

# **Regular City Council Meeting**

## **September 28, 2020**

**7:30 p.m.**      **Call to Order**  
**Pledge of Allegiance**  
**Roll Call**  
**Approval of City Council Minutes: September 14, 2020**  
**Approval of Bills: None**  
**Approval of Agenda**

**Public Comment**

**Discussion - Downtown**

**Fire Chief Report**  
**Police Chief Report**

**I.    Old Business**  
      **1.   Road Improvement Program**

**II.   New Business**  
      **1.   Police Vehicle Purchase – New Patrol SUV**

**III.   Budget**  
**IV.   Manager's Report**  
**V.    Public Comment**  
**VI.   Council Comments**  
**VII.   Adjournment**

**\*Please see reverse side for rules of conduct for public comment at City Council meetings\***

City of South Lyon  
Regular Council Meeting  
September 14, 2020

Mayor Pelchat called the meeting to order at 7:30 p.m.  
Mayor Pelchat led those present in the Pledge of Allegiance

Present: Mayor Pelchat, Councilmembers Dilg, Kennedy, Kivell, Kurtzweil, and Walton  
Absent: Councilmember Richards

Also present: City Manager Zelenak, Chief Sovik, Attorney Hamaneh, and Clerk/Treasurer Deaton

MINUTES

Councilmember Kennedy stated the word aerial is misspelled during the conversation about the Fire truck.  
Councilmember Kivell stated on page 2 the word seen needs to be changed to saw.

CM 9-1-20 MOTION TO APPROVE MINUTES

Motion by Kennedy, supported by Kivell  
Motion to approve the minutes as amended

VOTE: MOTION CARRIED UNANIMOUSLY

BILLS

CM 9-2-20 MOTION TO APPROVE THE BILLS

Motion by Kivell, supported by Kennedy  
Motion to approve the bills as presented

VOTE: MOTION CARRIED UNANIMOUSLY

AGENDA

CM 9-3-20 MOTION TO APPROVE THE AGENDA

Motion by Dilg, supported by Walton  
Motion to approve the agenda as presented

VOTE: MOTION CARRIED UNANIMOUSLY

CONSENT AGENDA

1. Traffic Control Order 20-1

CM 9-4-20 MOTION TO APPROVE CONSENT AGENDA

Motion by Kurtzweil, supported by Kennedy  
Motion to approve the consent agenda as presented

VOTE: MOTION CARRIED UNANIMOUSLY

PUBLIC COMMENT- None

DISCUSSION- Downtown

Nate Mack the Downtown Development Director updated Council on the downtown. He stated he has ordered 280 cornstalks to be placed on the light poles in the downtown. We have a total of 72 decorative poles in town. We will also be putting out haybales. The Chamber of Commerce will be doing the scarecrows in the downtown again this year. Mr. Mack stated at the September 10<sup>th</sup> DDA meeting, they decided to cancel the downtown trick or treating due to the pandemic because they were concerned about

social distancing with the number of people that come to that event. The DDA Board also discussed forming 3 additional committees based off the Main Street program. We currently have an economic vitality committee, and we discussed adding a design committee, an organization committee and a promotion committee. He stated this follows the Main Street four-point approach and it will help as we progress in that program. Mr. Mack stated he and the City Manager met with the company doing the soil boring at 390 S Lafayette about the preliminary results and they are seeking clarification on what we want to have on that parcel. Once we give them the information, they will be preparing the report and we hope to have it the end of this week or early next week. He thanked Councilmember Kennedy and Councilmember Dilg for helping to pass out the Love for Lyon signs. They visited probably 100 businesses and he is happy the signs got out. We have had a lot of postings on social media suggesting people shop and dine local and to show your Love for South Lyon. Mr. Mack stated he has gotten inquiries about downtown parking. He stated some of the business owners are parking in front of the stores downtown. He stated he went out today and gave out no parking flyers, reminding people to not park in front of the businesses so they can be reserved for customers. He stated the Farmers Market has been going very well and about 95% of the spaces were filled 2 weeks ago. We added a new vendor that provides organic goods and they are doing well. Councilmember Kennedy congratulated the article about Nate in the Lyon Today magazine as well as the article about the Show Your Love for Lyon campaign. Councilmember Dilg asked how long will the Farmers Market continue. Mr. Mack stated until the end of October. Councilmember Kivell stated he doesn't understand why businesses don't understand the problem with parking in front of the businesses. The notion of letting customers have good access to their stores seems as though as it should be paramount. He then asked Nate share the information about the soil borings at 390 S Lafayette with Council when he receives the information. Councilmember Kurtzweil asked Nate to update Council on the façade work being done on Diane's Doll House and the new business going in at the old Good Day Café location. Mr. Mack stated Lefty's Cheesesteak will be opening soon, they are currently working on their signs and working on the interior. He then stated they are doing some masonry work on the Diane's Doll House building and getting that cleaned up. Councilmember Walton stated lately there has been some negative comments on social media and asked him if he has standard verbiage for when he puts things out there. Mr. Mack stated he doesn't have standard verbiage and he hasn't seen any issues that have come from DDA posts or other councilmembers post.

#### FIRE CHIEF REPORT

Cory Armstrong stated the tornado siren in the Lake Street parking lot is still not fixed. He then stated they started the work on the burn buildings by the water plant, the ground is ready to go, so they are just waiting on the containers. Mr. Armstrong stated all their radios went down last night, so their only communication was through cell phones.

#### POLICE CHIEF REPORT

Chief Sovik stated Challenger Technologies who are providing the infrastructure for the Comcast phone lines we are putting in and they have begun working. They are guessing about 6 days of work. Chief Sovik stated he wants to recognize our City Attorney Hamameh for doing such a great job since taking over for Tim. She is very responsive and knowledgeable and she is doing a great job. Mayor Pelchat stated he agrees and stated Attorney Hamameh does a great job.

OLD BUSINESS- None

NEW BUSINESS

1. Safebuilt contract

City Manager Zelenak stated we need to approve the new contract with Safebuilt. He stated the new contract is for 5 years and will provide inspections for the City whereby Safebuilt will receive 90% of the cost of the inspection fee and the City will receive 10%. The contract includes Safebuilt providing a staff person in the office at no cost to the City for 5 hours a day, 5 days a week. He then stated the previous contract the City paid for this staff person to be in the office 4 hours a day, 5 days a week. The new contract will provide approximately \$6,000 per year in additional revenue. Attorney Hamameh stated there was an issue with the contract regarding insurance. She stated we were able to come up with language to resolve the issue.

CM 9-5-20 MOTION TO APPROVE SAFEUILT CONTRACT

Motion by Kivell, supported by Walton

Motion to approve the professional services agreement with Safebuilt Michigan, LLC to provide inspection services with the City of South Lyon with the addition of new language of section 14d.

ROLL CALL VOTE:

DILG- Yes

Kurtzweil- Yes

Kivell- Yes

Kennedy- Yes

Walton- Yes

Pelchat- Yes

MOTION CARRIED

CM 9-6-20 MOTION TO EXCUSE ABSENCE

Motion by Walton, supported by Dilg

Motion to excuse Councilmember Richards absence

VOTE:

MOTION CARRIED

2. Police station wooden fence replacement

Chief Sovik stated the original fencing on the south and west side of the Police Department is at least 30 years old and is in need of replacing. It's been broken down for many years. He stated this is a budgeted item, and he has gotten 3 bids and the low bid came in by Debord Brothers Fence Company in the amount of \$5,500.00 Chief Sovik stated the cost of wood has gone up, but he is still honoring the bid from earlier in the year.

CM 9-7-20 MOTION TO APPROVE BID FOR REPLACEMENT FENCE

Motion by Kivell, supported by Kennedy

Motion to accept bid by Debord Brothers Fence Company to replace fencing on west and south side of the main Police building in the amount of \$5,500 and from account number 101-300-977

ROLL CALL VOTE:

Walton- Yes

Kennedy- Yes

Kivell- Yes

Kurtzweil- Yes

Dilg- Yes

Pelchat- Yes

MOTION CARRIED

## BUDGET- None

## MANAGER'S REPORT

City Manager Zelenak reminded Council to continue reviewing the zoning ordinance rewrite. City Manager Zelenak reminded everyone to fill out the census and we are currently just over 84% complete and he hopes that number will increase in the next few weeks. He then stated Plante Moran will be at the first meeting in October to present the audit to Council. City Manager Zelenak stated Fieldstone final site plan meeting was originally scheduled for the 10<sup>th</sup>, but will now go before the Planning Commission at the September 24th meeting and after that it will be brought before City Council. He stated the project for the water tank installation is moving forward and they are currently preparing the site for the installation of the water tank foundation. City Manager Zelenak stated at a future Council meeting he will have an agenda item regarding different funding possibilities for road improvements.

## PUBLIC COMMENT- None

## COUNCIL COMMENTS

Councilmember Dilg stated Lyon Township has chosen contractors to work on the path at Eleven Mile and Milford and they are starting this fall. She then stated a friend of hers asked where she can get on the trail and which restaurants and bars she and her family could go to. The rail trail is very important and beautiful and it brings people to town. Councilmember Dilg thanked the South Lyon teachers and the I.T. people. She knows they have been working very hard and this is different than anything anyone's ever done. There is a lot of angry people, but the teachers aren't the enemy and they are doing things she wouldn't want to try to do. She then thanked the parents that are being patient with the teachers and being patient with the kids. Everyone wants to be back to in person school, but she thanked everyone for doing all they are doing. Councilmember Dilg then mentioned that she was able to visit some local businesses and she thanked Councilmember Kennedy for taking some because she had to work too much. She then welcomed Body and Soul Soapery which is located upstairs and next to the Corner Social. She stated she hopes everyone was able to read social media and, in the Lyon Today magazine about Show Your Love for Lyon campaign and hopefully people will buy a t shirt that will support all the efforts.

Councilmember Walton thanked the South Lyon Community school teachers and all their staff that had to make so many changes along the way, but they have made it through the first week and she has heard from parents and students of how rough it has been, but how great the teachers and support staff have been. Councilmember Walton congratulated Erwin's Orchard on their 100-year anniversary which is phenomenal.

Councilmember Kurtzweil congratulated the dine local and shop local campaign, however, many residents have told her that you can't shop local and you can't dine local if you're not back to work. She stated we need to unlock Michigan. She encourages everyone to contact State Legislature, call the Governor's Office and let's put politics aside and unlock Michigan and get the workers back to work. She then thanked the owners of Pinz Bowling for their commitment for contacting the State Legislature, including Jim Runestad for assistance in getting bowling alley's open again. She then stated Pinz Bowling performs many functions for us, it is a great recreational place to go, and they are a tremendous fundraiser for the schools. She then thanked them again and stated she was happy to be a part of that behind the scenes. She then thanked everyone that helped her lobby for the opening for gyms in southeastern Michigan. It's interesting what the drafting of a lawsuit can do to get the gyms open again. Gyms are used for people to stay healthy and our senior citizens use them and people need a place to recreate and they need to be healthy. Also, gym owners provide a substantial number of workers in the workforce, including the people that work at the

gyms and clean the gyms and now they will be able to pay their rent. Councilmember Kurtzweil stated her message is before the vaccines come out, we need to unlock Michigan and get everyone back to work, be cautious, be safe and responsible.

Councilmember Kivell stated he is happy how well the flowers have been doing downtown. Everything looks terrific and they are well maintained and he is proud of the guys taking care of them. Councilmember Kivell stated he is happy to hear about Lefty's Cheesesteak coming to town. He is happy the beautiful building will be used again. He further stated he has had fun watching the progress at the waste water plant with the new tank being installed and he is happy about how well that is going. He then stated we have caught some breaks that will benefit us in the long run.

Councilmember Kennedy stated he wants to emphasize the point made by City Manager Zelenak and ask everyone to please complete their Census Questionnaire. We are currently at about 84% response rate which means about 1,900 residents have not yet been counted. So, please go to [2020Census.gov](https://2020Census.gov) and complete the questionnaire. It's going to make a significant difference for the next 10 years.

Councilmember Kennedy stated there is an upcoming community shredding event at the Salem-South Lyon District Library. The event will be held this Saturday, September 19th from 10:00am until 1:00pm in the library parking lot, so now's a good time to dispose of all those old records you no longer need that you found after clearing out the closets and basement since you've been home.

Mayor Pelchat reminded everyone that kindness is king and we all need to be good to each other, it is tough and we are all dealing with different levels of trying to navigate the pandemic. He then reminded everyone to fill out their Census forms. Mayor Pelchat stated Pinz Bowling Center has been a gathering place and has been a staple going back to the days when it was 700 Bowl. Katie and Troy are very involved in the community and many times you can walk in there and they will have both the schools bowling teams and they are a big player in our community and they have had a long run with their doors shut so if you get a chance when open bowling opens, stop in and play a few games. He then reminded everyone to continue to support our local businesses.

#### ADJOURNMENT

#### CM 9-8-20 MOTION TO ADJOURN

Motion by Kurtzweil, supported by Walton  
Motion to adjourn at 8:07 p.m.

VOTE:

Respectfully submitted,

MOTION CARRIED UNANIMOUSLY

\_\_\_\_\_  
Mayor Dan Pelchat

\_\_\_\_\_  
City Clerk/Treasurer Lisa Deaton

# **AGENDA NOTE**

Old Business # /

**MEETING DATE:** September 28, 2020

**PERSON PLACING ITEM ON AGENDA:** City Manager

**AGENDA TOPIC:** Road Improvement Plan Discussion - Funding

**EXPLANATION OF TOPIC:** Based upon the City of South Lyon receiving a road conditions assessment performed (PASER Rating). I have prepared additional information pertaining to Road Funding options.

Tonight we will have our second discussion on addressing the long term repair of our roads, including discussing revenues, expenditures, funding alternatives, and how to plan and move forward with determining a long-term solution to repair our roads.

**MATERIALS ATTACHED AS SUPPORTING DOCUMENTS:** Memo on Road the Improvement Plan – Funding, South Lyons Ordinance pertaining to SADs, Outline of the process of a Special Assessment District (SAD). Attorney letter addressing items pertaining to SADs.

**POSSIBLE COURSES OF ACTION:** Discussion the funding options pertaining to a City Road Improvement Plan.

**SUGGESTED MOTION:** None

# **City of South Lyon**

## **Road Improvement Plan Discussion “Funding”**



## **Road Funding**

At our City Council meeting last month we discussed various components of a Road Improvement Plan. Including the road assessment, types of road repairs, typical road cross-sections, sample roads conditions within our community, current local and major road revenues and expenditures, infrastructure affected by a road improvement and funding methods. Moving forward, I would now like to go into further detail regarding road funding.

As was stated last month, 90% of our roads are in poor or very poor shape. No one wants to pay higher taxes. But the number one complaint we get at City Hall is the conditions of our roads. So, we must come up with a way to fund a road improvement program.

The City receives a majority of its road revenue from ACT 51 funds. Other examples to fund road maintenance / repairs / improvements include: **County Road Funding** – funding directly received from the county for a particular road. **Tri Party Funds**-which is a combination of City, County and RCOC funds for a specific improvement. **SAD** – Special Assessment Districts - which is a specific levy designed to recover the costs of improvement that benefits the property. It is levied against the lands benefitting by the improvement. **Federal Funds** – funds directly to be used based upon the requirements of receiving the funds. **General Fund**-City tax dollars allocated in the budget to be used on city expenses. **Bonds** – A loan that is designated to pay for a particular improvement. **Levied Road Millage** – a voter approved millage by the residents.

**Road Bonds:** One item in particular that always comes up when road funding is needed is a road bond. Bonding is the borrowing of money to pay for a particular improvement. The taking out of a bond costs the residents or the municipality bond fees, principle and interest payments. The City is also limited in the amount that we can borrow for a bond based upon state limits which is based upon a percentage of our SEV (State Equalized Value).

A bond is usually done with a Special Assessment District (SAD), whereby all the costs and payments would be borne by the taxpayer receiving the improvement, unless there is a City percentage contribution. One item of importance is that an individual SAD project takes about a year from starting to collect signatures to establish the district, to the time the construction project actually begins.

Bonding could also be used to pay for road improvements levied by a road millage. Whereby the revenue generated by the road millage would pay directly for the improvement or a bond payment. (i.e. The City takes out a \$5 million dollar bond to pay for road improvements. The revenue received from the road millage each year pays for the bond payment, which includes principle and interest). Or the City could use the road millage revenue each year to pay for improvements based upon how much revenue we receive. This would eliminate the need to take out a bond. If the City raises the millage via a vote (3+ Mills) we would receive enough revenue each year via tax receipts (every July) to potentially eliminate the need to take out a bond. This is because we would have enough funds generated by the collection of the millage to pay for the road improvements each and every year.

Based upon existing revenue (general fund or Act 51 road funding) the city does not have enough funds to make substantial road improvements or make payments on a bond that would have any effect on the overall condition of our roads. So taking out a bond to make road improvements with existing funding levels under this scenario isn't feasible. Which leads us to two other potential scenarios.

Raising the millage rate 1+ mill which we have the ability to do under the law, and establish individual SADs. Or raise the millage via the vote of the electorate. (more than 1 mill) This would allow us to generate enough funds via the millage to pay for the improvements each year. Each 1 mill increase generates approximately \$400,000 in additional revenue. This coupled with a portion of the Act 51 funds we receive each year (approximately \$500,000) could begin a road improvement plan for the City, if the City roads are improved by a SAD. However, the single mill increase and the Act 51 funds alone are not enough to initiate a road program.

The City contribution of approximately \$500,000 of Act 51 funds and our ability to raise the millage (1+ mill) as a City contribution to the establishment of a SAD would work out to be a contribution of almost a \$1 million dollars a year to a road improvement plan. Which works out to be about a 20% contribution per year on \$5 million worth of road improvements per year.

If the City makes any bond payments (whether by payment from a millage increase or the establishment of a SAD) we are reducing the amount of improvements we can make each year by approximately 15-20% due to the cost of the setting up the bond plus principal & interest payments. If a SAD is established, the City would need to take out a bond for the improvements due to the timing in receiving payments for the SAD (total payments would be made over a period of 10 years).

**Important discussion points:**

Additional Millage of 1+ Mill = \$500,000 in additional revenue each year

Act 51 Funding available = \$500,000 per year

Additional millage levied by voter approval can also occur (3,4,or 5 mills)

No County, State or Federal grant funds to pay for paving of subdivision streets.

Work that would be done: Sealcoating, Mill and Overlay, Reconstruction

A one (1) mill increase would mean additional taxes on an average home of approximately \$125 per year.

**Three potential funding scenarios:**

<b><u>Scenario A</u></b>	<b><u>Scenario B</u></b>	<b><u>Scenario C</u></b>
No millage increase	1+ Mill increase	3-5 Mill Increase
Use existing Act 51	(allowed by Headlee)	(Voted increase)
Funds-Approx. \$500,000	+\$500,000 Act 51 Funds	\$1.2-2.0M in Revenue
	Establish an SAD	+ Act 51 Funds
Minor road repairs	Specific road projects	City-wide projects

## Chapter 78 - SPECIAL ASSESSMENTS

## Sec. 78-1. - Definitions.

The following words, terms and phrases when used in this chapter shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*Cost* means and shall include, when referring to any public improvement, the cost of surveys, services, lands, plans, condemnation, spreading of rolls, notices, advertising, financing, construction, and legal fees and all other costs incident to the making of such improvements, the special assessments therefor, and the financing thereof.

*Engineer* means the engineer of the City of South Lyon, or any person, firm or association of registered engineers employed by the City of South Lyon in that capacity.

*Improvement* means any public betterment and/or any improvement upon public property which results in special benefit to the real property in the vicinity of such improvement.

*Owner* means the last recorded title holder(s) of any lot or parcel of land.

(Code 1988, § 1.251)

## Sec. 78-2. - Initiation of proceedings.

Proceedings to provide for any public improvements to be financed in whole or part by a special assessment tax may be initiated by resolution of the council or by a petition signed by the owners of more than 50 percent of the assessable frontage lots or acreage, as the case may be, who may be subject to any such special assessment tax or may be initiated, without such petition being first filed, upon resolution of the council determining that an improvement shall be made and financed in whole or in part by special assessment. All improvements hereunder shall be made at the discretion of the council solely and no petition shall be mandatory or directive in nature.

(Code 1988, § 1.252)

## Sec. 78-3. - Petitions—Requirements.

All petitions for public improvements shall include an affidavit by one or more of the circulators that the signatures appearing thereon are genuine and each signer declares himself to be the owner of the land(s) indicated. Where any lot or parcel is owned by more than one person, each person having an interest must join in the petition.

(Code 1988, § 1.253)

Sec. 78-4. - Same—Investigations by the city manager.

All petitions for public improvements shall be investigated by the city manager to determine whether a sufficient number of valid signatures have been obtained and, if such investigation discloses a deficiency, the said petition shall be returned to the circulator with notice of that fact.

(Code 1988, § 1.254)

Sec. 78-5. - Preliminary report.

- (a) Whenever the city manager shall determine that a petition containing the required number of valid signatures has been received, or whenever the council shall by resolution so direct, the city manager shall make or cause to be made an investigation of the proposed public improvement and report his findings to the council.
- (b) The report shall include an analysis of the following:
  - (1) The assessed valuation of all property affected by the proposed improvement, together with the name and address of the last known person or party against whom taxes are currently assessed.
  - (2) The number of parcels which show tax delinquency.
  - (3) The number of parcels owned by public authorities.
  - (4) The number of parcels which are vacant.
  - (5) Prepare, or cause to be prepared, plans and specifications therefor, and an estimate of the cost thereof.
  - (6) An estimate and recommendation as to what portion of the cost should be paid by special assessment and what part, if any, should be a general obligation of the city.
  - (7) A recommendation concerning the number of installments in which the assessment may be paid.
  - (8) The land which should be included in the special assessment district.
  - (9) And any other facts or recommendations which will aid the council in determining whether the improvement shall be made and how the same shall be financed.
  - (10) The report in total shall be placed on file with the city clerk as soon as same has been prepared.

(Code 1988, § 1.255)

Sec. 78-6. - Hearing; notice of same.

After filing of the plans and specifications above referred to, the council shall, by resolution, provide for a public hearing before them, which hearing shall be held not less than ten days after notice thereof has been sent by the clerk, by first class mail, to all property owners in the proposed district as shown by the current assessment roll of the city. The council may also, in addition to personal notice, give notice by publication citing the time, date and place of hearing, however, such publication shall not be mandatory.

(Code 1988, § 1.256)

Sec. 78-7. - Public hearing, objections and changes.

At the time and place specified in such notice for the public hearing, the council shall meet and hear any person to be affected by the proposed public improvement. Such hearing may be scheduled for any regular, special or adjourned meeting of the council. The hearing may be adjourned from time to time by the council, and the council may make any changes in the proposed work or assessment which shall seem reasonable or proper in view of any objections, or for any other reason which may appear to be for the best interest of the city.

(Code 1988, § 1.257)

Sec. 78-8. - Resolution of determination.

After said public hearing the council may, by resolution, determine to make the improvement and to defray the whole or any part of the cost of the improvement by special assessment upon the property especially benefited in proportion to the benefits derived or to be derived. By such resolution the council shall approve the plans and specifications for the improvement, determine the estimated cost thereof, determine what proportion of such cost shall be paid by special assessment upon the property especially benefited, and what part, if any, shall be a general obligation of the city, determine the number of installments in which assessments may be paid, not to exceed 25 in number, determine the rate of interest to be charged on installments, and not to exceed eight percent, per annum, designate the district or land and premises upon which special assessment shall be levied, direct the assessor to prepare a special assessment roll in accordance with the council's determination, and designate the name by which said assessment roll shall be known and referred to.

(Code 1988, § 1.258)

Sec. 78-9. - Limitations on preliminary expenses.

No contract or expenditure except for the cost of preparing necessary profiles, plans, specifications and estimates of cost shall be made for the improvement, nor shall any improvement be commenced until special assessment roll to defer the cost of same shall have been made and confirmed.

(Code 1988, § 1.259)

Sec. 78-10. - Special assessment roll—Preparation.

The assessor shall thereupon prepare a special assessment roll including all lots and parcels of land within the special assessment district designated by the council, and shall assess to each such lot or parcel of land such relative portion of the whole sum to be levied against all the lands in the special assessment district as the benefit to such lot or parcel of land bears to the total benefits to all lands in such district. There shall also be entered upon such roll the amount which has been assessed to the city at large.

(Code 1988, § 1.260)

Sec. 78-11. - Same—Columns for installments.

The assessor in preparing the special assessment roll shall divide the assessment into installments and provide a separate column for each installment. The roll and all installments thereof shall be made and reviewed as an original roll and confirmation of the roll shall be made of each and every installment or installments when due without further review or confirmation.

(Code 1988, § 1.261)

Sec. 78-12. - Notice of hearing on roll.

Upon receipt of such special assessment roll the council shall order it filed in the office of the clerk for public examination, shall fix the time and place when it will meet and review such roll, which meeting shall be held not less than ten days after notice thereof, specifying the purpose, time and place, has been sent by the clerk by first class mail to all property owners in the proposed district as shown by the current assessment roll of the city. The council may also, in addition, give notice by publication citing the time, date and place of hearing, however, such publication shall not be mandatory. The special assessment roll shall remain on file in the office of the city clerk for public examination for a period of at least seven days prior to the date and time set for the said hearing.

(Code 1988, § 1.262)

Sec. 78-13. - Objections to roll.

Any person deeming himself aggrieved by the special assessment roll may file his objections thereto in writing with the clerk at any time prior to the close of said hearing, which written objections shall specify in what respect he deems himself aggrieved.

(Code 1988, § 1.263)

Sec. 78-14. - Hearing on objections.

The council shall meet and review the said special assessment roll at a time and place appointed or at an adjourned date therefor and shall consider any written objections thereto.

(Code 1988, § 1.264)

Sec. 78-15. - Corrections and changes.

The council may correct said roll as to any assessment or description of any lot or parcel of land or other errors appearing therein. Any changes made in such roll shall be noted in the council minutes.

(Code 1988, § 1.265)

Sec. 78-16. - Confirmation or rejection of roll.

After such hearing and review, the council may confirm such special assessment roll with such corrections as may have been made, if any, or may refer it back to the assessor for revision or may annul it and any proceedings in connection therewith.

(Code 1988, § 1.266)

Sec. 78-17. - Vote required.

In order to confirm any special assessment roll, such confirmation shall receive an affirmative vote of a majority of the council elect. No special assessment roll shall be finally confirmed except by a four-fifths vote of the council if prior to said hearing written objections to said improvement have been filed with the city clerk by the owners of the property which will be required to bear more than one-half of the special assessment.

(Code 1988, § 1.267)

Sec. 78-18. - Certificate of confirmation.

The clerk shall endorse the date of confirmation upon each special assessment roll and upon confirmation, such roll shall be final and conclusive.

(Code 1988, § 1.268)

Sec. 78-19. - Lien established.



All special assessments contained in any special assessment roll, including any part thereof deferred as to payment, shall from the date of confirmation of such roll, constitute a lien upon the respective lots or parcels of land assessed until paid.

(Code 1988, § 1.269)

Sec. 78-20. - Personal liability of owner.

Any special assessment made pursuant to this chapter shall, until paid, be charged against the respective owners of the several lots or parcels of land and shall be a debt owed to the city from the persons to whom they are assessed.

(Code 1988, § 1.270)

Sec. 78-21. - Character of lien.

All liens above referred to shall be of the same character and effect as the lien created by the city Charter for taxes and shall include accrued interest and penalties.

(Code 1988, § 1.271)

Sec. 78-22. - Destruction or impairment of lien.

No judgment or decree nor any action of the council vacating a special assessment shall destroy or impair the lien of the city upon the premises assessed for such amount of the assessment as may be equitably charged against the same or as by regular mode of proceeding might have been lawfully assessed thereon.

(Code 1988, § 1.272)

Sec. 78-23. - Failure to receive notice.

Failure of any owner to receive any notice required to be sent under the provisions of the city Charter and this chapter, shall not invalidate any special assessment or special assessment roll. Nor shall, to the extent permitted by law, any failure on the part of the treasurer to give any required notice cause any invalidation of any special assessment roll of the city or assessment thereupon, nor excuse the payment of interest or penalties.

(Code 1988, § 1.273)

Sec. 78-24. - Installments and date due.

All special assessments levied hereunder shall become due upon confirmation of the special assessment roll and the annual installments shall not exceed 25 in number as the council may determine at the time of confirmation and if in annual installments, the council shall determine the first installment to be due upon confirmation or on the following July 1 and subsequent installments on July 1 of succeeding years.

