Hallandale Beach Strategic Policing Initiative (SPI) Measurement Protocols

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Introduction

The Strategies for Policing Innovation (SPI) Action Plan of the City of Hallandale Beach Police Department (HBPD) develops, implements, and advances an integrated, comprehensive, and community-focused policing strategy. The strategy centers on seeking community guidance and insights, utilizing innovative crime fighting technologies and tools, and executing continual impact assessment and improvements to reduce crime, address community needs and priorities, enhance mutual understandings between residents and police officers, and transform community-police relations and residents' perceptions towards policing and crime prevention measures.

Four community-engaging and crime-reducing policing innovations will be implemented in the City of Hallandale Beach. Specifically, they are: a Quadrant Safety Board (QSB) consisting of community leaders, business owners, and residents; Closed-Circuit Television (CCTV) systems in high violent crime areas in consultation with residents and the QSB; Automated License Plate Readers (ALPRs) in the main arteries of the City; and a Crime Analyst in the Strategic Intelligence Unit (SIU) to examine data generated by the tools, identify and predict crime patterns, and guide crime prevention and reduction efforts. All together, these innovations will cultivate a community-informed and evidence-based policing strategy focusing on addressing community needs and priorities.

The long-term vision of HBPD is the implementation of a Real Time Crime Center (RTCC). The goal of the RTCC is to enhance public safety through expedited police responses and criminal investigations with utilization and integration of all the technological tools and analytical capacities. The activities in this effort will have the immediate effect of increasing community engagement and enhancement of crime prevention tools with the additional benefit of building the infrastructure and relationships needed for such a RTCC as a follow up to this project. While the RTCC is not the focus of this effort, conducting this essential groundwork is a positive externality to the primary project covered by this grant.

A multi-faceted and robust impact evaluation plan has also been developed to continually assess the efficacy of proposed policing strategies, guide improvement efforts, and achieve SPI goals and vision. The various impact evaluation strategies and methods, which are rooted in the academic literature and practical success, balance out effects of each proposed policing tactic and their overall impacts. Although pure randomization is infeasible, the evaluation strategies are built upon vigorous research designs to infer and establish causal linkages between a specific policing initiative and observed outcomes. The impact evaluation strategies also take advantage of currently available datasets and hence impose moderate-low data collection requirements. As a part of the comprehensive, integrated SPI plan, data collected through surveys and focus groups will be communicated back to the community, Hallandale Beach officials and the HBPD thus reinforcing transparency and communication among all parties. Table 1 presents a succinct summary of various impact evaluation methods and data requirements.

Summary of SPI Evaluation Strategies

To assess the impact of the four SPI components, we will conduct an evaluation consisting of several strategies. To capture the combined effects, we compare crime rates at the level of Census block groups (property crimes as well as robbery and aggravated assault) pre- and post-intervention and relative to the comparable City of Dania Beach. We examine the role of the QSB based on community surveys and focus groups. To assess the potential effect of the CCTVs and ALPRs, we employ localized crime data from the areas in which these technologies will be installed and use difference-in-differences methodology. We evaluate the impact of the SIU specialist on operations and outputs utilizing surveys and focus groups with police personnel.

In measuring this holistic and relatively novel approach to combating high violent crime rates, two related but distinct ideas are being measured. First, the objective safety of an area, as measured by call volume, crime stats, and case closure rates. These measures are relatively easily measured, and standard reporting practices already exist for many Uniform Crime Reporting (UCR) categories at both the state and federal levels. The second measurement is more difficult to define and reliably measure. The subjective safety of an area, is how safe people *feel* in the neighborhood, without taking into consideration the objective safety. Walkability scores, comfort with walking alone during the day or at night, fear of victimization and the perceived likelihood of victimization, and attitudes toward police treatment are all measures of subjective safety. This report aims to assist in the creation of measures for the listed components, and to lay out how those measures will report on the performance of the public safety strategy at the conclusion of the grant period.

The overarching goal of the plan is to increase the actual and perceived safety of residents, better the relationship between the community and the police department and ultimately to increase the legitimacy of the police department. To determine the success of the SPI plan regarding both objective and subjective safety, a number of evaluations will be conducted. The quantitative measurement protocol will bring in data from several sources to measure a pre-post effect on crime rate within treatment areas. These data will be used in quasi-experimental studies and statistical review to demonstrate the efficacy of the program, and ultimately be combined with the qualitative analysis to determine the total success of the program.

Proposed evaluation strategies are built upon the strengths of qualitative and quantitative research methods. They focus on not only tangible numerical changes of crime prevention and reduction as a result of tactics developed in the SPI plan, but also intangible perceptual changes in trust towards and collaboration with HBPD. Specifically, five evaluation strategies will be utilized and they are community-based survey, law enforcement officer survey, focus groups, quasi-experiments, and difference-in-differences (DID) methodology. Each of the five methods has its own strengths and when combined, they will provide a more comprehensive and holistic view on the impacts of HBPD's SPI plan.

