

# COUNCIL COMMITTEE OF THE WHOLE

## AGENDA



**AUGUST 29, 2017 - 6:00 P.M.**

**CITY HALL COUNCIL CHAMBERS  
15 LOOCKERMAN PLAZA  
DOVER, DELAWARE**

PUBLIC COMMENTS ARE WELCOMED ON ANY ITEM AND WILL BE PERMITTED AT APPROPRIATE TIMES. WHEN POSSIBLE, PLEASE NOTIFY THE CITY CLERK (736-7008 OR E-MAIL AT [CITYCLERK@DOVER.DE.US](mailto:CITYCLERK@DOVER.DE.US)) SHOULD YOU WISH TO BE RECOGNIZED.

### **SAFETY ADVISORY AND TRANSPORTATION COMMITTEE**

#### **AGENDA ADDITIONS/DELETIONS**

- 1. VIABILITY OF THE SHOTSPOTTER GUNSHOT DETECTION AND LOCATION SERVICE (ANDERSON)**
- 2. QUARTERLY BRIEFING ON DOVER/KENT COUNTY METROPOLITAN PLANNING ORGANIZATION (MPO) PROJECTS (COMMITTEE ACTION NOT REQUIRED)**
- 3. QUARTERLY UPDATE - BICYCLE/PEDESTRIAN SUBCOMMITTEE (COMMITTEE ACTION NOT REQUIRED)**
- 4. ADJOURNMENT OF SAFETY ADVISORY AND TRANSPORTATION COMMITTEE MEETING**

### **UTILITY COMMITTEE**

#### **AGENDA ADDITIONS/DELETIONS**

- 1. DEDICATION OF RIGHTS-OF-WAY AND PUBLIC INFRASTRUCTURE - GARRISON OAK TECHNICAL PARK**  
(STAFF RECOMMENDS ACCEPTANCE OF THE DEDICATION OF RIGHTS-OF-WAY AND PUBLIC INFRASTRUCTURE OF THE GARRISON OAK TECHNICAL PARK. DEDICATION IS TO INCLUDE ALL OF THE REFERENCED PUBLIC IMPROVEMENTS.)
- 2. ADJOURNMENT OF UTILITY COMMITTEE MEETING**

### **ADJOURNMENT OF COUNCIL COMMITTEE OF THE WHOLE MEETING**

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THE AGENDA ITEMS AS LISTED MAY NOT BE CONSIDERED IN SEQUENCE. PURSUANT TO 29 DEL. C. §10004(E)(2), THIS AGENDA IS SUBJECT TO CHANGE TO INCLUDE THE ADDITION OR THE DELETION OF ITEMS, INCLUDING EXECUTIVE SESSIONS, WHICH ARISE AT THE TIME OF THE MEETING.

## **COUNCIL MINUTES HISTORY**

### **OVERVIEW OF THE SHOTSPOTTER GUNSHOT DETECTION AND LOCATION SERVICE**

#### **EXCERPT OF APRIL 11, 2016 CITY COUNCIL MEETING MINUTES**

The Regular Council Meeting was held on April 11, 2016 at 7:30 p.m. with Council President Slavin presiding. Council members present were Mr. Anderson, Mr. Sudler, Mr. Neil, Mr. Lewis, Mr. Cole, Mr. Hoffelt, Mr. Hare, and Mr. Hutchison.

#### **COUNCIL COMMITTEE OF THE WHOLE REPORT - MARCH 29, 2016**

The Council Committee of the Whole Meeting was held on March 29, 2016, at 6:00 p.m., with Council President Slavin presiding. Members of Council present were Mr. Anderson, Mr. Sudler (arrived at 6:01 p.m.), Mr. Neil, Mr. Hoffelt, Mr. Hare (departed at 6:40), and Mr. Hutchison. Mr. Lewis, Mr. Cole, and Mayor Christiansen were absent. Civilian members present for their Committee meetings were Mr. Keller (*Safety Advisory and Transportation*), Mr. Blakeman and Mrs. Stewart (*Utility*), and Mr. Shevock and Ms. Maucher (*Legislative, Finance, and Administration*). Mr. Shelton (*Safety Advisory and Transportation*), was absent.

#### **ShotSpotter Gunshot Detection and Location Service**

Due to time constraints, Mr. Anderson requested that the matter of the viability of the ShotSpotter Gunshot Detection and Location Service be referred to staff for review and that it be discussed during the next Safety Advisory and Transportation Committee meeting.

The Committee recommended that the matter of the viability of the ShotSpotter Gunshot Detection and Location Service be referred to staff for review and that it be discussed during the next Safety Advisory and Transportation Committee meeting.

**By consent agenda, Mr. Neil moved for approval of the Committee's recommendation, seconded by Mr. Anderson and carried by a unanimous roll call vote.**

#### **EXCERPT OF AUGUST 8, 2016 CITY COUNCIL MEETING MINUTES**

The Regular Council Meeting was held on August 8, 2016 at 7:30 p.m. with Council President Slavin presiding. Council members present were Mr. Sudler, Mr. Neil, Mr. Hoffelt, Mr. Hare, and Mr. Hutchison. Mr. Anderson, Mr. Cole, and Mr. Lewis were absent.

#### **COUNCIL COMMITTEE OF THE WHOLE REPORT - JULY 26, 2016**

The Council Committee of the Whole Meeting was held on July 26, 2016 at 6:00 p.m., with Council President Slavin presiding. Members of Council present were Mr. Anderson (arrived at 6:11 p.m. and departed at 6:20 p.m.), Mr. Sudler (arrived at 6:08 p.m.), Mr. Neil, Mr. Cole, Mr. Hoffelt, Mr. Hare, and Mr. Hutchison. Mr. Lewis was absent. Mayor Christiansen (departed at 8:05 p.m.) was also present. Civilian

members present for their Committee meetings were Mr. Keller (*Safety Advisory and Transportation*), Mr. Blakeman (*Utility*), and Mr. Shevock and Ms. Stewart (*Legislative, Finance, and Administration*). Mr. Shelton and Ms. Arndt were absent.

## **SAFETY ADVISORY AND TRANSPORTATION COMMITTEE**

The Safety Advisory and Transportation Committee met with Chairman Hosfelt presiding.

### **Viability of the ShotSpotter Gunshot Detection and Location Service**

Deputy Police Chief Marvin Mailey informed members that gunfire is a major concern in the City, noting that the communities most affected are the least likely to report calls to 911, so gunfire is vastly under-reported. He advised that the Police Department had responded to 95 calls for service for shots fired in various areas throughout the City in 2016, stating that people are often gone when they respond. On the rare occasions when someone is hit, the Department conducts an investigation; however, these incidents are largely under-investigated due to lack of evidence. Deputy Chief Mailey explained that the ShotSpotter gunshot detection and location system works by triangulating the noise emitted from gunfire and helping to pinpoint the exact location. He noted that several audio devices or sound listening posts would be located throughout a sector of the City, and they would be able to pick up the noise, report it to a center, de-conflict that noise as a backfire from a car or other device, and report it to the Police Department to determine the location. Deputy Chief Mailey indicated that the current system depends on citizens calling from their residence or cell phone to report gunfire. Officers then respond to the area and conduct a grid search. He stated that the ShotSpotter would allow officers to go to the exact area of the shots. If subsequent shots are fired, they would be able to follow this on a grid map and possibly arrest those firing the shots, locate the handgun, and conduct their investigation in a professional way.

Deputy Chief Mailey advised that ShotSpotter claims that 80% of all shootings go unreported, and he noted that it is not a foolproof system. Under daytime circumstances, the accuracy dips to about 25 meters from the sound device. He explained that when shootings are outside, the sensors triangulate to the system and help officers locate the exact location. Deputy Chief Mailey stated that the City of Wilmington currently uses the ShotSpotter system and Wilmington Police Chief Bobby Cummings was interviewed about this system in March. He explained that, even though ShotSpotter did not capture all of the data, it appeared that three (3) sensors would capture gunshots and alert the Police Department. ShotSpotter had enabled the City of Wilmington to respond to unreported gunfire and collect evidence, including shell casings, from crime scenes that would otherwise not have been collected. Deputy Chief Mailey stated that these shell casings were now being

entered into the Integrated Ballistics Identification System (IBIS) so they can be tied back to firearms.

Deputy Chief Mailey indicated that the cost to cover a three (3) square mile area of the City would be approximately \$195,000 per year, noting that the equipment would be leased rather than owned and that grant funds were available. He stated that three (3) sources of grants and funding had been identified; however, they had expired since the research was done on the system. Deputy Chief Mailey advised that the federal government traditionally renews these grants each fiscal year, so more grants would be available in the next federal budget year. He informed members that there had been 17 shootings so far this year, no homicides, and 40 handguns had been recovered from the streets of Dover without having the benefit of the ShotSpotter. Deputy Chief Mailey felt this system could increase those numbers, reduce the rate of shootings, and keep the homicide numbers down to the desired level of zero (0).

Responding to Mr. Hosfelt regarding the success rate or number of cases cleared in Wilmington as a result of the ShotSpotter, Deputy Chief Mailey stated that he did not have those exact numbers but that he could get them and report back.

In response to Mr. Hosfelt regarding the availability of the \$195,000 in grant funds that was mentioned for next year, Deputy Chief Mailey stated that he could contact Mr. Windley in Senator Carper's Office, who helps the Police Department with federal grants on a routine basis. He noted that Mr. Windley is very good at finding grants and identifying sources to purchase equipment.

Mr. Neil advised that a resident in White Oak Park had reported a shot fired, and questioned if the equipment would cover an area that distance from downtown. Responding, Deputy Chief Mailey stated that White Oak Park would be outside the area of coverage, which is approximately 400 meters from the site. He explained that the equipment would cover the area where the microphone is in position and, if located in the downtown area, it would not collect data from outlying areas across Route 13. Deputy Chief Mailey explained that gunshots outside the network of microphones would not be collected.

In response to Mr. Neil, Deputy Chief Mailey stated that the cost would be approximately \$65,000 per square mile and microphones must be affixed to light poles and raised areas to collect audio feedback. Only a small footprint would be covered, and ideally the system would be placed in the highest crime areas.

Mr. Neil stated his understanding that if this system was wanted now, it would have to be the result of a grant.

