩展,为顾客打造一个社区门户。停车库 (综合用途或非综合用途)以美观的外墙,美化的环境及 大厅设计为特点。

- 细致考虑美学和建筑学
- 建立新的建筑物来设置街景,利用周围的美化环境和
   硬景观特色
- 提供人行道和行人通路,鼓励步行
- 设计大堂和塔楼构建建筑元素
- 考虑可持续和"绿色"设计的特点提高建筑设计。
   "绿色"屋顶,凉爽屋顶,可再生能源,再生材料, 提升价值
- 利用智能技术多项选择选择提高停车效率和便利性
- 建造一个美观的外墙,为建筑及周围社区带来益处

利用实效的停车战略打造可持续发展的社区

# **Utilizing Effective Parking Strategies** to Create **Self-Sustaining** Communities



#### How can we revitalize our cities, create "people places", and reduce our environmental impact?

Parking plays a vital role in the success and development of all areas from downtown urban neighborhoods to the suburbs. Sustainability at the community level - cities, towns, and suburbs - requires a major paradigm shift.

As countries, states, and cities seek to reduce carbon emissions, we will be compelled to take a hard look at how we plan, develop, and construct our cities, our institutions, and our homes.

TimHaahs has developed a "cellular" development model that incorporates the principles of New Urbanism, parking and sustainable design to create self-sustaining communities. The model provides a replicable framework that can be proactively utilized to transform new development as well as retrofit existing urban and suburban nodes. The model reduces auto dependency and the resultant congestion, pollution, carbon emissions, and commuting time; reduces the infrastructure required for parking to serve the community; and ultimately, creates walkable streets and healthier, livable, self-sustaining communities.

从市中心社区到郊区,停车场在这些所有区域的成功发展中起着重要的作用。社区的可持续 发展 - 城市, 城镇和郊区 - 需要一个重大的范式转换。

由于许多国家,州和城市都力图寻求减少碳排放,我们将严格审查我们的规划方案,来开发 建设我们的城市,我们的机构和我们的家园。

造现有的城市和郊区的结点。

#### 我们如何才能振兴我们的城市,打造"人气地带",并减少对环境的影响?

TimHaahs开发了一个"单元"的发展模式,结合新城市主义, 停车和可持续发展的设计原则 来创造自我维持的社区。该模型提供了一个可复制的框架,可以积极利用于新的开发以及改

该模型降低对汽车的依赖和由此产生的拥挤,污染,二氧化碳排放量和通勤时间;减少社区 停车服务基础设施的需求;最终,创建步行街道和健康,宜居,自我持续发展的社区。







# **Global Challenge**

全球挑战

- Vertical sprawl and urbanization of suburban and rural areas •
- Increasing infrastructure needs and roadway construction •
- Car-dependent cities and streets without life ٠
- Traffic congestion, pollution and carbon emissions
- Negative impacts to quality of life and health •
- 垂直的扩张及郊区和农村的城市化
- 增加基础设施的需求和道路建设
- 依赖汽车的城市和街道- 没有生气 •
- 交通拥堵,污染和碳排放
- 对生活质量和健康的负面影响

### **Global Solutions** 全球解决方案

- Planning strategies to accommodate growth promote density
- Increasing mobility through all modes of transit
- Shape and recreate the physical framework •
- Reduce necessity of the single occupancy vehicle
- Enhance walkability and create successful places ٠
- Create a replicable and scalable framework
- 规划战略,来适应经济增长 提高密度
- 通过所有运输方式增加流动性
- 塑造和重建物质形态结构
- 尽量减少单人用车
- 增加步行通行能力并打造成功地带
- 创建一个复制和可推广的构架





#### MASTER PLANNING 总体规划



#### **DESIGN for PEOPLE** 为人设计

- Effective planning provides a framework for development
- Plan strategically for pedestrians, transit and automobiles
- Parking supports development and growth
- Plan for future sustainable development
- Consider lessons learned by other countries
- 提供一个有效的规划发展框架
- 为行人,公共交通和汽车提供战略性规划
- 停车场助力开发及增长
- 为未来可持续发展计划
- 思考总结其他国家的经验教训











#### Rahway Town Center Master Plan Receives Smart Growth Award From NJ Future

Rahway镇中心总体规划, 被NJ Future授予智能成长奖

Timothy Haahs & Associates, Inc. is honored to receive one of NJ Future's Smart Growth Awards for the Rahway Town Center Master Plan project in Rahway, NJ, for the category of Town Center Revitalization Plan. These awards are comprised of a diverse group of innovative development and redevelopment projects located in cities, towns, and townships across New Jersey.

凭借在新泽西,拉威市镇中心,镇中心振兴计划中的总体规划项 目, Timothy Haahs建筑师事务所荣幸地接受到NJ future授予的"智慧 成长奖"。这些奖项是对位于跨越新泽西州各城市、市镇、乡镇不 同群体的创新开发及重建项目的表彰。





#### **Government Solutions** 政府解决方案

- Implement appropriate parking and transportation policies •
- Development must support economic growth ٠
- Balance accessibility with security
- Implement strategic, regional planning policies
- 实施适当的停车和交通政策
- 开发必须支持经济增长
- 平衡通行性和安全性
- 实施战略性区域规划政策









# **Create Destinations**

创建目的地

- Integrate office, retail, restaurant and community spaces
- Promote walkability and mass transit ٠
- Utilize limited space
- Implement shared-parking strategies
- 集成办公,零售,餐饮和社区空间 •
- 促进步行通行性和公共交通 •
- 利用有限的空间 •
- 实现共享停车战略

# **Encourage Transit Use**

鼓励公交使用

- Provide a variety of affordable public transportation options
- Provide economic incentives for transit integration and use
- Reduce vehicle miles travelled, congestion and pollution
- Promote development with access to bus and rail

- 提供各种经济实惠的公共交通选择
- 提供交通整合和使用的经济诱因
- 减少车辆里程数,交通拥堵和污染
- 促进公共汽车和铁路的发展

#### **Serve Office Districts** 服务办公地区

- Meet the needs of employees
- Provide safe, functional and convenient parking
- Focus on pedestrian connectivity
- Employee satisfaction is critical





#### 商业 COMMERCIAL

- 满足员工的需要
- 提供安全,功能齐全,便利的停车场
- 专注于步行连通性
- 员工满意是关键



# Manage Assets

管理资产

- Proactively maintain infrastructure ٠
- Reduce costs of future maintenance ٠
- Maintain attractive appearance
- Implement maintenance plan
- 主动维护基础设施
- 降低日后的维修成本
- 保持美观的外观。
- 实施维修计划





#### **Enhance Student Life** 提高学生校园生活质量

- Enhance the campus and student life
- Create people places •
- Incorporate mixed-use
- Integrate pedestrian scale and promote walkability
- 提高校园和学生的生活质量
- 创建人气地带
- 融入综合用途
- 人行道规模化与提高步行通行能力相结合





#### HEALTHCARE 医疗保健

# Improve Hospital Experience

改善医院患者体验

- Create a convenient, comfortable and safe experience
- Consider walking distances
- Limit pedestrian and vehicular conflicts
- Minimize stress on hospital patrons and employees
- 创造一种方便,舒适和安全的体验
- 考虑步行距离
- 减少行人和车辆的冲突
- 最小化医院病人和员工的焦虑







# 

### **Parking Studies** 停车研究

- Identify solutions to parking problems
- Parking supply and demand •
- Financial and site feasibility
- Operational studies
- 找出停车难问题的解决方案 •
- 停车供给和需求
- 财政和选址的可行性 •
- 运营研究





#### SUSTAINABILITY 可持续发展







#### **Sustainable Strategies** 可持续发展战略

• Implement shared-parking to reduce parking capacity

- Promote renewable energy
- Utilize sustainable building materials
- Capitalize on environmental and economic benefits
- 实现停车共享,以减少停车场空间
- 促进可再生能源 •
- 使用可持续利用建筑材料
- 利用环境效益和经济效益



Sensors in Parking Spaces	Gateway	Center
StreetSmart's state-	These parking events	The gateways transmit
of-the-art detection	are relayed via our	the parking data to our
sensors detect vehicle	secure radio network	network operations
arrivals and departures.	to our gateways.	center or "NOC".



- Identify innovative technology solutions for parking management
- Pay by cell phone parking options and mobile applications •
- Virtual parking meters and systems
- Smart parking sensors
- 确定停车场管理的创新技术解决方案 •
- 通过手机停车选项和手机应用程序支付
- 虚拟停车咪表和系统 •
- 智能停车传感器 •

Images are by sample technology providers, leading firms in state of the art on-street parking management technology and mobile applications, Streeline and StreetSmart



#### 技术应用 TECHNOLOGY



#### iPhone or Android Smartphone

The NOC processes the data and relays useful information to our customers.









# CASE STUDIES

#### CASE STUDY: Gang Dong Gu, Seoul, Korea 案例研究: 韩国首尔市江东区



Frameworks for Mixed-Use Development and Self-Sustaining Communities: Reducing Traffic, Congestion, and Parking Requirements

开发综合使用和自我维持的社区框架, 减少交通拥堵和停车需求

# Gang Dong Gu

Gangdong Gu, the densely populated district east of the Han River in Seoul, is facing a time of growth and change. The district recognizes the challenges inherent to economic development and growth, and plans to form and shape the future of Gangdong Gu proactively.

