

**CITY OF BIRMINGHAM
ADVISORY PARKING COMMITTEE**

CITY COMMISSION ROOM

151 MARTIN ST., BIRMINGHAM, MI

(248) 530-1850

REGULAR MEETING AGENDA

WEDNESDAY, SEPTEMBER 4, 2019, 7:30 A.M.

1. ROLL CALL
2. RECOGNITION OF GUESTS
3. APPROVAL OF MINUTES, MEETING OF JUNE 12, 2019
4. STRUCTURAL ASSESSMENT OF PARKING GARAGES: REQUEST FOR PROPOSALS - ACTION
5. FUTURE PARKING DEMAND STRATEGY – DISCUSSION
 - a. ALTERNATIVES MATRIX
 - b. PARKING DEMAND AND PERMIT SALES
 - c. PARKING MITIGATION PLAN
 - d. METERED PARKING: EVENING LIMITS
6. MOBILE PARKING APPLICATION DEMONSTRATION – DISCUSSION
7. UPDATES: ON STREET VALET PROGRAM, GARAGE RESTRIPING, METER NOTIFICATIONS
8. PARKING UTILIZATION REPORT AND FINANCIALS
9. MEETING OPEN FOR MATTERS NOT ON THE AGENDA
10. NEXT MEETING: OCTOBER 2, 2019

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City of Birmingham
ADVISORY PARKING COMMITTEE
REGULAR MEETING

Birmingham City Hall Commission Room
151 Martin, Birmingham, Michigan
Wednesday, June 12, 2019

MINUTES

These are the minutes of the Advisory Parking Committee ("APC") regular meeting held on Wednesday, June 12, 2019. The meeting was called to order at 7:36 a.m. by Chairman Al Vaitas.

1. ROLLCALL

Present: Chairman Al Vaitas
Vice-Chairperson Gayle Champagne
Anne Honhart
Steven Kalczynski
Judith Paskiewicz

Absent: Lisa Krueger
Jennifer Yert

SP+ Parking: Sara Burton
Jay O'Dell

Administration: Tiffany Gunter, Asst. City Manager
Laura Eichenhorn, Transcriptionist

2. RECOGNITION OF GUESTS (none)

3. MINUTES OF REGULAR APC MEETING OF MAY 1, 2019

Chairman Vaitas noted that on the first, second, and third pages statements attributed to Ms. Krueger were actually statements by Dr. Paskiewicz.

Elsewhere in the minutes, 'Ms. Paskiewicz' should be amended to read 'Dr. Paskiewicz'.

On the final page of the minutes 'Future APC Meters' should be amended to read 'Future APC Meetings'.

Motion by Ms. Champagne

Seconded by Ms. Honhart to approve the minutes of the regular APC meeting of May 1, 2019 as amended.

VOICE VOTE

Yeas: Champagne, Honhart, Kalczynski, Paskewicz, Vaitas,
Nays: None

Motion carried, 5-0.

4. SMARKING – DATABASE PRESENTATION - UPDATE

Motion by Ms. Honhart

Seconded by Ms. Champagne to receive the Smarking Database Presentation as the fourth item of the agenda.

VOICE VOTE

Yeas: Honhart, Champagne, Paskewicz, Kalczynski, Vaitas
Nays: None

Motion carried, 5-0.

Assistant City Manager Gunter introduced the item.

Kurt Wedel, Chief Revenue Officer of Smarking and Chris Hayes, Birmingham's Account Manager with Smarking presented an overview of Birmingham's Smarking database to the APC via phone and digital meeting. Members of the APC were able to both hear explanation from the Smarking team and see virtual presentations of the database on the projection screens and television monitor in the Commission room.

The Smarking team explained:

- Smarking can provide real-time parking data, data on parking trends, and likely future parking trends. These data can be broken down into subareas, or zones, as well. Any area equipped with Smarking sensors can be accurately represented.
- Birmingham can share past parking trends with the public so visitors can better anticipate where parking is more likely to be available at any given time.

Chairman Vaitas granted Lawrence Imerman of the Birmingham Senior Men's Club permission to ask a question of the Smarking team.

In reply to Mr. Imerman, the Smarking team said it would be possible to notify groups of people via email that an unusual amount of parking congestion is anticipated at a certain time, in a certain area. This would allow group members to either plan more time to find parking in said area, or to give them the opportunity to seek less occupied parking elsewhere in the City.

Mr. Kalczynski noted that Townsend events can have a significant impact on parking availability near the Townsend, so he wondered if the Townsend could provide the City with event information in order to make the parking availability information to the public more accurate.

In reply to Mr. Kalczynski, Assistant City Manager Gunter explained that the City would have to explore further if there was an appropriate way to publicize the projected parking impacts of future events at the City's hotels and gathering spaces. She speculated that the provision of future parking information could possibly be made available on the City's website and messaging on the app. She stated that the main intent of the Smarking data was to be able to create a mobile parking application with real-time information on available parking both on-street and in the garages.

Assistant City Manager Gunter explained that the mobile parking application would not be able to notify users of out-of-order parking meters.

The Smarking team continued:

- All data collected by Smarking will remain available to Birmingham indefinitely.
- Parking passes issued by businesses, residences, or the City government allow for the tracking and analysis of different groups' usage of the garages at different times and over time.
- Smarking can show trends in length of parking time according to when a parking session begins. This would allow the City to compare, for instance, how long cars entering the garage at 9 a.m. tend to remain, on average, as opposed to how long cars entering the garage at 2 p.m. tend to remain.

The Smarking team presented a bit more of the system's overview, and then concluded.

Chairman Vaitas thanked the Smarking team.

The Smarking team said they looked forward to working with Birmingham further.

5. PARKING LOT 6: SIGNAGE FOR PERMIT HOLDERS - ACTION

Assistant City Manager Gunter presented the item.

Chairman Vaitas said he asked members of the public about this proposal, and that some said they may be frustrated if they found public parking spaces in Lot 6 unavailable while reserved permit parking spaces in Lot 6 are vacant.

Dr. Paskiewicz stated valet has been working very well. She said the valet has become permanent in the garages, but the number of cars being parked in the garages by the valet are not very high. She wondered if valet were provided on a regular basis in Lot 6 if it would be used more frequently than it is used in the garages.

Motion by Dr. Paskiewicz

Seconded by Ms. Champagne to make a Permit Parking Only area in the segment of the lot furthest from the office building in Lot 6 for a demonstration period of three months.

VOICE VOTE

Yeas: None

Nays: Paskewicz, Champagne, Honhart, Kalczynski, Vaitas

Motion failed, 0-5.

6. PARKING LOT 6: SIGNAGE FOR NO OVERNIGHT PARKING ON SATURDAYS - ACTION

Assistant City Manager Gunter presented the item. She said enforcement would likely entail ticketing the inappropriately parked vehicle and the building of the Farmer's Market around said vehicle, which would prevent the driver from retrieving their vehicle until the Farmer's Market is completely over. The vehicles would not likely be towed.

The APC decided to move forward with the recommended motion.

Motion by Ms. Champagne

Seconded by Ms. Honhart to permit signage in Lot #6 that prohibits overnight parking on Saturday's during the Farmer's Market.

VOICE VOTE

Yeas: Champagne, Honhart, Paskewicz, Kalczynski, Vaitas

Nays: None

Motion carried, 5-0.

7. PARKING GARAGE RESTRIPIING: VENDOR RECOMMENDATION – ACTION

Assistant City Manager Gunter presented the item. She confirmed the striping would be done overnight.

Mr. O'Dell confirmed the striping paint dries in under eight hours.

When the possibility of reconfiguring the striping was discussed, Assistant City Manager Gunter stated that it would be most expedient and cost efficient for the restriping to follow the current lines since that would avoid the need to reconfigure any aspects of the garages. She noted that all current garage parking spaces meet the City's 180 square foot requirement. She also noted that the parking spaces are sufficient to park even very large vehicles side-by-side as long as drivers are mindful of the lines.

Mr. O'Dell concurred with Assistant City Manager Gunter's assessment, saying that reconfiguring the lines in the garage would add significant extra expense. He told the APC that vehicles parked somewhat badly receive a written warning from SP+, and that SP+ will request the police in to write \$30 tickets for vehicles inappropriately parked across multiple spaces.

Motion by Dr. Paskewicz

Seconded by Mr. Kalczynski to recommend that the City Commission authorize the expenditure of \$10,781.85 to restripe the Park Street, Peabody, Pierce, and

Chester Street garages using Accurate Parking Lot Services to complete the work.

VOICE VOTE

Yeas: Paskewicz, Kalczynski, Champagne, Honhart, Vaitas

Nays: None

Motion carried, 5-0.

8. PARKING UTILIZATION REPORT AND FINANCIALS

Parking utilization increased over last year, but Assistant City Manager Gunter and Mr. O'Dell concurred there was nothing of particular note to report.

9. MEETING OPEN FOR MATTERS NOT ON THE AGENDA

Dr. Paskewicz recommended parkers be asked to notify the Police Department of broken parking meters via text message instead of via phone call. She said a sticker with the text line could be added to each meter, which would allow the City to be more efficiently aware of meter issues.

Assistant City Manager Gunter stated that the majority of jammed meters are reported to the City by the meters' CivicSmart software. She said she was unsure how other meter issues are reported by the software, if they are, but that she would find out.

Dr. Paskewicz asked if the APC should formalize their attendance at the public meetings regarding the N. Old Woodward lot to make sure their perspective was represented.

Chairman Vaitas said he had been attending those meetings, and encouraged all members of the APC to attend.

Assistant City Manager Gunter explained that the last official meeting of the Ad Hoc Parking Development Committee was May 2, 2018. The AHPDC was charged with deciding what should be done at the N. Old Woodward site, issuing an RFQ, issuing an RFP, and finally making a recommendation to the City Commission as to the preferred developer team. After the recommendation, further development planning was turned over to the City Commission. The Planning Board will be reviewing the proposed development at the N. Old Woodward site beginning this month.

In reply to Dr. Paskewicz, Assistant City Manager Gunter explained that the AHPDC's Subcommittee on Finances met in 2017 and proposed the funding strategy for the project, which was presented as part of the recommendation.

In reply to Mr. Kalczynski, Assistant City Manager Gunter confirmed she will convey information about the N. Old Woodward parking project to the APC at each meeting. If the bond passes, the issues that will likely come back to the APC for consideration will include rates and discussions about parking on the Bates Street extension. She also agreed

with Chairman Vaitas in encouraging any and all APC members to join the public meetings on the matter. Assistant City Manager Gunter said she would forward the schedule of upcoming meetings to the APC.

In reply to Dr. Paskewicz, Assistant City Manager Gunter stated Birmingham Yes is a coalition of individuals that support the N. Old Woodward project. She said she did not have further information about it because the City government does not participate in, or affiliate with, political campaigns.

Assistant City Manager Gunter clarified that City employees and board and committee members are permitted to support political campaigns as long as they do so as individuals and not as representatives of the City.

Assistant City Manager Gunter stated that the intent of the parking enforcement team is to have all City parking meters up and running well before the winter. Parking enforcement at this time is only permitted for expired meters, and not for time limits, due to a recent Michigan Supreme Court ruling. Assistant City Manager Gunter said she anticipates more debate to come on that finding by the MI Supreme Court.

Assistant City Manager Gunter confirmed for Chairman Vaitas that she requested the public parking signage at the corner of Pierce and Maple be restored, and that she would follow up in the request again.

Mr. O'Dell told Chairman Vaitas that the signage on the lower levels of the Pierce St. garage prohibiting parking before 10 a.m. had been replaced in a smaller section of the garage with signage limiting parking in that area to three hours.

Assistant City Manager Gunter noted that signage was not high quality since it has been originally ordered as a demonstration, and requested SP+ check the signs to see if any had been damaged since their installation.

Mr. O'Dell said SP+ would check the signage.

Assistant City Manager Gunter informed the APC on upcoming matters. She explained:

- The transition to utilizing SP+'s remote monitoring system (RMS) has commenced. The transition was previously approved for the management of incoming 'Help' calls from drivers at any of the parking garages' Skidata machines. SP+ is in the process of compiling all the information the City will need, and the local SP+ office will remain handling the calls until implementation is complete. RMS will allow all calls from users in the garage to be handled simultaneously by a call center. Today, they are answered, one at a time, in the order in which they are received.
- The contract with SP+ allows the City to request 'Other Services as Needed' as long as those services have to do with the operation of parking in the City. In light of this, the City requested SP+ create a proposal for the City's planned mobile parking application that could notify visitors to Birmingham of parking availability around the City. SP+ already has an application available that it could customize

for the City, and they submitted their proposal for such.

The SP+ mobile application would be thoroughly integrated with both SP+'s data and the Smarking data and analytics. The cost of development for a new mobile application could be upwards of \$40,000, which could be saved by the use of SP+'s extant mobile parking application. In addition, it could prove difficult for an outside contractor to integrate its work with the SP+ and Smarking systems, which is another possible benefit of using the SP+ mobile parking application.

The APC should decide whether they would prefer to go through a competitive bidding process for the development of a mobile parking application, or whether SP+ should handle implementation since it would be permissible as part of their existing contract.

- The education campaign for the Birmingham N. Old Woodward Project, known as the Birmingham N.O.W. project is on-going. The City created both a project website and a three minute video as education tools regarding the project. Assistant City Manager Gunter shared both with the APC, and noted both are available to the public at large.

There was APC consensus that proceeding with the SP+ mobile parking application would be the most appropriate course of action.

10. NEXT MEETING: August 7, 2019

11. ADJOURNMENT

No further business being evident, the Chairman adjourned the meeting at 9:22 a.m.

Assistant City Manager Tiffany Gunter



MEMORANDUM

Office of the City Manager

DATE: September 4, 2019

TO: Advisory Parking Committee

FROM: Tiffany J. Gunter, Assistant City Manager

SUBJECT: Parking Garage: Structural Safety Assessment RFP

The City, in an on-going effort to ensure, the highest level of safety and integrity of our existing parking structures is conducting structural assessments at each site over the next year. We began review of the Pierce Street garage in the Fall. Pierce Street was selected first based on visual observations of the structure at the expansion joints and the drainage system. The work was completed in September 2018. The engineering firm, Weiss, Janney, Elstner Associates, Inc. (WJE), developed a recommendation for a full structural analysis at the conclusion of their preliminary assessment (attached). They did indicate that there was not cause for immediate concern, however, did highly recommend that the City conduct a more rigorous evaluation as soon as possible.

Firms were invited to bid on the attached Request for Quote on November 6, 2018. Quotes were due to the City by December 3, 2018. After internal review and further discussion with staff, it was agreed that a full structural assessment of all of the parking garages in the parking system was warranted. The RFP before the committee for consideration today is more inclusive as it includes all of the garages to be evaluated that will assist the City in developing a more robust repair and rehabilitation program for the five parking garages that range in age from 31 years to 53 years.

The RFP, if approved for release by the Committee, will be released on September 6 with bids due to the City by September 24. The Committee will have the opportunity to review the proposals and make a recommendation at the October APC meeting. It is anticipated that at the conclusion of the full parking garage structural assessment, staff will receive a prioritized and detailed cost estimate of actual work to be performed in the garage. Once known, staff will work to identify the schedule and budget necessary to perform the work in the structures over the next several years. Funding has been allocated for this purpose using place holders over the next three years for major capital improvements in one garage per year.

SUGGESTION ACTION:

To authorize release of the Request for Proposals to Conduct Structural Assessments of all five parking garages in the Automobile Parking System.