Having cursorily researched this system, Mr. Slavin advised that one of the complaints was about accuracy. He noted that the ShotSpotter would provide guidance to a certain grid, and within that grid it did not give any additional coordinates to someone who would be dispatched.

Deputy Chief Mailey stated that, according to his reading, the ShotSpotter triangulates and is supposed to pinpoint a location. Theoretically, if gunshots were in the network of the sound gathering devices, it should be able to pinpoint an exact spot on a grid map so that officers could go directly there. He noted that a certain amount of disturbance would affect the system during daytime hours.

Mr. Slavin indicated that this was what he was referring to, noting that other noise interferes. He noted that some police departments had purchased and then abandoned the ShotSpotter because they learned that for every shot that was fired where ShotSpotter identified a location, there was a correlation with a number of calls telling them where it occurred. They found it was cheaper to allow people to call on their cell phones and the calls tended to come quicker.

In response to Mr. Slavin regarding any soft costs on the City's end and how information would be received and what the intervention would be, Deputy Chief Mailey stated that the information would go directly to the dispatch center. The information on the dispatchers' display would be sent to the responding officers and they would be given an exact location, rather than an area, to start their search. Deputy Chief Mailey indicated this would be additional information for dispatchers.

Deputy Chief Mailey explained that the City of Wilmington has vastly different problems than Dover. He indicated that there are a lot of citizens who pick up the phone to let the Police Department know that shots have been fired in their neighborhood; however, it becomes very difficult for the Police Department to respond to a general area rather than a specific point to pick up the search. Deputy Chief Mailey advised that there are other systems on the market, noting that he and Councilman Hosfelt had attended a presentation at Dover Downs on a very good Verbi system. He noted that the equipment would be owned and the City would have it until the sensors need replacement. Deputy Chief Mailey advised that this system comes with a lofty price tag, but it includes military grade software and materials that are currently being used in the Middle East. He informed members that this would integrate directly with camera systems and go directly to any iOS device. Since it is web-based, if an officer had the application and shots went off, the officer would receive a message on their phone or tablet telling them where to go.

Mr. Hutchison expressed interest in looking at Wilmington's statistics and results and questioned how long they had been using this system. Deputy Chief Mailey believed that it was very new technology that was born out of the engagement in the Middle

East, so he estimated that it had been within the last ten (10) years. He indicated that the ShotSpotter system must be leased rather than owned; however, the Verbi system would be purchased at a much higher price. Deputy Chief Mailey indicated that, although the up-front cost would be high, after five (5) to ten (10) years, less would be paid over the life of the equipment compared to a lease. He reiterated that ShotSpotter would cost \$195,000 each year for three (3) square miles. He indicated that the Verbi representative had sent him a spreadsheet that indicated that over ten (10) years, there would be a savings of approximately \$840,000 if the two (2) products were compared side by side. Deputy Chief Mailey noted that the Verbi system would cover a six (6) mile footprint rather than three (3) miles.

Mr. Hutchison stated that the City of Dover Police Department has a great working relationship with the Dover community. He realized that this equipment could be considered; however, when the price tag is considered, he felt that putting boots on the ground and possibly paying extra duty officers to become more involved in community policing would provide a better value than this device. Deputy Chief Mailey advised that the Department was currently doing this, and extra duty officers were assigned in high crime areas. In addition, he explained that the Department's crime analyst identifies areas in the City that require police attention, and specific dates and times and patrols are assigned based on that intelligence. Deputy Chief Mailey noted that this system would take officers' searches down from an area to a specific point, and this would be a benefit.

Mr. Anderson indicated that Wilmington started testing this program in approximately 2014 in a small area and seemed to like it, so it was very new in Delaware. In regard to a cost/benefit analysis, he would like to evaluate if it fits Dover and not to commit to it. Mr. Anderson believed that there had been incidences when seven (7) or eight (8) calls were received about shots fired, but because of echoes and the way sound carries, it was indicated that gunfire came from different areas. He questioned if this system would have helped in this type of situation. Responding, Deputy Chief Mailey stated that, rather than looking at a sector of a couple of blocks, it would narrow the search to a specific point on a street where the first shot was fired. If several shots were fired during a drive-by shooting, it would tell the direction of vehicle travel and indicate in red dots on a grid map exactly where the first and sequential shots were fired. Deputy Chief Mailey explained that, in general, officers currently go from one (1) block to another and look for shell casings or stop to try to solicit responses from the people on the street. Having been on the street when shots were fired, he noted that sound bounces all over at night. Mr. Anderson advised that he had also been on the street when shots were fired.

Mr. Neil questioned if upgrades would be part of the system or if it would fall behind if technology accelerates. Responding, Deputy Chief Mailey believed that if equipment was leased and newer technology came out, newer equipment would be

**COUNCIL MINUTES HISTORY -  
OVERVIEW OF VIABILITY OF THE SHOTSPOTTER GUNSHOT  
DETECTION AND LOCATION SERVICE**

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provided; however, he stated he would have to confirm this information with ShotSpotter. If the equipment was purchased, an upgrade to newer equipment would have to be purchased.

In response to Mayor Christiansen, Deputy Chief Mailey was not aware of any other cities in the area currently using the equipment. Mayor Christiansen suggested taking a trip to other communities that have a system in place to confirm the information provided by Mr. Slavin and learn about the success or failure in other communities before purchasing the equipment, and Deputy Chief Mailey concurred. Mayor Christiansen felt it sounded like a great system that would assist the City's police officers in doing what is necessary.

In response to Mayor Christiansen, Deputy Chief Mailey stated that he believed that preventive maintenance would be included in a contract but indicated that he would have to check. Mayor Christiansen requested that Deputy Chief Mailey provide he and the Committee information on other communities within a reasonable radius of Dover that are using a system. He expressed the desire to hold a conference call with officials or take a trip to find out the worthiness and effectiveness of the product. Mr. Hosfelt suggested, once it is established that a city or township is to be visited, that a member of Council attend such a meeting.

The Committee deferred Viability of the ShotSpotter Gunshot Detection and Location Service for further investigation.

**By consent agenda, Mr. Neil moved for approval of the Council Committee of the Whole Report, seconded by Mr. Hare and carried by a unanimous roll call vote (Mr. Anderson, Mr. Cole, and Mr. Lewis absent).**

**EXCERPT OF SEPTEMBER 12, 2016 CITY COUNCIL MEETING MINUTES**

The Regular Council Meeting was held on September 12, 2016 at 8:00 p.m. with Council President Slavin presiding. Council members present were Mr. Anderson, Mr. Sudler, Mr. Neil, Mr. Lewis, Mr. Cole, Mr. Hosfelt, Mr. Hare, and Mr. Hutchison.

**COUNCIL COMMITTEE OF THE WHOLE REPORT - AUGUST 23, 2016**

The Council Committee of the Whole Meeting was held on August 23, 2016 at 6:00 p.m., with Council President Slavin presiding. Members of Council present were Mr. Sudler, Mr. Neil (arrived at 6:03 p.m.), Mr. Lewis (arrived at 6:09 p.m.), Mr. Cole, Mr. Hosfelt, Mr. Hare, and Mr. Hutchison. Mr. Anderson was absent. Mayor Christiansen was also present. Civilian members present for their Committee meetings were Mr. Keller and Mr. Shelton (*Safety Advisory and Transportation*) and Mr. Shevock and Dr. Stewart (*Legislative, Finance, and Administration*).

**SAFETY ADVISORY AND TRANSPORTATION COMMITTEE**

The Safety Advisory and Transportation Committee met with Councilman Hosfelt presiding.

**Viability of the ShotSpotter Gunshot Detection and Location Service**

During the Council Committee of the Whole/Safety Advisory and Transportation Committee Meeting of July 26, 2016, members considered the Viability of the ShotSpotter Gunshot Detection and Location Service and deferred this item for further investigation.

Deputy Police Chief Marvin Mailey advised members that he wished to address questions that members had posed during the meeting of July 26, 2016. In regard to the availability of federal grant funding, he explained that he had spoken with Ms. Amanda Wood, Funding Specialist, ShotSpotter, Inc., who outlined a number of funding programs that could cover some or most of the cost of the ShotSpotter program, which would be approximately \$195,000 per year. Deputy Chief Mailey stated that there were three (3) programs available through the Department of Housing and Urban Development (HUD), a program through the Department of Homeland Security's State Homeland Security Grant Program, and federal grants through Project Safe Neighborhoods and the Smart Policing Initiative Grant, as well as a technology grant for innovations in public safety. He indicated that grants are awarded annually, and Ms. Wood would be willing to help the Department with the paperwork to obtain them.

Deputy Chief Mailey informed members that he had spoken with Captain James Sarkos, Atlantic City Police Department, who was the organizer or head of the ShotSpotter program in Atlantic City, New Jersey. Captain Sarkos stated that they received grant funding; however, Atlantic City bore a lot of the cost for the program in its first year, which was very expensive, and the grant funding kicked in during the following years.

In response to questions asked by Mr. Hosfelt and Mr. Hutchison during the meeting of July 26, 2016, Deputy Chief Mailey advised that he had spoken to Mr. John Martin, IT Systems Administrator, Wilmington Police Department, who directs this program in Wilmington, in regard to cleared cases pertaining to ShotSpotter and was informed that Wilmington tracks the raw data but does not correlate it to crimes solved. The approval of the Wilmington's chief of police was needed to obtain the data; however, Deputy Chief Mailey stated that he was unable to receive approval after reaching out to the chief on several occasions. He informed members that the raw data from Wilmington would show only activations and would not correlate to a homicide solved on a particular day, and this was also the case in Atlantic City and in the Camden County Police Department in Trenton, New Jersey.



Responding to Mr. Neil's question during the meeting of July 26, 2016, regarding ShotSpotter technology upgrades, Deputy Chief Mailey indicated that, although he had described the ShotSpotter as a lease program, it is actually a subscription service that is paid for annually. He informed members that ShotSpotter, Inc. would provide new hardware and software as the technology ages so that there would be optimal results from the system.