(Code 1988, § 1.274)

Sec. 78-25. - Publication of notice to pay.

The assessment roll shall be transmitted by the clerk to the treasurer for collection immediately after its confirmation and the treasurer shall give notice by one publication in a newspaper which shall meet the requirements of the city Charter, that said special assessment roll (identifying it) has been filed in the city treasurer's office and specifying when and where payments may be made thereon. The council may order the treasurer to send a notice to pay to those persons listed on the special assessment roll, although such notice shall not be required.

(Code 1988, § 1.275)

Sec. 78-26. - Treasurer's warrant; acceleration of payments when overdue.

Upon confirmation of any special assessment roll, the council shall direct that the city clerk shall attach his warrant to such assessment roll therein commanding the city treasurer to collect from each of the persons assessed in said roll the amount of money assessed to and set opposite their names therein, and in case any person named in said roll shall neglect or refuse to pay the assessment upon demand, then to levy and collect the same by distress and sale of the goods and chattels of such person. The city treasurer under such warrant shall be authorized to collect the several installments of any special assessment as and when the same shall become due and payable, together with interest and penalties, as provided in this chapter, and in the event that any such special assessment installment shall remain unpaid for a period of 90 days from and after the due date of such special assessment installment, that, thereupon, the same shall become delinquent and such delinquent installment and all future installments shall become due and payable forthwith and shall be certified by the city treasurer to the city clerk for spreading upon the next succeeding city tax roll in a column designated "special assessments," and there shall be added to such special assessment installments all interest which may have accrued from the date of confirmation of the special assessment tax roll to July 1 of the year in which such city tax roll is made, provided, that any fraction of a month shall be considered a full month.

(Code 1988, § 1.276)

Sec. 78-27. - Cash payment; remaining installments.

The whole or any part of any such assessment may be paid within 60 days from the date of confirmation of the special assessment roll. Such part as may be paid within the said 60 days shall not bear interest or penalty. Not later than 15 days after the end of said 60-day period the treasurer shall transmit such roll to the assessor with all payments upon assessment noted thereon. The assessor shall then divide any remaining balance of each assessment into such number of equal installments as shall have been fixed by the council, but not into a number of installments which will make any installment less than \$10.00.

(Code 1988, § 1.277)

Sec. 78-28. - Collection fees.

Upon transfer to any delinquent or accelerated delinquent installments of any special assessment to the general city tax roll, there should be added thereto in addition to the interest as hereinbefore provided, a collection fee of four percent of the amount of the delinquent assessment (without interest computed) as shall be so transferred to the general city tax roll.

(Code 1988, § 1.278)

Sec. 78-29. - Additional payments by taxpayer.

A taxpayer may, at any time prior to the time when special assessment taxes have been transferred to the general city tax roll, pay one or more of such installments, together with accrued interest from the date of confirmation of the special assessment roll to the date of such payment, and in the event that all delinquent and past due installments shall have been paid, thereupon the deferred installments shall be reinstated as such and be considered current and may be paid annually as spread upon the original assessment roll unless and until any subsequent installment shall become delinquent, whereupon the foregoing procedure shall be followed.

(Code 1988, § 1.279)

Sec. 78-30. - Collection by suit at law.

In addition to any other remedies and without impairing the lien therefor, any delinquent special assessment, together with interest and penalties may be collected in an action in assumpsit in the name of the city against the person assessed, in any court having jurisdiction of the amount. If in any such action it shall appear that by reason of any irregularities or informalities the assessment has not been properly made against the defendant or upon the premises sought to be charged, the court may, nevertheless, on satisfactory proof that expense has been incurred by the city which is a proper charge against the defendant or the premises in question, render judgment for the amount properly chargeable against such defendant or upon such premises.

(Code 1988, § 1.280)

Sec. 78-31. - Contested assessments.

No suit or action of any kind shall be instituted or maintained for the purpose of contesting or enjoining the collection of any special assessment unless within 30 days after the confirmation of the special assessment roll, written notice is given to the council of intention to file such suit or action stating the grounds on which it is claimed such assessment is illegal and unless such suit or action shall be commenced within 60 days after confirmation of the roll.

(Code 1988, § 1.281)

Sec. 78-32. - Return to county treasurer.

All special assessments or installments thereof, which have been transferred to the general city tax roll as being delinquent, or because the delinquency has been accelerated by nonpayment of installments as and when due, shall be collected in all respects as city taxes due upon such general city tax roll, and if uncollected, shall be returned to the county treasurer with unpaid general city taxes, on March 1, following the date upon which such general tax roll shall have been delivered to the city treasurer for collection.

(Code 1988, § 1.282)

Sec. 78-33. - Special provisions.

Special assessment installments shall become delinquent, if unpaid, 90 days after the due date for such special assessment installment and the delinquency in any one installment shall accelerate the payment of future installments, which, in the event of delinquency of one installment, shall cause all of the remaining special assessment installments to become due and payable forthwith. Delinquent special assessment installment or installments shall be transferred to the general city tax roll for the year commencing July 1 succeeding the date of such delinquency, provided, however, that prior to the time that any delinquent special assessment tax has been transferred to the general city tax roll, the taxpayer shall have the right and privilege of reestablishing future installments of such special assessment tax upon payment of all delinquent special assessment tax installments to the date of such payment, together with accumulated interest thereon as hereinbefore provided. All delinquent special assessment tax installment or installments as certified to the city clerk by the city treasurer shall be spread upon the general city tax roll as hereinbefore provided by the city treasurer, under a column designated "special assessments" to which shall be added all interest upon such special assessment installment or installments accruing from the date of confirmation of the special assessment tax roll to July 1 of the current tax year, and in such computation fractions of the month shall be considered as a full month, together with collection fee as provided in section 78-28.

(Code 1988, § 1.283)

Sec. 78-34. - Cost certification.

Upon completion of the improvement and the payment of the cost thereof, the city manager shall certify to the council the total cost of said improvement, together with the amount of the original roll for said improvement.

(Code 1988, § 1.284)

Sec. 78-35. - Additional assessment.

Should the assessments in any special assessment roll, including the amount assessed to the city at large, prove insufficient for any reason to pay the cost of the improvement for which they are made, then the council shall make additional assessments against the city and the several lots or parcels of land in the same ratio as the original assessments, to supply the deficiency.

(Code 1988, § 1.285)

Sec. 78-36. - Limitation of additional assessment.

Any additional pro rata assessment shall not exceed 25 percent of the assessment as originally confirmed unless a meeting of the council be held to review such additional assessment, for which meeting notice shall be given as provided in the case of review of the original special assessment roll.

(Code 1988, § 1.286)

Sec. 78-37. - Excess under five percent.

The excess by which any special assessment proves larger than the actual cost of the improvement and expenses incidental thereto may be placed in the general fund of the city if such excess is five percent or less of the assessment.

(Code 1988, § 1.287)

Sec. 78-38. - Excess over five percent.

Should the assessment prove larger than necessary by more than five percent, then the entire excess shall be refunded on a pro rata basis to the owners of the property assessed.

(Code 1988, § 1.288)

Sec. 78-39. - Refund procedure.

Any excess refund shall be made by credit against future unpaid installments in the inverse order in which they are payable to the extent such installments then exist and the balance of such refund shall be made in cash.

(Code 1988, § 1.289)

Sec. 78-40. - Illegal or invalid assessment.

Whenever any special assessment shall in the opinion of the council be invalid by reason of irregularity or informality in the proceeding, or if any court of competent jurisdiction shall adjudge such assessment to be illegal, the council shall, whether the improvement has been made or not, or whether any part of the assessment has been paid or not, have power to cause a new assessment to be made for the same purpose for which the former assessment was made.

(Code 1988, § 1.290)

Sec. 78-41. - Proceedings on reassessments.

All proceedings on any reassessment and for the collection thereof, shall be conducted in the same manner as provided for the original assessment and whenever any sum, or any part thereof, levied upon any premises has been set aside, if the same has been paid and not refunded, any payment made thereon shall be applied upon the reassessment and the reassessment shall to that extent be deemed satisfied, or if the payments exceed the amount of the reassessment, refund of the excess amount shall be made.

(Code 1988, § 1.291)

Sec. 78-42. - Retention of lien.

To the extent permitted by law, no judgment or decree nor any act of the council vacating a special assessment shall destroy or impair the lien of the city upon the premises assessed for such amount of the assessment as may be equitably charged against the same or as by regular mode of proceeding might have been lawfully assessed thereupon.

(Code 1988, § 1.292)

Sec. 78-43. - Combination of projects.

The council may combine several districts into one project for the purpose of effecting a savings in the cost; provided, however, that for each district there shall be established separate funds in accounts to cover the cost of same.

(Code 1988, § 1.293)

Sec. 78-44. - Deferred payment of special assessment.

The council may provide for the deferred payment of special assessment from persons who, in the opinion of the council and assessor, by reason of poverty are unable to contribute towards the cost thereof. In all such cases as the condition of granting of such deferred payments, the city shall require mortgage or like security on the real property of the beneficiary, payable on or before his death, or in any event, on the sale or transfer of the property.

(Code 1988, § 1.294)

## **Special Assessment District Process**

Application

Feasibility

Formal petitions

Circulate Petitions

Petition review - #, verify names, addresses

Verify estimates

Resolution #1 – Acknowledge receipt of Petitions, Prepare plans and estimate

Resolution #2 – Set Public Hearing – Setting Date of Public Hearing

Public Hearing on Necessity

Notices sent out

Public hearing

Direct to prepare final plans and engineers estimates

Resolution # 3 – Approve Boundaries, Estimates, Sent out for Bids

Bids received

Resolution #4 – Set Public Hearing on Costs

Roll Finished

Notice

Public hearing

Board Confirms Roll

Resolution #5 – Adopts Final Roll / Number or Installments / interest rate

Award Bid

Notice of Assessment

Construction

***See Attached Special Assessment Ordinance / Attorney Letter***



# AGENDA NOTE

New Business Item: /

**MEETING DATE:** September 28, 2020

**PERSON PLACING ITEM ON AGENDA:** Police Chief

**AGENDA TOPIC:** Vehicle Purchase – **One Patrol SUV**

**EXPLANATION OF TOPIC:** The Police Department is requesting authorization to order one replacement Ford Police Interceptor SUV (Patrol). Our request for the purchase of the vehicle was approved during the budget workshop for fiscal year 2020-2021. The funds for the purchase will be drawn from line item **101-300-978 Capital Equipment**. Normally three bids are required for a purchase of this amount. However, during the last 10 years we have only purchased vehicles from Gorno Ford (Michigan Bid) or Signature Ford (Macomb County Bid). Other dealerships are no longer offering quotes because they are unable to compete with prices from these two dealerships. I contacted four dealerships for this year's bids and only Gorno Ford and Signature Ford submitted quotes.

Cynergy Wireless, our equipment and installation provider will remove the mobile data computer, lightbar, and remaining electronics from 231 and install what we can use from 231 and put them into the new SUV. Cynergy will also install the in-car camera system from WatchGuard during the build of the new SUV.

**MATERIALS ATTACHED AS SUPPORTING DOCUMENTS:** Purchase request, Bid Sheets including e-mails

**POSSIBLE COURSES OF ACTION:** Approve/Do Not Approve the vehicle purchase. I recommend purchasing one Ford Police Interceptor SUV from Signature Ford in the amount of \$32,614.00.

**SUGGESTED MOTION:** Motion by \_\_\_\_\_, supported by \_\_\_\_\_ to approve the purchase of one 2021 Ford Police Interceptor SUV vehicle from Signature Ford, under the Macomb County bid, at a cost of \$32,614.00 from line item **101-300-978 Capital Equipment**.

09/28/2020

## CITY OF SOUTH LYON PURCHASE REQUEST

**NAME** Chief Christopher J Sovik  
**DEPARTMENT** Police Department  
**PURCHASE** 2021 Ford Police Interceptor SUV  
**PRICE** \$32,614.00

	<u>VENDOR NAME</u>	<u>PRICE</u>
1.	Signature Ford	\$32,614.00
2.	Gorno Ford	\$33,540.00
3.	Brighton Ford	No longer sell Police Interceptors
4.	Hines Park Ford	Not available for municipal sales

This vehicle purchase will add the sixth patrol vehicle to our fleet. We have been operating with only five marked units because we took marked vehicle 231 out of the rotation as a primary vehicle in August 2019 due to its maintenance costs. It was supposed to serve as one of the two primary vehicles for FY 2019-20 which allowed us to operate with a full fleet (a primary vehicle is a vehicle that is driven by our patrol officers 24/7). We made 231 our cadet vehicle shortly into FY 2019-20 and it will continue to be our cadet vehicle until June 2021. Funds have been allocated in the Police Department budget for fiscal year 2020-2021 to cover the cost of the proposed purchase. Line Item: 101-300-978 Capital Equipment

  
SIGNATURE

09/21/2020  
DATE



July 28, 2020

South Lyon Police Department  
Attn: Lt. Doug Baaki  
219 Whipple Street  
South Lyon, MI 48178

Dear Lt. Doug Baaki:

Price on 2021 Vehicle Macomb County Contract Bid:

**2021 Ford Police Interceptor Utility AWD in Black** **\$32,614.00 ea**

Service Contract: 36,000 miles or 36 months factory bumper to bumper warranty and 100,000 miles or 60 months powertrain warranty.

Delivery date: About 120 days from receipt of your PO.

**Order Cutoff Date: TBD.**

Ford Motor Company does not guarantee delivery---Ford Motor Company will make reasonable efforts to schedule orders received prior to fleet order cut-off date.

Payment requirements: All departments to pay on delivery of vehicle. 10-day grace period will be given if previous arrangements have been made. An \$8.00 per day floor plan will be charged if payment is not at the dealership within 10 days of delivery of the vehicle (s).

If you have any questions please call me, 888-92-Fleet (888-923-5338).

Respectfully Submitted,

*Bill Campbell*

Bill Campbell  
Government & Fleet Sales

1960 East Main St, Owosso, MI 48867  
888-92-FLEET or 888-923-5338, Fax 517-625-5832

# Macomb County Bid Price (Bid #21-18, MY2020) in the State of Michigan 2021 Utility Police Interceptor Major Standard Equipment

## MECHANICAL

- Axle Ratio – 3.73 (AWD)
- Brakes – 4-Wheel Heavy-Duty Disc w/H.D. Front and Rear Calipers
- Column Shifter
- DC/DC converter – 220-Amp (in lieu of alternator)
- Drivetrain – All-Wheel-Drive
- Electric Power-Assist Steering (EPAS) – Heavy-Duty
- Engine – 3.3L V6 Direct-Injection Hybrid Engine System
- Engine – 3.3L V6 Direct-Injection FFV with 10-Speed Automatic Transmission (136-MPH Top Speed)
- Note: Deletes Regenerative Braking and Lithium-Ion Battery Pack; adds 250-Amp Alternator, replaces H7 AGM battery (800 CCA/80-amp) with H7 SLI battery (730 CCA/80-amp) and replaces 19-gallon tank with 21.4-gallon tank
- Engine – 3.0L V6 EcoBoost® with 10-Speed Automatic Transmission – (148-MPH Top Speed)
- Note: Deletes Regenerative Braking and Lithium-Ion Battery Pack; adds 250-Amp Alternator, replaces H7 AGM battery (800 CCA/80-amp) with H7 SLI battery (730 CCA/80-amp) and replaces 19-gallon tank with 21.4-gallon tank
- Engine Hour Idle Meter
- Engine Hour Meter
- Engine Oil Cooler
- Fuel Tank – 19-gallons
- H7 AGM Battery (800 CCA/80-amp)
- Lithium-Ion Battery Pack
- Suspension – independent front & rear
- Transmission – 10-speed automatic

## EXTERIOR

- Antenna, Roof-mounted
- Cladding – Lower bodyside cladding MIC
- Door Handles – Black (MIC)
- Exhaust True Dual (down-turned)
- Front-Door-Lock Cylinders (Front Driver / Passenger / Liftgate)
- Glass – 2nd Row, Rear Quarter and Liftgate Privacy Glass
- Grille – Black (MIC)
- Headlamps – Automatic, LED Low-and-High-Beam
- Note: Includes Front Headlamp / Police Interceptor Housing (with LED wig-wag feature)
- Pre-drilled hole for side marker police use, does not include LED strobe, but includes LED wig-wag functionality (eliminates need to drill housing assemblies and provides LED wig-wag feature)
- Pre-molded side warning LED holes with standard sealed capability (does not include LED installed lights)
- Wig-wag default is traditional ping-pong pattern; can be programmed to triple-burst pattern or ping-pong / triple-burst
- Note: Must be wired to vehicle's light controller to enable wig-wag functionality; recommend Ready for the Road Package (67H) or Ultimate Wiring Package (67U)
- Liftgate – Manual 1-Piece – Fixed Glass w/Door-Lock Cylinder
- Mirrors – Black Caps (MIC), Power Electric Remote, Manual Folding with Integrated Spotter (integrated blind spot mirrors not included when equipped with BLIS®)
- Spare – Full size 18" Tire w/TPMS
- Spoiler – Painted Black
- Tailgate Handle – (MIC)
- Tail lamps – LED
- Tires – 255/60R18 A/S BSW
- Wheel-Lip Molding – Black (MIC)
- Wheels – 18" x 8.0 painted black steel with wheel hub cover
- Windshield – Acoustic Laminated

## INTERIOR/COMFORT

- Cargo Hooks
- Climate Control – Dual-Zone Electronic Automatic Temperature Control (DEATC)
- Door-Locks
- Power
- Rear-Door Handles and Locks Operable
- Fixed Pedals (Driver Dead Pedal)
- Floor – Flooring – Heavy-Duty Thermoplastic Elastomer
- Glove Box – Locking/non-illuminated
- Grub Handles – (1 – Front-passenger side, 2-Rear)

## INTERIOR/COMFORT (continued)

- Liftgate Release Switch located in overhead console (45 second timeout feature)
- Lighting
  - Overhead Console
  - Red/White Task Lighting in Overhead Console
  - 3rd row overhead map light
- Mirror – Day/Night Rear View
- Particulate Air Filter
- Powerpoints – (1) First Row
- Rear-door closeout panels
- Rear-window Defrost
- Scuff Plates – Front & Rear
- Seats
  - 1st Row Police Grade Cloth Trim, Dual Front Buckets with reduced bolsters
  - 1st Row – Driver 6-way Power track (fore/aft, Up/down, tilt with manual recline, 2-way manual lumbar)
  - 1st Row – Passenger 2-way manual track (fore/aft, with manual recline)
  - Built-in steel intrusion plates in both driver/passenger seatbacks
  - 2nd Row Vinyl, 35/30/35 Split Bench Seat (manual fold-flat, no tumble) – fixed seat track
- Speed (Cruise) Control
- Speedometer – Calibrated (includes digital readout)
- Steering Wheel – Manual / Tilt / Telescoping, Urethane wheel finish w/Silver Painted Bezels with Speed Controls and 4-usr configurable latching switches
- Sun visors, color-keyed, non-illuminated
- Universal Top Tray – Center of I/P for mounting aftermarket equipment
- Windows, Power, 1-touch Up/Down Front Driver/Passenger-Side with disable feature

## SAFETY/SECURITY

- AdvanceTrac® w/RSC® (Roll Stability Control™)
- Airbags, dual-stage driver & front-passenger, side seat, passenger-side knee, Roll Over Protection Airbags and Safety Canopy®
- Anti-Lock Brakes (ABS) with Traction Control
- Brakes – Police calibrated high-performance regenerative braking system
- Belt-Minder® (Front Driver / Passenger)
- Child-Safety Locks (capped)
- Individual Tire Pressure Monitoring System (TPMS)
- LATCH (Lower Anchors and Tethers for Children) system on rear outboard seat locations
- Rearview Camera with Washer viewable in 4.2" center stack.
- Seat Belts, Pretensioner/Energy-Management System w/adjustable height in 1st Row
- SOS Post-Crash Alert System™

## FUNCTIONAL

- Audio
  - AM/FM / MP3 Capable / Clock / 4-speakers
  - Bluetooth® interface
  - 4.2" Color LCD Screen Center-Stack "Smart Display"
- Note: Standard radio does not include USB Port or Aux. Audio Input Jack; Aux. Audio Input Jack requires SYNC 3®
- Easy Fuel® Capless Fuel-Filler
- Ford Telematics™ – Includes Ford Modem and complimentary 2-year trial subscription
- Front door tether straps (driver/passenger)
- Power pigtail harness
- Recovery Hooks; two in front and trailer bar in rear
- Simple Fleet Key (w/o microchip, easy to replace; 4-keys)
- Two-way radio pre-wire
- Two (2) 50 amp battery ground circuits – power distribution junction block (behind 2nd row passenger seat floorboard)
- Wipers – Front Speed-Sensitive Intermittent; Rear Dual Speed Wiper Wipers – Front

## WARRANTY

- 3 Year / 36,000 Miles Bumper / Bumper
- 8 Year / 100,000 Miles Hybrid Unique Components
- POWERTRAIN CARE EXTENDED SERVICE PLAN
- 5-year/100,000-mile Powertrain CARE Extended Service Plan (zero deductible) – Standard

### Police Interceptor Utility Base Prices

<input checked="" type="checkbox"/>	Utility All Wheel Drive (3.3L V6 Direct-Injection FFV, 136 MPH, 99B/44U) K8A/500A	\$31,544.00
<input type="checkbox"/>	Utility All Wheel Drive (3.0L V6 EcoBoost, 148 MPH, 99C/44U) K8A/500A	\$35,356.00
<input type="checkbox"/>	Utility All Wheel Drive (3.3L V6 Direct-Injection Hybrid Eng., 136 MPH, 99W/44B) K8A/500A	\$34,659.00

### VEHICLE COLOR: Order Code

Arizona Beige Clearcoat Metallic  
Medium Brown Metallic  
Dark Toreador Red Clearcoat Metallic  
Dark Blue  
Norsea Blue Clearcoat Metallic  
Royal Blue  
Light Blue Metallic  
Vermillion Red  
Smokestone Clearcoat Metallic  
Silver Grey Metallic  
Iconic Silver Clearcoat Metallic  
Agate Black  
Oxford White Clearcoat  
Blue Metallic  
Sterling Grey Metallic  
Medium Titanium Clearcoat Metallic  
Ultra Blue (Extra Cost Paint \$1,008.00)

### Interior Trim Color Charcoal Black (96)

[E3]	[ ]
[BU]	[ ]
[JL]	[ ]
[LK]	[ ]
[KR]	[ ]
[LM]	[ ]
[LN]	[ ]
[E4]	[ ]
[HG]	[ ]
[TN]	[ ]
[JS]	[ ]
[UM]	[X]
[YZ]	[ ]
[FT]	[ ]
[UJ]	[ ]
[YG]	[ ]
[21U17]	[ ]

### INTERCEPTOR OPTIONAL FEATURES:

#### Flooring/Seats

	Code	\$Cost
<input type="checkbox"/> 1st and 2nd row carpet floor covering	16C	125.00
<input type="checkbox"/> 2nd Row Cloth Seats	F6/ 88F	60.00
<input checked="" type="checkbox"/> Power passenger seat (6-way) w/manual recline and lumbar	87P	325.00
<input checked="" type="checkbox"/> Rear Console Plate (Not available with Interior Upgrade Pkg – 65U)	85R	45.00
<input type="checkbox"/> Interior Upgrade Package	65U	390.00

- 1st and 2nd Row Carpet Floor Covering
- Cloth Seats – Rear
- Center Floor Console less shifter w/unique Police console finish plate
- Includes Console and Top Plate with 2 cup holders
- Floor Mats, front and rear (carpeted)
- Deletes the standard console mounting plate (85D)
- SYNC® 3
  - Enhanced Voice Recognition Communications and Entertainment System
  - 4.2" Color LCD Screen Center-Stack "Smart Display"
  - AppLink®
  - 911 Assist®

Note: SYNC® AppLink® lets you control some of your favorite compatible mobile apps with your voice. It is compatible with select smartphone platforms.

#### Lamps/Lighting

<input checked="" type="checkbox"/> Dark Car Feature – Courtesy lamp disable when any door is opened	43D	20.00
<input type="checkbox"/> Daytime Running Lamps	942	45.00
<input type="checkbox"/> Side Marker Lights in Skull Caps	63B/60A	340.00
<input type="checkbox"/> Rear Quarter Glass Side Marker Lights	63L	575.00
<input type="checkbox"/> Front Warning Auxiliary Light (Driver side – Red / Passenger side – Blue)	21L/60A	600.00
<input type="checkbox"/> Rear Auxiliary Liftgate Lights (Red/Blue LED Lights; located beneath liftgate glass in applique panel)	43A	395.00
<input type="checkbox"/> Front Interior Windshield Warning Lights (Red/Blue with take down)	96W	1145.00
<input type="checkbox"/> Rear Spoiler Traffic Warning Light	96T	1495.00
<input checked="" type="checkbox"/> Dome Lamp – Red/White in Cargo Area	17T	50.00
<input checked="" type="checkbox"/> Pre-wiring for grille lamp, siren, and speaker	60A	50.00
<input checked="" type="checkbox"/> Spot Lamp – Driver Only (LED Bulbs) (Unity)	51R	395.00
<input type="checkbox"/> Spot Lamp – Driver Only (LED Bulbs) (Whelen)	51T	420.00
<input type="checkbox"/> Spot Lamp – Dual (driver and passenger) (LED Bulbs) (Unity)	51S	620.00
<input type="checkbox"/> Spot Lamp – Dual (driver and passenger) (LED Bulbs) (Whelen)	51V	665.00

**Body**

[ ] Glass – Solar Tint 2nd and 3rd Row (Deletes Privacy Glass)	92G	120.00
[ ] Glass – Solar Tint 2nd Row (Privacy Glass on Rear Quarter and Liftgate Window)	92R	85.00
[ ] Deflector Plate	76D	335.00

**Wheels**

[ ] Wheel Covers (18" Full Face Wheel Cover)	65L	60.00
[ ] 18" Painted Aluminum Wheel	64E	475.00

**Misc**

[ ] Engine Block Heater	41H	90.00
[ ] License Plate Bracket – Front	153	N/C
[ ] Badge Delete (Police Interceptor Badge Only)	16D	N/C
[ ] 100 Watt Siren/Speaker (includes bracket and pigtail)	18X	300.00
[ ] Aux Air Conditioning	17A	610.00
[ ] Noise Suppression Bonds (Ground Straps)	60R	100.00
[ ] OBD-II Split Connector – Allows up to 2 devices to be connected to the vehicle's OBD-II port	61B	55.00
[ ] Rear Bumper Step Pad	16P	95.00
[ ] My Speed Fleet Management	43S	60.00

**Audio/Video**

[ ] Rear View Camera (Includes Electrochromic Rear View Mirror – Video is displayed in rear view mirror) Note: This option would replace the camera that comes standard in the 4" center stack area.	87R	N/C
[ ] Rear Camera On-Demand – allows driver to enable rear camera on-demand	19V	230.00

**Doors/Windows**

[x] Global Lock / Unlock feature (Door-panel switches will lock/unlock all doors and rear liftgate. Eliminates the overhead console liftgate unlock switch) ***** OLD STYLE REAR HATCH LOCK / UNLOCK *****	18D	N/C
[ ] Hidden Door Lock Plunger, Rear Door Handle and Rear Windows Inoperable	52P	160.00
[x] Rear Door Handles Inoperable/Locks Inoperable and Rear Windows Inop	68G	75.00
[x] Lock system: Single Key/All Vehicles Keyed Alike	59E	50.00
Keyed Alike 1284x= 59B    Keyed Alike 1294x= 59C    Keyed Alike 0135x= 59D		
Keyed Alike 1435x= 59E    Keyed Alike 0576x= 59F    Keyed Alike 0151x= 59G		
Keyed Alike 1111x= 59J		

