

Elizabeth Alcantar, Mayor  
Jose R. Gonzalez, Vice Mayor  
Chris Garcia, Council Member  
Jack M. Guerrero, Council Member  
Blanca Lozoya, Council Member



**REMOTE TELECONFERENCE AND ELECTRONICALLY**

This meeting will be conducted telephonically and electronically pursuant to the State of California Executive Order No. 29-20.

**Teleconference Phone Number:**

+1 (253) 215-8782

**Meeting ID:** 884 8790 0591

<https://us02web.zoom.us/j/88487900591>

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## **AGENDA**

**A REGULAR MEETING  
OF THE CUDAHY CITY COUNCIL  
and JOINT MEETING of the  
CITY OF CUDAHY AS SUCCESSOR AGENCY and HOUSING SUCCESSOR AGENCY  
TO THE CUDAHY DEVELOPMENT COMMISSION  
Tuesday, June 2, 2020 – 6:30 P.M.**

Written materials distributed to the City Council within 72 hours of the City Council meeting shall be available for public inspection at [www.cityofcudahy.com](http://www.cityofcudahy.com)

*In compliance with the Americans with Disabilities Act (ADA) if you need special assistance to participate in this meeting, you should contact the City Clerk's Office at (323) 773-5143 at least 72 hours in advance of the meeting.*

### **Rules of Decorum**

Under the Government Code, the City Council may regulate disruptive behavior that impedes the City Council Meeting.

Disruptive conduct may include, but is not limited to:

- Screaming or yelling during another audience member's public comments period;
- Profane language directed at individuals in the meeting room;
- Throwing objects at other individuals in the meeting room;
- Verbal altercations with other individuals in the meeting room; and
- Going beyond the allotted three-minute public comment period granted.

When a person's or group's conduct disrupts the meeting, the Mayor or presiding officer will request that the person or group stop the disruptive behavior, and WARN the person or group that they will be asked to leave the meeting room if the behavior continues.

If the person or group refuses to stop the disruptive behavior, the Mayor or presiding officer may order the person or group to leave the meeting room, and may request that those persons be escorted from the meeting room. Any person who, without authority of law, willfully disturbs or breaks up a City Council meeting is guilty of a misdemeanor. (Pen. Code, § 403.)

**1. CALL TO ORDER**

**2. ROLL CALL**

Council / Agency Member Garcia  
Council / Agency Member Guerrero  
Council / Agency Member Lozoya  
Vice Mayor / Vice Chair Gonzalez  
Mayor / Chair Alcantar

**3. PLEDGE OF ALLEGIANCE**

**4. PRESENTATIONS**

- A. Young Men's Christian Association (YMCA)
- B. Gateway Cities Council of Governments - Update on the I-710 South Corridor by Karen Heit, Transportation Deputy

**5. PUBLIC COMMENTS**

(Each member of the public may provide a public comment telephonically or electronically if he or she wishes to address the City Council. Members of the public are permitted to speak for three (3) minutes concerning items under the City Council's jurisdiction, including items on the agenda and closed session items.)

(Any person who, without authority of law, willfully disturbs or breaks up a City Council meeting is guilty of a misdemeanor. (Pen. Code, § 403).)

**6. CITY COUNCIL COMMENTS / REQUESTS FOR AGENDA ITEMS** (Each Council Member is limited to three minutes.)

(This is the time for the City Council / Agency to comment on any topics related to "City Business," including announcements, reflections on city / regional events, response to public comments, suggested discussion topics for future council meetings, general concerns about particular city matters, questions to the staff, and directives to the staff (subject to approval / consent of the City Council majority members present, regarding staff directives). Each Council / Agency Member will be allowed to speak for a period not to exceed three (3) minutes. Notwithstanding the foregoing, the City Council Members shall not use this comment period for serial discussions or debate between members on City business matters not properly agendized. The City Attorney shall be responsible for regulating this aspect of the proceeding.)

**7. CITY MANAGER REPORT (information only)**

8. REPORTS REGARDING AD HOC, ADVISORY, STANDING, OR OTHER COMMITTEE MEETINGS

9. WAIVER OF FULL READING OF RESOLUTIONS AND ORDINANCES

(Consideration to waive full text reading of all Resolutions and Ordinances by single motion made at the start of each meeting, subject to the ability of the City Council / Agency to read the full text of selected resolutions and ordinances when the item is addressed by subsequent motion.)

(COUNCIL / AGENCY)

**Recommendation:** Approve the Waiver of Full Reading of Resolutions and Ordinances.

10. CONSENT CALENDAR

(Items under the Consent Calendar are considered routine and will be enacted by one motion. There will be no separate discussion of these items unless a Council / Agency Member so requests, in which event the item will be removed from the Consent Calendar and considered separately.)

- A. Consideration to Adopt Resolution No. 20-14, Updating the Authorizing Agents for Operation and Management of the City's Wells Fargo Bank Fund Accounts *(page 9)*

Presented by Finance Director

**Recommendation:** The City Council is requested to approve Resolution No. 20-14 to update the authorized agents for the City's Wells Fargo Bank Fund Accounts.

- B. Consideration to Approve a Second Amendment to Professional Services Agreement Between the City of Cudahy and MV Cheng & Associates Inc. for Technical and Practical Accounting Services *(page 15)*

Presented by Finance Director

**Recommendation:** The City Council is requested to approve the Second Amendment to the Professional Services Agreement between the City of Cudahy and MV Cheng & Associates Inc. for technical and practical accounting / payroll support through June 30, 2021.

- C. Consideration to Review and Approve the Draft Minutes of April 7, 2020, and April 21, 2020, for the Regular Meeting of the City Council and the Joint Meeting of the City of Cudahy as Successor Agency and Housing Successor Agency to the Cudahy Development Commission and Draft Minutes of April 10, 2020 Special Meeting of the City Council *(page 63)*

Presented by City Clerk's Office

**Recommendation:** The City Council is requested to review and approve the City Council / Successor Agency Draft Minutes for April 7, 2020, April 10, 2020, and April 21, 2020.

## 11. PUBLIC HEARING

- A. Appeal of the Planning Commission's decision to deny Development Review Permit No. 41-532 to allow the construction of a 67,148 square foot charter school located at 7801-7835 Otis Avenue (APN 6225-026-0201/002/003/013/014) *(page 89)*

*Presented by Interim Community Development Manager*

**Recommendation:** The City Council is requested to reverse the Planning Commission's decision and adopted Resolution No. 20-15, approving Development Review Permit No. 41-532 (DRP 41-532) to allow the design, site layout, and construction of a new 67,148 square foot site of the art charter school.

## 12. BUSINESS SESSION

- A. Presentation of Proposed Fiscal Year (FY) 2020-21 City Budget *(page 459)*

*Presented by Finance Director*

**Recommendation:** The City Council is requested to receive a presentation of the Proposed Fiscal Year (FY) 2020-21 City Budget.

- B. Consideration and Adoption of an Urgency Ordinance Enacting a Temporary Moratorium on Evictions for Residential Tenants *(page 519)*

*Presented by City Attorney's Office*

**Recommendation:** The City Council is recommended to adopt an Urgency Ordinance enacting a temporary moratorium on evictions due to the nonpayment of rent for residential tenants where failure to pay rent results from income loss attributable to the novel Coronavirus (COVID-19).

- C. Discussion of Cudahy's 2020 Firework Sales in light of COVID-19 *(page 535)*

*Presented by Interim Community Development Manager*

**Recommendation:** The City Council is requested to provide direction to staff concerning the sale of fireworks for the 2020 4th of July celebrations.

## 13. COUNCIL DISCUSSION

- A. Council Member Guerrero
  - i. Municipal Code Hotel Permitting Process.

**RECESS TO CLOSED SESSION**

This is the time at which the City Council will meet in closed session to go over items of business on the closed session agenda. Once closed session is completed and the City Council returns from closed session into open session, members of the public may then rejoin the proceedings.

**14. CLOSED SESSION**

**DELIBERATING AS CUDAHY SUCCESSOR AGENCY**

- A. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 1 Elizabeth Street Residential  
Property 5256 Elizabeth Street APN: 6224-001-014  
5260 Elizabeth Street APN: 6224-001-015

Successor Agency Negotiator: Henry Garcia, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative  
Officer Under Negotiation: Price and Terms

- B. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 2 Atlantic Avenue/Santa Ana Street Commercial  
Property 4734 Santa Ana Street APN: 6224-018-008  
8110 South Atlantic Avenue APN: 6224-018-071  
8100 South Atlantic Avenue APN: 6224-018-068  
Santa Ana Street APN: 6224-018-070  
4720 Santa Ana Street APN: 6224-018-069

Successor Agency Negotiator: Henry Garcia, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative  
Officer Under Negotiation: Price and Terms

- C. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 3 Santa Ana Street Residential  
Property 4610 Santa Ana Street APN: 6224-019-014

Successor Agency Negotiator: Henry Garcia, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer Under Negotiation: Price and Terms

D. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 4 Atlantic Avenue/Cecilia Street Commercial  
Property 8135 South Atlantic Avenue APN: 6224-022-001  
4629 Cecilia Street APN: 6224-022-004  
8201 South Atlantic Avenue APN: 6224-022-002  
8221 South Atlantic Avenue APN: 6224-022-012  
4633 Cecilia Street APN: 6224-022-003

Successor Agency Negotiator: Henry Garcia, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer Under Negotiation: Price and Terms

E. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 5 Atlantic Avenue/Patata Street Commercial  
Property 4819 Patata Street APN: 6224-034-014  
8420 South Atlantic Avenue APN: 6224-034-032 APN: 6224-034-040  
Patata Street APN: 6224-034-041

Successor Agency Negotiator: Henry Garcia, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer Under Negotiation: Price and Terms

F. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 6 Atlantic Avenue/Clara Street Commercial  
Property 4613 Clara Street APN: 6226-022-002  
7660 South Atlantic Avenue APN: 6226-022-008  
7630 South Atlantic Avenue APN: 6226-022-019 APN: 6226-022-020  
7638 South Atlantic Avenue APN: 6226-022-023  
7644 South Atlantic Avenue APN: 6226-022-022  
No address APN: 6226-022-021 APN: 6226-022-024

Successor Agency Negotiator: Henry Garcia, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer Under Negotiation: Price and Terms

**G. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiator**

Properties:

- 8100 Atlantic Ave., 4720 Santa Ana St., 8110 Atlantic Ave., 4734 Santa Ana St. (APN 6224-018-068, 069, 070, 071, 008)
- 8135 Atlantic Ave., 4629 Cecilia St., 8201 S. Atlantic, 4633 Cecilia St., 8221 S. Atlantic Ave. (APN 6224-022-001, 004, 002, 003, 012)
- 4819 Patata, 8420 S. Atlantic Ave. (APN 6224-034-014, 032, 040, 041)
- 4613/4615 Clara St., 7630 Atlantic Blvd., 7660 Atlantic Blvd., 7638 Atlantic Blvd., 7644 Atlantic Blvd. (APN 6226-022-002, 019, 020, 008, 021, 022, 023, 024)
- 4610 Santa Ana St. (APN 6224-019-014)

City Negotiators: Interim City Manager, Henry Garcia and City Attorney Negotiating Parties: Cudahy LF, LLC  
Under Negotiation: Price and terms of payment

**DELIBERATING AS CITY COUNCIL**

**H. Closed Session Pursuant to Government Code Section 54956.9(d)(4) – Conference with Legal Counsel to Discuss the Initiation of Litigation – Two Matters**

**RECONVENE TO OPEN SESSION**

**15. CLOSED SESSION ANNOUNCEMENT**

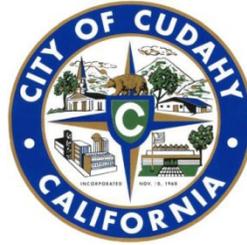
**16. ADJOURNMENT**

I, Richard Iglesias, hereby certify under penalty of perjury under the laws of the State of California that the foregoing agenda was posted on the City's Website not less than 72 hours prior to the meeting. A copy of said Agenda is on file in the City Clerk's Office.

Dated this 28th day of May 2020

  
Richard Iglesias  
Assistant City Clerk

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# Item Number 10A

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## STAFF REPORT

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**Date:** June 2, 2020  
**To:** Honorable Mayor/Chair and City Council/Agency Members  
**From:** Henry Garcia, Interim City Manager/Executive Director  
By: Steven Dobrenen, Finance Director  
**Subject:** **Consideration to Adopt Resolution No. 20-14, Updating the Authorizing Agents for Operation and Management of the City's Wells Fargo Bank Fund Accounts**

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### **RECOMMENDATION**

The City Council is requested to approve Resolution No. 20-14 to update the authorized agents for the City's Wells Fargo Bank Fund Accounts.

### **BACKGROUND**

1. On January 21, 2020, the City Council adopted Resolution No. 20-02 authorizing agents for operation and management of the Wells Fargo Bank Fund Account.
2. On April 16, 2020, the City Council appointed Henry Garcia as Interim City Manager, to start on May 29, 2020.
3. On May 28, 2020, Acting City Manager, Santor Nishizaki, ended his term as Acting City Manager and was deactivated as an agent of the operation and management of the Wells Fargo Bank Fund Account.

### **ANALYSIS**

The authorized agents for the City must be on file with the City's banking institution. Agents of the City may act on behalf of the City to cause the debts of the City to be paid, namely payroll and accounts payable payments. Typically, City Ordinances require a combination of the Mayor and / or members of upper management to sign checks to be drawn upon the City

accounts. Resolution No. 20-14 communicates to Wells Fargo Bank the new agents that the City of Cudahy has appointed for the purposes of signing accounts payable checks and payroll checks in accordance with Cudahy Municipal Code Section 3.04.050 and Section 2.28.10. Resolution No. 20-14 is designed to add Interim City Manager Henry Garcia, as an agent/check signer to the City's Wells Fargo Accounts as well as remove Acting City Manager, Santor Nishizaki, from the accounts list.