**REQUEST FOR PROPOSALS
PARKING GARAGE STRUCTURAL ASSESSMENT PROGRAM**

Sealed proposals endorsed **“PARKING GARAGE STRUCTURAL ASSESSMENT PROGRAM”**, will be received at Birmingham City Hall, ATTN: Tiffany J. Gunter, 151 Martin Street, Birmingham, Michigan, 48009; until **Tuesday, September 24, 2019 at 4:00 PM EST** after which time bids will be publicly opened and read.

The City of Birmingham, Michigan is accepting sealed bid proposals from qualified professional firms and/or contractors for conducting parking garage structural assessments of the five parking garages in Downtown Birmingham ranging in age from 34-53 years of age. This work must be performed as specified in accordance with the specifications contained in the Request for Proposals (RFP).

The RFP, including the specifications, may be obtained online from the Michigan Inter-governmental Trade Network at <http://www.mitn.info> or at Birmingham City Hall, 151 Martin Street, Birmingham, Michigan. ATTENTION: City of Birmingham, Assistant City Manager, Tiffany J. Gunter.

The acceptance of any proposal made pursuant to this invitation shall not be binding upon the City of Birmingham until an agreement has been executed.

Submitted to MITN:	Friday, September 6, 2019
Deadline for Submissions:	<u>Tuesday, September 24, 2019 at 4:00 PM</u>
Contact Person:	Assistant City Manager, Tiffany J. Gunter 151 Martin Street Birmingham, MI 48009 Phone: 248-530-1827 Email: tgunter@bhamgov.org



REQUEST FOR PROPOSALS PARKING GARAGE STRUCTURAL ASSESSMENT PROGRAM

Contents

INTRODUCTION.....	3
REQUEST FOR PROPOSALS (RFP).....	3
INVITATION TO SUBMIT A PROPOSAL.....	3
INSTRUCTIONS TO BIDDERS	4
CONTRACTOR’S RESPONSIBILITIES	6
CITY’S RESPONSIBILITY	7
SETTLEMENT OF DISPUTES	7
INSURANCE	7
CONTINUATION OF COVERAGE	7
EXECUTION OF CONTRACT	8
INDEMNIFICATION	8
CONFLICT OF INTEREST	8
EXAMINATION OF PROPOSAL MATERIALS	8
SCOPE OF WORK	9
ATTACHMENT A - AGREEMENT	11
ATTACHMENT B - BIDDER’S AGREEMENT	18
ATTACHMENT C - COST PROPOSAL.....	19
ATTACHMENT D - IRAN SANCTIONS ACT VENDOR CERTIFICATION FORM.....	20
ATTACHMENT E - PROJECT SITE PLAN.....	21



INTRODUCTION

For purposes of this request for proposal the City of Birmingham will hereby be referred to as “the City” and the private firm or person will hereby be referred to as “Contractor.”

The City is accepting sealed bid proposals from qualified professional firms and/or contractors for conducting parking garage structural assessments of the five parking garages in Downtown Birmingham ranging in age from 34-53 years of age. This work must be performed as specified, in accordance with the specifications outlined by the Scope of Work contained in this Request for Proposals (RFP).

During the evaluation process, the City reserves the right to request additional information or clarification from contractors, or to allow corrections of errors or omissions. At the discretion of the City, contractors submitting proposals may be requested to make oral presentations as part of the evaluation.

It is anticipated that the selection of a Contractor will be completed by Monday, October 28, 2019. An Agreement for services will be required with the selected Contractor. A copy of the Agreement is contained herein for reference. Contract services will commence upon execution of the service agreement by the date specified by the City.

REQUEST FOR PROPOSALS (RFP)

The purpose of this RFP is to request sealed bid proposals from contractors presenting their qualifications, capabilities and costs to provide professional engineering evaluation services.

INVITATION TO SUBMIT A PROPOSAL

Proposals shall be submitted no later than **Tuesday, September 24, 2019 at 4:00 PM** to:

City of Birmingham
ATTN: City Clerk's Office
151 Martin Street
Birmingham, Michigan 48009

One (1) original and two (2) copies of the proposal shall be submitted. *Also, include a digital copy of the RFP on a thumb drive in the packet.* The proposal should be firmly sealed in an envelope, which shall be clearly marked on the outside, **“PARKING GARAGE – STRUCTURAL ASSESSMENT PROGRAM”**. Any proposal received after the due date cannot be accepted and will be rejected and returned, unopened, to the contractor. Contractor may submit more than one proposal provided each proposal meets the functional requirements.

INSTRUCTIONS TO BIDDERS

1. Any and all forms requesting information from the bidder must be completed on the attached forms contained herein (see Contractor's Responsibilities). If more than one bid is submitted, a separate bid proposal form must be used for each.
2. Any request for clarification of this RFP shall be made via the Michigan Intergovernmental Trade Network (MITN) no later than Monday, September 16, 2019. Such request for clarification shall be answered via MITN, in writing, no later than 5 days prior to the deadline for submissions.
3. All proposals must be submitted following the RFP format as stated in this document and shall be subject to all requirements of this document including the instruction to respondents and general information sections. All proposals must be regular in every respect and no interlineations, excisions, or special conditions shall be made or included in the RFP format by the respondent.
4. The contract will be awarded by the City to the most responsive and responsible bidder who can best accomplish the requirements of the Scope of Work in an effective and cost efficient manner.
5. Each respondent shall include in his or her proposal, in the format requested, the cost of performing the work. Municipalities are exempt from Michigan State Sales and Federal Excise taxes. Do not include such taxes in the proposal figure. The City will furnish the successful company with tax exemption information when requested.
6. Each respondent shall include in their proposal the following information: Firm name, address, city, state, zip code, telephone number, and fax number. The company shall also provide the name, address, telephone number and e-mail address of an individual in their organization to whom notices and inquiries by the City should be directed as part of their proposal.

EVALUATION PROCEDURE AND CRITERIA

Proposals will be evaluated and ranked. The City of Birmingham reserves the right to reject any and all proposals, to make an award based directly on the proposals or to negotiate further with one or more firms. The firm(s) selected will be chosen on the basis of the apparent greatest value to the City, including but not limited to:

1. Responsiveness to Objectives/Methodology – The firm shall provide a work program that expressly addresses the objectives identified in the Request for Proposals. The selection committee will determine how well the proposed work program benefits/assists the objectives of the City.
2. Experience and Qualifications – The firm must have personnel who have experience with the professional engineering services described herein, as well as experience in working with municipal governments or public entities. Provide information on technical training, experience, and education of ONLY the personnel who will be assigned to the City's project.
3. Capacity – Enumeration of the firm's capability to accomplish projects with its present work force. Firms should clearly identify all disciplines available within the firm and those that will be subcontracted to others. List the subcontracted firms that will be involved in the project. Provide for each firm the scope of responsibility.
4. Comparable Projects – Provide a list of five comparable projects/services that have been successfully completed by your firm within the past 5 years and a contact person (name, address, title, responsibility, and phone number) for each project.
5. Cost – The City will select the proposal that provides the best value for the services being requested .

TERMS AND CONDITIONS:

1. The City reserves the right to reject any or all proposals received, waive informalities, or accept any proposal, in whole or in part, it deems best. The City reserves the right to award the contract to the next most qualified Contractor if the successful Contractor does not execute a contract within ten (10) days after the award of the proposal.
2. The City reserves the right to request clarification of information submitted and to request additional information of one or more Contractors.
3. The City reserves the right to terminate the contract at its discretion should it be determined that the services provided do not meet the specifications contained herein. The City may terminate this Agreement at any point in the process upon notice to Contractor sufficient to indicate the City's desire to do so. In the case of such a stoppage, the City agrees to pay Contractor for services rendered to the time of notice, subject to the contract maximum amount.
4. Any proposal may be withdrawn up until the date and time set above for the opening of the proposals. Any proposals not so withdrawn shall constitute an irrevocable offer, for a period of ninety (90) days, to provide the services set forth in the proposal.
5. The cost of preparing and submitting a proposal is the responsibility of the Contractor and shall not be chargeable in any manner to the City.
6. Payment will be made within thirty (30) days after invoice. Acceptance by the City is defined as authorization by the designated City representative to this project that all the criteria requested under the Scope of Work contained herein have been provided. Invoices are to be rendered each month following the date of execution of an Agreement with the City.
7. The Contractor will not exceed the timelines established for the completion of this project.
8. The successful bidder shall enter into and will execute the contract as set forth and attached as Attachment A.

CONTRACTOR'S RESPONSIBILITIES

Each bidder shall provide the following as part of their proposal:

1. Complete and sign all forms requested within this RFP.
 - a. Bidder's Agreement (Attachment B)
 - b. Cost Proposal (Attachment C)
 - c. Iran Sanctions Act Vendor Certification Form (Attachment D)
 - d. Agreement (– **only if selected by the City**).
2. Provide a description of completed projects (preferably projects working with similar parking infrastructure with respect to size and age) and other businesses

that demonstrate the firm's ability to complete projects of similar scope, size, and purpose, and in a timely manner, and within budget.

3. Provide a written plan detailing the plan for executing the tasks as set forth in the Scope of Work.
4. The Contractor will be responsible for any changes necessary for the plans to be approved by the City.
5. Provide a description of the firm, including resumes and professional qualifications of the principals involved in administering the project.
6. Provide a list of sub-contractors and their qualifications, if applicable.
7. Provide three (3) client references from past projects, include current phone numbers.
8. Provide a project timeline addressing each section within the Scope of Work and a description of the overall project approach. Include a statement that the Contractor will be available according to the proposed timeline.

CITY'S RESPONSIBILITY

1. The City will provide a designated representative to work with the Contractor to coordinate both the City's and Contractor's efforts.
2. The City will be accessible to the Contractor during regular business hours as approved by the City's designated representative.

SETTLEMENT OF DISPUTES

The successful bidder agrees to certain dispute resolution avenues/limitations. Please refer to the Agreement attached as Attachment A for the details and what is required of the successful bidder.

INSURANCE

The successful bidder is required to procure and maintain certain types of insurances. Please refer to the Agreement attached as Attachment A for the details and what is required of the successful bidder.

CONTINUATION OF COVERAGE

The Contractor also agrees to provide all insurance coverages as specified. Upon failure of the Contractor to obtain or maintain such insurance coverage for the term of the agreement, the City may, at its option, purchase such coverage and subtract the cost of obtaining such coverage from the contract amount. In obtaining such coverage, City shall have no obligation to procure the most cost effective coverage but may contract with any insurer for such coverage.

EXECUTION OF CONTRACT

The bidder whose proposal is accepted shall be required to execute the contract and to furnish all insurance coverages as specified within ten (10) days after receiving notice of such acceptance. Any contract awarded pursuant to any bid shall not be binding upon the City until a written contract has been executed by both parties. Failure or refusal to execute the contract shall be considered an abandoned all rights and interest in the award and the contract may be awarded to another. The successful bidder agrees to enter into and will execute the contract as set forth and attached as Attachment A.

INDEMNIFICATION

The successful bidder agrees to indemnify the City and various associated persons. Please reference the Agreement attached as Attachment A for the details and what is required of the successful bidder.

CONFLICT OF INTEREST

The successful bidder is subject to certain conflict of interest requirements/restrictions. Please refer to the Agreement attached as Attachment A for the details and what is required of the successful bidder.

EXAMINATION OF PROPOSAL MATERIALS

The submission of a proposal shall be deemed a representation and warranty by the Contractor that it has investigated all aspects of the RFP, that it is aware of the applicable facts pertaining to the RFP process and its procedures and requirements, and that it has read and understands the RFP. Statistical information which may be contained in the RFP or any addendum thereto is for informational purposes only.

SCOPE OF WORK

The City of Birmingham is seeking qualified firm(s) to conduct parking garage structural assessments of the five parking garages in Downtown Birmingham ranging in age from 34-53 years of age. The original floor plans for each garage and more recent visual assessments that have been completed for Pierce Street and N. Old Woodward are included as Attachments E, F, and G.

Consistent with our on-going effort to ensure the highest level of safety and integrity of our existing parking structures, the City is seeking professional engineering services to conduct structural assessments at each site over the next year and develop a sound capital improvement program that will protect and enhance the longevity of our aging infrastructure. This program is consistent with the recommendations in the Parking Strategies report to assess infrastructure needs both now and in the future. The following table represents the age and capacity of each of the parking decks located in downtown Birmingham.

Garage	Year Built (Age)	Capacity
N. Old Woodward	1966 (53)	589
Pierce Street	1968 (51)	706
Park Street	1974 (45)	811
Peabody	1984 (35)	437
Chester	1988 (31)	880

Task 1: Floor laser survey

Conduct a topographical survey of all elevated floors and ramps using three-dimensional laser scanning to plot contour maps of the top surface, bottom surface and thickness of the elevated floors along the expansion joints.

Task 2: Drainage system clean-out and video inspection

The drainage system under the first floor level will need to be cleaned out (if possible) in order to do a video inspection to observe their condition and make recommendations for improved drainage within each garage.

Task 3: Structural Analyses

- A. Develop a three-dimensional finite element model (FEM) of the parking structure. All elevated floors and ramps will be included in the model using the measured thickness provided from the laser topography survey in Task 1. This analysis is to calculate deflections of the floors due to dead load (floor self-weight) and design live loads.
- B. Based on results of the FEM analysis and laser topography survey, identify several critical regions that have severe deflection and/or highest loading demands for additional ground penetrating radar (GPR) scanning survey and inspection openings. Identify locations to extract concrete samples for testing.
- C. Calculate the load carrying capacity of the identified critical regions using as-built measurements from the additional GPR scanning survey and the inspection openings. Measured concrete compressive strength should be used in the

calculation. Finally, determine if those critical floor regions have sufficient capacity to support the required design loads specified by the 2015 Michigan Building Code.

Task 4: Site work

- A. Conduct additional GPR scanning at the identified critical regions from Task 3A. The GPR scanning results will be used to inspect the location and depth of reinforcing bars and to identify locations for inspection openings.

Task 5: Material testing

Test concrete samples to estimate the cement-to-aggregate ratio (cement content) and water-to- cement ratio, and to measure the compressive strength.

Task 6: Report

Prepare a written report summarizing your findings from each task and your conclusion on whether the observed differential deflections, varying floor thicknesses and depth of reinforcing are concerns that need to be addressed immediately and provide a prioritized list of repair recommendations for structural and other observed conditions. The report will also provide a preliminary repair cost estimate to facilitate the City in developing the capital improvement program for the parking garages over the next five years and recommended cycle for repair and rehabilitation as an on-going program.



ATTACHMENT A - AGREEMENT
PARKING GARAGE STRUCTURAL ASSESSMENT PROGRAM

This AGREEMENT, made this _____ day of _____, 2019, by and between the City of Birmingham (hereinafter sometimes called "the City"), having its principal municipal office at 151 Martin Street, Birmingham, MI, and _____ (hereinafter called "Contractor"), provides as follows:

WITNESSETH:

WHEREAS, the City has heretofore advertised for bids for the procurement and performance of services required to serve as the City's qualified professional firm and/or contractors for conducting parking garage structural assessments of the five parking garages in Downtown Birmingham ranging in age from 31-53 years of age and in connection therewith has prepared a request for sealed proposals ("RFP"), which includes certain instructions to bidders, specifications, terms and conditions.

WHEREAS, the Contractor has professional qualifications that meet the project requirements and has made a bid in accordance with such request for cost proposals to perform the role of Owner's Representative.