**Safety & Security**

[ ] Ballistic Door Panels – Driver Front Door Only (Level 3)	90D	1585.00
[ ] Ballistic Door Panels – Driver & Pass Front Doors (Level 3)	90E	3170.00
[ ] Ballistic Door Panels – Driver Front Door Only (Level 4+)	90F	2415.00
[ ] Ballistic Door Panels – Driver & Pass Front Doors (Level 4+)	90G	4830.00
[ ] BLIS® – Blind Spot Monitoring with Cross Traffic Alert	55B/54Z	545.00
[ ] Police Perimeter Alert – detects motion in an approximately 270-degree radius on sides and back of vehicle; if movement is determined to be a threat, chime will sound at level I. Doors will lock and windows will automatically go up at level II. Includes visual display in instrument cluster with tracking.	68B	675.00
[ ] Pre-Collision Assist with Pedestrian Detection (includes Forward Collision Warning and Automatic Emergency Braking and unique disable switch for Law Enforcement use) Note: Not available with option 96W	76P	145.00
[ ] Mirrors– Heated, Non BLIS	549	60.00
[ ] Perimeter Anti-Theft Alarm – Activated by Hood, Door, or Decklid	593/55F	460.00
[ ] Remote Keyless Entry w/4 Key Fobs (w/o Keypad)	55F	340.00
[ ] Police Engine Idle Feature	47A	260.00
[ ] Extra Key \$6.00x____=	Parts	6.00 ea
[ ] Remote Starter (Must Order Keyless Entry 55F)	Parts	550.00
[ ] Reverse Sensing	76R	275.00
[ ] Class III Trailer Tow Lighting Package (4-pin and 7-pin connectors and wiring)	52T	80.00
[ ] H8 AGM Battery (900 CCA/92-amp)	19K	110.00
[ ] Gun Vault (Not Available with (17A) Aux Air Conditioning)	63V	245.00

[ ] <b>12.1" Integrated Computer Screen</b>	47E	2745.00
<ul style="list-style-type: none"> <li>Includes 12.1" touchscreen display in center stack and allows for operation of laptop in remote location to free up cabin space in front passenger area</li> <li>Includes Audio Video extender (AVX) box, (2) AVX cables, (2) USB cables and (1) HDMI cable</li> <li>Includes SYNC 3 ®</li> </ul>		
[ ] <b>Front Headlamp Lighting Solution</b>	66A	895.00
<ul style="list-style-type: none"> <li>Includes LED Low beam/High beam headlamp, Wig-wag function and Red/Blue/White LED side warning lights (driver's side White/Red / passenger side White/Blue)</li> <li>Includes pre-wire for grille LED lights, siren and speaker (60A)</li> <li>Wiring, LED lights included. Controller "not" included</li> </ul>		
Note: Not available with option: 67H		
Note: Recommend using Ultimate Wiring Package (67U)		
[ ] <b>Police Wire Harness Connector Kit – Front/Rear</b>	67V	185.00
For connectivity to Ford PI Package solutions includes:		
• Front		
– (2) Male 4-pin connectors for siren		
– (5) Female 4-pin connectors for lighting/siren/speaker		
– (1) 4-pin IP connector for speakers		
– (1) 4-pin IP connector for siren controller connectivity		
– (1) 8-pin sealed connector		
– (1) 14-pin IP connector		
• Rear		
– (2) Male 4-pin connectors for siren		
– (5) Female 4-pin connectors for lighting/siren/speaker		
– (1) 4-pin IP connector for speakers		
– (1) 4-pin IP connector for siren controller connectivity		
– (1) 8-pin sealed connector		
– (1) 14-pin IP connector		
Note: Note: See Upfitters guide for further detail <a href="http://www.fordpoliceinterceptorupfit.com">www.fordpoliceinterceptorupfit.com</a>		
[x] <b>Tail Lamp/Police Interceptor Housing Only</b>	86T	60.00
<ul style="list-style-type: none"> <li>Pre-existing holes with standard twist lock sealed capability (does not include LED Strobe lights) (eliminates need to drill housing assemblies)</li> </ul>		
Note: Not available with options: 66B and 67H		
[ ] <b>Tail Lamp Lighting Solution</b>	66B	430.00
• Includes LED lights plus two (2) rear integrated hemispheric lighthead white LED side		
Warning lights in taillamps		
• LED lights only. Wiring, controller "not" included		
Note: Not available with option: 67H		
Note: Recommend using Ultimate Wiring Package (67U)		
[ ] <b>Rear Lighting Solution</b>	66C	455.00
<ul style="list-style-type: none"> <li>Includes two (2) backlit flashing linear high-intensity LED lights (driver's side red / passenger side blue) mounted to inside liftgate glass</li> </ul>		
<ul style="list-style-type: none"> <li>Includes two (2) backlit flashing linear high-intensity LED lights (driver's side red / Passenger side blue) installed on inside lip of liftgate (lights activate when liftgate is open)</li> </ul>		
• LED lights only. Wiring, controller "not" included		
Note: Not available with option: 67H		
Note: LED lights only – does "not" include wiring or controller		
Note: Recommend using Ultimate Wiring Package (67U)		
[ ] <b>Ultimate Wiring Package</b>	67U	560.00
• Rear console mounting plate (85R) – contours through 2nd row; channel for wiring		
• Pre-wiring for grille LED lights, siren and speaker (60A)		
• Wiring harness I/P to rear cargo area (overlay)		
– Two (2) light cables – supports up to six (6) LED lights (engine compartment/grille)		
– One (1) 10-amp siren/speaker circuit engine cargo area		
• Rear hatch/cargo area wiring – supports up to six (6) rear LED lights		
• Does "not" include LED lights, side connectors or controller		
– Recommend Police Wire Harness Connector Kit 67V		
Note: Not available with options: 65U, 67H		

<b>[ ] Ready for the Road Package All-in Complete Package</b>	<b>67H</b>	<b>3595.00</b>
<b>All-in Complete Package – Includes Police Interceptor Packages: 66A, 66B, 66C, plus</b> <ul style="list-style-type: none"> <li>• Whelen Cencom Light Controller Head with dimmable backlight</li> <li>• Whelen Cencom Relay Center / Siren / Amp w/Traffic Advisor control (mounted behind 2nd row seat)</li> <li>• Light Controller / Relay Cencom Wiring (wiring harness) w/additional input/output pigtails</li> <li>• High current pigtail</li> <li>• Whelen Specific WECAN Cable (console to cargo area) connects Cencom to Control Head</li> <li>• Pre-wiring for grille LED lights, siren and speaker (60A)</li> <li>• Rear console plate (85R) – contours through 2nd row; channel for wiring</li> <li>• Grille linear LED Lights (Red / Blue) and harness</li> <li>• 100-Watt Siren / Speaker</li> <li>• Hidden Door-Lock Plunger w/Rear-door controls inoperable (locks, handles and windows) (52P)</li> </ul>		
<b>Note: Not available with options: 66A, 66B, 66C, 67U and 65U</b>		

<b><u>Extended Warranty Option's (\$0.00 Deductible) 100,000 Mile Coverage</u></b>		
<b>[ ] 5-Year Premium Care Warranty (500 Plus Components Coverage)</b>		<b>2745.00</b>

**Total Price \$32,614.00 ea**



**STATE OF MICHIGAN CONTRACT HOLDER**

Robert K. Alderman

**Gorno Ford**

Bus: 734-671- 4017

ralderman@gornoford.com

SOUTH LYON POLICE DEPT

ATT: LT. DOUGLAS BAAKI

07-28-20

219 WHIPPLE STREET

SOUTH LYON, MI 48178

BUS: 248-4374193

EMAIL: [baakid@southlyonpolice.com](mailto:baakid@southlyonpolice.com)

**2021 FORD UTILITY INTERCEPTOR AWD, MI CONTRACT 071B1300005**

3.7 L V6

6SPD AUTO TRANS

SHADOW BLACK

POWER WINDOWS / LOCKS

REARVIEW CAMERA

FRONT DRIVER 6 WAY POWER SEAT

GLOBAL LOCK / UNLOCK

CARGO DOME LAMP

DARK CAR FEATURE

DRIVER LED SPOT LIGHT

KEY CODE 1435X

GRILL WIRING

REAR DOOR HANDLE INOP

RR MOUNT PLATE

FRONT / REAR LAMP HOUSING

**TOTAL PRICE DELIVERED TO SOUTH LYON, MI ..... \$ 33,540.00**

## Chris Sovik

---

**From:** Jeff Johnston [REDACTED]  
**Sent:** Friday, September 18, 2020 4:10 PM  
**To:** Chris Sovik  
**Subject:** Re: Police Quote

Sorry for the hold up Chris. We no longer order police interceptors. Thank you for calling the other day. I hope you find one ASAP!

Kind Regards,  
Jeff Johnston  
Brighton Ford

Sent from my iPhone

On Sep 18, 2020, at 12:22 PM, Chris Sovik <SovikC@southlyonpolice.com> wrote:

Jeff, Anything on the request for a quote? Hope you received my email yesterday.

Thanks, Chris

Chief Christopher Sovik  
South Lyon Police Department  
219 Whipple Street  
South Lyon, MI 48178  
Direct Line: 248-437-0444  
Station: 248-437-1773  
Fax: 248-437-0459  
[sovikc@southlyonpolice.com](mailto:sovikc@southlyonpolice.com)  
Graduate FBI National Academy Session 248  
<image001.jpg>  
<image002.png>  
"If serving is below you, leadership is beyond you."

## **Doug Baaki**

---

**From:** Doug Baaki  
**Sent:** Thursday, May 14, 2020 3:41 PM  
**To:** Eric Wilkinson  
**Subject:** RE: Interceptor

Ok, I understand and thanks for responding so quickly to my request.

Thanks again,

Lt. Douglas Baaki  
South Lyon Police Department  
219 Whipple Street  
South Lyon, MI 48178  
248-437-4193 Phone  
248-437-0459 Fax  
[baakid@southlyonpolice.com](mailto:baakid@southlyonpolice.com)  
*"Safeguarding our Community"*



**From:** Eric Wilkinson [REDACTED]  
**Sent:** Thursday, May 14, 2020 1:16 PM  
**To:** Doug Baaki [REDACTED]  
**Subject:** Interceptor

Good afternoon, Lt Baaki

My name is Eric Wilkinson, I am one of the Sales Managers at Hines Park Ford.

Joelle asked me to reach out to you regarding your price quote inquiry on an Explorer. We appreciate the opportunity, unfortunately our store isn't signed up for municipality sales at this time, so I cannot provide a build out on this vehicle for you.

I'm terribly sorry!

Good luck in your search! Please let us know if there is anything else we can do (or attempt) for you!



CONSULTING  
GROUP

Report on Preliminary Geotechnical  
Investigation

**Proposed Commercial  
Development  
390 S. Lafayette Street  
South Lyon, Michigan**

Latitude: 42.458108° N  
Longitude: 83.651785° W

Prepared for:

City of South Lyon  
335 S. Warren Street  
South Lyon, Michigan 48178

G2 Project No. 200233  
September 23, 2020

[g2consultinggroup.com](http://g2consultinggroup.com)

<b>Headquarters</b>	1866 Woodslee St	Troy, MI 48083	P 248.680.0400	F 248.680.9745
<b>Ann Arbor</b>	1350 Eisenhower Pl	Ann Arbor, MI 48108	P 734.390.9330	F 734.390.9331
<b>Chicagoland</b>	1186 Heather Dr	Lake Zurich, IL 60047	P 847.353.8740	F 847.353.8742



CONSULTING  
GROUP

September 23, 2020

Mr. Paul Zelenak  
City Manager  
City of South Lyon  
335 S. Warren Street  
South Lyon, Michigan 48178

Re: Report of Preliminary Geotechnical Investigation  
Proposed Commercial Development  
390 S. Lafayette Street  
South Lyon, Michigan  
G2 Project No. 200233

Dear Mr. Zelenak,

In accordance with your request, we have completed the preliminary geotechnical investigation for a proposed commercial development to be constructed at 390 S. Lafayette Street within the City of South Lyon. This report presents the results of our observations and analyses and our recommendations for foundation design and construction considerations as they relate to the geotechnical conditions at the proposed development.

As always, we appreciate the opportunity to be of service to the City of South Lyon on this project and look forward to discussing the recommendations presented. In the meantime, if you have any questions regarding this report or any other matter pertaining to the project, please let us know.

Sincerely,

G2 Consulting Group, LLC

Jeffrey M. Hayball, P.E.  
Project Engineer

JMH/NJHT/ljv

Enclosures

Noel J. Hargrave-Thomas, P.E.  
Principal

[g2consultinggroup.com](http://g2consultinggroup.com)

<b>Headquarters</b>	1866 Woodslee St	Troy, MI 48083	P 248.680.0400	F 248.680.9745
<b>Ann Arbor</b>	1350 Eisenhower Pl	Ann Arbor, MI 48108	P 734.390.9330	F 734.390.9331
<b>Chicagoland</b>	1186 Heather Dr	Lake Zurich, IL 60047	P 847.353.8740	F 847.353.8742

## EXECUTIVE SUMMARY

The project consists of evaluation of the feasibility to develop the existing property located at 390 S. Lafayette Street within the City of South Lyon. The proposed site is a 100 foot by 60 foot parcel located at the northwest corner of S. Lafayette Street and W. McHattie Street. It is our understanding the city desires to develop the property into a two-story, slab-on-grade structure with associated parking and utilities. No grading plan or loading conditions were available upon completion of this proposal. However, we assume final grades will be near or at existing grades and column loads will range from 50 to 100 kips and wall loads range from 2 to 4 kips per foot.

Approximately 4 inches of topsoil is present at the ground surface of boring B-2. Granular fill soils, consisting of medium compact gravelly sand and sand, are present at the ground surface of boring B-1 and underlie the topsoil within boring B-2 and extend to depths ranging from 3 to 4 feet below grade. Very loose peat underlies the granular fill soils within borings B-1 and B-2, extending to depths of 7 and 9-1/2 feet, respectively. Native granular soils, consisting of very loose to medium compact sand, gravelly sand, and sandy gravel, are present below the peat and extend to depths ranging from 24 to 25 feet below existing grades. Native medium to very stiff silty clay underlies the upper native granular soils and extends to an approximate depth of 37 feet. Granular soils, consisting of loose to medium compact sand, sandy silt, and clayey sand, are present below the native silty clay and extend to depths ranging from 52 to 57 feet. Native stiff clayey silt underlies the native granular soils within boring B-1 and extends to the explored depth of 60 feet. Very compact gravelly sand is present below an approximate depth of 58 feet within boring B-2 and extends to the explored depth of 60 feet. Groundwater was observed during drilling operations within the borings B-1 and B-2 at depths of 7 feet and 4 feet, respectively. Upon completion of drilling operations, groundwater was observed within borings B-1 and B-2 at depths of 7 feet and 7-1/2 feet, respectively.

The existing peat is not suitable for support of foundations or floor slabs. Therefore, options for constructing the desired two-story, slab-on-grade, office building consist of removing and replacing the peat with engineered fill or supported the structure on a deep foundation system. Dewatering the site, which will be required to remove the existing peat soils, may induce settlement of any adjacent roadways, parking lots, and commercial buildings supported on the compressible peat soils. All construction options to build the proposed building are expensive relative to conventional construction operations. Therefore, we recommend the small parcel be utilized as public parking, where grades are generally unchanged. Long terms pavement distress should be anticipated at an accelerated rate due to the underlying peat, therefore we recommend a pavement maintenance program be budgeted for the design life of the new pavement.

If the project is not limited by budget constraints, then given the present of peat and the generally high groundwater table, we recommend the proposed building and floor slab be constructed on a deep foundation system. We recommend site grades not be raised, which may induce settlement of the existing peat soils.

Based on the results of our analyses, we recommend a minimum new pavement section consisting of 2 inches of MDOT 5E1 bituminous concrete wearing course supported by 2 inches of MDOT 4E1 bituminous concrete leveling course, supported on a minimum of 8 inches of MDOT 21AA dense graded aggregate base.

This summary is not to be considered separate from the entire text of this report, with all the conclusions and qualifications mentioned herein. Details of our analysis and recommendations are discussed in the following sections and in the Appendix of this report.

## PROJECT DESCRIPTION

The project consists of evaluation of the feasibility to develop the existing property located at 390 S. Lafayette Street within the City of South Lyon. The proposed site is a 100 foot by 60 foot parcel located at the northwest corner of S. Lafayette Street and W. McHattie Street. It is our understanding the city desires to develop the property into a two-story, slab-on-grade structure with associated parking and utilities. No grading plan or loading conditions were available at the time of this report. However, we assume the final grades will be near or at existing grades and column loads will range from 50 to 100 kips and wall loads range from 2 to 4 kips per foot.

The purpose of our investigation is to determine and evaluate the general subsurface conditions at the site and develop preliminary recommendations for site development.

## SCOPE OF SERVICES

The field operations, laboratory testing, and engineering report preparation were performed under direction and supervision of a licensed professional engineer. Our services were performed according to generally accepted standards and procedures in the practice of geotechnical engineering in this area. Our scope of services for this project is as follows:

1. We drilled a total of two (2) soil borings, B-1 and B-2, within the project site extending to a depth of 60 feet each. Soil boring B-1 was performed within the western half of the site and soil boring B-2 was drilled within the eastern half of the site.
2. We performed laboratory testing on samples obtained from the soil borings. Laboratory testing included visual engineering classification, grain size distribution, organic matter content (loss-on-ignition), moisture content, dry density, and unconfined compressive strength determinations.
3. We prepared this engineering report which includes our evaluation of the subsurface conditions at the site and our recommendations for new foundation construction and other construction considerations that may impact the proposed development.

## FIELD OPERATIONS

G2 Consulting Group, LLC (G2), selected the number, depth, and location of the soil borings. The soil borings were located in the field by a G2 representative by use of GPS assisted mobile technology in conjunction with conventional taping methods. The approximate soil boring locations are presented on the Soil Boring Location Plan, Plate No. 1. Groundwater surface elevations were not available upon completion of this report. We recommend the boring locations are surveyed by a professional civil engineer in order to assign elevations to the soil boring profiles.

Soil borings were drilled using a truck-mounted rotary drilling rig. Continuous flight, 2-1/4 inch inside diameter hollow-stem augers were used to advance the boreholes to the desired depth of 60 feet. Soil samples were obtained within the soil borings at regular 2-1/2-foot intervals within the upper 10 feet and at intervals of 5 feet thereafter. The samples were obtained by the Standard Penetration Test (SPT) method (ASTM D1586) which involves driving a 2-inch outside diameter split-spoon sampler into the soil with a 140-lb weight falling 30 inches. The sampler is generally driven in three successive 6-inch increments with the number of blows for each increment recorded. The number of blows required to advance the sample the last 12 inches is termed the Standard Penetration Resistance (N-value). The blow counts for each 6-inch increment and the resulting N-value are presented on the individual soil boring logs.

Soil samples were placed in sealed containers in the field and brought to the laboratory for testing and classification. During the drilling operations, the drilling crew maintained logs of the encountered subsurface conditions, including changes in stratigraphy and observed groundwater levels to be used in conjunction with our analysis of the subsurface conditions. The final soil boring logs are based on the

field logs and laboratory soil classification and testing. After completion of boring operations, the boreholes were backfilled with excavated soil.

## **LABORATORY TESTING**

Representative soil samples were subjected to laboratory testing to determine soil parameters pertinent to foundation and pavement design and site preparation. An experienced geotechnical engineer classified the samples in general conformance with the Unified Soil Classification System.

Laboratory testing included natural moisture content, dry density, organic matter content (loss-on-ignition), and unconfined compressive strength determinations. Grain size distribution was determined in general conformance with ASTM C 136 method of testing. The organic matter content of representative samples was determined in accordance with ASTM Test Method D 2974, "Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils". The unconfined compressive strengths were determined by ASTM Test Method D2166 and using a spring-loaded hand penetrometer. Per ASTM D2166, the unconfined compressive strength of cohesive soils is determined by axially loading a small cylindrical soil sample under a slow rate of strain. The unconfined compressive strength is defined as the maximum stress applied to the soil sample before shear failure. If shear failure does not occur prior to a total strain of 15 percent, the unconfined compressive strength is defined as the stress at a strain of 15 percent. The hand penetrometer estimates the unconfined compressive strength to a maximum of 4-1/2 tons per square foot (tsf) by measuring the resistance of the soil sample to the penetration of a calibrated spring-loaded cylinder.

The results of the moisture content, organic matter content, dry density, and unconfined compressive strength laboratory tests are indicated on the soil boring logs at the depths the samples were obtained. Unconfined Compressive Strength Test are shown graphically on Figure No. 3 within the Appendix. The grain size analyses are presented in the Appendix as Grain Size Distribution, Figure No. 4. We will hold the soil samples for 60 days from the date of this report. If you would like the samples, please let us know.

## **SITE CONDITIONS**

The subject property is located at 390 S. Lafayette Street within the City of South Lyon, Oakland County, Michigan. The proposed site is a 100 feet by 60 feet parcel located at the northwest corner of S. Lafayette Street and W. McHattie Street. The site is currently covered with grass and bituminous concrete pavements and is relatively flat. Surrounding properties consist of commercial developments, consisting of parking lots and single-story buildings.

## **SUBSURFACE CONDITIONS**

Approximately 4 inches of topsoil are present at the ground surface of boring B-2. Granular fill soils, consisting of gravelly sand and sand, are present at the ground surface of boring B-1 and underlie the topsoil within boring B-2 and extend to depths ranging from 3 to 4 feet below grade. Peat underlies the granular fill soils within borings B-1 and B-2, extending to depths of 7 and 9-1/2 feet, respectively. Native granular soils, consisting of sand, gravelly sand, and sandy gravel, are present below the peat and extend to depths ranging from 24 to 25 feet below existing grades. Native silty clay underlies the upper native granular soils and extends to an approximate depth of 37 feet. Granular soils, consisting of sand, sandy silt, clayey sand, and gravelly sand, are present below the native silty clay and extend to an approximate depth of 52 feet within boring B-1 and the explored depth of 60 feet within boring B-2. Native clayey silt underlies the native granular soils within boring B-1 and extends to the explored depth of 60 feet.

The granular fill soils are medium compact with Standard Penetration Test (SPT) N-values ranging from 16 to 22 blows per foot (bpf). The peat is very loose in compactness with SPT N-values ranging from 1 to 3 bpf, moisture contents ranging from 73 to 154 percent, and organic matter contents ranging from



28.2 to 52.8 percent. The native granular soils are generally very loose to medium compact with SPT N-values ranging from 4 to 17 bpf. However, the gravelly sand within boring B-2 below 58 feet is very compact with a SPT N-value of 58 bpf. The native cohesive soils are medium to very stiff in consistency with natural moisture contents ranging from 11 to 18 percent, dry densities ranging from 131 to 134 pound per cubic foot (pcf), and unconfined compressive strengths ranging from 1,930 to 6,860 pounds per square foot (psf).

The stratification depths shown on the soil boring logs represent the soil conditions at the boring locations. Variations may occur between borings. Additionally, the stratigraphic lines represent the approximate boundaries between soil types. The transition may be more gradual than what is shown. We have prepared the boring logs on the basis of laboratory classification and testing as well as field logs of the soils encountered.

The Soil Boring Location Plan, Plate No. 1, Soil Boring Logs, Figure Nos. 1 through 3, Unconfined Compressive Strength Test, Figure No. 4, and Soil Boring Profile Sheet, Figure No. 5, are presented in the Appendix. The soil profiles described within this report are generalized descriptions of the soil conditions at the boring locations. General notes defining the nomenclature used on the boring logs and elsewhere in this report are presented on Figure No. 6.

## **GROUNDWATER CONDITIONS**

Groundwater observations were made during and upon completion of drilling operations within the soil borings. Groundwater was observed during drilling operations within the borings B-1 and B-2 at depths of 7 feet and 4 feet, respectively. Upon completion of drilling operations, groundwater was observed within borings B-1 and B-2 at depths of 7 feet and 7-1/2 feet, respectively. It should be noted the boreholes collapsed at depths ranging from 7-1/2 and 8 feet upon removal of augers. Fluctuations in perched and long-term groundwater levels should be anticipated due to seasonal variations and following periods of prolonged precipitation.

## **OBSERVATIONS AND RECOMMENDATIONS**

The purpose of this preliminary geotechnical investigation is to determine the feasibility of developing the existing property. It is desired to construct a two-story, slab-on-grade office building. However, peat was encountered within the soil borings at depths ranging from 3 to 4 feet and extending to depths ranging from 7 to 9-1/2 feet. In addition, groundwater was encountered at depths ranging from 4 to 7 feet during drilling operations.

The existing peat is not suitable for support of foundations or floor slabs. Therefore, options for constructing the desired two-story, slab-on-grade, office building consist of removing and replacing the peat with engineered fill or supported the structure on a deep foundation system. Dewatering the site, which will be required to remove the existing peat soils, may induce settlement of any adjacent roadways, parking lots, and commercial buildings supported on the compressible peat soils. All construction options to build the proposed building are expensive relative to conventional construction operations. Therefore, we recommend the small parcel be utilized as public parking, where grades are generally unchanged. Long terms pavement distress should be anticipated at an accelerated rate due to the underlying peat, therefore we recommend a pavement maintenance program be budgeted for the design life of the new pavement.

If the project is not limited by budget constraints, then given the present of peat and the generally high groundwater table, we recommend the proposed building and floor slab be constructed on a deep foundation system. We recommend site grades not be raised, which may induce settlement of the existing peat soils.

## **NEW PAVEMENT RECOMMENDATIONS**

### **General**

For new pavement construction, we recommend stripping the site of topsoil and bituminous concrete then cutting down the exposed subgrade to the proposed subgrade elevation. The exposed subgrade is anticipated to consist of granular fill soils. The subgrade should also be graded to promote effective drainage. Once a rough grade has been achieved, the subgrade should be evaluated for stability. We recommend proof compacting the granular subgrade with a smooth drum roller, making a minimum of 10 passes across the subgrade in perpendicular directions. However, we recommend the vibratory setting of the smooth drum roller be turned off within 25 feet of the adjacent building.

Subgrade undercuts, if required, should be evaluated by a qualified engineering technician to determine if subgrade stabilization is necessary. We recommend that undercut excavations, where required, be backfilled with MDOT 21AA dense graded aggregate base placed in an engineered manner. Lift thicknesses should not exceed 9 inches. All engineered fill should be compacted to a density of at least 95 percent of the maximum density determined by the Modified Proctor (ASTM D 1557) method of testing. All engineered fill material should be placed and compacted at approximately the optimum moisture content. Frozen material should not be used as fill, nor should fill be placed on a frozen subgrade.

### **Pavement Design**

We performed pavement design analyses in accordance with the "AASHTO Guide for Design of Pavement Structures". The subgrade soils will generally consist of granular fill overlaying peat. Based on the existing subgrade soils, we have provided design pavement sections based on an effective subgrade resilient modulus of 5,000 pounds per square inch (psi).

It is our understanding the traffic is primarily cars with the occasional delivery trucks. For evaluation purposes, we have designed the pavement section on an estimated of 50,000 18-kip equivalent single-axle loads (ESALs) over a 20-year design life. For evaluation purposes of the reconstruction, we have utilized a serviceability loss of 2.0, a standard deviation of 0.49 for flexible pavements, and a reliability factor of 0.95. If any actual traffic volume information becomes available, G2 Consulting Group should be notified so we can reevaluate our recommendations.

Based on the results of our analyses, we recommend a minimum new pavement section consisting of 2 inches of MDOT 5E1 bituminous concrete wearing course supported by 2 inches of MDOT 4E1 bituminous concrete leveling course, supported on a minimum of 8 inches of MDOT 21AA dense graded aggregate base.

All pavement materials are specified within the 2012 Standard Specifications for Construction from the Michigan Department of Transportation. The aggregate materials for the subbase are described in Section 902. The bituminous pavement materials are described in Section 501 and can be assigned a structural coefficient number of 0.42. Any imported MDOT 21AA material can be assigned a structural coefficient number of 0.14.

### **Pavement Drainage and Maintenance**

The pavement and subgrade should be properly sloped to promote effective surface and subsurface drainage and prevent water from ponding. We also recommend pavement subbase materials consist of non-frost-susceptible aggregates where possible. Regular timely maintenance should be performed on the bituminous pavement to reduce the potential deterioration associated with moisture infiltration through surface cracks. The owner should be prepared to seal the cracks with a hot-applied elastic crack

filler as soon as possible after cracking develops and as often as necessary to block the passage of water to the subgrade soils.

### **DEEP FOUNDATION RECOMMENDATIONS**

We recommend a deep foundation system consist of either auger cast piles or triple flight helical piles to support the proposed building and floor slab. We anticipate an auger cast pile extending into the stiff to very stiff silty clay encountered within the soil borings at depths between 25 and 37 feet below existing grades will provide an allowable bearing capacity of 50 kips per 12-inch diameter pile. Alternatively, a triple flight helical anchor deep foundation system utilizing a 12-inch, 10-inch, and 8-inch helix will provide an allowable beating capacity of 10 kips per pile bearing at the same depth as the auger cast piles. Once the proposed building layout and loading conditions are determined, we recommend a supplemental geotechnical investigation be performed to confirm our preliminary findings and recommendations. We can provide different pile lengths for different pile capacities if required.