It is commonly agreed that a fully and purely randomized experiment on crime prevention and reduction initiatives is infeasible and unattainable. The proposed quasi-experimental and DID approaches innovatively utilize multiple controls within and outside the City of Hallandale

Beach in order to strengthen and maximize internal validity of the evaluation research. In other words, a causal linkage between policing tactics proposed in the SPI plan and observed, desired outcomes, if any, can be inferred with reasonable confidence.

Strategies that are shown as ineffective will be adjusted and potentially replaced by expanding effective strategies and/or implementing new strategies in conjunction with the Quadrant Safety Board. The HBCRA and the City will sustain components of this project that are proven to be effective after the grant award period ends. It is estimated that two (2) years are needed to implement every phase of the SPI Plan.

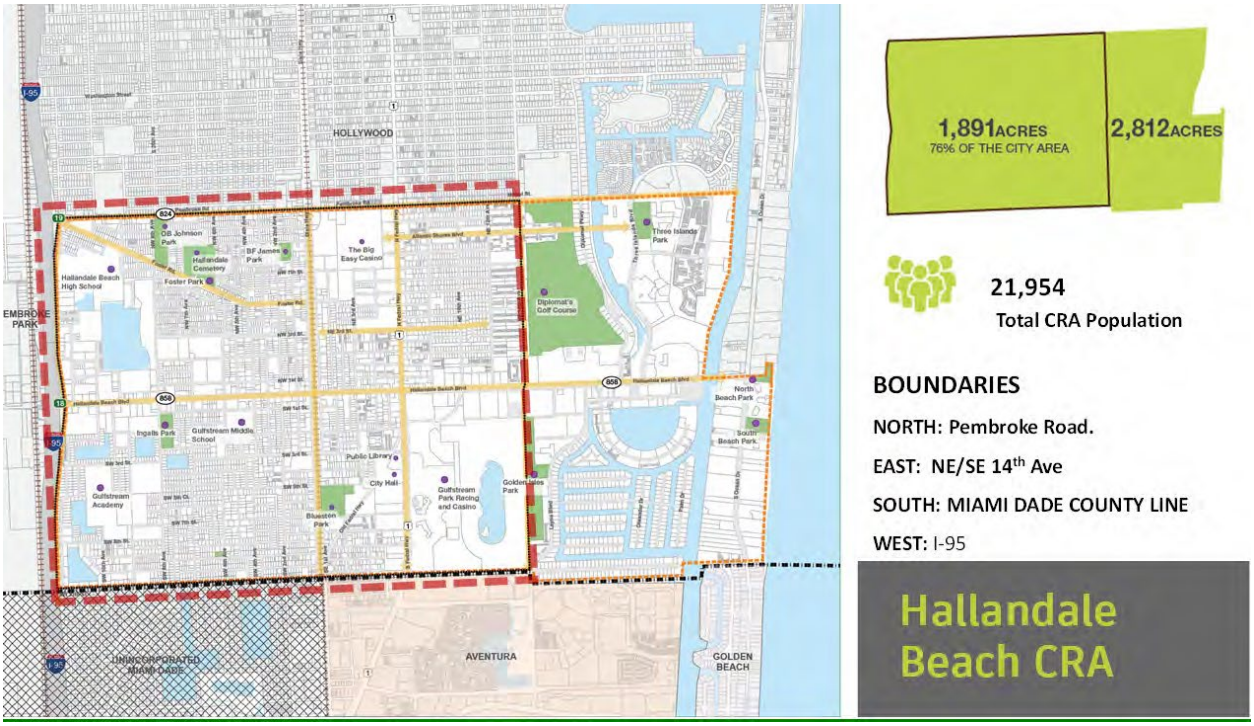
Table 1: Summary of SPI Evaluation Strategy

SPI Component	**Data Sources**	**Evaluation Strategy**	**Goal**
Quadrant Safety Board (QSB)	Community and police surveys; focus groups	Examine stakeholders' perceptions of QSBs Community-based survey; focus groups	Increase community engagement Increase public perceptions of police, legitimacy/attitudes
CCTVs and ALPRs	Localized UCR crime data	Conduct quasi-experimental Difference-in-Differences analysis	Decrease crime rates Increase case closure rates
Strategic Intelligence Unit (SIU) specialist	Police surveys; focus group	Examine police personnel's perceptions of SIU specialist surveys; focus group	Apply intelligence led policing strategies Use data to guide police and QSB/ community decision making
Total impact	Crime and clearance rates; community and police surveys	Conduct quasi-experimental matching with Census block groups in the City of Dania Beach. Examine perceptions of safety and police relations from pre and post surveys. Additional experimental design will evaluate impact of active outreach vs. passive outreach.	Conduct grant initiative using replicable principles. Demonstrate efficacy of community engagement strategies. Demonstrate ability to coordinate intelligence led policing principles with community oriented policing principles.