NOW, THEREFORE, for and in consideration of the respective agreements and undertakings herein contained, the parties agree as follows:

1. It is mutually agreed by and between the parties that the documents consisting of the Request for Proposal to perform structural assessments of the five parking garages to facilitate the development of a comprehensive repair and rehabilitation program of parking infrastructure for the City. The Contractor's cost proposal dated _____ shall be incorporated herein by reference and shall become a part of this Agreement, and shall be binding upon both parties hereto.
2. The Contractor's Proposal shall be incorporated herein by reference, shall become a part of this Agreement, and shall be binding on the parties hereto. In the event there is a conflict between the Proposal and this Agreement, this Agreement shall control.

3. The term of this Agreement shall commence on _____ for a period of _____ expiring _____. If changes to the existing terms are sought, an amendment to the Agreement must be prepared and signed before any changes are effective.
4. Notwithstanding the foregoing term, either party may terminate this Agreement for any or no reason upon a thirty day (30) notice to the other party. If the City terminates the Agreement under this paragraph, Contractor will be compensated for any work already performed up to the date of termination. However, Contractor shall not perform any new work or incur new costs after the City's notice of termination unless specifically authorized by the City.
5. The City shall pay the Contractor for the performance of this Agreement in an amount not to exceed \$_____ as set forth in the Contractor's _____ cost proposal. Contractor shall submit monthly invoices in accordance with the schedule of values attached to and incorporated in this Agreement. City will be required to make payments of undisputed amounts against such monthly payment invoices within thirty (30) days of receipt of such invoices.
6. In the event City requests services from the Contractor that are outside the scope of this Agreement ("Additional Services"), the Contractor shall provide a written proposal to the City indicating any additional time or additional cost required to perform such Additional Services. Only upon City's issuance of it written approval of such additional time/cost, if any, the Contractor may commence Additional Services.
7. This Agreement shall commence upon execution by both parties, unless the City exercises its option to terminate the Agreement in accordance with the Request for Proposals.
8. The Contractor shall employ personnel of good moral character and fitness in performing all services under this Agreement. The Contractor shall provide a list of personnel assigned to this Project at the commencement of its services. No change in personnel may be made by the Contractor without obtaining a prior written approval of the City.
9. The Contractor and the City agree that the Contractor is acting as an independent Contractor with respect to the Contractor's role in providing services to the City pursuant to this Agreement, and as such, shall be liable for its own actions and neither the Contractor nor its employees shall be construed as employees of the City of Birmingham ("City"). Nothing contained in this Agreement shall be construed to imply a joint venture or partnership and neither party, by virtue of this Agreement, shall have any right, power or authority to act or create any obligation, express or implied, on behalf of the other party, except as specifically outlined herein. Neither the City nor the Contractor shall be considered or construed to be the agent of the other, nor shall either have the right to bind the other in any manner whatsoever, except as specifically provided in this Agreement, and this Agreement shall not be construed as a contract of agency. The Contractor shall not be entitled or eligible to participate in any benefits or privileges

given or extended by the City, or be deemed an employee of the City for purposes of federal or state withholding taxes, FICA taxes, unemployment, workers' compensation or any other employer contributions on behalf of the City.

10. The Contractor acknowledges that in performing services pursuant to this Agreement, certain confidential and/or proprietary information (including, but not limited to, internal organization, methodology, personnel and financial information, etc.) may become involved. The Contractor recognizes that unauthorized exposure of such confidential or proprietary information could irreparably damage the City. Therefore, the Contractor agrees to use reasonable care to safeguard the confidential and proprietary information and to prevent the unauthorized use or disclosure thereof. The Contractor shall inform its employees of the confidential or proprietary nature of such information and shall limit access thereto to employees rendering services pursuant to this Agreement. The Contractor further agrees to use such confidential or proprietary information only for the purpose of performing services pursuant to this Agreement.
11. This Agreement shall be governed by and performed, interpreted and enforced in accordance with the laws of the State of Michigan. The Contractor agrees to perform all services provided for in this Agreement in accordance with and in full compliance with all local, state and federal laws and regulations.
12. If any provision of this Agreement is declared invalid, illegal or unenforceable, such provision shall be severed from this Agreement and all other provisions shall remain in full force and effect.
13. This Agreement shall be binding upon the successors and assigns of the parties hereto, but no such assignment shall be made by the Contractor without the prior written consent of the City. Any attempt at assignment without prior written consent shall be void and of no effect.
14. The Contractor agrees that neither it nor its sub-Contractors will discriminate against any employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment because of race, color, religion, national origin, age, sex, height, weight or marital status. The Contractor shall inform the City of all claims or suits asserted against it by the Contractor's employees who work pursuant to this Agreement. The Contractor shall provide the City with periodic status reports concerning all such claims or suits, at intervals established by the City.
15. The Contractor shall not commence work under this Agreement until it has, at its sole expense, obtained the insurance required under this paragraph. All coverages shall be with insurance companies licensed and admitted to do business in the State of Michigan. All coverages shall be with carriers acceptable to the City.
16. The Contractor shall maintain during the life of this Agreement the types of insurance coverage and minimum limits as set forth below:

A. Workers' Compensation Insurance:

For Non-Sole Proprietorships: Contractor shall procure and maintain during the life of this Agreement, Workers' Compensation Insurance, including Employers Liability Coverage, in accordance with all applicable statutes of the State of Michigan.

For Sole Proprietorships: Contractor shall complete and furnish to the City prior to the commencement of work under this Agreement a signed and notarized Sole Proprietor Form, for sole proprietors with no employees or with employees, as the case may be.

- B. Commercial General Liability Insurance: Contractor shall procure and maintain during the life of this Agreement, Commercial General Liability Insurance on an "Occurrence Basis" with limits of liability not less than **\$1,000,000** per occurrence combined single limit, Personal Injury, Bodily Injury and Property Damage. Coverage shall include the following extensions: (A) Contractual Liability; (B) Products and Completed Operations; (C) Independent Contractors Coverage; (D) Broad Form General Liability Extensions or equivalent; (E) Deletion of all Explosion, Collapse and Underground (XCU) Exclusions, if applicable.
- C. Motor Vehicle Liability: Contractor shall procure and maintain during the life of this Agreement Motor Vehicle Liability Insurance, including all applicable no-fault coverages, with limits of liability of not less than \$1,000,000 per occurrence combined single limit Bodily Injury and Property Damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.
- D. Additional Insured: Commercial General Liability and Motor Vehicle Liability Insurance, as described above, shall include an endorsement stating the following shall be *Additional Insureds*: The City of Birmingham, including all elected and appointed officials, all employee and volunteers, all boards, commissions and/or authorities and board members, including employees and volunteers thereof. This coverage shall be primary to any other coverage that may be available to the additional insured, whether any other available coverage by primary, contributing or excess.
- E. Professional Liability: Professional liability insurance with limits of not less than \$1,000,000 per claim if Contractor will provide service that are customarily subject to this type of coverage.
- F. Pollution Liability Insurance: Contractor shall procure and maintain during the life of this Agreement Pollution Liability Insurance, with limits of liability of not less than \$1,000,000, per occurrence preferred, but claims made accepted.
- G. Owners Contractors Protective Liability: The Contractor shall procure and maintain during the life of this contract, an Owners Contractors Protective Liability Policy with limits of liability not less than \$3,000,000 per occurrence, combined single limit,

Personal Injury, Bodily Injury and Property Damage. The City of Birmingham shall be "Name Insured" on said coverage.

- H. Cancellation Notice: Should any of the above described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.
- I. Proof of Insurance Coverage: Contractor shall provide the City of Birmingham at the time the Agreement is returned for execution, Certificates of Insurance and/or policies, acceptable to the City of Birmingham, as listed below.
- 1) Two (2) copies of Certificate of Insurance for Workers' Compensation Insurance;
 - 2) Two (2) copies of Certificate of Insurance for Commercial General Liability Insurance;
 - 3) Two (2) copies of Certificate of Insurance for Vehicle Liability Insurance;
 - 4) Two (2) copies of Certificate of Insurance for Professional Liability Insurance;
 - 5) If so requested, Certified Copies of all policies mentioned above will be furnished.
- J. Coverage Expiration: If any of the above coverages expire during the term of this Agreement, Contractor shall deliver renewal certificates and/or policies to the City of Birmingham at least (10) days prior to the expiration date.
- K. Maintaining Insurance: Upon failure of the Contractor to obtain or maintain such insurance coverage for the term of the Agreement, the City of Birmingham may, at its option, purchase such coverage and subtract the cost of obtaining such coverage from the Agreement amount. In obtaining such coverage, the City of Birmingham shall have no obligation to procure the most cost-effective coverage but may contract with any insurer for such coverage.
17. To the fullest extent permitted by law, the Contractor and any entity or person for whom the Contractor is legally liable, agrees to be responsible for any liability, defend, pay on behalf of, indemnify, and hold harmless the City elected and appointed officials, employees and volunteers and others working on behalf of the City of Birmingham against any and all claims, demands, suits, or loss, including all costs and reasonable attorney fees connected therewith, and for any damages which may be asserted, claimed or recovered against or from by reason of personal injury, including bodily injury and death and/or property damage, including loss of use thereof, which arises out of or is in any way connected or associated with this Agreement. Such responsibility shall not be construed as liability for damage caused by or resulting from the sole act or omission of its elected or appointed officials, employees, volunteers or others working on behalf of the City.

18. If, after the effective date of this Agreement, any official of the City, or spouse, child, parent or in-law of such official or employee shall become directly or indirectly interested in this Agreement or the affairs of the Contractor, the City shall have the right to terminate this Agreement without further liability to the Contractor if the disqualification has not been removed within thirty (30) days after the City has given the Contractor notice of the disqualifying interest. Ownership of less than one percent (1%) of the stock or other equity interest in a corporation or partnership shall not be a disqualifying interest. Employment shall be a disqualifying interest.
19. If Contractor fails to perform its obligations hereunder, the City may take any and all remedial actions provided by the general specifications or otherwise permitted by law.
20. All notices required to be sent pursuant to this Agreement shall be mailed to the following address:

City of Birmingham
Attn: Assistant City Manager
151 Martin Street
Birmingham, MI 48009

21. Any controversy or claim arising out of or relating to this Agreement, or the breach thereof, shall be settled either by commencement of a suit in Oakland County Circuit Court, the 48th District Court or by arbitration. If both parties elect to have the dispute resolved by arbitration, it shall be settled pursuant to Chapter 50 of the Revised Judicature Act for the State of Michigan and administered by the American Arbitration Association with one arbitrator being used, or three arbitrators in the event any party's claim exceeds \$1,000,000. Each party shall bear its own costs and expenses and an equal share of the arbitrator's and administrative fees of arbitration. Such arbitration shall qualify as statutory arbitration pursuant to MCL§600.5001 et. seq., and the Oakland County Circuit Court or any court having jurisdiction shall render judgment upon the award of the arbitrator made pursuant to this Agreement. The laws of the State of Michigan shall govern this Agreement, and the arbitration shall take place in Oakland County, Michigan. In the event that the parties elect not to have the matter in dispute arbitrated, any dispute between the parties may be resolved by the filing of a suit in the Oakland County Circuit Court or the 48th District Court.
22. FAIR PROCUREMENT OPPORTUNITY: Procurement for the City will be handled in a manner providing fair opportunity for all businesses. This will be accomplished without abrogation or sacrifice of quality and as determined to be in the best interest of the City.

IN WITNESS WHEREOF, the said parties have caused this Agreement to be executed as of the date and year above written.

WITNESSES:

CONTRACTOR

By: _____

Its:

CITY OF BIRMINGHAM

By: _____

Its: Mayor

By: _____

J. Cherilynn Mynsberge
Its: City Clerk

Approved:

Tiffany J. Gunter, Assistant City Manager
(Approved as to substance)

Mark Gerber, Director of Finance
(Approved as to financial obligation)

Timothy J. Currier, City Attorney
(Approved as to form)

Joseph A. Valentine, City Manager
(Approved as to substance)



ATTACHMENT B - BIDDER'S AGREEMENT
PARKING GARAGE STRUCTURAL ASSESSMENT PROGRAM

In submitting this proposal, as herein described, the Contractor agrees that:

1. They have carefully examined the specifications, terms and Agreement of the Request for Proposal and all other provisions of this document and understand the meaning, intent, and requirement of it.
2. They will enter into a written contract and furnish the item or items in the time specified in conformance with the specifications and conditions contained therein for the price quoted by the proponent on this proposal.

PREPARED BY
(Print Name)

DATE

TITLE

AUTHORIZED SIGNATURE

E-MAIL ADDRESS

COMPANY

ADDRESS

PHONE

NAME OF PARENT COMPANY

PHONE

ADDRESS



ATTACHMENT C - COST PROPOSAL

PARKING GARAGE STRUCTURAL ASSESSMENT PROGRAM

In order for the bid to be considered valid, this form must be completed in its entirety. The cost for the Scope of Work as stated in the Request for Proposal documents shall be a lump sum, as follows:

Attach technical specifications for all proposed materials as outlined in the Contractor's Responsibilities section of the RFP

COST PROPOSAL	
ITEM	BID AMOUNT
North Old Woodward Assessment	\$
Pierce Street Garage Assessment	\$
Park Street Garage Assessment	\$
Peabody Garage Assessment	\$
Chester Garage Assessment	\$
	\$
	\$
	\$
TOTAL AMOUNT	\$

Firm Name _____

Authorized signature _____ Date _____



ATTACHMENT C - COST PROPOSAL

PARKING GARAGE STRUCTURAL ASSESSMENT PROGRAM

In order for the bid to be considered valid, this form must be completed in its entirety. The cost for the Scope of Work as stated in the Request for Proposal documents shall be a lump sum, as follows:

Attach technical specifications for all proposed materials as outlined in the Contractor's Responsibilities section of the RFP

COST PROPOSAL	
ITEM	BID AMOUNT
North Old Woodward Assessment	\$
Pierce Street Garage Assessment	\$
Park Street Garage Assessment	\$
Peabody Garage Assessment	\$
Chester Garage Assessment	\$
	\$
	\$
	\$
TOTAL AMOUNT	\$

Firm Name _____

Authorized signature _____ Date _____



**ATTACHMENT D - IRAN SANCTIONS ACT VENDOR CERTIFICATION FORM
PARKING GARAGE STRUCTURAL ASSESSMENT PROGRAM**

Pursuant to Michigan Law and the Iran Economic Sanction Act, 2012 PA 517 ("Act"), prior to the City accepting any bid or proposal, or entering into any contract for goods or services with any prospective Vendor, the Vendor must certify that it is not an "Iran Linked Business", as defined by the Act.

By completing this form, the Vendor certifies that it is not an "Iran Linked Business", as defined by the Act and is in full compliance with all provisions of the Act and is legally eligible to submit a bid for consideration by the City.

PREPARED BY
(Print Name)

DATE

TITLE

AUTHORIZED SIGNATURE

E-MAIL ADDRESS

COMPANY

ADDRESS

PHONE

NAME OF PARENT COMPANY

PHONE

ADDRESS

TAXPAYER I.D.#



ATTACHMENT E – ORIGINAL FLOOR PLANS ALL GARAGES



ATTACHMENT F – VISUAL OBSERVATION OF N. OLD WOODWARD GARAGE



NORTH OLD WOODWARD PARKING STRUCTURE Limited Visual Structural Assessment

333 North Old Woodward Avenue, Birmingham, Michigan



Final Report

July 5, 2019

WJE No. 2019.4512



Prepared for:

Ms. Tiffany J. Gunter

Assistant City Manager

City of Birmingham

151 Martin Street

Birmingham, MI 48012

Prepared by:

Wiss, Janney, Elstner Associates, Inc.