If final grades are raised, G2 should be notified, as an additional downdrag load should be applied to the allowable bearing capacities of the deep foundations system.

We recommend a compression load test be performed prior to installation of production piles. The load test shall follow ASTM D1143 - Standard Test Methods for Deep Foundations Under Static Axial Compressive Load. The test pile shall be installed in a manner that matches the final production piles, utilizing the same contractor and equipment.

Piles should have a minimum center-to-center spacing of 3 times their maximum diameter to avoid any reduction in pile capacity due to group action. Once the pile installation operations are complete, grade beams and/or pier caps will be required to transfer the building loads to the foundation system. Exterior grade beams and pier caps must extend to a minimum depth of 3-1/2 feet below finished grade for protection from frost penetration.

We recommend a qualified G2 field representative or engineer be present on site during foundation excavation operations in order to verify the soils are consistent with that which was observed during our geotechnical exploration or to verify driven pile capacity during pile driving operations.

Additionally, the G2 representative can verify the foundation elements have been constructed in accordance with project plans and specifications. If the recommendations outlined in this report are adhered to, total and differential settlements for the completed structure should be within 1 inch and 1/2 inch, respectively. We expect settlements of these magnitudes are within tolerable limits for the type of structure proposed. We recommend all foundations be suitably reinforced to minimize the effects of differential settlements associated with local variations in subsoil conditions.

### **FLOOR SLAB RECOMMENDATIONS**

The existing peat is not suitable for support of the proposed floor slab. Therefore, we recommend the floor slab be structurally supported and incorporated into the deep foundation system. We recommend that at least 4 inches of pea gravel or coarse sand be placed between the subgrade and the bottom of the floor slab for use as a capillary break to reduce moisture transmission through the concrete floors and to reduce the potential for concrete curling. If moisture sensitive floor coverings are planned, or if greater protection against vapor transmission is desired, a vapor barrier, consisting of at least 10-mil plastic sheeting, may be placed over the capillary break layer beneath floor slabs.

### **CONSTRUCTION CONSIDERATIONS**

Care should always be exercised when excavating near existing roadways, structures, or utilities to avoid undermining. In no case should excavations extend below the level of adjacent foundations and utilities unless underpinning is planned.

We anticipate excavations for grade beams and pile caps will extend to a minimum of 3-1/2 feet below the proposed finish grade elevations. In general, we anticipate caving and or sloughing of the granular fill soils will occur. The contractor should be prepared to over-excavate and form grade beams and pile caps. The sides of the grade beams should be constructed straight and vertical.

Where sloped excavations can be made, we recommend a maximum slope of 2 horizontal units to 1 vertical unit (2H:1V) within the very loose to loose granular soils, and 1-1/2H:1V within the medium compact granular fill soils and medium to stiff cohesive fill soils. Under no circumstance shall excavations extend below the groundwater level without prior construction dewatering. All excavations must be safely shored or sloped in accordance with MI-OSHA requirements. If material is stored or equipment is operated near an excavation, lower angle slopes or stronger shoring must be used to resist the extra pressure due to the superimposed loads.

#### **GENERAL COMMENTS**

We have formulated the evaluations and recommendations presented in this report relative to site preparation, new pavement construction, and new foundation construction on the basis of data provided to us relating to the location, type, and grade for the proposed site. Any significant change in this data should be brought to our attention for review and evaluation with respect to the prevailing subsurface conditions.

The scope of the present investigation was limited to evaluation of subsurface conditions for the construction of the proposed building and other related aspects of the proposed project. No chemical, environmental, or hydrogeological testing or analysis were included in the scope of this investigation. If changes occur in the design, location, or concept of the project, the conclusions and recommendations contained in this report are not valid unless G2 Consulting Group, LLC reviews the changes. G2 Consulting Group, LLC will then confirm the recommendations presented herein or make changes in writing.

We have based the analyses and recommendations submitted in this report upon the data from soil borings performed at the approximate locations shown on the Soil Boring Location Plan, Plate No. 1. This report does not reflect variations that may occur between the actual boring locations. The nature and extent of any such variations may not become clear until the time of construction. If significant variations then become evident, it may be necessary for us to re-evaluate our report recommendations.

Soil conditions at the site could vary from those generalized on the basis of soil borings made at specific locations. It is, therefore, recommended that G2 Consulting Group, LLC be retained to provide soil engineering services during the water main and roadway construction phases of the proposed project. This is to observe compliance with the design concepts, specifications, and recommendations. Also, this allows design changes to be made in the event that subsurface conditions differ from those anticipated prior to the start of construction.

## APPENDIX

Soil Boring Location Plan

Plate No. 1

Soil Boring Logs

Figure Nos. 1 and 2

Unconfined Compressive Strength Test

Figure No. 3

Grain Size Distribution

Figure No. 4

General Notes Terminology

Figure No. 5



**Legend**

-  Soil Borings performed by Triple R Drilling on August 25, 2020

**Soil Boring Location Plan**

Proposed Commerical Development  
390 S. Lafayette Street  
South Lyon, Michigan



Project No. 200233	
Drawn by: JMH	
Date: 9/17/20	Plate No. 1
Scale: NTS	

Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street  
South Lyon, Michigan

G2 Project No. 200233

Latitude: N/A Longitude: N/A



Soil Boring No. B-1

CONSULTING GROUP

### SUBSURFACE PROFILE

### SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Fill: Medium Compact Brown Gravelly Sand with trace silt and slab-like-material			8 10 12	22			
		Fill: Loose Brown Sand with trace silt and gravel			4 1 2	3	72.9		
5		Loose Black Peat (Organic Matter Content = 29.6%)	5	S-2	0 1 4	5			
				S-3	4 6 7	13			
10			10	S-4	3 4 5	9			
		Loose to Medium Compact Gray Sand with trace silt and gravel			3 3 3	6			
15			15	S-5	1 2 2	4	12.0	133	1930
		Loose Gray Gravelly Sand with trace silt			6 7 8	15	10.9	133	2830
20			20	S-6	5 7 7	14	10.7	132	6860
25		Medium Gray Silty Clay with trace sand and gravel	25	S-7					
				S-8					
30		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel	30	S-8					
				S-9					
35			35	S-9					

Total Depth: 60 ft  
Drilling Date: August 25, 2020  
Inspector:  
Contractor: Triple R Drilling  
Driller: Ryan Rau

Water Level Observation:  
7 feet during and upon completion

Notes:  
Borehole collapsed at 7-1/2 ft after auger removal  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:  
Auger cuttings

Figure No. 1a

SOIL / PAVEMENT BORING 200233.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 9/23/20

Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street  
South Lyon, Michigan

G2 Project No. 200233

Latitude: N/A Longitude: N/A



Soil Boring No. B-1

CONSULTING GROUP

### SUBSURFACE PROFILE

### SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Stiff to Very Stiff Gray Silty Clay with trace sand and gravel <i>(continued)</i>							
40			40	S-10	2 3 4	7			
45		Loose Gray Sand with trace silt and gravel	45	S-11	3 4 4	8			
50		Medium Compact Gray Sandy Silt with trace clay	50	S-12	5 6 8	14			
55		Stiff Gray Clayey Silt with occasional sand partings	55	S-13	5 7 8	15	16.5		3500*
60			60	S-14	7 8 9	17	18.0		3000*
		End of Boring @ 60 ft							
65			65						
70			70						

Total Depth: 60 ft  
Drilling Date: August 25, 2020  
Inspector:  
Contractor: Triple R Drilling  
Driller: Ryan Rau

Water Level Observation:  
7 feet during and upon completion

Notes:  
Borehole collapsed at 7-1/2 ft after auger removal  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:  
Auger cuttings

Figure No. 1b

SOIL / PAVEMENT BORING: 200233.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.CDT 9/23/20



Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street  
South Lyon, Michigan

G2 Project No. 200233

Latitude: N/A Longitude: N/A



Soil Boring No. B-2

CONSULTING GROUP

### SUBSURFACE PROFILE

### SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsail: Dark Brown Silty Sand (4 inches)	0.3						
		Fill: Dark Brown Sand with trace silt, gravel, and organic matter	1.3		4				
		Fill: Medium Compact Brown Sand with trace silt and gravel	3.0	S-1	8	16			
5		Very Loose Black Peat with occasional sand seams (Organic Matter Content = 28.2% - 52.8%)	5	S-2	2 1 1	2	154.3		
				S-3	0 0 1	1	142.6		
10		Very Loose Gray Gravelly Sand with trace silt	10	S-4	0 1 3	4			
				S-5	6 8 9	17			
15		Medium Compact Gray Sand with trace silt and gravel	15	S-6	6 6 7	13			
				S-7	5 6 7	13			
20		Medium Compact Gray Sandy Gravel with trace silt	20						
25		Very Stiff Gray Silty Clay with trace sand and gravel	25	S-8	7 8 10	18	11.5	131	4020
30			30	S-9	8 6 8	14	11.3	134	5750
35			35						

Total Depth: 60 ft  
Drilling Date: August 26, 2020  
Inspector:  
Contractor: Triple R Drilling  
Driller: Ryan Rau

Water Level Observation:  
4 feet during; 7-1/2 feet upon completion

Notes:  
Borehole collapsed at 8 ft after auger removal  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:  
Auger cuttings

Figure No. 2a

SOIL / PAVEMENT BORING 200233.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 9/23/20

Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street  
South Lyon, Michigan

G2 Project No. 200233

Latitude: N/A Longitude: N/A



Soil Boring No. B-2

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Very Stiff Gray Silty Clay with trace sand and gravel ( <i>continued</i> )	37.0						
40			40	S-10	6 8 8	16			
		Medium Compact Gray Sand with trace silt and gravel, occasional gravel layers							
45			45	S-11	4 6 7	13			
			48.0						
50			50	S-12	4 6 6	12			
		Medium Compact Gray Clayey Sand with trace silt and gravel, occasional gravel layers							
55			55	S-13	4 5 6	11			
			57.0						
60		Very Compact Gray Gravelly Sand with trace clay and silt	60.0	S-14	21 28 30	58			
		End of Boring @ 60 ft							
65			65						
70			70						

Total Depth: 60 ft  
Drilling Date: August 26, 2020  
Inspector:  
Contractor: Triple R Drilling  
Driller: Ryan Rau

Water Level Observation:  
4 feet during; 7-1/2 feet upon completion

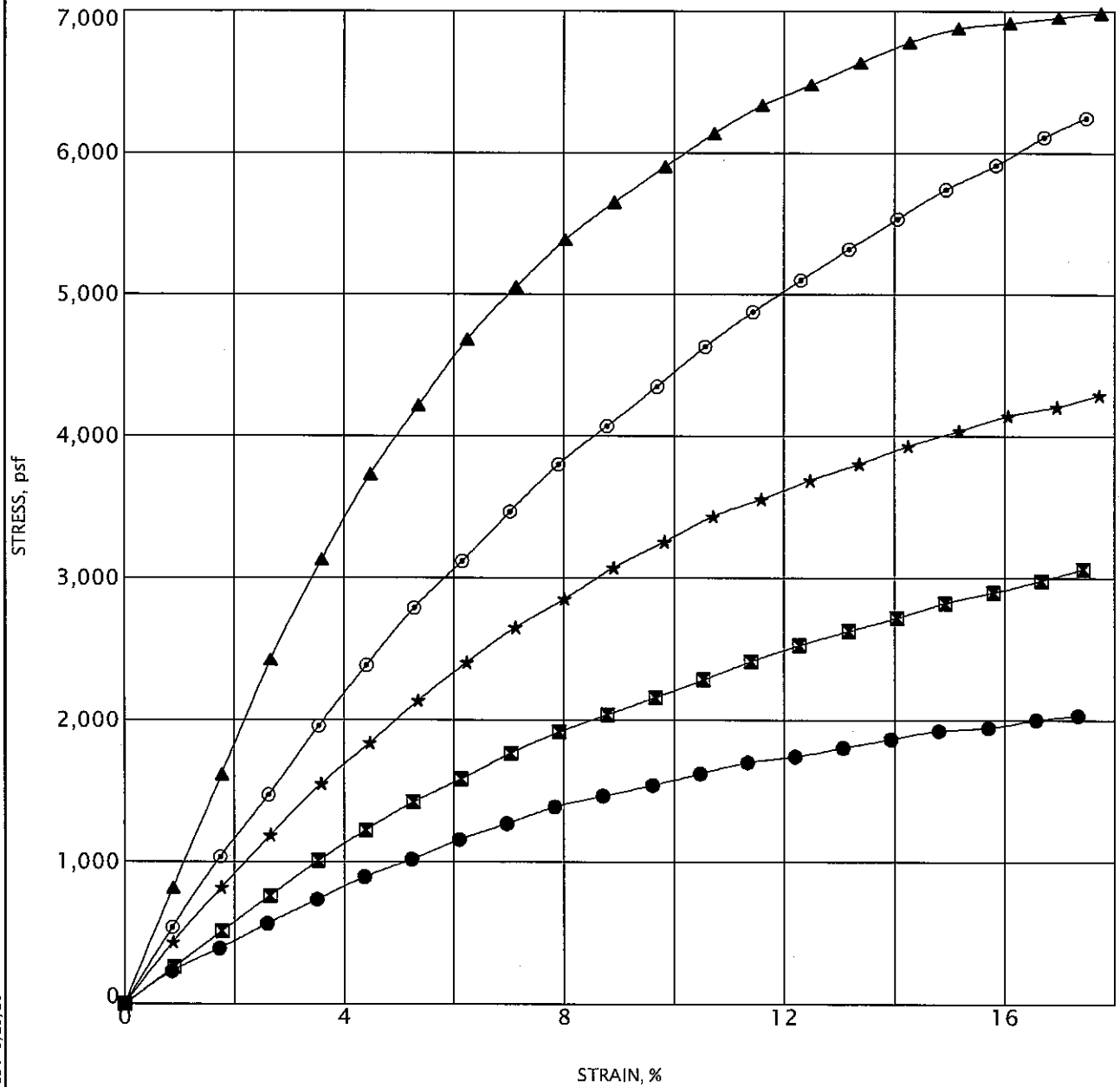
Notes:  
Borehole collapsed at 8 ft after auger removal  
\* Calibrated Hand Penetrometer

Drilling Method:  
2-1/4 inch inside diameter hollow-stem augers

Excavation Backfilling Procedure:  
Auger cuttings

Figure No. 2b

SOIL / PAVEMENT BORING 200233.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 9/23/20



Specimen	Classification	MC%	$\gamma_d$	UC
● B-1 S-7	Gray Silty Clay	12	133	1930
⊠ B-1 S-8	Gray Silty Clay	11	133	2830
▲ B-1 S-9	Gray Silty Clay	11	132	6860
★ B-2 S-8	Gray Silty Clay	11	131	4020
⊙ B-2 S-9	Gray Silty Clay	11	134	5750



### UNCONFINED COMPRESSIVE STRENGTH TEST

Project Name: Proposed Commercial Development

Project Location: 390 S. Lafayette Street  
South Lyon, Michigan

G2 Project No.: 200233

Figure No. 3



Specimen ID			Description				LL	PL	PI	Cc	Cu
●	B-1	S-4	Gray Sand with trace silt							0.9	1.9
Specimen ID			D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay	
●	B-1	S-4	9.5	0.146	0.099	0.076	0.1	90.8	9.2		



## Figure No. 4

## GENERAL NOTES TERMINOLOGY

Unless otherwise noted, all terms herein refer to the Standard Definitions presented in ASTM 653.

### PARTICLE SIZE

Boulders	- greater than 12 inches
Cobbles	- 3 inches to 12 inches
Gravel - Coarse	- 3/4 inches to 3 inches
- Fine	- No. 4 to 3/4 inches
Sand - Coarse	- No. 10 to No. 4
- Medium	- No. 40 to No. 10
- Fine	- No. 200 to No. 40
Silt	- 0.005mm to 0.074mm
Clay	- Less than 0.005mm

### CLASSIFICATION

The major soil constituent is the principal noun, i.e. clay, silt, sand, gravel. The second major soil constituent and other minor constituents are reported as follows:

Second Major Constituent (percent by weight)	Minor Constituent (percent by weight)
Trace - 1 to 12%	Trace - 1 to 12%
Adjective - 12 to 35%	Little - 12 to 23%
And - over 35%	Some - 23 to 33%

### COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, clay becomes the principal noun with the other major soil constituent as modifier, i.e. sandy clay. Other minor soil constituents may be included in accordance with the classification breakdown for cohesionless soils, i.e. silty clay, trace sand, little gravel.

Unconfined Compressive		
Consistency	Strength (psf)	Approximate Range of (N)
Very Soft	Below 500	0 - 2
Soft	500 - 1,000	3 - 4
Medium	1,000 - 2,000	5 - 8
Stiff	2,000 - 4,000	9 - 15
Very Stiff	4,000 - 8,000	16 - 30
Hard	8,000 - 16,000	31 - 50
Very Hard	Over 16,000	Over 50

Consistency of cohesive soils is based upon an evaluation of the observed resistance to deformation under load and not upon the Standard Penetration Resistance (N).

### COHESIONLESS SOILS

Density Classification	Relative Density %	Approximate Range of (N)
Very Loose	0 - 15	0 - 4
Loose	16 - 35	5 - 10
Medium Compact	36 - 65	11 - 30
Compact	66 - 85	31 - 50
Very Compact	86 - 100	Over 50

Relative Density of cohesionless soils is based upon the evaluation of the Standard Penetration Resistance (N), modified as required for depth effects, sampling effects, etc.

### SAMPLE DESIGNATIONS

AS -	Auger Sample - Cuttings directly from auger flight
BS -	Bottle or Bag Samples
S -	Split Spoon Sample - ASTM D 1586
LS -	Liner Sample with liner insert 3 inches in length
ST -	Shelby Tube sample - 3 inch diameter unless otherwise noted
PS -	Piston Sample - 3 inch diameter unless otherwise noted
RC -	Rock Core - NX core unless otherwise noted

**STANDARD PENETRATION TEST (ASTM D 1586)** - A 2.0 inch outside-diameter, 1-3/8 inch inside-diameter split barrel sampler is driven into undisturbed soil by means of a 140-pound weight falling freely through a vertical distance of 30 inches. The sampler is normally driven three successive 6-inch increments. The total number of blows required for the final 12 inches of penetration is the Standard Penetration Resistance (N).

## MEMO



Date: Sep 28, 2020  
To: City Council  
From: Douglas Varney, Director, Utilities and DPW  
Re: Updates for Capital Improvement Plan @ Water Treatment Plant

---

CIP Review – 4 Major Items: 1. New 12" HDPE Water Line 2. New Ground Storage Tank 3. Horizontal Pressure Filter (6) Refurbish and New Media 4. Refurbish Existing Ground Storage Tank

12" HDPE Horizontal Directional Drilling has been completed. All tests (pressure test and Bacteriological) have passed. The tie-ins to the park and plant went very well.

Park Side Connection: The discovery of the pitted cast iron line **(PHOTO #1-3)** caused us (DPW) to hydro-excavate in spots further down the line towards well #7 to ensure that the existing cast iron line was not compromised. Exposure of pipe allowed us to visually confirm it was in great shape. In doing this excavation it was discovered we would need to install a new gate valve to isolate Well #7 as the valve was not where expected. The following is HRC's statement regarding Change Order #2.

There was an unknown field condition that lead to the need to add a second gate valve. The City's drawings showed a gate valve essentially at the "T" where existing water main lines intersected, it was unclear as to which line the valve was on. It was assumed that the existing gate valve was on the line headed towards Well 7, but because the watermain is buried there was no way of confirming which line the valve was on. After excavation it was determined that the valve was not on the line heading towards Well 7 but instead was on the line that connects to Well 6. Per EGLE a second gate valve needed to be added to the water line to Well 7 to allow the system to maintain firm capacity while sharing Well 6 with the Tube Mill.

Supporting Documents Attached – Provided by HRC to highlight the area in discussion. Portions are enlarged for increased clarity.

General Contractor is planning on utilizing a local landscape firm to complete the final restorations at both Mchattie and at the Dorothy St. location. We are coordinating with UIS to complete some SCADA programming to have the line utilized to pump raw water using the newly installed line in the near future.

HRC has had a camera installed at the construction site. The link is available and can be viewed any time.

LINK TO WEBSITE TO VIEW THE SITE: <https://www.cvmedia.net/hrc1/>

## MEMO

The tank construction is in progress. The panels are being formed and already are 1/3 complete as of 9/23. They plan on having the floor poured by next week. They will begin setting panels the following week. (PHOTO #3 & 4)

HRC is contacting the contractor (Tonka) for the Horizontal Pressure Filters. They are hoping to have a start date to begin the process to refurbish all six tanks.

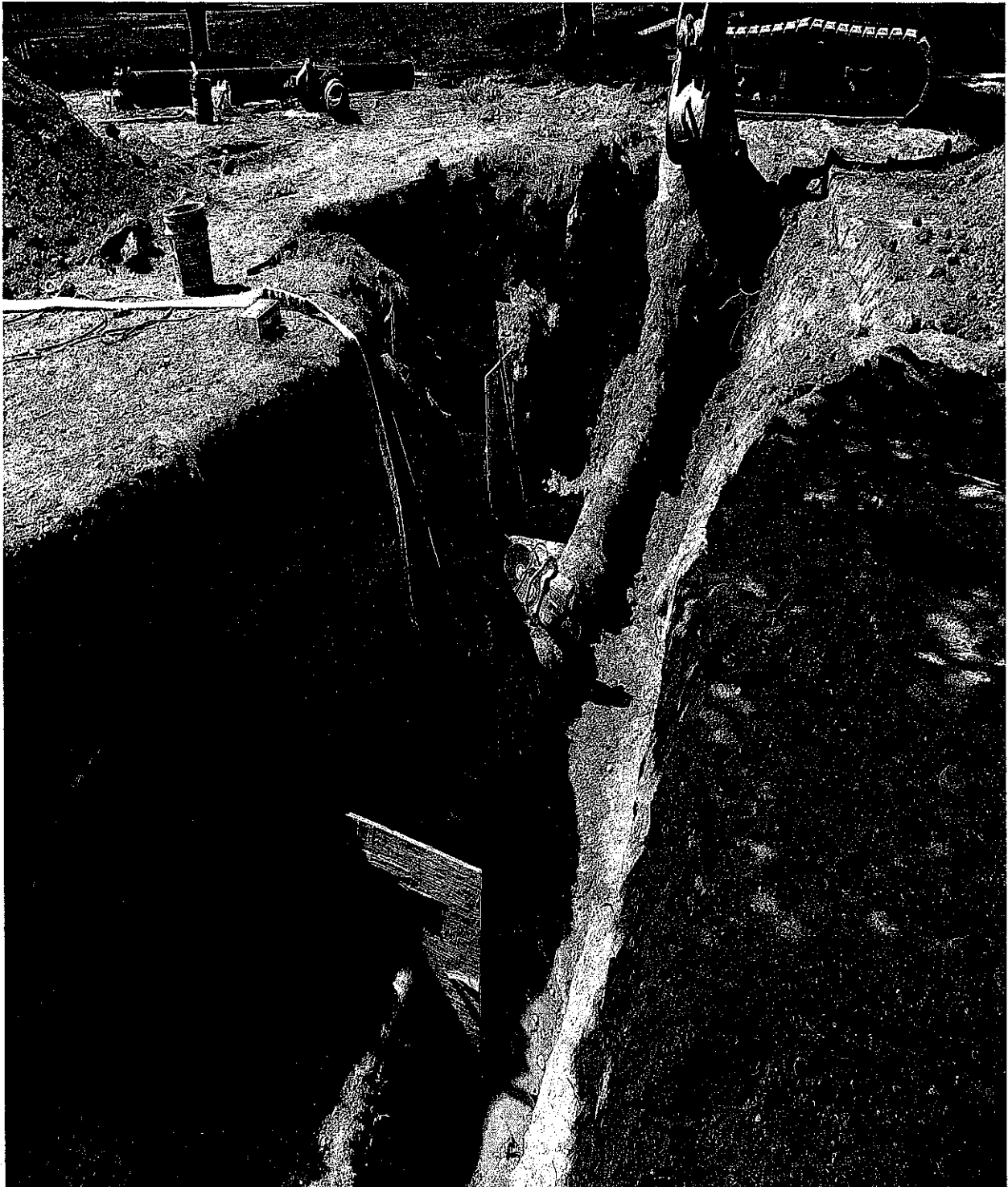
PHOTO #1



PITTING SHOWN PAINTED. THESE INDENTS INDICATE CORROSION.