### **CONCLUSION**

After the Council approves and adopts Resolution No. 20-14, the Interim City Manager, Henry Garcia will be added as an agent/authorized check signer to the City's Wells Fargo Bank accounts.

### **FINANCIAL IMPACT**

None

### **ATTACHMENT**

Resolution No. 20-14

**RESOLUTION NO. 20-14**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CUDAHY AUTHORIZING AGENTS FOR OPERATION AND MANAGEMENT OF THE WELLS FARGO BANK FUND ACCOUNT**

**WHEREAS**, the City of Cudahy (“City”), a municipal corporation, organized and existing under and by virtue of the laws of the State of California, with its principal office at 5220 Santa Ana Street, Cudahy, CA 90201; and

**WHEREAS**, CITY OF CUDAHY is the complete and correct name of the Account Holder designating Agents to the WELLS FARGO BANK, N.A., located at 3508 E. Florence Avenue in the City of Huntington Park, CA 90255, hereinafter referred to as “Financial Institution”, as the Financial Institution of the City; and

**WHEREAS**, the City of Cudahy desires to add the below newly elected officials to the Wells Fargo Bank Fund account as “Agents”.

**BASED UPON THE ABOVE RECITALS, THE CITY COUNCIL OF THE CITY OF CUDAHY, CALIFORNIA, DOES HEREBY FIND, DETERMINE AND RESOLVE AS FOLLOWS:**

SECTION 1. That the Financial Institution named above, doing business at any one or more of its offices or branches in the State of California, be and is hereby designated as a depository for the funds of this City, which may be withdrawn on checks, drafts, advices of debit, notes or other orders for the payment of monies bearing the following appropriate number of signatures of the officials of the City: Any three (3) of the seven (7) named officers, employees, or the successors of the City of Cudahy, hereinafter referred to as “Agents,” whose names are shown below in this Section 1:

ELIZABETH ALCANTAR, MAYOR

JOSE R GONZALEZ, VICE MAYOR

CHRIS GARCIA, COUNCILMEMBER

JACK M GUERRERO, COUNCILMEMBER

BLANCA LOZOYA, COUNCILMEMBER

HENRY GARCIA, INTERIM CITY MANAGER

STEVEN DOBRENEN, FINANCE DIRECTOR

SECTION 2. The Agents of the CITY OF CUDAHY whose names appear in the preceding Section 1 of this Resolution are hereby authorized and directed to produce to the Financial Institution a true and correct original execution of his/her signature on a form provided by the Financial Institution according to the procedures established by and between the Financial Institution and the City, if such signature is not already on file with the Financial Institution for the Wells Fargo Bank Fund Account.

SECTION 3. Pursuant to Section 3.04.050 and Section 2.28.10 of the Cudahy Municipal Code, the City Council finds:

- A. That the Accounts Payable (AP) checks must bear the following combinations of signatures: Agents shall be the City Manager, a Councilmember and the third signature shall be any of the above authorized Agents. One of the required signatures may be affixed by stamping or otherwise placing a facsimile or such signature thereon.
- B. That the Payroll checks must bear the following combination of signatures: Agents shall be one Councilmember and two signatures shall be any of the above authorized Agents. One of the required signatures may be affixed by stamping or otherwise placing a facsimile of such signature thereon.

SECTION 4. That the Financial Institution is hereby directed to accept and pay without further inquiry any item drawn against any of the City's accounts with the Financial Institution bearing the approved combination of signatures of Agents, as authorized above, even though drawn or endorsed to the order of any Agent signing or tendered by such Agent for cashing or in payment of the individual obligation of such Agent or for the deposit to the Agent's personal account, and the Financial Institution shall not be required or be under any obligation to inquire as to the circumstances of the issue or use of any item signed in accordance with the resolutions contained herein, or the application or depositor of such item of the proceeds of the item.

SECTION 5. That a combination of three (3) signatures, are authorized to endorse all checks, drafts, notes and other items payable to or owned by this City for deposit with the Financial Institution, or for collection or discount by the Financial Institution, and to accept drafts and other items payable at the Financial Institution.

SECTION 6. That the above named Agents, in the approved signature combination, are authorized and empowered to execute such other agreements, including, but not limited to, special depository agreements and arrangements regarding the manner, conditions, or purposes for which funds, checks or items of the City may be deposited, collected, or withdrawn and to perform such other acts as they deem reasonably necessary to carry out the provisions of this Resolution. The other arrangements and other acts may not be contrary to the provisions contained in this Resolution.

SECTION 7. That the authority hereby conferred upon the above named Agents, in the approved signature combination, shall be and remain in full force and effect until written notice of any amendment or revocation thereof shall have been delivered to and received by the Financial Institution at each location where any account is maintained. Financial Institution shall be indemnified and held harmless from any loss suffered or any liability incurred by it in continuing to act in accordance with this Resolution. Any such notice shall not affect any items in process at the time notice is given.

SECTION 8. This Resolution shall hereby supersede Resolution No. 20-02 and any other Resolution which is in conflict or inconsistent with the provisions of this Resolution.

SECTION 9. This Resolution shall take effect immediately upon its adoption by the City Council and the City Clerk shall certify to the passage and adoption of this Resolution and enter it into the book of original Resolutions.

**PASSED, APPROVED, AND ADOPTED** by the City Council of the City of Cudahy at its regular meeting on this 2<sup>ND</sup> DAY OF JUNE 2020.

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Elizabeth Alcantar  
Mayor

ATTEST:

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Richard Iglesias  
Assistant City Clerk

**CERTIFICATION**

STATE OF CALIFORNIA            )  
COUNTY OF LOS ANGELES    ) SS:  
CITY OF CUDAHY                )

I, Richard Iglesias, Assistant City Clerk of the City of Cudahy, hereby certify that the foregoing Resolution No. 20-14 was passed and adopted by the City Council of the City of Cudahy, signed by the Mayor and attested by the City Clerk at a regular meeting of said Council held on the 2<sup>nd</sup> of June 2020, and that said Resolution was adopted by the following vote, to-wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

\_\_\_\_\_  
Richard Iglesias  
Assistant City Clerk



# Item Number 10B

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## STAFF REPORT

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**Date:** June 2, 2020

**To:** Honorable Mayor/Chair and City Council/Agency Members

**From:** Henry Garcia, Interim City Manager/Executive Director  
By: Steven Dobrenen, Finance Director

**Subject:** **Consideration to Approve A Second Amendment to Professional Services Agreement Between the City of Cudahy and MV Cheng & Associates Inc. for Technical and Practical Accounting Services**

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### RECOMMENDATION

The City Council is requested to approve the Second Amendment to the Professional Services Agreement between the City of Cudahy and MV Cheng & Associates Inc. for technical and practical accounting / payroll support through June 30, 2021.

### BACKGROUND

1. On September 14, 2019, the City entered into a Professional Services Agreement (PSA) with MV Cheng to provide support in the City's finance department as it related to accounting and payroll functions for a not to exceed contract amount of \$25,000.
2. On December 3, 2019, the City entered passed a first amendment to the PSA with MV Cheng to increase the not-to-exceed limit to \$182,300 through June 30, 2020.
3. On June 30, 2020. The term is set to expire for services related to accounting and payroll functions.

### ANALYSIS

After the recent retirement of one accounting division employee in August of 2019, and the extended temporary leave of the other division employee, the available resources for the City to perform these functions became very limited. To address the unfilled vacancies the City

entered in a one-year PSA with consulting firm MV Cheng and Associates. MV Cheng immediately provided on site support staff that were instrumental in keeping up with processing vendor payments, payroll, maintaining City financial records, preparation for audits performed by local, regional, and State granting agencies (i.e., Metropolitan Transportation Authority, Los Angeles Community Development Authority, and the State Controller's Office). Responsibilities also included day-to-day duties such as performing recordkeeping duties, including bank reconciliations and general ledger recording.

The current first amendment is set to expire on June 30, 2020. MV Cheng's supporting staff have provided necessary professional services in the highlighted areas, and therefore to avoid any disruptions in the next fiscal year, it is imperative to extend the firm's term through June 30, 2021. If approved, MV Cheng would continue staffing both unfilled positions three days per week, 30 hours per position, for a total of 60 hours per week.

MV Cheng is a notable firm that provides temporary technical and practical accounting services to Local Government entities who experience a shortage of personnel by providing special project and daily operations support.

In accordance with Ordinance No. 649 sections 3.16.160 of this Chapter 3.15 " Purchase of professional services provided by persons, firms, companies, ... including accounting... shall be made on the basis of demonstrated competence and experience of the service provider and on the professional qualifications necessary for the satisfactory performance of the services required.. The process for securing professional services may be through negotiation ... however, neither formal nor informal bidding shall be required prior to the purchase of professional services."

Pursuant to Ordinance No. 649, MV Cheng provides the skill sets and required resources to fully staff the two temporarily unfilled positions within the Finance Department. Moreover, MV Cheng has been instrumental in providing payroll and accounts payable services for fiscal year (FY) 2019-20. Therefore, approving this second amendment would minimize disruptions and address departmental deficiencies.

## **CONCLUSION**

MV Cheng would continue assisting the City with financial recordkeeping, as well as assisting in daily payroll and accounts payable processes. The professional services agreement will have a term through June 30, 2021.

### **FINANCIAL IMPACT**

No additional fiscal impact is anticipated to affect the City's General Fund, as both positions were budgeted as part of the FY 2020-21 City Budget. Moreover, the incremental contract amendment amount shall not exceed the budgeted personnel costs for FY 2020-2021. Accordingly, the not-to-exceed amount of \$355,000 is being requested through June 30, 2021.

### **ATTACHMENTS**

- A. Second Amendment to Master Agreement with MV Cheng and Associates Inc.
- B. First Amendment to master agreement with MV Cheng and Associates Inc.
- C. Master Agreement between the City and MV Cheng and Associates Inc.

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SECOND AMENDMENT  
TO AGREEMENT FOR PROFESSIONAL SERVICES  
(MV Cheng & Associates Inc.: Accounting and Finance Consulting Services)

THIS SECOND AMENDMENT (“Second Amendment”) to that certain agreement entitled “Professional Services Agreement” dated as of September 17, 2019, is hereby made and entered into this 2<sup>nd</sup> day of June, 2020 (the “Effective Date”) by and between the City of Cudahy, a municipal corporation (hereinafter, “City”) and MV Cheng & Associates Inc. (hereinafter, “Consultant”). For purposes of this Second Amendment, the capitalized term “Parties” shall be a collective reference to the City and Consultant and the capitalized term “Party” shall refer to the City or Consultant interchangeably, as appropriate.

RECITALS

This Second Amendment is made and entered into with respect to the following facts:

WHEREAS, on or about September 17, 2019, the Parties executed and entered into that certain agreement entitled “Professional Services Agreement” (hereinafter, the “Master Agreement”) to provide specialized, technical consulting services with respect to the City’s accounting and finance needs. The Master Agreement is attached and incorporated hereto as **Exhibit “A”**; and

WHEREAS, the First Amendment was approved by the City Council at its regular meeting of December 3, 2019. The First Amendment is attached and incorporated hereto as Exhibit “A”; and

WHEREAS, the Parties now wish to further amend the terms of the Master Agreement to extend the Term of the Master Agreement by one year through June 30, 2021 and to increase the not-to-exceed sum (hereinafter, “Contract Price”) to new total Contract Price of THREE HUNDRED FIFTY-FIVE THOUSAND (\$355,000); and

WHEREAS, this Second Amendment was approved by the City Council at its regular meeting of June 2, 2020.

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions herein contained, City and Consultant agree as follows:

1. Subsection 1.2 TERM:

- A. This Agreement shall have a term from the date of this Agreement to June 30, 2021. Nothing in this section shall operate to prohibit or otherwise restrict the City's ability to terminate this Agreement at any time for convenience or for cause.
- 2. Subsection 1.3 COMPENSATION:
  - B. Consultant's total compensation during the Term of this Agreement or any extension term shall not exceed the budgeted aggregate sum of THREE HUNDRED FIFTY FIVE THOUSAND DOLLARS \$355,000 (hereinafter, the "Not-to-Exceed Sum"), unless such added expenditure is first approved by the City. In the event Consultant's charges are projected to exceed the Not-to-Exceed Sum prior to expiration of the Term or any single extension term, City may suspend Consultant's performance pending City approval of any anticipated expenditures in excess of the Not-to-Exceed Sum or any other City-approved amendment to the compensation terms of this Agreement.
- 3. Except as otherwise set forth in this Second Amendment, the Master Agreement shall remain binding, controlling, and in full force and effect. This Second Amendment, together with the Master Agreement, shall constitute the entire, complete, final, and exclusive expression of the Parties with respect to the matters addressed in both documents.
- 4. The provisions of this Second Amendment shall be deemed a part of the Master Agreement and except, as otherwise provided under this Second Amendment, the Master Agreement and all provisions contained therein shall remain binding and enforceable. In the event of any conflict or inconsistency between the provisions of this Second Amendment and the provisions of the Master Agreement, the provisions of this Second Amendment shall control, but only in so far as such provisions conflict with the Master Agreement and no further.

[SIGNATURES FOLLOW ON NEXT PAGE]

**CITY OF CUDAHY:**

By: \_\_\_\_\_  
Henry Garcia,  
Interim City Manager

**CONSULTANT  
MV Cheng & Associates Inc.**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**ATTEST:**

By: \_\_\_\_\_  
Assistant City Clerk

**APPROVED AS TO FORM:**

By: \_\_\_\_\_  
City Attorney

**EXHIBIT A**  
**MASTER AGREEMENT/FIRST AMENDMENT**



FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT

(Services: Accounting and Finance Consulting Services)  
(Parties: City of Cudahy and MV Cheng & Associates Inc.)

