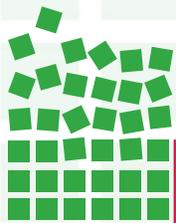


MUNICIPALITY OF NORRISTOWN
Norristown, Pennsylvania

■ **Norristown Municipal Wide Parking Study**

Final Report

17 August 2009



CHANCE
MANAGEMENT ADVISORS, INC.

I. INTRODUCTION

The Municipality of Norristown retained *CHANCE Management Advisors, Inc. (CMA)* to complete a comprehensive **Norristown Municipal-Wide Parking Study**. One of the keys to this project was to leverage all existing and available data and information to inform this planning effort in order to minimize the need to collect additional data and instead focus resources on the analysis and recommendations the Municipality has requested.



While more geographically limited parking studies have been conducted in Norristown in the past, this study is meant to cover a much broader area and not focus solely on the downtown or specific project areas. As such, the goals of this study are to:

- provide the Municipality with a comprehensive look at current and anticipated future parking conditions throughout the Municipality;
- incorporate community and Stakeholder input and concerns;
- evaluate zoning ordinances and other regulations regarding parking; and
- provide recommendations for short and long-term policies that will alleviate community concerns regarding parking and that will maximize the effectiveness of Norristown's parking supply for the Municipality's residents, business owners, customers, and visitors.

CMA proposed to accomplish these goals through six main TASKS:

- TASK ONE: Project Initiation and Stakeholder Interviews
- TASK TWO: Obtain Comparable Data from Peer Municipalities and Local and Regional Trend Analysis
- TASK THREE: Existing Parking Conditions
- TASK FOUR: Parking System Analysis: Pricing, Residential Permit Parking Program and Enforcement Program
- TASK FIVE: Future Parking Conditions
- TASK SIX: Short Term and Long Term Parking Strategies and Policies

II. EXISTING PARKING CONDITIONS

In order to determine the existing levels of parking activity throughout the Municipality, three different methods of data collection and observation were utilized as a part of this study. The first method was a parking inventory of all the streets in Municipality based on available satellite imagery. The second method was a two-pass parking occupancy survey conducted on streets that were identified by Municipality officials as those areas with the

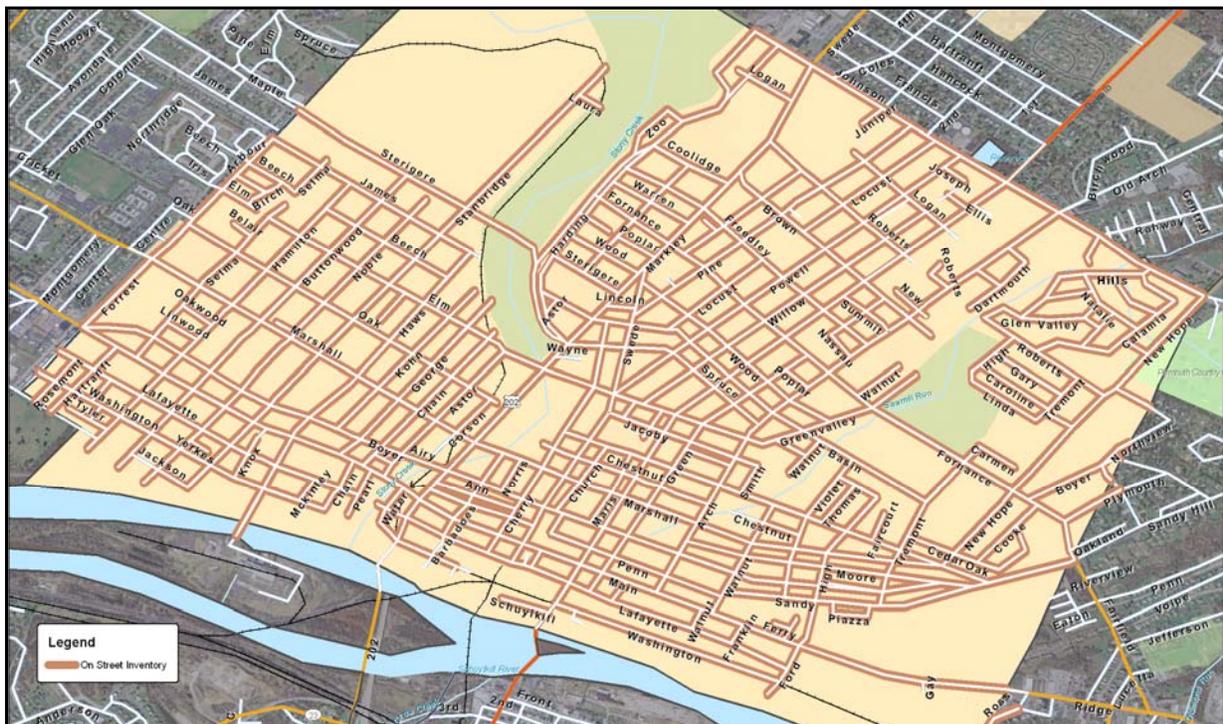
most acute parking problems. The third method was an observation of evening parking demand in certain “hot spots” as identified by Municipality officials and representatives.

Municipal-wide Blockface Inventory

CMA proposed the idea of conducting a municipal-wide blockface inventory based on the most recent satellite imagery available. An actual survey of parking activity on every blockface in the Municipality would not be feasible or useful (essentially, any single street address block represents two blockfaces). MAP 1 depicts the blockfaces that were inventoried using this method.

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MAP 1: Blockface Inventory Map



Because the available satellite imagery did not offer enough detail to be able to read individual parking and traffic signs and regulations, a series of calculations were performed in order to determine the number of parking spaces and “safety” spaces on each blockface.

Using GIS (geographic information systems) software, each blockface was measured for a total length, and from that number was subtracted the amount of space on each blockface allocated to driveways, loading spaces, crosswalks, and fire hydrants (which comprise the category of “safety” spaces). The category of “parking” spaces includes all spaces (or

blockface space) that could be used for parking vehicles, even if that space is currently reserved, signed for no parking, or is not regulated.

The goal of sorting the spaces in this manner is to arrive at a total number of blockface or curb space that could be used for the storage of vehicles. Safety spaces do not fit into this category because they are required to be used for other uses in order to maintain general public safety and vehicular access. TABLE 1 summarizes the results of satellite image blockface inventory.

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TABLE 1: Municipal Wide Blockface Inventory Results

Curb Length Designation	Parking Spaces
Parking Spaces (Unregulated, Timed, Metered, Disabled, No Parking, Bus Zone, Reserved)	24,996
Safety Spaces (Driveway, Loading, Crosswalk, Hydrants)	7,244
TOTAL	32,240

From these data it was found that there are approximately 1,800 blockfaces in all of Norristown. These 1,800 blockfaces contain almost 32,500 spaces (legal and prohibited) with 12 regulations. In all, almost 25% of all on-street curb space is dedicated for spaces that affect motorist and pedestrian safety. Compared to other cities, this amount of safety spaces is about average.