This study examined the roles of planning, development, parking, and infrastructure, and where these intersect to create opportunities for transformative change. Through mixed-use development with significant structured parking, or "parking anchors", the district can initiate broad and far-reaching objectives. These objectives include reducing parking demand and traffic congestion, creating a more vibrant, walkable district, and integrating a dynamic mix of uses in strategic locations.

TimHaahs developed two scalable, replicable frameworks for successful urban mixed-use, centered on large scale transit-oriented development (TOD) and smaller scale town centers. Both frameworks use structured parking as the foundation for complementary mixed-use. Both provide parking resources for residential use, and apply shared-use principles to reduce the number of required spaces and maximize turnover. More importantly, both frameworks contribute to greater opportunities for alternative transportation, reducing dependency on personal vehicles and mitigating congestion and traffic burdens.

位于首尔汉江东部的人口稠密区江东区,正面临着增长和变化的时期。江东区认识到经济发展和增长 所带来的挑战,并积极计划塑造江东区的未来发展。

这项研究考察了规划,开发,停车,和基础设施分别发挥的作用,并找到在哪里这些方面可以形成交 集以带来改革的机遇。通过重大的结构化综合用途停车场的开发,或者所谓"停车锚"的开发使江东 区能够开始践行更广泛和深远的目标。这些目标包括减少停车需求和交通拥堵,创造一个更加充满活 力的步行区,并集成一个动态综合用途的战略区域。

TimHaahs为城市综合用途规划开发了两种可扩展可复制的框架,以大规模的公交交通为导向的开发 (TOD: 主要指以公共交通枢纽和车站为核心的同时倡导高效、综合的土地利用,如商业、住宅、办 公、酒店等。此外,其环境设计可以有效控制步行空间)和重点建设小规模的城镇中心开发。这两个 框架都使用综合结构化停车场,作为基础互补实现开发的综合用途。两者都为居民提供停车资源,并 遵循共享使用的原则,以减少所需的空间数量并最大限度地提高营业额。更重要的是,这两个框架都 为替代交通,减少私人车辆的依赖及减轻阻塞和交通负担做出贡献。



#### CASE STUDY: Gang Dong Gu, Seoul, Korea 案例研究: 韩国首尔市江东区



These concepts showcase the type of dense, urban development that can be achieved in Gangdong Gu. Once implemented, these models can create a "ripple effect" of success, catalyzing further private development and economic vitality.

The "parking anchor" concept provides far more than simply parking infrastructure:

- Provides parking resources to alleviate challenges and even personal conflicts, increasing safety, security, and quality of life for residents.
- ٠ Utilizes the residential community as a foundation, providing amenities to serve residents such as office space, retail shops, public plazas and greenways.
- ٠ Creates street life and generates pedestrian activity, through a complementary mix of uses that "shorten" walking distances.
- ۰ Enhances the walkability of Gangdong Gu, and increases transportation options, allowing for substantial reductions in traffic congestion and reliance on the private automobile.
- Provides attractive, shared-use parking structures that relieve parking pressures in the district and reduce vehicle trips through urban density.
- Creates a financially viable and profitable development model to benefit both private developers and the district.

TimHaahs developed Urban Guidelines that address parking holistically, recognizing its impact on street life, urban form, and the mitigation of traffic and congestion. The standards include best practices that can be adapted to the on the ground reality in Gangdong Gu, including structure, form, and sustainability.

这些概念展现了密集型城市开发可在江东区被实现。 一旦付诸实施,这些模型可以创建一个成功的"涟漪 效应",催生更多私人的开发和并增强经济活力。" 停车锚" 的概念远远超越了简单的停车设施:

- 提供停车资源,减缓停车挑战,甚至人和人的冲 突,提高安全性和居民生活质量。
- 利用住宅社区为基础,提供便利设施服务居民, 如办公空间,零售商店,公共广场和林荫道路。
- 通过综合用途互补开发, 缩短步行距离, 赋予 街头生机并增加步行活动。
- 增强江东区的步行能力,增加交通选择,从而大 幅度减少交通挤塞及对私家车使用的依赖。
- 提供美观,共享使用的停车场建筑,减缓地区停 车压力,减少城市高密度区域的车辆通行。
- 创建一个财政上可行和可盈利的发展模式,从而 有利于私人开发商和社区。

TimHaahs 认识到解决停车对街道生活,城市形态, 缓解交通拥塞的影响,开发了实现城市整体停车的标 其标准包括适应江东区基本实际状况的最佳实 准, 践,包括结构,形式和可持续性。



Through effective government policies and careful master planning, Gangdong Gu can initiate and sustain efforts to reduce parking demand and traffic congestion, and provide parking infrastructure to fuel growth and development. By pairing policy and best practices with comprehensive parking management, Gangdong Gu can be transformed into a more walkable, pedestrian environment - creating a true live-work-play lifestyle in a vibrant mixed-use district.

In Gang Dong Gu, TimHaahs' comprehensive study addressed:

- Supply/Demand and Shared-Use Analysis
- Building a Framework for Successful Urban Mixed-Use
- **Creating Walkable, Pedestrian Friendly Streets**
- Program Analysis for Successful Mixed-Use Development
- Integration of Plazas, Public Space, and Greenways
- ٠ Comprehensive Parking Management to Reduce Auto Dependency and Traffic
- Large Scale Mater Planning and Transit-Oriented Development
- ٠ Town Center Master Planning with Specialized Mixed-Use Zoning
- "Community Wells" and Their Public Parking Connections
- **Proposed Street Types and Street Life**
- ٠ **Mixed-Use and Façade Design**
- Sustainable Design... extending beyond the building footprint
- Parking Access and Revenue Control Systems (PARCS)
- Feeling Safe Public Space Standards for Security

Transforming the character of Gangdong Gu requires vision and 'big picture' change -- change focused on master planning, transportation choices, and reducing vehicle use, congestion, and carbon emissions.

江东区角色的转变需要有远见和 "大局面"改观 -将变化的重点放在总体规划, 交通选择, 并减少车辆的 使用. 交通拥堵和碳排放量。

> 通过有效的政府政策和周密的总体规划, 江东区能够 启动规划并投入持续努力,减少停车需求和交通拥 堵,为满足发展提供停车基础设施。通过配套政策和 综合停车场管理实践, 江东区可转变成为一个更适宜 步行的环境,打造一个名副其实的生活-工作-享受充 满生气的综合用途区域。

江东区, TimHaahs的全面研究解决方案强调:

- 供应/需求和共享使用分析
- 建立一个成功的城市综合用途框架
- 打造步行便利,行人便利的街道
- 成功的综合用途开发计划分析
- 城市广场,公共空间和绿色通道一体化
- 综合停车场管理,减少对汽车和交通的依赖
- 大规模总体规划和公交导向型开发
- 城市中心专业化的综合用途区域整体规划
- "社区源头"和公共停车场的连接
- 拟建街道类型和街区生活
- 综合用途和外观设计
- 可持续设计.....延伸至建筑基底外
- 进出停车场和收入控制系统(PARCS系统)
- •安全感 公共空间的安全标

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#### **CASE STUDY: Sharjah, UAE** 案例研究: 阿拉伯联合酋长国沙迦



#### **Concepts for Integrated Parking Project Site Study, Master Planning, and Urban Design Guidelines**

综合停车场项目选址研究,总体规划,城市设计准则的概念

Sharjah

#### A Story About Sharjah

Sharjah has a pristine lakefront, attractive high rise condominiums and apartments, countless cultural destinations and educational institutions. It is a place to raise a family, and live a peaceful life. It is a UNESCO heritage site and a cultural beacon for the entire UAE. Its proximity to Dubai lures residents, both Emirate and expatriate alike.

An ever present part of the landscape, cranes and construction sites result in more beautiful buildings to attract more residents to the city. Thirty and 40 story architectural icons line the main boulevards. These well-maintained thoroughfares surround the city and are landscaped with tall palms. This illustrates Sharjah's sense of planning and importance of these boulevards to the city.

Many of Sharjah's residents work in Dubai. Their long commute home, in severe traffic lasting an hour or more, ends in a harried search for a parking space anywhere they can squeeze a vehicle. Sharjah is facing a parking crisis. This crisis escalates to near chaos at night, when commuters from Dubai and other nearby Emirates brave the traffic and return home. Sharjah's growth and construction have occurred quickly. Unfortunately, this construction has not integrated sufficient parking for the city's population. Residents park on dirt lots, aligning themselves with their neighbor's car, as close as they can get to their home. Sometimes they may have to walk many blocks in the heat to reach their home. As construction projects, and eventually new buildings, replace these lots, parking spaces disappear, making the search for a space even more difficult.