MEMO

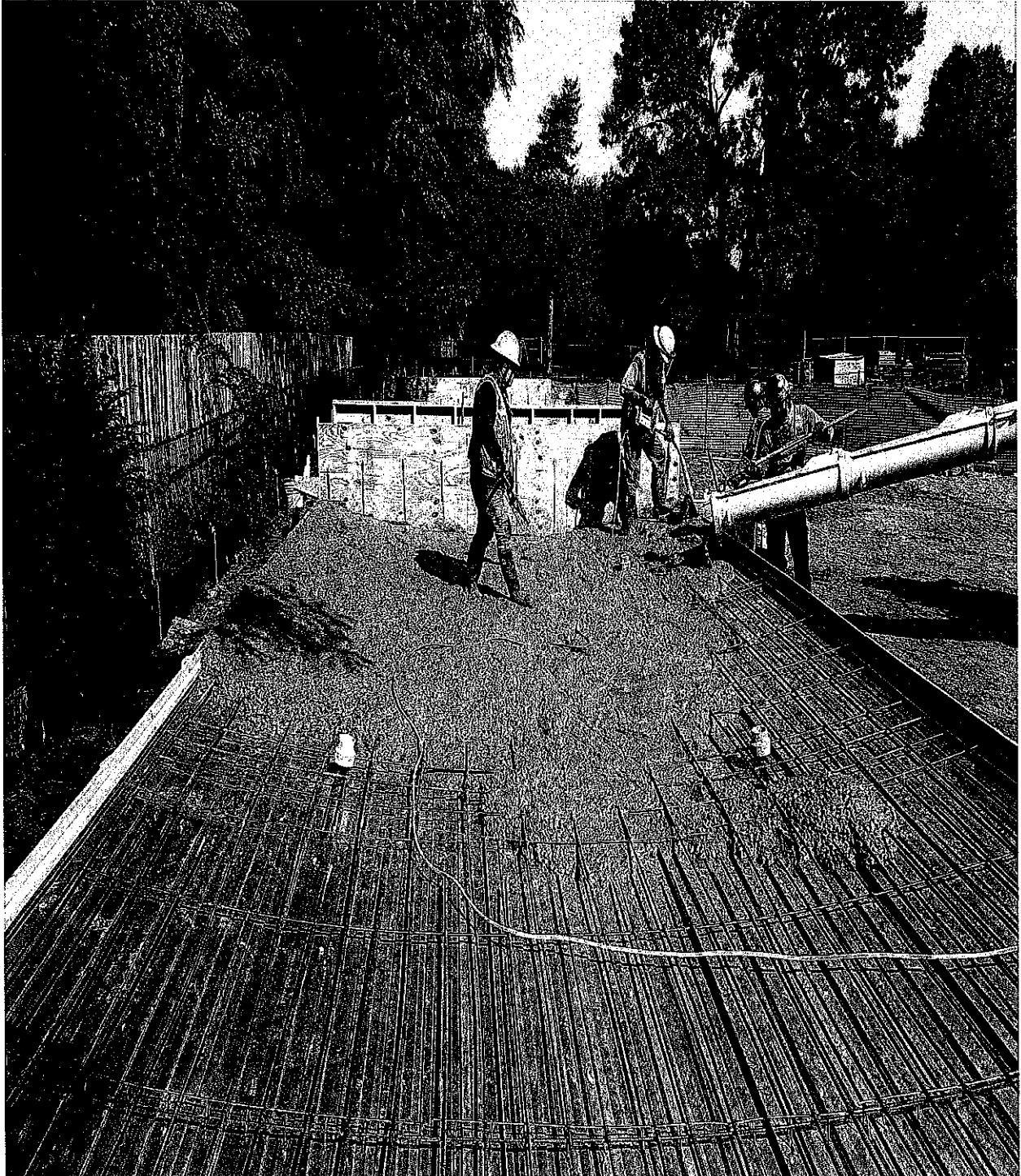
PHOTO #2 – BAD SECTION OF PIPE BEING PREPPED FOR REMOVAL





## MEMO

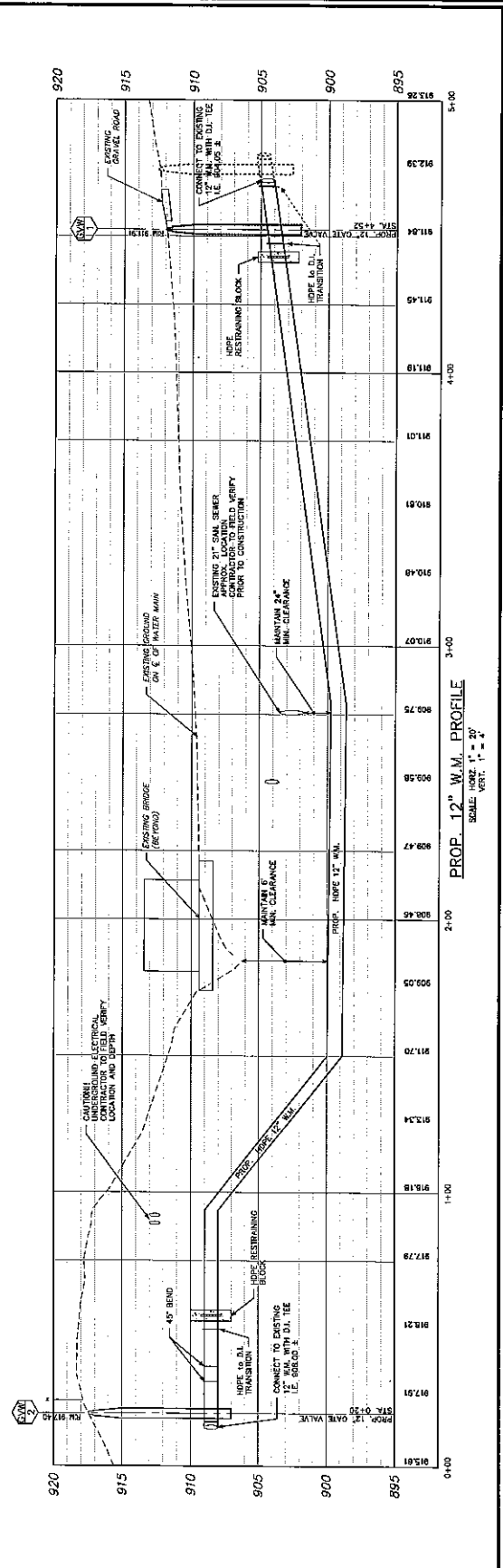
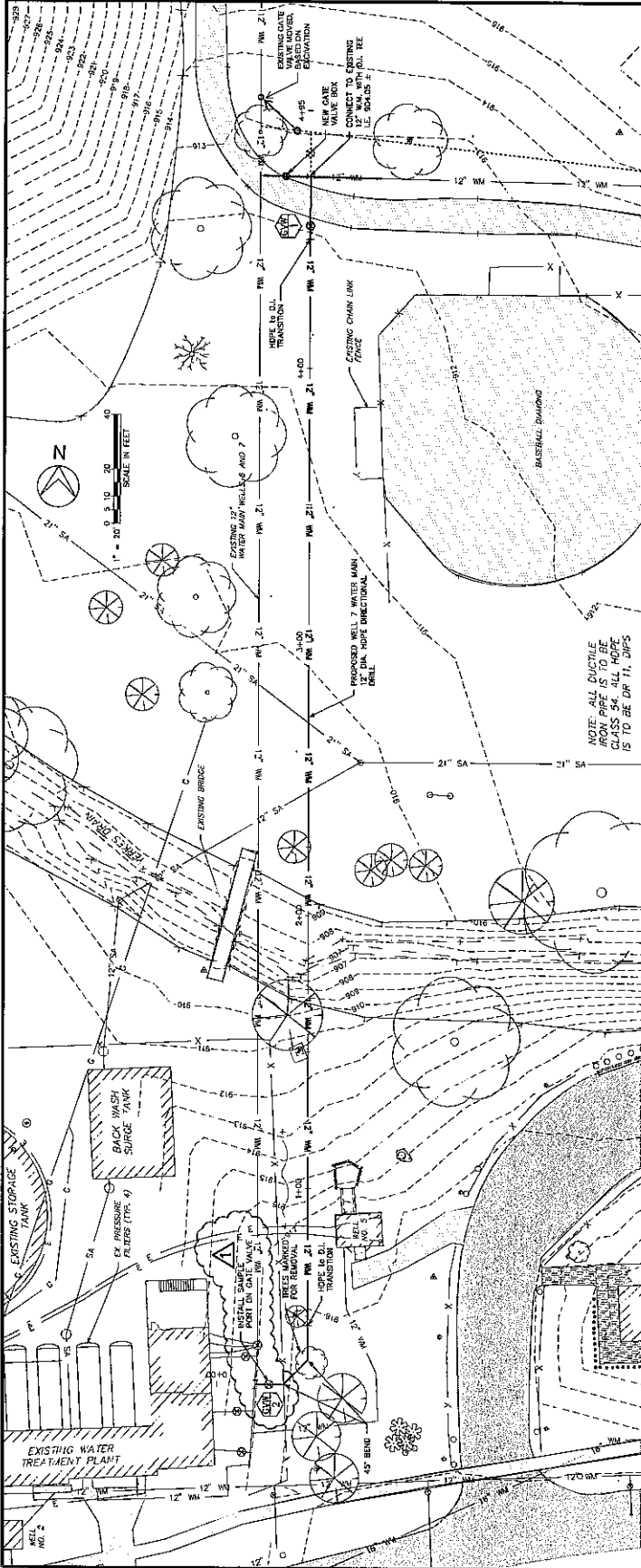
PHOTO #3 –NEW STORAGE TANKS WALLS. CONSTRUCTING IN THESE CUSTOMIZED FORMS. PREPPED TO STAND UP IN THE COMING WEEKS. THERE WILL BE 12 PANELS IN TOTAL.



## MEMO

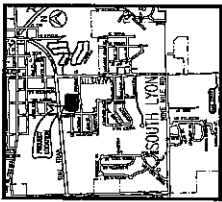
PHOTO #4: A CUSTOM BED BUILT AS A FORM TO COMPLETE PANELS. (THERE WILL BE 6 PER BAY)



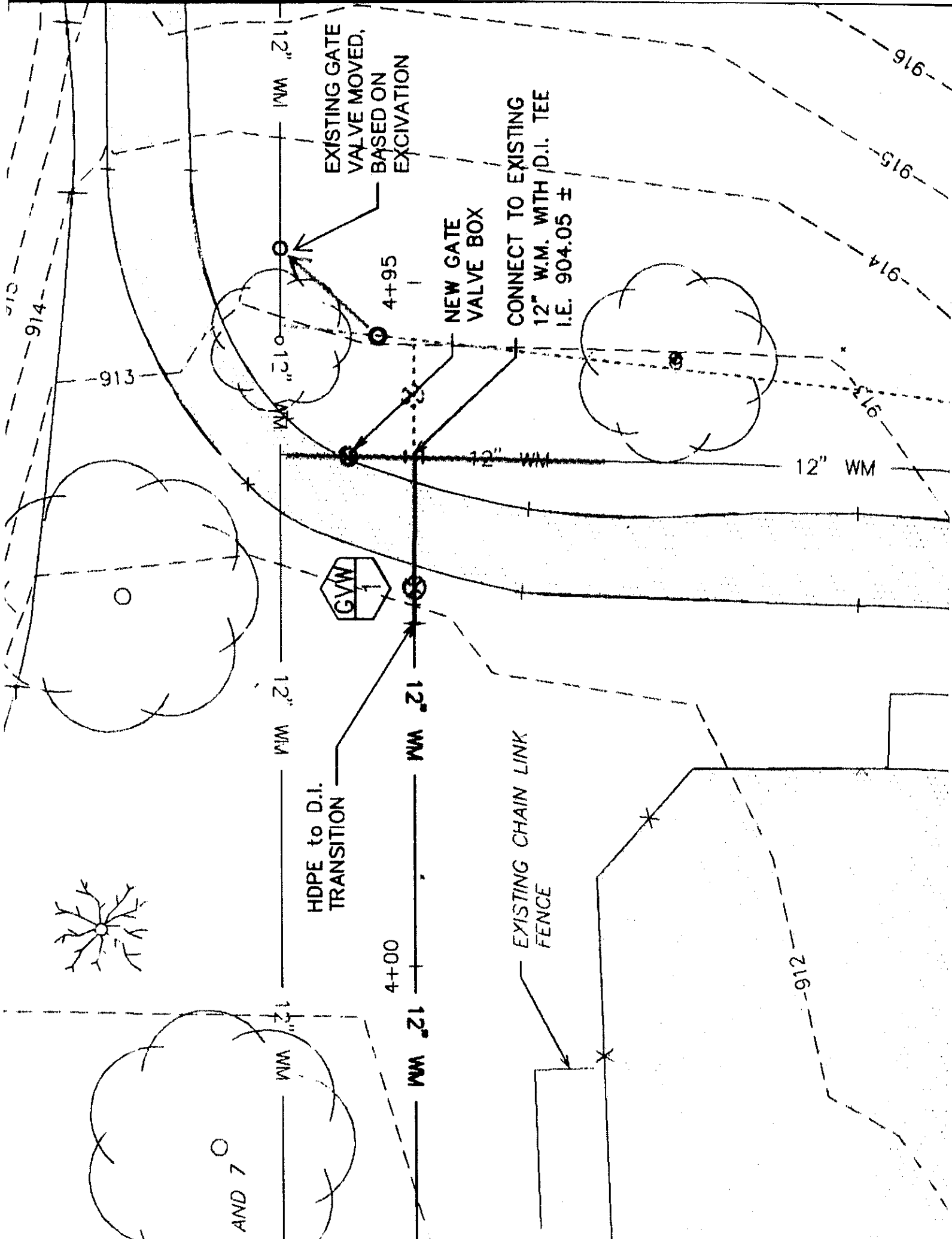


**HRC**  
**HUBBELL, ROTH & CLARK, INC.**  
 CONSULTING ENGINEERS SINCE 1915  
 10000 W. 14th Ave.  
 South Lyon, MI 48186  
 PHONE: (248) 344-4411  
 FAX: (248) 344-4412  
 WEB SITE: <http://www.hrcinc.com>

8-24-20	ISSUED FOR COT 2
8-27-20	ISSUED FOR PRO 3
7-9-20	ISSUED FOR CONSTRUCTION
5-7-20	ISSUED FOR ADDENDUM NO. 1
4-7-20	ISSUED FOR RDS
3-15-20	SOX REVIEW
DATE	ADDENDUM NO. 2
DESIGNED	NAME
DRAWN	E.J.P.
CHECKED	N.E.L.
APPROVED	R.A.



**CITY OF SOUTH LYON**  
**WTP PHASE 1 IMPROVEMENTS**  
**PROPOSED 12" WATER MAIN PLAN AND PROFILE**  
 SHEET NO. 20180333  
 DATE: APRIL 7, 2020  
 SCALE: AS SHOWN  
 SHEET: C-4 OF 4  
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## CHANGE ORDER NO: 2

### Revision of Terms to the General Conditions of the Contract Documents

---

**PROJECT :**

South Lyon WTP Phase 1 Improvements

**OWNER:**

City of South Lyon

335 S. Warren Street

South Lyon, MI 48178

**CONTRACTOR:**

L.D'Agostini & Sons, Inc.

---

**The following changes are hereby made to the CONTRACT DOCUMENTS:**

Original Contract Price.....	\$	3,314,400.00
Total of previous Change Orders to date.....	\$	<u>128,870.86</u>
Current Contract Price adjusted by previous Change Orders.....	\$	3,443,270.86
The Contract Price due to this Change Order will be INCREASED by.....	\$	<u>12,623.32</u>
The revised Contract Price including this Change Order will be.....	\$	3,455,894.18
% Change to date (relative to Original Contract)).....		4.27%

Recommended Changes and Extras, up to and including this Change Order, are equal to a 4.27% increase in the original Contract Price.

**Change to Contract Time**

Change Order Agreement Date.....	September 17, 2020
Final Completion Date .....	June 3, 2022
Per this Change Order, the Contract time for Final Completion will be UNCHANGED	
The Final Completion date of the Contract will remain as .....	June 3, 2022

<p><b>All terms, conditions and provisions of the Contract Documents, except as modified herein, will continue in full force and effect</b></p>
---

To be effective, the City Manager of the City of South Lyon must approve this order if it changes the scope or objectives of the contract, or as may otherwise be required by the "Supplemental General Conditions."

**PROPOSED BY:**

*Michael P. Darga*

Michael Darga, Associate, HRC

Date: 9-17-20

**ACCEPTED BY:**

Michael D'Agostini  
Digitally signed by Michael D'Agostini  
Date: 2020.09.17 11:18:19 -0400

Michael D'Agostini, President, L.D'Agostini & Sons, Inc.

Date: 9/17/2020

**APPROVED BY:**

Paul Zelenak, City Manager, City of South Lyon

Date: \_\_\_\_\_

**APPROVED BY:**

Douglas Varney, DPW Director, City of South Lyon

Date: \_\_\_\_\_

## CHANGE ORDER NO: 2

PROJECT :

## South Lyon WTP Phase 1 Improvements

CONTRACTOR:

L.D'Agostini & Sons, Inc.

Item	Amount Increase	Amount Decrease
<b>Additional DI Pipe and Gate Valve for the McHattie Park End of the New Water Line</b>  The existing water line has been found south of the location that it was believed to be. Once excavated one section of the line was found to be heavily pitted. Rather than replace the line section themselves the City agreed to request that the work be done by their subcontractor DVM as they connect the new water line. Additionally the existing isolation valve was found to isolate Well House 3 not Well House 4, so an additional valve is needed.		
<b>Items added to contract</b>		
Additional Gate Valve	\$ 1,990.00	
Additional DI Pipe and Fittings	\$ 5,308.84	
Equipment and Labor	\$ 5,040.00	
12" full body sleeve credit		\$ 323.30
Contractor markup	\$ 607.78	
Totals	\$ 12,946.62	\$ 323.30
<b>Net Change in Contract Price</b>		<b>\$ 12,623.32</b>

DVM Utilities, 6045 Sims Drive, Suite 2, Sterling Heights, MI 48313, 586-979-0402

September 15, 2020

L. D'Agostini & Sons inc, 15801 Twenty Three Mile Road, Macomb, MI 48042

ATTN, James Billicki, project manager

RE, City of South Lyon, MI WTP Phase I improvements

RFQ – Removal of pitted cast iron watermain pipe, replace with DIP, 30 + - LF, city park area connection.

Jim,

Please consider this letter a written price quotation to remove existing watermain pipe in the connection area. The new pipe to be cleaned/sterilized and adding an additional gate valve and box.

As drawn by Noah from HRC, 9-3-20.

LABOR/EQUIPMENT –

Foreman & truck-tools \$125.00/ HR @ 8 hours \$ 1,000.00

Operator & excavator \$235.00/ HR @ 8 hours \$ 1,880.00

Pipelayer \$85.00/ HR @ 8 hours \$ 680.00

Operator & loader @ \$185.00/ HR 8 hours \$1,480.00

Total Labor & Equipment \$ 5,040.00

MATERIALS –

12" SSLP MJ/FB SS DUAL – for cast \$1080.00

12" oversize mega lug 1 each \$95.00

12" mega lug – 4 each @ \$73.00/ each \$ 292.00

12" bolt gasket set – 4 each -\$22.00/each \$ 88.00

12" EJIW GV MJ RW O/L \$ 1,765.00

12" DIP CL 54 2 pieces \$50.00/ LF \$ 2000.00

GV D- BOX \$225.00

SALES TAX	347.49
Sand for bedding	\$250.00
Total materials	\$6,388.00
12" full body sleeve (credit)	(\$323.30)
Sub- total (materials)	\$6,065.69
Materials mark up only %15	\$909.98
Grand Total materials only	\$6,975.54
 RFQ total	 \$12,155.54

Michael Mancini

DVM Utilities



# Oakland County. Economic Outlook

2020-2022

S U M M A R Y

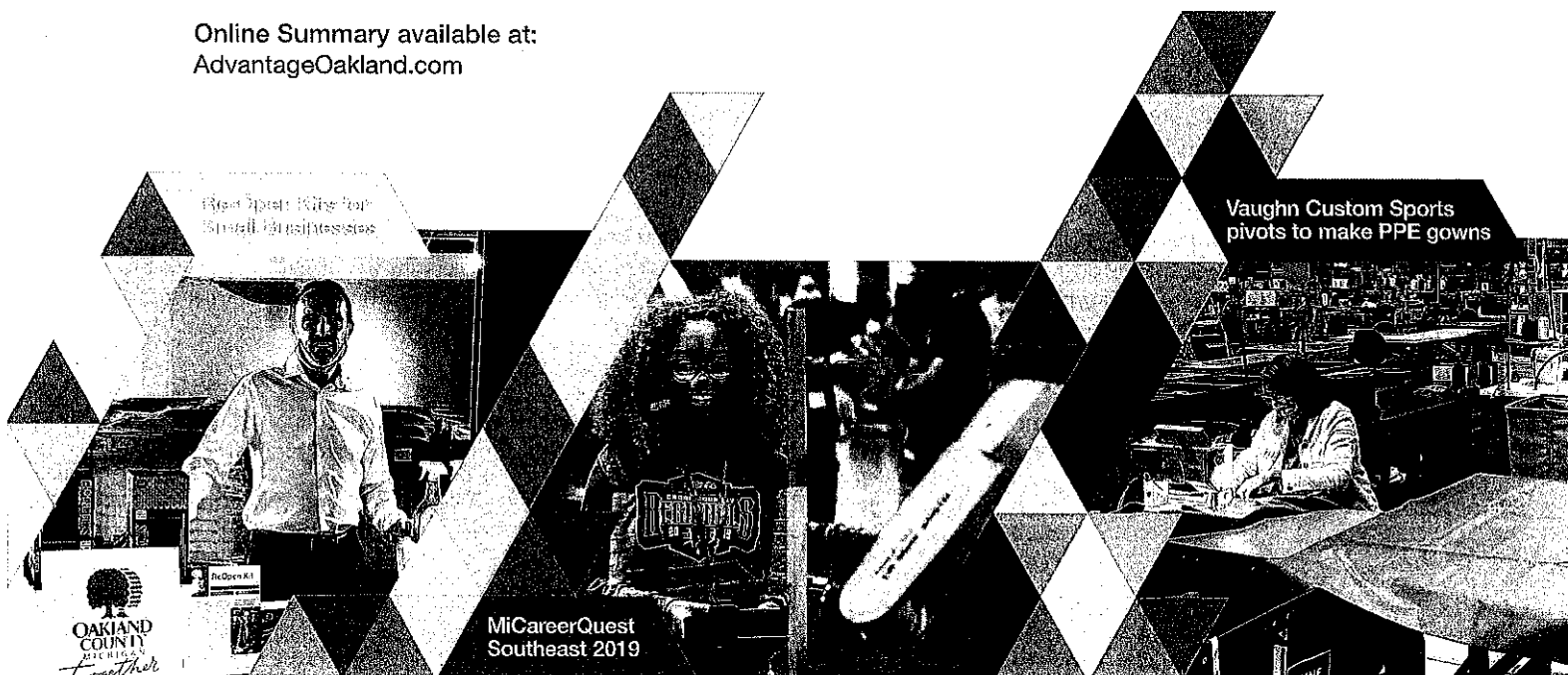


**OAKLAND  
COMMUNITY  
COLLEGE**  
Excellence Empowered.®

Presented by:

Dr. Gabriel Ehrlich and Donald R. Grimes,  
*Research Seminar in Quantitative Economics,  
University of Michigan*

Online Summary available at:  
[AdvantageOakland.com](http://AdvantageOakland.com)



# SUMMARY INTRODUCTION DAVID COULTER OAKLAND COUNTY EXECUTIVE

**AAA**

**BOND RATING SINCE 1998**

*Oakland County is a fiscally responsible government partner with resources to support your success.*

**Thank you for your interest in Oakland County's economic outlook forecast.** We are

proud of the work we do on behalf of our 42,000 businesses and 1.2 million residents. The county continues to be a great place for entrepreneurs with an idea, small businesses looking to grow or global firms looking to relocate. We welcome anyone looking to build an exciting life or career in one of America's great counties.

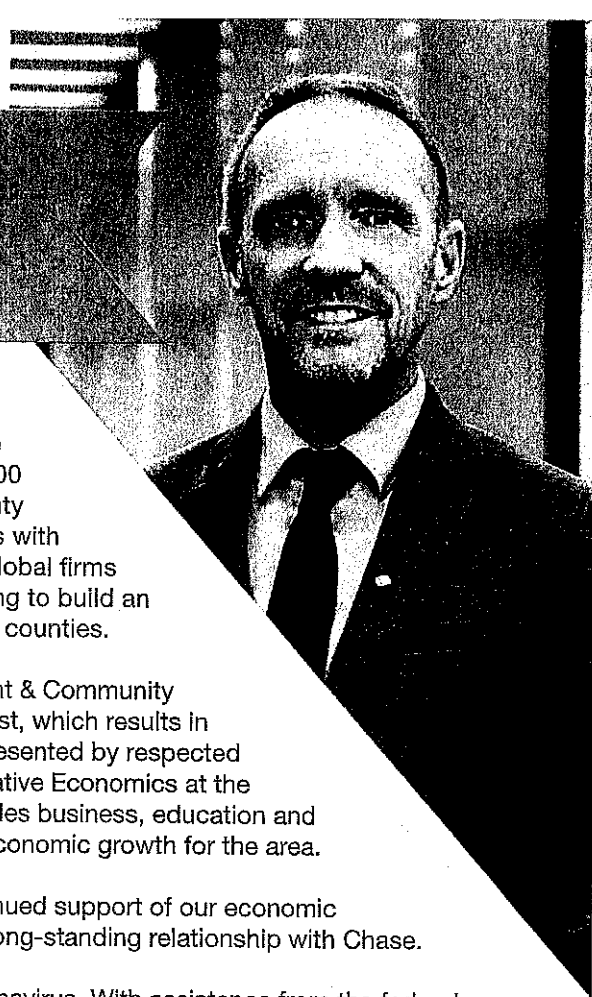
Oakland Community College and our Department of Economic Development & Community Affairs have partnered for more than three decades on the economic forecast, which results in the production of this much anticipated report. The data is prepared and presented by respected economists Dr. Gabriel Ehrlich, director of the Research Seminar in Quantitative Economics at the University of Michigan, and longtime contributor Donald R. Grimes. It provides business, education and government leaders in southeast Michigan with a three-year projection of economic growth for the area.

I thank them and the Oakland County Board of Commissioners for its continued support of our economic development programming. We are grateful for the past sponsors and our long-standing relationship with Chase.

We all know the beating the global economy has taken because of the coronavirus. With assistance from the federal government and in cooperation from the Board of Commissioners, we have moved aggressively to stabilize our economy and mitigate the effects of the pandemic locally. We quickly allocated more than \$130 million of our \$219 million federal CARES Act funding into the for grants to businesses, communities and residents including:

- Nearly \$14 million to 3,500 small businesses seriously impacted by the pandemic. Grants averaged nearly \$4,000 from the small business stabilization fund.
- The "Saving Businesses, Saving Lives" grant, which incentivized Oakland County manufacturers (23 companies to date sharing \$887,000) to produce personal protective equipment for health care workers, hospitals and first responders.
- \$32 million for retail stores, restaurants and personal service businesses such as salons and fitness centers.
- 15,000 Oakland Together COVID-19 safety kits which include facemasks, no-touch thermometers, gloves and sanitizer were created to give small businesses, faith-based and nonprofit organizations essential materials for reopening.
- Oakland County (\$10 million) and Macomb County (\$2 million) partnered with Automation Alley to bring advanced manufacturing technologies to small and medium businesses to improve the region's agility and ability to respond to future disruptions such as the COVID 19 pandemic.
- \$30 million for cities, townships, and villages impacted by COVID-19.
- \$28 million to help county public and charter schools recover some of the unexpected costs incurred preparing for in school or remote student learning.
- \$2 million to hire 60 school nurses to help districts develop strategies to prepare for the safe return of students, faculty and staff to the classroom or for virtual learning.
- \$10 million fund to support 84 non-profit organizations, with grants ranging from \$4,000 to \$500,000.
- \$8.1 million for the Rent, Mortgage & Utility Relief Program to assist eligible county residents who have fallen behind on their rent, mortgage or utility payments because of a lost job or other income reduction with a one-time grant of up to \$15,000 per household.
- \$2 million to assist museums and cultural institutions.

These grants provided critical assistance to businesses and residents. We know the coronavirus remains with us, and we will continue to do everything we can to support our businesses, residents and communities. As Oakland Together, we will get through this challenge.



# Oakland County. Economic Outlook

S U M M A R Y 2020-2022

*PRESENTED BY*

Dr. Gabriel M. Ehrlich  
and Donald R. Grimes  
*University of Michigan*

SEPTEMBER 2020



Gabriel Ehrlich



Donald Grimes

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  - *Employment Growth by Industry Division*
  - *Oakland Employment Growth Compared with Michigan's*
  - *Local Unemployment and Inflation Rates*

This Economic Outlook Summary is available online beginning September 19, 2020 at:  
**AdvantageOakland.com | [lsa.umich.edu/econ/rsqe](https://lsa.umich.edu/econ/rsqe)**

## Research Seminar in Quantitative Economics (RSQE)

The Research Seminar in Quantitative Economics (RSQE) is a modeling and forecasting unit that has been in operation at the University of Michigan since 1952. Four times per year, RSQE provides forecasts of both the U.S. economy and the Michigan economy. RSQE hosts the University of Michigan's Annual Economic Outlook Conference, the longest running such event in the U.S., in Ann Arbor each November. RSQE has twice received the prestigious Blue Chip Annual Economic Forecasting Award (AEFA) recognizing "accuracy, timeliness, and professionalism" in economic forecasting.

### Dr. Gabriel M. Ehrlich

received his Ph.D. in economics from the University of Michigan. He is the director of the University's Research Seminar in Quantitative Economics (RSQE). His research focuses on macroeconomics and urban and regional economics. His work has been published in the *New England Journal of Medicine*, the *Review of Economics and Statistics*, the *Journal of Urban Economics*, and the *Journal of Health Politics, Policy and Law*.

Prior to joining RSQE, Dr. Ehrlich worked in the Financial Analysis Division at the Congressional Budget Office (CBO), where he forecast interest rates and conducted analysis on monetary policy and the mortgage finance system. He has also worked as a financial analyst in the mortgage banking industry. He earned his undergraduate degrees in finance and economics at the University of Maryland, where he was chosen by the faculty as the outstanding graduate in finance during his senior year.

Dr. Ehrlich testifies twice per year to the state legislature on Michigan's fiscal and economic prospects, which the state uses as a guide to determining expected future revenues. He recently coauthored The United States Economic Outlook for 2020–2021 and The Michigan Economic Outlook for 2020–2021.

### Donald R. Grimes

received his master's degree in economics from the University of Michigan. He is a senior research area specialist at the University's Research Seminar in Quantitative Economics (RSQE) and at the Economic Growth Institute, where he is assistant director of the Center for Labor Market Research. His primary research interests are in labor economics and economic forecasting.

For 40 years, he has been engaged in economic forecasting for state and local governments and is frequently called upon for policy advice. He has worked for many years with the Michigan departments of Transportation and Treasury and the Michigan Economic Development Corporation on policy analysis and evaluating economic strategies. He is co-director of a project to generate long-term economic and demographic projections for all of the counties of Michigan. His past research includes a study looking at Michigan's industrial structure with a view to identifying sectors that will promote economic growth in the future.

His work has been published recently in the *Economic Development Quarterly*, the *New England Journal of Medicine*, and the *Journal of Health Politics, Policy and Law*. He recently coauthored The Michigan Economic Outlook for 2020–2021.

### Dr. Michael R. McWilliams

is the Michigan Forecasting Specialist at the Research Seminar in Quantitative Economics (RSQE) at the University of Michigan. He earned his Ph.D. in economics from the University of Michigan, and he has also received an M.Sc. in economics from the London School of Economics and Political Science. At RSQE, Michael assists with forecasts of the Michigan economy and leads the development of state tax revenue projections. He recently coauthored The Michigan Economic Outlook for 2020–2021.