Parking Activity Survey Results

In order to understand the parking conditions throughout the Municipality, a two-pass parking occupancy survey was designed and carried out. CMA worked with representatives from the Norristown Department of Planning, Municipal Development as well as the Norristown Police Department to identify the key areas and street blockfaces to be included in survey. Based on the resources allocated for the study, it was determined in advance that 500 blockfaces could be surveyed. Through a series of discussions, the final set of survey blockfaces was determined, as presented in the map below.

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MAP 2: Parking Activity Survey Blockfaces



On December 16 and 17, 2008, CMA carried out the occupancy surveys on the 500 blockfaces identified in MAP 2. A detailed inventory of the regulations for each space was collected first, followed by a morning pass to collect parking occupancy levels, followed by a second afternoon occupancy pass. All data were collected on optical scan forms, which were scanned and fed into CMA's StreetPASS database to calculate the indicators presented on the following maps.

The on-street parking inventory is characterized by its *Primary Regulation*, which is the most common regulation that was observed on each blockface. Using the primary regulation indicator enables efficient representation of a large study area, but more importantly it indicates the primary use of the curb space, whether it is for commercial or retail use, traffic movement, or other uses, such as public safety. MAP 3 shows the primary regulation by blockface as collected during the study survey process.

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MAP 3: Primary Regulation by Blockface



Overall, in the 500 blockfaces survey area, a total of 6,183 spaces were counted and surveyed. The most predominant regulation was “un-regulated”, or spaces that had no sign identifying the regulation for that space or blockface. This can also include curb space that directly abuts a roadway or traffic lane, but has no signs to indicate parking or stopping is prohibited. The second most predominant regulation was for “timed” spaces. These are spaces that limit parking to some amount of time (two hours, four hours, etc.) but do not have parking meters controlling them. The third most common regulation was for safety spaces, followed by “no parking” as the fourth most common regulation. TABLE 2 provides more detailed results of the survey inventory results.

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TABLE 2: Parking Survey Inventory Results

Regulation	Parking Spaces
Un-Regulated	1,775
Timed	1,668
No Parking	1,171
Meter	202
Handicapped	78
Bus Zone	21
Safety	1,268
Crosswalk	614
Hydrant	101
Loading Zone	30
Driveway	520
Reserved	3
TOTAL	6,183

In addition to the on-street spaces, CMA also collected inventory and occupancy information for 21 of the off-street parking facilities in Norristown. These 21 parking lots and garages, owned by the City, County and private owners, contain 1,927 spaces, which is almost exactly equal to the number of legal spaces observed in the study area (the total number of timed, metered, and handicapped on-street spaces is 1,948). MAP 4 illustrates the off-street facilities that were surveyed. For a more detailed listing of the individual off-street facilities surveyed and the number of spaces in each of the 21 facilities, see TABLE 3.

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MAP 4: Off-Street Inventory



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TABLE 3: Off-Street Inventory Results

Lot	Location	Inventory
I	Main St. & Franklin St.	101
II	Main St. & Green St.	80
III	Septa Transportation Center Parking Garage	520
IV	Septa Transportation Center Parking Lot	180
V	Septa Main Street Parking Lot	102
VI	Corson Municipal Parking	38
VII	Chain St. & Marshall St. (North East)	10
VIII	Chain St. & Marshall St. (South East)	16
IX	Septa Elm Street Parking Lot	246
X	Spruce St. & Powell St.	42
XI	Elm St. & Arch St.	30
XII	Wood St. & Green St.	66
XIV	Freedley St. & Dekalb St.	123
XV	Freedley St. & Arch St.	N/A
XVI	Airy St. & Arch (Side by Muncipal Bldg)	18
XVII	Airy St. & Arch (Across from Municipal Bldg)	27
XVIII	Airy St. & Arch (Next to Municipal Bldg)	99
XIX	Airy St. & Maris St.	191
XX	601 E. Marshall St.	11
XXI	Kohn & Blackberry Alley	11
XXII	100-200 W. Lafayette St.	16
TOTAL		1,927

The parking occupancy surveys were conducted on all 500 blockfaces that had been surveyed for primary regulation, as well as the 21 off-street facilities. The occupancy surveys were conducted between the hours of 10:00 a.m. and 5:00 p.m. The term “occupancy” indicates the number of parking spaces utilized and it is presented through average and peak rates. The average represents the average number of cars observed during both passes, while the peak occupancy number represents the occupancy level on a blockface during the time period with the highest parking occupancy for the entire survey area. The peak parking occupancy period was observed to occur during the a.m. period, though it was only slightly higher than the afternoon period. Therefore, the peak parking occupancy figures below represent occupancy levels that occurred during the a.m. survey pass.

On the occupancy maps presented below, the following color convention is used to represent parking utilization on individual blockfaces and parking facilities:

- Green = low utilization
- Amber = appropriate utilization
- Red = high utilization

The average occupancy indicates what the average demand for parking is on each blockface and facility. As is shown in MAP 5, the majority of blockfaces in the study are being utilized at a low level, with less than 68% of the spaces being occupied, on average. Of the 21 off-street facilities, only five are being utilized at a high level, with occupancy levels higher than 85%.

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MAP 5: Average Parking Occupancy



The peak parking utilization period occurred in the a.m., between 10:00 a.m. and 12:00 p.m. During the peak period, most of the on-street blockfaces are occupied below an “appropriate” level, except for some blocks along Main Street and West Marshall Street, where parking occupancy is much higher. Of the 3,723 legal and unregulated on-street parking spaces, a total of 1,590 of these spaces were occupied during the peak period, or 42% occupancy level, leaving 2,133 spaces available on-street in the 500 blockfaces surveyed.

Of the 1,927 off-street parking spaces surveyed, 1,182 were occupied, leaving 745 spaces available. This equates to peak parking occupancy level of 61%, considerably higher than the on-street parking utilization at the same time. MAP 6 depicts the peak parking occupancy levels by blockface and facility.

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MAP 6: Peak Parking Occupancy



Overall, there were 2,878 parking spaces available in the Warren study area during the peak parking period, for a total parking (on and off-street) utilization level of 50%. Based on parking industry norms, a peak parking utilization level of 50% is considered low, and indicates that while parking problems may be localized to parts of certain blocks, Norristown does not have an overall parking deficiency within the survey area.