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is made and entered into this 3<sup>rd</sup> day of December 2019 (hereinafter, the "Effective Date"), by and between the CITY OF CUDAHY, a municipal corporation ("CITY") and MV Cheng & Associates Inc., a California Corporation, with its principal place of business at 102 W. 24th Street, Upland, CA 91784 (hereinafter, "CONSULTANT"). For the purposes of this Agreement CITY and CONSULTANT may be referred to collectively by the capitalized term "Parties." The capitalized term "Party" may refer to CITY or CONSULTANT interchangeably.

WHEREAS, CITY wishes to engage CONSULTANT to provide the following specialized services: Payroll and Accounting; and

WHEREAS, CITY's in-house personnel is presently unable to perform / unable to timely perform the specialized services and tasks contemplated under this Agreement; and

WHEREAS, CONSULTANT possesses the specialized training, skills, expertise and experience required to perform the services contemplated under this Agreement; and

WHEREAS, CONSULTANT agrees to perform the various services and tasks set forth under this Agreement subject to the terms and conditions set forth herein; and

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions herein contained, CITY and CONSULTANT agree as follows:

I.

ENGAGEMENT TERMS

- 1.1 SCOPE OF SERVICES: Subject to the terms and conditions set forth in this Agreement and all exhibits attached and incorporated hereto, CONSULTANT agrees to perform the services and tasks set forth in **Exhibit "A"** (hereinafter referred to as the "Scope of Services"). CONSULTANT further agrees to furnish to CITY all labor, materials, tools, supplies, equipment, services, tasks and incidental and customary work necessary to competently perform and timely

complete the services and tasks set forth in the Scope of Services. For the purposes of this Agreement the aforementioned services and tasks set forth in the Scope of Services shall hereinafter be referred to generally by the capitalized term "Work."

1.2 TERM: This Agreement shall have a term from the date of this agreement to June 30, 2020. Nothing in this Section shall operate to prohibit or otherwise restrict the CITY's ability to terminate this Agreement at any time for convenience or for cause.

1.3 COMPENSATION:

A. CONSULTANT shall perform the various services and tasks set forth in the Scope of Services in accordance with the compensation schedule which is attached hereto as **Exhibits "B"** hereinafter, the "Approved Rate Schedule").

B. CONSULTANT's total compensation during the Term of this Agreement or any extension term shall not exceed the budgeted aggregate sum of (AMOUNT) DOLLARS (\$182,300 (hereinafter, the "Not-to-Exceed Sum"), unless such added expenditure is first approved by the CITY. In the event CONSULTANT's charges are projected to exceed the Not-to-Exceed Sum prior to the expiration of the Term or any single extension term, CITY may suspend CONSULTANT's performance pending CITY approval of any anticipated expenditures in excess of the Not-to-Exceed Sum or any other CITY-approved amendment to the compensation terms of this Agreement.

1.4 PAYMENT OF COMPENSATION: Following the conclusion of each calendar month, CONSULTANT shall submit to CITY an itemized invoice indicating the services and tasks performed during the recently concluded calendar month, including services and tasks performed and the reimbursable out-of-pocket expenses incurred. If the amount of CONSULTANT's monthly compensation is a function of hours worked by CONSULTANT's personnel, the invoice shall indicate the number of hours worked in the recently concluded calendar month, the persons responsible for performing the Work, the rate of compensation at which such services and tasks were performed, the subtotal for each task and service performed and a grand total for all services performed. Within thirty (30) calendar days of receipt of each invoice, CITY shall notify CONSULTANT in writing of any disputed amounts included in the invoice. Within thirty (30) calendar days of receipt of each invoice, CITY shall pay all undisputed amounts included on the invoice. CITY shall not withhold applicable taxes or other authorized deductions from payments made to CONSULTANT.

1.5 ACCOUNTING RECORDS: CONSULTANT shall maintain complete and accurate records with respect to all matters covered under this Agreement for a period of three (3) years after the expiration or termination of this Agreement. CITY shall have the right to access and examine such records, without charge,

during normal business hours. CITY shall further have the right to audit such records, to make transcripts therefrom and to inspect all program data, documents, proceedings, and activities. All other "Documents and Data" as defined in paragraph 6.1 shall be and remain property of the CITY.

- 1.6 ABANDONMENT BY CONSULTANT: In the event CONSULTANT ceases to perform the Work agreed to under this Agreement or otherwise abandons the undertaking contemplated herein prior to the expiration of this Agreement or prior to completion of any or all tasks set forth in the Scope of Services, CONSULTANT shall deliver to CITY immediately and without delay, all materials, records and other work product prepared or obtained by CONSULTANT in the performance of this Agreement. Furthermore, CONSULTANT shall only be compensated for the reasonable value of the services, tasks and other work performed up to the time of cessation or abandonment, less a deduction for any damages, costs or additional expenses which CITY may incur as a result of CONSULTANT's cessation or abandonment.

## II. PERFORMANCE OF AGREEMENT

- 2.1 CITY'S REPRESENTATIVES: The CITY hereby designates the City Manager and the Senior Administrative Analyst (hereinafter, the "CITY Representatives") to act as its representatives for the performance of this Agreement. The City Manager shall be the chief CITY Representative. The CITY Representatives or their designee, which designee the CITY may assign by notifying CONSULTANT in writing, shall act on behalf of the CITY for all purposes under this Agreement. CONSULTANT shall not accept directions or orders from any person other than the CITY Representatives or their designee.
- 2.2 CONSULTANT'S REPRESENTATIVES: CONSULTANT hereby designates Misty V. Cheng or designee, which designee CONSULTANT may assign by notifying CITY in writing, to act as its representative for the performance of this Agreement (hereinafter, "CONSULTANT Representative"). CONSULTANT Representative shall have full authority to represent and act on behalf of the CONSULTANT for all purposes under this Agreement. CONSULTANT Representative or designee shall supervise and direct the performance of the Work, using his best skill and attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the Work under this Agreement. Notice to the CONSULTANT Representative shall constitute notice to CONSULTANT.
- 2.3 COORDINATION OF SERVICE; CONFORMANCE WITH REQUIREMENTS: CONSULTANT agrees to work closely with CITY staff in the performance of the Work and this Agreement and shall be available to CITY staff and the CITY Representatives at all reasonable times. All work prepared by CONSULTANT

shall be subject to inspection and written approval by CITY Representatives or their designees.

2.4 STANDARD OF CARE; PERFORMANCE OF EMPLOYEES: CONSULTANT represents, acknowledges and agrees to the following:

- A. CONSULTANT shall perform all Work skillfully, competently and to the highest standards of CONSULTANT's profession;
- B. CONSULTANT shall perform all Work in a manner reasonably satisfactory to the CITY;
- C. CONSULTANT shall comply with all applicable federal, state and local laws and regulations, including the conflict of interest provisions of Government Code section 1090 and the Political Reform Act (Government Code section 81000 et seq.);
- D. CONSULTANT understands the nature and scope of the Work to be performed under this Agreement as well as any and all schedules of performance;
- E. All of CONSULTANT's employees and agents possess sufficient skill, knowledge, training and experience to perform those services and tasks assigned to them by CONSULTANT; and
- F. All of CONSULTANT's employees and agents (including but not limited to subcontractors and subconsultants) possess all licenses, permits, certificates, qualifications and approvals of whatever nature that are legally required to perform the tasks and services contemplated under this Agreement and all such licenses, permits, certificates, qualifications and approvals shall be maintained throughout the term of this Agreement and made available to CITY for copying and inspection.

The Parties acknowledge and agree that CONSULTANT shall perform, at CONSULTANT's own cost and expense and without any reimbursement from CITY, any services necessary to correct any errors or omissions caused by CONSULTANT's failure to comply with the standard of care set forth under this Section or by any like failure on the part of CONSULTANT's employees, agents, contractors, subcontractors and subconsultants. Such effort by CONSULTANT to correct any errors or omissions shall be commenced within three (3) business days upon their discovery by either Party and shall be completed within no more than fifteen (15) calendar days from the date of discovery or such other extended period of time authorized by the CITY Representatives in writing and in their sole and absolute discretion except for any error or omission which may be a hazard to health or life safety in which case corrective action shall be taken immediately and shall be diligently completed. The Parties acknowledge and agree that CITY's acceptance of any work performed by CONSULTANT or on CONSULTANT's behalf shall not constitute a release of any deficiency or delay in performance. The

Parties further acknowledge, understand and agree that CITY has relied upon the foregoing representations of CONSULTANT, including but not limited to the representation that CONSULTANT possesses the skills, training, knowledge and experience necessary to perform the Work skillfully, competently and to the highest standards of CONSULTANT's profession.

**2.5** ASSIGNMENT: The skills, training, knowledge and experience of CONSULTANT are material to CITY's willingness to enter into this Agreement. Accordingly, CITY has an interest in the qualifications and capabilities of the person(s) who will perform the services and tasks to be undertaken by CONSULTANT or on behalf of CONSULTANT in the performance of this Agreement. In recognition of this interest, CONSULTANT agrees that it shall not assign or transfer, either directly or indirectly or by operation of law, this Agreement or the performance of any of CONSULTANT's duties or obligations under this Agreement without the prior written consent of the CITY. In the absence of CITY's prior written consent, any attempted assignment or transfer shall be ineffective, null and void and shall constitute a material breach of this Agreement.

**2.6** CONTROL AND PAYMENT OF SUBORDINATES; INDEPENDENT CONTRACTOR: The Work shall be performed by CONSULTANT or under CONSULTANT's strict supervision. CONSULTANT will determine the means, methods and details of performing the Work subject to the requirements of this Agreement. CITY retains CONSULTANT on an independent contractor basis and not as an employee. CONSULTANT reserves the right to perform similar or different services for other principals during the term of this Agreement, provided such work does not unduly interfere with CONSULTANT's competent and timely performance of the Work contemplated under this Agreement and provided the performance of such services does not result in the unauthorized disclosure of CITY's confidential or proprietary information. Any additional personnel performing the Work under this Agreement on behalf of CONSULTANT are not employees of CITY and shall at all times be under CONSULTANT's exclusive direction and control. CONSULTANT shall pay all wages, salaries and other amounts due such personnel and shall assume responsibility for all benefits, payroll taxes, Social Security and Medicare payments and the like. CONSULTANT shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: Social Security taxes, income tax withholding, unemployment insurance, disability insurance, workers' compensation insurance and the like.

**2.7** REMOVAL OF EMPLOYEES OR AGENTS: If any of CONSULTANT's officers, employees, agents, contractors, subcontractors or subconsultants are determined by the CITY Representatives to be uncooperative, incompetent, a threat to the adequate or timely performance of the tasks assigned to CONSULTANT, a threat to persons or property, or if any of CONSULTANT's officers, employees, agents, contractors, subcontractors or subconsultants fail or

refuse to perform the Work in a manner acceptable to the CITY, such officer, employee, agent, contractor, subcontractor or subconsultant shall be promptly removed by CONSULTANT and shall not be reassigned to perform any of the Work.

- 2.8 COMPLIANCE WITH LAWS: CONSULTANT shall keep itself informed of and in compliance with all applicable federal, state or local laws to the extent such laws control or otherwise govern the performance of the Work. CONSULTANT's compliance with applicable laws shall include without limitation compliance with all applicable Cal/OSHA requirements.
- 2.9 NON-DISCRIMINATION: In the performance of this Agreement, CONSULTANT shall not discriminate against any employee, subcontractor, subconsultant, or applicant for employment because of race, color, creed, religion, sex, marital status, sexual orientation, national origin, ancestry, age, physical or mental disability or medical condition.
- 2.10. INDEPENDENT CONTRACTOR STATUS: The Parties acknowledge, understand and agree that CONSULTANT and all persons retained or employed by CONSULTANT are, and shall at all times remain, wholly independent contractors and are not officials, officers, employees, departments or subdivisions of CITY. CONSULTANT shall be solely responsible for the negligent acts and/or omissions of its employees, agents, contractors, subcontractors and subconsultants. CONSULTANT and all persons retained or employed by CONSULTANT shall have no authority, express or implied, to bind CITY in any manner, nor to incur any obligation, debt or liability of any kind on behalf of, or against, CITY, whether by contract or otherwise, unless such authority is expressly conferred to CONSULTANT under this Agreement or is otherwise expressly conferred by CITY in writing.
- 2.11. HIRING OF CONSULTANT'S ASSOCIATES AND/OR SUBCONTRACTORS. CITY agrees that each of CONSULTANT's associates and/or sub contractors will only be able to obtain a direct contract or professional services agreement with the CITY, only after the expiration of the contract or professional services agreement with CONSULTANT AND only after 2 years from the expiration date of the contract or professional services agreement with CONSULTANT. CITY agrees to hire one of CONSULTANT's associates and/or sub contractors as a full time, permanent, fully benefited employee of the CITY, only after CITY has performed a recruitment AND the associate and/or sub contractor has billed 960 hours to the CITY. If CITY employs CONSULTANT's associates and/or sub contractors through another temporary service or staffing agency, CITY agrees to pay a fee of 10% of the associate and/or sub contractor's annualized wages based on the hourly rate charged, to CONSULTANT.