In response to Mayor Christiansen's questions during the meeting of July 26, 2016, Deputy Chief Mailey stated that ShotSpotter guaranteed full maintenance throughout the service subscription, including replacement and tech support, and they would come to the City to provide onsite training. He indicated that Atlantic City had advised that ShotSpotter was very good about providing service. Deputy Chief Mailey stated that Atlantic City loved ShotSpotter and was very willing to meet or hold a conference call with City of Dover representatives to discuss the program. He advised that Captain Sarkos informed him of an incident when Atlantic City used ShotSpotter to identify a gunshot that was unreported. The police department responded and found a subject who had been shot, and Captain Sarkos believed that this person probably would have expired had they not had the ShotSpotter program to identify the gunshot location. Deputy Chief Mailey advised that the New York City Police Department went to Atlantic City to discuss and observe the Atlantic City ShotSpotter program, and New York City was now using this technology.

Mr. Hosfelt recalled that Wilmington had been having an issue with not receiving calls for 911 service when shots were fired and had no way to track them. It was believed that this technology would help them to respond to those areas, and this was one of the selling points for obtaining ShotSpotter. Mr. Hosfelt noted that the \$195,000 cost was not cheap, and he felt that if there was an ability to connect the use of ShotSpotter to cleared homicides or shootings, this would be advertised as a selling point. He questioned if the City of Dover would be better off investing these funds in more security cameras, noting that the results from existing cameras were known and could show cleared homicides or shootings. Mr. Hosfelt believed that the City of Dover still has community involvement and that residents and constituents still make those calls. He was not sure that Dover was at the point that Wilmington was in terms of not receiving calls.

Deputy Chief Mailey stated that ShotSpotter advertises that once their system is put in, there is a decline in gunshots and gun violence. They pointed to Wilmington as showing a 42% drop in gunshots after the technology was initially installed. Deputy Chief Mailey indicated that several agencies had used ShotSpotter in criminal investigations to point them to evidence that was brought into the courtroom as part of probable cause in prosecution of criminal cases. He stated that, personally, if he had the money to spend, he would spend it on equipment, cameras, and officers, which he felt would better serve the City. Deputy Chief Mailey agreed with

Mr. Hosfelt that the City of Dover is not a place where people do not report gunshots fired.

Responding to Mr. Hutchison, Deputy Chief Mailey advised that the cost of ShotSpotter would be \$65,000 per square mile, with a total cost of \$195,000 to cover three (3) square miles. He indicated that shots are fired throughout the City, beyond an area of three (3) square miles, and cited occurrences on White Oak Road, Mayfair, and Autumn Run Apartments. Deputy Chief Mailey indicated that a three (3) square mile footprint is not very large.

In response to Mr. Hutchison regarding statistics for the days and times when more problems are experienced in the City, Deputy Chief Mailey indicated that he did not have this data but could research it and provide information. He stated that Retired Captain Robert Scott, Crime Analyst, analyzes raw data and provides peak times for crime, dates, land locations, and the Department provides enhanced patrols in those areas. Deputy Chief Mailey advised that State funding allowed for extra duty for officers, and this had helped in some of the troubled neighborhoods where there is a lot of violence and drug sales. He indicated that the Police Department is reactive to real time crime data.

Mr. Hutchison stated that the Police Department should be very proud of its men and women, who do an outstanding job, as shown in last year's audit of the Police Department that contained information on response times and clearance percentages. He felt that this was a reflection of training, staffing, and community support.

Ms. Slavin expressed appreciation for the effort put into researching the ShotSpotter service but noted that he had never been in favor of this technology. He thought it was probably useful in some jurisdictions, but perhaps not the City of Dover due to its geography and the frequency of problems. Mr. Slavin felt that \$195,000 could be deployed more effectively, noting that this \$195,000 had not been budgeted and would be a mid-year addition to the budget. He believed that adding expenses mid fiscal year weakens the discipline in the budget and displaces other things that went through the budget vetting process and were approved, some of which were in the Police Department budget. Mr. Slavin stated the need to be careful about this and be good stewards of public safety, public finances, etc. He indicated that he appreciates grant funding; however, grant funding typically helps start something and then goes away, which inflates the budget in outlying years and causes cycles of desperation with large gaps. Mr. Slavin noted that he was very interested in the use of technology to help fight crime.

Responding to Mr. Sudler, Deputy Chief Mailey advised that he would rate the necessity for the ShotSpotter in 2017 as a very low priority, rating it as a one (1) or two (2) on a 10-point scale, with a ten being the highest priority.

**Mr. Hare moved for acceptance of the Council Committee of the Whole Report. The motion was seconded by Mr. Lewis and unanimously carried.**

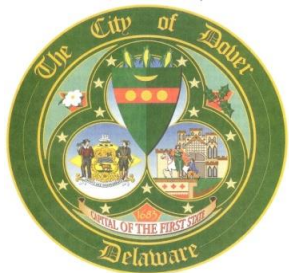
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# Downtown Dover Parking Study

Presented to the Dover Community

August 24, 2017



**LANGAN**



# Downtown Dover Parking Study

DOWNTOWN DOVER PARKING STUDY FOCUS AREAS

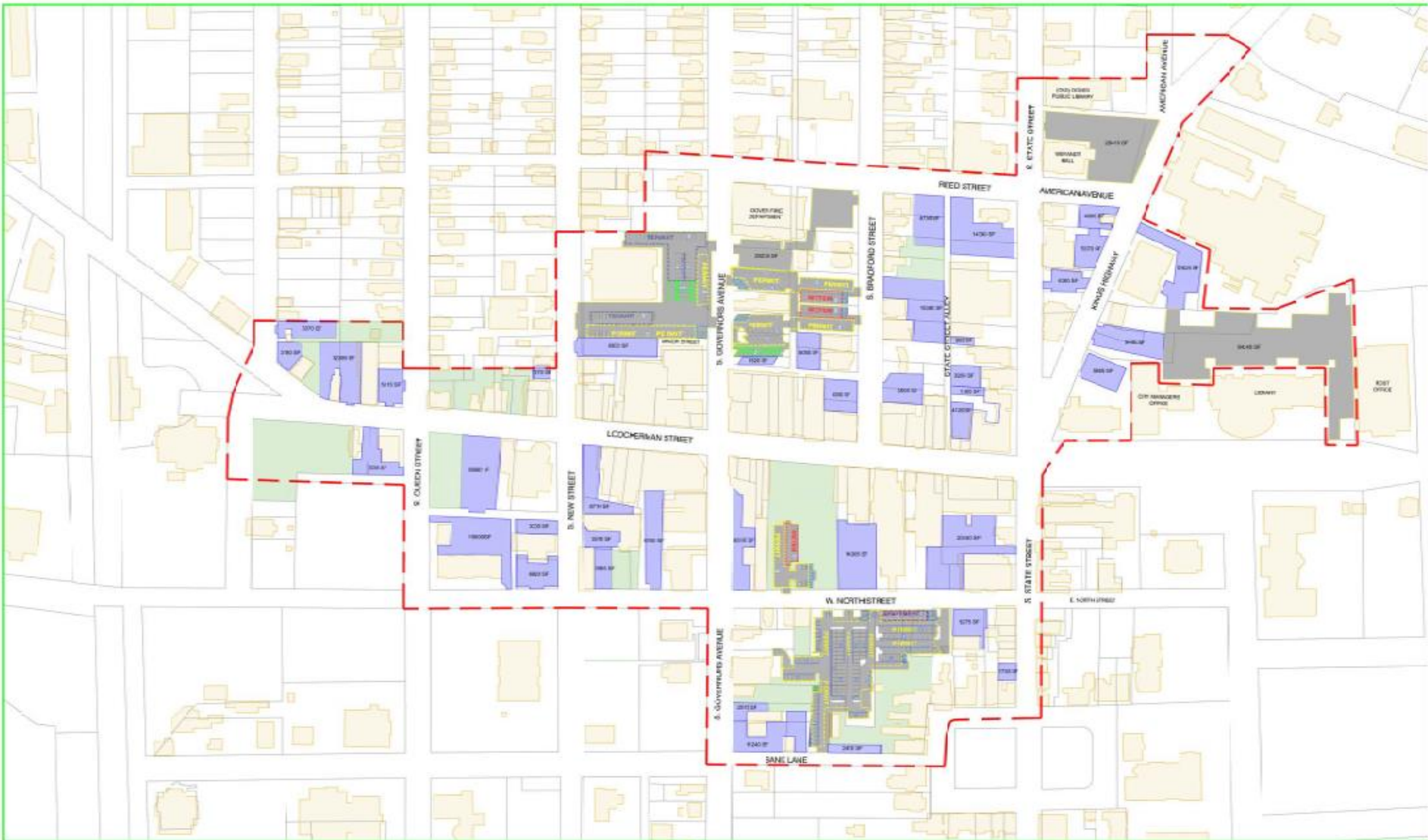


- “Too much?”
- “Too little?”
- “Too pricy?”
- “Too cheap?”
- “Easy to Understand?”
- “Convenient to where I want to go?”