#### 关于沙迦的故事

沙迦 - 拥有原始的湖畔,许多吸引人的高层公寓,无数的文化圣地及教育机构。是一个适宜建立家庭,平静的生活的地方。沙迦 是联合国教科文组织认定的世界遗产之一,同时也是整个阿联酋的文化灯塔。它毗邻迪拜,吸引着迪拜以及酋长国和外籍居民。

同样作为美丽景观的一部分,起重机和建筑工地打造了这里漂亮的建筑,吸引更多市民进入城市。主要大道旁30、40层的建筑物是 沙迦的建筑标志。这些维护完好的干道和高大的棕榈树花木环绕着城市。这凸显了沙迦的规划感及这些林荫大道对于城市的重要 性。许多沙迦居民在迪拜工作,在拥挤的交通中他们经历持续一个小时或者更多时间返家,往往疲惫不堪,寻找任何可以挤进一辆 车的地方停车。

沙迦面临着一个停车危机。当人们从迪拜和阿联酋其他邻近地区返程回家时,这一危机升级为接近混乱的程度。沙迦的开发和建设 仿佛一夜之间。不幸的是,其建设没有整合出满足城市人口的足够停车空间。居民不惜在灰尘车位停车,与他们邻居的车紧密连成 一线,只为了靠近家门口。有时在炎热的天气他们可能不得不经过很多街区才能回家。当新项目建设,尤其是落成的建筑物占用了 这些停车位的时候,原来的停车位便消失,使停车更加困难,一位难求。





#### **CASE STUDY: Sharjah, UAE** 案例研究: 阿拉伯联合酋长国沙迦



The municipality began parking operations and management with pay and display multi-space meters – regulating some lots and on street parking. They have added systems to program the meters remotely and efficiently. The need for organized, paid parking is both public and recognized.

# So how does the city solve the problem?

#### Undertake serious efforts to:

#### 1) reduce the parking demand and;

#### 2) provide more parking spaces.

Reducing parking demand ratios requires a pollution reduction program, increased public transportation, and creating a live/work/play environment. Providing more spaces requires building more parking spaces, using both structured parking and automated parking systems.

This study addressed both, adding more structured parking (to address current parking needs) and creating livable, walkable mixed-use facilities (to reduce parking demand ratios in the future). These two goals are intertwined, and we have coined this type of development a "parking oasis."

The city could build big plain concrete behemoths to serve residents, and it might help solve the parking problem. But it would not solve other resident concerns like traffic and congestion, dirt and dust in unpaved lots, and a lack of public spaces and places for people to gather. 市政当局通过收费和显示多车位咪表记录,启动停 车场运营管理,进而规范部分停车场和路面停车。 他们也增加了系统程序来高效远程编制停车咪表。 有组织化的付费停车场是大众的普遍需求。

#### 那么沙迦是如何解决这个问题的?

#### 确保在以下方面不遗余力:

#### 1) 减少停车需求 ;

#### 2)提供更多的停车位。

减少停车场需求比率需要一个污染减排计划,增加 公共交通,打造一个居住/工作/娱乐的环境。提供 更多的空间就要求建设更多的停车位,利用结构化 和自动化停车系统。

这项研究强调两个目标,增加更多的结构化停车场 (解决当前的停车需求)和创造宜居, 便于行走的 综合用途设施(以减少未来停车需求比率)。这两 个目标是相辅相成的,我们把这一种发展类型称为 "停车绿洲"。

城市可以建设混凝土庞然大物来服务居民,也许能 够帮助解决停车的问题。但是却不能解决居民关注 的如交通堵塞,无铺面路段的污染和灰尘,以及缺 乏公共空间和人们聚集地的其他问题。 A parking structure is perceived as a "house for cars". Garages and lot are designed to store automobiles. But structured parking can be mor than merely a place to park your car. Just as streets can form "the rive of life", parking can become a catalyst for change, revitalization, an growth. Parking can be more than just a "house for cars", it can becom the very heart of development.

- Parking can activate a streetscape.
- Parking can fuel economic development.
- Parking can be attractive, and even iconic.
- Parking can be clean, comfortable, and most of all, secure.
- Parking can provide sustainable energy solutions.
- Parking can provide "third places"
  - cafes, restaurants, green space and parks, and retail.
- Parking can improve the quality of life.
- Parking can improve the quality of life, and the environmen in Sharjah.

This may not be a traditional view of parking, and it may not be conservative kind of development. But it can work, and work well, if it planned carefully, and with purpose. By integrating parking with a mi of uses, the building becomes more than just the sum of its parts. Wit vision, it can be a "parking oasis" and a "people place", a destinatio point – and a reason to live, work, and play, in Sharjah.

In Sharjah, TimHaahs' comprehensive study addressed:

- Site Allocation and Consolidation
- Supply Demand Analysis and Shared-Use Analysis
- Streetscape, Walkability, and City Beautification
- Program Analysis and Mixed-Use Development
- Off Street Incentives for Surface Parking
- Comprehensive Parking Management
- Master Planning
- Financial Proforma
- Conceptual Design
- Urban Design Guidelines

re er nd ne	停车场建筑被视为是一座"汽车的房子"。车库和停车场 为存放汽车而设计。但是结构化的停车场不仅仅是一个停 车的地方。正如街道可塑造"生命之河",同样停车场可 以是变化,复苏及地区发展的催化剂。停车场可以超越" 汽车的房子"这一定义,成为发展的非常核心。
	<ul> <li>停车场能够激活一个街景</li> <li>停车场能够助力经济发展</li> <li>停车场可以非常美观,甚至成为地区标志</li> <li>停车场可以非常美元,舒适,最重要的-安全性好</li> </ul>
	<ul> <li>停车场能够提供可持续的能源解决方案</li> <li>停车场能够提供"第三地带" – 咖啡厅,餐馆,绿</li> <li>地和公园,以及零售空间</li> <li>停车场能够改善生活品质</li> </ul>
nt,	• 在沙迦, 停车场可以改善生活质量及环境
a is iix th on	这可能不是一种传统的停车观念,也不是一种保守式的开 发。但如果目标明确,规划细致,非常可行,并能取得良 好的效果。通过整合停车场的各项综合用途,停车场建筑 就不只是各个部分的总和。可以预见,它会变成"停车绿 洲"及"人气地带",是沙迦一个绝对宜于工作-生活-娱 乐的目的地。 在沙迦,TimHaahs的综合研究解决:
	<ul> <li>场地分配和整合</li> <li>供需分析和共享使用分析</li> <li>街景,步行通行性,城市美化</li> <li>项目分析与综合用途开发</li> <li>催生地表停车场</li> <li>综合停车场管理</li> <li>总体规划</li> <li>财务报表</li> <li>概念设计</li> <li>城市设计准则</li> </ul>
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项目简介

# **PROJECT PROFILES**





#### **Rahway Town Center Master Plan**

拉威镇中心的总体规划

- Rahway, NJ
- 拉威,新泽西

TimHaahs provided master planning services for the Rahway Town Center master plan, which would create a new "public square" atmosphere. The plan includes a shopping district, residential units, and a variety of entertainment venues. The plan maintains the most important public features of the city, including the City Hall and public recreational center adjacent to the site. The City selected a "main street" plan which features an attractive civic plaza, an outdoor theatre and seating area, parking facilities, and a variety of residential options.

TimHaahs为新泽西拉威镇中心总体规划提供总体设计服务,将营 造新的"公共广场"氛围。该规划涵盖一个购物区,住宅单位和 各种娱乐场所。规划维持了城市公共场所最重要的特点,包括毗 邻该地点的市政厅和公众娱乐中心。城市规划选择采取"主街" 式设计,以美观的市民广场,一个户外剧院和座位区,停车场设 施,以及各种住宅建设为特色。



#### **Gateway Transit Village**

运输中转村

– New Brunswick, NJ

- 新泽西州新不伦瑞克市

The Gateway Transit Village includes a 664-space parking structure, retail at grade, a university bookstore, 14 stories of apartments, potential entertainment venue space, and office space including. The development also features a pedestrian walkway connecting to the adjacent New Jersey Transit/Amtrak station. The Transit Village development creates a connection between downtown New Brunswick, New Jersey and Rutgers University. The development creates an attractive, pedestrian-friendly environment serving students, residents, and visitors, while providing transit connections throughout New Jersey.

该中转村项目包括一个有664车位的停车建筑,不同档次的零售 店,一个大学书店,14层公寓及未来开发的娱乐场地,还有办公 空间。该开发还突出了其连接邻近新泽西公交/火车站的人行道设 计。中转村的开发将新不伦瑞克市中心与新泽西州和罗格斯大学相 连接。 此次开发创建了一个有吸引力,便于行走的环境以服务学 生,居民,和游客,同时提供横跨整个新泽西的公共交通连接。



#### Lulu Tower Parking Planning and Design

Lulu 塔停车场的规划和设计

– Abu Dhabi, United Arab Emirates

- 阿拉伯联合酋长国阿布扎比

TimHaahs is working with SOM, providing parking planning and consulting services for a new parking structure for iconic Lulu Tower in Abu Dhabi. The first phase of the project includes studies to site the garage and determine the number of parking spaces required.

TimHaahs和SOM公司一起为阿布扎比标志性停车建筑lulu塔一个新的停车场提供规划与咨询服务。第 一阶段的项目包括研究和确定停车场地址和所需车位数量。

#### 1111 Lincoln Road

林肯路1111号

– Miami Beach, FL

- 佛罗里达州迈阿密海滩

TimHaahs provided parking consulting services for the 1111 Lincoln Road parking garage in Miami Beach, FL. The mixed-use facility is a unique attraction on Miami's South Beach. Designers incorporated varying ceiling heights throughout the garage to provide a unique look, as well as accommodate restaurant and residential space in the upper levels. The garage features ground-level retail to provide an attractive streetscape, and serves as an exciting venue for social and commercial events, providing magnificent views of the Miami skyline and the beach.