III.  
INSURANCE

- 3.1 DUTY TO PROCURE AND MAINTAIN INSURANCE: As more specifically set forth below under this Article, Consultant agrees that it shall procure and maintain for the term of this Agreement (and for such extended period of time as may be required under this Article) insurance against claims for death or injuries to persons or damages to property that may arise from or in connection with Consultant's performance of this Agreement. Consultant shall also procure and maintain such other types of insurance as may be required under this Article, below. City shall not, and shall be under no obligation to, issue a Notice to Proceed until Consultant has provided evidence satisfactory to City that it has procured all insurance required under this Article III (Insurance).
- 3.2 REQUIRED COVERAGES: Consultant agrees that it shall procure and maintain the following insurance coverage, at its own expense, for the duration for this Agreement or any extended period set forth herein:
- A. Commercial General Liability Insurance: Consultant shall procure and maintain Commercial General Liability Insurance ("CGL Coverage") as broad as Insurance Services Office Commercial General Liability coverage (occurrence Form CG 0001). Such CGL Coverage shall have minimum limits of no less than One Million Dollars (\$1,000,000.00) per occurrence for bodily injury, personal injury, property damage, operations, products and completed operations, and contractual liability. The general aggregate limit of the CGL Coverage shall either apply separately to the work and services to be performed under this Agreement; or the general aggregate limit shall be twice the required occurrence limit;
  - B. Automobile Liability Insurance: Consultant shall procure and maintain Automobile Liability Insurance as broad as Insurance Services Office Form Number CA 0001 covering Automobile Liability, Code 1 (any auto). Such Automobile Liability Insurance shall have minimum limits of no less than One Million Dollars (\$1,000,000.00) per accident for bodily injury and property damage.
  - C. Workers' Compensation Insurance/Employer's Liability Insurance: Consultant shall procure and maintain Workers' Compensation Insurance affording coverage at least as broad as that required by the State of California with Employer's Liability Insurance with minimum limits of no less than One Million Dollars (\$1,000,000.00) per accident for bodily injury or disease. The Worker's Compensation insurer shall also agree to waive all rights of subrogation against City and City's elected and appointed officials, officers, employees, agents and volunteers for losses paid under the terms of the insurance policy. Workers' Compensation insurance shall also provide or be endorsed to provide: There will be no

cancellation, suspension, reduction or voiding of coverage without thirty (30) calendar days prior written notice by certified mail, return receipt requested, to City. If any reduction of coverage occurs, Consultant shall furnish City with information regarding such reduction at Consultant's earliest possible opportunity and in no case later than five (5) calendar days after Consultant is notified of the change in coverage. Any failure to comply with reporting or other provisions of the policy, including breaches of warrants, shall not affect the coverage provided to City and City's elected or appointed officials, officers, employees, agents or volunteers.

D. Professional Liability Insurance: For the full term of this Agreement and for a period of three (3) years thereafter, Consultant shall procure and maintain Errors and Omissions Liability Insurance appropriate to Consultant's profession. Such coverage shall have minimum limits of no less than One Million Dollars (\$1,000,000.00) per claim and shall be endorsed to include contractual liability.

3.3 ADDITIONAL INSURED REQUIREMENTS: The CGL Coverage and the Automobile Liability Insurance shall contain an endorsement naming the City and City's elected and appointed officials, officers, employees, agents and volunteers as additional insureds. As to the CGL Coverage, the additional insured endorsement shall be made using Insurance Service Office form CG20 10 1185, CG 20 10 10 01 or CG 37 10 01.

3.4 REQUIRED CARRIER RATING: All varieties of insurance required under this Agreement shall be procured from insurers licensed in the State of California and authorized to issue policies directly to California insureds. Except as otherwise provided elsewhere under this Article, all required insurance shall be procured from insurers, who according to the latest edition of the Best's Insurance Guide have an A.M. Best's rating of no less than A:VII. City may also accept policies procured by insurance carriers with a Standard & Poor's rating of no less than BBB according to the latest published edition the Standard & Poor's rating guide.

3.5 PRIMACY OF CONSULTANT'S INSURANCE: All policies of insurance provided by Consultant shall be primary to any coverage available to the City, the City's elected or appointed officials, officers, employees, agents or volunteers. Any insurance or self- insurance maintained by the City or City's elected or appointed officials, officers, employees, agents or volunteers shall be in excess of Consultant's insurance and shall not contribute with it.

3.6 WAIVER OF SUBROGATION: All insurance coverage provided pursuant to this Agreement shall not prohibit Consultant or Consultant's officers, employees, agents, subcontractors or subconsultants from waiving the right of subrogation prior to a loss. Consultant hereby waives all rights of subrogation against City.

3.7 VERIFICATION OF COVERAGE: Consultant acknowledges, understands and agrees that City's ability to verify the procurement and maintenance of the

insurance required under this Article is critical to safeguarding the City's financial well-being. Accordingly, Consultant warrants, represents and agrees that it shall furnish City with original certificates of insurance and endorsements evidencing the coverage required under this Article on forms satisfactory to City in its sole and absolute discretion. The certificates of insurance and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf, and shall be on forms provided by the City if requested. All certificates of insurance and endorsements shall be received and approved by City as a condition precedent to Consultant's commencement of any work or any of the Work. Upon City's written request, Consultant shall also provide City with certified copies of all required insurance policies as a condition precedent to the commencement of any work or any of the Work. City shall not, and shall be under no obligation to, issue a Notice to Proceed until Consultant fully complies with this Section. The requirements of this Section cannot be waived and any attempted waiver shall be void, invalid and non-binding upon City.

#### IV. INDEMNIFICATION

- 4.1 The Parties agree that CITY and CITY's elected and appointed officials, officers, employees, agents and volunteers (hereinafter, the "CITY Indemnitees") should, to the fullest extent permitted by law, be protected from any and all loss, injury, damage, claim, lawsuit, cost, expense, attorneys' fees, litigation costs, or any other cost arising out of or in any way related to the performance of this Agreement. Accordingly, the provisions of this indemnity provision are intended by the Parties to be interpreted and construed to provide the CITY Indemnitees with the fullest protection possible under the law. CONSULTANT acknowledges that CITY would not enter into this Agreement in the absence of CONSULTANT's commitment to indemnify, defend and protect CITY as set forth herein.
- 4.2 To the fullest extent permitted by law, CONSULTANT shall indemnify, hold harmless and defend the CITY Indemnitees from and against all liability, loss, damage, expense, cost (including without limitation reasonable attorneys' fees, expert fees and all other costs and fees of litigation) of every nature arising out of or in connection with CONSULTANT's performance of Work hereunder or its failure to comply with any of its obligations contained in this Agreement, except such loss or damage which is caused by the sole negligence or willful misconduct of the CITY.

- 4.3 CITY shall have the right to offset against the amount of any compensation due CONSULTANT under this Agreement any amount due CITY from CONSULTANT as a result of CONSULTANT's failure to pay CITY promptly any indemnification arising under this Article and related to CONSULTANT's failure to either (i) pay taxes on amounts received pursuant to this Agreement or (ii) comply with applicable workers' compensation laws.
- 4.4 The obligations of CONSULTANT under this Article will not be limited by the provisions of any workers' compensation act or similar act. CONSULTANT expressly waives its statutory immunity under such statutes or laws as to CITY and CITY's elected and appointed officials, officers, employees, agents and volunteers.
- 4.5 CONSULTANT agrees to obtain executed indemnity agreements with provisions identical to those set forth here in this Article from each and every subcontractor or any other person or entity involved by, for, with or on behalf of CONSULTANT in the performance of this Agreement. In the event CONSULTANT fails to obtain such indemnity obligations from others as required herein, CONSULTANT agrees to be fully responsible and indemnify, hold harmless and defend CITY and CITY's elected and appointed officials, officers, employees, agents and volunteers from and against any and all claims and losses, costs or expenses for any damage due to death or injury to any person and injury to any property resulting from any alleged intentional, reckless, negligent, or otherwise wrongful acts, errors or omissions of CONSULTANT's subcontractors or any other person or entity involved by, for, with or on behalf of CONSULTANT in the performance of this Agreement. Such costs and expenses shall include reasonable attorneys' fees incurred by counsel of CITY's choice.
- 4.6 CITY does not, and shall not, waive any rights that it may possess against CONSULTANT because of the acceptance by CITY, or the deposit with CITY, of any insurance policy or certificate required pursuant to this Agreement. This hold harmless and indemnification provision shall apply regardless of whether or not any insurance policies are determined to be applicable to the claim, demand, damage, liability, loss, cost or expense.
- 4.7 This Article and all provisions contained herein (including but not limited to the duty to indemnify, defend and hold free and harmless) shall survive the termination or normal expiration of this Agreement and is in addition to any other rights or remedies which the CITY may have at law or in equity.

V.  
TERMINATION

5.1 TERMINATION WITHOUT CAUSE: CITY may terminate this Agreement at any time for convenience and without cause by giving CONSULTANT a minimum of ten (10) calendar days' prior written notice of CITY's intent to terminate this Agreement. Upon such termination for convenience, CONSULTANT shall be compensated only for those services and tasks which have been performed by CONSULTANT up to the effective date of the termination. CONSULTANT may not terminate this Agreement except for cause as provided under Section 5.2, below. If this Agreement is terminated as provided herein, CITY may require CONSULTANT to provide all finished or unfinished Documents and Data, as defined in Section 6.1 below, and other information of any kind prepared by CONSULTANT in connection with the performance of the Work. CONSULTANT shall be required to provide such Documents and Data within fifteen (15) calendar days of CITY's written request. No actual or asserted breach of this Agreement on the part of CITY pursuant to Section 5.2, below, shall operate to prohibit or otherwise restrict CITY's ability to terminate this Agreement for convenience as provided under this Section.

5.2 EVENTS OF DEFAULT; BREACH OF AGREEMENT:

A. In the event either Party fails to perform any duty, obligation, service or task set forth under this Agreement (or fails to timely perform or properly perform any such duty, obligation, service or task set forth under this Agreement), an event of default (hereinafter, "Event of Default") shall occur. For all Events of Default, the Party alleging an Event of Default shall give written notice to the defaulting Party (hereinafter referred to as a "Default Notice") which shall specify: (i) the nature of the Event of Default; (ii) the action required to cure the Event of Default; and (iii) a date by which the Event of Default shall be cured, which shall not be less than the applicable cure period set forth under Sections 5.2.B and 5.2.C below or if a cure is not reasonably possible within the applicable cure period, to begin such cure and diligently prosecute such cure to completion. The Event of Default shall constitute a breach of this Agreement if the defaulting Party fails to cure the Event of Default within the applicable cure period or any extended cure period allowed under this Agreement.

B. CONSULTANT shall cure the following Events of Defaults within the following time periods:

i. Within five (5) business days of CITY's issuance of a Default Notice for any failure of CONSULTANT to timely provide CITY or CITY's employees or agents with any information and/or written reports, documentation or work product which CONSULTANT is obligated to provide to CITY or CITY's employees or agents under this Agreement. Prior to the expiration of the 5-

day cure period, CONSULTANT may submit a written request for additional time to cure the Event of Default upon a showing that CONSULTANT has commenced efforts to cure the Event of Default and that the Event of Default cannot be reasonably cured within the 5-day cure period. The foregoing notwithstanding, CITY shall be under no obligation to grant additional time for the cure of an Event of Default under this Section 5.2.B.i. that exceeds seven (7) calendar days from the end of the initial 5-day cure period; or

- ii. Within fourteen (14) calendar days of CITY's issuance of a Default Notice for any other Event of Default under this Agreement. Prior to the expiration of the 14-day cure period, CONSULTANT may submit a written request for additional time to cure the Event of Default upon a showing that CONSULTANT has commenced efforts to cure the Event of Default and that the Event of Default cannot be reasonably cured within the 14-day cure period. The foregoing notwithstanding, CITY shall be under no obligation to grant additional time for the cure of an Event of Default under this Section 5.2.B.ii that exceeds thirty (30) calendar days from the end of the initial 14-day cure period.

In addition to any other failure on the part of CONSULTANT to perform any duty, obligation, service or task set forth under this Agreement (or the failure to timely perform or properly perform any such duty, obligation, service or task), an Event of Default on the part of CONSULTANT shall include, but shall not be limited to the following: (i) CONSULTANT's refusal or failure to perform any of the services or tasks called for under the Scope of Services; (ii) CONSULTANT's failure to fulfill or perform its obligations under this Agreement within the specified time or if no time is specified, within a reasonable time; (iii) CONSULTANT's and/or its employees' disregard or violation of any federal, state, local law, rule, procedure or regulation; (iv) the initiation of proceedings under any bankruptcy, insolvency, receivership, reorganization, or similar legislation as relates to CONSULTANT, whether voluntary or involuntary; (v) CONSULTANT's refusal or failure to perform or observe any covenant, condition, obligation or provision of this Agreement; and/or (vi) CITY's discovery that a statement, representation or warranty by CONSULTANT relating to this Agreement is false, misleading or erroneous in any material respect.

- C. CITY shall cure any Event of Default asserted by CONSULTANT within forty-five (45) calendar days of CONSULTANT's issuance of a Default Notice, unless the Event of Default cannot reasonably be cured within the 45-day cure period. Prior to the expiration of the 45-day cure period, CITY may submit a written request for additional time to cure the Event of Default upon a showing that CITY has commenced its efforts to cure the Event of Default and that the Event of Default cannot be reasonably cured within the 45-day cure period. The foregoing notwithstanding, an Event of Default dealing with CITY's failure to timely pay any undisputed sums to CONSULTANT as

provided under Section 1.4, above, shall be cured by CITY within five (5) calendar days from the date of CONSULTANT's Default Notice to CITY.

- D. CITY, in its sole and absolute discretion, may also immediately suspend CONSULTANT's performance under this Agreement pending CONSULTANT's cure of any Event of Default by giving CONSULTANT written notice of CITY's intent to suspend CONSULTANT's performance (hereinafter, a "Suspension Notice"). CITY may issue the Suspension Notice at any time upon the occurrence of an Event of Default. Upon such suspension, CONSULTANT shall be compensated only for those services and tasks which have been rendered by CONSULTANT to the reasonable satisfaction of CITY up to the effective date of the suspension. No actual or asserted breach of this Agreement on the part of CITY shall operate to prohibit or otherwise restrict CITY's ability to suspend this Agreement as provided herein.
- E. No waiver of any Event of Default or breach under this Agreement shall constitute a waiver of any other or subsequent Event of Default or breach. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel, or otherwise.
- F. The duties and obligations imposed under this Agreement and the rights and remedies available hereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. In addition to any other remedies available to CITY at law or under this Agreement in the event of any breach of this Agreement, CITY, in its sole and absolute discretion, may also pursue any one or more of the following remedies:
- i. Upon written notice to CONSULTANT, the CITY may immediately terminate this Agreement in whole or in part;
  - ii. Upon written notice to CONSULTANT, the CITY may extend the time of performance;
  - iii. The CITY may proceed by appropriate court action to enforce the terms of the Agreement to recover damages for CONSULTANT's breach of the Agreement or to terminate the Agreement; or
  - iv. The CITY may exercise any other available and lawful right or remedy.