City of Hallandale Beach Overview

The City of Hallandale Beach covers 4.22 square miles and contains approximately 40,000 residents. Situated on the southeast most corner of Broward county, this diverse city is divided into four directional quadrants (NW, SW, NE, SE) and each quadrant has its own varied and yet distinct population, crime problems, and needs of city resources.

The HBCRA covers approximately three-square miles or 76% of the City's acreage and 59% of the City's permanent population, as shown in chart below. Note that the City, especially the area outside the HBCRA, has a large seasonal population which is not counted in the Census calculations. As of 2018, the HBCRA contained 21,954 permanent residents. The HBCRA is estimated to be 54.2 percent White and 34.4 percent Black residents. Of the HBCRA's permanent residents, 41.6 percent are estimated to be of Hispanic origin. The median household income for HBCRA residents is estimated to be $32,718 compared to the City's $36,103. Approximately 38 percent of the households earn less than $25,000. In general, the planning area has a high percentage of Residential properties (43.35%) followed by Commercial land uses (30.1%). It also has about 5% of underutilized Commercial/ Industrial plots, which account for about 40 Acres.



The initial analysis of crime patterns and HBPD policy and practice by agency command staff and other officers, including myself, revealed several glaring and troubling deficiencies within the HBPD. First, the HBPD lacks the institutional knowledge and practices to research and analyze crime data. Second, the HBPD does not possess or utilize any crime analysis software to review or develop strategies to combat crime. Third, the HBPD relies on a reactionary culture of overwhelming an area with personnel after an incident or pattern was identified. Hence it lacks an official, coherent, or sustained strategy to combat any form of crime, let alone violent crimes. Fourth, the HBPD does not have a culture of effective communication either internally

or externally. Within the many subdivisions of the 100 sworn member police department (See Appendix 1 for an organizational chart), The HBPD is part of several task forces to include Internet Crimes Against Children, FBI Fraud Unit, ATF Task Force, Operation Wasted Day (FBI and DEA Task Force), DEA Regional Group, Blue Lightning Strike Force, U.S. Marshals Violent Offender Task Force, and the Multi-Agency Homeless Task Force. The HBPD is made up of eight command staff members to include a Chief, Assistant Chief, the Uniform Patrol Division and Support Services/Investigations Division who are each overseen by a Major and four captains. Currently, the city has a single civilian employee that does some limited data analysis and reporting for command staff, along with some advisory work for detectives. This employee is not a trained statistician, and the department does not have software capable of conducting even rudimentary data analysis or GIS crime mapping.

The agency has little communication among these different divisions. Uniform Patrol Police Officers rarely gain feedback or hear any information regarding ongoing investigations and/or crime patterns. Nor do officers have any method to communicate further information regarding crime patterns or suspects. Externally, the HBPD does not regularly or formally communicate with the community they serve regarding criminal activity and/or what is being done to address it. Like the department's reactionary crime fighting culture, the department only has community meetings after an incident resulting in public outcry. Finally, the HBPD does not use any modern technology or tools such as shot spotters or extensive camera systems within the HBCRA to help combat or to gather information regarding violent crime. The only technologies used by the HBPD are 185 CCTV cameras located only on city properties around the City and 6 ALPRs in the City's two safe neighborhood districts which are outside the HBCRA. Each of these applications are outside of the bounds of this proposal and do not provide information on most crimes since few are committed on city properties.

As a result, HBPD partnered with the HBCRA to develop a Public Safety Strategy intended to utilize technological innovations, crime analysis and meaningful community policing in order to provide a better and more efficient service to residents. The HBCRA is a separate legal entity, from the governing Hallandale Beach City Commission, which operates within the boundaries of the City of Hallandale Beach. The HBCRA focuses primarily on the redevelopment and implementation of capital improvements designed to promote economic development within that geographic area where the physical and economic conditions meet the definition of slum or blight according to the Florida Statute.

The HBCRA board, which is composed of the City Commission, promised funding through an Interlocal Agreement in the amount of $1.1 million dollars to address crime concerns within its boundaries. The funds would help create a Quadrant Safety Board (QSB) designed to foster communication between the police and community, police community educational courses intended to decrease the likelihood of citizen victimization, police de-escalation training to enhance police officers' incident response skillset, the installation of Automated License Plate Reader Cameras (ALPRs) and the creation of a Strategic Intelligence Unit (SIU). The goal of the SIU will be to gather criminal intelligence and data collection to guide police operations. In August of 2019, the strategy was presented to both the HBCRA Board and City Board of Commissioners and approved for implementation.

These two governing bodies will oversee the implementation of new policies in association with the SPI plan, but at present have no daily administrative impact on operations or program goals. The SPI plan being considered for a grant intends to address many of these problems by implementing a number of personnel, training, technology, and organizational principles. Specifically:

- Creation of Quadrant Safety Boards (QSBs) made up of civilian residents and business owners within Hallandale Beach, to coordinate enforcement activities and programs with the public and to increase communication between the police department and community.