Michael's personal research focuses on a range of topics in environmental and natural resource economics, including land use change and its causes and environmental consequences, regulation of light-duty vehicles, and the impact of the ethanol mandates. His work has been published in the *Proceedings of the National Academy of Sciences* and *Energy Policy*. During his graduate study, Michael interned at the U.S. Environmental Protection Agency, Office of Transportation and Air Quality.

### Jacob T. Burton

is the newest member of the team at the University of Michigan's Research Seminar in Quantitative Economics (RSQE), where he contributes to the Michigan and U.S. forecasts four times per year. He recently finished his master's degree in applied economics from Eastern Michigan University. He coauthored The United States Economic Outlook for 2020–2021 and The Michigan Economic Outlook for 2020–2021. His primary fields of interests are in economic forecasting and energy economics.

[lsa.umich.edu/econ/rsqe](https://lsa.umich.edu/econ/rsqe)

Table 1

**Track Record over the Years**

Year of Forecast	% Forecast Error for Total Private Jobs	Year of Forecast	% Forecast Error for Total Private Jobs	Year of Forecast	% Forecast Error for Total Private Jobs
1986	+ 1.4	1998	+ 1.3	2010	- 1.7
1987	+ 0.7	1999	- 1.2	2011	- 2.5
1988	- 1.8	2000	+ 0.6	2012	- 2.6
1989	- 1.9	2001	+ 1.9	2013	- 1.1
1990	+ 2.2	2002	+ 3.2	2014	- 0.3
1991	+ 3.9	2003	+ 1.5	2015	- 0.1
1992	- 2.0	2004	+ 2.6	2016	- 0.1
1993	+ 0.5	2005	+ 1.4	2017	+ 1.1
1994	- 1.3	2006	+ 3.4	2018	+ 0.5
1995	+ 0.2	2007	0.0	2019	+ 0.1
1996	- 0.5	2008	+ 2.3		
1997	+ 0.6	2009	+ 5.5		

(Positive numbers indicate that the forecast was too high; negative numbers indicate that it was too low.)

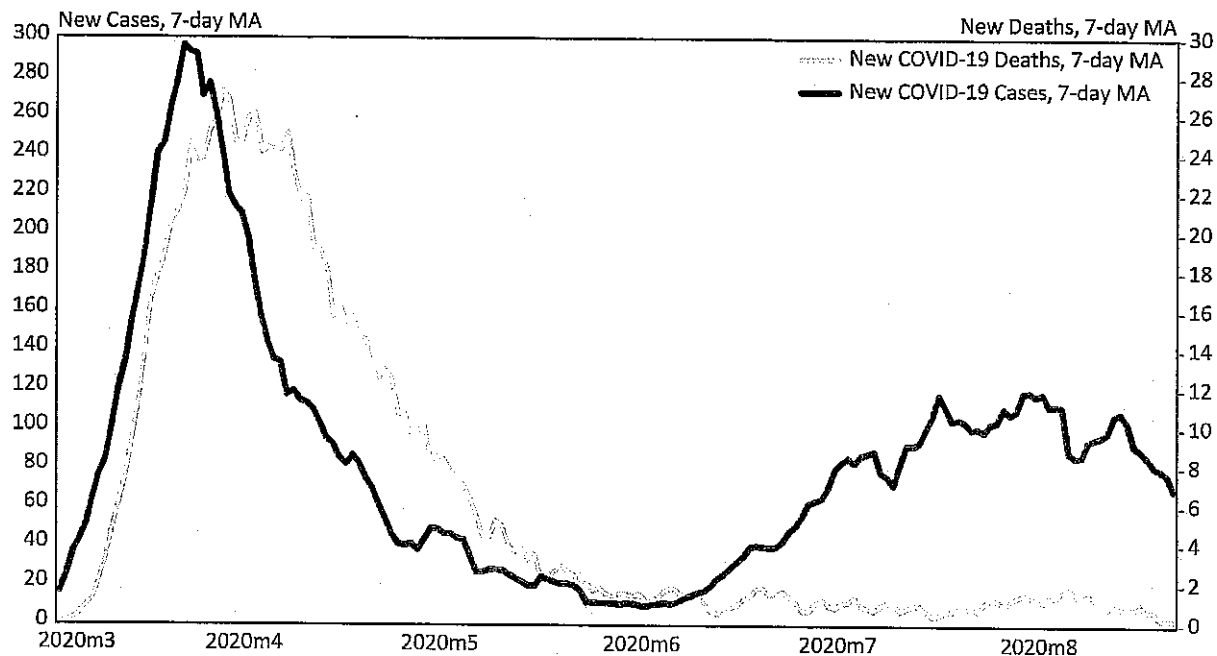
Average absolute forecast error 1986–2019: 1.5%

	Forecast 2019	Actual 2019
Unemployment rate	2.7%	3.4%
Consumer inflation rate	1.5%	1.4%

Forecast Date: September 2020

- In last year's report, we forecast that Oakland County's private sector would add 9,888 jobs in 2019, for a growth rate of 1.4 percent. We now estimate that the county gained 9,160 new jobs last year, or 1.3 percent, resulting in an over prediction of 0.1 percentage points, or one worker per 1,000.
- That forecast error is well below our average absolute error of 1.5 percent since 1986.
- Our relatively small overall forecast error benefited from offsetting errors at the sector level. Job growth was stronger in the goods-producing sector than we anticipated, especially in non-automotive manufacturing, but it was weaker in the service-providing sector, as the job losses in administrative support and waste management were larger than we expected.
- Our forecast for the government sector was also too optimistic. We anticipated job growth of 1.0 percent in 2019; instead, government employment declined by 38 jobs (-0.1 percent).
- We had forecast that the unemployment rate would decline by 0.6 percentage points, from 3.3 percent in 2018 to 2.7 percent in 2019. Instead, Oakland County's unemployment rate actually increased by 0.1 percentage points, to 3.4 percent.
- Our forecast for inflation was very close. We overestimated local consumer inflation by 0.1 percentage points. Local prices increased by 1.4 percent in 2019 instead of the 1.5 percent we had forecast.

Figure 1  
**The COVID-19 Pandemic in Oakland County**

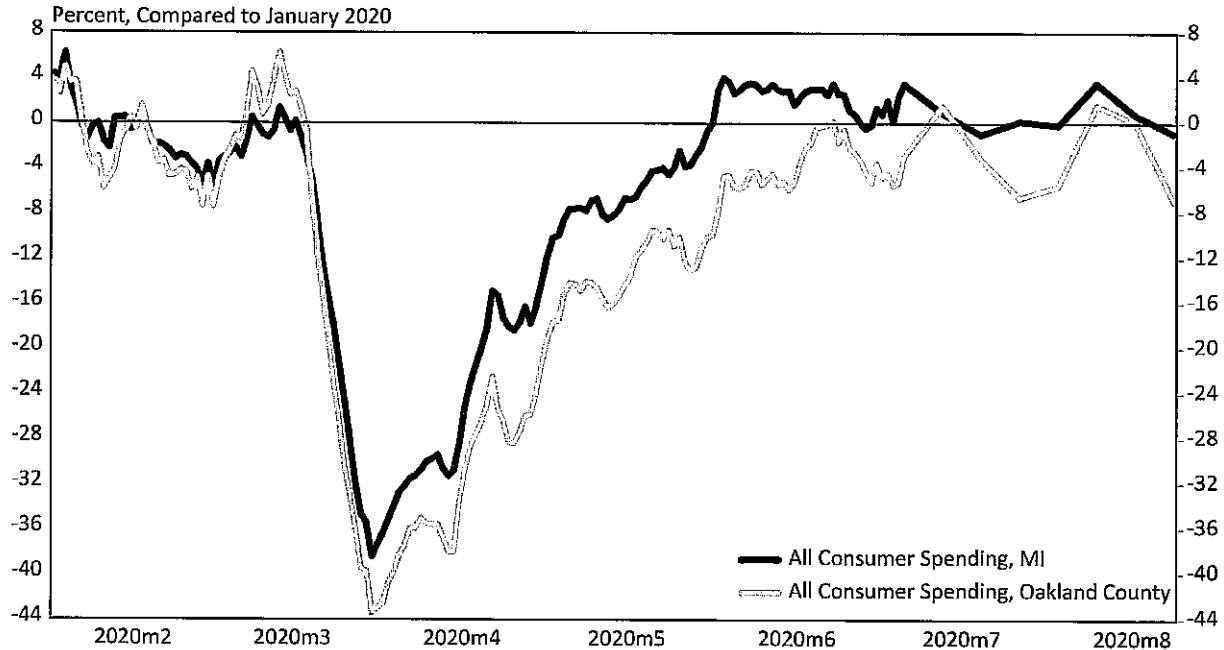


Source: Oakland County Dashboard

- The COVID-19 pandemic has severely disrupted the economy this year, both in Oakland County and beyond. The economy cannot make a complete recovery until the public health situation allows consumers and workers to go about their daily routines safely.
- There are strong day-of-the-week patterns in reported new cases of COVID-19, so the underlying trend is more visible in the seven-day moving average than in the daily case counts. We focus on seven-day moving averages of both measures here.
- New cases of COVID-19 in Oakland County peaked at nearly 300 per day on April 5th before declining to roughly 10 per day in mid-June. New caseloads have risen since then as more economic activity has resumed, and new cases ranged from roughly 80 to 120 per day from late July through August, with a tick down to roughly 70 at the start of September.
- The profile for fatalities from COVID-19 in Oakland County has followed a different trajectory than new caseloads. Fatalities from COVID-19 peaked at a level of approximately 25–30 per day in the first half of April, and they have since fallen to below one per day on average.
- Unlike new cases of COVID-19, fatalities have not shown a tendency to rise as economic activity in Oakland County has recovered.
- The distinct patterns of new cases of COVID-19 and mortality from the disease are consistent with statewide data and with other metrics such as hospitalization rates. We attribute the recent divergence to an improved standard of care, wider testing for the disease, and more favorable demographics among the newly infected.
- It remains to be seen how the pandemic will progress as schools and colleges reopen, the weather turns cooler, and more activity moves indoors. While we expect to see localized outbreaks of new COVID-19 cases, related especially to schools and colleges reopening, we do not expect a return to the uncontrolled spread of the disease seen this spring.
- We believe that the improvements in testing, tracing, and treatment will allow Oakland's economy to operate with roughly the same level of precautions it currently has in place until a vaccine becomes widely available, which we hope will occur by mid-2021.

Figure 2

## Consumer Spending in Oakland County & Michigan, February–August, 2020

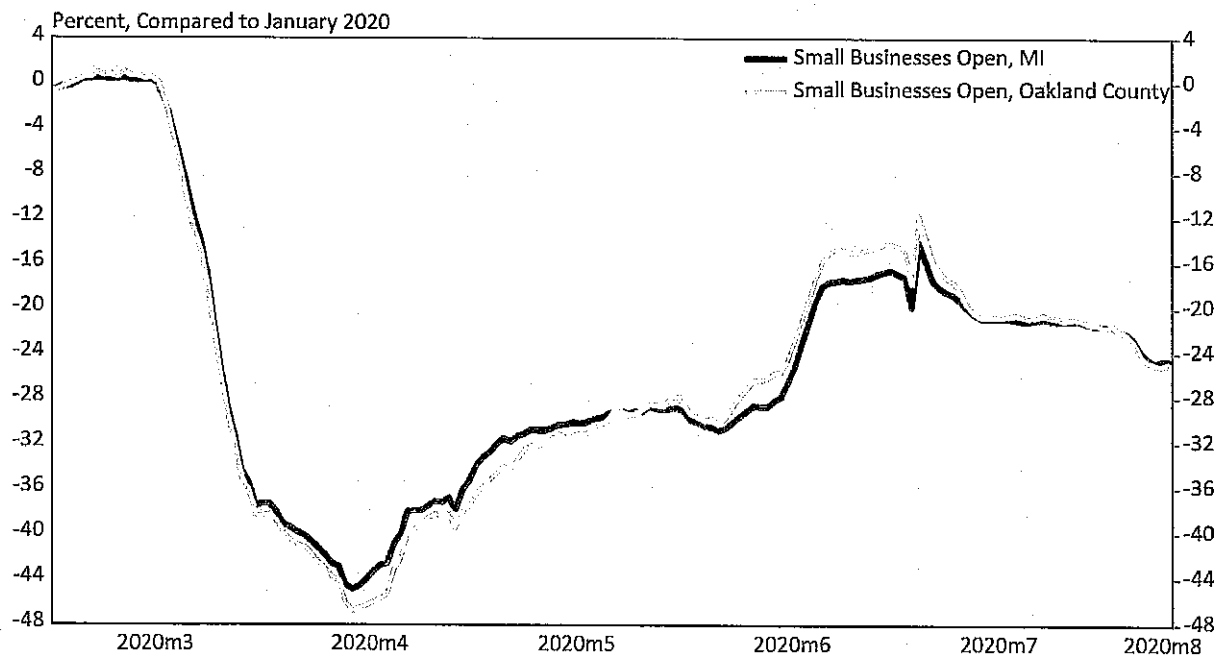


Source: Affinity Solutions via Opportunity Insights

- Because of the severe and fast-moving disruption COVID-19 has brought about in the economy, we have started to track many non-traditional data sources that provide a high-frequency look at the economic recovery.
- This chart displays data on daily consumer spending at businesses in Oakland County in the yellow line and the state of Michigan in the blue line. The data are gathered from credit and debit card transactions tracked by Affinity Solutions via Chetty, Friedman, Hendren, Stepner, and the Opportunity Insights Team (2020).
- Consumer spending fell by over 40 percent in Oakland County as of late March–early April relative to its January average. A strong rebound began in mid-April, around the time that the Economic Impact Payments and increased unemployment insurance (UI) benefits provided in the Coronavirus Aid, Relief, and Economic Security (CARES) Act began.
- The daily spending data is volatile. Consumer spending in Oakland County ran between 7 percent below and 2.5 percent above its January average since July 1st, averaging 1.7 percent below the January level.
- The springtime drop in consumer spending was a bit less severe in Michigan overall than in Oakland County, which we attribute primarily to Southeast Michigan experiencing the initial wave of the pandemic more severely than the state as a whole.
- Consumer spending statewide recovered to its pre-pandemic level at the end of May, and has stayed above or near that level since then.
- Dips in consumer spending both in Oakland County and in Michigan are visible in the graph in the second half of August, which we attribute to the expiration in late July of the Federal Pandemic Unemployment Compensation program that supplemented regular UI benefits with an additional \$600 per week.
- We attribute the slightly more robust performance of consumer spending in Michigan overall relative to Oakland County to the structure of the income support provided by the CARES Act. Income replacement was generally higher proportionally in lower-income regions. Oakland County is more prosperous on average than Michigan overall, so we believe that the CARES Act did less to protect Oakland residents' incomes and local consumer spending.

Figure 3

## Small Businesses Open in Oakland County & Michigan, March–August, 2020



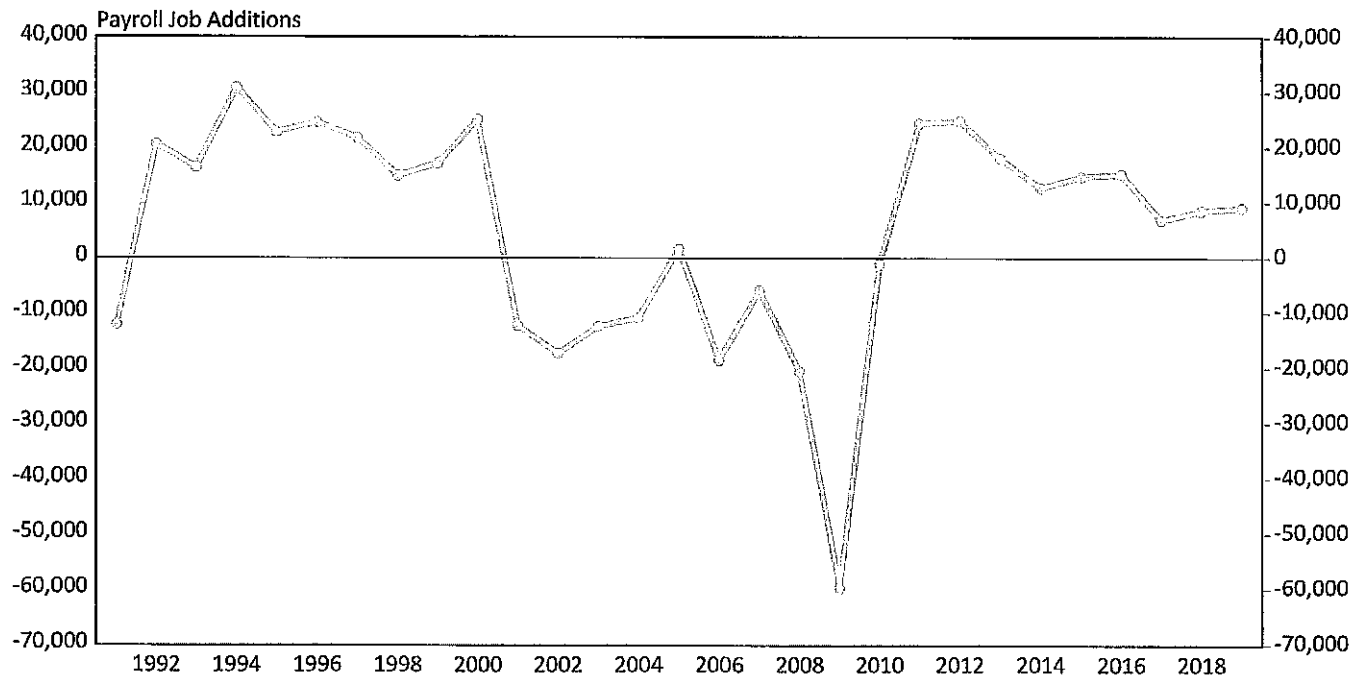
Source: Womply via Opportunity Insights

- This chart displays data on the number of small businesses open in Oakland County in the yellow line and the state of Michigan in the blue line. The data are produced by Womply and provided via Chetty, Friedman, Hendren, Stepner, and the Opportunity Insights Team (2020).
- The number of small businesses open in Oakland County fell by nearly 50 percent as of early-to-mid-April relative to its January average.
- The number of small businesses open has recovered partially since then, but the recovery in small businesses open has been noticeably weaker than the recovery in total consumer spending.
- The number of small business open in Oakland County recovered to 11.6 percent below the January average on July 4th, but it has since given up some of those gains. As of early August, the number of small businesses open in Oakland was roughly 25 percent lower than in January.
- The pattern of small businesses open in Oakland County has tracked the statewide pattern closely.
- The number of small businesses open nationwide has held up a bit better than in Michigan or in Oakland County. It stood 19.1 percent below its January average level as of early August.
- Statewide, small business closures have remained especially acute in the leisure and hospitality sector. County-level data is not available at the sector level.



Figure 4

## Job Growth in Oakland County, 1991–2019



- Oakland County's economy added 182,700 jobs from 1990 to 2000, an average pace of 2.8 percent per year.
- The county gave up the majority of that growth during the 2000s, shedding 156,500 jobs. That came to an average rate of decline of 2.2 percent annually. In total, the county lost 86 percent of the jobs it had gained in the preceding decade.
- The 2010s saw a return to growth in Oakland County. Through 2019, the county added back 135,000 jobs, registering an average growth rate of 2.2 percent per year.
- Job growth in Oakland was a bit slower than the recent average pace over the past two years, coming in at 1.2 percent in both 2018 and 2019, as the county's relatively low unemployment rate began to constrain potential job growth.
- In our view, Oakland County's recent success has reflected the diversification of the county's economy toward future growth sectors, which has been enabled by the county's well-educated labor force.
- Unfortunately, the COVID-19 recession that started in March of this year has temporarily upended the county's growth.
- The focus of this report is on Oakland County's economic prospects going forward into the post-COVID-19 era.
- There is substantial uncertainty surrounding the nation's economic prospects, and the outlook for Oakland County is no different. We have had to make several strong assumptions about the future course of the pandemic and the federal economic policy response to produce the forecast in this report. If those assumptions turn out to be incorrect, Oakland County's economy is likely to evolve differently than we have forecast.
- We nonetheless hope that this forecast is useful for decision makers in Oakland County and beyond as they plan for an uncertain future.

## Unemployment Rates for Oakland County and for the United States, 1990–2019

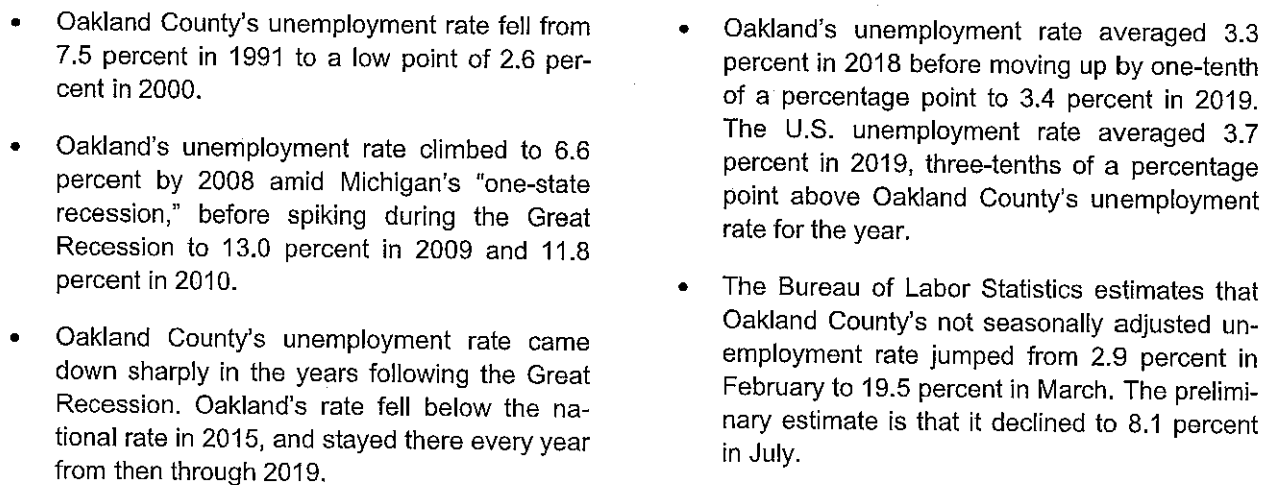


Table 2

**Oakland County Compared with its Peers\***

County	State	Population 2018	Associate's Degree or More	Child Poverty	Median Family Income**	High-Income Persons Aged 65 or Older	Managerial, Professional	Sum of Rankings	Rank of Sum
Fairfax	VA	1,148,463	1	2	1	1	1	6	1
Montgomery	MD	1,048,478	2	4	4	2	2	14	2
Collin	TX	1,004,307	5	1	2	12	4	24	3
Wake County	NC	1,091,273	3	13	7	9	3	35	4
Nassau	NY	1,357,534	10	3	6	4	13	36	5
DuPage	IL	927,247	6	5	3	13	11	38	6
Bergen	NJ	932,816	9	6	9	10	8	42	7
Westchester	NY	968,213	11	10	10	5	10	46	8
<b>Oakland</b>	<b>MI</b>	<b>1,256,694</b>	<b>8</b>	<b>9</b>	<b>5</b>	<b>16</b>	<b>9</b>	<b>47</b>	<b>9</b>
Hennepin	MN	1,257,925	4	15	8	17	7	51	10
Contra Costa	CA	1,150,519	17	8	17	3	16	61	11
Travis	TX	1,246,572	14	20	11	11	6	62	12
Fulton	GA	1,050,131	7	23	14	15	5	64	13
Fairfield	CT	943,971	15	17	12	7	15	66	14
Suffolk	NY	1,480,830	20	7	16	8	21	72	15
St. Louis	MO	995,219	16	21	13	19	14	83	16
Allegheny	PA	1,217,281	12	18	15	27	12	84	17
Mecklenburg	NC	1,093,750	13	22	19	22	18	94	18
Prince George's	MD	909,619	35	14	20	6	22	97	19
Salt Lake	UT	1,148,692	24	12	18	20	23	97	19
Honolulu	HI	979,858	22	11	22	14	34	103	21
Franklin	OH	1,307,698	21	30	23	23	17	114	22
Gwinnett	GA	927,337	23	16	21	26	31	117	23
Erie	NY	919,717	18	25	25	32	20	120	24
Palm Beach	FL	1,482,876	25	24	29	18	30	126	25
Sacramento	CA	1,538,746	32	27	24	21	25	129	26
Hillsborough	FL	1,451,919	26	26	27	28	26	133	27
Pinellas	FL	973,058	28	19	28	31	27	133	27
Cuyahoga	OH	1,241,718	27	33	26	33	19	138	29
Pima County	AZ	1,036,554	29	29	30	24	33	145	30
Orange	FL	1,381,540	19	31	31	35	29	145	30
Duval	FL	948,652	31	28	32	29	28	148	32
Shelby	TN	936,365	34	36	33	25	36	164	33
Marion	IN	958,700	30	32	34	34	35	165	34
Milwaukee	WI	946,969	33	34	35	36	32	170	35
Philadelphia	PA	1,583,592	36	37	37	37	24	171	36
Fresno	CA	991,950	37	35	36	30	37	175	37
Bronx	NY	1,432,087	38	38	38	38	38	190	38

\*All counties in the United States with a population between 900,000 and 1,600,000 in 2018

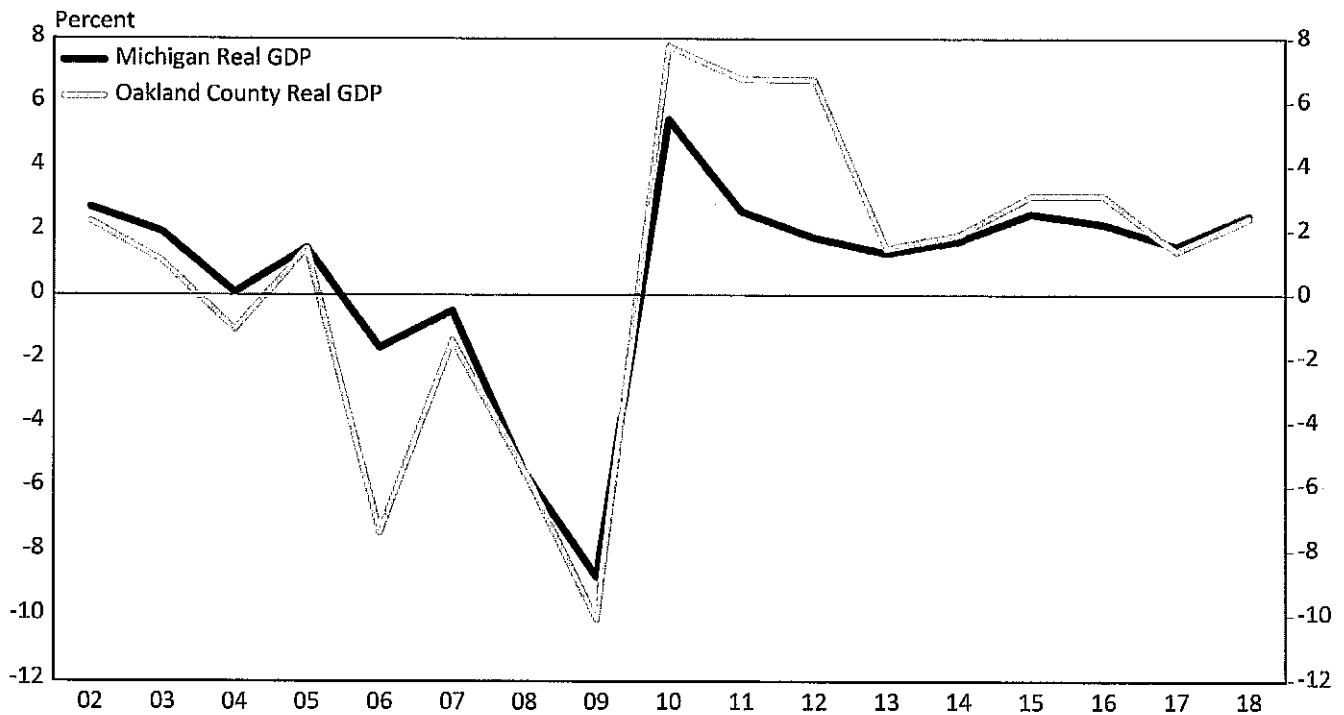
\*\*Adjusted for cost of living

Source: American Community Survey 2018. Census Bureau Population Estimates, March 2020.