CONSULTANT shall be liable for all legal fees plus other costs and expenses that CITY incurs upon a breach of this Agreement by CONSULTANT or in the CITY's exercise of its remedies under this Agreement.

G. In the event CITY is in breach of this Agreement, CONSULTANT's sole remedy shall be the suspension or termination of this Agreement and/or the recovery of any unpaid sums lawfully owed to CONSULTANT under this Agreement for completed services and tasks.

5.3 SCOPE OF WAIVER: No waiver of any default or breach under this Agreement shall constitute a waiver of any other default or breach, whether of the same or other covenant, warranty, agreement, term, condition, duty or requirement contained in this Agreement. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel, or otherwise.

5.4 SURVIVING ARTICLES, SECTIONS AND PROVISIONS: The termination of this Agreement pursuant to any provision of this Article or by normal expiration of its term or any extension thereto shall not operate to terminate any Article, Section or provision contained herein which provides that it shall survive the termination or normal expiration of this Agreement.

## VI.

### MISCELLANEOUS PROVISIONS

6.1 DOCUMENTS & DATA; LICENSING OF INTELLECTUAL PROPERTY: All Documents and Data shall be and remain the property of CITY without restriction or limitation upon their use or dissemination by CITY. For purposes of this Agreement, the term "Documents and Data" means and includes all reports, analyses, correspondence, plans, drawings, designs, renderings, specifications, notes, summaries, strategies, charts, schedules, spreadsheets, calculations, lists, data compilations, documents or other materials developed and/or assembled by or on behalf of CONSULTANT in the performance of this Agreement and fixed in any tangible medium of expression, including but not limited to Documents and Data stored digitally, magnetically and/or electronically. This Agreement creates, at no cost to CITY, a perpetual license for CITY to copy, use, reuse, disseminate and/or retain any and all copyrights, designs, and other intellectual property embodied in all Documents and Data. CONSULTANT shall require all subcontractors and subconsultants working on behalf of CONSULTANT in the performance of this Agreement to agree in writing that CITY shall be granted the same right to copy, use, reuse, disseminate and retain Documents and Data prepared or assembled by any subcontractor or subconsultant as applies to Documents and Data prepared by CONSULTANT in the performance of this Agreement.

6.2 CONFIDENTIALITY: All data, documents, discussion, or other information developed or received by CONSULTANT or provided for performance of this Agreement are deemed confidential and shall not be disclosed by

CONSULTANT without prior written consent by CITY. CITY shall grant such consent if disclosure is legally required. Upon request, all CITY data shall be returned to CITY upon the termination or expiration of this Agreement. CONSULTANT shall not use CITY's name or insignia, photographs, or any publicity pertaining to the Work in any magazine, trade paper, newspaper, television or radio production or other similar medium without the prior written consent of CITY.

- 6.3 **FALSE CLAIMS ACT:** CONSULTANT warrants and represents that neither CONSULTANT nor any person who is an officer of, in a managing position with, or has an ownership interest in CONSULTANT has been determined by a court or tribunal of competent jurisdiction to have violated the False Claims Act, 31 U.S.C., section 3789 et seq. and the California False Claims Act, Government Code section 12650 et seq.
- 6.4 **NOTICES:** All notices permitted or required under this Agreement shall be given to the respective Parties at the following addresses, or at such other address as the respective Parties may provide in writing for this purpose:

**CONSULTANT:**

MV Cheng & Associates Inc.  
102 W. 24th Street  
Upland, CA 91784  
ATTN: Misty V. Cheng

**CITY:**

City of Cudahy  
Attention: City Manager  
5220 Santa Ana Street  
Cudahy, CA 90201  
Attn: City Manager  
Phone: (323) 773-5143  
Fax: (323) 771-2072

Such notices shall be deemed effective when personally delivered or successfully transmitted by facsimile as evidenced by a fax confirmation slip or when mailed, forty-eight (48) hours after deposit with the United States Postal Service, first class postage prepaid and addressed to the Party at its applicable address.

- 6.5 **COOPERATION; FURTHER ACTS:** The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as is reasonably necessary, appropriate or convenient to achieve the purposes of this Agreement.
- 6.6 **SUBCONTRACTING:** CONSULTANT shall not subcontract any portion of the Work required by this Agreement, except as expressly stated herein, without the prior written approval of CITY. Subcontracts (including without limitation subcontracts with subconsultants), if any, shall contain a provision making them

- 6.13 NO THIRD PARTY BENEFIT: There are no intended third party beneficiaries of any right or obligation assumed by the Parties. All rights and benefits under this Agreement inure exclusively to the Parties.
- 6.14 CONSTRUCTION OF AGREEMENT: This Agreement shall not be construed in favor of, or against, either Party but shall be construed as if the Parties prepared this Agreement together through a process of negotiation and with the advice of their respective attorneys.
- 6.15 SEVERABILITY: If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.
- 6.16 AMENDMENT; MODIFICATION: No amendment, modification or supplement of this Agreement shall be valid or binding unless executed in writing and signed by both Parties, subject to CITY approval. The requirement for written amendments, modifications or supplements cannot be waived and any attempted waiver shall be void and invalid.
- 6.17 CAPTIONS: The captions of the various articles, sections and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content, or intent of this Agreement.
- 6.18 INCONSISTENCIES OR CONFLICTS: In the event of any conflict or inconsistency between the provisions of this Agreement and any of the exhibits attached hereto, the provisions of this Agreement shall control.
- 6.19 ENTIRE AGREEMENT: This Agreement including all attached exhibits is the entire, complete, final and exclusive expression of the Parties with respect to the matters addressed herein and supersedes all other agreements or understandings, whether oral or written, or entered into between CITY and CONSULTANT prior to the execution of this Agreement. No statements, representations or other agreements, whether oral or written, made by any Party which are not embodied herein shall be valid or binding. No amendment, modification or supplement to this Agreement shall be valid and binding unless in writing and duly executed by the Parties pursuant to Section 6.16, above.
- 6.20 COUNTERPARTS: This Agreement shall be executed in three (3) original counterparts each of which shall be of equal force and effect. No handwritten or typewritten amendment, modification or supplement to any one counterparts shall be valid or binding unless made to all three counterparts in conformity with

subject to all provisions stipulated in this Agreement, including provisions relating to insurance requirements and indemnification.

- 6.7 CITY'S RIGHT TO EMPLOY OTHER CONSULTANTS: CITY reserves the right to employ other contractors in connection with the various projects worked upon by CONSULTANT.
- 6.8 PROHIBITED INTERESTS: CONSULTANT warrants, represents and maintains that it has not employed nor retained any company or person, other than a *bona fide* employee working solely for CONSULTANT, to solicit or secure this Agreement. Further, CONSULTANT warrants and represents that it has not paid nor has it agreed to pay any company or person, other than a *bona fide* employee working solely for CONSULTANT, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, CITY shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer or employee of CITY, during the term of his or her service with CITY, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.
- 6.9 TIME IS OF THE ESSENCE: Time is of the essence for each and every provision of this Agreement.
- 6.10 GOVERNING LAW AND VENUE: This Agreement shall be interpreted and governed according to the laws of the State of California. In the event of litigation between the Parties, venue, without exception, shall be in the Los Angeles County Superior Court of the State of California. If, and only if, applicable law requires that all or part of any such litigation be tried exclusively in federal court, venue, without exception, shall be in the Central District of California located in the City of Los Angeles, California.
- 6.11 ATTORNEYS' FEES: If either Party commences an action against the other Party, either legal, administrative or otherwise, arising out of or in connection with this Agreement, the prevailing Party in such litigation shall be entitled to have and recover from the losing Party reasonable attorneys' fees and all other costs of such action.
- 6.12 SUCCESSORS AND ASSIGNS: This Agreement shall be binding on the successors and assigns of the Parties.

Section 6.16, above. One fully executed original counterpart shall be delivered to CONSULTANT and the remaining two original counterparts shall be retained by CITY.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed the day and year first appearing in this Agreement, above.

**CITY OF CUDAHY:**

By:   
\_\_\_\_\_  
City Manager

**CONSULTANT: MV CHENG & ASSOCIATES INC.**

By: \_\_\_\_\_  
NAME

Title \_\_\_\_\_

**ATTEST:**

By: \_\_\_\_\_  
Deputy City Clerk

**APPROVED AS TO FORM:**

By: \_\_\_\_\_  
City Attorney

Section 6.16, above. One fully executed original counterpart shall be delivered to CONSULTANT and the remaining two original counterparts shall be retained by CITY.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed the day and year first appearing in this Agreement, above.

**CITY OF CUDAHY:**

By: \_\_\_\_\_  
City Manager

**CONSULTANT: MV CHENG & T  
ASSOCIATES INC.**

By: \_\_\_\_\_  
NAME



Title PRESIDENT & CEO

**ATTEST:**

By: \_\_\_\_\_  
Deputy City Clerk

**APPROVED AS TO FORM:**

By: \_\_\_\_\_  
City Attorney

## **EXHIBIT "A"**

### **Scope of Services**

The services will include both technical and practical support to client.  
Specifically:

1. Payroll processing services that include but are not limited to verifying changes to employee master files, verification of employee timesheet (including meal breaks), calculation of employee timesheet hours, entering hours, and adjustments. Payroll processing will also include payment of commissioners, processing of other 3<sup>rd</sup> party remittance check, and payment of taxes withheld to State and Federal agencies, including, but not limited to medical, dental, vision, retirement (PERS), loan programs, garnishments, and Federal and State Tax deposits.
2. Preparation and filing of quarterly and annual reports to Federal and State agencies as needed.
3. Other payroll matters as needed.
4. Accounts Payable processing that includes preparation of Check Requests, matching of invoices, purchase requisition, other related documents. Obtaining signatures of appropriate individuals for approval and review of Check Requests. Processing may also include entering approved Check Requests, including invoice information, in to Accounts Payable module and printing the warrants. As part of the processing research may be required to identify if invoice(s) had been previously paid.
5. General Ledger processing includes, but is not limited to, posting of Cash Receipts, Accounts Payable, Payrolls monthly activity to the G/L; closing the fiscal year ended June 30, 2019 G/L.
6. Bank Reconciliation preparation, including identifying/categorizing and recording of wire transfers in the Cash Receipts system. Bank Reconciliation will conclude with a Cash by Fund and Cash and Investments worksheet as well as recaps of Check Demands and Payroll activity that will be included as part of monthly staff report to the City Council.
7. Preparation of journals entries, including, but not limited to, adjustment relating to bank activity (such as NSF checks) grant programs, and fiscal agent activity.
8. Grant / Funding reporting (Los Angeles Metropolitan Authority, LA CDC [CDBG funding], and other Local / State / Federal Agencies).
9. Preparation of Year End Journal entries to record accruals and to make adjustments / transfers from general fund to special funds
10. Prepare and consolidate financial statements and workpapers and provide support for outstanding external audits. Audit workpaper preparation including but not limited to, schedules of Accounts Payable, Accounts Receivable, capital assets (including search), long term. Preparation also includes running reports from various accounting models such as balance sheet, income statements, check registers, cash receipt reports, journal entry reports.
11. Assistance in preparing budget projections and recording of Annual Budget and adjustments in G/L.

**EXHIBIT "B"**  
**Approved Rate Schedule**

**Rate of Compensation**

<u>Position Level</u>	<u>Rate</u>	<u>Est. Hours/Week</u>	<u>Est. Cost per Week</u>
Payroll / Accounts Payable			
Technician	60	30	\$ 1,800
Senior Accountant	75	30	\$ 2,250

Per Section 1.4, itemized invoices are paid based upon on each concluded calendar month.



PROFESSIONAL SERVICES AGREEMENT

(Services: Accounting and Finance Consulting Services)  
(Parties: City of Cudahy and MV Cheng & Associates Inc.)

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is made and entered into this 17<sup>th</sup> day of September 2019 (hereinafter, the "Effective Date"), by and between the CITY OF CUDAHY, a municipal corporation ("CITY") and MV Cheng & Associates Inc., a California Corporation, with its principal place of business at 102 W. 24th Street, Upland, CA 91784 (hereinafter, "CONSULTANT"). For the purposes of this Agreement CITY and CONSULTANT may be referred to collectively by the capitalized term "Parties." The capitalized term "Party" may refer to CITY or CONSULTANT interchangeably.

WHEREAS, CITY wishes to engage CONSULTANT to provide the following specialized services: Payroll and Accounting; and

WHEREAS, CITY's in-house personnel is presently unable to perform / unable to timely perform the specialized services and tasks contemplated under this Agreement; and

WHEREAS, CONSULTANT possesses the specialized training, skills, expertise and experience required to perform the services contemplated under this Agreement; and

WHEREAS, CONSULTANT agrees to perform the various services and tasks set forth under this Agreement subject to the terms and conditions set forth herein; and

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions herein contained, CITY and CONSULTANT agree as follows:

I.

ENGAGEMENT TERMS

- 1.1 SCOPE OF SERVICES: Subject to the terms and conditions set forth in this Agreement and all exhibits attached and incorporated hereto, CONSULTANT agrees to perform the services and tasks set forth in **Exhibit "A"** (hereinafter referred to as the "Scope of Services"). CONSULTANT further agrees to furnish to CITY all labor, materials, tools, supplies, equipment, services, tasks and incidental and customary work necessary to competently perform and timely

complete the services and tasks set forth in the Scope of Services. For the purposes of this Agreement the aforementioned services and tasks set forth in the Scope of Services shall hereinafter be referred to generally by the capitalized term "Work."

1.2 TERM: This Agreement shall have a term from the date of this agreement to June 30, 2020. Nothing in this Section shall operate to prohibit or otherwise restrict the CITY's ability to terminate this Agreement at any time for convenience or for cause.