Evening Parking Activity Observations

Based on feedback from the initial public presentation of the survey data, and through discussions with various Municipal officials and representatives, it became clear that while the results of the daytime commercial area surveys were widely accepted, there remained some concern over the evening and night-time parking situation. In order to address these concerns and provide a comprehensive understanding of Norristown's parking situation, CMA staff conducted a driving tour of evening parking "hot spots", or problem areas, with select members of Council and



representatives from the Department of Planning and Development and Police Department. The driving tour covered both the east and west sides of Norristown, and observations indicated that the most heavily utilized parking areas occurring along West Marshall Street and along a block of two of the intersecting streets.

While some of the blocks were heavily utilized, others were moderately or "appropriately" utilized. Particularly adjacent to West Marshall Street, parking activity on the streets perpendicular to Marshall dropped off considerably only three or four blocks away. On some of these streets multiple streetlights had burned out and not been replaced, resulting in poorly lit sidewalks and streets, which can be a significant deterrent for parking customers to park farther from their destination and walk. Improving pedestrian connections between available parking and popular destinations can help reduce localized parking and traffic circulation problems by spreading out the concentration of vehicles.

To a large extent, the evening parking demand is fueled by residents returning home at the end of the day. While many residential buildings have their own off-street parking accessed through an alley or side street, only two or three spaces can fit into limited backyard space, and are not enough to accommodate the demand in buildings that have been converted to multi-family dwellings. Many of these conversions occurred under less stringent zoning and building regulations, or occurred without building permits altogether. This has resulted in high levels of parking utilization during the evening and night time hours in areas where these apartment conversions have occurred.

Additionally, as an historical community, much of Norristown's physical infrastructure was in place long before the automobile became a mainstay of American life, and as such, certain areas of the Municipality simply were not built to accommodate the current parking demand. While there are strategies the Municipality can employ to reduce parking occupancy levels (which are discussed in the Recommendations section of this report), the solution also lies in the need to manage residents' expectations for parking convenience and availability. Even during the evening hours, as evidenced from the driving tour, parking is available, but may require a longer walk than people prefer or to which they are accustomed. As mentioned above, the illumination and condition of the pedestrian connections and sidewalks may contribute to peoples' reluctance to park farther from their home or other destination due to safety concerns.

III. PARKING SYSTEM ASSESSMENT

In response to Norristown's comprehensive parking plan and as requested in the RFP, *CMA* suggested the performance of a parking assessment to determine which, if any, changes would be needed to enable the Municipality's on-street parking management system to better support future growth and development.

In performing its assessment, *CMA* interviewed a number of officials from Norristown's Police, Finance, Public Works and Planning departments. Parking inventory and occupancy data were collected at representative times in commercial and residential areas (primarily during the daytime), although observations of on-street parking conditions in commercial and residential locations also were made in the company of Police and elected officials during a representative evening. Quantitative data regarding parking ticket issuance and meter revenues were reviewed and analyzed, and a presentation and discussion of parking conditions was held with Municipality stakeholders.

OPERATING PREMISES FOR THE ASSESSMENT

CMA's assessment considered the organizational, managerial and operational aspects of the Norristown parking management "system", and was made from the premise (based on the firm's corporate experience) that achieving excellence in municipal parking management requires a proactive, coordinated, systematic approach to interrelated parking planning and operational activities. Parking meter or ticket revenue must be recognized for what it truly is: a by-product, not the primary goal, of a parking management program.

The above viewpoint concerning parking revenue does not absolve a municipality from working toward optimum efficiency and effectiveness concerning parking management issues. Rather, it requires that appropriate operational tools and management structure be in place to ensure the following program objectives are achieved:

- sufficient opportunity for motorists to find economically-priced and legal curb parking reasonably close to their commercial, residential or recreational destinations;
- a minimal degree of parking safety infractions at corners or fire hydrants to promote safe driving and pedestrian conditions;
- a proactive (rather than reactive) approach to properly regulate curb space for the adjacent land use, through interaction with community and business groups *before* parking problems arise; and
- parking operations that are effectively coordinated to ensure regulations and enforcement methods achieve the desired result of providing ready access to on-street parking in compliance with the regulations.

It is with these premises that Norristown's parking management system has been examined.

Parking System Assessment

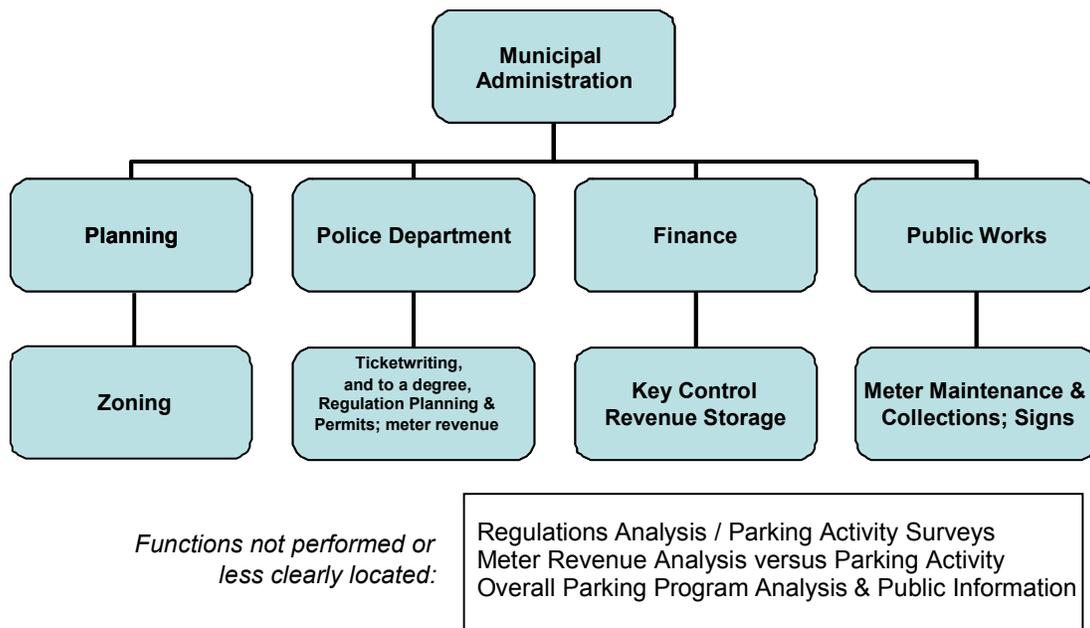
The overarching issue of concern regarding the parking system is one of organizational structure. Who is responsible for parking management in Norristown’s public administration? The answer may be characterized as both “everyone” and “no one”.

Specifically, no single individual below the level of Municipal Administrator is responsible for oversight of the diverse but interrelated planning, administrative and operational tasks associated with Norristown’s parking management activities. In sum, on-street parking responsibility is not effectively centralized at the *integrative level where policy meets program*, which could help ensure the coordination and effective implementation of parking regulatory and operational activities.