- Procurement and installation of approximately 75 CCTV cameras.

- Procurement and installation of 48 Automated License Plate Readers (ALPRs).

- Hiring of a full-time crime analyst as part of the SIU, to lead the initiative in advancing intelligence-led policing by providing data and guidance based on crime patterns. This analyst will play an integral role within the Strategic Intelligence Unit (SIU) using Intelligence-led policing and predictive policing to combat ever changing crime trends, and to coordinate response between Patrol Operations and the Investigative Services Division.

Evaluation Strategies

Quantitative Evaluation Strategies

Descriptive Trend Analysis

To begin, the report will include descriptive trend analysis and will be conducted by comparing longitudinal reporting of Florida Uniform Crime Reporting (UCR) annual reports for three predetermined comparison groups. The uniformity of reports allows for highly valid and reliable analysis over time (Further discussion of these data sources can be found in appendix 2). These groups are as follows: Hallandale Beach Over-Time, Neighboring Cities, and Local Statically Similar Cities. Each of these comparison groups is intended to account for weaknesses in the other two, and reporting the three together will impart a better understanding to the reader than taking any single comparison by itself.

Hallandale Beach UCR Reported Crime Statistics Over-Time (2011-2019)

Using Florida Department of Law Enforcement (FDLE) Uniform Crime Reporting (UCR) information, the total annual reported number of Homicides, Rapes, Aggravated Assaults, Robberies, Burglaries, Larcenies, and Vehicle Thefts can be easily obtained. These numbers can be compared over time for a baseline comparison, and trends in crime rates can be observed. Using these figures also makes the figures easily compared to other Florida municipalities, as the uniform nature of the reports makes the comparisons relatively quick and valid. UCR data has been obtained and collated from 2011-2019, with each of the reported crime stats laid out to demonstrate the overall trend within the city.

However, the broad categories assigned to these UCR stats does not allow for finer analysis of changes in crime patterns within Hallandale Beach. The plan can make use of internal reporting through the Records Management System (RMS) software to make basic assessments and analyses of localized crime rates. A block by block analysis is necessary within the City of Hallandale Beach, both historically and moving forward, to determine the localized effects of CCTV cameras and LPR installation at specific sites. Currently, the Hallandale Beach Police Department does not have the requisite software or professional expertise to conduct a thorough GIS style analysis of crime rates. An integral of the SPI plan involves hiring a dedicated data analyst and procuring the technology and software necessary to do a more complete analysis of crime rates moving forward.

Neighboring Cities

A strong comparison group for the SPI plan is using geographically local areas to compare against. As the plan involves installing a relatively large number of cameras and LPRs in a relatively small area, there should be a stark contrast between the treatment area and the immediately surrounding municipalities. The City of Hallandale Beach is approximately 4.2 square miles, and the majority of the plan's treatment area falls within approximately 2-3 square miles.

To obtain a sufficient and similarly sized comparison group in the immediate area, cities with a 1 square mile area within a 3 mile radius are being used as a comparison group.

The cities identified for this group are the cities of: Aventura, Dania Beach, Golden Beach, Hollywood, Miami Gardens, Miramar, North Miami Beach, Pembroke Park, Sunny Isles Beach, and West Park. This diverse group of cities in north Miami-Dade County and south Broward County will serve as an interesting group when conducting analysis, as the cities represent nearly the full range (from highest to lowest) in every examined category, with Hallandale Beach falling on or near the average in every category.

Distribution of 11 cities comprising Neighboring Cities Comparison Group				
	Low	Average	Hallandale Beach	High
Median Household Income	$35,236	$48,580	$38,319	$70,005
Per Capita Income	$14,938	$28,483	$27,031	$55,715
% of Population below Poverty Line	10.20%	17.40%	18.70%	26.70%
Population Density, residents per square mile	3,926	8,852	9,439	22,797
Robbery – Adjusted for Population	3*	11.5	14.3	21.3
Aggravated Assault - Adjusted for Population	7.7*	26.4	26.9	54.6

** The low category for both Robbery and Aggravated Assault for Golden Beach are both 0, however, the population of Golden Beach is so low that this is expected, and not necessarily useful. Golden Beach will be an interesting, but likely less useful comparison than most of the group for this reason.*

- Strengths of comparison group:
  These cities are Hallandale Beach's immediate neighbors, and so many of the geographic and demographic features in Hallandale Beach will be shared with these other cities. Many of these municipalities also share crime patterns with Hallandale Beach, though there are many disparities in types of crime city by city.

- Weaknesses of comparison group:
  While these cities are proximally located to Hallandale Beach, there is a vast disparity in income levels with Golden Beach being one of the wealthiest municipalities in the tri-county area, and West Park being one of the poorest. As should be expected, the economic development of individuals, businesses and government entities within these municipalities mirror the resources available to each city. While this serves as a challenge, there is also an opportunity for further analysis, as each of these diverse socio-economic sub-communities that exist within Hallandale Beach has similarities

with our demographically and economically diverse neighbors. This measure is not expected to have an impact on the current grant or study, but the resulting increase in ability of Hallandale Beach to analyze this information could lead to promising future research.