TimHaahs为佛罗里达州迈阿密海滩林肯路1111号停车库提供停车咨询服 务。该综合用途设施成为迈阿密的南海滩一处独一无二的胜地。设计师在 整个车库融入不同高度的天花板设计打造独特的视觉,并和谐化餐厅和高 层住宅空间。车库特色是建有地面层的零售店铺,提供了美观的街景和商 业活动地带,在那人们可以欣赏迈阿密地平线和海滩的迷人景色



#### PROJECT PROFILES 项目简介



#### **AMTRAK 30th Street Station Intermodal Gateway**

美铁第30街站 综合运输中转站

– Philadelphia, PA - 宾夕法尼亚州费城

The Intermodal Gateway parking garage, with 1525 spaces, accommodates the parking demands of the Cira Centre high rise building and the surrounding commercial district. The parking facility also serves Philadelphia's 30th Street Station. Located on Amtrak's Northeast Corridor, the station handles over four million patrons annually for both local and long-distance rail travel, the second busiest of the AMTRAK system in the United States.

综合运输中转站停车库有1525个停车位,可 满足Cira中心的高层建筑及周边商业区的停 车需求。同时也服务费城第三十街车站。该 站位于铁公司的东北走廊,是美国第二繁忙 的美铁公司系统,每年吞吐超过四百万长短 途火车旅行客运。







#### **Courthouse Center** 法院中心

– Miami, FL

- 佛罗里达州迈阿密

法院中心综合用途项目为迈阿密市中心该快速重建区域带来了停车,购物,餐饮等 多项选择。该中心将推动市区进一步发展。TimHaahs的设计融入了凸出的建筑特色 包括穿孔金属屏蔽,街道"衬层"和环绕蓝色玻璃。这一综合体项目还包括一个风 景优美的公共广场,成为社区一个吸引人的聚集地。

The Courthouse Center mixed-use project brings parking, shopping, and dining options to this rapidly redeveloping area of downtown Miami. The center will help to drive further development to the downtown district. TimHaahs' design incorporated prominent architectural features including perforated metal screening, street "liners," and perimeter blue glass. The complex also includes a beautifully landscaped public plaza, which is an inviting gathering place for the community.



**Rutgers University** 罗格斯大学

– New Brunswick, NJ

- 新泽西州新不伦瑞克

The Morris Street parking facility provides parking for the 13-story Rutgers Rockoff Hall residential building, which wraps the parking facility. Housing is the project's most unique feature. This garage is a key component in the redevelopment of this area in the city. The garage also serves an adjacent hotel and conference center, and will serve two other planned residential projects at the same intersection.

Morris 街停车库为13层的罗格斯罗科夫学生宿舍大楼提供停车设施。停车库被该大楼环绕。其外壳是项目独特特 征。该停车库是城市中该区域重建的关键。车库也为相邻的酒店及会议中心服务,并将为同一交叉路口计划中的 住宅项目提供停车服务。





– Tampa, FL - 佛罗里达州坦帕市

The Channelside District in Tampa, FL, serves thousands of tourists, residents, and visitors each year. TimHaahs provided design services for the expansion. The garage significantly enhances the vibrancy of the existing streetscape, and creates an attractive and convenient parking destination for tourists, visitors and residents.

佛罗里达坦帕Channelside区每年接待成千上万的居民和游 客。TimHaahs为其提供扩建设计服务。该车库显著提升了现 有街景的活力,并为游人,访客和居民创建了一个美观方便 的停车目的地。





#### **Cira South Parking Structure** 南CIRA停车场结构

– Philadelphia, PA

- 宾夕法尼亚州费城市

TimHaahs designed the 1650-space parking structure at the Cira South development area in Philadelphia, PA. Working with developer Brandywine Realty Trust, TimHaahs provided prime design services for the Cira South Parking Structure. The parking structure features retail frontage, and serves the new government complex building.

在宾夕法尼亚州费城南CIRA开发区, TimHaahs与布兰迪房地产 信托开发一起设计了一座1650车位的停车建筑, TimHaahs 为南 CIRA停车场结构提供了优质的设计服务。停车场以其临街零售 区设计为特点,为新的政府综合大楼提供停车服务。

#### Norristown Transportation Center

诺里斯敦运输中心

- Norristown, PA
- 宾夕法尼亚州诺里斯敦

The Norristown Transportation Center serves commuters of the Southeastern Pennsylvania Transportation Authority (SEPTA) transit system in Philadelphia, PA. The intermodal facility includes a 522-space multi-level parking garage and intercity bus terminal. The facility provides connections between suburban rail lines and bus routes, while adding greatly to the supply of convenient parking for the Transportation Center.

诺里斯敦运输中心为使用宾夕法尼亚州东南部交通运输系统的乘 客服务,该多式联运设施包括一个522车位的多层次停车库和城际 公交总站。该设施为市郊铁路线和巴士路线之间提供连接,同时 大大提高了交通中心停车场的容量和便利性。







#### **Annapolis Towne Centre** 安纳波利斯城中心

- Parole, MD

- 马里兰州Parole

The Annapolis Towne Centre at Parole is a vibrant mixed-use development including condominiums, restaurants, a grocery store, retail shops, an entertainment complex, and structured parking. TimHaahs designed two parking structures to support this redevelopment. The Centre combines an inviting sense of community, with the convenience of a walkable mixed-use neighborhood.

安纳波利斯城镇中心是一个充满活力的综合用途开发项目,包括 公寓,餐厅,杂货店,零售商店,综合娱乐和结构性停车场。为 支持这项重建项目, TimHaahs设计了两个停车结构。该中心使社 区的开放性与邻近可步行综合用途区域的便利性融为一体。



陶森市陶森镇中心近期的扩建改造工程,包括扩大现有的停车场设施。TimHaahs设计的停车设施使P.F.Chang, 艺士蛋糕工厂和户 外座位区的综合用途空间整合为一体,为街道带来了更多的生机活力。这一模式有助于更好地利用可用空间,提供建立零售和餐 饮店的机会,同时创造一个通往市中心的温馨"通道"。

#### **Towson Town Center Expansion**

陶森市中心扩建

- Towson, MD
- 马里兰州陶森市

The recent transformation of the Towson Town Center in Towson, MD, included the expansion of an existing parking facility. TimHaahs designed the garage addition to integrate significant mixed-use space including P.F. Chang's and The Cheesecake Factory, as well as outdoor seating areas, bringing more activity to the street. This strategy helped to better utilize available space, providing opportunities for even more retail and restaurant units, while creating an inviting "gateway" to the Center.

#### PROJECT PROFILES 项目简介







#### **Fresh Market Mixed-Use Facility Design** 生鲜市场综合设施的设计

- Miami Beach, FL
- 佛罗里达州迈阿密海滩

This mixed-use two-tier, 127 space parking facility serves the new Fresh Market grocery in Miami Beach, FL. The facility will serve Miami Beach residents and visitors alike, attracting retail shoppers, pedestrians and garage patrons to the area. The design team effectively integrated the interior Fresh Market space with structured parking, and provided an attractive façade.

这一综合用途的两层,含127个车位的停车设施为佛罗里达 州迈阿密海滩生鲜杂货市场服务。该设施为迈阿密海滩的 居民,游客,购物者,行人和车库顾客提供服务。设计团 队将生鲜市场的内部空间与结构化停车场有效的整合为一 体,提供了一个漂亮的外观设计。



#### Hamilton Square at the University of Pennsylvania

宾夕法尼亚大学汉密尔顿广场

- Philadelphia, PA
- 宾夕法尼亚州费城

This mixed-use parking garage revitalized an entire downtown corridor, creating a "people place" for the University of Pennsylvania campus by providing retail at grade and essential infrastructure.

这种综合用途的停车场使整个市中心走廊 恢复生机,提供了相当档次的零售服务和 必需的基础设施,为宾夕法尼亚大学校园 创造了一个"人气地带"。









发表文章

# ARTICLES



# Creating Community through Strategic Parking Planning

Timothy H. Haahs, PE, AIA and Megan Leinart, LEED AP BD+C

"The street is the river of life... the place where we come together, the pathway to the center." This quote by urban sociologist William H. Whyte serves as an inspiring reminder of the importance of bringing people together in their communities. Whether they are residents of urban, suburban, or rural societies, people have an inherent need to connect with others on a social level. This should remind us, as designers and planners of our responsibility to create these opportunities and consider the social connections in our projects.

While our chosen careers as parking professionals may create some bias, we do truly believe that parking provides valuable opportunities to create vibrant and active people places, particularly when considered early enough in the planning process. On college campuses, in dense urban communities, and along suburban "main streets," parking is often a critical factor in determining the likelihood of residents and visitors to visit or frequent a destination. Convenient, secure, and welcoming parking choices often play a deciding factor in people's decision on where to go in their free time.

#### Plan Early for Project Success

Consider the issue of parking as early as possible in the master planning process to identify the most effective opportunities to integrate parking – now and in the future. Planners should give parking a high level of importance in the planning process, and work to locate it strategically in areas with significant activity. All too often, parking is left as an afterthought, leaving no other choice than to locate these important assets on the outskirts of development and activity. This can leave parking isolated and inconvenient, and serve to discourage its use.