30700 Telegraph Road, Suite 3580

Bingham Farms, Michigan 48025

248.593.0900 tel | 248.593.8532 fax



NORTH OLD WOODWARD PARKING STRUCTURE Limited Visual Structural Assessment

333 North Old Woodward Avenue, Birmingham, Michigan

A handwritten signature in black ink, appearing to read 'Matthew E. Lewis'.

Matthew E. Lewis, P.E.
Project Manager and Senior Associate

A handwritten signature in black ink, appearing to read 'Justin D. Barden'.

Justin D. Barden
Project Associate

Final Report

July 5, 2019

WJE No. 2019.4512



Prepared for:

Ms. Tiffany J. Gunter

Assistant City Manager

City of Birmingham

151 Martin Street

Birmingham, MI 48012

Prepared by:

Wiss, Janney, Elstner Associates, Inc.

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TABLE OF CONTENTS

Introduction.....	1
Structure Description	1
Field Assessment	1
Structural Components.....	1
Structural Floor Slabs	1
Columns.....	2
Walls.....	2
Facade	2
Precast Panels	2
Discussion.....	3
Recommendations.....	4
Immediate Recommendations	4
Repair Recommendations	5
Opinion Of Probable Costs	5
Probable Repair Costs	5
Closing	6
Figures	8

NORTH OLD WOODWARD PARKING STRUCTURE Limited Visual Structural Assessment

333 North Old Woodward Avenue, Birmingham, Michigan

INTRODUCTION

As requested, Wiss, Janney, Elstner Associates, Inc. (WJE) completed a limited condition assessment of the parking structure located at 333 North Old Woodward Avenue in Birmingham, Michigan. It is our understanding that the City of Birmingham is considering modifications to the property on which the subject parking structure is located and, as result, is interested in determining preliminary cost estimates to repair the existing structure. With this in mind, the intent of our assessment was to develop general repair recommendations for the parking structure and develop a table of estimated probable costs, on an order of magnitude level, for the recommended repairs. This report summarizes our observations and provides recommendations for your consideration.

STRUCTURE DESCRIPTION

The parking structure was constructed in 1966 and has five levels of parking with a centralized ramp system. It is a reinforced concrete structure with elevated flat slabs supported on columns which include drop panels. Level 1 is a reinforced concrete slab on ground and Level 5 is uncovered rooftop parking. The structure is square in plan with approximate dimensions of 200 feet by 200 feet, for a total area of 200,000 square feet of floor space when all five levels (40,000 square feet each) are included. The structure is primarily clad with exposed aggregate precast concrete panels individually attached at each slab level. The towers in the corners of the structure are clad with brick veneer.

FIELD ASSESSMENT

Mr. Justin Bardin of WJE visited the site on July 1, 2019. During the course of an approximately 8 hour site visit, the assessment included a limited visual inspection of the accessible and exposed portions of the structural components, a limited visual inspection of the facade, and a limited sounding survey of portions of the structural components. A summary of pertinent observations follows.

Structural Components

Structural Floor Slabs

The condition of the structural floor slabs varied throughout the parking structure; however, the slabs were generally in serviceable condition with localized areas of distress. Notable conditions and deterioration are described below.

1. Spalled, loose, and unsound concrete on the underside of the elevated concrete slabs (Figures 1 and 2). Reinforcing bars exposed at locations of spalling are typically corroded with severity ranging from moderate to severe (Figure 3).
2. Localized areas of spalled and unsound concrete on the top surface of the concrete slabs (Figure 4).
 - a. WJE performed a delamination survey at representative locations on the top surface of the supported levels in accordance with ASTM D4580 - *Standard Practice for Measuring Delaminations in Concrete Bridge Decks by Sounding*.

- (1) For this survey, areas of delamination were identified using the chain-drag method, which consists of dragging a length of chain over the surface of the concrete deck and listening for variations in the ringing tone of the chain. In areas of sound concrete, the chain produces a ringing sound, and when a delamination is encountered, a hollow, drum-like sound is produced.
 - (2) During the sounding survey, WJE noted that the delaminations often extend beyond the region where the concrete deterioration is readily visible. Additionally, the sounding survey identified areas of unsound concrete that occur where there are no visible indications of concrete deterioration.
 - (3) For the purposes of this assessment, between 5 and 10 percent of the total area for each floor was surveyed. Based on the quantity of delaminated concrete found in the survey areas, the amount of delaminated concrete throughout the structure was estimated by extrapolation.
3. Cracks not associated with underside spalls are present on the underside of slabs. Typically the cracks are relatively narrow (i.e., less than 0.015 inches wide). Corrosion staining and efflorescence were observed at many of the cracks (Figure 5).
 4. Previous repairs are common on the top and bottom of the supported slabs. Many of the previous repairs are unsound, deteriorated, or have associated cracks with corrosion staining and efflorescence (Figures 6 and 7).

Columns

The columns support the elevated slabs. There are two types of columns: rectangular columns with a rectangular drop panel are present throughout the interior, and rectangular columns with exposed aggregate are present along the exterior. The interior columns are generally in serviceable condition with localized concrete distress. The exterior columns exhibit more distress as compared with the interior columns. The following was observed:

1. Localized areas of unsound and cracked concrete on the interior and exterior columns (Figures 8 and 9).
2. Previous repairs were found at select columns. Many of the column repairs are unsound or deteriorated (Figure 9).
3. As shown in Figure 10, the angle attachments at the exterior columns are generally in poor condition with many locations exhibiting pack rust (i.e. layers of rust).

Walls

Exterior reinforced concrete walls exist around the perimeter on Level 1 and Level 5. Additionally, interior reinforced concrete walls exist at the ramp on Level 5. WJE observed:

1. Limited, localized areas of spalled concrete. Corroded reinforcing bars were typically exposed at the spalled locations (Figures 11 and 12).

Facade

Precast Panels

Precast concrete panels are located around the perimeter of the structure at Levels 1 through 4. The panels on Levels 2 through 4 are rectangular in shape and have three sections oriented vertically (Figure 13). The panels on Level 1 are rectangular in shape and have one vertical section (Figure 14). The top and bottom attachments of the panels typically consists of steel angles with steel bolts; one bolt secures the angle to the

panel while another bolt secures the panel to the structure in a continuous steel slot embedded into the underside of the slab edge at the top of the panel, and into the edge of a concrete curb at the bottom of the panel. WJE noted the following:

1. There are approximately 280 large precast panels with three vertical sections and 280 small precast panels with one vertical section on the parking structure.
 - a. Several post-installed panel connections (i.e., not original) are present throughout the parking structure. Many post-installed connections generally appeared in good condition, while select post-installed connections have failed since installation (Figure 15 and Figure 16).
 - b. Approximately 75 percent of facade panels exhibit some level of deterioration including exposed embedded reinforcement, spalled concrete, and/or incipient spalls (i.e. loose concrete/beginning of a spall). Example distress is shown in Figures 17 and 18. Many of the observed spalls and incipient spalls are located near the connection angle at the top of the panel positioned such that they may decrease the overall capacity of the top panel connection (Figure 19).
 - c. At least four panels on the south elevation are of immediate concern, with the top connections failed and the concrete at the bottom connections cracked or spalled (Figures 20 and 21).
2. The steel angles that attach the top and bottom of the panel to the slab edges are corroded. Generally, the corrosion is minor and superficial with little section loss (Figure 22).
3. The embedded steel slot on the underside of the slab and on the topside of the concrete curb exhibits corrosion throughout the parking structure. Generally, the corrosion is minor and superficial with little section loss; however, localized lengths of the slot have significant corrosion (Figure 23).
4. The concrete curbs located at and near the bottom of the panels have localized distress, including cracking and spalls (Figures 24 and 25).

DISCUSSION

Concrete parking structures in Michigan are susceptible to deterioration due to their exposure to moisture, deicing salts, and temperature changes (i.e., freezing and thawing, thermal expansion and contraction, etc.). The primary causes of concrete deterioration in concrete parking structures is chloride contamination and carbonation. They both contribute to corrosion of embedded steel reinforcement. Because steel corrosion product (i.e. rust) occupies a larger volume than the native steel, it is common for distress in the form of cracks, delamination, or spalls to develop when the embedded steel corrodes and expands.

Structural Repairs

Based on information provided by the City of Birmingham to WJE, it has been about 10 years since the last repair effort at the parking garage. Given that this structure has been in service for over 50 years, ongoing deterioration is expected, despite previous repair efforts to maintain the structure, and a repair effort to maintain and restore the structure should be expected every 5 to 10 years. It should be noted that during the field assessment, WJE observed locations of concrete distress that were noted in the 2010 repair documents prepared by Walker Restoration Consultants, but had not been repaired, indicating some of the proposed repairs may not have been performed at that time.

The approach to implementing the necessary repairs should reflect the future needs and planning for parking at this location. These approaches could be wide ranging, varying from doing detailed repairs and waterproofing to reconstructing sections of the structure. Based on our experience with similar structures and with the current condition of the parking structure, concrete distress identified during our limited field assessment could be addressed using typical concrete repair processes that have become standard in the repair industry. With regard to the concrete slabs, columns and walls, the extent and severity of deterioration

is consistent with expectations for a fifty year old parking structure that has not undergone repairs in the last 10 years.

Traffic Coating

Currently, the supported slabs of the parking structure do not have vehicular traffic bearing waterproofing systems (traffic coating). If moisture can be kept out of the slab concrete, future corrosion activity should be reduced. Therefore, a waterproofing system is an important measure commonly used to greatly reduce the amount of moisture and chlorides that can enter the concrete. Traffic-bearing membrane systems are the most common waterproofing system used on parking structures. They typically consist of multi-layer polyurethane or epoxy coating with integral aggregate broadcast for slip resistance. The bottom layer of the system generally provides the waterproofing and the upper layers contain the aggregate and protect the bottom layer. It would be prudent for Birmingham to consider installing a traffic coating on the supported levels to extend the life of the structure and increase the durability of the repairs, thereby extending the time between significant repair projects.

Precast Concrete Facade Panels

Multiple options are available to address the deteriorating precast concrete panels comprising the facade.

- First is localized, in-place repair of deteriorated panels. Initially, this could be the lowest cost option; however, repairs will need to be performed regularly (annually or bi-annually) and the repair material will not match the aesthetic of the existing exposed aggregate surfaces.
- Second is localized replacement of deteriorated panels. This option may be more expensive than repair, but will provide new panels and connections, reducing future maintenance costs for the replaced panels and connections. However, similar to the repair option, the remaining original panels will need to be assessed on a regular basis and potentially replaced in the future. In addition, the new panels will have a brighter appearance than the remaining panels which affects the overall aesthetic of the facade.
- Lastly, the entire precast concrete facade system can be removed and replaced. Our assessment indicates that the current system is deteriorating and will continue to do so over time, likely at an increasing rate. While this option is the most costly, it will reduce maintenance costs for the facade in the short term as a new system should not require significant repairs for many years. In addition, replacing the facade affords the City of Birmingham the opportunity to change the exterior aesthetic.

RECOMMENDATIONS

Immediate Recommendations

Potentially hazardous conditions were noted during the field investigation. These conditions present a hazard from falling debris. We recommend that the following conditions be addressed as soon as possible:

1. Removing loose overhead concrete throughout the parking structure and facade to minimize the potential for concrete pieces to dislodge and impact pedestrians or vehicles. This is generally performed with hand tools or small electric chipping hammers with the intent of removing loose concrete rather than concrete chipping hammers used for concrete demolition.
2. Stabilizing, repairing, or replacing precast concrete facade panels that are severely deteriorated and/or have compromised connections. Based on our limited assessment, we estimate that at least four facade panels will require stabilization, repair, or replacement in the very near future.

Repair Recommendations

WJE recommends the following items be considered as part of a repair project for the structure. Note that *Table 1: Summary of Estimated Structural Repairs* assumes complete replacement of the precast concrete panels and installation of a new traffic bearing membrane.

1. Concrete repairs at the following locations:
 - a. Partial-depth repairs on the top surface of the slabs and ramps;
 - b. Partial-depth repairs on the underside of the slab;
 - c. Full-depth repairs on the supported slabs.
2. New traffic bearing membrane on parking surfaces
3. Addressing distress on the precast concrete panels and associated elements including:
 - a. Repairing or replacing panels with moderate to severe distress;
 - b. Concrete repairs at curbs where concrete deterioration is present;
 - c. Replacing or cleaning and coating the angle connections, as appropriate;
 - d. Cleaning and coating, or replacing where appropriate, the embedded slot at the underside of the slab and at the top of the concrete curbs, where corrosion is present;
 - e. Replacing bolts at the angle connections;

Based on the extent of the observed deterioration, it is likely that the existing concrete is contaminated with chlorides and/or carbonation, in which case, durability improvements such as the application of traffic bearing waterproof membrane at critical levels and the replacement of joint sealant throughout the structure could also be considered at additional cost.

OPINION OF PROBABLE COSTS

Probable Repair Costs

As shown in Table 1, the probable construction cost of a repair project to address the recommended structural repairs, to replace the facade precast panels and to install a traffic bearing membrane is on the order of six to seven million dollars. Due to the limited nature of our assessment to-date, these costs should be considered as an order of magnitude estimate.

Table 1: Summary of Estimated Repairs

REPAIR TYPE	UNIT	QUANT.	UNIT PRICE	COST
Full Depth Slab Replacement	SF	8,000	\$ 110	\$ 880,000
Partial Depth Slab Repair (Topside)	SF	12,000	\$ 45	\$ 540,000
Partial Depth Column Repair	SF	1,500	\$ 110	\$ 165,000
Partial Depth Exterior Wall Repair	SF	300	\$ 100	\$ 30,000
Facade Panel Complete Replacement	SF	26,000	\$ 75	\$ 1,950,000
Install Traffic Membrane (Optional)	SF	200,000	\$ 5	\$ 1,000,000
SUBTOTAL				\$ 4,565,000
General Conditions, Rigging, and Access (15%)				\$ 684,750
Contingency (15%)				\$ 684,750
Engineering/Testing/Construction Period Services (10%)				\$ 456,500
TOTAL ESTIMATE				\$ 6,391,000

Notes:

- The quantities provided in this table are rough estimates intended for the purpose of developing order of magnitude level cost estimates with regard to a single restoration project. A detailed assessment of the extent of deterioration to develop actual repair quantities will be required as part of the design phase for a restoration project.*

The total estimate includes a 15 percent contingency, which based on our experience with similar repair projects and the limited nature of our assessment to date, is prudent to include in order to accommodate unforeseen conditions that are encountered during repair construction. In addition, the total estimate includes a 10 percent budget for engineering, testing, and inspection. This cost estimate assumes that all of the work will be performed during one large construction project. The majority of the unit costs contained in the budget estimate are based on costs for similar work on previous concrete repair projects located in the Midwest region. Repair quantities determined are based on current level of deterioration determined during our limited field assessment, and unit prices used to calculate the repair type costs are in current dollars. Both are subject to increase in the future.

Given the age of the structure, significant repair efforts for the structural concrete elements (slabs, columns, and walls) should be anticipated every five to ten years. For the purposes of estimating, a similar concrete repair effort (on the order of one to two million dollars) could be considered every ten years. However, this effort could be reduced significantly with the inclusion of a traffic bearing membrane.

CLOSING

On behalf of The City of Birmingham, WJE performed a limited structural condition assessment of the parking structure located at 333 North Old Woodward Avenue in Birmingham, Michigan. The condition of the structural elements was assessed through onsite observations and non-destructive testing to identify conditions that require repair to restore the structure. Based on our observations and experience with similar

concrete repair projects, order of magnitude estimates of repair quantities and costs were developed for consideration with regard to their decision to modify the property. In total, we estimate a project cost on the order of six to seven million to restore the structure and replace the existing facade system.