**LANGAN**





- Private Off-Street Parking
- Public Off-Street Parking
- Open Space

Existing Surface Area  
 264,255 SF = approximately 6.5 acres

### Surface Parking Areas

March 2017

Cover Downtown Parking Study  
 Dover, DE



Scale: 1 100



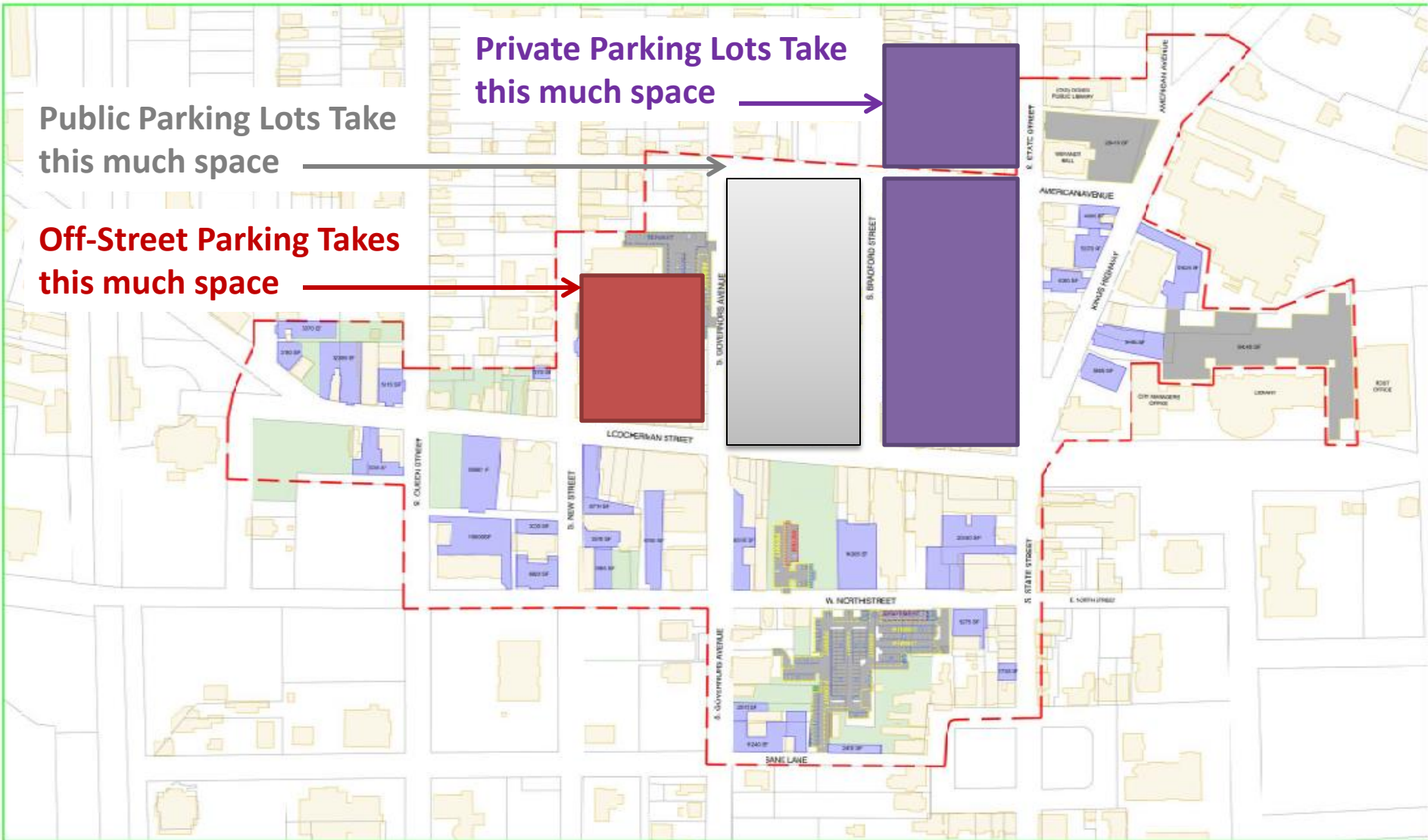
**LANGAN**



Public Parking Lots Take this much space

Off-Street Parking Takes this much space

Private Parking Lots Take this much space

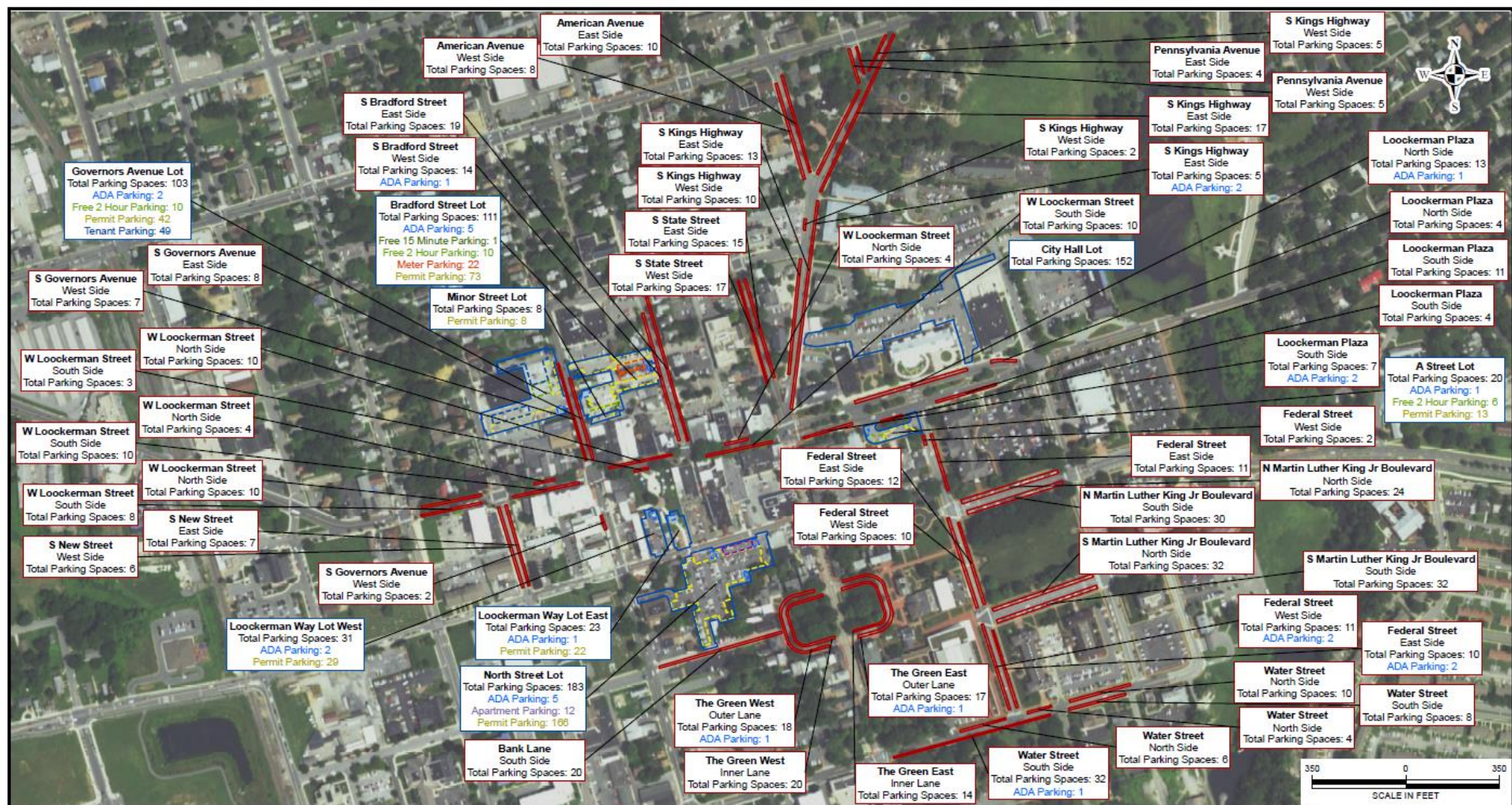


Existing Surface Area  
 264,255 SF = approximately 6.5 acres

- Private Off-Street Parking
- Public Off-Street Parking
- Open Space

Surface Parking Areas  
 March 2017  
 Cover Downtown Parking Study  
 Dover, DE





**Legend**

Parking Type	Parking Spot Type	
	Street Parking	
	Parking Lot	

Free 2 Hour Parking  
 Meter Parking  
 Permit Parking  
 Tenant Parking

ADA Parking  
 Apartment Parking  
 Free 15 Minute Parking

Notes:  
World aerial imagery base map is provided through Langan's Esri ArcGIS software licensing and ArcGIS online. Source of aerial imagery is USDA FSA from 7/11/2015. Credits: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, and the GIS User Community

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Langan Engineering & Environmental Services, Inc.  
 Langan Engineering, Environmental, Surveying and  
 Landscape Architecture, D.P.C.  
 Langan International LLC  
 Collectively known as Langan

Project  
**DOVER PARKING STUDY**  
 DOVER  
 KENT COUNTY DELAWARE

Drawing Title  
**PARKING TYPE**

Project No. 220100701	Figure <b>X</b>
Date 3/3/2017	
Scale 1"=350'	
Drawn By MMK	
Submission Date 3/3/2017	Sheet 001 of 001



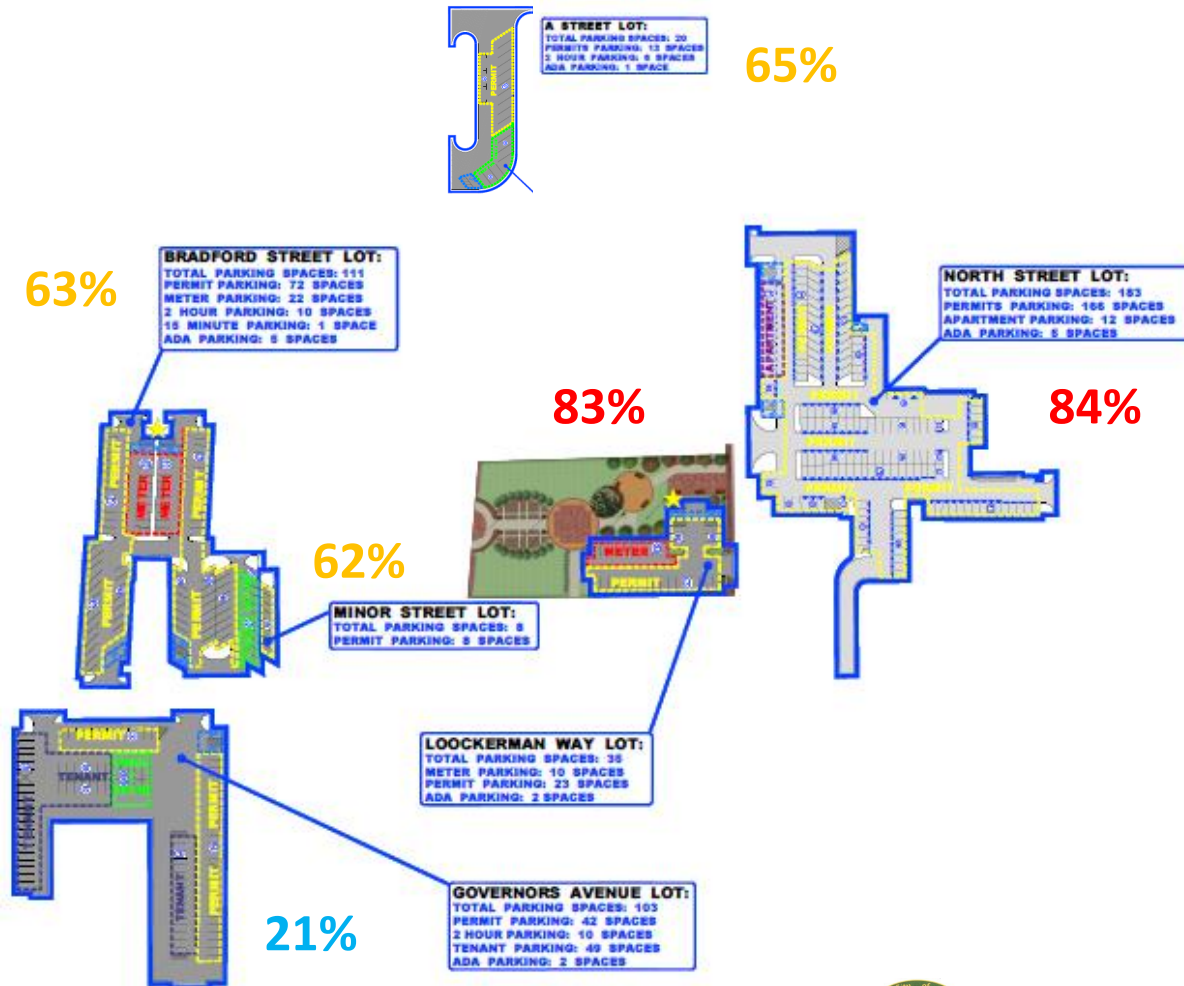
# Parking Count Findings

- On-Street Parking
  - Peak Hour – 12:30 to 1:30 pm
  - Peak Occupancy Rate – 75%
  - Peak Violation Rate – 16%
- Off-Street Parking
  - Peak Hour – 11 am – Noon
  - Peak Occupancy Rate – 63%