Parking can play an important role not only in encouraging more pedestrian movement at the street level, but also in sparking further development in surrounding areas. One of the most effective parking planning strategies is to incorporate mixed-use within the footprint of the structure, especially at the street level. Integrating the parking facility with retail, office space, or even residential units is an effective and smart use of limited land parcels for development and redevelopment. This can increase activity in the community, as well as architectural appeal and pedestrian scale for the structure, the streetscape, and the entire block or neighborhood. Combined with the powerful impact of shared-use parking, this single strategy can generate additional turnover, revenue, and magnify activity onstreet.

#### **Strategic Parking Planning for Campuses**

The Hamilton Square development in Philadelphia serves as a testament to the impact of strategic parking planning on an urban campus. Located in a once blighted and unsafe area in West Philadelphia, the University of Pennsylvania utilized the project to integrate parking and retail to create a more sustainable and attractive campus to serve its students, and the surrounding community.

Hamilton Square incorporated an 800-space parking structure with a grocery store located on the ground level. The project also featured a movie theater, a variety of retail stores, and café and restaurant space to enliven the public domain and create a renewed sense of community. The inclusion of the grocery store filled a critical need for student, local residents, and businesses – creating a real connection to the city by providing a very tangible benefit. The project served as a catalyst for revitalization in the area, and today is an exciting place of community on Penn's campus.

#### Parking as the "Front Door"

The Casino Reinvestment Development Authority (CRDA) is working in Atlantic City, NJ, to enhance the city's "first impression" for visitors. Planners of the development are seeking to utilize parking to accommodate the thousands of visitors to the city each year, while creating more street-level activity.

The CRDA mixed-use parking structure will accommodate 1200 parking spaces to serve casino patrons, as well as visitors to an adjacent

shopping center. The garage will include 18,000 square feet of ground floor retail, as well as space for a parking office. The mixed-use facility will help to create a livelier atmosphere in this section of Atlantic City, while promoting further growth and development at this extremely high-profile location.

The CRDA mixed-use parking facility is an important step in the future growth and development of Atlantic City. The garage will provide the essential parking infrastructure to serve the area, while the street-level retail will help draw more businesses and contribute to the economic vitality of the surrounding community.

#### Building Density and Creating Synergy of Uses - Effective Parking Strategies Abroad

The need to utilize effective parking planning strategies to create community and activity is not exclusive to the United States. The Municipality of Sharjah in the United Arab Emirates faces a growing problem of parking shortages and increased traffic congestion. Located just 20 miles from Dubai, the city houses a large number of residents who face long commute times and limited parking options. These conditions create parking and traffic chaos with little opportunity for relief or convenience.

However, Sharjah is working to address these challenges by utilizing structured parking and mixed-use to create a live-work-

Pedestrian-friendly streetscapes and a variety of retail, shopping, dining, and convenience establishments will enhance the sense of community and place, and improve the quality of city life.



Hamilton Square: The Hamilton Square project for the University of Pennsylvania utilized the effective integration of parking and retail to create a more sustainable and attractive community to serve its students.

play environment within the city. Building significant mixed-use parking assets in carefully selected locations will provide opportunities for businesses to locate in Sharjah, while creating jobs for residents as well. This strategy has the potential to reduce vehicle miles traveled, commute times, and congestion.

By transforming this primarily residential city into a more walkable, urban environment, it will leverage structured parking to drive economic development. Pedestrian-friendly streetscapes and a variety of retail and dining establishments will enhance the sense of community and place, and improve the quality of city life. Building density, applying sharedparking methods, and integrating mixed-use through the strategic location of structured parking will help to create a more vibrant and attractive environment, while bringing people together.

As parking planners and designers, we are all aware of the valuable opportunities that parking creates in development. Keeping in mind that "the street is the river of life," we have a responsibility to utilize our parking planning expertise to contribute to the quality of life for those who utilize the projects we design. Parking is an effective tool for developing attractive destinations, while ultimately bringing people together to live, work, and come together in community.

\*This abridged article originally appeared in its entirety in the September 2010 edition of the *Parking* 

# Structured PARKING

imothy H. Haahs, PE, AIA, F.ASCE and James M. Zullo, AICP, LEED AP, CAPP

# for Transit-Oriented Development

In this challenging real estate market, almost all real estate sectors have seen significant decreases in property value. However, according to most analysts the areas and properties that have maintained value, relatively speaking, are locations proximate to mass transit stations. Transit Oriented Developments (TOD's) are vibrant, mixed-use communities that include residential, retail, and office development within a five to ten minute walk of commuter train mass transit stations.

Developers, mass transit agencies, and municipalities that promote, plan, and implement TOD understand the significant challenges that confront these projects. These challenges include difficult property acquisition and assemblage, local opposition to higher density, and the cost, mass, and effective integration of structured parking for TOD projects.

#### The Challenge of Structured Parking

Given the relatively small sites, higher densities, and mix of uses, structured parking is regularly a necessary component of TOD projects - and often the largest challenge. The cost of structured parking can financially stress a project. The mass of a structure can overwhelm the scale of a community and spark local opposition. The parking challenge can be further magnified if commuter parking is incorporated into the project. This is often the case where a transit agency or municipal property, typically commuter surface lots, is incorporated into a TOD project. Where there is strong transit ridership, commuter parking often needs to be replaced or even increased to ensure that local and area residents have continued access to the mass transit system.

#### The Right Amount

The first step to meeting the parking challenge for TOD projects is to ensure that the parking facilities are sized correctly and in accordance with TOD parking principles. TOD planners employ various strategies to measure the required amount of parking to support the development program, so as to not to overbuild. The mix of land uses typical in TOD projects provides meaningful opportunities for shared parking. The utilization of the same parking space by multiple user groups (i.e., parking for commuters during the day, and residents or retail patrons in the evening and weekends) maximizes the use of the parking structure, reduces the amount of parking to be built, and if parking fees are charged, financially supports the facilities' capital and operating expenses.

TOD planners also need to maximize on-street parking to satisfy TOD parking requirements, reducing the amount of structured parking. On-street parking adds vibrancy, convenience, and a buffer to street level activity. On-street parking can also be designed and integrated with a transit station so that it serves as shortterm, drop off parking during the commuter rush period, and is available for downtown merchant parking during off peak hours. Applying appropriate TOD parking ratios and requirements, or implementing parking maximums for each land use, is a critical element to "right sizing" parking for TOD projects. Depending on the proximity and level of service at the mass transit station, standard parking ratios can be significantly reduced, especially in suburban areas.

Another factor eliminating or reducing the need for a primary or secondary car in a TOD environment is the development of car sharing services, which provide quick and easy access to a car when needed. Accordingly, data pertaining to built TOD projects increasingly support the reduction of parking ratios and requirements for most land uses in TOD projects. Unbundling the cost of parking from commercial, retail, and residential rents will also limit the need to construct excess parking. Free or subsidized parking will incentivize people to bring cars, thereby increasing the amount of parking needed.

#### **TOD Parking Planning and Design**

The integration, design, and user convenience of structured parking requires the application of sound TOD planning principles and attention to detail. These parking facilities will serve several user groups, and provide a meaningful impression to those throughout the community. As such, certain components of the structures should be planned and designed as "places," not as warehouses for cars. To the extent possible, retail and mixed-use development should be integrated at the ground level of the garage to enliven the streetscape.

Pedestrian and vehicular access, exits, and sections of the facade may be adorned with architectural elements that contribute to the aesthetic character of the community. Stair and elevator towers serve as desirable architectural features, and should be designed using glass with maximum visual access to enhance user comfort and security. Lighting levels may be increased beyond typical levels, and components of the structure should be painted or stained to promote brightness.

Often in large scale TODs, planners include individual parking structures for each building or land use component, and wrap the structure with that component to hide the parking structure. While these plans and designs are aesthetically pleasing, the development of multiple structures is often economically infeasible. To reduce structured parking costs, the facilities should be consolidated and shared to the greatest extent possible.

#### Parking Function and Management

Often a parking structure in a TOD community will be used and shared by multiple users and serve as a gateway to the community. As a result, it must be managed and maintained to a high standard. The facility should be be clean, well secured, and convenient to use. Given the regular flow of new visitors, signage and graphics should be well-designed and easy to understand. The parking access and revenue control system (PARCS) should be able to accommodate the various users conveniently and efficiently, especially commuters who time their access to the mass transit system to the minute. A well-managed parking operation is critical to the success of the development as a whole, and not merely to bottom line revenue.

bus and rail transit and associated facilities at the Norristown Transportation Center in Norristown, Pennsylvania. The new Intermodal facility includes a 522-space parking garage and an intercity pus terminal, linking commuters to Center City Philadelphia and the surrounding suburbs.

#### **TOD Development – Case Studies**



#### Rahway, NJ

The City of Rahway, which sits on the NJ Transit Northeast Corridor line approximately 45 minutes from Manhattan, was designated by the New Jersey Department of Transportation as one of the state's first Transit Villages in 2005. Since the late 1990's, the City has embarked on a major effort to plan and promote mixed-use TOD on several surface parking lots owned by the Rahway Parking Authority (RPA) which

were utilized by train commuters and other downtown parcels. The City and RPA recognized that these lots were not the highest and best use of property with such proximity to the train station. One of the first components of the downtown development that the City and RPA undertook was the development of a parking structure, the Rahway Transportation Center Garage, to provide parking for the new TOD projects, and to replace and expand commuter parking on the surface lots. The 524-space parking structure allowed the surface lots to be developed with residential and mixed-use development, and by design incorporated additional capacity to support future projects.