Local Statistically Similar Cities

To determine a group of statistically similar cities, the entire group of 58 municipalities represented in the UCR and Census data sheet were considered and descriptive statistics were run to look for similarities and differences in both demographics and violent crime rate. The factors considered for these tests were: median household income, per capita income, % of population living below the poverty line, population density, aggravated assault (adjusted for population) and robbery (adjusted for population). Cities were ranked from small to large in each category, and a group of 20 cities (10 above and 10 below) Hallandale Beach were considered. Of 58 total municipalities considered in Broward and Miami-Dade counties, considering 20 at a time equates to approximately 1/3 of cities in each category. Cities that were both represented in 3 of the 4 demographic categories and represented in at least one of the violent crime categories were retained as a comparison group. All seven crime categories reported on UCR reports were considered as well. Fifteen cities met these criteria, approximately a quarter of municipalities in the two counties. This comparison group contains a diverse mix of cities, but its composition and statistical breakdown are quite different from the Neighboring Cities comparison group. The resulting comparison group comprises: Dania Beach, Davie, Deerfield Beach, Hollywood, Homestead, Lauderhill, Lauderdale Lakes, Miami, Miami Springs, North Miami, North Miami Beach, Oakland Park, Plantation, Tamarac, and West Park.

Distribution of 16 cities comprising Statistically Similar Cities Comparison Group				
	Low	Average	Hallandale Beach	High
Median Household Income	$ 36,372	$47,575	$38,319 (3 of 15	$71,721
Per Capita Income	$16,581	$25,459	$27,031	$36,216
% of Population below Poverty Line	%9.6	%17.9	18.70%	%24.6
Population Density, residents per square mile	2,987	6,757	9,439	13,686
Robbery – Adjusted for Population	6.0	15.9	14.3	39.75
Aggravated Assault - Adjusted for Population	11.95	33.2	26.9	60.47

- Strengths of comparison group:
  These cities are the most similar to Hallandale Beach as calculable using available information. The comparison group is large enough and varied

enough that the average effect over time should be relatively constant, and any measurable change from the SPI treatment may be attributable to the plan. Further difference in differences tests may be conducted to approach causality.

- Weaknesses of comparison group:
  The broad nature of reporting statistics being used does not allow for a finer analysis of why the differences exist. Underlying differences may account for some of the variance between municipalities, and these variances may cause our analysis to falsely conclude upon positive or negative results of the SPI protocol. However, using a number of comparison cities, rather than a single comparison city, should allow for the variances to average out and make the group useful for quasi-experimental research purposes.

Currently Available Measurement for all comparison groups

UCR and Census data has been obtained and collated from each city from 2017 to 2019. The exception is the city of Golden Beach, which lacks demographic information obtained from the census report, as the city has less than the 5,000 required residents for data to be obtained or reported.

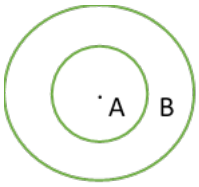
Difference in Differences

These measurement protocols are taken directly from the SPI proposal created by the research partners at FIU, they are included here for completeness of the evaluation plan, and have been taken directly from that grant proposal. These evaluations focus on the immediate area surrounding treatment zones.

CCTV Surveillance Cameras and ALPRs are all fixed in locations, so their effects may likely be highly localized. Assessment of their respective effectiveness can be achieved by using the same research design, same causal identification strategy, and same methodology. The method of difference-in-differences (DID) will be applied for efficacy assessment. Two DID designs will be implemented, specifically, a “near-far” approach and an “early-late” approach.

The “near-far” approach is a standard “ring” DID design that compares crime rates of various crime types within a treatment radius of a CCTV camera or an ALPR to crime rates within a larger control radius. In other words, this approach takes advantage of spatially localized and decayed effects of a CCTV camera or an ALPR and compares crimes in areas very close to a camera or an ALPR to crimes in areas that are slightly farther away. The identification assumption of the “near-far” approach is that in the absence of CCTV cameras or ALPRs, crimes would have changed in parallel in the treatment and control areas. This assumption is more likely to hold with small ring radii that contain a relatively homogeneous area because larger radii may introduce bias when constructing control areas that are dissimilar to treatment areas. For CCTV cameras, the

baseline treatment radius will initially be set to 500 feet (roughly working range of high-definition CCTV surveillance cameras), while the control radius to 1,500 feet. For ALPRs, the baseline treatment radius will initially be set to one mile while the control radius to two miles. We will investigate the validity of our identification assumption by examining monthly crime trends prior to installation of CCTVs and/or ALPRs and consider alternate radii in robustness checks.