# Parking Study Findings

## Peak Occupancy Per Lot



# Cost of Parking:

(Per Hour /  
On Street)

**DOVER**



**Wilmington**



**Newark**



**Annapolis, MD**



**Media, PA**



# Cost of Parking:

(Per Day /  
Public Lots)

**DOVER**



**Wilmington**

12 x



**Newark**

8 x



**Annapolis, MD**

13 x



**Media, PA**



# How Would You Spend Your ?

Quick Errand  
to Downtown  
Dover



, but 20 mins only



/ hr, On-Street



/ hr, Off-Street

Day-long Stay



All day, Off-Street

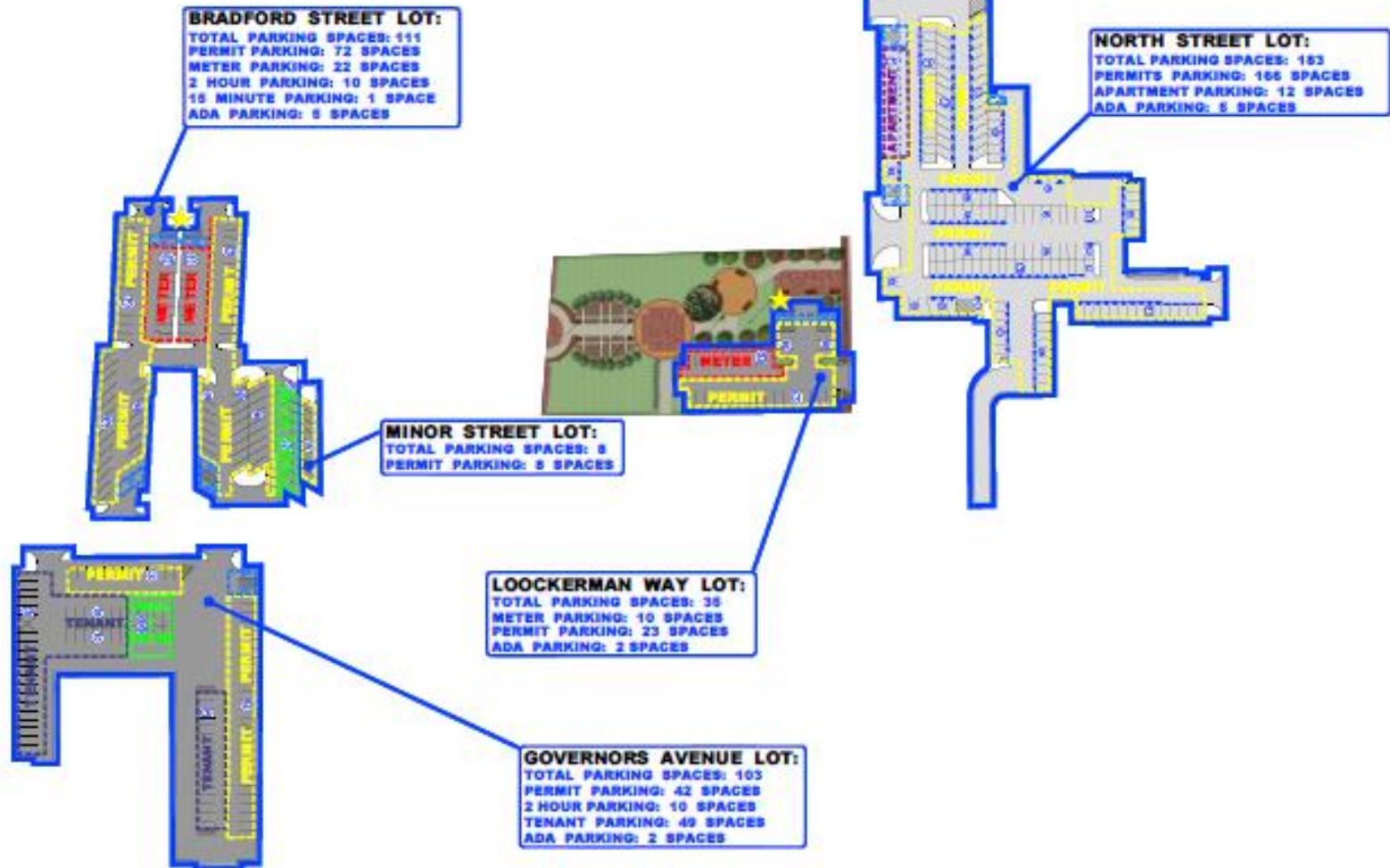


All day, On-Street,  
but moving car every 2 hours

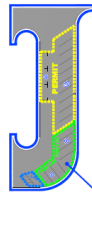


All day, On-Street

# Current:



# Potential Improvement Scenario 1:



**A STREET LOT:**  
 TOTAL PARKING SPACES: 20  
 PERMITS PARKING: 13 SPACES  
 2 HOUR PARKING: 6 SPACES  
 ADA PARKING: 1 SPACE

**BRADFORD STREET LOT:**  
 TOTAL PARKING SPACES: 111  
 PERMIT PARKING: 72 SPACES  
 METER PARKING: 22 SPACES  
 2 HOUR PARKING: 10 SPACES  
 15 MINUTE PARKING: 1 SPACE  
 ADA PARKING: 6 SPACES

**BRADFORD STREET LOT (Proposed – Scenario 1):**  
 Total Parking Spaces: 111  
 Permit parking: 72 plus 11 new spaces (converted from 2-Hour and 15-min parking)  
 Meter parking: 22 (reconfigured)  
 ADA Parking: 5

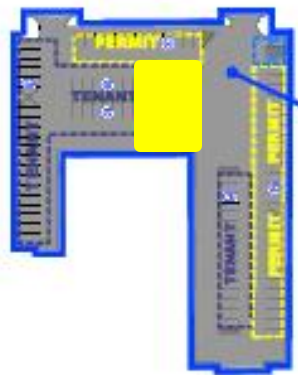
**NORTH STREET LOT:**  
 TOTAL PARKING SPACES: 153  
 PERMITS PARKING: 166 SPACES  
 APARTMENT PARKING: 12 SPACES  
 ADA PARKING: 5 SPACES



**MINOR STREET LOT:**  
 TOTAL PARKING SPACES: 8  
 PERMIT PARKING: 8 SPACES

**LOOCKERMAN WAY LOT:**  
 TOTAL PARKING SPACES: 35  
 METER PARKING: 10 SPACES  
 PERMIT PARKING: 23 SPACES  
 ADA PARKING: 2 SPACES