#### Morristown, NJ

NJ Transit has been a major advocate of smart growth and TOD since the mid 1990's. NJ Transit's Morristown Station converted a 300-space, commuter surface lot into a mixed-use residential

project adjacent to the Morristown Station. The Highlands at Morristown project consists of 218 apartment units, 8,000 sf of retail space, and a 722- space parking garage to support both the development program and the growing demand for commuter parking in the region. The project will increase mass transit ridership, increase commuter parking, and serve as a major redevelopment project for downtown Morristown.

#### Atlanta, GA

Lindbergh City Center at Lindbergh Station, a MARTA stop, is a mixed-use transitoriented development on 47 acres. The development includes office, retail, apartments, condominiums, and a hotel to be designed and constructed in two phases. Lindbergh City Center uses shared parking solutions, lowering parking ratios and the accompanying expense to build and operate additional structured parking. MARTA has adopted a progressive approach to development and parking at its rail stations, furthering development along station lines to increase ridership and provide vibrant communities.

As in any type of development, planners, architects, developers, government officials, and owners must plan appropriately for infrastructure requirements. Parking plays a particularly important role in transit-oriented development, shaping pedestrian and vehicle patterns. It has the ability to enliven a plaza or streetscape, creating a positive impression and contributing to the development. On the other hand, it is an area of planning that is often overlooked, with detrimental results. Sizing parking appropriately is critical to support transit-oriented development and the economic feasibility of the project helping owners save on construction and project costs and avoiding overbuilding. Designing and integrating parking correctly will complement the character of the surrounding area, creating a "people place" where visitors will want to return. Perhaps most importantly, the proper design, integration, and sizing of parking within a TOD community can contribute to the principles and best practices of smart growth and sustainable development.

\* This abridged article originally appeared in its entirety in the April 2009 edition of UrbanLand.



Megan Leinart, LEED AP BD+C

# THE ROLE OF SUSTAINABLILITY **IN PARKING PLANNING, DESIGN AND OPERATIONS**

We have been inundated in recent years with information related to sustainability. Every industry has its own take on how sustainability influences its products and services, and the responsibility of those who develop and market them. Parking is no different.

Many outside of our industry may consider a "sustainable" parking facility an oxymoron, but this is simply not the case. There are many opportunities to integrate "green" design and economically efficient practices into parking. We continue to identify and incorporate these strategies into parking projects, whether in downtown or mixed-use communities, at educational or healthcare institutions, or in transit-oriented developments.

As a community of professionals, we have the opportunity to define "sustainability" in terms of parking planning, design, and operations, and separate truly sustainable ideas from "greenwashing," or the intentional mislabeling of products and services as "green" solely to increase market

share. If we are to succeed, it is essential that we embrace sustainability and the implementation of efficient building practices as part of our social responsibility. No longer seen purely as an additive to design, sustainability has moved toward integration in process and form.

Many cities and institutions, including the federal government, have instituted requirements mandating certain levels of LEED (Leadership in Energy and Environmental Design) certification. Alternative systems exist (or are in development), including the Green Globes program; SITES, a pilot program by the American Society for Landscape Architects; and the Green Garage Certification program, kicked off by the Green Parking Council. Soon building codes and regulations will be updated to complement or create additional amendments to standards as well.

#### Sustainable Planning Strategies in Parking

The most fundamental argument for structured parking as a sustainable design practice is density - they are a more efficient use of land by their nature. Rather than paving acres of land for surface parking to support the needs of a development or campus, structured parking provides an opportunity to meet parking demand using a fraction of the space of a surface lot. Densely building parking, as well as other buildings, preserves significant portions of land for further development, and open



Federal, state, and local incentives abound to install photovoltaic panels; Nexus Properties elected to install these panels to generate electricity to serve the energy demands of the facility as well as power electrical vehicle charging stations. Photo courtesy Nexus Properties.

space, which can take the form of natural habitat or landscaped plazas and planted green space. In addition to increasing density, structured parking facilities can actually result in a decrease in vehicle miles traveled (VMT) in a particular area. Locating parking facilities in a mixed-use or transit-oriented development offering a variety of destinations provides the opportunity for people to park once and walk to varied destinations, rather than driving to multiple locations, each scattered miles apart.

While the recent popularity of mixed-use and transit-oriented communities will no doubt continue to have a positive impact on the planning practices of both our cities and suburbs, parking is a critical element to their success. Most people today still choose to own automobiles and depend on them for specific needs, even if they can also utilize transit or car sharing programs on a regular basis. Parking facilities provide the essential

infrastructure for these developments, supporting the continued parking needs of those who live and work in these communities. Parking plays an extremely important role in serving the residents and visitors of these developments. Integrating mixed-use office, retail, or restaurant space can help to create a more attractive, pedestrianfriendly streetscape by increasing the amount of street level activity.

#### **LEED and Parking: A Complex Relationship**

At this time, the United State's Green Building Council's (USGBC) LEED rating systems are the most common and accepted system for measuring the sustainability of a building. While other systems, such as Green Globes and AIA 2030, are becoming more widespread and acknowledged, LEED continues to increase market share and public attention. The USGBC's rating systems will continue to evolve and change, but at this time it is not possible for a stand-alone parking structure to obtain LEED certification. Under LEED 2009, a



project must meet all Prerequisites and achieve an established point value through earning credits for sustainable strategies.

While LEED certification is both admirable and noteworthy, the overarching mission is to develop buildings which will create a more healthy and

We face a unique challenge as we attempt to implement sustainable design strategies into the planning, design, and construction of parking facilities, and collaborate with a cadre of organizations who would prefer to eradicate or strictly limit automobile use.

sustainable environment overall, and contribute to energy reduction. Regardless of certification or its pursuit, we can actively apply many strategies to the design and construction of parking facilities. More importantly, employing these strategies can enable even a standalone garage to contribute to the overall LEED certification of a campus development.

While stand-alone а garage cannot obtain LEED certification, it is possible for a mixed-use parking facility to do so. Mixed-use parking facilities with a significant

footprint of conditioned interior space serving one or more Full Time Equivalent Occupants, such as retail or restaurant space, or even a residential component, can help the facility to obtain certification.

The planning, design, and construction practices we exercise today are critically important to the sustainable growth and development of our future communities. "Big picture" planning strategies must consider issues such as reduction VMT and traffic congestion, as well as pedestrian convenience, to reduce carbon emissions and create attractive, high-

value, smart-growth developments. Meanwhile, our buildings must integrate energy and resource-efficient design and construction practices so that they can contribute positively - both environmentally and economically.

As parking professionals, we understand the importance of parking to successful development. We have a responsibility to educate ourselves and others as to the many opportunities to implement sustainable strategies, not just in parking planning practices, but also through design, construction, and operations.

\*This abridged article originally appeared in its entirety in the December 2010 edition of the Parking Professional.

# Creating SELF-SUSTAINING **Communities**

# through Sustainable **Urban Design**

Timothy Haahs, PE, AIA, F.ASCE and Megan Leinart, LEED AP BD+C

"For all the implications of 'sprawl'-- from job loss and economic decline, to alarming obesity, asthma rates and segregation, to the loss of habitat and global warming, to our dangerous dependence on foreign oil--all of them are driven by one fundamental problem: the mismatch between where we live and where we work."

Shaun Donavan, Secretary of the Department of Housing and Urban Development (HUD), powerfully depicts the serious issues facing the United States and countries around the world due to decades of impractical and inefficient development. Sprawl, both urban and suburban, has produced extremely negative consequences, aggravated by impractical zoning regulations and development trends that isolate residential, office, entertainment and retail districts. These practices have resulted in complex, intertwined economic and environmental impacts, as well as guality of life issues such as human health and social equity.

The trend toward separating the places where people live, work and socialize has created lifestyle disconnects. This "fractured" development essentially mandates automobile ownership, requiring multiple vehicle trips to accomplish every day tasks. These practices have increased our dependence on fossil fuels, while generating detrimental vehicle emissions levels and traffic congestion, and further decreasing social quality and community connectivity.

The invention and development of the automobile has undoubtedly been a true hallmark of prosperity, particularly in the United States, opening doors to opportunities that would have otherwise been impossible. However, looking forward, as the global population continues to increase, and available land decreases (or is preserved for future generations), planning strategies to create more self-sustaining communities rise to a new level of importance.

We face the daunting challenge of overcoming years of inefficient development, while attempting to reverse the impacts to the environment. It is important to recognize that sprawl as we know it is a relatively new trend, having only been in existence at this level since the middle of the twentieth century. Therefore, with the intelligence and experience we have now, we can avoid the mistakes of the past, developing new, self-

The Annapolis Towne Centre mixed-use development in Parole, Maryland is a model for cellular mixed-use development, incorporating a unique combination uses including residential, office and retail, and complemented by convenient parking options

sustaining communities focused on smart growth, and implementing policies to encourage more sustainable planning and design practices.