- We ranked Oakland County among its peers on five measures that we believe provide useful insights into the county's economic well-being. We considered all counties in the United States with populations between 900,000 and 1.6 million residents in 2018 as Oakland's peer group. A total of 37 other counties matched this description, with Oakland's population of 1.26 million in the middle of the pack.
- Many of the nation's most successful counties are included in this group. Like Oakland, many are also among the select group of U.S. counties that have a AAA bond rating with multiple rating agencies.
- In Table 2, we arrange the 38 counties by the sum of their rankings across the various measures to calculate an overall ranking. Oakland places 9th overall, down three places from its ranking a year ago. The annual data can be noisy, however, and we believe that Oakland's top-ten ranking among this group of counties reflects its solid economic fundamentals, which should position the county for a solid economic rebound from the current downturn.
- The five measures we consider are: (1) educational attainment—the share of the population aged 25 to 64 with at least an associate's degree in 2018; (2) child poverty—the share of the population aged 17 and under who lived within families whose income was below the poverty level in 2018; (3) median family income adjusted for the local cost of living in 2018; (4) high-income seniors—the share of persons aged 65 and older with income at least five times the poverty line in 2018; and (5) professional occupations—the share of employed county residents working in professional and managerial occupations in 2018.
- A lower number for a rank indicates a better position among the counties: a rank of 1 is the best and 38 is the worst. Oakland County ranks between 5th and 16th across the various measures (the underlying data for Table 2 is presented in the appendix).
- Oakland ranks within the top ten in each of the following categories: median family income (5th), educational attainment (8th), child poverty (9th), and professional occupations (9th). Oakland's placement in these categories has helped it to maintain its overall top-ten position among its peer group. This is an impressive achievement considering that a number of these counties contain some of the top-rated local economies in the nation.
- Oakland's lowest ranking came in the share of high-income seniors, but the county's ranking of 16th on this metric still placed the county within the top half of its peer group.
- We believe Oakland County's strong overall performance in these measures suggest it is well positioned for the future despite the current challenges facing the local and national economies. The combination of an educated populace, a high share of managerial and professional jobs, and an attractive standard of living should provide a solid foundation for economic prosperity over our forecast period and in the years to come.

Figure 6

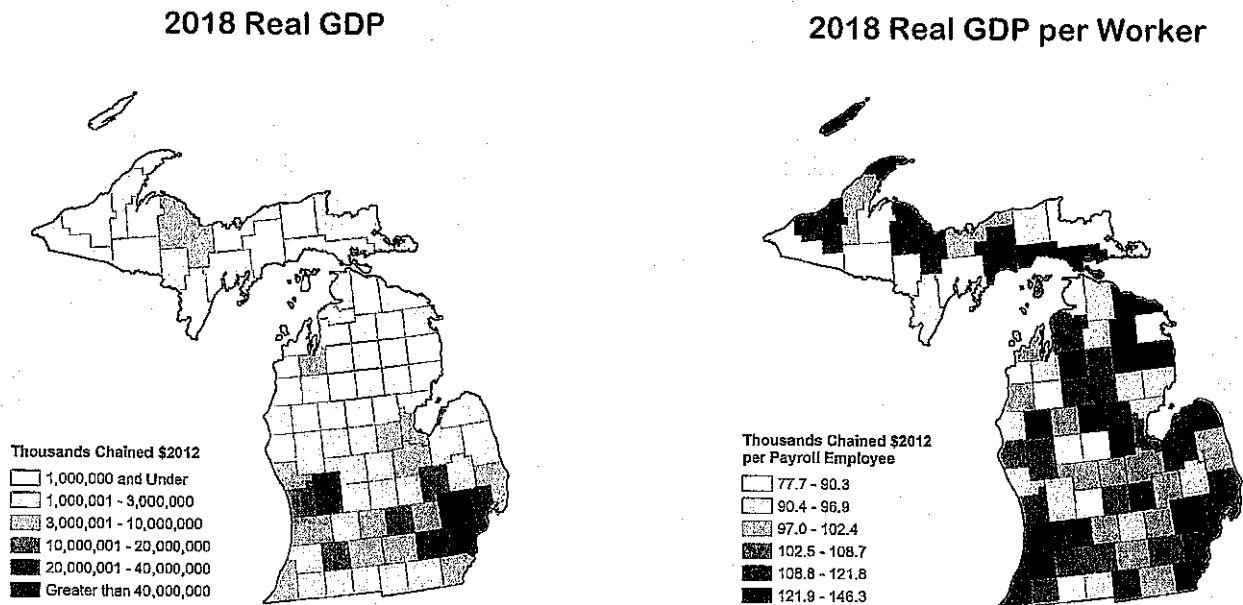
## Michigan and Oakland County Real GDP Growth, 2002–2018



- The Bureau of Economic Analysis recently released county-level statistics for annual Gross Domestic Product (GDP). GDP measures the value of all of the goods and services produced in a particular location over a specific time period. Real GDP adjusts that measure for inflation, in this case to be expressed in 2012 dollars.
- Figure 6 displays the annual percent change in real GDP both in Oakland County and in Michigan between 2002 and 2018.
- From 2002 to 2009, real GDP growth in Oakland County tended to under-perform the state of Michigan. Over that period, real GDP declined by almost 20 percent in Oakland County compared to a decline of slightly more than 10 percent in Michigan.
- Since 2009, real GDP has tended to grow faster in Oakland County than in the state overall, especially in the first few years of the economic recovery from the Great Recession. Between 2009 and 2018, real GDP grew by 40 percent in Oakland County compared to 24 percent in Michigan.
- Over the entire period 2001 through 2018, real GDP grew slightly faster in Oakland County (13 percent) than in the state overall (11 percent).
- The county-level statistics do not provide a high level of industrial detail, but it is logical that Oakland's economy, which is closely tied to the cyclical automotive industry, would display significant variation over the business cycle.

Figure 7

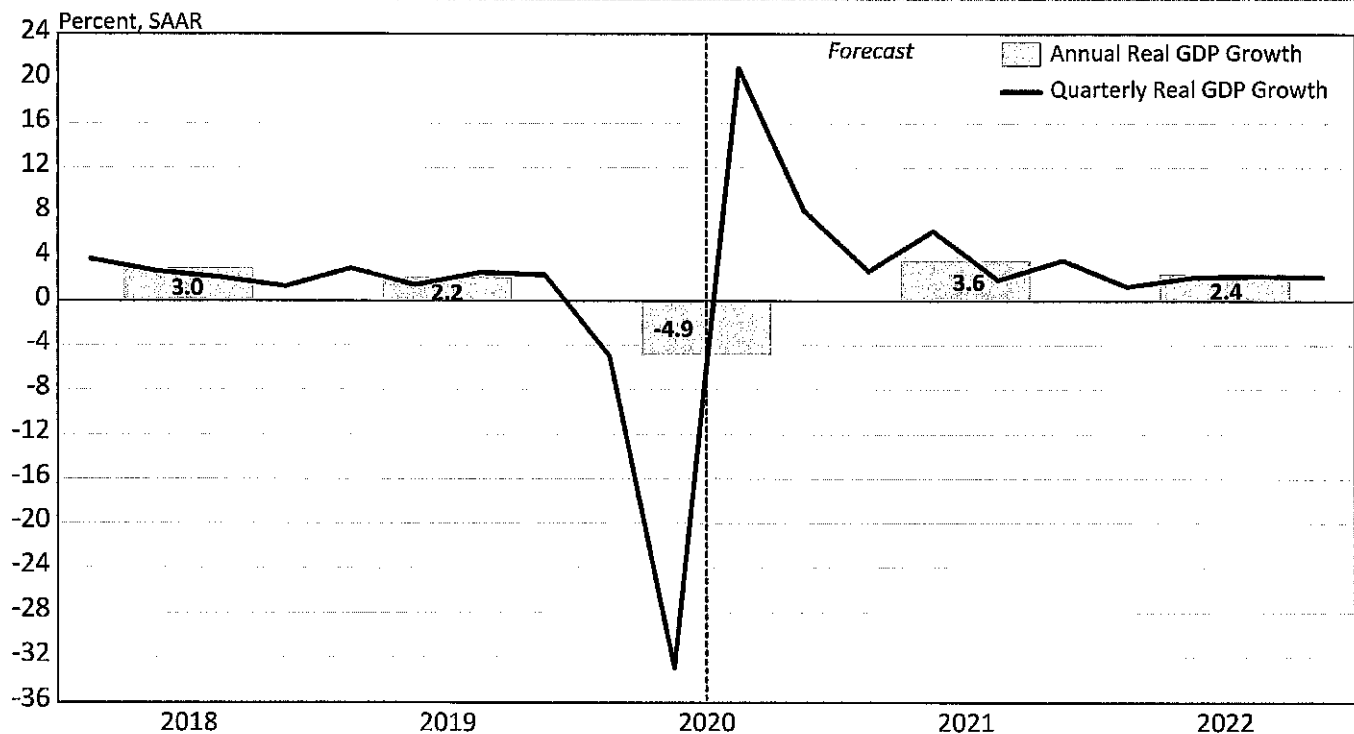
## Oakland County Real GDP, 2018



- The left-hand map above shows real GDP for each of Michigan's counties in 2018, the most recent year for which data is available.
- Oakland County's real GDP totaled \$101 billion in 2018. That was the largest GDP out of all of the counties in Michigan, about 15 percent larger than the next-largest level, in neighboring Wayne County. In fact, Oakland County accounted for 21 percent of Michigan's real GDP in 2018.
- Private service-producing industries accounted for 74.2 percent of Oakland County's real GDP in 2018. Private goods-producing industries accounted for 21.6 percent, while government accounted for just 4.2 percent.
- Relative to Michigan overall, a higher share of Oakland County's GDP comes from private-sector service industries and lower shares come from private goods and government.
- The right-hand map above shows 2018 real GDP divided by the number of payroll employees, or output per worker, for each of Michigan's counties.
- Oakland County's real output per worker was \$136,900 in 2018, about 26 percent higher than the state average. Oakland's level ranked fifth out of the state's counties.
- The four counties with higher levels of output per worker in 2018 were Mackinac, Monroe, Keweenaw, and Presque Isle. With the exception of Monroe, the real output of each of these counties was less than 1 percent of Oakland's in 2018; Monroe's total output was 6 percent of Oakland's in 2018. We believe that the rankings on this measure should be taken with a grain of salt given the size differences.
- Wayne County had real output per worker of \$121,300 in 2018, which was 11.4 percent lower than Oakland's level. Kent, Macomb, and Washtenaw Counties, with the state's third-through fifth-largest economies, all had real output per worker in the \$100,000–\$110,000 range, more than 20 percent lower than Oakland's.
- Private sector output per worker in Oakland County was even higher in 2018 than the overall level, at \$139,800. In the government sector, output per worker was \$93,000.

Figure 8

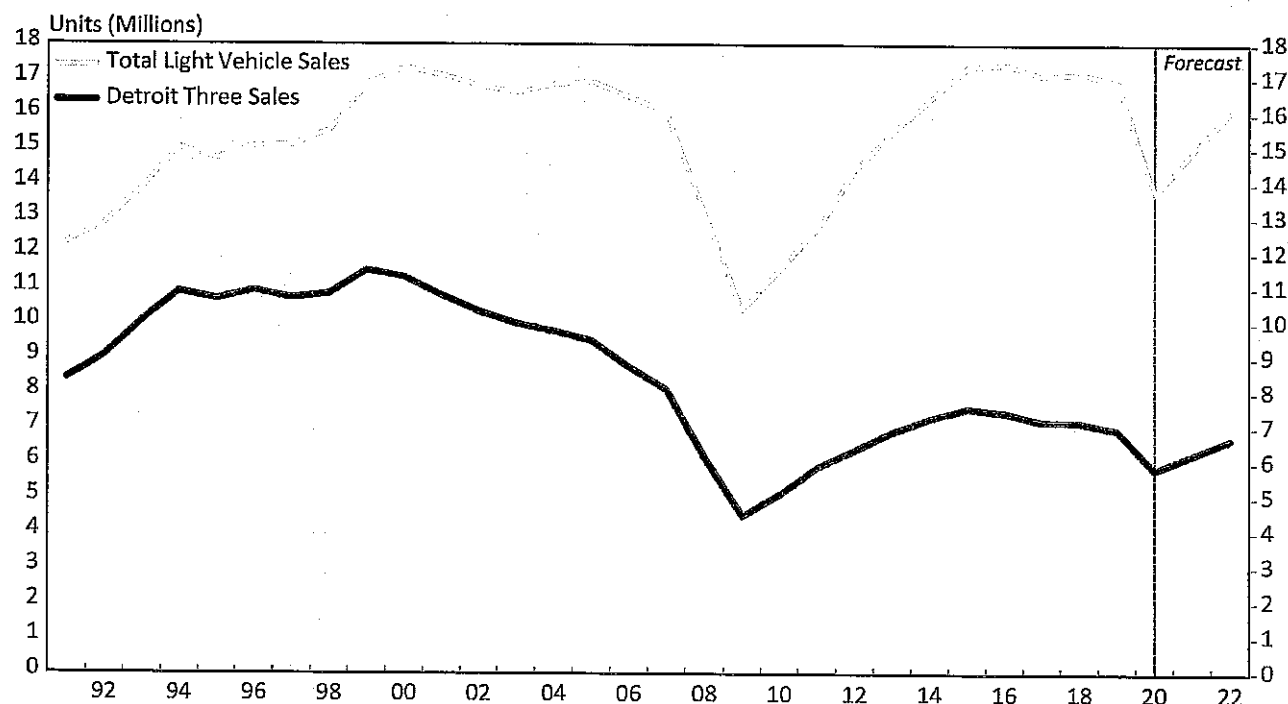
## U.S. Real GDP Growth, 2018–2022



- Oakland County's economic future is closely tied to the overall health of the national economy. The health of both economies in turn depends strongly on the public health situation.
- According to the Bureau of Economic Analysis's Advance Estimate, U.S. real GDP fell by 9.5 percent from the first quarter to the second quarter of 2020, or 32.9 percent at an annualized rate. The decline in the second quarter followed a decline of 1.3 percent (5.0 percent annualized) in the first quarter of the year.
- We are forecasting real GDP to grow by 4.9 percent, (20.9 percent annualized) in the third quarter and by another 2.0 percent (8.2 percent annualized) in the fourth quarter. That growth path would leave real GDP 4.4 percent lower at the end of this year than it was at the end of 2019.
- Our forecast calls for real GDP to decline by 4.9 percent on a calendar year average basis from 2019 to 2020.
- We expect the pace of the recovery to slow in 2021. We anticipate above-trend growth in the second quarter of the year, however, when we assume that a vaccine for COVID-19 will become widely available.
- We forecast annual real GDP growth to register 3.6 percent in 2021 and 2.4 percent in 2022.
- Real GDP recovers to its pre-pandemic level by the third quarter of 2022 in our forecast, and ends the forecast period about one percent higher than it was at the end of 2019.
- We have assumed that Congress will pass, and the President will sign, a substantial additional stimulus bill this fall, but as of the writing of this report, no deal was in place. If no additional stimulus is forthcoming, we would expect the recovery to proceed more slowly than we have forecast.
- We expect the Federal Reserve to continue to provide substantial monetary support for the recovery. We anticipate short-term interest rates staying near zero throughout our forecast horizon. We view the Fed's recent shift to "average inflation targeting" as a modestly helpful step toward encouraging nominal income growth.

Figure 9

## U.S. and Detroit Three Light Vehicle Sales, 1991–2022

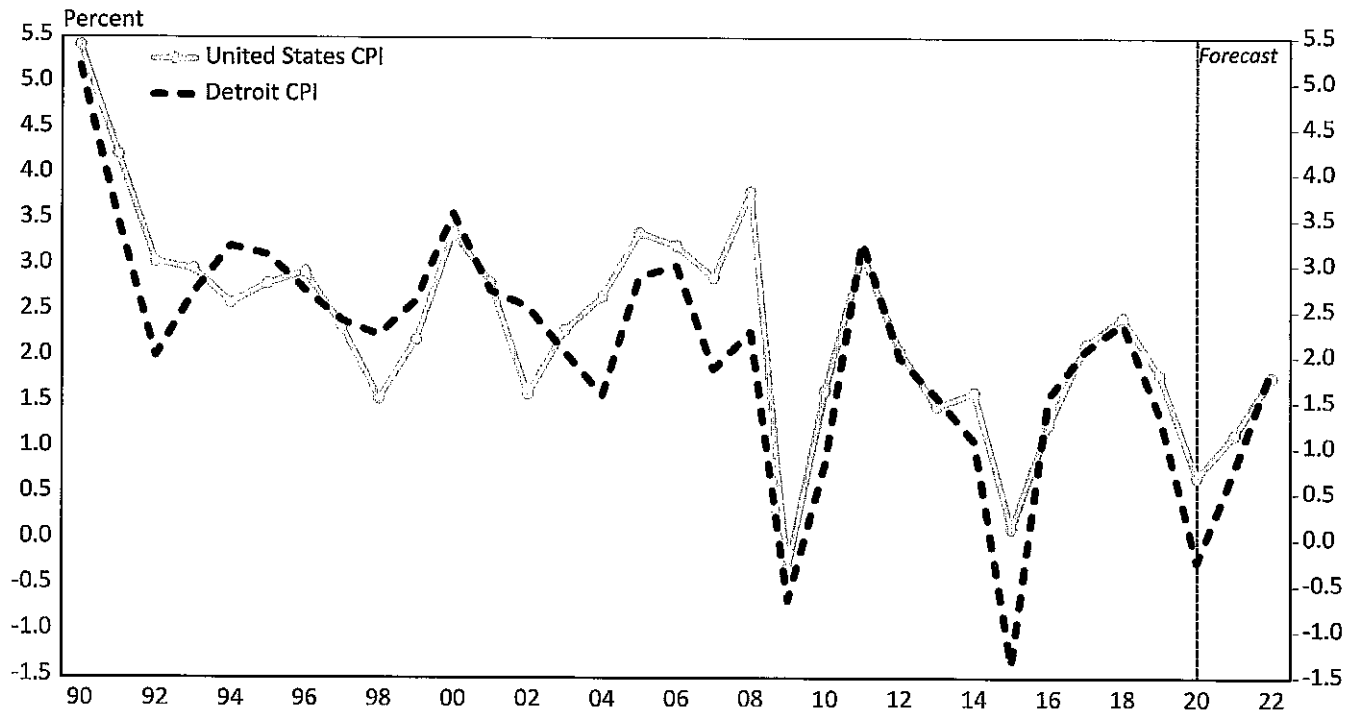


- National light vehicle sales took a nosedive during the spring, registering 8.7 million at a seasonally adjusted annual rate in April. That was the slowest monthly pace on record since the beginning of the modern data series in 1976.
- Total light vehicle sales have risen sharply since April, registering a 15.2 million unit pace in August. For comparison, light vehicle sales stayed below the 10-million unit pace for six straight months in 2009.
- We expect total light vehicle sales to amount to 13.8 million units this year, a reduction of approximately 19 percent from the 2019 pace of 17.0 million. Low inventory levels, domestic capacity constraints, and the severity of the pandemic in Mexico all limit the rebound this year, as does consumer demand.
- We are forecasting unit sales to climb to 15.0 million next year and to 16.1 million in 2022 as the broader economy recovers, the public health situation improves domestically and abroad, and supply constraints are resolved.
- We expect the light truck share of the total market to hover around 75–77 percent on an annual basis over our forecast period.
- We project the Detroit Three's share of the light vehicle market to average 42.3 percent this year, up a bit from its level of 41.0 percent in 2019. The Detroit Three's share of the market declines back to the 41–42 percent range over the next two years.
- We forecast Detroit Three sales to total 5.8 million units this year. That would be a decline of roughly 16 percent from their 2019 pace of 7.0 million units, but it would be nearly thirty percent higher than their pace in 2009.
- We forecast Detroit Three light vehicle sales to rise to 6.3 million units in 2021 and 6.7 million in 2022.



Figure 10

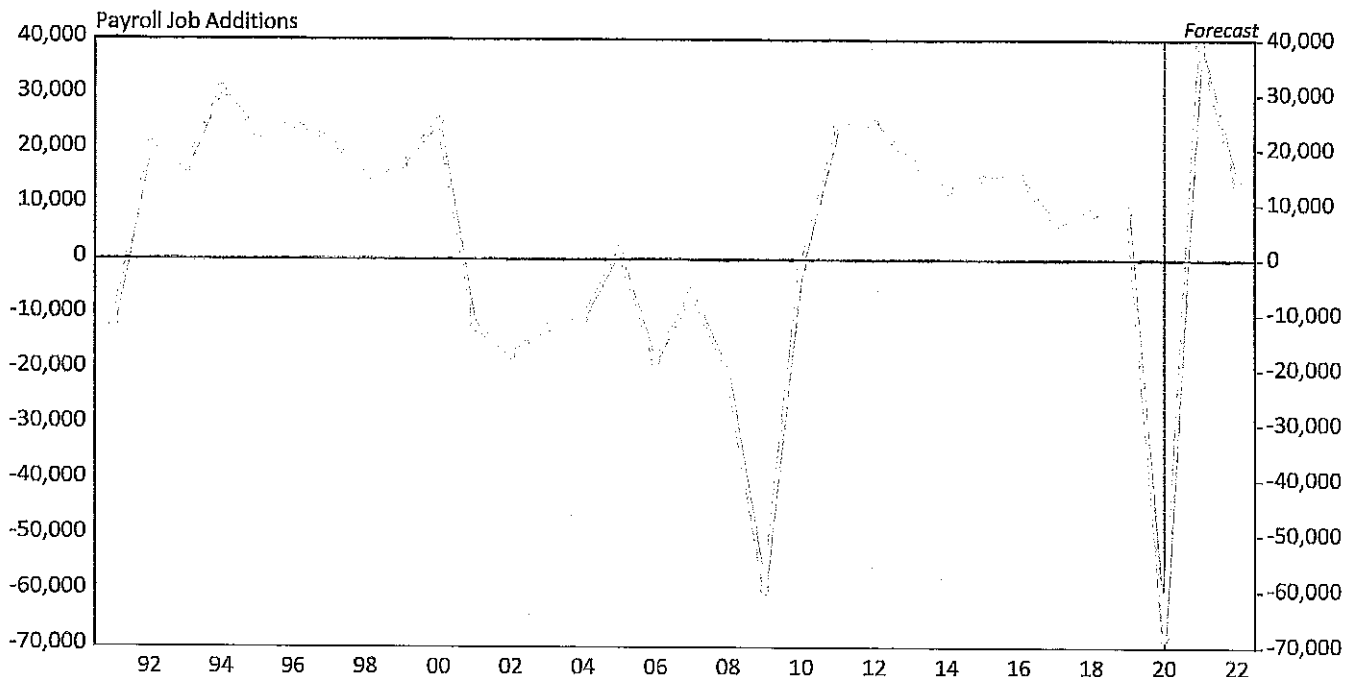
## Inflation Rate, National and Detroit CPIs, 1990–2022



- We measure local inflation by the growth rate of the Detroit Consumer Price Index (CPI), as county-level consumer price data are not available.
- We believe the COVID-19 pandemic has substantially reduced both aggregate supply and aggregate demand in the United States economy, but we judge the demand shock to be bigger than the supply shock.
- Accordingly, we expect national CPI inflation to fall from 1.8 percent in 2019 to 0.7 percent this year. One contributor to the decline in headline inflation is falling energy prices, which despite recovering from their rock bottom levels this spring remain well below their year-ago levels. Core CPI inflation, which strips out volatile food and energy prices, registers 1.2 percent this year.
- We expect headline CPI inflation to pick back up to 1.2 percent next year and 1.8 percent in 2022 as the economy recovers from the pandemic and the Federal Reserve's monetary stimulus has the desired effect of growing the volume of nominal expenditure.
- We are forecasting a return to local deflation this year for the first time since 2015, with the Detroit CPI declining by 0.2 percent in 2020.
- Local inflation returns to positive territory in 2021 and 2022, registering 0.8 percent and 1.9 percent, respectively.
- The inflation rates we are forecasting are substantially below the Federal Reserve's symmetric 2 percent inflation target for the Personal Consumption Expenditures (PCE) deflator. PCE inflation tends to run below CPI inflation.
- In that case, the Federal Reserve's recently announced average inflation targeting policy should lead to some moderate "catch-up" inflation in the years beyond our forecast period.

Figure 11

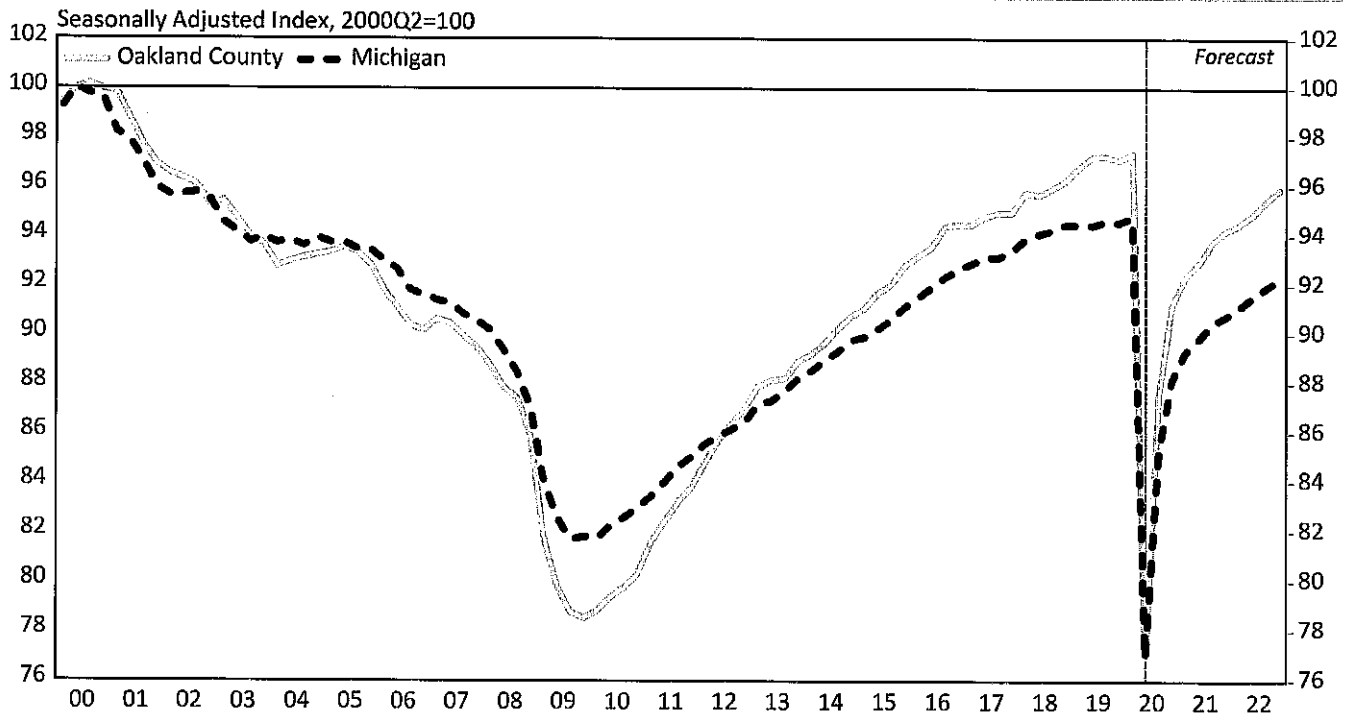
## Job Growth in Oakland County, 1991–2022



- By the end of 2019, on a quarterly basis, Oakland County had completed ten consecutive years of job growth since the recession's low point at the end of 2009.
- The small number of job losses recorded in 2010 is a statistical artifact that results from calendar-year averaging. The county actually gained jobs in each quarter of the year, but not quickly enough to take the annual average above its level in the previous year.
- The county also added jobs in the first quarter of 2020, making 10 and one quarter years of job growth, the longest such streak since the data has been collected.
- The bottom fell out of the national and local economies in the second quarter of 2020. The nation lost 18.2 million jobs in the quarter, and we estimate that Oakland County lost 156,100 jobs (on a seasonally adjusted basis).
- Oakland County's job losses in the second quarter totaled nearly the same number of jobs the county lost in the entirety of the 2000s—in only one quarter.
- Fortunately the rebound so far has also been impressive by historical standards. On an annual average basis, the county is forecast to end up losing only 68,000 jobs in 2020. That performance would translate to a decline of 9.1 percent.
- We expect that the county will recover an additional 39,100 jobs in 2021 (5.8 percent) and 14,300 jobs in 2022 (2.0 percent).
- Thus, we are forecasting that average annual employment in Oakland County in 2022 will remain 14,700 jobs, or 2.0 percent, short of 2019 levels.