The following Organization Chart graphically portrays the division of responsibilities for parking management in Norristown, wherein

- the Police enforce the regulations;
- the Department of Public Works maintains and collects the meters;
- the Finance Department analyzes meter revenues (and controls access to revenue collection equipment);
- there is shared responsibility for coordinating regulatory changes;
- the important analytical function of collecting and interpreting parking activity indicators for management’s action appears to be missing;
- responsibility for on-street parking planning appears is shared by the Police and Planning Departments, with no single agency taking the lead;
- a public information or outreach function is missing.

Responsibilities for Norristown’s On-Street Parking Management Functions Are Highly Dispersed



This dispersal of responsibilities ultimately leads to operational inefficiencies that can prevent effective and timely responses to dynamic local parking conditions.

NEGATIVE CONSEQUENCES OF THE PRESENT ORGANIZATION OF PARKING RESPONSIBILITIES

The negative consequences of the present organizational arrangement can be seen in the following observations, all of which can easily translate to negative perceptions - and negative realities - regarding the provision of Municipal parking management services.

- Outreach to merchants and residents concerning parking management issues is ad-hoc or reactive, versus ongoing and proactive, which can lead to the protracted duration of inefficient or unsafe on-street parking situations. For example:
 - Norristown’s parking regulations appear to be developed or changed through a *reactive* process that begins with the citizen or merchant, which then are promulgated through Municipal Council either before or after some level of coordination has occurred with the Planning and Police Departments.
 - In some cases, the Police Department has been assigned the function of addressing from a planning perspective commercial parking regulations. While the results have been commendable, the responsibility for these activities, nevertheless, is misplaced, as the preferred method of having a Parking Regulations Department (or at least, a dedicated regulations analyst in smaller municipal settings) to *proactively* monitor the regulations and spearhead changes as needed.
- Observations indicated poor parking availability at the curb for visitors in several commercial areas (such as West Marshall Street, and along Main Street) due to improperly regulated curb space, such as the presence of permit parking regulations in lieu of parking meters along West Marshall Street, or the absence of metered parking along Main Street, which result in the on-street spaces being used for long-term parking.
- The poor, weathered appearance of parking meters and parking regulation signs (including bent sign poles), has been proven to increase the likelihood of non-compliance with parking regulations, particularly parking safety regulations, and presents a negative image of Municipal services.



The faded sign/bent pole (above left) is adjacent to the Municipal Building; the bent sign (above right) is adjacent to the Courthouse, along East Airy St.

The parking meter images immediately above are adjacent to the Courthouse on East Airy Street. The bent “rate plate” decal in the meter at left is indicative of a chronically insufficient maintenance program.

- Parking meters are reportedly maintained reactively only upon outage reports by enforcement staff, citizen complaints, or when noticed by a meter collector, as opposed to their being maintained on a routine or regularly scheduled basis.
- The absence of a meter maintenance management system hinders oversight of the meter program, which consists of approximately 300 on-street meters.
- Physical and administrative controls over parking meter revenues and collections are suspect, as exemplified to the excessive percent of meters that contained coins in their upper housings when inspected.
- The presence of excessively-large residential parking permit zones and permit regulations in commercial areas, coupled with the antiquated nature of the residential permit system, creates the potential for motorists to use permits improperly and/or fraudulently, and results in insufficient availability to, and turnover of, short-term parking spaces in commercial areas.
- Ancillary duties performed by the Police Department's parking enforcement officer staff can limit the officers' effective patrol time, and when coupled with relatively large patrol areas, can cause inconsistent enforcement levels throughout the Municipality. This inconsistency can lead to increased parking violation levels as well as complaints about enforcement, as motorists may become prone to "testing" the enforcement system, but if ticketed, cite previous instances of being allowed to park in a similar manner.
- The absence of a position dedicated solely to the collection and interpretation of parking activity indicators on an ongoing basis limits the Municipality's ability to affect improvements in each of the areas identified above. Such indicators, each of which can be evaluated in light of industry-recognized parking activity "norms", would include but not be limited to:
 - parking occupancy and availability (vacancy) rates;
 - parking space turnover and "percent of optimum turnover" rates;
 - violation rates for metered, service (for example, loading zone) and safety zone violation rates;
 - violation capture rates for each of the above types of regulations.
- Last but not least, the Municipality presently does not have a brochure of any type regarding parking management services, policies, parking locations, etc. Such a brochure could be used with merchants, residents and visitors alike as an outreach device and public information/educational tool to promote improved parking conditions.

It is acknowledged that a number of the issues identified above have occurred, at least indirectly, as a result of reduced staffing levels necessitated by Municipal budget considerations. For instance, it was reported that parking meter technicians previously were assigned to maintain the meters on a routine basis before the elimination of several positions within the Department of Public Works necessitated changes in maintenance frequencies. However, with combined program revenues from parking meters and violations exceeding \$800,000 annually, it will be important for Norristown to reassess its commitment to its parking program through an effective combination of organizational and operational improvements if the on-street parking conditions are to facilitate development.

DESPITE THE ABOVE INEFFICIENCIES, THERE REMAIN POSITIVE ASPECTS REGARDING PARKING MANAGEMENT IN NORRISTOWN

The Police Department has credibly filled a void in the “parking analysis” function by providing thorough analyses of regulation improvements in selected areas, such as the Department’s report suggesting improvements to the West Marshall Street commercial area, which recommended the replacement of the existing permit parking with metered regulations. *CMA* fully supports this concept.

Norristown’s Municipal Administrator desires to improve parking management services through the deployment of multi-space meters; this is a positive step, and especially so if these units were to be installed in recently-improved commercial areas, such as West Marshall street, with it’s upgraded streetscape, for instance, and along Main Street, specifically those blocks adjacent to the parking garage at Cherry Street.

The Police Department is, at this writing, investigating the procurement of a new parking permit system to replace the existing, ineffective manual permit tracking system as well as the permits themselves, which are highly susceptible to being easily duplicated and used fraudulently.

Finally, the existing parking meter rates and ticket fines appear to be appropriate given Norristown’s current levels of development, parking activity and off-street parking prices. However, parking activity must be measured more proactively to determine whether changes in the on-street pricing structure (namely, the meter rate and ticket fine/penalty structure) are required to ensure that turnover and illegal parking remain within acceptable standards.

Finally, the firm’s limited review of evening parking conditions indicated sufficient curb parking is available in the residential areas examined, although it would be appropriate for the Municipality to regularly monitor parking activity in its commercial and residential areas for appropriate adjustment of regulations in the former, and to determine the opportunity for shared parking arrangements in the latter.