#### Implementing Strategies for Change

There are two primary methods for addressing these global issues: active and passive. "Active" strategies focus on specific issues at hand and identify opportunities for improvement. Examples of active strategies include incentives to encourage the use of transit, regulations on vehicle miles travelled (VMTs) or higher taxes to discourage driving and vehicle emissions. Other strategies may include the development and implementation of technologies such as installing air filtration systems or the construction of "zero emissions" buildings that are able to operate with net zero energy consumption and carbon emissions, while harvesting their own energy on site.

While these active strategies can have a positive impact on the communities who implement them, "passive" strategies create more long-term solutions, working to transform the broader attitude toward development. Passive strategies focus on the big picture, identifying opportunities to implement sustainable planning policies to reduce the repercussions of inefficient development and create self-sustaining communities.

#### A New Concept, An Old Approach

We believe the most effective solution to reversing the negative impacts from decades of sprawl is to implement a "cell" or "village" concept. Parking is Power – Parking can play an important role in encouraging pedestrian movement at street level, as well as sparking further growth in surrounding areas. Early consideration of parking during planning will identify the best opportunities for integrating parking, and create the potential for incorporating mixed-use. Further, implementing shared-parking strategies to serve various users (i.e. transit commuters and office employees during the day, and residents and retail during evenings and weekends) helps to maximize the use of parking facilities, and reduces the amount of parking needed. Areas that utilize shared-parking also create further opportunities for green space, and a more effective use of land for further development.

This concept focuses on creating replicable developments that seek to reduce sprawl and encourage density in smaller areas. The cell, or village, integrates a variety of destinations, including housing, retail, office and entertainment, as well as educational, cultural and religious destinations in one place. This model will help to produce communities capable of sustaining themselves, and resulting in more active, vibrant and walkable environments. Today, many metropolitan regions have begun to implement these cellular development trends, creating town centers that seek to increase density, reduce traffic congestion and create more attractive communities. Throughout the United States and abroad, hundreds of new, smallscale urban and suburban infill projects are underway to establish more walkable streets and neighborhoods.

Design for the Pedestrian - It is extremely important to design for pedestrian connectivity to encourage foot traffic. Creating The primary goal of the cellular development concept is to incorporate walkability and pedestrian scale will create a positive impression for many of the destinations and amenities one would access on a daily or communities and help to establish a more attractive "sense of place" weekly basis into one place, or a much smaller, denser area. Locating to keep people coming back, and encouraging more people to move residences, offices, restaurants, entertainment venues and more - all in. The complete streets initiatives currently being explored in cities within walking distance - is the most effective strategy for creating a nationwide enhance these efforts. pedestrian-friendly urban neighborhood, as well as generating more street level vibrancy. Coupled with proximate access to transit, and Creating Value through Transit - Many people today consider the complete streets for walkability and alternative modes of transit, this availability of transit as a significant issue driving their likelihood to development framework contains the components for creating successful, live or work in an area. Transit-oriented developments in particular have proven successful in recent years, and as development trends self-sustaining communities. The convenience and enhanced walkability will also help to reduce aspects of the environmental hazards realized as continue to shift toward creating density and encouraging mixeda result of sprawl. use, the convenient proximity of transit is vital to supporting the needs of those who choose to live and work in these communities.

One recent example of successful town center development is the Annapolis Towne Centre in Parole, MD. The Annapolis Towne Centre Focus on Security – Creating activity and street-level vibrancy not serves as a model for specialized mixed-use integration. The development only provides a more attractive sense of place for residents and provides those who live and work there with the convenience of a variety visitors of these communities, but it helps to establish a greater of uses located within a pedestrian-friendly atmosphere, complemented sense of safety and security. Avoiding layouts which may create opportunities for crime will negatively impact the development and with convenient parking options. hinder its opportunities for success.

The Towne Centre includes a unique combination of residential, retail, restaurant and entertainment destinations, creating a pleasant "downtown" atmosphere. The combination of retail with proximate mixeduse has significantly reduced the need for vehicle trips, while generating a unique sense of community for residents and visitors.

Although the development does significantly reduce the need for driving compared to other suburban communities, parking has and will continue to play an important role in its success. Parking facilities provide essential infrastructure to support the growing density of the site, while integrating street-level mixed-use space to create an attractive pedestrian scale, and blending seamlessly with the architectural features of the surrounding buildings.

#### **Kevs to Development Success**

For this framework to succeed as a development trend well into the future, there are a number of design guidelines that must be implemented to provide a successful foundation. These principles are critical to the success of any development, and must be appropriately considered and carefully implemented to ensure future growth and prosperity:

#### **Establishing a Replicable Framework**

As we move forward in the planning and design of new communities – in both our urban cores as well as our suburban communities – the concept of cellular development can be applied in a variety of development types. Encouraging the development of self-sustaining communities can transform the mindset of urban and suburban planners and policies, and have beneficial impacts on many facets of development.

The goal of this concept is not to create "cookie cutter" developments. This framework is replicable and can be applied with creativity to enhance existing communities and build new ones. Careful implementation of this framework and associated best practices can create unique and vibrant developments, sustaining our cities and neighborhoods by reducing dependence on the single occupant vehicle, while enhancing transportation options.

\*To be published in UrbanLand magazine



The Complete Streets initiative in Boston seeks to create streets that are multi-modal, green, and smart. The guidelines include recommendations for permeable paving options for streets as well as parking.

The design, engineering and planning of roadways and transportation in the United States has been primarily focused on the single occupant vehicle. These efforts have created a system that encourages efficient and safe movement of vehicles - to the detriment of mass transit and other alternative modes of transportation, most particularly, the pedestrian.

However, major shifts in trends in the industry are at work the planning and structure of our transportation system LEED and alternative rating systems have changed how w building performance and design, local governments, con planners and transportation professionals are transform roads, sidewalks and transit options.

#### **Complete Streets**

Complete Streets enable safe, attractive, and comfortabl and travel for all users, including pedestrians, bicyclists, n and public transport users of all ages and abilities, careful design and operation. "Incomplete streets," d only for vehicles, all too often discourage walking, bicycl taking mass transit, making these options problematic a dangerous.

Complete Streets policies vary widely, and typically inco multiple elements, such as:

Narrower travel lanes

By Rachel Yoka, LEED AP BD+C, CPSM

# **Effectively Integrating Parking**

#### **Understanding Complete Streets, Green** Streets, and the Role of Parking

altering	Sidewalks
n. Just as	Dedicated bicycle lanes
e look at	Dedicated pedestrian crossings/raised crosswalks
mmunity	On-street parking, complemented by structured parking
ning our	ADA-compliant walkways
	Crossing islands
	Bus lanes
	Spaces for buses to transition into traffic
	Medians and street trees
le access	Shorter building setbacks and infill development
notorists	Lines of sight for both cars and pedestrians
through	Attractive building facades facing the street
designed	Additional traffic calming measures
ling, and	Additional methods to increase walkability
and even	•
	Oregon led this charge in 1971, enacting the first statewi
	complete streets policy in the country. This policy required the
orporate	new or reconstructed roads accommodate both bicycles a
	pedestrians, and requires local governments to fund facilities

pedestrians and bicyclists within the public right-of-way.

Complete Streets policies vary in intensity, design and focus. They can be achieved through executive orders, resolutions, design manuals, comprehensive plans, and internal policies. Policies may collect input from multiple stakeholders, and are then formally adopted by elected officials. There are multiple elements for an ideal Complete Streets policy. The National Complete Streets Coalition outlines a full list of elements that include vision; accommodating all users (of all ages and abilities) as well as trucks, buses and automobiles; street connectivity; performance standards; and implementation.



"new york's roadways should safely accommodate all pedes-trians, motorcycles, and cyclists. [Complete *Streets] legislation will* help communities across the state achieve this objective. *Complete Streets design* recognizes mea-sures that will make streets safer for new yorkers of all ages and abilities."

-ANDREW CUOMO, GOVERNOR, NEW YORK

By the end of 2010 more than 200 policies existed at multiple levels of government in the United States. This adoption appears to be accelerating rapidly and is projected to advance quickly. Nearly half of the states have some

form of complete streets policy. New research by the National Complete Streets Coalition and the American Planning Association found that most of the stronger policies tended to be newer and recently implemented. In many cases, states provided valuable leadership, modeling Complete Streets policies that are then adopted by local municipalities, and often emulated by other agencies. Just as parking professionals look to each other for guidance and expert advice, new initiatives build on existing policy and experience to create Complete Streets.

A current federal statute in the United States code mandates that "bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use are not permitted." In early 2010 Secretary LaHood released an updated "policy statement on bicycle and pedestrian accommodation regulations and recommendations". This statement demonstrates federal government support of fully integrated transportation networks and encourages states and local governments to commit to accommodate cyclists and pedestrians in the transportation system. It further encourages agencies and communities to exceed minimum design standards and requirements.

Beyond federal, state and local initiatives, the Project for Public Spaces (PPS) has advanced a major initiative called "Streets as Places". The intent of this initiative is to transform public streets from purely functional, moving vehicles from place to place, to resources that improve the quality of the environment for the people who live there. Essentially an extension of place making, this initiative addresses the critical role the street plays in our everyday lives.