**LOOCKERMAN WAY LOT (Proposed – Scenario 1):**  
 Total Parking Spaces: 35  
 Meter parking: 33  
 ADA Parking: 2

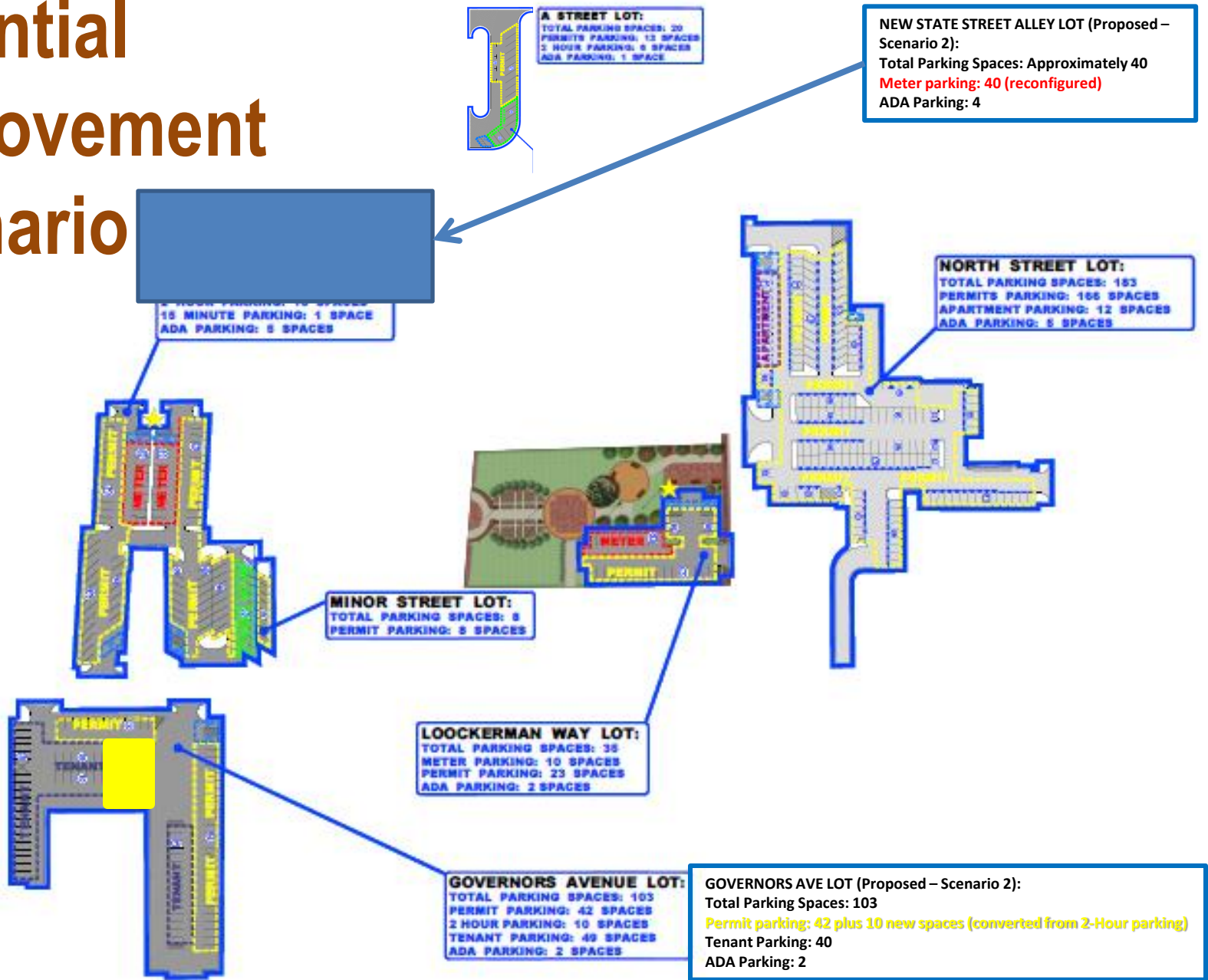


**GOVERNORS AVENUE LOT:**  
 TOTAL PARKING SPACES: 103  
 PERMIT PARKING: 42 SPACES  
 2 HOUR PARKING: 40 SPACES  
 TENANT PARKING: 49 SPACES  
 ADA PARKING: 2 SPACES

**GOVERNORS AVE LOT (Proposed – Scenario 1):**  
 Total Parking Spaces: 103  
 Permit parking: 42 plus 10 new spaces (converted from 2-Hour parking)  
 Tenant Parking: 40  
 ADA Parking: 2

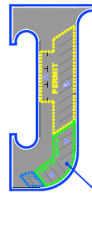


# Potential Improvement Scenario 2:





# Potential Improvement Scenario 3:

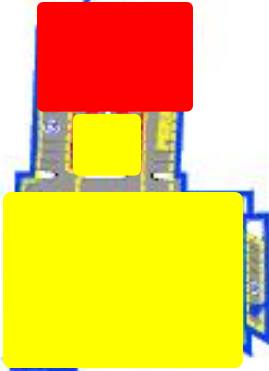


**A STREET LOT:**  
 TOTAL PARKING SPACES: 20  
 PERMITS PARKING: 13 SPACES  
 2 HOUR PARKING: 6 SPACES  
 ADA PARKING: 1 SPACE

**BRADFORD STREET LOT:**  
 TOTAL PARKING SPACES: 111  
 PERMIT PARKING: 72 SPACES  
 METER PARKING: 22 SPACES  
 2 HOUR PARKING: 10 SPACES  
 15 MINUTE PARKING: 1 SPACE  
 ADA PARKING: 6 SPACES

**BRADFORD STREET LOT (Proposed – Scenario 3):**  
 Total Parking Spaces: 111  
 Permit parking: 72 plus 33 new spaces (converted plus new)  
 Meter parking: 22 (reconfigured)  
 ADA Parking: 5

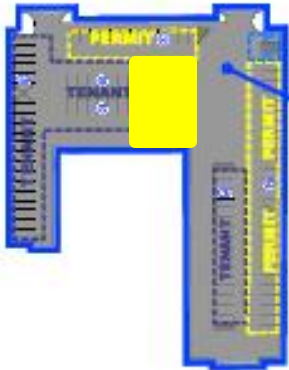
**NORTH STREET LOT:**  
 TOTAL PARKING SPACES: 153  
 PERMITS PARKING: 166 SPACES  
 APARTMENT PARKING: 12 SPACES  
 ADA PARKING: 5 SPACES



**MINOR STREET LOT:**  
 TOTAL PARKING SPACES: 8  
 PERMIT PARKING: 8 SPACES

**LOOCKERMAN WAY LOT:**  
 TOTAL PARKING SPACES: 35  
 METER PARKING: 10 SPACES  
 PERMIT PARKING: 23 SPACES  
 ADA PARKING: 2 SPACES

**LOOCKERMAN WAY LOT (Proposed – Scenario 3):**  
 Total Parking Spaces: 35  
 Meter parking: 33  
 ADA Parking: 2

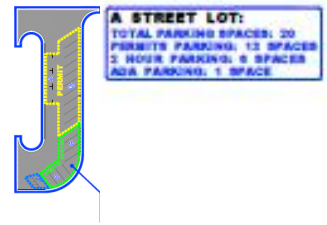


**GOVERNORS AVENUE LOT:**  
 TOTAL PARKING SPACES: 103  
 PERMIT PARKING: 42 SPACES  
 2 HOUR PARKING: 49 SPACES  
 TENANT PARKING: 49 SPACES  
 ADA PARKING: 2 SPACES

**GOVERNORS AVE LOT (Proposed – Scenario 3):**  
 Total Parking Spaces: 103  
 Permit parking: 42 plus 10 new spaces (converted from 2-Hour parking)  
 Tenant Parking: 40  
 ADA Parking: 2



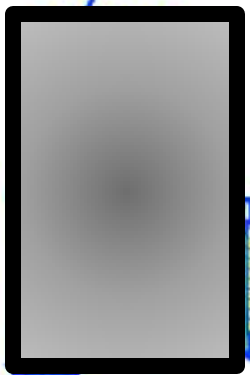
# Potential Improvement Scenario 4:



**BRADFORD STREET LOT:**  
 TOTAL PARKING SPACES: 111  
 PERMIT PARKING: 72 SPACES  
 METER PARKING: 22 SPACES  
 2 HOUR PARKING: 10 SPACES  
 15 MINUTE PARKING: 1 SPACE  
 ADA PARKING: 6 SPACES

**BRADFORD STREET GARAGE (Proposed – Scenario 4):**  
 Total Parking Spaces: approx. 400 (3 stories)  
 Permit parking: 200  
 Meter parking: 200  
 ADA Parking: 15

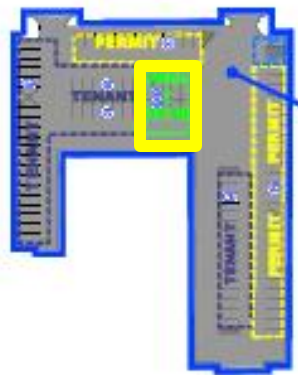
**NORTH STREET LOT:**  
 TOTAL PARKING SPACES: 153  
 PERMIT PARKING: 166 SPACES  
 APARTMENT PARKING: 12 SPACES  
 ADA PARKING: 5 SPACES



**MINOR STREET LOT:**  
 TOTAL PARKING SPACES: 8  
 PERMIT PARKING: 5 SPACES

**LOOCKERMAN WAY LOT:**  
 TOTAL PARKING SPACES: 35  
 METER PARKING: 10 SPACES  
 PERMIT PARKING: 23 SPACES  
 ADA PARKING: 2 SPACES

**LOOCKERMAN WAY LOT (Proposed – Scenario 4):**  
 Total Parking Spaces: 35  
 Meter parking: 33  
 ADA Parking: 2



**GOVERNORS AVENUE LOT:**  
 TOTAL PARKING SPACES: 103  
 PERMIT PARKING: 42 SPACES  
 2 HOUR PARKING: 49 SPACES  
 TENANT PARKING: 49 SPACES  
 ADA PARKING: 2 SPACES

**GOVERNORS AVE LOT (Proposed – Scenario 4):**  
 Total Parking Spaces: 103  
 Permit parking: 42 plus 10 new spaces (converted from 2-Hour parking)  
 Tenant Parking: 40  
 ADA Parking: 2