1.3 COMPENSATION:

A. CONSULTANT shall perform the various services and tasks set forth in the Scope of Services in accordance with the compensation schedule which is attached hereto as **Exhibits "B"** hereinafter, the "Approved Rate Schedule").

B. CONSULTANT's total compensation during the Term of this Agreement or any extension term shall not exceed the budgeted aggregate sum of (AMOUNT) DOLLARS (\$25,000 (hereinafter, the "Not-to-Exceed Sum"), unless such added expenditure is first approved by the CITY. In the event CONSULTANT's charges are projected to exceed the Not-to-Exceed Sum prior to the expiration of the Term or any single extension term, CITY may suspend CONSULTANT's performance pending CITY approval of any anticipated expenditures in excess of the Not-to-Exceed Sum or any other CITY-approved amendment to the compensation terms of this Agreement.

1.4 PAYMENT OF COMPENSATION: Following the conclusion of each calendar month, CONSULTANT shall submit to CITY an itemized invoice indicating the services and tasks performed during the recently concluded calendar month, including services and tasks performed and the reimbursable out-of-pocket expenses incurred. If the amount of CONSULTANT's monthly compensation is a function of hours worked by CONSULTANT's personnel, the invoice shall indicate the number of hours worked in the recently concluded calendar month, the persons responsible for performing the Work, the rate of compensation at which such services and tasks were performed, the subtotal for each task and service performed and a grand total for all services performed. Within thirty (30) calendar days of receipt of each invoice, CITY shall notify CONSULTANT in writing of any disputed amounts included in the invoice. Within thirty (30) calendar days of receipt of each invoice, CITY shall pay all undisputed amounts included on the invoice. CITY shall not withhold applicable taxes or other authorized deductions from payments made to CONSULTANT.

1.5 ACCOUNTING RECORDS: CONSULTANT shall maintain complete and accurate records with respect to all matters covered under this Agreement for a period of three (3) years after the expiration or termination of this Agreement. CITY shall have the right to access and examine such records, without charge,

during normal business hours. CITY shall further have the right to audit such records, to make transcripts therefrom and to inspect all program data, documents, proceedings, and activities. All other "Documents and Data" as defined in paragraph 6.1 shall be and remain property of the CITY.

- 1.6 ABANDONMENT BY CONSULTANT: In the event CONSULTANT ceases to perform the Work agreed to under this Agreement or otherwise abandons the undertaking contemplated herein prior to the expiration of this Agreement or prior to completion of any or all tasks set forth in the Scope of Services, CONSULTANT shall deliver to CITY immediately and without delay, all materials, records and other work product prepared or obtained by CONSULTANT in the performance of this Agreement. Furthermore, CONSULTANT shall only be compensated for the reasonable value of the services, tasks and other work performed up to the time of cessation or abandonment, less a deduction for any damages, costs or additional expenses which CITY may incur as a result of CONSULTANT's cessation or abandonment.

II.  
PERFORMANCE OF AGREEMENT

- 2.1 CITY'S REPRESENTATIVES: The CITY hereby designates the City Manager and the Senior Administrative Analyst (hereinafter, the "CITY Representatives") to act as its representatives for the performance of this Agreement. The City Manager shall be the chief CITY Representative. The CITY Representatives or their designee, which designee the CITY may assign by notifying CONSULTANT in writing, shall act on behalf of the CITY for all purposes under this Agreement. CONSULTANT shall not accept directions or orders from any person other than the CITY Representatives or their designee.
- 2.2 CONSULTANT'S REPRESENTATIVES: CONSULTANT hereby designates Misty V. Cheng or designee, which designee CONSULTANT may assign by notifying CITY in writing, to act as its representative for the performance of this Agreement (hereinafter, "CONSULTANT Representative"). CONSULTANT Representative shall have full authority to represent and act on behalf of the CONSULTANT for all purposes under this Agreement. CONSULTANT Representative or designee shall supervise and direct the performance of the Work, using his best skill and attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the Work under this Agreement. Notice to the CONSULTANT Representative shall constitute notice to CONSULTANT.
- 2.3 COORDINATION OF SERVICE; CONFORMANCE WITH REQUIREMENTS: CONSULTANT agrees to work closely with CITY staff in the performance of the Work and this Agreement and shall be available to CITY staff and the CITY Representatives at all reasonable times. All work prepared by CONSULTANT

shall be subject to inspection and written approval by CITY Representatives or their designees.

2.4 STANDARD OF CARE; PERFORMANCE OF EMPLOYEES: CONSULTANT represents, acknowledges and agrees to the following:

- A. CONSULTANT shall perform all Work skillfully, competently and to the highest standards of CONSULTANT's profession;
- B. CONSULTANT shall perform all Work in a manner reasonably satisfactory to the CITY;
- C. CONSULTANT shall comply with all applicable federal, state and local laws and regulations, including the conflict of interest provisions of Government Code section 1090 and the Political Reform Act (Government Code section 81000 et seq.);
- D. CONSULTANT understands the nature and scope of the Work to be performed under this Agreement as well as any and all schedules of performance;
- E. All of CONSULTANT's employees and agents possess sufficient skill, knowledge, training and experience to perform those services and tasks assigned to them by CONSULTANT; and
- F. All of CONSULTANT's employees and agents (including but not limited to subcontractors and subconsultants) possess all licenses, permits, certificates, qualifications and approvals of whatever nature that are legally required to perform the tasks and services contemplated under this Agreement and all such licenses, permits, certificates, qualifications and approvals shall be maintained throughout the term of this Agreement and made available to CITY for copying and inspection.

The Parties acknowledge and agree that CONSULTANT shall perform, at CONSULTANT's own cost and expense and without any reimbursement from CITY, any services necessary to correct any errors or omissions caused by CONSULTANT's failure to comply with the standard of care set forth under this Section or by any like failure on the part of CONSULTANT's employees, agents, contractors, subcontractors and subconsultants. Such effort by CONSULTANT to correct any errors or omissions shall be commenced within three (3) business days upon their discovery by either Party and shall be completed within no more than fifteen (15) calendar days from the date of discovery or such other extended period of time authorized by the CITY Representatives in writing and in their sole and absolute discretion except for any error or omission which may be a hazard to health or life safety in which case corrective action shall be taken immediately and shall be diligently completed. The Parties acknowledge and agree that CITY's acceptance of any work performed by CONSULTANT or on CONSULTANT's behalf shall not constitute a release of any deficiency or delay in performance. The

Parties further acknowledge, understand and agree that CITY has relied upon the foregoing representations of CONSULTANT, including but not limited to the representation that CONSULTANT possesses the skills, training, knowledge and experience necessary to perform the Work skillfully, competently and to the highest standards of CONSULTANT's profession.

**2.5** ASSIGNMENT: The skills, training, knowledge and experience of CONSULTANT are material to CITY's willingness to enter into this Agreement. Accordingly, CITY has an interest in the qualifications and capabilities of the person(s) who will perform the services and tasks to be undertaken by CONSULTANT or on behalf of CONSULTANT in the performance of this Agreement. In recognition of this interest, CONSULTANT agrees that it shall not assign or transfer, either directly or indirectly or by operation of law, this Agreement or the performance of any of CONSULTANT's duties or obligations under this Agreement without the prior written consent of the CITY. In the absence of CITY's prior written consent, any attempted assignment or transfer shall be ineffective, null and void and shall constitute a material breach of this Agreement.

**2.6** CONTROL AND PAYMENT OF SUBORDINATES; INDEPENDENT CONTRACTOR: The Work shall be performed by CONSULTANT or under CONSULTANT's strict supervision. CONSULTANT will determine the means, methods and details of performing the Work subject to the requirements of this Agreement. CITY retains CONSULTANT on an independent contractor basis and not as an employee. CONSULTANT reserves the right to perform similar or different services for other principals during the term of this Agreement, provided such work does not unduly interfere with CONSULTANT's competent and timely performance of the Work contemplated under this Agreement and provided the performance of such services does not result in the unauthorized disclosure of CITY's confidential or proprietary information. Any additional personnel performing the Work under this Agreement on behalf of CONSULTANT are not employees of CITY and shall at all times be under CONSULTANT's exclusive direction and control. CONSULTANT shall pay all wages, salaries and other amounts due such personnel and shall assume responsibility for all benefits, payroll taxes, Social Security and Medicare payments and the like. CONSULTANT shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: Social Security taxes, income tax withholding, unemployment insurance, disability insurance, workers' compensation insurance and the like.

**2.7** REMOVAL OF EMPLOYEES OR AGENTS: If any of CONSULTANT's officers, employees, agents, contractors, subcontractors or subconsultants are determined by the CITY Representatives to be uncooperative, incompetent, a threat to the adequate or timely performance of the tasks assigned to CONSULTANT, a threat to persons or property, or if any of CONSULTANT's officers, employees, agents, contractors, subcontractors or subconsultants fail or

refuse to perform the Work in a manner acceptable to the CITY, such officer, employee, agent, contractor, subcontractor or subconsultant shall be promptly removed by CONSULTANT and shall not be reassigned to perform any of the Work.

- 2.8** COMPLIANCE WITH LAWS: CONSULTANT shall keep itself informed of and in compliance with all applicable federal, state or local laws to the extent such laws control or otherwise govern the performance of the Work. CONSULTANT's compliance with applicable laws shall include without limitation compliance with all applicable Cal/OSHA requirements.
- 2.9** NON-DISCRIMINATION: In the performance of this Agreement, CONSULTANT shall not discriminate against any employee, subcontractor, subconsultant, or applicant for employment because of race, color, creed, religion, sex, marital status, sexual orientation, national origin, ancestry, age, physical or mental disability or medical condition.
- 2.10.** INDEPENDENT CONTRACTOR STATUS: The Parties acknowledge, understand and agree that CONSULTANT and all persons retained or employed by CONSULTANT are, and shall at all times remain, wholly independent contractors and are not officials, officers, employees, departments or subdivisions of CITY. CONSULTANT shall be solely responsible for the negligent acts and/or omissions of its employees, agents, contractors, subcontractors and subconsultants. CONSULTANT and all persons retained or employed by CONSULTANT shall have no authority, express or implied, to bind CITY in any manner, nor to incur any obligation, debt or liability of any kind on behalf of, or against, CITY, whether by contract or otherwise, unless such authority is expressly conferred to CONSULTANT under this Agreement or is otherwise expressly conferred by CITY in writing.
- 2.11.** HIRING OF CONSULTANT'S ASSOCIATES AND/OR SUBCONTRACTORS. CITY agrees that each of CONSULTANT's associates and/or sub contractors will only be able to obtain a direct contract or professional services agreement with the CITY, only after the expiration of the contract or professional services agreement with CONSULTANT AND only after 2 years from the expiration date of the contract or professional services agreement with CONSULTANT. CITY agrees to hire one of CONSULTANT's associates and/or sub contractors as a full time, permanent, fully benefited employee of the CITY, only after CITY has performed a recruitment AND the associate and/or sub contractor has billed 960 hours to the CITY. If CITY employs CONSULTANT's associates and/or sub contractors through another temporary service or staffing agency, CITY agrees to pay a fee of 10% of the associate and/or sub contractor's annualized wages based on the hourly rate charged, to CONSULTANT.

III.  
INSURANCE

- 3.1 DUTY TO PROCURE AND MAINTAIN INSURANCE: As more specifically set forth below under this Article, Consultant agrees that it shall procure and maintain for the term of this Agreement (and for such extended period of time as may be required under this Article) insurance against claims for death or injuries to persons or damages to property that may arise from or in connection with Consultant's performance of this Agreement. Consultant shall also procure and maintain such other types of insurance as may be required under this Article, below. City shall not, and shall be under no obligation to, issue a Notice to Proceed until Consultant has provided evidence satisfactory to City that it has procured all insurance required under this Article III (Insurance).
- 3.2 REQUIRED COVERAGES: Consultant agrees that it shall procure and maintain the following insurance coverage, at its own expense, for the duration for this Agreement or any extended period set forth herein:
- A. Commercial General Liability Insurance: Consultant shall procure and maintain Commercial General Liability Insurance ("CGL Coverage") as broad as Insurance Services Office Commercial General Liability coverage (occurrence Form CG 0001). Such CGL Coverage shall have minimum limits of no less than One Million Dollars (\$1,000,000.00) per occurrence for bodily injury, personal injury, property damage, operations, products and completed operations, and contractual liability. The general aggregate limit of the CGL Coverage shall either apply separately to the work and services to be performed under this Agreement; or the general aggregate limit shall be twice the required occurrence limit;
  - B. Automobile Liability Insurance: Consultant shall procure and maintain Automobile Liability Insurance as broad as Insurance Services Office Form Number CA 0001 covering Automobile Liability, Code 1 (any auto). Such Automobile Liability Insurance shall have minimum limits of no less than One Million Dollars (\$1,000,000.00) per accident for bodily injury and property damage.
  - C. Workers' Compensation Insurance/Employer's Liability Insurance: Consultant shall procure and maintain Workers' Compensation Insurance affording coverage at least as broad as that required by the State of California with Employer's Liability Insurance with minimum limits of no less than One Million Dollars (\$1,000,000.00) per accident for bodily injury or disease. The Worker's Compensation insurer shall also agree to waive all rights of subrogation against City and City's elected and appointed officials, officers, employees, agents and volunteers for losses paid under the terms of the insurance policy. Workers' Compensation insurance shall also provide or be endorsed to provide: There will be no

cancellation, suspension, reduction or voiding of coverage without thirty (30) calendar days prior written notice by certified mail, return receipt requested, to City. If any reduction of coverage occurs, Consultant shall furnish City with information regarding such reduction at Consultant's earliest possible opportunity and in no case later than five (5) calendar days after Consultant is notified of the change in coverage. Any failure to comply with reporting or other provisions of the policy, including breaches of warrants, shall not affect the coverage provided to City and City's elected or appointed officials, officers, employees, agents or volunteers.