FIGURES



Figure 1. Spalled, loose concrete on the slab underside.



Figure 2. Spalled, loose concrete with visible corroded reinforcing bars on the slab underside.



Figure 3. Spall near previous repair with corroded reinforcing bars.



Figure 4. Unsound concrete outlined in blue (indicated by the arrow) adjacent to previous topside slab repairs.



Figure 5. Cracks with leaching efflorescence.



Figure 6. Cracked previous repair with efflorescence and corrosion staining.



Figure 7. Unsound, failed previous repair at piping.



Figure 8. Exterior column exhibiting cracks, spalls, and unsound concrete.



Figure 9. Interior column with unsound concrete at the bottom corners (unsound concrete on the bottom left is at a previous repair).



Figure 10. Pack rust at the top angle attachment of an exterior column.



Figure 11. Localized spall at the Level 5 ramp wall.



Figure 12. Localized spall at the Level 1 wall.



Figure 13. Typical single precast panel. Note the three vertical sections connected at the bottom, creating a single panel.



Figure 14. Single Level 1 precast concrete panel with post-installed connections..



Figure 15. Post-installed panel connection with missing concrete at the connection bolts.

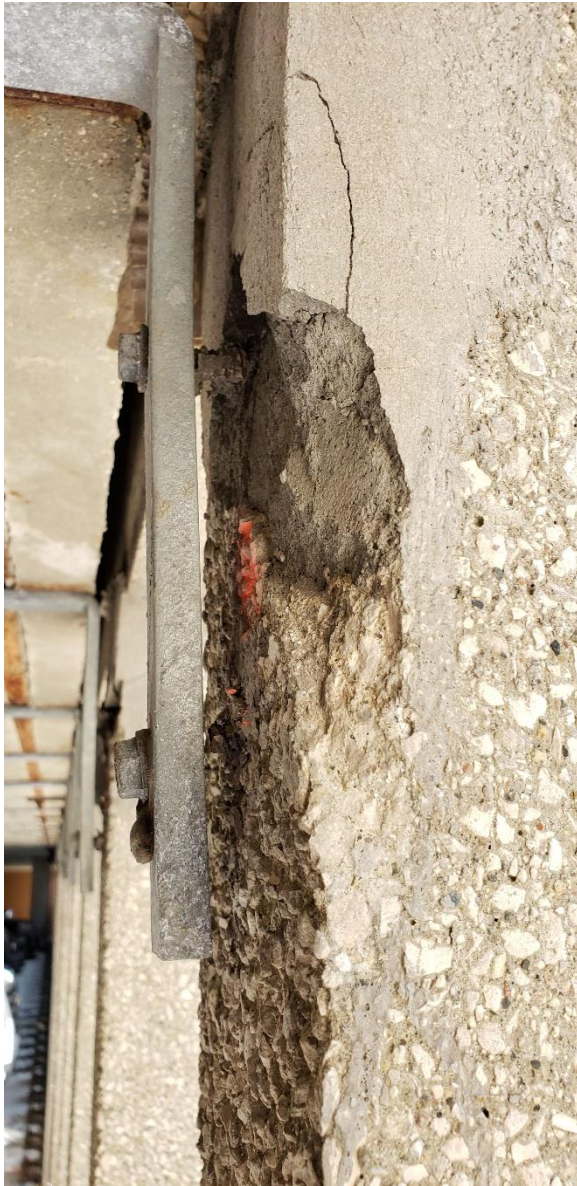


Figure 16. Post-installed panel connection with a spall at the top bolt and a fracture at the bottom bolt.



Figure 17. Concrete spalls exposing corroded reinforcing bars at the exterior of a precast panel.



Figure 18. Concrete spall exposing corroded reinforcing bars at the interior of a precast panel.



Figure 19. Incipient spall at the top connection of a precast panel.

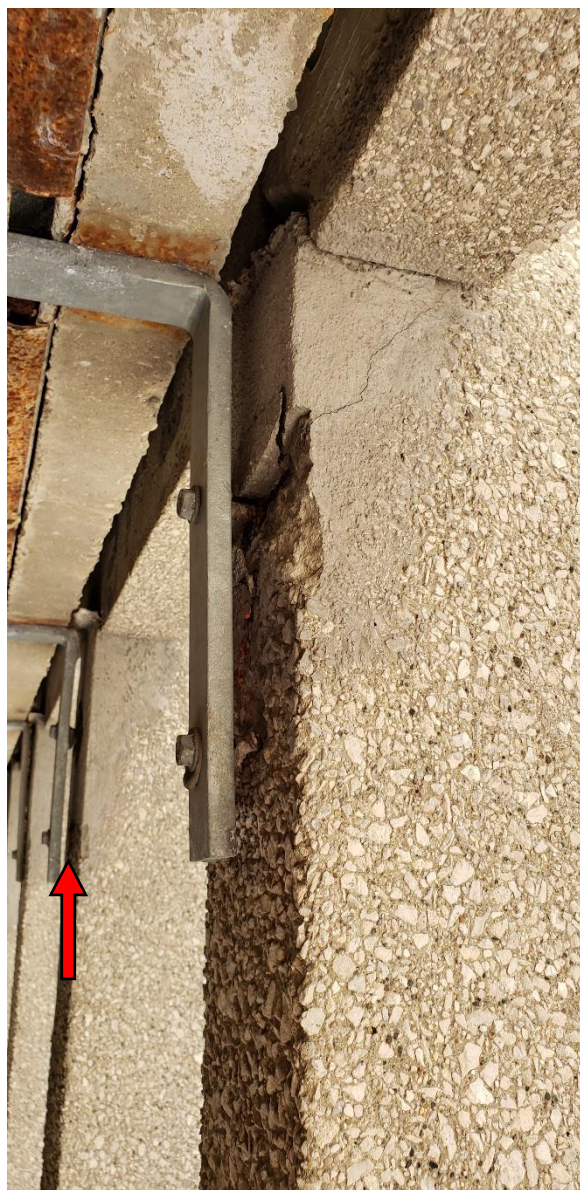


Figure 20. Spall at the nearest top connection of a precast panel. Note the loose bolts at the nearest connection and the fractured bolt at the connection beyond (indicated by the arrow).



Figure 21. Concrete deterioration and separation (indicated by the arrow) at the bottom connections of a precast panel.



Figure 22. Typical surface corrosion at the precast panel steel angles.



Figure 23. Corroded embedded steel slot.



Figure 24. Concrete curb spalls near the connections at the bottom of precast panels.



Figure 25. Concrete spalls and missing concrete at the concrete curb edge at the bottom precast panel connections.



ATTACHMENT G – PRELIMINARY ASSESSMENT OF PIERCE STREET GARAGE

Via E-mail: tgunter@bhamgov.org

September 28, 2018

Ms. Tiffany J. Gunter
Assistant City Manager
City of Birmingham
151 Martin Street
Birmingham, MI 48012

Re: Pierce Street Parking Structure
Slab Differential Deflection Safety Assessment
WJE No. 2018.5569

Dear Ms. Gunter:

As requested, Wiss, Janney, Elstner Associates, Inc. (WJE) performed a limited structural assessment of a reinforced parking structure located at 28315 Groesbeck Highway in Roseville, Michigan. The purpose of the assessment was a preliminary assessment of whether there is a safety concern caused by the visible differential deflection at the expansion joints of the supported floors and to provide an assessment of the working condition of the drainage system. This letter summarizes our findings and recommendations

STRUCTURE DESCRIPTION AND BACKGROUND

The parking structure was constructed in 1968 and is a four-story reinforced concrete flat slab structure. Five parking levels (including the slab-on-ground level) are connected via a north-south ramp at the middle of the structure. The nominal 12-1/2 inch elevated floor slabs are supported directly by reinforced concrete columns, with drop panels 10 feet by 11 feet by 4 inches at each column. The typical column spacing is approximately 29 feet in the north-south direction and 34 feet in the east-west direction. The floor slabs cantilever approximately 15 feet at the perimeter of the structure from the columns to an upturned edge beam/guardrail. The slabs also cantilever approximately 15 feet to the two interior expansion joints.

In plan the structure consists of two joined rectangles with the long dimension of each rectangle in the north-south direction and each floor comprising about 60,000 square feet. The larger rectangle is approximately 130 feet east-west by 325 feet north-south with the smaller rectangle to its west, approximately 70 feet east-west by 180 feet north-south. The larger rectangle is split approximately in half by an east-west expansion joint, and a north-south expansion joint separates the larger and smaller rectangles.

OBSERVATIONS

Mark Krueger and Thai Dam of WJE assessed the parking structure on September 17, 2018. Mark Krueger returned on September 24 to assess the surface drainage while it was raining. They also reviewed the provided documents and conducted a limited structural analysis. Following is a summary of their findings.

Document Review Findings

WJE reviewed the following provided documents as part of the assessment:

- A set of 37 original design drawings dated November 20, 1967 by O'Dell Hewlett & Luckenbach Inc.

- A set of 7 drawings for a structure restoration, contact No. 2-02 (PK), dated January 28, 2002 by Walker Parking Consultants.
- A set of 10 drawings for a structure restoration, contact No. 5-03 (PK), dated January 29, 2003 by Walker Parking Consultants.
- Contact No. 13-09(PK), specifications for expansion joint repairs, published by the City of Birmingham.
- A memorandum for a feasibility study of the possibility of adding two floors to the structure dated October 4, 2013 by Walker Parking Consultants.
- A set of 9 drawings for a structure restoration, contact No. 3-12 (PK), dated on January 19, 2018 by Walker Parking Consultants.

According to the original design drawings of the structure, the two-way slabs were typically 12-1/2 inches thick and the concrete clear cover depth was 1-1/4 inches for the top reinforcement bars and 1 inches for the bottom bars (Figure 1). The east-west bars were placed outside (near top and bottom of the slabs), and the north-south bars were placed inside. The thickness of slab regions near the curbs were 12-1/2 inches for the warp slabs (ramps) and 16-1/2 inches for the level slabs (Figure 2).

Per provided previous repair documents and drawings, some repairs have been made to the parking structure. Concrete delaminations on the top and the bottom of the elevated floors were repaired at locations throughout the structure, especially at the expansion joints. Concrete delaminations on columns and beams were also repaired. Traffic topping has been applied, and reapplied in some regions, and floor expansion joints were repaired. Many of the drain heads have been replaced throughout the structure, except at the ground floor.

Differential Deflections

Measured differential deflections at selected locations (points) E1 thru E7 along expansion joints, as shown in Figure 3, are given in Table 1. The measured differential deflections varies from 0.0 inches (no differential deflection) to almost 4 inches. Except location E5 on the 6th floor and locations E6, the east and south sides at the remaining locations deflected below the west and north sides.

The profile of the bottom of the slabs along lines DE and DW, as shown in Figure 3, was also measured (Figure 5). A plot of the measured bottom slab profile versus distance from the column face is shown in Figure 4. The plot indicates that the deflection of the east side slab is larger than the deflection of the west side slab, and the measured edge deflections were approximately 2.9 inches for the east side and 1.4 inches for the west side.

Slab Reinforcement

Select locations on the lower three elevated slabs were scanned using Ground Penetrating Radar (GPR) for location of reinforcing bars. A typical GPR scan is shown in Figure 6 and average measured clear concrete cover depth (to the scanned bars) over the column strips is given in Table 2. According to GPR scanning results, clear concrete covers varies from 2-3/8 inches to 6-7/8 inches, and the measured thickness of the slabs also varies from 12-1/2 inches to more than 20 inches.

Limited Structural Analysis

A three-dimensional finite element model was develop to estimate the deflection of the slabs due to dead load and live load along the expansion joints. The slab on the east side of the north-sound expansion joint

and a portion of the slab on the north of the east-west expansion joints (Figure 3) were included in the model as shown in Figure 7. The model was utilized to estimate differential deflection at location E1.

According to the finite element analysis (Table 3), calculated elastic deflections of the slabs at location E1 due to dead load (self-weight of the 12-1/2 inches thick slabs) were 0.39 inches for the east side slab and 0.23 inches for the west side slab. Deformed shape of the slabs due to dead load is shown in Figure 8. Calculated deflections due to a uniform live load of 40 psf were 0.100 inches for the east side and 0.060 inches for the west side. If 50 percent of live load is assumed to be sustained on the slabs, calculated deflections due to sustained loads (dead + 50% live load) were 0.443 inches for the east side and 0.267 inches for the west side. Calculated instantaneous differential deflection at location E1 due to assumed (sustained) loads was 0.176 inches.

Drainage and Surface Water Management

Drainage heads and exposed drain lines were visually inspected. Most of the drain heads have been replaced in the past, but approximately 17 of the drain heads on the elevated floors and all of the drain heads on the first floor (slab on grade) have not been replaced and some of them are severely corroded (Figure 9). A limited amount of the drain lines were corroded and not in working condition (Figure 10). Many of the drain line cleanouts were open, especially at the ground floor, indicating that there may be problems with partially clogged drain lines, although it was observed that the floor drains on the ground floor were accommodating the relatively light rainfall on September 24 (Figure 11). During the initial walk through there had been questions about surface water management at the gaps in the perimeter beam/guard rail, but we observed that there is a curb at these locations to prevent slab surface water exit at these locations.

DISCUSSION

Maximum measured differential deflection between slabs at location E1 was 3-7/16 inches (3.44 inches). This measured deflection is approximately 20 times larger than the calculated elastic differential deflection due to sustain loads. In typical design of concrete structures, the total deflection of a member including long-term deflection due to concrete creep during the life of the structure is assumed to be three to five times of the calculated elastic deflection.

The measured profile of the bottom of the slab along lines DE and DW (Figure 4) indicates that the existing deformation of the slab on the west side (DW) is equal to a typical total deflection limit of 1/240 of span length (2 times of cantilever length) for a concrete structure, while the existing deformation of the east side (DE) is significantly larger than the typical deflection limit.

Deflection of a concrete member, especially creep induced deformation, depends on concrete strength, water-cement ratio, and location of reinforcing bars. The measured concrete cover of the slab reinforcing bars at the column strips was significantly larger than the specified depth of 1-1/4 inches in the original drawings, indicating the bars were placed deeper in the slab than what was designed. Reduction of the effective flexural depth of a concrete members often results in an increase of a long-term deflection due to sustained loads.

Measured slab thicknesses at the selected locations on the elevated slabs shows that the slab thickness are not uniform, and the slabs, at some locations, are significantly thicker than the specified thicknesses in the original drawings. This causes an increase in dead loads and deflections of the slabs.

Overall, the condition of existing drainage system is not unexpected for a system of this age. A limited amount of the drain heads and the drainage lines require replacement. Also, the surface drainage is working reasonably well, with a few limited areas of ponding water. An important next step in the assessment of the drainage system would be to clean the lines and conduct a video inspection. The video inspection is especially important for the below grade portion of the drainage system, especially because the open cleanouts indicate that the drains are not operating as they should.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of our limited assessment, our conclusions and recommendation are as follows:

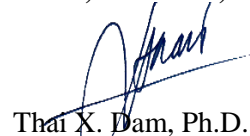
1. There are two aspects of the observed excessive differential deflection of the elevated floors that cause structural concern that prevent this initial assessment from reaching a conclusion about the safety of the structure:
 - a. Slab reinforcing bars were placed deeper into the slabs than specified in the original design drawings.
 - b. The slabs were built thicker (heavier) than the design specifications.
2. These structural concerns should be further investigated:
 - a. Since we have found that slab thickness and deflection varies widely, a laser scan should be conducted to measure the thickness and deflection of all four elevated floors and ramps.
 - b. Results of this laser survey should be used to calculate more accurate dead load and deflection of the slabs, and to identify critical regions of slabs with excessive deflections.
 - c. Since we have found that the depth of the reinforcing varies widely, additional GPR surveys and inspection openings are recommended at several critical locations identified by the laser survey to inspect the slab reinforcing bars (diameter, depth, and condition)
3. Less than 20 drain heads and limited portions of the exposed drain lines on the four supported floors are not in a good working condition, and should be replaced.
4. Drain heads and pipes under the first floor level (slab on ground) should be cleaned, inspected by video camera, and repaired or replaced as required. Based on the visible condition it is expected that most of the drain heads on the first level will require replacement.
5. Although the traffic coating needs to be repaired or replaced in many areas to reduce water permeation into the concrete, we did not observe significant problems with the surface water management.