CCTV cameras and ALPRs will be mounted on electricity poles of Florida Power & Light (FPL) and a single FPL pole may have multiple cameras and/or ALPRs. This is more cost-effective than using separate locations for each individual CCTV and ALPR and likely to be more impactful because multiple angles can be captured simultaneously. Further, power supply makes the use of poles valuable, and the large number of poles in the area will only minimally limit the possible locations of cameras. This approach requires that the DID rings are centered around FPL poles instead of individual cameras or ALPRs. When a given single pole has both cameras and ALPRs, their respective effects can be differentiated by different types of crimes. ALPRs are more closely related to crimes of traffic violations and stolen vehicles, while CCTV cameras are more associated with violent crimes and property crimes other than stolen vehicles.

The “near-far” approach focuses on identifying geographically localized effects, but it may be contaminated when crimes are displaced from the inner circles (treatment areas) to outer rings (control areas) after the installation of cameras and ALPRs. The other DID design, an “early-late” approach, will then be utilized. The “early-late” strategy compares crimes in areas around CCTV cameras or ALPRs that are installed in an early batch to crimes in areas around late installations. This strategy takes advantage of different installation timing or schedules, which can result from either intentional decisions and priorities or idiosyncratic factors, such as availability of parts and/or labor.

The displacement of crime can be addressed in several ways. The movement of crime from the inside to the outside ring would be an indication of displacement. Improvement in pole areas can be put in relation to crime development in the entire city. If pole areas show less crime, but the average rates for the entire city remain the same, this would be another indicator of displacement within the city. Essentially, we will be able to contextualize potential improvements in crime rates in pole areas by relating these numbers to broader crime trends in the entire city.

The identification assumption of the “early-late” strategy is that crimes would have changed in parallel near areas of different installation schedules in the absence of installation of CCTV cameras or ALPRs. All sites for installation in this “early-late” strategy, however, share characteristics that warrant installation of CCTV cameras or ALPRs and are equally deserving based on predetermined criteria. There are no matched counterfactual areas or randomly assigned control areas during the implementation of this strategy. This identification assumption will also be tested by comparing and showing crime trends and differences between neighborhoods near treatment and control installation sites.

Qualitative Evaluation Strategies

Community-based and law-enforcement surveys

Qualitative and quantitative evaluation protocols will be based on surveys administered to both the community and department personnel, and pre - post measurement of perceptions over time will be compared to the timeline of treatment phases. Surveys were developed with items drawn from surveys and principles cited by the International Association of Chiefs of Police (IACP) as widely recognized community surveys. Many questions were taken directly from these surveys, and tailored to Hallandale Beach and our residents; other questions were developed for the project's research questions, and the specific metrics being measured here. In addition to a core of questions that will be consistent across community and police surveys, the latter will include specific questions about license plate readers, surveillance cameras, the intelligence unit as well as perceptions of organizational culture and the way the department is operating. This survey will include questions that identify direct officer involvement with these efforts.

Consistent with this plan's intent to garner better relations with the community, the survey pool will be developed in cooperation with community leaders and organizations. To supplement an email list culled from contact lists within Hallandale Beach governmental agencies, local faith-based organizations, homeowners associations, businesses and our three Hallandale Beach schools (Gulfstream Early Learning Center, Gulfstream Academy of Hallandale Beach, and Hallandale Beach High School), will be integral to developing email lists and fostering ongoing interaction between the HBPD, evaluation team, and the community. A social media campaign may also be utilized, as the city has an extensive list of "followers" on Facebook and Instagram. Once email lists are developed, email surveys will be sent using Qualtrics at the beginning of the project, and then again annually. Longitudinal evaluation of survey responses will be compared to quantitative evaluations and treatment timelines to look for correlations between implementation and changes in perceptions.

The community survey will ask both broad and specific questions related to the grant. Topics will include overall perceptions of community-police relationships, neighborhood safety, and effectiveness of the police force. More specific topics will include questions related to cameras (pooling both tag readers and surveillance cameras as citizens are unlikely to differentiate the two) and HBPD. This will allow for comparisons of whether citizen perceptions about safety and police actions change over the course of the implementation. The surveys will include broad demographic questions on household income, gender, age and race/ethnicity so that the study can identify if there are specific segments of the community with different perceptions and concerns. In addition, we will include a question that identifies whether people are actively involved in community-police relation efforts or local government. This will assist in differentiating between active community participants and passive members.

The surveys will include two additional ways of engaging. First, we will also include an open-ended space for people to provide any additional information or thoughts on these issues. Second, we will ask people whether they want to volunteer to participate in a focus group interview.

We will use a cluster sampling, where we will reach out to leaders of community organizations including religious organizations (preliminary analysis shows 25 organizations),

schools, and other organizations such as the local rotary club. Cluster sampling allows us to identify a list of community-representative organizations and locations, compile email lists with the help of these organizations, and try to survey every individual on these lists. Through these organizations, we will ask for any member emails or cell phone numbers, so that we will conduct the surveys electronically using Qualtrics software. Making sure that the selected locations are representative of the community at large will make help ensure that our sample will be representative. While random sampling is often the preferred data collection strategy, this approach has the drawback that we could only survey a random sample of our email addresses, thereby, unnecessarily reducing our sample size and by extension the sample's representativeness.