D. Professional Liability Insurance: For the full term of this Agreement and for a period of three (3) years thereafter, Consultant shall procure and maintain Errors and Omissions Liability Insurance appropriate to Consultant's profession. Such coverage shall have minimum limits of no less than One Million Dollars (\$1,000,000.00) per claim and shall be endorsed to include contractual liability.

- 3.3 ADDITIONAL INSURED REQUIREMENTS: The CGL Coverage and the Automobile Liability Insurance shall contain an endorsement naming the City and City's elected and appointed officials, officers, employees, agents and volunteers as additional insureds. As to the CGL Coverage, the additional insured endorsement shall be made using Insurance Service Office form CG20 10 1185, CG 20 10 10 01 or CG 37 10 01.
- 3.4 REQUIRED CARRIER RATING: All varieties of insurance required under this Agreement shall be procured from insurers licensed in the State of California and authorized to issue policies directly to California insureds. Except as otherwise provided elsewhere under this Article, all required insurance shall be procured from insurers, who according to the latest edition of the Best's Insurance Guide have an A.M. Best's rating of no less than A:VII. City may also accept policies procured by insurance carriers with a Standard & Poor's rating of no less than BBB according to the latest published edition the Standard & Poor's rating guide.
- 3.5 PRIMACY OF CONSULTANT'S INSURANCE: All policies of insurance provided by Consultant shall be primary to any coverage available to the City, the City's elected or appointed officials, officers, employees, agents or volunteers. Any insurance or self- insurance maintained by the City or City's elected or appointed officials, officers, employees, agents or volunteers shall be in excess of Consultant's insurance and shall not contribute with it.
- 3.6 WAIVER OF SUBROGATION: All insurance coverage provided pursuant to this Agreement shall not prohibit Consultant or Consultant's officers, employees, agents, subcontractors or subconsultants from waiving the right of subrogation prior to a loss. Consultant hereby waives all rights of subrogation against City.
- 3.7 VERIFICATION OF COVERAGE: Consultant acknowledges, understands and agrees that City's ability to verify the procurement and maintenance of the

insurance required under this Article is critical to safeguarding the City's financial well-being. Accordingly, Consultant warrants, represents and agrees that it shall furnish City with original certificates of insurance and endorsements evidencing the coverage required under this Article on forms satisfactory to City in its sole and absolute discretion. The certificates of insurance and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf, and shall be on forms provided by the City if requested. All certificates of insurance and endorsements shall be received and approved by City as a condition precedent to Consultant's commencement of any work or any of the Work. Upon City's written request, Consultant shall also provide City with certified copies of all required insurance policies as a condition precedent to the commencement of any work or any of the Work. City shall not, and shall be under no obligation to, issue a Notice to Proceed until Consultant fully complies with this Section. The requirements of this Section cannot be waived and any attempted waiver shall be void, invalid and non-binding upon City.

#### IV. INDEMNIFICATION

- 4.1 The Parties agree that CITY and CITY's elected and appointed officials, officers, employees, agents and volunteers (hereinafter, the "CITY Indemnitees") should, to the fullest extent permitted by law, be protected from any and all loss, injury, damage, claim, lawsuit, cost, expense, attorneys' fees, litigation costs, or any other cost arising out of or in any way related to the performance of this Agreement. Accordingly, the provisions of this indemnity provision are intended by the Parties to be interpreted and construed to provide the CITY Indemnitees with the fullest protection possible under the law. CONSULTANT acknowledges that CITY would not enter into this Agreement in the absence of CONSULTANT's commitment to indemnify, defend and protect CITY as set forth herein.
- 4.2 To the fullest extent permitted by law, CONSULTANT shall indemnify, hold harmless and defend the CITY Indemnitees from and against all liability, loss, damage, expense, cost (including without limitation reasonable attorneys' fees, expert fees and all other costs and fees of litigation) of every nature arising out of or in connection with CONSULTANT's performance of Work hereunder or its failure to comply with any of its obligations contained in this Agreement, except such loss or damage which is caused by the sole negligence or willful misconduct of the CITY.

- 4.3 CITY shall have the right to offset against the amount of any compensation due CONSULTANT under this Agreement any amount due CITY from CONSULTANT as a result of CONSULTANT's failure to pay CITY promptly any indemnification arising under this Article and related to CONSULTANT's failure to either (i) pay taxes on amounts received pursuant to this Agreement or (ii) comply with applicable workers' compensation laws.
- 4.4 The obligations of CONSULTANT under this Article will not be limited by the provisions of any workers' compensation act or similar act. CONSULTANT expressly waives its statutory immunity under such statutes or laws as to CITY and CITY's elected and appointed officials, officers, employees, agents and volunteers.
- 4.5 CONSULTANT agrees to obtain executed indemnity agreements with provisions identical to those set forth here in this Article from each and every subcontractor or any other person or entity involved by, for, with or on behalf of CONSULTANT in the performance of this Agreement. In the event CONSULTANT fails to obtain such indemnity obligations from others as required herein, CONSULTANT agrees to be fully responsible and indemnify, hold harmless and defend CITY and CITY's elected and appointed officials, officers, employees, agents and volunteers from and against any and all claims and losses, costs or expenses for any damage due to death or injury to any person and injury to any property resulting from any alleged intentional, reckless, negligent, or otherwise wrongful acts, errors or omissions of CONSULTANT's subcontractors or any other person or entity involved by, for, with or on behalf of CONSULTANT in the performance of this Agreement. Such costs and expenses shall include reasonable attorneys' fees incurred by counsel of CITY's choice.
- 4.6 CITY does not, and shall not, waive any rights that it may possess against CONSULTANT because of the acceptance by CITY, or the deposit with CITY, of any insurance policy or certificate required pursuant to this Agreement. This hold harmless and indemnification provision shall apply regardless of whether or not any insurance policies are determined to be applicable to the claim, demand, damage, liability, loss, cost or expense.
- 4.7 This Article and all provisions contained herein (including but not limited to the duty to indemnify, defend and hold free and harmless) shall survive the termination or normal expiration of this Agreement and is in addition to any other rights or remedies which the CITY may have at law or in equity.

V.  
TERMINATION

5.1 TERMINATION WITHOUT CAUSE: CITY may terminate this Agreement at any time for convenience and without cause by giving CONSULTANT a minimum of ten (10) calendar days' prior written notice of CITY's intent to terminate this Agreement. Upon such termination for convenience, CONSULTANT shall be compensated only for those services and tasks which have been performed by CONSULTANT up to the effective date of the termination. CONSULTANT may not terminate this Agreement except for cause as provided under Section 5.2, below. If this Agreement is terminated as provided herein, CITY may require CONSULTANT to provide all finished or unfinished Documents and Data, as defined in Section 6.1 below, and other information of any kind prepared by CONSULTANT in connection with the performance of the Work. CONSULTANT shall be required to provide such Documents and Data within fifteen (15) calendar days of CITY's written request. No actual or asserted breach of this Agreement on the part of CITY pursuant to Section 5.2, below, shall operate to prohibit or otherwise restrict CITY's ability to terminate this Agreement for convenience as provided under this Section.

5.2 EVENTS OF DEFAULT; BREACH OF AGREEMENT:

A. In the event either Party fails to perform any duty, obligation, service or task set forth under this Agreement (or fails to timely perform or properly perform any such duty, obligation, service or task set forth under this Agreement), an event of default (hereinafter, "Event of Default") shall occur. For all Events of Default, the Party alleging an Event of Default shall give written notice to the defaulting Party (hereinafter referred to as a "Default Notice") which shall specify: (i) the nature of the Event of Default; (ii) the action required to cure the Event of Default; and (iii) a date by which the Event of Default shall be cured, which shall not be less than the applicable cure period set forth under Sections 5.2.B and 5.2.C below or if a cure is not reasonably possible within the applicable cure period, to begin such cure and diligently prosecute such cure to completion. The Event of Default shall constitute a breach of this Agreement if the defaulting Party fails to cure the Event of Default within the applicable cure period or any extended cure period allowed under this Agreement.

B. CONSULTANT shall cure the following Events of Defaults within the following time periods:

i. Within five (5) business days of CITY's issuance of a Default Notice for any failure of CONSULTANT to timely provide CITY or CITY's employees or agents with any information and/or written reports, documentation or work product which CONSULTANT is obligated to provide to CITY or CITY's employees or agents under this Agreement. Prior to the expiration of the 5-

day cure period, CONSULTANT may submit a written request for additional time to cure the Event of Default upon a showing that CONSULTANT has commenced efforts to cure the Event of Default and that the Event of Default cannot be reasonably cured within the 5-day cure period. The foregoing notwithstanding, CITY shall be under no obligation to grant additional time for the cure of an Event of Default under this Section 5.2.B.i. that exceeds seven (7) calendar days from the end of the initial 5-day cure period; or

- ii. Within fourteen (14) calendar days of CITY's issuance of a Default Notice for any other Event of Default under this Agreement. Prior to the expiration of the 14-day cure period, CONSULTANT may submit a written request for additional time to cure the Event of Default upon a showing that CONSULTANT has commenced efforts to cure the Event of Default and that the Event of Default cannot be reasonably cured within the 14-day cure period. The foregoing notwithstanding, CITY shall be under no obligation to grant additional time for the cure of an Event of Default under this Section 5.2.B.ii that exceeds thirty (30) calendar days from the end of the initial 14-day cure period.

In addition to any other failure on the part of CONSULTANT to perform any duty, obligation, service or task set forth under this Agreement (or the failure to timely perform or properly perform any such duty, obligation, service or task), an Event of Default on the part of CONSULTANT shall include, but shall not be limited to the following: (i) CONSULTANT's refusal or failure to perform any of the services or tasks called for under the Scope of Services; (ii) CONSULTANT's failure to fulfill or perform its obligations under this Agreement within the specified time or if no time is specified, within a reasonable time; (iii) CONSULTANT's and/or its employees' disregard or violation of any federal, state, local law, rule, procedure or regulation; (iv) the initiation of proceedings under any bankruptcy, insolvency, receivership, reorganization, or similar legislation as relates to CONSULTANT, whether voluntary or involuntary; (v) CONSULTANT's refusal or failure to perform or observe any covenant, condition, obligation or provision of this Agreement; and/or (vi) CITY's discovery that a statement, representation or warranty by CONSULTANT relating to this Agreement is false, misleading or erroneous in any material respect.

- C. CITY shall cure any Event of Default asserted by CONSULTANT within forty-five (45) calendar days of CONSULTANT's issuance of a Default Notice, unless the Event of Default cannot reasonably be cured within the 45-day cure period. Prior to the expiration of the 45-day cure period, CITY may submit a written request for additional time to cure the Event of Default upon a showing that CITY has commenced its efforts to cure the Event of Default and that the Event of Default cannot be reasonably cured within the 45-day cure period. The foregoing notwithstanding, an Event of Default dealing with CITY's failure to timely pay any undisputed sums to CONSULTANT as

provided under Section 1.4, above, shall be cured by CITY within five (5) calendar days from the date of CONSULTANT's Default Notice to CITY.

- D. CITY, in its sole and absolute discretion, may also immediately suspend CONSULTANT's performance under this Agreement pending CONSULTANT's cure of any Event of Default by giving CONSULTANT written notice of CITY's intent to suspend CONSULTANT's performance (hereinafter, a "Suspension Notice"). CITY may issue the Suspension Notice at any time upon the occurrence of an Event of Default. Upon such suspension, CONSULTANT shall be compensated only for those services and tasks which have been rendered by CONSULTANT to the reasonable satisfaction of CITY up to the effective date of the suspension. No actual or asserted breach of this Agreement on the part of CITY shall operate to prohibit or otherwise restrict CITY's ability to suspend this Agreement as provided herein.
- E. No waiver of any Event of Default or breach under this Agreement shall constitute a waiver of any other or subsequent Event of Default or breach. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel, or otherwise.
- F. The duties and obligations imposed under this Agreement and the rights and remedies available hereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. In addition to any other remedies available to CITY at law or under this Agreement in the event of any breach of this Agreement, CITY, in its sole and absolute discretion, may also pursue any one or more of the following remedies:
- i. Upon written notice to CONSULTANT, the CITY may immediately terminate this Agreement in whole or in part;
  - ii. Upon written notice to CONSULTANT, the CITY may extend the time of performance;
  - iii. The CITY may proceed by appropriate court action to enforce the terms of the Agreement to recover damages for CONSULTANT's breach of the Agreement or to terminate the Agreement; or
  - iv. The CITY may exercise any other available and lawful right or remedy.

CONSULTANT shall be liable for all legal fees plus other costs and expenses that CITY incurs upon a breach of this Agreement by CONSULTANT or in the CITY's exercise of its remedies under this Agreement.

G. In the event CITY is in breach of this Agreement, CONSULTANT's sole remedy shall be the suspension or termination of this Agreement and/or the recovery of any unpaid sums lawfully owed to CONSULTANT under this Agreement for completed services and tasks.

- 5.3 SCOPE OF WAIVER: No waiver of any default or breach under this Agreement shall constitute a waiver of any other default or breach, whether of the same or other covenant, warranty, agreement, term, condition, duty or requirement contained in this Agreement. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel, or otherwise.
- 5.4 SURVIVING ARTICLES, SECTIONS AND PROVISIONS: The termination of this Agreement pursuant to any provision of this Article or by normal expiration of its term or any extension thereto shall not operate to terminate any Article, Section or provision contained herein which provides that it shall survive the termination or normal expiration of this Agreement.