The approach to Complete Streets does include developing new street standards and guidelines, as has been done in San Francisco, Los Angeles, Seattle, and New York City. Further, the approach should be interdisciplinary, involving multiple departments and stakeholders, including parking professionals. In New York City, multiple collaborators released the Active Design Guidelines (January 2010) encouraging multiple modes of transportation. These guidelines integrated feedback and expertise from numerous departments including Design and Construction, Health and Mental Hygiene, Transportation, City Planning, Green Codes Task Force, and the Office of Management and Budget, as well as professional groups including the American Institute of Architects.

As initiatives continue to progress in depth and geography, federal, state, and local governments have a critical function to play in their support and implementation. Grassroots and citizen-led organizations have created a groundswell of support in many communities as well. The parking industry, too, has an important role in properly developing, maintaining, and managing parking resources to complement and enhance these efforts.

#### **Greener, Smarter Streets**

Complete Streets efforts are often paired with Green Streets efforts. The Low Impact Development Center defines Green Streets as "urban transportation right-of-ways integrated with green techniques". These streets incorporate sustainable storm water management infrastructure within the street system itself.

These initiatives pair extremely well with Smart Growth best practices to facilitate mixed-use, higher density communities that encourage people to decrease their dependence on the automobile. Smart Growth concepts also include transit-oriented development, which emphasizes many of the same principles.

The urban environment integrates significant impervious surfaces including roads, sidewalks, surface parking, and roofs. Each of these impervious surfaces contributes to stormwater runoff and accompanying pollutants. By design most roadways have impervious surfaces these roads present a significant opportunity to create green infrastructure to treat stormwater, improve water quality, and utilize natural processes and landscaping to increase infiltration.



Green Streets seeks to accomplish these goals through a number of practical methods that integrate storm water management within the right-of-way and reduce volume discharged into natural water bodies. Green Streets policies often integrate aesthetic improvements as well as an improved pedestrian experience. Green streets programs include a number of strategies:

bio-retention technologies can be provided in tree boxes, planter boxes, and curb extensions. One of the most common and applicable technologies is permeable paving. This paving comes in a number of forms including permeable concrete, permeable asphalt, permeable interlocking concrete pavers, and grid pavers. Some systems may be modular and available for retrofit. All of the systems provide structural support, storm runoff, and

"All street projects including design, planning, reconstruction, rehabilitation, maintenance, or operations by the city of Charlottesville should be designed and executed in a balanced, responsible and equitable way to accommodate and encourage travel by bicyclists, public transportation vehicles and their passengers, and pedestrians of all ages and abilities."

- Report from Charlottesville, Virginia

- For new streets, select alternative street designs built on narrower street widths, planned with respect to the existing landscape, and minimized impervious area
- For existing streets that may be retrofitted or redeveloped, decrease impervious surface through a multiple of methods

These methods include swales (vegetated open channels) designed to accept runoff and increase infiltration. These may be as simple as integrating grassy areas to capture water, or more complex forms that include amended soils, gravel storage areas, diverse thick vegetation and bio-retention soils. Additional assist in the removal of pollutants. Another accompanying strategy is to increase pavement albedo (reflectivity) to further reduce the heat island effect.

"Incomplete streets" exist nearly everywhere in the nation, putting pedestrians at risk and discouraging mass transit use

Many cities have formal programs to develop and maintain sidewalk trees and tree boxes in the urban environment. The benefits of street trees include reducing the heat island effect and reducing storm water runoff, as well as the accompanying aesthetic improvements. Often, insufficient space is permitted for the tree to grow and thrive. In line with Green Streets approaches, these areas may be enlarged to increase the value and life of the street trees. Street trees, swales, and planters create an

additional barrier between moving vehicles and the pedestrian, creating a higher level of safety and increased walkability.

San Francisco's December 2010 update to Complete Streets provided information on green infrastructure and storm water standards and guidelines. New York City's pending update to the street design manual is anticipated to provide a specific chapter on landscaping to address environmental performance and storm water.

The City of Portland defines a Green Street as a street that "uses vegetative facilities to manage storm water runoff at its source", and a "sustainable storm water strategy that meets regulatory compliance and resource protection goals". In 2007 the City Council approved a Green Street resolution, report, and policy that incorporated many of these strategies, namely reducing polluted storm water, improving pedestrian and bicycle safety, and reducing impervious surfaces. Portland has made the connection between increasing urban green space, quality of life, and street design, and has made significant progress in developing implementation tools and successful project experience.

One of the newest trends is exemplified in Boston, Massachusetts where they are pioneering the concept of "smart streets" that provide "intelligent signals, smart meters, electric vehicle charging, car and bicycle sharing, wayfinding and social networks for greater system efficiencies and user convenience." Boston is seeking to develop streets that are multimodal, green and smart. The complete streets website for Boston emphasizes the fact that streets can reinforce the identity, the brand, and the atmosphere of a place. These guidelines, too, recognize the role of on-street parking and seek to leverage its value.

#### **Effectively Integrating Parking**

Although many of these programs are quite new and are currently being implemented, certain impacts should be expected. These policies may reduce on-street parking to accommodate other facilities for bicycle and transit. These policies may include dedicated lanes for bus rapid transit bicycles and other uses. Demand for bicycle parking may increase under these conditions, in part due to the potential to reduce vehicle parking demand. acknowledges the importance of parking and transportation to a vibrant urban environment.

The initiative seeks to craft a comprehensive transportation and streetscape plan to include a traffic management plan focusing on key pedestrian and transit streets, as well as commercial deliveries and a parking management plan for downtown.

The parking management plan encourages the supply and price of parking to support traffic management goals, decrease single occupancy vehicles, and shift parking from commuter to short-term that can support economic development. This program has specifically addressed parking reform to create a more livable, sustainable city, and links complete streets, neighborhood transportation plans, and accessibility via multiple modes of transportation.

"An American family living in a house accessible only by car is spending on average 25% of their income on cars. Households in walkable communities spend less than half that amount, putting



more money in their pockets."

- Christopher B Leinberger, the Brookings Institution

On-street parking plays an important role in a Complete Streets program in many contexts. Curbside parking can (and in many cases should) be retained to create a traffic calming effect, as well as create a sense of comfort by creating a physical barrier between vehicles and pedestrians. Complete Streets initiatives also include creating accessibility for all users. This may mean that some parking is lost to ADA-compliant walkways and curb bulb-outs to shorten pedestrian crossing distances.

The Livable Cities' Livable Downtown Initiative in San Francisco seeks to develop a livable and sustainable downtown neighborhood. The initiative includes managing parking and traffic as well as improving public transit. Although one of the key tenets in the 2007 initiative is the promotion of the creation of car-free streets in specific downtown areas, the plan also The attitude of this particular venture towards parking is progressive, and integrates many best practices that parking professionals in the industry already know. These include concepts such as "too much parking can create problems," "parking can be a source of revenue for government, and priced correctly can fund other city priorities" and that "cities should use price to increase parking availability and turnover."

The redesign and redevelopment of urban and semi-urban roads under these policies and initiatives presents an opportunity to reshape physical and operational parking programs, street by street. The parking industry has been, and will continue to be effected by streets that seek to be complete, green, and smart. The interdisciplinary approach required for these changes creates openings to involve parking professionals, especially parking authorities and departments, to share their expertise and add value.

#### Making the Connections

Transportation accounted for 28% of total US greenhouse gas emissions in 2006. The greatest source of these omissions is personal cars and trucks. By employing Complete Streets and Green Streets programs and strategies in the urban environment, cities can increase walkability and access to alternative modes of transportation.

This July, WalkScore rated the walkability of 2500 cities and 10,000 neighborhoods – the only national quantitative rating available. Locations with the score of 90 to 100 were deemed a "Walker's Paradise". WalkScores top 10 most walkable cities included 1) New York, 2) San Francisco, and 3) Boston. It is no surprise to see Chicago, Washington, DC, and Philadelphia on this list as well. The trends toward urban development and revitalization, mixed-use development, and complete, green streets have transitioned from leading cities like San Francisco and New York to cities, towns, and suburbs all over the country.

How can parking play a vital role in shaping these trends?

"In the last decade, from 2000 through 2009, more than 47,700 pedestrians were killed in the United States, the equivalent of a jumbo jet full of passengers crashing roughly every month. On top of that, more than 688,000 pedestrians were injured over the decade, a number equivalent to a pedestrian being struck by a car or truck every 7 minutes." - Transportation for America

\*This abridged article originally appeared in its entirety in the November 2011 edition of the *International Parking Institute*.



# "We exist to help those in need."

#### "我们旨在帮助有需要的人。"



# 核心价值观 **RE VALU**

• 付出额外劳动

客户满意

•

• 当日回复问询 • 知悉客户和员工

#### **Employee Fulfillment** 令员工安足

- •
- •

# 企业的成就

- 提升企业形象,非个人

#### **Client Satisfaction**

• Go the extra mile • Return calls on the same day Keep clients and staff informed

• Respect each employee's personal needs, as they respect the corporate purpose Keep employees motivated with necessary training, recognition, and rewards

• 尊重每位员工的个人需要,如同他们尊重公司的大目标一样 给予员工必要的培训,表彰和奖励激励员工

#### **Corporate Accomplishment**

• Enhance corporate image, not the individual • Support charitable organizations and individuals, through time and financial assistance

• 通过时间和财政援助,支持慈善组织和个人



Atlanta Chicago Philadelphia Miami New Brunswick Tampa

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