# How Would You Spend Your ?

**Scenario 1**

Less than \$100k

**Scenario 2**

\$1M to \$2M

**Scenarios 1 and 2**

\$1M to \$2M

**Scenario 3**

\$1M to \$2M

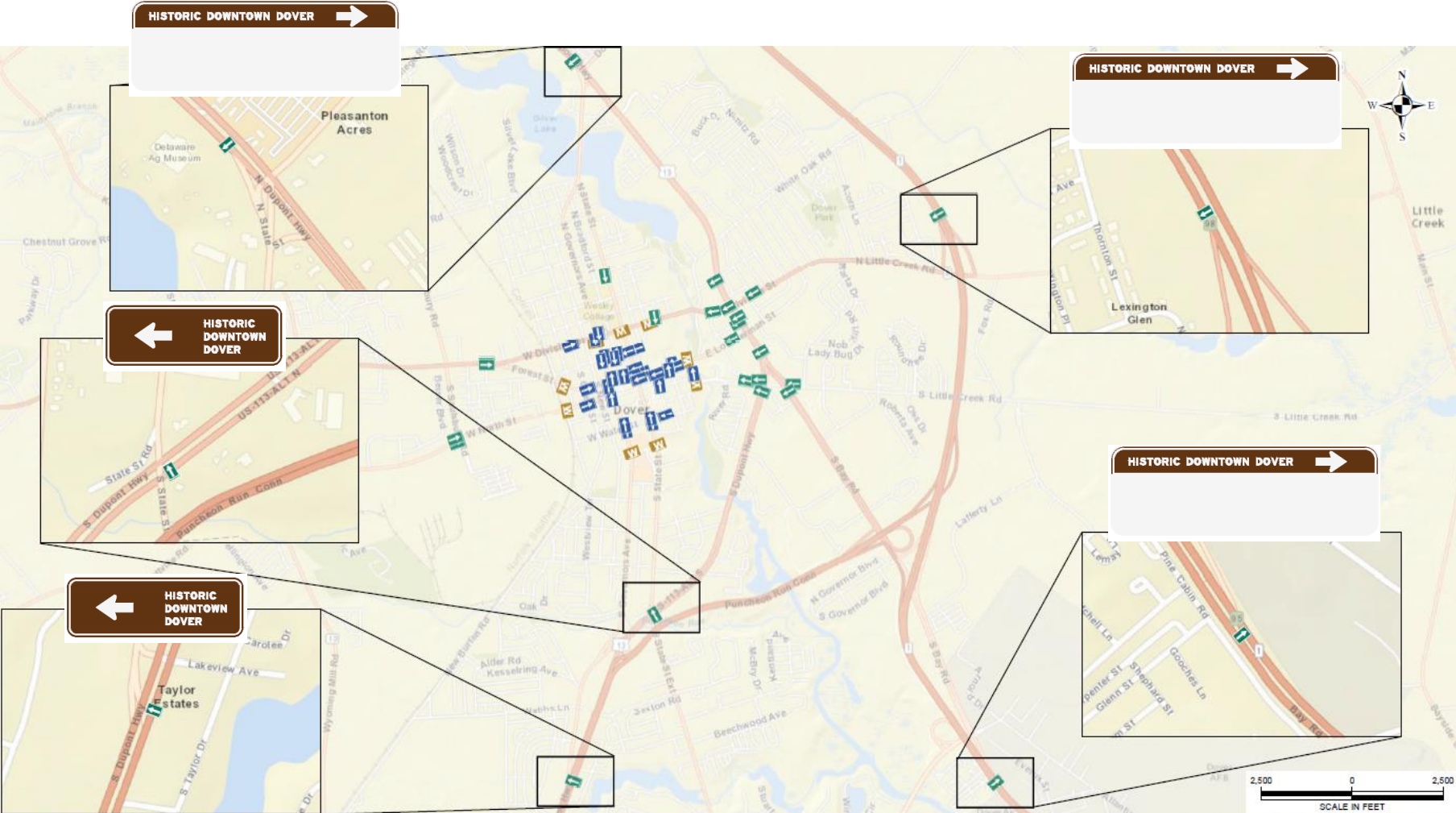
**Scenarios 2 and 3**

\$2M to \$4M

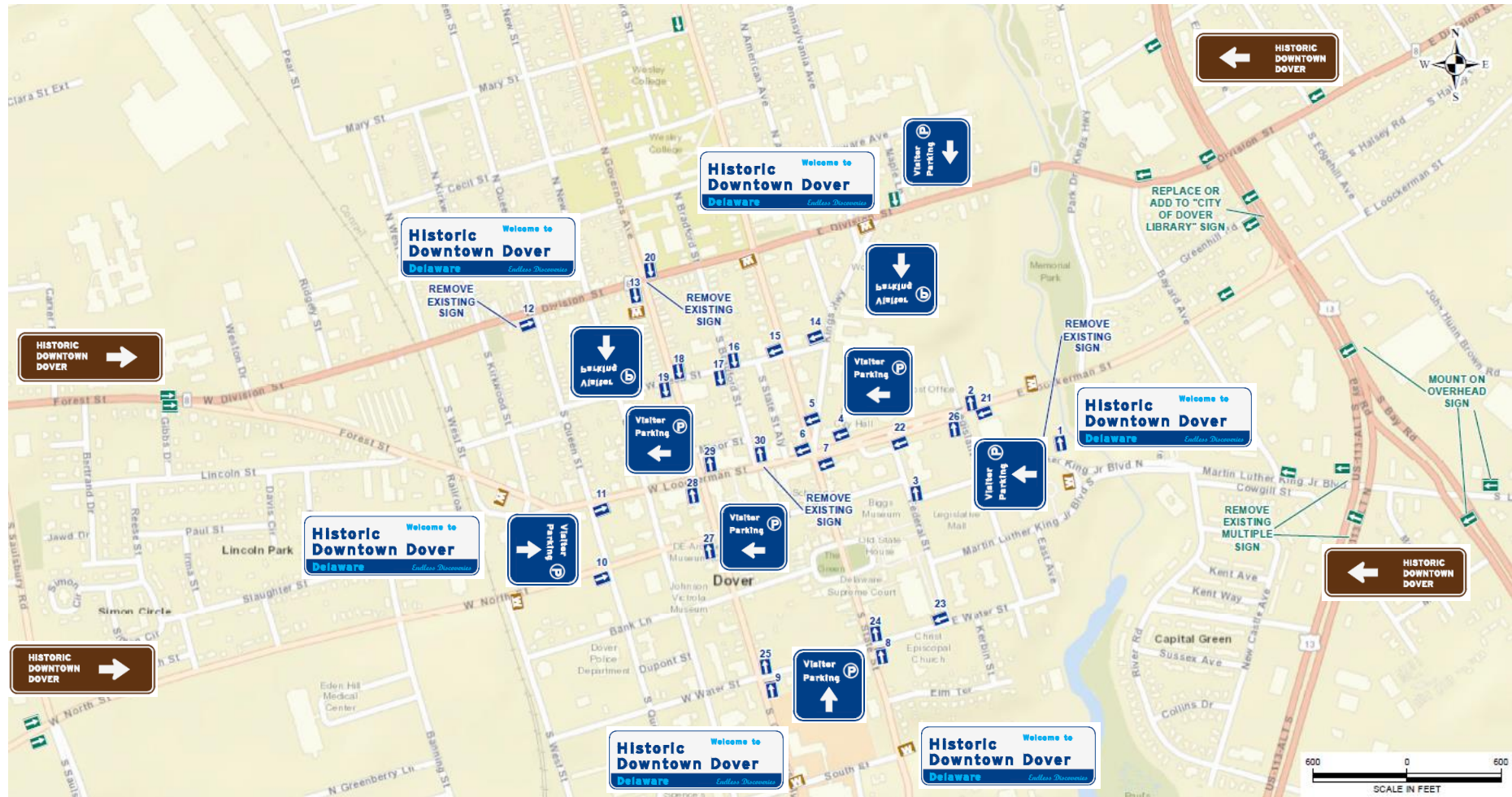
**Scenario 4**

Over \$4M

# Wayfinding and Signage

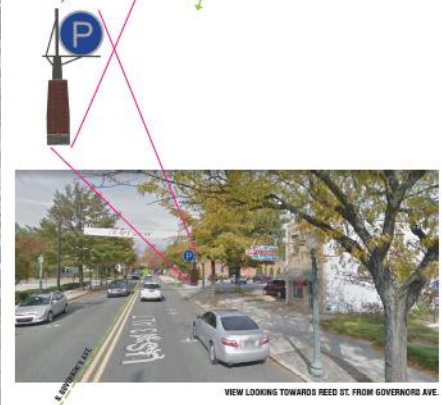


# Wayfinding and Signage

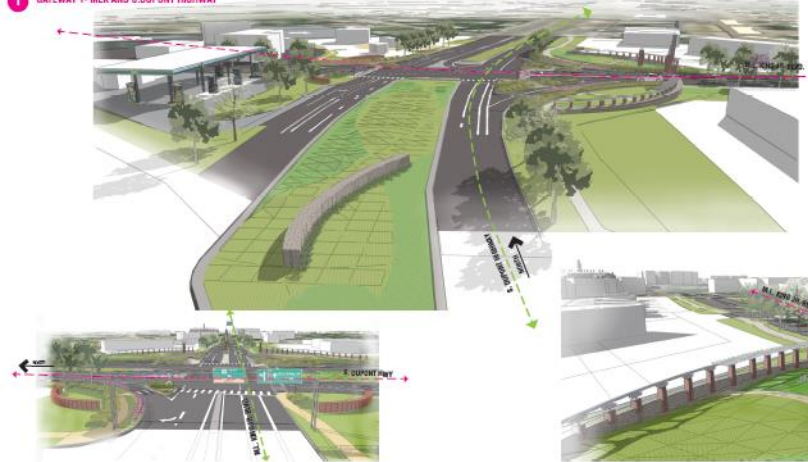


# Gateways

Welcome to  
**Historic Downtown Dover**  
 Delaware  
*Endless Discoveries*



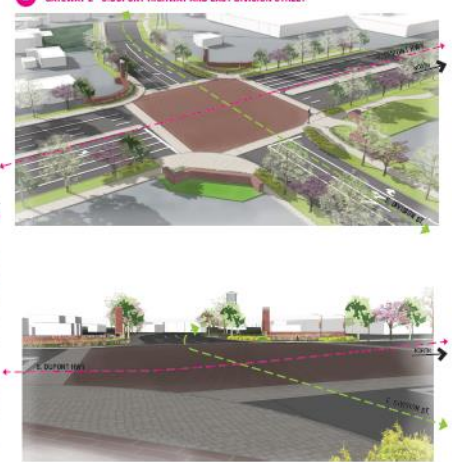
1 GATEWAY 1- MLK AND S. DUPONT HIGHWAY



3 GATEWAYS- KINGSHIGHWAY ST. AND EAST DIVISION STREET



2 GATEWAY 2- S DUPONT HIGHWAY AND EAST DIVISION STREET



# Bicycle & Pedestrian Subcommittee

## Quarterly Update August 2017

### Members

James A. Hutchison, III,  
Chair

Chris Asay

Frances Riddle

Jayne Lesniewski

Dave Moses

Gerry Pennington

Andy Siegel

## Successful May - Bike Months Events

Celebrating May as National Bike Month offered the subcommittee the opportunity to bring awareness to cycling and encourage bike riding. We kicked off with our 5th Bike To Work day event with the highest attendance to date.

During Bike To Work Day, we unveiled the Fit For the First State Bike Rack contest winning design with the 1st bike rack. The Capital School District students who designed the bike rack, along with other

school officials joined the official ribbon cutting ceremony.

The evening of May 17, we hosted our 3rd Ride of Silence in Dover. We had 47 riders in this year's event. A special thank you to Dover Police Department and Kent County EMS services for assisting us with the Ride of Silence again this year.

Fun Rides on Thursday nights was also slated to kick off on May 25, however, thunderstorms kept us from rolling along. Fun Rides have been held

the last Thursday of each month thru August, leaving from The Green and returning just in time for riders to enjoy that evening performance.

While these events are great in May, we continue to look for ways to encourage biking and walking activities throughout the year.