CLOSURE

It has been a pleasure to assist the City of Birmingham on this project. Please feel free to contact me if you have any questions regarding our findings and recommendations.

Sincerely,

WISS, JANNEY, ELSTNER ASSOCIATES, INC.



Thai X. Dam, Ph.D., P.E.
Associate III



Mark R. Krueger, PE
Principal and Project Manager

Enclosure:

Tables 1 to 3
Figures 1 to 11

Table 1. Measured differential deflection (inches) of slab at expansion joints

Location		2 nd FL	3 rd FL	4 th FL	5 th FL	Note
E1	Top	3-1/16	2-5/8	1/2		A positive value indicates the east side is lower
	Bottom	3-7/16	2-3/4	3/4	2-1/2	
E2	Top	3/4			2-1/8	A positive value indicates the east side is lower
	Bottom	7/8				
E3	Top	4-3/4	3/4			A positive value indicates the south side is lower
	Bottom	4-3/16				
E4	Top	3-3/4	2-5/8	2-1/4		A positive value indicates the east side is lower
	Bottom	3-5/16	2-3/4	3-1/4	3-15/16	
E5	Top	0	3/4	-9/16	9/16	A positive value indicates the south side is lower
	Bottom		1/2	-1/2	0	
E6	Top	-1/4	-1-1/8			A positive value indicates the south side is lower
	Bottom			-7/8		
E7	Top	2-3/4	3/4			A positive value indicates the south side is lower
	Bottom					

Unit: inches. Refer to Figure 3 for locations of E1 through E7

Table 2. Measured concrete cover depth over column strips

Scan line	Average cover depth (inches)	Note
GPR 1	5-1/2	2 nd floor, east-west bars
GPR 2	6-7/8	2 nd floor, east-west bars
GPR 3	5-1/2	2 nd floor, east-west bars
GPR 4	3-3/8	2 nd floor, east-west bars
GPR 5	2-3/8	2 nd floor, east-west bars
GPR 6/3	4-1/2	3 rd floor, north-south bars
GPR 6/4	4-1/8	4 th floor, north-south bars
GPR 7/3	4-1/4	3 rd floor, north-south bars
GPR 7/4	4-3/4	4 th floor, north-south bars

Table 3. Estimate of instantaneous deflection of slab at corner E1

Load	East side	West side	Differential deflection
Dead load (self-weight)	0.393 inches	0.237 inches	0.159 inches.
Live load (40 psf)	0.100 inches	0.060 inches	0.040 inches.
Dead + 50% Live loads	0.443 inches	0.267 inches	0.176 inches.

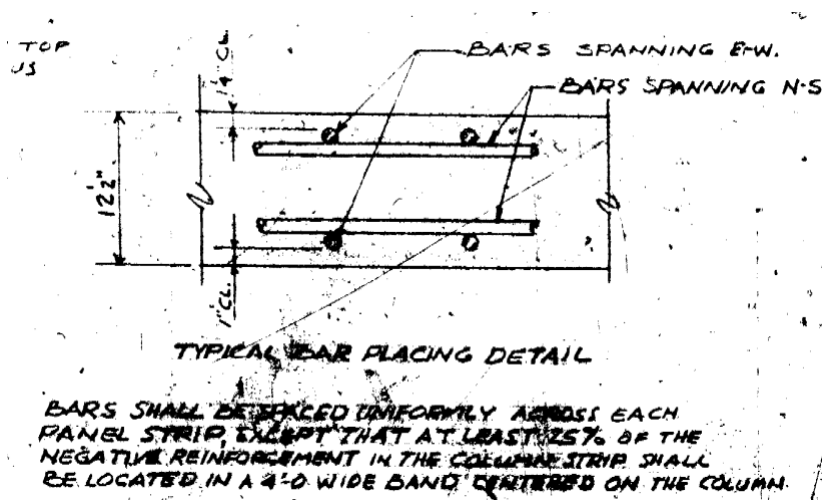


Figure 1. Typical slab reinforcing bar placement detail in the two-way flat slabs at the parking structure (excerpt from the original design drawing S8)

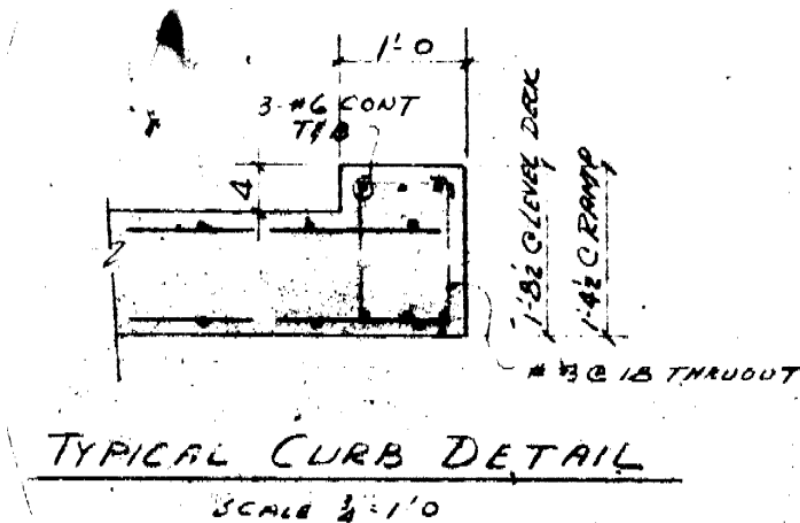


Figure 2. Typical curb detail (excerpt from the original design drawing S8)

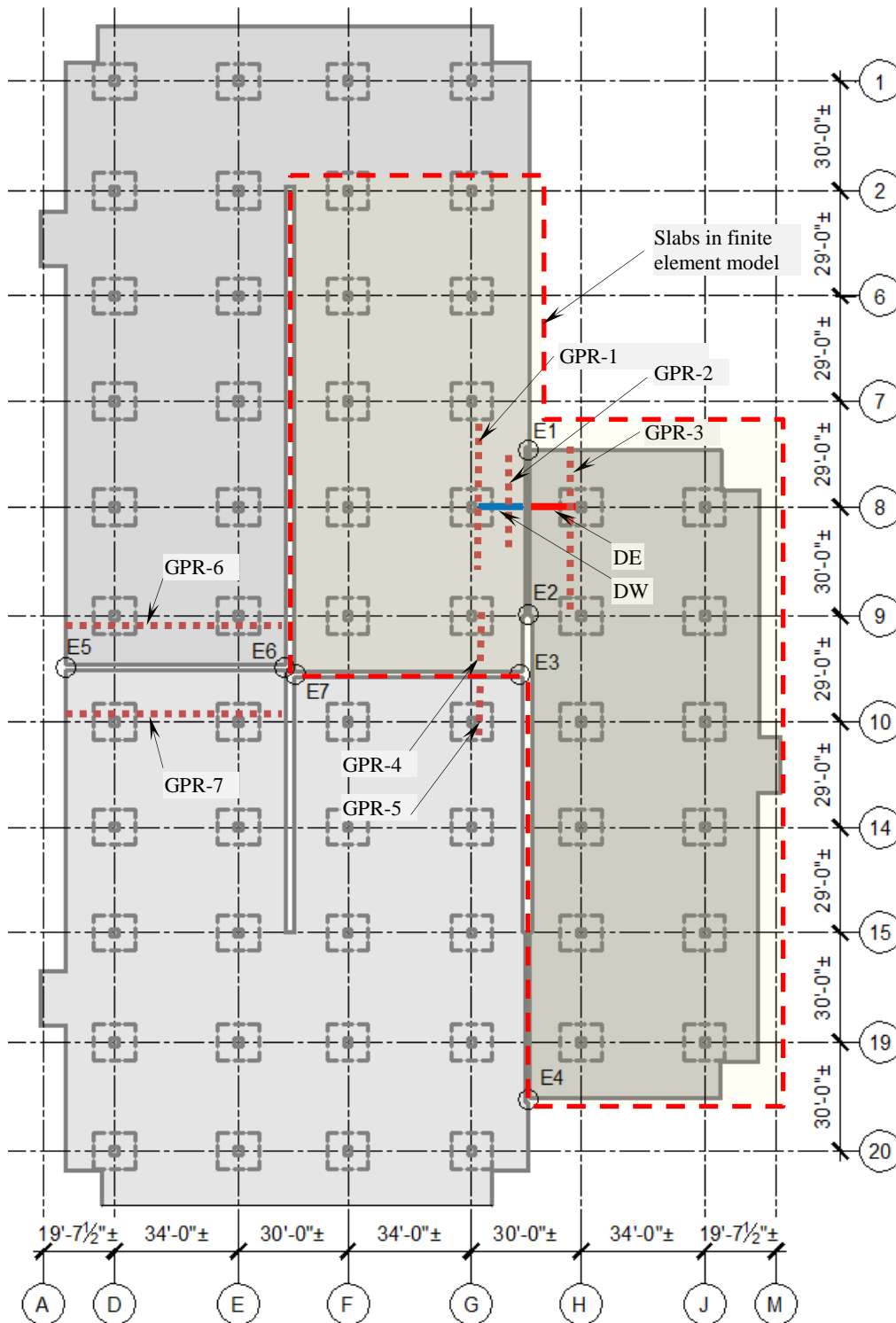


Figure 3. Floor plan and measurement locations (North is up in the sketch)

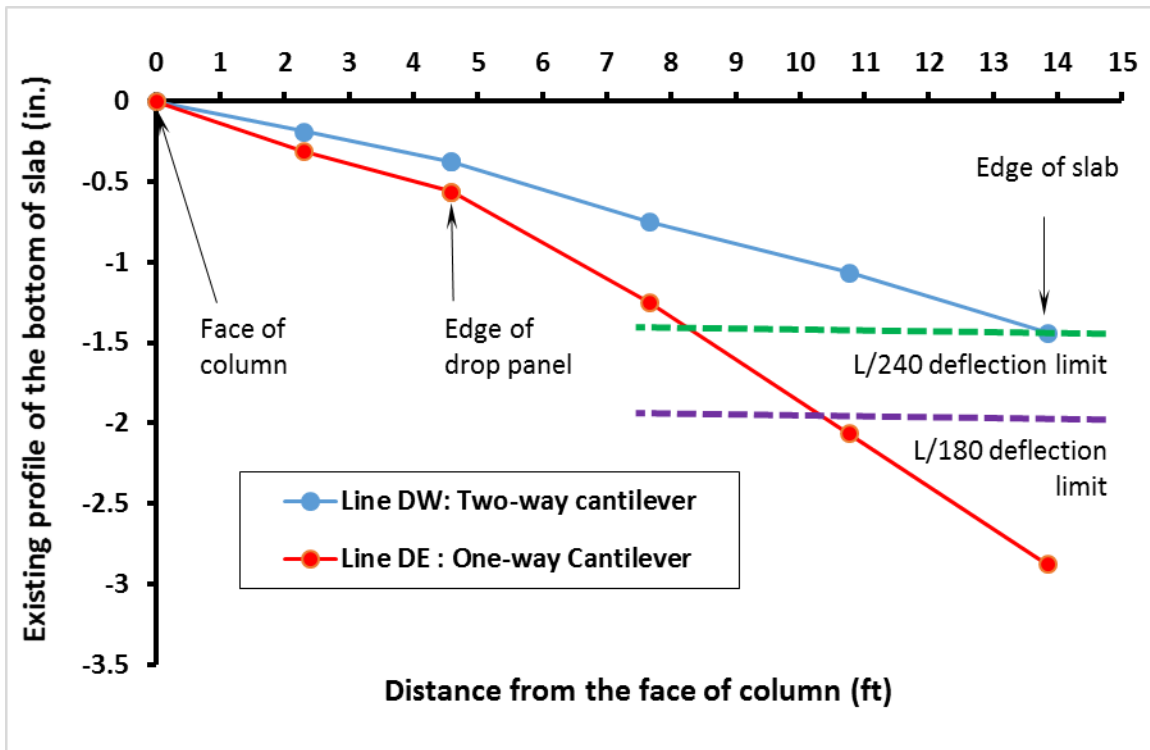


Figure 4. Measured slab deflection along lines DW and DE



Figure 5. Slab differential deflection measurement

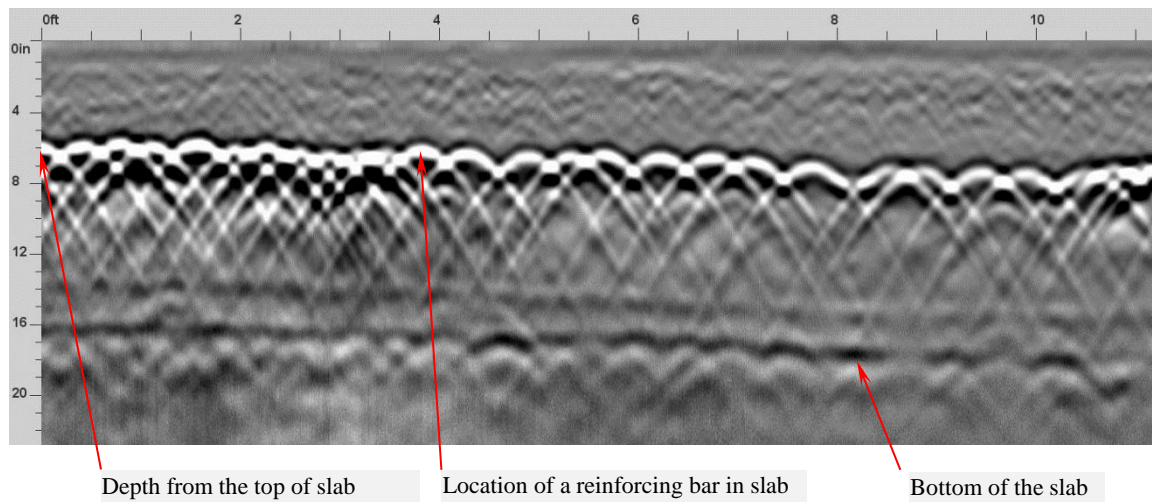


Figure 6. Typical GPR scanning of the slabs

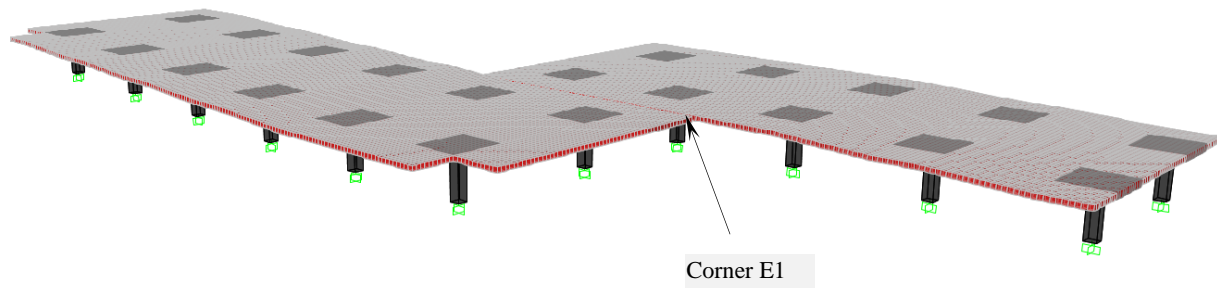


Figure 7. Three-dimensional finite element model to estimate differential deflection of slab