IV. ZONING PEER REVIEW AND TRENDS

ZONING PEER REVIEW

Because night time parking demand generated by residents is one of the Municipality’s biggest concerns, zoning regulations (and, specifically residential conversion parking requirements) are one of the most important tools at the Municipality’s disposal. In order to better understand Norristown’s zoning requirements, it is useful to compare the Municipality to other similar cities and towns. TABLE 4 compares Norristown and seven regional peer cities. Six of the eight cities require two parking spaces per each single family unit, while five also require two spaces for each multi-family dwelling unit. Only two municipalities (New Hope and Media) have separate parking regulations for residential conversion dwelling units.

While most area municipalities have similar residential parking requirements, Media is the only municipality that uses the number of bedrooms in a dwelling unit to calculate parking requirements. Parking requirements based on the number of bedrooms can be very difficult to administer and enforce, which is why most regulations are based on the number of dwelling units, even though bedroom-based regulations can be somewhat effective in situations where residential overcrowding is a concern.

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TABLE 4: Peer Municipality Residential Parking Requirements

Municipality	Population	Area (Sq. Miles)	Pop. per Square Mile	Residential Parking Requirements		
				Single Family	Multiple Family	Conversion
Doylestown	8,227	2.2	3,740	2 per unit	2 per unit	
Easton	26,263	4.7	5,588	2 per unit	1.5 per unit	
Jenkintown	4,478	0.6	7,463	1 per unit	1.5 per unit	
Media	5,533	0.8	6,916	2 per unit	1.5-2 per unit*	1.5-2 per unit*
New Hope	2,252	1.4	1,609	2 per unit	2 per unit	1 per unit
Norristown	31,282	3.5	8,938	2 per unit	2 per unit	
Radnor	30,878	13.8	2,238	2 per unit	2 per unit	
Wilkes-Barre	43,123	7.2	5,989	1 per unit	2 per unit	

* Depending on Number of Bedrooms

ZONING TRENDS

In addition to comparing Norristown to other peer municipalities, it can be useful to look at other cities and towns across the country for innovative solutions to Norristown’s parking issues.

WAYNESBORO, PA: REDUCED PARKING REQUIREMENTS FOR EXISTING BUILDINGS IN DOWNTOWN

- Located 78 miles northwest of Baltimore, Maryland
- Population: 9,614
- Area: 3.4 square miles

Local officials and business leaders in Waynesboro had realized that the existing parking requirements made it difficult for new businesses to open in existing buildings downtown.

In January 2009 the borough changed its regulations so that any new or modified non-residential use in the Downtown business district in an existing structure will require no additional parking spaces. The existing



parking requirements remained for new construction. The goal of the new regulations is to allow and encourage the reuse of existing buildings in the downtown, where it can be almost impossible to create additional parking without demolishing existing buildings.

CITY OF MINNEAPOLIS, MN: PARKING MAXIMUMS

- Population: 372,833
- Area: 58.4 square miles

The most familiar form of parking requirements to most people is the parking minimum, or a regulation that requires a minimum number of spaces for each use. Many cities, though, have come to find that parking minimums can lead to a proliferation of parking spaces that detracts from a neighborhood's appearance and disrupts the pedestrian-friendly nature of urban areas that makes them appealing places to live and work. Some cities have started proscribing parking *maximums* in order to better control their built environment.

Minneapolis enacted parking maximums as part of its zoning regulations by eliminating parking minimum requirements in the downtown, and instead implementing maximum parking allowances. The elimination of parking minimums downtown is in recognition of not only the detrimental affects surface parking lots can have on the built environment of a city, but also that it can be almost impossible to add parking when a new business opens in an existing downtown building. Instead of requiring off-site parking or the demolition of buildings and open space to accommodate the required parking, Minneapolis supported the idea of a place where people can park once in a parking garage and walk to multiple destinations, thus reducing the number of spaces needed by each business. Downtown Minneapolis also has good public transit access and connections, thus providing another alternative for travel to and within the downtown area. TABLE 5 lists excerpted parking requirements for downtown Minneapolis.

TABLE 5: Minneapolis Downtown Parking Requirements

Table 541-2 Specific Off-Street Parking Requirements - Downtown Districts		
Maximum parking allowed, downtown districts, in general. Uses subject to a maximum parking requirement may provide parking up to the amount specified below provided that a development with one (1) or more non-residential uses shall not be restricted to fewer than ten (10) total accessory parking spaces on a zoning lot.		
Use	Minimum Parking Requirement	Maximum Parking Allowed
RESIDENTIAL USES		
	None except that multiple-family dwellings of 50 or more units that provide off-street parking for residents shall also provide designated visitor parking at a ratio of not less than one visitor space per 50 dwelling units	1.5 spaces per dwelling unit or rooming unit in the B4 District; 1.6 spaces per dwelling or rooming unit in the B4S and B4C Districts; Developments with fewer than 10 dwelling or rooming units shall be subject to a maximum parking requirement of 2 spaces per unit in the downtown districts; Accessible spaces required for residential uses by the Minnesota State Building Code and visitor parking spaces required by this ordinance shall not count toward the maximum parking requirement.
COMMERCIAL USES		
Retail sales and services	None	1 space per 500 sq. ft. of GFA except that the maximum parking requirement for grocery stores shall be 1 space per 300 sq. ft.
Offices	None	1 space per 1,000 sq. ft. of GFA

Outside of downtown, the City has implemented both parking minimums and maximums.

TABLE 6: Minneapolis Parking Requirements Outside of Downtown

Table 541-1 Specific Off-Street Parking Requirements			
<p>Minimum parking requirement, in general. Non-residential uses with one thousand (1,000) square feet or less shall be exempt from minimum off-street parking requirements. All uses over one thousand (1,000) square feet, other than those specified under the heading "Residential Uses" shall provide a minimum of four (4) parking spaces or the amount specified in this table, whichever is greater, except as otherwise provided in this chapter. Multiple-tenant or multiple-use buildings may exempt no more than four (4) uses of one thousand (1,000) square feet or less from the minimum off-street parking requirement. In addition, one (1) parking space shall be provided for each commercial vehicle or vehicle necessary for the operation of the use that is maintained on the premises. Such vehicles may include, but shall not be limited to, tow trucks, taxis, buses, limousines, hearses, commercial trucks or vans, police or fire vehicles or other service vehicles. Maximum parking allowed, in general. Uses subject to a maximum parking requirement may provide parking up to the amount specified below provided that a development with one (1) or more non-residential uses shall not be restricted to fewer than ten (10) total accessory parking spaces on a zoning lot.</p>			
Use	Minimum Parking Requirement	Maximum Parking Allowed	Notes
RESIDENTIAL USES			
Dwellings	1 space per dwelling unit	No maximum except as regulated by Article VIII, Special Parking Provisions for Specific Zoning Districts	1 Existing dwellings nonconforming as to parking may provide off-site parking within 300 feet.
COMMERCIAL USES			
Retail Sales and Services			
General retail sales and services	1 space per 500 sq. ft. of GFA in excess of 4,000 sq. ft.	1 space per 200 sq. ft. of GFA	2
Offices	1 space per 500 sq. ft. of GFA in excess of 4,000 sq. ft.	1 space per 200 sq. ft. of GFA	2

(1) The number one (1) shall mean that required off-site parking shall be prohibited, except where there is a shared parking facility adjacent to the property served.