Figure 12

## Total Jobs in Oakland County and Michigan, Seasonally Adjusted, First Quarter of 2000 to Fourth Quarter of 2022



- To put the current downturn in perspective, we plot Oakland County's quarterly path of total employment from the beginning of 2000 to the end of our forecast period in 2022. We include the same path for the state of Michigan.
- We index both employment paths to equal 100 in the second quarter of 2000, when Michigan reached its peak employment level. Oakland reached its peak employment level one quarter later, in the third quarter of 2000.
- Oakland County lost 166,500 jobs from then until the fourth quarter of 2009, its Great Recession-era low point. That was 21.6 percent of its peak level. Michigan lost 859,100 jobs in that time, 18.3 percent of its peak level.
- We estimate that Oakland recovered 144,800 jobs from the end of 2009 to the first quarter of 2020, which was more vigorous proportionally than Michigan overall.
- We also estimate that Oakland County suffered a sharper proportional drop in employment than the state overall in the second quarter of 2020.
- The estimated job loss in the second quarter was so severe that, both in the county and in the state, employment was lower in the second quarter of 2020 than it was at the end of 2009.
- We forecast that Oakland County will begin to recover jobs beginning in the third quarter, cumulating to 144,900 by the end of 2022—leaving the county 11,200 jobs (1.5 percent) short of first-quarter 2020 levels at the end of our forecast. (These numbers differ from the values using calendar-year averages reported alongside Figure 9 because they are from the first quarter of 2020 to the end of 2022.)
- As figure 12 shows, we are expecting that Oakland will enjoy a faster job recovery than Michigan overall, so that the gap between the two index lines widens from 2.6 points in the first quarter of 2020 to 3.6 points at the end of 2022.

Table 3

**Forecast of Jobs in Oakland County by Major Industry Division, 2019–2022\***

	Preliminary	Forecast Employment			Average Annual Wage
	2019	2020	2021	2022	2019
<b>TOTAL JOBS (Number of persons)</b>	<b>746,103</b>	<b>678,062</b>	<b>717,126</b>	<b>731,409</b>	<b>63,728</b>
(Annual percentage change)	(1.2)	(-9.1)	(5.8)	(2.0)	N.A.
TOTAL GOVERNMENT	45,354	42,205	41,976	42,769	55,817
TOTAL PRIVATE	700,750	635,857	675,150	688,640	64,240
GOODS-PRODUCING	97,210	88,636	94,808	97,878	78,975
Natural resources and mining	881	881	881	881	37,299
Construction	27,226	25,908	28,448	29,725	73,179
Manufacturing	69,103	61,847	65,478	67,272	81,790
Food manufacturing	1,781	1,806	1,848	1,887	35,724
Plastics manufacturing	5,547	4,707	5,018	5,127	57,262
Fabricated Metals mfg.	10,001	8,484	9,002	9,179	61,145
Machinery manufacturing	11,378	9,922	10,415	10,621	84,510
Transportation equip.	21,697	18,968	20,192	20,735	104,533
Other manufacturing	18,699	17,961	19,004	19,724	76,448
PRIVATE SERVICE-PROVIDING	603,540	547,221	580,342	590,762	61,867
Trade, transportation and utilities	131,056	122,302	126,917	127,138	56,726
Wholesale trade	37,797	35,417	36,912	37,319	98,364
Retail trade	78,820	73,067	75,140	74,186	36,279
Transportation, warehousing	12,911	12,290	13,338	14,106	51,327
Utilities	1,528	1,528	1,528	1,528	127,103
Information	15,094	14,779	14,914	14,919	86,299
Financial activities	56,174	56,232	57,121	57,668	87,305
Professional and business services	185,126	169,374	178,663	182,566	80,373
Professional, scientific, and technical	104,611	99,490	105,052	107,615	94,258
Engineering & Architecture	40,418	37,429	40,989	42,913	101,348
Computers Services	21,491	20,550	21,169	21,255	94,309
Other Professional & Tech.	42,702	41,511	42,893	43,446	87,522
Management of companies and enterprises	18,886	18,671	18,588	19,131	119,049
Administrative support and waste management	61,629	51,213	55,023	55,820	44,951
Private education and health services	118,537	111,075	116,801	119,061	51,684
Private education services	11,445	10,698	11,283	11,511	43,088
Ambulatory Health Services	42,385	39,233	41,157	41,743	58,766
Hospitals	35,029	32,904	34,291	34,787	65,192
Nursing & Residenital Care	17,259	16,527	17,542	18,050	31,077
Social Assistance	12,420	11,713	12,528	12,969	25,974
Leisure and hospitality	72,372	50,235	59,976	63,155	23,801
Other services	23,277	21,321	24,045	24,352	37,464
Unclassified	1,904	1,904	1,904	1,904	51,308

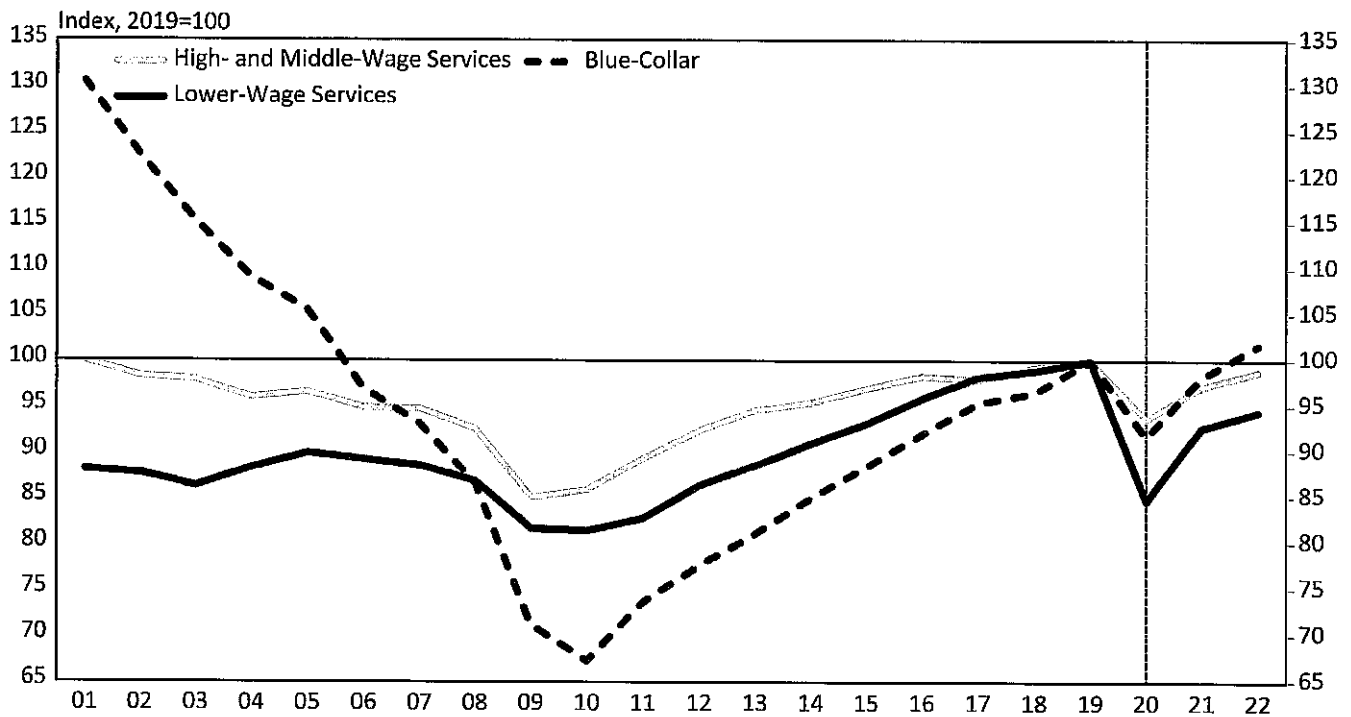
Addendum

Labor Force	680,255	648,709	668,516	670,968
Unemployment Rate	3.4	9.1	7.2	6.0

\*Some subtotals do not add to totals due to rounding of annual average computations.

Figure 13

## Jobs in Oakland County by Selected Industry Group, 2001–2022

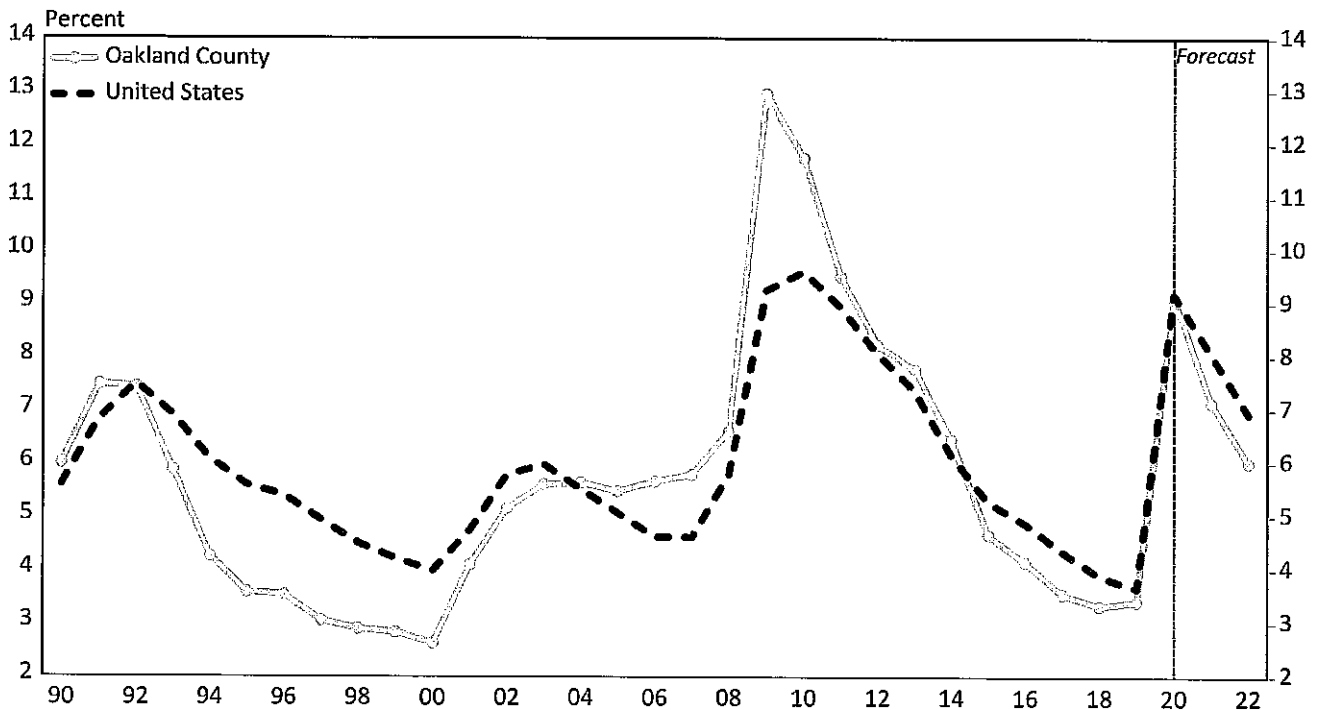


- Table 3 distributes our projected total job movements for Oakland County from 2019 to 2022 among 36 major industries. The table also includes the average wage in each industry in 2019.
- The industries in Table 3 are reorganized into three categories of industries in figure 13. The three categories are blue-collar industries; high- and middle-wage service industries; and lower-wage service industries. The lower-wage service industries had an average annual wage of less than \$40,000 in 2019.
- The blue-collar industries include manufacturing, construction, natural resources and mining, and transportation and warehousing. They accounted for 15 percent of Oakland County's wage and salary employment in 2019.
- The high- and middle-wage service industries include government, wholesale trade, utilities, information, financial activities, business and professional services, education, ambulatory health services, hospitals, and the unallocated services industries. They accounted for 58 percent of Oakland County's wage and salary employment in 2019.
- The lower-wage services industries include retail trade, nursing and residential care, social assistance, leisure and hospitality, and other services. They accounted for 27 percent of Oakland County's wage and salary employment in 2019.
- This categorization illustrates how very different the COVID-19 recession and subsequent recovery is from the Great Recession (and prior recessions) and recovery periods.
- Between 2001 and 2007, Oakland's employment declined by 29 percent in the blue-collar industries but by only 5 percent in the high- and middle-wage service industries. Employment actually grew by 1 percent in the lower-wage service industries.
- During the Great Recession, 2007 to 2009, employment in Oakland fell by a further 24 percent in the blue-collar industries and by a comparatively modest 10 percent in the high- and middle-wage service industries and 8 percent in the lower-wage service industries.

- The county's employment decline in the 2001–2009 period was therefore very heavily weighted toward blue-collar industries. Employment in the lower-wage service industries tended to hold up much better.
- Between 2009 and 2019, employment in all three categories of industries expanded. By 2019, employment in the high- and middle-wage service industries was almost exactly the same as in 2001, and employment in lower-wage services industry was higher by 24,000 jobs. Employment in blue-collar industries, however, was lower than the 2001 level by 34,000 jobs.
- Therefore, an important feature of the county's (and indeed the country's) economy during the 2001–2019 period was a shift away from blue-collar industry jobs toward lower-wage service industry jobs, especially during economic recessions.
- The COVID-19 recession and our forecast for the subsequent recovery reverse this narrative.
- In 2020, the largest job loss in the county occurs among the lower-wage service industries, which see an employment decline of 15 percent. High- and middle-wage service industries and blue-collar industries see significantly smaller employment declines this year, of 6.4 percent and 8.3 percent, respectively.
- The concentration of job loss among lower-wage service industries during a recession is unprecedented. Normally during a recession, job losses are concentrated in manufacturing, construction, and higher-wage white collar industries that are associated with those activities.
- We are forecasting that between 2020 and 2022, both the blue-collar industries and the lower-wage services industries will see employment growth by about 11 percent, while employment in high- and middle-wage services industries will grow by about 5.5 percent.
- Thus, by 2022, employment in the blue-collar industries will be 1,900 jobs higher than in 2019, while employment will be 5,100 jobs lower in the high- and middle-wage service industries and 11,400 jobs less in the lower-wage services industries than in 2019.
- Among the blue-collar industries, the construction and transportation and warehousing industries will lead the job growth between 2019 and 2022, with job gains of 2,500 and 1,200, respectively. Manufacturing employment is expected to decline by 1,800 jobs, as losses in plastic parts, fabricated metals, machinery manufacturing, and motor vehicle and parts manufacturing exceed gains elsewhere in the manufacturing sector.
- Job losses between 2019 and 2022 in the high- and middle-wage service industries are concentrated in administrative support services (-5,800 jobs total) and government (-2,600 jobs total). The job losses in administrative support reflect weak demand for temporary help employees. We expect the government sector to face severe tax revenue shortfalls over the next few years, which will be mitigated only partially by additional federal support.
- We are expecting modest job growth in most other high- and middle-wage service industries. One bright spot is engineering services, which we expect to add 2,500 jobs between 2019 and 2022 as the shift toward electric and autonomous vehicles continues in the auto industry.
- Job losses in the lower-wage services industries are concentrated in retail trade (-4,600) and leisure and hospitality services (-9,200). The job losses in retail trade reflect an acceleration of the pre-pandemic trend toward declining employment at brick and mortar retail stores due to internet shopping and productivity gains. We expect that these job losses will continue past 2022.
- The job losses in leisure and hospitality services stem directly from the COVID-19 pandemic. Prior to the pandemic, this industry had been growing by 2.7 percent per year since the end of the Great Recession in 2009. The leisure and hospitality services industry was virtually shut down by the pandemic, and we expect it to reopen only slowly, as a vaccine becomes widely available and business travel resumes. We expect that this industry will continue to grow in the years beyond our forecast period, with employment eventually exceeding 2019 levels, unlike in retail trade.

Figure 14

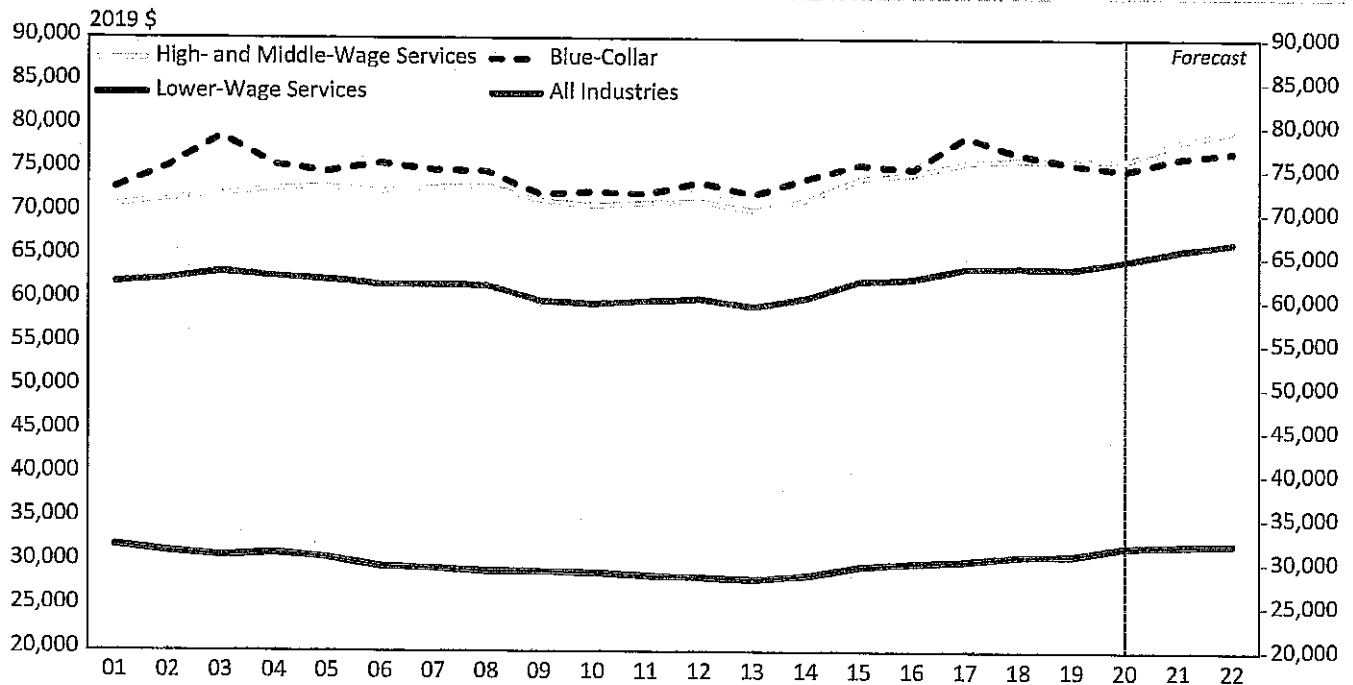
## Unemployment Rates for Oakland County and for the United States, 1990–2022



- The job losses we are forecasting for Oakland County drive the unemployment rate up to an average of 9.1 percent for the year in 2020. We expect that the U.S. unemployment rate will be 0.1 percentage points higher, at 9.2 percent.
- In the Great Recession era, Oakland County's not seasonally adjusted monthly unemployment rate peaked at 15.0 percent in July 2009. The local unemployment rate averaged 13.0 percent that year.
- Oakland's unemployment rate spiked to 19.5 percent in April and registered 19.3 percent in May, but based on the recent improvement, we expect it to average well below its 2009 level in 2020.
- One reason the local unemployment rate remains well below 2009 levels is that the local labor force is expected to decline by 4.6 percent this year.
- The local labor force grows by 3.1 percent in 2021 and by 0.4 percent in 2022. Despite that growth, the county's potential workforce in 2022 is 9,300 people smaller than it was in 2019.
- We anticipate continued weakness in labor force growth beyond 2022, so that finding available and qualified workers will become a serious problem for employers once again in the years after 2022.
- For the next couple of years, however, the major problem will remain too many unemployed workers. We expect that the unemployment rate in Oakland County will average 7.2 percent in 2021 and 6.0 percent in 2022.
- We expect that Oakland's unemployment rate in 2022 will be nine-tenths of a percentage point lower than the U.S. rate of 6.9 percent and 0.5 percent below the Michigan rate of 6.5 percent.

Figure 15

## Average Real Wage in Oakland County by Selected Industry Group, 2001–2022



- Here we present the average real wage in Oakland County for the years 2001–2022, adjusted for inflation and expressed in 2019 dollars. We display the average real wage across all industries as well as for three broad industry categories as previously described: (1) blue-collar industries; (2) high- and middle-wage service-providing industries and (3) lower-wage service-providing industries.
- In 2003, the average annual real wage in Oakland County reached \$63,291. Average real wages then entered a decade in which they trended downwards, hitting a low point of \$59,352 in 2013. That level was 6.2 percent lower than in 2003.
- From 2013 to 2017, real wages increased by an average of 1.8 percent per year, buoyed by low consumer price inflation, bringing average real wages to \$63,782 in 2017.
- Real wage gains then stalled out, as the average real wage in 2019 (\$63,728) was actually \$54 less than it was in 2017.
- Real wage growth in our forecast rebounds to 1.6 percent in 2020, 1.8 percent in 2021, and 1.3 percent in 2022, for a total gain of 4.8 percent over the next three years.
- Ironically, part of the reason for the relatively strong aggregate wage growth in our forecast is the shift in the county's industrial composition toward higher paid industries.
- We are forecasting a cumulative increase between 2019 and 2022 of 1.9 percent in the average real wage in blue-collar industries, 4.3 percent in lower-wage services industries, and 4.5 percent in the high- and middle-wage service industries.



## Appendix

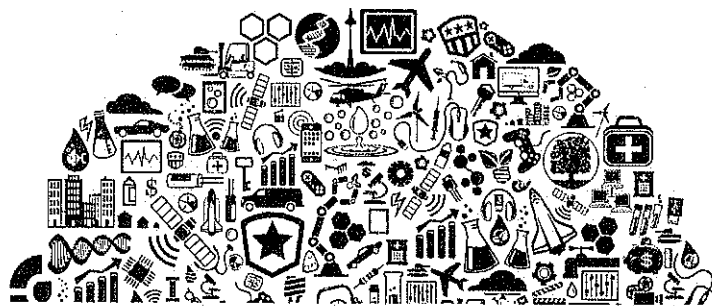
**Oakland County Compared with its Peers Indicator Values\***

County	State	Population 2018	Associate's Degree or More	Child Poverty	Median Family Income**	High-Income Persons Aged 65 or Older	Managerial, Professional
Fairfax	VA	1,148,463	67.6%	7.1%	118,107	63.0%	58.0%
Montgomery	MD	1,048,478	64.6%	7.9%	106,881	60.1%	54.1%
Collin	TX	1,004,307	61.6%	6.7%	108,035	43.4%	52.8%
Wake County	NC	1,091,273	62.3%	10.5%	102,785	44.5%	53.3%
Nassau	NY	1,357,534	57.8%	7.3%	103,485	48.7%	46.4%
DuPage	IL	927,247	60.8%	8.2%	107,396	43.3%	47.4%
Bergen	NJ	932,816	59.1%	8.6%	99,837	44.4%	49.2%
Westchester	NY	968,213	57.7%	9.7%	99,049	48.0%	48.7%
<b>Oakland</b>	<b>MI</b>	<b>1,256,694</b>	<b>59.2%</b>	<b>9.6%</b>	<b>104,437</b>	<b>37.2%</b>	<b>49.2%</b>
Hennepin	MN	1,257,925	61.8%	11.2%	100,911	36.7%	49.6%
Contra Costa	CA	1,150,519	51.2%	9.3%	90,159	49.3%	45.2%
Travis	TX	1,246,572	56.2%	15.8%	98,151	43.4%	50.1%
Fulton	GA	1,050,131	59.9%	18.3%	91,950	37.2%	51.0%
Fairfield	CT	943,971	56.1%	13.1%	97,238	45.4%	45.6%
Suffolk	NY	1,480,830	48.8%	9.2%	91,025	45.2%	40.7%
St. Louis	MO	995,219	54.5%	16.8%	93,374	35.1%	46.2%
Allegheny	PA	1,217,281	57.2%	15.2%	91,114	28.1%	46.5%
Mecklenburg	NC	1,093,750	56.2%	17.7%	84,061	32.6%	43.1%
Prince George's	MD	909,619	39.4%	11.0%	84,053	47.2%	40.7%
Salt Lake	UT	1,148,692	45.4%	10.4%	89,582	34.8%	40.2%
Honolulu	HI	979,858	48.1%	10.3%	81,304	42.9%	35.9%
Franklin	OH	1,307,698	48.1%	22.3%	80,974	32.1%	43.6%
Gwinnett	GA	927,337	47.4%	11.7%	81,681	28.1%	36.9%
Erie	NY	919,717	50.1%	19.8%	79,287	25.6%	40.7%
Palm Beach	FL	1,482,876	45.1%	18.7%	70,709	36.4%	37.0%
Sacramento	CA	1,538,746	40.5%	20.8%	79,864	34.2%	39.6%
Hillsborough	FL	1,451,919	44.7%	20.5%	73,014	28.0%	39.0%
Pinellas	FL	973,058	42.9%	15.6%	72,061	26.1%	38.6%
Cuyahoga	OH	1,241,718	43.0%	26.6%	77,986	25.2%	41.0%
Pima County	AZ	1,036,554	42.5%	22.0%	69,023	30.7%	36.1%
Orange	FL	1,381,540	49.0%	23.9%	68,148	22.3%	37.3%
Duval	FL	948,652	40.9%	21.8%	68,053	27.5%	37.4%
Shelby	TN	936,365	39.6%	34.6%	67,823	30.1%	34.3%
Marion	IN	958,700	41.2%	24.6%	67,316	22.8%	35.2%
Milwaukee	WI	946,969	39.9%	27.6%	66,038	21.6%	36.1%
Philadelphia	PA	1,583,592	36.8%	34.6%	53,273	19.9%	39.7%
Fresno	CA	991,950	29.1%	30.9%	62,815	27.4%	30.8%
Bronx	NY	1,432,087	28.5%	38.1%	39,681	16.7%	25.0%
<i>State of Michigan</i>			41.5%	19.4%	77,458	25.1%	41.5%
<i>United States</i>			43.2%	18.0%	76,401	29.8%	43.2%

\*All counties in the United States with a population between 900,000 and 1,600,000 in 2018.

\*\*Adjusted for cost of living.

Source: American Community Survey 2018. Census Bureau Population Estimates, March 2020. Median Family Income adjusted using BEA price parity indices for 2017 and extended to counties by relative gross rent.



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# Oakland County's

*Department of Economic Development & Community Affairs*

## Small Business Services

Oakland County small businesses, from any sector and at any stage, can get free consultations and access to training and other resources. Data, maps, aerial photography and property information is also available to residents through the business center.

## Financial Services

*Business Finance Corporation and  
Economic Development Corporation*  
Small business loans for  
buildings and equipment.

## Planning

Community services for all the cities, villages and townships. Resources are available in the areas of downtown development, historic preservation and design assistance, environmental stewardship, waste resources, brownfield redevelopment, land use and zoning.

## Business Development

Helping businesses locate and expand in Oakland County.

## Veterans Services

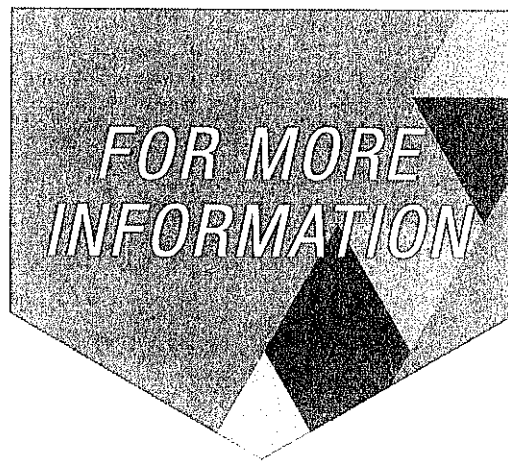
Benefits counselors can provide assistance to veterans and their families filing and appealing claims. Information on grants and resources is also available.

## Workforce Development

Helping businesses with talent recruitment, training and retention. Building the talent pipeline through apprenticeships and student career events.

For more information, visit: [AdvantageOakland.com](http://AdvantageOakland.com)  
Or, contact us at: (248) 858-0721 | [info@AdvantageOakland.com](mailto:info@AdvantageOakland.com)

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COUNTY MICHIGAN  
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