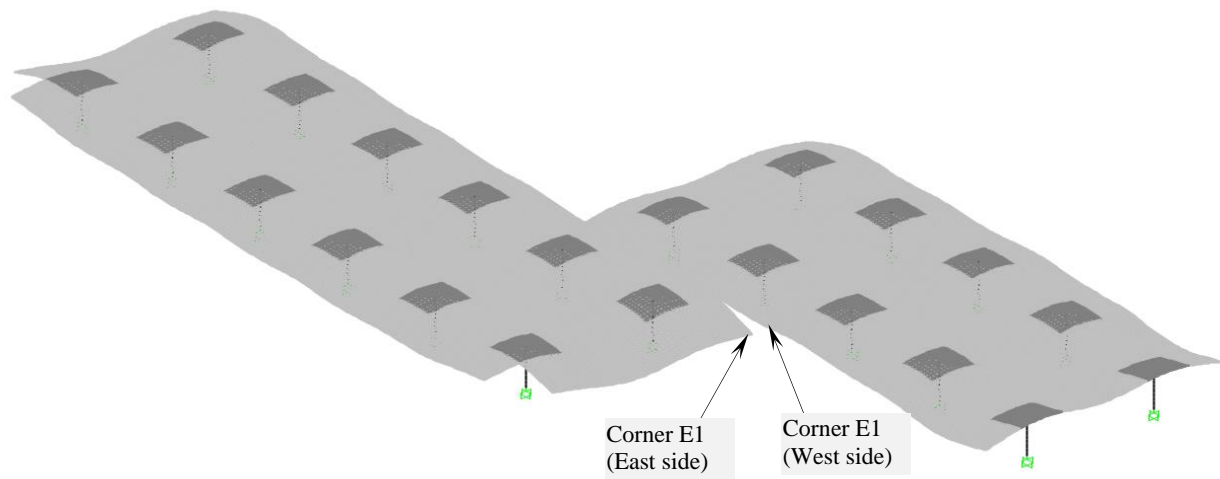


Figure 8. Deformed shape of portions of the east and west floors due to dead load



Figure 9. Severely corroded drain head



Figure 10. Corroded steel drain line at clean out



Figure 11. Water on the ground floor entering the floor drains.

DATE: September 4, 2019

TO: Advisory Parking Committee

FROM: Tiffany J. Gunter, Assistant City Manager

SUBJECT: Current and Future Parking Demand – Strategy Development

The parking proposal that was placed on the August 6, 2019 ballot to fund the expansion of public parking capacity, extend Bates Street, and redevelop the existing site with mixed-use development at the N. Old Woodward garage site did not pass. During the education campaign, there was a consistent theme expressed by both businesses and residents that parking in the downtown is a major point of frustration. The need to supply sufficient existing and future parking demand continues to be the focus of the Advisory Parking Committee. The contents of this memo attempt to illustrate the key issues for the Committee to consider and make recommendations for improvement in the future. The following is an outline of these issues:

- A. **Increasing Capacity (Alternatives)** – There are opportunities to add parking capacity to the system. Larger scale construction of elevated decks will require bond financing while other options, such as, off-site parking and shuttling for employees that may be considered sufficient to address demand. The table below highlights some of these options and their associated costs and number of potential additional parking spaces.

Options	Requires Bond Financing (Y/N)	Implementation Timeframe	Cost Estimate	Additional Parking Gained
Replace Existing North Old Woodward garage and Build New Structure in its place and on surface lot.	Y	36-48 Months	\$55 - \$65 Million	300 or more
Build new 4 level structure on surface lot at N. Old Woodward	Y	24-36 Months	\$17 - \$20 Million	339*
Add 2 levels on Pierce Street Garage	N	24-36 Months	\$12 - \$15 Million	280*
Off- Site Parking Lots and Shuttle System	N	2-3 Months	\$500K - \$1 Million*	100-500

*339 – Structure would have 495 spaces, but less the 156 existing surface lot spaces.

*\$500K – 1 Million is an operational cost per year, while the other amounts represent capital improvement costs.

*280 –The Pierce garage is 51 years old and an assessment of age and condition would determine feasibility of this option.

- B. Monthly Permit Allocation and Pricing** – The number of unique individuals on the wait list for a parking permit as of July 31, 2019 was 3,757. It has been stated as an objective of the City to reduce the waitlist for those that wish to have a monthly parking pass at a discounted rate. The parking strategies report pointed out that many of the individuals on the wait list are currently parking in the garage and paying the \$10 daily rate. The monthly parking pass is, at most, \$70 per month. We assume that employees use them 20 days out of every month, which equates to \$200 per month for those that do not have a pass. There is a balancing act that comes with issuing additional passes for sale and maintaining parking availability in the garage for transient usage simultaneously.

During the past several months, the parking system has experienced a decrease in utilization at the Chester and Pierce Street garages. We have been working to monitor this change with the data analytics team at Smarking to determine if the lower utilization is expected to continue. These findings will be shared once the analysis is complete.

At the same time, there has been an increase in demand at the Park, Peabody, and N. Old Woodward garages that has resulted in capacity exceeding 100% in many cases so as to trigger the roof-top valet option, where possible. The parking and community development staff have evaluated developments under construction and planned for in the Parking Assessment district to assess potential impact on the existing system.

Development Projects Under Construction:

The Pearl (Primarily Residential – Self Parked)
Brookside Terraces (Primarily Residential – Self Parked)
The Daxton (Hotel – 2 Levels of underground parking, will impact Pierce Garage)
The Jeffery (some on-site parking, 2 stories)

Planned Developments:

277 Pierce (Former Varsity Shop expected to house two floors of office – Pierce Garage)
Peabody development (will add two levels of office – nearest to Peabody and Park garage)
The Woodward (Hunter House site will lose Lot on Woodward- 40 spaces and add two levels of office nearest to Peabody and Park garages)

The Committee over the next couple of months will work to assess the impact of these developments with respect to increasing permit allocations. As part of the evaluation, staff would also encourage the committee to consider working to increase the number of available permits at an increased rate. When reviewing parking economics with downtown's that have similar demand and retail/office characteristics to those of Birmingham, it is true that the permit prices are remarkably low. Given that many users are currently paying close to \$200 per month to park daily, it may be worth the effort to explore the financial impact of moving to a discounted pass at a rate of \$120 per month or higher. The financial implications would need to be evaluated and vetted along with the other benefit of significantly increasing throughput time and customer satisfaction with entering and exiting the structure and reducing the on-street queueing that results from an increased number of users that have to use credit cards. The introduction of the

Parkonect technology that allows the pay-by-phone option in the garage will also improve throughput. If the committee recommends further exploration, it is likely that will be accompanied by a sunset provision for the pass holders that currently enjoy the \$70 per month fee, which equates to roughly \$3.50 per day for a 20-day month. Further, additional options for pass holders that want to buy a number of days at a discounted rate could be further explored if the committee agrees. The ultimate goal of the permit pricing adjustments or allocations is not to increase revenue, but rather to:

- 1) increase the number of options available for regular parkers so that it is not an all or nothing environment,
- 2) increase the flow in and out of the garages to increase user satisfaction and safety, and
- 3) have better information and communications with the parking population in the garages.

Lastly, the Lot 6 expansion is now complete and there have been requests to increase the number of permits sold at this location equivalent to the number of new spaces. Staff will explore and make a recommendation at the next meeting after conducting a review of current usage.

C. Parking Mitigation Plan Options –

While there is a temporary decrease in demand for parking on the South side of the downtown, staff believes it is important to be prepared for circumstances where parking demands begin to reach occupancies in the high nineties, which had been the case for many months in 2018-2019. As such, there were several options suggested in addition to off-site lots and shuttles for consideration during the parking proposal initiative. The purpose of this section is to begin an effort to prioritize these items so that as demands begin to rise again, the City has a plan in place to respond quickly and effectively. The ideas proposed included:

- Off Site Parking and Shuttle Services
- City Sponsored Valet Services
- Drop and Go Valet Services
- Customized Ridesharing Services
- Luxury Zip Car
- Daytime Trolley
- Discounted Public Transit Passes
- Mobile Parking Application

City sponsored valet services and the mobile parking application are both items that are moving ahead currently. The City sponsored valet services are managing roughly 450+ cars per week and the users are very positive about the service. The mobile parking application is under development and is expected to roll-out in the Fall. The mobile parking application will help motorists that are coming into the downtown to select a parking location more efficiently than they do now. It will work as a wayfinding system to direct people to available parking and demystify the “unknown.” At times, the motorists get a bad reputation for only wanting to park in front of their destination, when it’s possible they would park elsewhere, if they were aware that they could. The mobile parking application, we anticipate, will help to manage the imbalance between the garages for

those that are willing and able to walk a few extra blocks. If the committee wanted to explore the daytime trolley option further, pricing and routing could be studied that would make it easier for employers and employees to adopt parking options that are further away from the offices.

The Committee will evaluate the other options listed above and determine, which of these makes sense to implement in the near-term and what options need to be explored and ready for implementation if certain thresholds of demand are crossed.

D. Metered Parking – Evening Limits

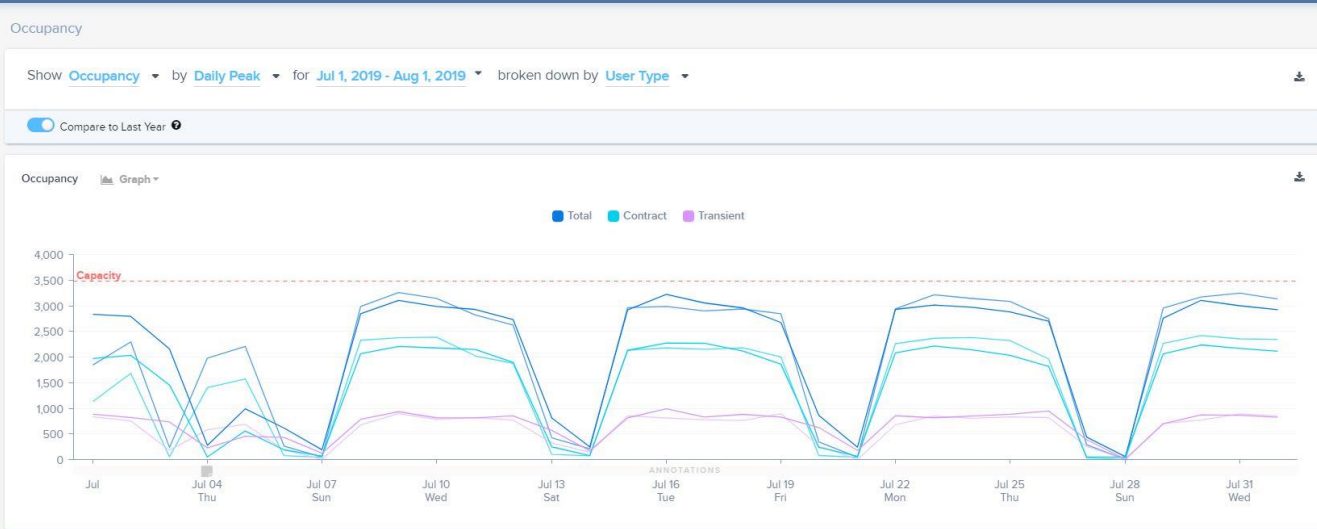
This may seem like an odd header for the subject matter in this memo. However, it has been brought to the attention of City Hall several times by the merchant community that it is a source of frustration to have two hour time limits on the meters in the evenings. During the daytime, time limits are used as a mechanism to increase turn over and ensure that employees are not parking for a full day in the prime parking locations. There are options to encourage evening employees to utilize the parking garages and the demands on the system in the evening are virtually non-existent when compared to daytime. Therefore, staff, if agreed to by the APC could explore the option of extending time limits in the evening to satisfy the requests of the businesses. This would require additional conversations and surveys of the businesses to confirm their interest and support of this potential change, but could prove to increase business and customer satisfaction.

In conclusion, the options presented above are introductions to the discussions that will be on future agenda items for Committee consideration. The list is not exhaustive. The Committee is encouraged to add other options and alternatives for consideration as an on-going exchange with staff. The time to plan for our next parking crisis is now.

City of Birmingham Parking Utilization Dashboard – July 2019

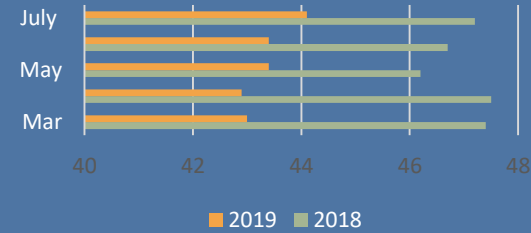
Parking Garages

OCCUPANCY

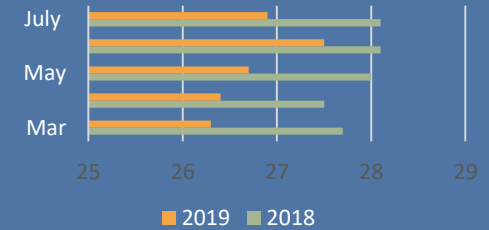


Parking Meters

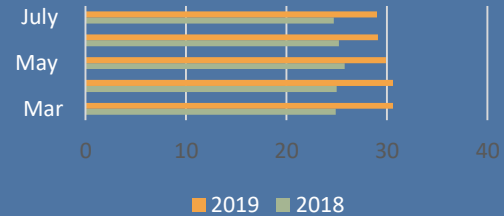
Coin



Credit



ParkMobile



DURATION



MONTHLY PARKING PERMIT REPORT

For the month of: July 2019
Date Compiled: August 9, 2019

	Pierce	Park	Peabody	N.Old Wood	Chester	Lot #6/\$210	Lot #6/\$150	South Side	Lot B	35001 Woodward	Lot 12	Total
1. Total Spaces	706	811	437	745	880	174	79	8	40	40	150	4070
2. Daily Spaces	370	348	224	359	425	N/A	N/A	N/A	N/A	N/A	N/A	1726
3. Monthly Spaces	336	463	213	386	560	174	79	8	30	40	150	2439
4. Monthly Permits Authorized	550	750	400	800	1140	150	40	8	30	50	225	4143
5. Permits - end of previous month	550	750	400	800	1140	150	40	8	16	50	212	4116
6. Permits - end of month	550	750	400	800	1140	150	40	8	22	50	223	4133
7. Permits - available at end of month	0	0	0	0	0	0	0	0	8	0	2	10
8. Permits issued in month includes permits effective 1st of month	5	3	0	4	2	0	0	0	0	0	0	14
9. Permits given up in month	5	3	0	4	2	0	0	0	0	0	0	14
10. Net Change	0	0	0	0	0	0	0	0	0	0	0	0
11. On List - end of month*	1234	1418	1185	1565	1116	27	0	0	0	22	0	6567
**On List-Unique Individuals												3757
12. Added to list in month	9	111	38	91	48	0	0	0	0	0	0	297
13. Withdrawn from list in month (w/o permit)	0	0	0	0	0	0	0	0	0	0	0	0
14. Average # of weeks on list for permits issued in month	143	82	141	126	57	0	0	0	0	0	0	109.8
15. Transient parker occupied	260	242	111	154	63	N/A	N/A	N/A	N/A	N/A	N/A	830
16. Monthly parker occupied	307	560	308	529	609	N/A	N/A	N/A	N/A	N/A	N/A	2313
17. Total parker occupied	567	802	419	683	672	N/A	N/A	N/A	N/A	N/A	N/A	3143
18. Total spaces available at 1pm on Wednesday 7/17	139	9	18	62	208	N/A	N/A	N/A	N/A	N/A	N/A	436
19. "All Day" parkers paying 5 hrs. or more												
A:Weekday average.	218	250	122	131	82	N/A	N/A	N/A	N/A	N/A	N/A	803
B:*Maximum day	N/A*	N/A*	N/A*	N/A*	N/A*	N/A	N/A	N/A	N/A	N/A	N/A	0
20. Utilization by long term parkers	N/A*	N/A*	N/A*	N/A*	N/A*	N/A	N/A	N/A	N/A	N/A	N/A	#DIV/0!