(2) The number two (2) shall mean that required off-site parking up to five hundred (500) feet away may be allowed, subject to the provisions of section 541.250, but all commercial vehicles or vehicles necessary for the operation of the use shall be maintained on-site.

SILVER SPRING, MD: SHARED PARKING REGULATIONS

- Located in Montgomery County, MD and borders Washington D.C.
- Population: 76,540
- Area: 9.4 square miles

Standard parking requirements dictate a minimum number of parking spaces for each zoning use. Typically, if a building or development contains multiple uses, the zoning code would call for the development to provide the required parking for each use.

As mixed-use developments have become more common over the course of the past two decades, developers and municipalities realized that standard parking regulations were, in many cases, mandating too much parking. Many mixed-use developments contain uses that have different patterns of use, meaning that the total parking demand for the development was not equal to the parking requirement for each use. The classic example of a shared parking situation is for a development that contains an office building and a movie theater. The office building generates almost all of its associated parking demand on weekdays between the hours of 8:00 a.m. and 5:00 p.m., with very little parking demand during the evening hours and on weekends. Alternately, the movie theater generates most of its parking demand during the weekend, with some demand occurring on weekday evenings. Because these two uses have opposite patterns of use, with opposing period of parking demand generation, they are ideal candidates to fall under a shared parking regulation.



In Montgomery County, Maryland, the shared parking regulation allows a developer to provide parking in an amount that equals the peak parking demand generates in a given time period. The exact calculation Montgomery County employs is shown in TABLE 7. First, the development's parking requirement for each use is calculated using the standing zoning code parking requirements. Then, the parking requirement for each use is calculated by time period according to the matrix in TABLE 7. Finally, the adjusted parking requirements are totaled for each time period, with the developments total shared parking requirement being set as the time period with highest total demand.

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TABLE 7: Montgomery County Shared Parking Matrix

	<i>Weekday</i>		<i>Weekend</i>		<i>Nighttime</i>
	<i>Daytime (6 am-6 pm)</i>	<i>Evening (6 pm-midnight)</i>	<i>Daytime (6 am-6 pm)</i>	<i>Evening (6 am-midnight)</i>	<i>(Midnight- 6 am)</i>
Office/Industrial	100%	10%	10%	5%	5%
General Retail	60%	90%	100%	70%	5%
Hotel, Motel, Inn	75%	100%	75%	100%	75%
Restaurant	50%	100%	100%	100%	10%
Indoor or Legitimate Theater, Commercial Recreational Establishment	40%	100%	80%	100%	10%
Meeting Center	50% ¹	100%	100%	100%	10%
Multi-family dwellings in Commercial Districts	50%	100%	100%	100%	100%

V. FUTURE CONDITIONS

TASK FIVE of the Municipal Wide Parking Study involved an investigation of Norristown’s future parking conditions. This investigation focused on the potential for new developments to significantly increase the parking demand in the future, thus requiring additional parking supply. In order to better understand the future parking conditions, CMA staff conducted interviews and discussions with stakeholders from a wide-range of groups and organizations with insight into future development in Norristown. TABLE 8 provides a full list of the stakeholders that were interviewed as a part of the future conditions study. The result of these conversations revealed that minimal changes were projected to occur in the expected future demand, due in part to reduced development activity due to current economic conditions.

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TABLE 8: Future Parking Conditions Stakeholder Interviews

Organization	Representative
Dept. of Planning and Municipal Development	Jayne Musonye
Elmwood Park Zoo	Bill Konstant
Greater Valley Forge TMA	Zoe Robertson
Habitat for Humanity	Brenda Fox
Human Services Center	Steve Nelson
JAR Investments	Rick Gallo
Kohn Street Resident	Ron Mingus
Lafayette Street Corridor Initiative	Leo Bagley
Montgomery County Industrial Development Corp.	Carmen Italia
Municipal Administrator	David Forrest
Oliver Tyrone Pulver Corp.	Don Pulver
Sabo Developers	Andrew Sabo
SEPTA	Rochelle Culbreath
Tyson Shirt Factory	Tom Ives
West Marshall Street Merchants Association	Jerry Hertz

VI. RECOMMENDED STRATEGIES AND POLICIES

One of the main objectives of the Municipal Wide Parking Study was to identify strategic short and long-term recommendations that would enable the Municipality's on-street parking system to effectively support future growth and development. Findings noted organizational, operational, and planning related improvements that are needed to address current parking conditions and internal operations.

For ease of reference and subsequent progress monitoring, the recommendations have been provided in a matrix, and identify the recommended party responsible for the item's



implementation, as well as the time frame for completion (short-term recommendations are those to be completed within 12 months, with the long-term recommendations occurring between one and three years).

Additional parking system operational and organizational recommendations beyond the twelve-month timeframe would essentially consist of program refinements and annual effectiveness reviews of the initial recommendations herein. It is recommended that the review result in a modified annual Parking Management Plan, to be completed by the Parking Manager and submitted to the

Municipal Administrator for approval.

Given the current economic climate and the associated budget shortfalls facing cities and states across the county, it is important to identify low-cost recommendations and solutions that Norristown can begin implementing in this environment. While this study recommends the development and staffing of a Parking Management Program, there are some actions that can be undertaken in advance of this and by using current Municipal resources and staff. These low-cost recommendations, specifically, include:

- OP2: Develop a parking brochure;
- OP3: Basic Meter maintenance activities;
- OP6: Conduct parking activity surveys;
- PL1: Improve night-time pedestrian conditions;
- PL2: Evaluate, repair, and replace signs; and
- PL3: Enact a shared parking ordinance.

It should be noted that recommendations of a more revenue-sensitive, internal control nature are being provided to the Administrator and the responsible department heads under separate cover.