[www.cityofdover.com/bicyclists-and-pedestrians](http://www.cityofdover.com/bicyclists-and-pedestrians)

## Bicycle Friendly Community

The Bicycle Friendly Community program is a roadmap to improving conditions for bicycling and guidance to help make our community more bikeable. The League of American Bicyclists measure key metrics of current Bicycle Friendly Communities which they call the **Building Blocks** of a Bicycle Friendly Community. These building blocks include: **High Speed Roads with Bicycle Facilities, Total Bicycle Network mile-**

**age to Total Road Network Mileage, Bicycle Education in Schools, Share of Transportation Budget Spent on Bicycling, Bike Month and Bike to Work Events, Active Bicycle Advocacy Group, Active Bicycle Advisory Committee, Bicycle Friendly Laws & Ordinances, Bike Plan is Current and is Being Implemented, Bike Program Staff to Population,**

In 2013, we submitted our first application which gar-

nered **Honorable Mention.**

Since then, we have worked diligently with our partners on the local, county and state levels to improve the City of Dover's bicycle friendliness

Staff and committee members are pleased that we have made advancements which should secure Dover's Bicycle Friendly designation in 2017. We will be submitting a **second application in August 2017.**

Created in 2012 by the Safety Advisory & Transportation Committee. They have been tasked with identifying gaps in the bicycle and pedestrian network in Dover and identifying areas where the city can work together with local partners to improve the atmosphere for bicyclists & pedestrians.

## Looking ahead

### Walk Friendly Community

We are reviewing the feedback received and will be developing a path forward to ensure our next application will ensure the Walk Friendly Community designation.



### Dover Duathlon

April 14, 2018

### National Bike Month

May 2018

Bike Week - May 14 thru 18

Dover's Bike To Work Day -  
TBD

Ride of Silence - May 16

## Fit for the First State - Bike Racks

Proudly, the **Fit for the First State Bike Rack** contest winning design made it full circle.

Seeing the need for improved bicycle parking the contest solicited designs for a **creative, functional bike rack that reflects the character of Dover** being our state capital.

The subcommittee announced the **Dover High School CAD** class of 2016/17 as presenting



the award winning design. In May 2017, the 1st "Dover" bike rack was installed in front of the **Dover Public Library** which had requested additional bike facilities for its patrons.

Additionally, We have submitted a Letter of Intent with the **People for Bikes** organization to construct & install a **second bike rack** on the **Dover High School campus** by the end of this upcoming school year.



## Bike To Work Day 2018



## Regional Bike Plan Update

The purpose of the **Dover/Kent County Metropolitan Planning Organization's Regional Bicycle Plan** is to provide a plan for improving bicyclists' safety and access to local facilities and services. It is intended to help increase the number of trips made by bicycle and reduce automobile use. The **Regional Bicycle Plan** is designed to coordinate with existing local bicycle plans throughout the region.

Public Meetings were held monthly between July 2016 and June 2017. In addition, two public workshops held in September 2016 and June 2017. Finally, the MPO Executive Director and project consultant met with the Dover Bicycle and Pedestrian Subcommittee in November 2016 and with the Smyrna Planning & Zoning Commission in May 2017 to gather additional input.

The Plan includes recom-

mendations for regional bicycle system projects in the Dover, Smyrna-Clayton, Milford, and Camden-Wyoming areas, as well as ordinances, policies, and programs recommended for implementation by local governments, the MPO, and other entities.

Adoption of the Plan by the Dover/Kent County MPO Council is anticipated in September 2017.

## 2017 Summer Playground Bike Rodeo



A special **THANK YOU** to John Fiori, Bicycle Coordinator, DeIDOT and Emma Cote, Summer Intern DeIDOT

## Walk Friendly Community

Our response from the **Walk Friendly Communities** organization was not what we were hoping to hear. Unfortunately, at this time we did not score high enough to earn a designation.

They did however, highlight some of our **impressive programs** like **Dover Walks**, use of **red light cameras**, and a growing **network of sidewalks**.

They have suggested

increased pedestrian counts to ensure we are getting the full picture of our pedestrian situation within Dover.

The subcommittee plans to review and visit each of the report card recommendations.



## **ACTION FORM**

<b>PROCEEDING:</b> Utility Committee	<b>AGENDA ITEM:</b>
<b>DEPARTMENT OF ORIGIN:</b> Public Works	<b>DATE SUBMITTED:</b> 8/18/17
<b>PREPARED BY:</b> Sharon J. Duca, P.E., Public Works Director / City Engineer	
<b>SUBJECT:</b> Dedication of Rights-of-Way and Public Infrastructure – Garrison Oak Technical Park	
<b>REFERENCE:</b> N/A	
<b>RELATED PROJECT:</b> N/A	
<b>APPROVALS:</b> City Manager	
<b>EXHIBITS:</b> Attachment A – List of Public Improvements to be accepted by the City of Dover Attachment B – Map	
<b>TOTAL BUDGET:</b> <u>\$12,983,000 (Final Budget)</u>	<b>TOTAL EXPENSE:</b> <u>\$13,078,497.53</u>
<b>TIMETABLE:</b> All infrastructure improvements will become the responsibility of the City of Dover upon action by City Council.	
<b>RECOMMENDED ACTION:</b> Acceptance of dedication of rights-of-way and public infrastructure of the Garrison Oak Technical Park. Dedication is to include all of the referenced public improvements.	

### **BACKGROUND AND ANALYSIS**

The City of Dover Department of Public Works requests that all public infrastructure improvements related to the Garrison Oak Technical Park be dedicated to the City of Dover for permanent ownership and maintenance. Attachment A outlines all of the public improvements associated with the development. It should be noted that since the City of Dover was the developer of this project, the contractor, account number and project codes associated with the specific infrastructure are notated. The total construction value of capitalized public improvements is \$12,241,583.21. Attachment B shows the general location and configuration of the subject rights-of-way. All construction aspects have been completed to meet the City of Dover Standards and Specifications for Public Works Construction as well as the Water / Wastewater Handbook. A one (1) year Maintenance Bond and a Release of Liabilities will be submitted as part of the dedication process. Required as-built drawings of the infrastructure as well as videos of the sanitary sewer mains have been provided to staff.

DEDICATION OF RIGHTS-OF-WAY AND PUBLIC INFRASTRUCTURE  
GARRISON OAK TECHNICAL PARK

**ATTACHMENT A**

The following is a list of all public improvements which are to be accepted by the City of Dover:

**Sanitary Sewer Utility Infrastructure**

**Pump Station 14R Infrastructure (George & Lynch) (Construction Value = \$1,679,294 ):**

*(WW1304, 417-6900-569.40-31)*

Pre-Packaged Pump Station and Site Improvements	-	1 ea.
16" DIP CL52 Force Main	-	150 l.f.
10" DIP CL52 Force Main	-	6,745 l.f.
Air Release Manholes	-	4 ea.
5' Diameter Sanitary Sewer Manholes	-	41 ea.

**Pump Station 5 Infrastructure Improvements (George & Lynch) (Construction Value = \$869,736.96):**

*(WW1304, 417-6900-569.40-31)*

Total Pump Station Upgrades and Site Improvements	-	1 ea.
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**Pump Station 14 Demolition (George & Lynch) (Construction Value = \$95,154 ):**

*(WW1304, 417-6900-569.40-31)*

Total Pump Station Demolition and Abandonment	-	1 ea.
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**Gravity Sewer Infrastructure (A-Del) (Construction Value = \$821,267.25 ):**

*(WW1304, 417-6900-569.40-31)*

12" SDR-26 PVC Sanitary Sewer Main	-	1,393 l.f.
10" SDR-35 PVC Sanitary Sewer Main	-	6,063 l.f.
8" PVC Sanitary Sewer Laterals	-	496 l.f. (12 laterals)
5' Diameter Sanitary Sewer Manholes	-	41 ea.

**Water Utility Infrastructure**

**Water Utility Infrastructure (A-Del) (Construction Value = \$933,005 ):**

*(WD1302, 417-6800-568.40-31)*

16" Ductile Iron (Class 52 Cement Lined) Water Main	-	6,685 l.f.
10" Ductile Iron (Class 52 Cement Lined) Water Service Lines	-	390 l.f. (13 series)
16" Gate Valve	-	13 ea.
6" Hydrant Valve	-	12 ea.
Fire Hydrants	-	12 ea.

**Water Utility Infrastructure (CB&I) (Construction Value = \$3,487,660 ):**

*(WD1302, 417-6800-568.40-31)*

1.5 MG Elevated Water Storage Tower	-	1 ea.
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## General Fund Infrastructure

### Storm Water Infrastructure (A-Del) (Construction Value = \$972,680 ):

(ST1304, 147-1800-554.40-31)

Catch Basins	-	54 ea.
6' Diameter Storm Sewer Manholes	-	18 ea.
8' Diameter Storm Sewer Manholes	-	2 ea.
15" Type III Reinforced Concrete Pipe	-	78 l.f.
18" Type III Reinforced Concrete Pipe	-	1,005 l.f.
24" Type III Reinforced Concrete Pipe	-	2,513 l.f.
30" Type III Reinforced Concrete Pipe	-	1,096 l.f.
36" Type III Reinforced Concrete Pipe	-	813 l.f.
42" Type III Reinforced Concrete Pipe	-	275 l.f.
48" Type III Reinforced Concrete Pipe	-	188 l.f.
29"x45" Elliptical Type III Reinforced Concrete Pipe	-	244 l.f.
14"x23" Elliptical Type III Reinforced Concrete Pipe	-	60 l.f.
Flared End Sections	-	10 ea.
12'x6' Box Culverts	-	2 ea.

### Landscaping Improvements (A-Del) (Construction Value = \$129,200):

(ST1304, 147-1800-554.40-31)

Complete and In Place Trees	-	646 ea.
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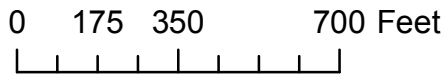
### Street Infrastructure (A-Del) (1.1991 miles) (Construction Value = \$3,253,586):

(ST1304, 147-1800-554.40-31)



Garrison Oak Drive	Station 00+81 to Station 64+12	6,331 l.f.
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# Attachment B

## Garrison Oak Technical Park Right of Ways to be Dedicated to the City of Dover



Date Printed: August 16, 2017  
File: m:\gis\_data\projects\tech\_mxds  
jason\_lyon\_maps\caf\_maps  
ICAF\_GarrisonOak  
Department: Public Works GIS  
City of Dover, Delaware

Legend	
	Area to be Dedicated
	Dover Parcels