(1) Lot #6 does not have gate control, therefore no transient count available

(2) (Permits/Oversell Factor + Weekday Avg.) / Total Spaces

* Average Maximum day not available currently in Skidata

** Unique individuals represent the actual number of unique people on the wait list regardless of how many structures they have requested.

**Birmingham Parking System
Transient & Free Parking Analysis
Months of July 2018 and July 2019**

July 2018

GARAGE	TOTAL CARS	FREE CARS	CASH REVENUE	% FREE
PEABODY	15,221	9,062	\$ 25,716.00	60%
PARK	17,151	6,933	\$ 37,639.00	40%
CHESTER	7,350	2,353	\$ 68,540.00	32%
WOODWARD	12,181	5,848	\$ 34,610.00	48%
PIERCE	21,876	10,992	\$ 54,381.00	50%
TOTALS	73,779	35,188	\$ 220,886.00	48%

July 2019

GARAGE	TOTAL CARS	FREE CARS	CASH REVENUE	% FREE
PEABODY	18,549	9,996	\$ 44,721.60	54%
PARK	23,218	8,615	\$ 73,106.00	37%
CHESTER	6,279	2,352	\$ 62,500.00	37%
WOODWARD	11,441	5,282	\$ 34,500.00	46%
PIERCE	25,154	11,721	\$ 70,232.00	47%
TOTALS	84,641	37,966	\$ 285,059.60	45%

BREAKDOWN:	TOTAL CARS	+15%
	FREE CARS	+8%
	CASH REVENUE	+29%

CITY OF BIRMINGHAM - Combined
Income Statement
For Periods Indicated

REVENUES:	Month Ended July 31, 2019	Month Ended July 31, 2019	Month Ended July 31, 2018	Month Ended July 31, 2018
Revenues - Monthly parking	178,788.00	178,788.00	239,092.00	239,092.00
Revenues - Cash Parking	285,059.60	220,886.00	220,886.00	220,886.00
Revenues - Card Fees	45.00	45.00	45.00	45.00
Revenue - Lot #6	5,110.00	5,110.00	5,505.00	5,505.00
TOTAL INCOME	469,002.60	404,829.00	465,528.00	465,528.00
EXPENSES:				
Salaries and Wages	63,580.19	63,580.19	64,486.28	64,486.28
Payroll Taxes	5,998.48	5,998.48	6,138.12	6,138.12
Workmens Comp Insurance	3,093.08	3,093.08	2,934.67	2,934.67
Group Insurance	20,388.87	20,388.87	21,469.06	21,469.06
Uniforms	0.00	0.00	310.06	310.06
Insurance	12,134.02	12,134.02	10,655.44	10,655.44
Utilities	1,044.22	1,044.22	778.37	778.37
Maintenance	4,463.10	4,463.10	13,303.77	13,303.77
Parking Tags/Tickets	0.00	0.00	428.33	428.33
Accounting Fees	4,533.97	4,533.97	4,363.97	4,363.97
Office Supplies	264.72	264.72	399.54	399.54
Card Refund	0.00	0.00	0.00	0.00
Operating Cost - Vehicles	439.59	439.59	809.57	809.57
Pass Cards	0.00	0.00	0.00	0.00
Employee Appreciation	0.00	0.00	64.00	64.00
Credit Card Fees	14,554.15	14,554.15	13,017.59	13,017.59
Bank Service Charges	70.17	70.17	78.21	78.21
Miscellaneous Expense	294.72	294.72	302.93	302.93
Management Fee Charge	3,875.00	3,875.00	3,875.00	3,875.00
TOTAL EXPENSES	134,734.28	134,734.28	143,414.91	143,414.91
OPERATING PROFIT	334,268.32	270,094.72	322,113.09	322,113.09

CITY OF BIRMINGHAM PIERCE DECK
Income Statement
For Periods Indicated

REVENUES:	Month Ended July 31, 2019	1 Month Ending July 31, 2019	Month Ended July 31, 2018	1 Month Ending July 31, 2018
Revenues - Monthly parking	35,577.00	35,577.00	39,935.00	39,935.00
Revenues - Cash Parking	70,232.00	70,232.00	54,381.00	54,381.00
Revenues - Card Fees	15.00	15.00	0.00	-
TOTAL INCOME	105,824.00	105,824.00	94,316.00	94,316.00
EXPENSES:				
Salaries and Wages	11,209.37	11,209.37	11,115.86	11,115.86
Payroll Taxes	1,047.57	1,047.57	1,020.26	1,020.26
Workmens Comp Insurance	545.71	545.71	506.29	506.29
Group Insurance	4,050.32	4,050.32	4,930.96	4,930.96
Uniforms	0.00	-	62.02	62.02
Insurance	1,797.00	1,797.00	1,992.68	1,992.68
Utilities	376.22	376.22	66.37	66.37
Maintenance	785.63	785.63	1,379.63	1,379.63
Parking Tags/Tickets	0.00	-	61.72	61.72
Accounting Fees	899.37	899.37	865.37	865.37
Office Supplies	52.93	52.93	79.91	79.91
Card Refunds	-	-	-	-
Operating Cost - Vehicles	87.92	87.92	161.91	161.91
Pass Cards	-	-	-	-
Employee Appreciation	-	-	-	-
Credit Card Fees	3,585.80	3,585.80	3,204.87	3,204.87
Bank service charges	12.25	12.25	11.49	11.49
Miscellaneous Expenses	13.63	13.63	13.44	13.44
Management Fee Charge	775.00	775.00	775.00	775.00
TOTAL EXPENSES	25,238.72	25,238.72	26,247.78	26,247.78
OPERATING PROFIT	80,585.28	80,585.28	68,068.22	68,068.22

CITY OF BIRMINGHAM PEABODY DECK
Income Statement
For Periods Indicated

REVENUES:	Month Ended July 31, 2019	1 Month Ending July 31, 2019	Month Ended July 31, 2018	1 Month Ending July 31, 2018
Revenues - Monthly parking	28,666.00	28,666.00	37,315.00	37,315.00
Revenues - Cash Parking	44,721.60	44,721.60	25,716.00	25,716.00
Revenues - Card Fees		-		-
TOTAL INCOME	<u>73,387.60</u>	<u>73,387.60</u>	<u>63,031.00</u>	<u>63,031.00</u>
EXPENSES:				
Salaries and Wages	10,807.67	10,807.67	10,993.44	10,993.44
Payroll Taxes	1,008.99	1,008.99	1,008.60	1,008.60
Workmens Comp Insurance	526.27	526.27	500.75	500.75
Group Insurance	4,154.88	4,154.88	4,930.94	4,930.94
Uniforms		-	62.01	62.01
Insurance	1,134.30	1,134.30	1,520.17	1,520.17
Utilities	167.00	167.00	178.00	178.00
Maintenance	785.62	785.62	2,495.85	2,495.85
Parking Tags/Tickets		-	61.71	61.71
Accounting Fees	809.19	809.19	775.19	775.19
Office Supplies	52.93	52.93	79.91	79.91
Card Refund		-		-
Employee Appreciation		-	0.00	-
Operating Cost - Vehicles	87.92	87.92	161.91	161.91
Pass Cards		-		-
Credit Card Fees	2283.33	2,283.33	1515.53	1,515.53
Bank service charges	12.25	12.25	11.49	11.49
Miscellaneous Expense	13.31	13.31	13.35	13.35
Management Fee Charge	775.00	775.00	775.00	775.00
TOTAL EXPENSES	<u>22,618.66</u>	<u>22,618.66</u>	<u>25,083.85</u>	<u>25,083.85</u>
OPERATING PROFIT	<u>50,768.94</u>	<u>50,768.94</u>	<u>37,947.15</u>	<u>37,947.15</u>

270-6487

CITY OF BIRMINGHAM PARK DECK
Income Statement
For Periods Indicated

REVENUES:	Month Ended July 31, 2019	1 Month Ending July 31, 2019	Month Ended July 31, 2018	1 Month Ending July 31, 2018
Revenues - Monthly parking	48,851.00	48,851.00	60,472.00	60,472.00
Revenues - Cash Parking	73,106.00	73,106.00	37,639.00	37,639.00
Revenues - Card Fees	0.00	-	0.00	-
TOTAL INCOME	121,957.00	121,957.00	98,111.00	98,111.00
EXPENSES:				
Salaries and Wages	13,296.37	13,296.37	13,738.45	13,738.45
Payroll Taxes	1,243.83	1,243.83	1,271.33	1,271.33
Workmens Comp Insurance	646.69	646.69	625.01	625.01
Group Insurance	3,938.68	3,938.68	3,865.46	3,865.46
Uniforms	-	-	62.01	62.01
Insurance	2,211.02	2,211.02	2,276.47	2,276.47
Utilities	167.00	167.00	178.00	178.00
Maintenance	1,085.62	1,085.62	2,868.44	2,868.44
Parking Tags/Tickets	-	-	61.71	61.71
Accounting Fees	915.28	915.28	881.28	881.28
Office Supplies	52.92	52.92	79.91	79.91
Card Refund	-	-	-	-
Operating Cost - Vehicles	87.92	87.92	161.91	161.91
Pass Cards	-	-	-	-
Employee Appreciation	-	-	0.00	-
Credit Card Fees	3,732.54	3,732.54	2,218.20	2,218.20
Bank service charges	12.25	12.25	11.49	11.49
Miscellaneous Expenses	42.63	42.63	15.50	15.50
Management Fee Charge	775.00	775.00	775.00	775.00
TOTAL EXPENSES	28,207.75	28,207.75	29,090.17	29,090.17
OPERATING PROFIT	93,749.25	93,749.25	69,020.83	69,020.83

270-6488

CITY OF BIRMINGHAM CHESTER DECK
Income Statement
For Periods Indicated

REVENUES:	Month Ended July 31, 2019	1 Month Ending July 31, 2019	Month Ended July 31, 2018	1 Month Ending July 31, 2018
Revenues - Monthly parking	21,864.00	21,864.00	52,050.00	52,050.00
Revenues - Cash Parking	62,500.00	62,500.00	68,540.00	68,540.00
Revenues - Card Fees	15.00	15.00	45.00	-
TOTAL INCOME	84,379.00	84,379.00	120,635.00	120,590.00
EXPENSES:				
Salaries and Wages	15,695.57	15,695.57	15,677.09	15,677.09
Payroll Taxes	1,523.29	1,523.29	1,640.85	1,640.85
Workmens Comp Insurance	762.79	762.79	712.77	712.77
Group Insurance	4,306.48	4,306.48	3,876.27	3,876.27
Uniforms	0.00	-	62.01	62.01
Insurance	2,232.00	2,232.00	2,450.00	2,450.00
Utilities	167.00	167.00	178.00	178.00
Maintenance	885.63	885.63	5,180.21	5,180.21
Parking Tags/Tickets		-	181.48	181.48
Accounting Fees	984.24	984.24	950.24	950.24
Office Supplies	52.92	52.92	79.91	79.91
Card Refund		-		-
Operating Cost - Vehicles	87.92	87.92	161.91	161.91
Pass Cards		-		-
Employee Appreciation		-	64.00	64.00
Credit Card Fees	3,191.03	3,191.03	4,039.30	4,039.30
Bank Service Charges	21.17	21.17	32.25	32.25
Misc Expense	29.34	29.34	64.66	64.66
Management Fee Charge	775.00	775.00	775.00	775.00
TOTAL EXPENSES	30,714.38	30,714.38	36,125.95	36,125.95
OPERATING PROFIT	53,664.62	53,664.62	84,509.05	84,464.05

270-6489

CITY OF BIRMINGHAM N. WOODWARD DECK
Income Statement
For Periods Indicated

	Month Ended July 31, 2019	1 Month Ending July 31, 2019	Month Ended July 31, 2018	1 Month Ending July 31, 2018
REVENUES:				
Revenues - Monthly parking	43,830.00	43,830.00	49,320.00	49,320.00
Revenues - Cash Parking	34,500.00	34,500.00	34,610.00	34,610.00
Revenues - Card Fees	15.00	15.00	0.00	-
TOTAL INCOME	78,345.00	78,345.00	83,930.00	83,930.00
EXPENSES:				
Salaries and Wages	12,571.21	12,571.21	12,961.44	12,961.44
Payroll Taxes	1,174.80	1,174.80	1,197.08	1,197.08
Workmens Comp Insurance	611.62	611.62	589.85	589.85
Group Insurance	3,938.51	3,938.51	3,865.43	3,865.43
Uniforms	-	-	62.01	62.01
Insurance	4,759.70	4,759.70	2,416.12	2,416.12
Utilities	167.00	167.00	178.00	178.00
Maintenance	920.60	920.60	1,379.64	1,379.64
Parking Tags/Tickets	-	-	61.71	61.71
Accounting Fees	925.89	925.89	891.89	891.89
Office Supplies	53.02	53.02	79.91	79.91
Card Refund	-	-	-	-
Operating Cost - Vehicles	87.92	87.92	161.91	161.91
Pass Cards	-	-	-	-
Employee Appreciation	-	-	0.00	-
Credit Card Fees	1761.45	1,761.45	2039.69	2,039.69
Bank Service Charges	12.25	12.25	11.49	11.49
Miscellaneous Expense	14.72	14.72	14.89	14.89
Management Fee Charge	775.00	775.00	775.00	775.00
TOTAL EXPENSES	27,773.69	27,773.69	26,686.06	26,686.06
OPERATING PROFIT	50,571.31	50,571.31	57,243.94	57,243.94

270-6484

CITY OF BIRMINGHAM lot #6
Income Statement
For Periods Indicated

		Month Ended July 31, 2019	1 Month Ending July 31, 2019	Month Ended July 31, 2018	1 Month Ending July 31, 2018
INCOME					
	Revenues - Monthly Parking Lot #6 & Southside	5,110.00	5,110.00	5,505.00	5,505.00
		0.00			
	TOTAL INCOME	<u>5,110.00</u>	<u>5,110.00</u>	<u>5,505.00</u>	<u>5,505.00</u>
EXPENSES					
	Liability Insurance				
	Office Supplies (Hanging Tags)				
	Misc.	181.09	181.09	181.09	181.09
	TOTAL EXPENSES	<u>181.09</u>	<u>181.09</u>	<u>181.09</u>	<u>181.09</u>
	NET PROFIT	<u>4,928.91</u>	<u>4,928.91</u>	<u>5,323.91</u>	<u>5,323.91</u>