TABLE 9: Municipal Wide Parking Study Recommendations Matrix

Area	ID	Recommendation / Comment	Responsible Party	Timeline
Organizational	ORG 1	<p>Decide upon the reporting location within the Municipal organization, and the organizational structure combining parking operational activities under a dedicated Parking Management Program.</p> <p>Two potential organizational locations would have the Parking Management Program reporting either to the Municipal Administrator (the preferred location) or to the Planning Director.</p> <p><i>Comment: The formation of a state-chartered parking authority is not considered to be an essential form for the desired parking organization; it is more important to ensure the appropriate realignment of key operational and analytical functions. Ultimately, program success does not hinge as much on the placement of the parking organization within the overall municipal hierarch, as much as it does on the co-location of the essential programmatic elements within an effective span of control.</i></p>	Administrator	Short-term
Organizational	ORG 2	<p>Develop organization chart, position descriptions and pay levels for new positions, that at a minimum would include:</p> <ul style="list-style-type: none"> ■ program manager and program analyst, or ■ a <i>combined</i> position of manager/analyst initially, to be migrated to the program manager position, and supplemented by the analyst position in the long-term, based on parking management requirements 	Administrator	Short-term

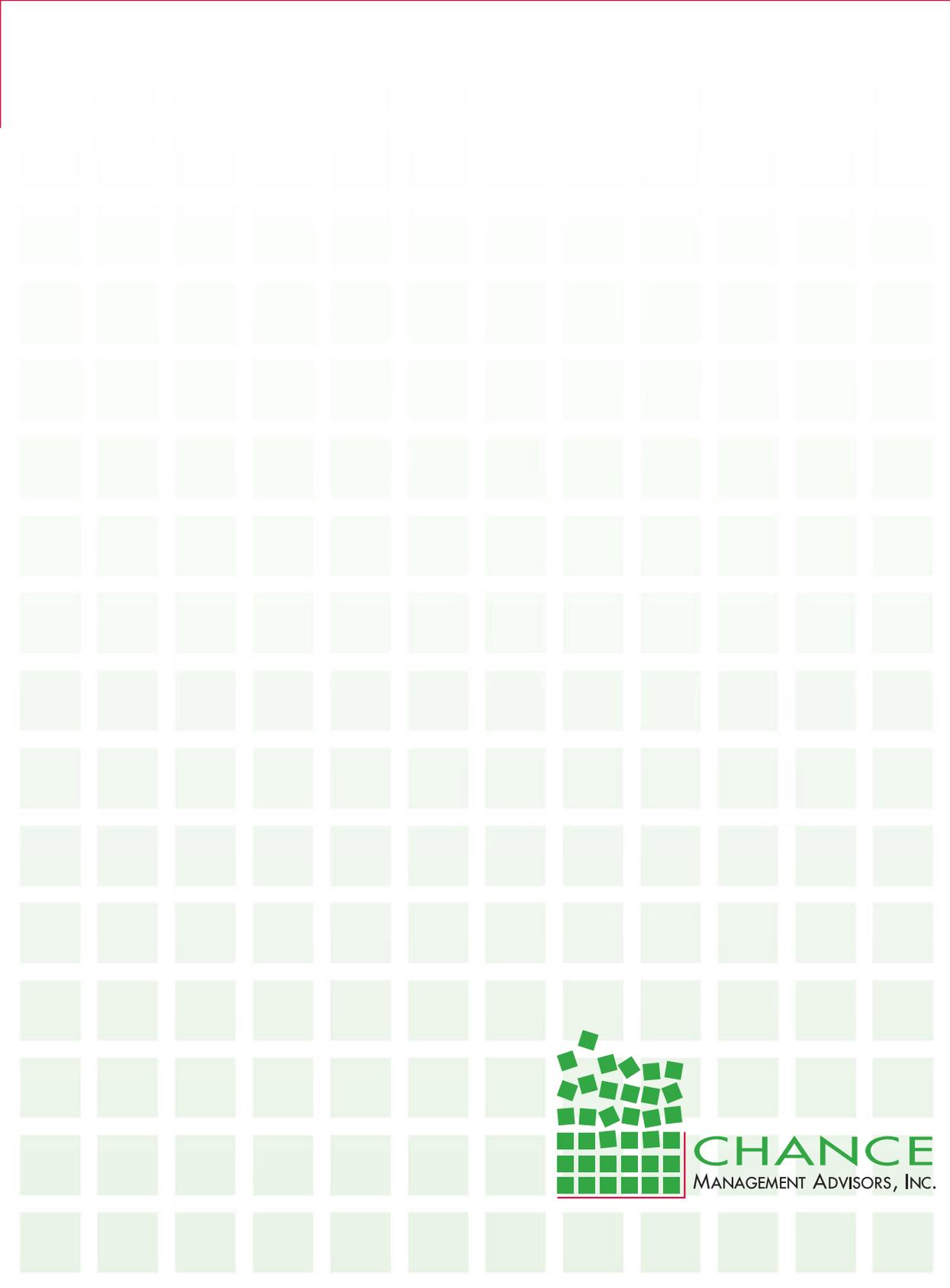
Area	ID	Recommendation / Comment	Responsible Party	Timeline
Organizational	ORG 3	<p>Interview and hire for the positions of Municipal Parking Program Manager and Parking Analyst</p> <p><i>Comment: The Parking Manger should have the vision, leadership and communication skills and abilities needed to be an effective emissary for the Parking Management Program, an ambassador for Norristown municipal government, and a day-to-day operations manager. The Parking Analyst should possess the energy and quantitative and communication skills necessary to collect and interpret parking activity and financial data, interact with merchant and neighborhood groups, and spearhead improvement initiatives such as shared parking pilot programs.</i></p>	Administrator	Short-term
Organizational	ORG 4	<p>Investigate the potential to obtain ongoing parking meter maintenance and collection services from the Philadelphia Parking Authority or other local municipalities or private vendors.</p> <p><i>Comment: Based on the findings from budgetary and other perspectives (such as organized labor issues), this particular recommendation would have an effect upon other organizational and operational recommendations contained herein. Accordingly, it is recommended this investigation be done expeditiously, and evaluated from both short- and long-term vantage points related to program costs, response times to meter outage conditions, etc.</i></p>	Administrator and Parking Manager	Short-term
Organizational	ORG 5	<p>Given the outcome from Recommendation Org4, develop parking program qualitative goals and objectives, office/shop physical locations and space requirements, and revenue and expense budgets</p>	Administrator, Parking Manager and Analyst	Short-term
Organizational	ORG 6	<p>Develop an implementation plan for the transfer of parking meter maintenance, collections, cash handling, revenue analysis, regulation analysis and enforcement operational activities</p>	Administrator and Parking Manager	Short-term