With the community survey we aim for a sample of 500+ respondents. In such a sample, effect sizes as low as r=0.10 will be statistically significant at a level of $p<0.05$, and assumptions about the normality of residuals in regression analysis can be largely ignored (Lumley at al. 2002). The law enforcement survey will be based on a census of all 85 sworn officers. This survey will be included in the department's Power DMS a training software, become mandatory, and ensure a response rate of nearly 100%. While the officer sample is significantly smaller (an "r" of 0.25 is statistically significant at $p<0.05$) than the community sample, we will be able to pool responses (hence, increase sample size for statistical calculations) on questions asked to both groups in order to compare discrepancies in perceptions across survey groups.

Initial drafts of both community and employee surveys were completed and are undergoing revisions within the evaluation team.

Focus groups

We will conduct five focus groups to obtain more in-depth and nuanced information after implementation. Our goal is that each focus group has 8-12 participants. Each focus group will bring together specific sets of people:

- Law enforcement officers that work directly on implementation efforts
- Law enforcement officers that are not directly involved with implementation
- Elected officials and administrators outside of law enforcement in Hallandale Beach
- Community members that are actively engaged in police-community relations efforts
- Community members that volunteer through the survey instrument.

Follow-up communications

At the end of the evaluation, we will conduct a community meeting discussing our findings and recommendations moving forward.

Experiment on the impact of community outreach

To complement our pre- and post- survey design we will also conduct an experiment on the impact of active community outreach compared to passive community outreach. The sample will be broken into a treatment and control group. Assignment to the groups will be random. The

treatment group will receive outreach emails that let them know about upcoming QSB meetings, invitations to attend meetings, summaries of discussions in previous QSB meetings, updates on HBPD implementation activities such as installing cameras, and progress reports. In essence, the treatment group will receive active outreach efforts/emails, while the control group will not. All participants will have access to the QSB website and all social media posts. The evaluation team will assess if active outreach influences the decision to participate, perceptions of police activity, perceptions of police-community relations, and perceptions of safety.

Ideally, the sample will have sufficient numbers of respondents that respond to both pre- and post- surveys to allow for measuring the changes in individual responses. However, in the event that the sample does not permit those links, a comparison of the post responses alone will still yield sufficient information to conduct a quantitative analysis of the impacts of active outreach.

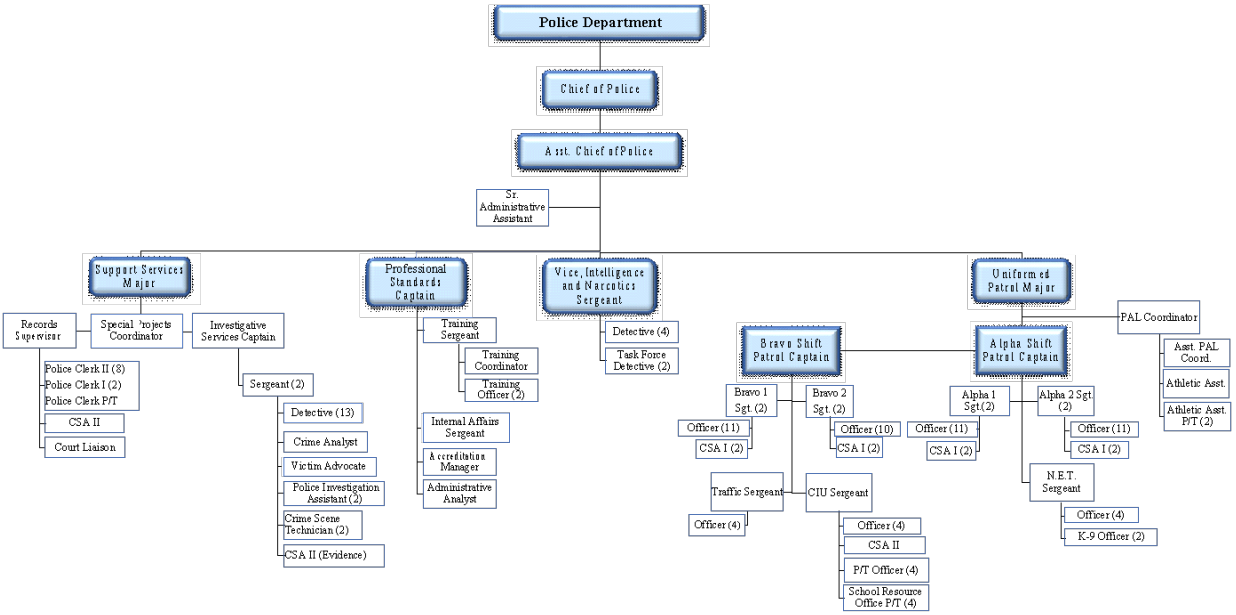
Evaluation Challenges Imposed by COVID-19

and Contingency Plans

The COVID-19 pandemic has and will continue to pose challenges to implementation of HBPD SPI plan and its evaluation efforts. Furthermore, heightened tension, as a result of the death of George Floyd, between police and communities will undoubtedly affect perception towards police-community relationships. Such evaluation challenges include:

1. "Stay at home" and social distancing orders since mid-March 2020 have created tremendous difficulties in inviting and recruiting participants to the community-based survey, the law enforcement officer survey, and focus groups. Though the two proposed surveys will be carried out through online platforms, initial face-to-face interactions with community leaders and potential participants for building rapport are critical. Without such initial "getting to know you" meetings, constructing a representative sample may take longer time. The contingency plan is an Internet and social media campaign that will be planned as the "stay at home" order is lifted.
2. "Stay at home" order has dramatically changed crime patterns in the City, not only in the total number of crimes, but also crime types and potentially spatial distribution of various crimes. Consequently, the "pre" SPI plan scenario is unlikely a valid baseline for assessing impacts of the SPI plan. Specifically, the pre-SPI crimes are systematically underreported and therefore estimated impacts of SPI plan may likely be exaggerated. The contingency plan is to look farther back into earlier years and establish a more valid baseline though crime averages of a longer time period.
3. Implementation of HBPD SPI plan is subject to "reopening the economy" and to how quickly each individual vendor could resume their operations. For example, installations of CCTVs and tag readers depend on working schedules of Florida Power and Light (FPL).
4. Second wave of COVID-19 may likely occur in late 2020, as predicted by many public health experts. If this happens, further delays are inevitable.
5. Heightened tension, as a result of the death of George Floyd, between police and communities particularly minority residents will undoubtedly have a long-term effect on perception towards police-community relationship. Under this "macro" environment, any positive impacts of the SPI plan on perceptual changes of the community and residents may not be captured by the community-based survey.

Hallandale Beach Police Department Organizational Chart



Appendix 2

Data Used

Information is gathered from several sources to create these analyses.

- **Florida UCR Crime Stats**
  "FDLE's Uniform Crime Report (UCR) system allows us to provide standardized reports on crime statistics based on data gathered from across the state." (FDLE Website***) This data is gathered and reported on an annual basis, using consistent metrics and methods. As it is standardized across reporting agencies, both the validity and reliability of the data is high. Returning to this source year after year will provide a consistent base of information, and any changes to the reporting structure will be uniform across all reporting agencies.

- **Census Data**
  Information on Median Household Income, Per Capita Income, and % of Population Living below the Poverty Line gathered from the US Census Bureau "quick facts" charts located at (https://www.census.gov/quickfacts/fact/table/US/PST045219). As this is a federal organization that has consistent protocols in place, and uniformly reports on all areas of the US, the data gathered here is both highly valid and reliable. Returning to this source as necessary to update demographic information, or gather new points as desired, will continue to be a good source of information for measured groups.

- **Internal Crime Stats**
  While this source of information may be the one the Hallandale Beach Police Department has the greatest direct control over, it is also, currently, that with the highest concern about validity and reliability. There are theoretically rules in place about how incidents are recorded and reported, but there are large grey areas where training and discretion of individual officers may change the end result of the report. Whether a report is classified as an aggravated battery or attempted homicide, an aggravated assault or simple assault, may not be uniform. Further training to ensure uniform reporting is recommended.

  There is some longitudinal data within our Records Management System (RMS) software, and some ability to search by incident. However, it is difficult, if not impossible, to search for critical information within the system, such as if a shooting occurred in the incident. To determine the number of shootings that have taken place in a given time frame, one would have to go through the Computer Aided Dispatch (CAD) report and look for any incident that could ostensibly contain a shooting. These classifications include, in no particular order: information report, aggravated assault, aggravated battery, homicide, shooting, domestic incident, disturbance, and suspicious incident. With over 40,000 cases a year initiated in Hallandale, this requires an intent from someone within the department to keep track of, or a significant amount of time from an analyst. Hiring a full time crime analyst to track this kind of information along with GIS style reporting, and procuring the requisite software and technology, is part of the SPI plan and as the protocols progress, greater ability to measure and report on these kinds of information will open up to the research team.

Currently, it is possible to conduct a block level analysis of crime patterns within Hallandale Beach using our internal reporting. This ability is still under development and will be further reported on when completed.

- **Other agencies**
  The research team is working on obtaining further information from potential comparison group agencies regarding their internal crime reporting. Without spending too much time discussing the possibilities, the ability to do more in depth, block level comparisons between increasingly similar areas only increases the validity of the research being conducted. Also, increasing the frequency of reporting would allow for a more accurate analysis of crime trends, and weekly or monthly comparisons of these areas to treatment zones, timed with the installation of cameras and LPRs, would further increase validity and allow the research time to approach finding causality.