Area	ID	Recommendation / Comment	Responsible Party	Timeline
Organizational	ORG 7	<p>Provide technical and public information training for the new Parking Manager and/or Parking Analyst, to include:</p> <ul style="list-style-type: none"> ■ site visits to local, established parking management programs and discussions with program directors and managers; ■ provision of the International Parking Institute's "handbooks" for parking management and other industry periodicals; ■ discussions and field orientations with other Municipal staff that have heretofore been involved in the provision or oversight of parking management services; ■ provision of professional training specializing in parking program leadership, analysis and public information, to include funding of attendance at state, regional and national parking conferences, etc. 	Administrator	Short-term
Organizational	ORG 8	Also based on the outcome of <i>Recommendation Org4</i> , dedicate (at least in the interim), one full-time equivalent position in the new parking management program as a meter technician, responsible for proactive maintenance and upgrading of parking meters.	Administrator, et al.	Long-term
Organizational	ORG 9	Transfer Parking Enforcement Officer line and supervisory positions from the Police Department to the new parking management unit.	Administrator, et al.	Long-term
Operational	OP1	Address parking meter revenue security enhancements (provided under separate cover).	Administrator, Parking Manager, Finance Director	Short-term
Operational	OP2	Proceed with implementing an improved version of the Police Department's recommendations for the "Zone Enforcement Program" (July 2009) for changes to the Residential Permit Parking (RPP) program. Additionally, RPP should be eliminated from non-metered blocks where the land use is primarily commercial, particularly on West Marshall Street. This should be done in conjunction with OP5 and with thorough coordination and communication with the business community and area residents. Evaluate and reduce or modify the size of other existing RPP zones.	Administrator, Parking Manager, Department of Public Works	Short-term

Area	ID	Recommendation / Comment	Responsible Party	Timeline
Operational	OP3	<p>Develop a brochure for the Parking in Norristown, including but not limited to the presentation of:</p> <ul style="list-style-type: none"> ■ Norristown’s parking improvements initiatives ■ a parking locations map ■ pricing information ■ benefits from and advice for parking legally ■ benefits from paid parking at the curb ■ customer service information for meter or ticket complaints, payments, adjudication, etc. 	<p>Parking Manager and/or Analyst, with assistance by:</p> <p>Planning Department Staff</p>	Short-term
Operational	OP4	<p>Assign the (interim) dedicated meter technician with the following tasks, and monitor their completion:</p> <ul style="list-style-type: none"> ■ replace faded domes and rate plates ■ lubricate upper and lower housing locks ■ field-check meters for timing accuracy and coin acceptance <p><i>Comment: After the expected public information notices concerning the parking improvement program, the physical appearance of the existing parking meters is perhaps the most visible, outward sign to the public that Norristown has begun implementation of its parking improvement program.</i></p> <p><i>Such low-cost changes do not represent a waste of effort or revenue, but are important to convey a sense of progress and attention on the part of the Municipality in addition to the tangible benefits for motorists parking at the meters.</i></p>	Parking Manager	Short-term
Operational	OP5	<p>Develop a meter improvement plan, starting with a cost-benefit analysis on physically upgrading paid parking technology for locations presently having single space meters.</p> <p><i>Comment: Newly improved streetscapes, such as West Marshall Street, by reason of the density of ground floor commercial activity and improved appearance, would be ideal candidates for multi-space parking technology, such as Pay by Space or Pay and Display. Further, many vendors would be willing to respond with price estimates based on a given number of units. Price quotes could be requested through direct contacts or by issuing a Request for Information or Quote for the number, cost and maintenance requirements of multi-space meter devices by location and in total.</i></p> <p><i>Also see Recommendation OP6.</i></p>	Analyst and Parking Manager	Short-term

Area	ID	Recommendation / Comment	Responsible Party	Timeline
Operational	OP6	<p>As part of the cost-benefit analysis discussed in Recommendation <i>OP5</i>, investigate the potential to obtain newer and/or reconditioned meter housings and/or mechanisms from the Philadelphia Parking Authority, or other nearby municipal or private sources, for meter locations that may not be amenable to multi-space meter technology.</p> <p><i>Comment: This could be a short-term, low-cost option for improving the physical meter plant for those locations that may not be amenable to multi-space technology due to reasons of streetscape aesthetics or extended walking distance to destinations.</i></p>	Analyst and Parking Manager	Short-term
Operational	OP7	<p>Conduct parking activity surveys during all representative time periods, and use the resulting statistics to identify operational changes that may be required to:</p> <ul style="list-style-type: none"> ■ regulated parking time limits; ■ hours and days of operation (when the regulations would be in effect); ■ new regulations required; ■ on-street parking pricing structures (that is, meter rates, ticket fines, etc.); ■ improvement to booting and/or towing programs; ■ enforcement officer deployment times, patrol beat designs and supervisory requirements; ■ et al. 	Parking Analyst and Manager	Short-term
Operational	OP8	Have the program manager and analyst both personally distribute and discuss the brochure with elected officials and merchant and community groups.	Parking Manager	Long-term
Operational	OP9	At the end of the Parking Management Program's first year in operation, and annually thereafter, prepare an Annual Report highlighting the goals, objectives, accomplishments and performance of the Program. Distribute this Report to all stakeholders and make it available on the Municipality's website.	Parking Manager	Long-term
Planning	PL1	Improve night-time pedestrian conditions in areas with high parking demand by replacing burnt out street light bulbs, trimming trees, and repairing sidewalks.	Planning Department, Department of Public Works	Short-term

Area	ID	Recommendation / Comment	Responsible Party	Timeline
Planning	PL2	In conjunction with recommendation OP4, evaluate parking, traffic, and street signs throughout Norristown. Repair and replace broken, faded, or missing signs. If no longer relevant, remove sign. Determine if the sign message needs to be updated or re-worded.	Planning Department, Department of Public Works, Parking Analyst	Short-term
Planning	PL3	Using the Montgomery County, MD regulation as an example, adopt a standardized shared parking calculation and zoning regulation.	Planning Department, Administrator, and Council	Short-term
Planning	PL4	In conjunction with recommendation OP7, examine individual streets in areas with high parking demand to determine the feasibility of adding legal on-street parking spaces. Unregulated curb space should be signed, and overnight on-street parking could be added to streets with low volumes in night-time traffic.	Planning Department, Parking Analyst and Manager, Department of Public Works	Short-term
Planning	PL5	Where sufficient residential parking is a concern, explore and develop the potential for shared parking supply with neighborhood groups and potential off-street parking providers and/or private entities. <i>Comment: It is recommended that a neighborhood parking area be used as a "pilot study" to develop an effective approach for neighborhood outreach and engagement, involvement of community leaders and legislative officials, and participation of associations or other neighborhood entities that may have available parking to provide residents unable to realize sufficient curb parking in relative proximity to their homes.</i>	Planning Department, Parking Analyst and Manager	Long-term
Planning	PL6	Reduce or eliminate parking minimums for some uses in downtown core in order to increase parking utilization and encourage new businesses and investment in the downtown core.	Planning Department, Parking Analyst and Manager	Long-term
Planning	PL7	If the night-time parking problem continues to escalate, investigate opportunities to purchase sites for small, additional off-street parking lots in residential areas. Include parking activity surveys as part of the overall data collection and analysis effort in order to determine appropriate size of lots.	Planning Department, Parking Analyst and Manager	Long-term



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