VI.  
MISCELLANEOUS PROVISIONS

- 6.1 DOCUMENTS & DATA; LICENSING OF INTELLECTUAL PROPERTY: All Documents and Data shall be and remain the property of CITY without restriction or limitation upon their use or dissemination by CITY. For purposes of this Agreement, the term "Documents and Data" means and includes all reports, analyses, correspondence, plans, drawings, designs, renderings, specifications, notes, summaries, strategies, charts, schedules, spreadsheets, calculations, lists, data compilations, documents or other materials developed and/or assembled by or on behalf of CONSULTANT in the performance of this Agreement and fixed in any tangible medium of expression, including but not limited to Documents and Data stored digitally, magnetically and/or electronically. This Agreement creates, at no cost to CITY, a perpetual license for CITY to copy, use, reuse, disseminate and/or retain any and all copyrights, designs, and other intellectual property embodied in all Documents and Data. CONSULTANT shall require all subcontractors and subconsultants working on behalf of CONSULTANT in the performance of this Agreement to agree in writing that CITY shall be granted the same right to copy, use, reuse, disseminate and retain Documents and Data prepared or assembled by any subcontractor or subconsultant as applies to Documents and Data prepared by CONSULTANT in the performance of this Agreement.
- 6.2 CONFIDENTIALITY: All data, documents, discussion, or other information developed or received by CONSULTANT or provided for performance of this Agreement are deemed confidential and shall not be disclosed by

CONSULTANT without prior written consent by CITY. CITY shall grant such consent if disclosure is legally required. Upon request, all CITY data shall be returned to CITY upon the termination or expiration of this Agreement. CONSULTANT shall not use CITY's name or insignia, photographs, or any publicity pertaining to the Work in any magazine, trade paper, newspaper, television or radio production or other similar medium without the prior written consent of CITY.

- 6.3 **FALSE CLAIMS ACT:** CONSULTANT warrants and represents that neither CONSULTANT nor any person who is an officer of, in a managing position with, or has an ownership interest in CONSULTANT has been determined by a court or tribunal of competent jurisdiction to have violated the False Claims Act, 31 U.S.C., section 3789 et seq. and the California False Claims Act, Government Code section 12650 et seq.
- 6.4 **NOTICES:** All notices permitted or required under this Agreement shall be given to the respective Parties at the following addresses, or at such other address as the respective Parties may provide in writing for this purpose:

**CONSULTANT:**  
MV Cheng & Associates Inc.  
102 W. 24th Street  
Upland, CA 91784  
ATTN: Misty V. Cheng

**CITY:**  
City of Cudahy  
Attention: City Manager  
5220 Santa Ana Street  
Cudahy, CA 90201  
Attn: City Manager  
Phone: (323) 773-5143  
Fax: (323) 771-2072

Such notices shall be deemed effective when personally delivered or successfully transmitted by facsimile as evidenced by a fax confirmation slip or when mailed, forty-eight (48) hours after deposit with the United States Postal Service, first class postage prepaid and addressed to the Party at its applicable address.

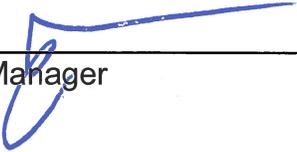
- 6.5 **COOPERATION; FURTHER ACTS:** The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as is reasonably necessary, appropriate or convenient to achieve the purposes of this Agreement.
- 6.6 **SUBCONTRACTING:** CONSULTANT shall not subcontract any portion of the Work required by this Agreement, except as expressly stated herein, without the prior written approval of CITY. Subcontracts (including without limitation subcontracts with subconsultants), if any, shall contain a provision making them

Section 6.16, above. One fully executed original counterpart shall be delivered to CONSULTANT and the remaining two original counterparts shall be retained by CITY.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed the day and year first appearing in this Agreement, above.

**CITY OF CUDAHY:**

**CONSULTANT: MV CHENG & ASSOCIATES INC.**

By:   
\_\_\_\_\_  
City Manager

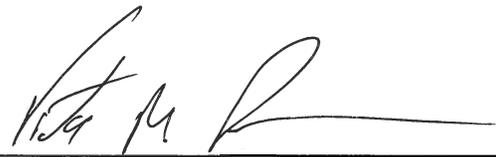
By: \_\_\_\_\_  
NAME

Title \_\_\_\_\_

**ATTEST:**

By:   
\_\_\_\_\_  
Deputy City Clerk

**APPROVED AS TO FORM:**

By:   
\_\_\_\_\_  
City Attorney

Section 6.16, above. One fully executed original counterpart shall be delivered to CONSULTANT and the remaining two original counterparts shall be retained by CITY.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed the day and year first appearing in this Agreement, above.

**CITY OF CUDAHY:**

By: \_\_\_\_\_  
City Manager

**CONSULTANT: MV CHENG & ASSOCIATES INC.**

By: \_\_\_\_\_  
NAME



Title PRESIDENT & CEO

**ATTEST:**

By: \_\_\_\_\_  
Deputy City Clerk

**APPROVED AS TO FORM:**

By: \_\_\_\_\_  
City Attorney

## **EXHIBIT "A"**

### **Scope of Services**

The services will include both technical and practical support to client.

Specifically:

1. Payroll processing services that include but are not limited to verifying changes to employee master files, verification of employee timesheet (including meal breaks), calculation of employee timesheet hours, entering hours, and adjustments. Payroll processing will also include payment of commissioners, processing of other 3<sup>rd</sup> party remittance check, and payment of taxes withheld to State and Federal agencies, including, but not limited to medical, dental, vision, retirement (PERS), loan programs, garnishments, and Federal and State Tax deposits.
2. Preparation and filing of quarterly and annual reports to Federal and State agencies as needed.
3. Other payroll matters as needed.
4. Accounts Payable processing that includes preparation of Check Requests, matching of invoices, purchase requisition, other related documents. Obtaining signatures of appropriate individuals for approval and review of Check Requests. Processing may also include entering approved Check Requests, including invoice information, in to Accounts Payable module and printing the warrants. As part of the processing research may be required to identify if invoice(s) had been previously paid.
5. General Ledger processing includes, but is not limited to, posting of Cash Receipts, Accounts Payable, Payrolls monthly activity to the G/L; closing the fiscal year ended June 30, 2019 G/L.
6. Bank Reconciliation preparation, including identifying/categorizing and recording of wire transfers in the Cash Receipts system. Bank Reconciliation will conclude with a Cash by Fund and Cash and Investments worksheet as well as recaps of Check Demands and Payroll activity that will be included as part of monthly staff report to the City Council.
7. Preparation of journals entries, including, but not limited to, adjustment relating to bank activity (such as NSF checks) grant programs, and fiscal agent activity.
8. Grant / Funding reporting (Los Angeles Metropolitan Authority, LA CDC [CDBG funding], and other Local / State / Federal Agencies).
9. Preparation of Year End Journal entries to record accruals and to make adjustments / transfers from general fund to special funds
10. Prepare and consolidate financial statements and workpapers and provide support for outstanding external audits. Audit workpaper preparation including but not limited to, schedules of Accounts Payable, Accounts Receivable, capital assets (including search), long term. Preparation also includes running reports from various accounting models such as balance sheet, income statements, check registers, cash receipt reports, journal entry reports.
11. Assistance in preparing budget projections and recording of Annual Budget and adjustments in G/L.

**EXHIBIT "B"**  
**Approved Rate Schedule**

**Rate of Compensation**

<u>Position Level</u>	<u>Rate</u>	<u>Est. Hours/Week</u>	<u>Est. Cost per Week</u>
Payroll / Accounts Payable			
Technician	60	30	\$ 1,800
Senior Accountant	75	30	\$ 2,250

Per Section 1.4, itemized invoices are paid based upon on each concluded calendar month.



# Item Number 10C

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## STAFF REPORT

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**Date:** June 2, 2020

**To:** Honorable Mayor/Chair and City Council/Agency Members

**From:** Henry Garcia, Interim City Manager/Executive Director  
By: Richard Iglesias, Assistant City Clerk

**Subject:** **Consideration to Review and Approve the Draft Minutes of April 7, 2020, and April 21, 2020, for the Regular Meeting of the City Council and the Joint Meeting of the City of Cudahy as Successor Agency and Housing Successor Agency to the Cudahy Development Commission and Draft Minutes of April 10, 2020 Special Meeting of the City Council.**

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### **RECOMMENDATION**

The City Council is requested to review and approve the City Council / Successor Agency Draft Minutes for April 7, 2020, April 10, 2020, and April 21, 2020.

### **BACKGROUND / ANALYSIS**

#### *Historically*

The Municipal Clerk is one of the oldest professions in government, dating back to 1272 A.D., originating in England. The record keeper then was called Remembrancer; an English official whose job was to remind the Lord Treasurer and Barons of Court, of business pending.

Years later in the 1600's when early colonist came to America, the office of the Clerk was one of the first offices to be established. Over the years the City Clerk's office has become the core for local government, and the liaison to the residents of the Community. The Municipal Clerk (City Clerk) is the record keeper of a City's recorded History.

William Bennett Munro a Canadian historian and political scientist, who taught at Harvard University and the California Institute of Technology, stated in one of his first textbooks written: "No other office in municipal service has so many contacts. It serves the Mayor, the

City Council, the City Manager (when there is one), and all administrative departments, without exception. All of them call upon it, almost daily, for some service or information. Its work is not spectacular, but it demands versatility, alertness, accuracy, and no end of patience. The public does not realize how many loose ends of city administration this office pulls together."

Moving forward to the present time, the City Clerk's office today is generally responsible for keeping record of City Council meetings; agreements; recordings of official documents; legal advertisements; municipal elections; commissions and committees current files; claims against the city; and other legal or official documents.

City Clerks in General Law cities are required to keep a record (minutes) of the proceedings of Council meetings (Government Code Sections 36814 and 40801). Minutes are the official record of a meeting which provides a record of the Council's decisions and actions.

### **CONCLUSION**

City Council is requested to approve the attached City Council / Agency Draft Minutes of the proceedings of April 7, 2020, April 10, 2020, and April 21, 2020, City Council meeting.

### **FINANCIAL IMPACT**

No Financial Impact.

### **ATTACHMENT**

- A. Draft Minutes April 7, 2020
- B. Draft Minutes April 10, 2020
- C. Draft Minutes April 21, 2020
- D. Resolution No. 16-38, approving the City Clerk's use of Summary Action Minutes as the Official Record of the City Council proceedings.

MINUTES

**CUDAHY CITY COUNCIL REGUAR MEETING and  
CITY OF CUDAHY AS SUCCESSOR AGENCY and  
HOUSING SUCCESSOR AGENCY TO THE CUDAHY  
DEVELOPMENT COMMISSION JOINT MEETING**

**April 7, 2020 6:30 P.M.**

**1. CALL TO ORDER**

Mayor / Chair Alcantar called the meeting to order at 6:36 p.m.

**2. ROLL CALL**

PRESENT: Council / Agency Member Garcia  
Council / Agency Member Guerrero  
Council / Agency Member Lozoya  
Vice Mayor / Vice Chair Gonzalez (arrived at 6:39 p.m.)  
Mayor / Chair Alcantar

ABSENT: None

ALSO PRESENT: Acting City Manager Santor Nishizaki, City Attorney, Victor Ponto, Assistant City Clerk, Richard Iglesias, Finance Director, Steven Dobrenen Human Resources Manager Jennifer Hernandez, and Junior Deputy City Clerk, Andres Rangel.

**3. PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was led by Council Member Garcia.

**4. PRESENTATIONS - NONE**

**DEPUTY CITY ATTORNEY PROPOSED COUNCIL TO CONSIDER A MOTION TO AMEND THE AGENDA TO MOVE ITEMS 14H-L AFTER PUBLIC COMMENT THEN CONSIDER ITEM 12F AND MOVE ALL OTHER ITEMS TO A SUBSEQUENT COUNCIL MEETING. COUNCIL DID NOT MOVE THE PROPOSED MOTION.**

**5. PUBLIC COMMENTS**

Marcos Oliva, thanked the technologies that allow transparency through the pandemic. He further emphasized that the people require government transparency, especially now that the government has the potential to expand in authority and powers. He stressed civic participation, transparency, and outreach for every decision made by council.

Susie de Santiago, spoke on behalf the items regarding the city manager, speaking in favor of Acting City Manager, Santor Nishizaki. She asked council to continue with the process for a permanent city manager in a transparent and civically engaging way after the COVID pandemic subsides. Regarding the health crisis, she asks the Council to act for the benefit of the community.

**VICE MAYOR JOSE GONZALEZ MADE A MOTION TO AMEND THE AGENDA TO MOVE CLOSED SESSION ITEMS 14H-L AFTER PUBLIC COMMENT, RECONVENE TO OPEN SESSION AND MOVE ALL OTHER ITEMS EXCEPT ITEM 12F TO A SUBSEQUENT COUNCIL MEETING. THE MOTION DID NOT RECEIVE A SECOND. THEREFORE, IT DID NOT CARRY.**

**IT WAS MOTIONED BY COUNCIL MEMBER GUERRERO AND SECONDED BY COUNCIL MEMBER LOZOYA TO MOVE ITEM 12F AFTER PUBLIC COMMENT, AND TABLE ALL OTHER ITEMS TO A SUBSEQUENT COUNCIL MEETING LATER IN THE WEEK, THEN PROCEED WITH CLOSED SESSION ITEMS H-L. THE MOTION CARRIED (5-0-0) BY THE FOLLOWING ROLL CALL VOTE:**

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None  
ABSTAIN: None

**6. CITY COUNCIL COMMENTS - NONE**

**7. CITY MANAGER REPORT (information only)**

**8. REPORTS REGARDING AD HOC, ADVISORY, STANDING OR OTHER COMMITTEE MEETINGS - NONE**

**9. WAIVER OF FULL READING OF RESOLUTIONS AND ORDINANCES**

**10. CONSENT CALENDAR**

**A. Approval of the Local Agency Investment Fund (LAIF) for the Month of November 2019**

Presented by the Finance Director

The City Council is requested to approve the Local Agency Investment Fund (LAIF) Report for the month of November 2019 in the amount of \$5,048,584.71.

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

**B. Approval of the City Demands and Payroll Including Cash and Investment Report for the Month of November 2019**

Presented by the Finance Director

The City Council is requested to approve the Demands and Payroll in the amount of \$835,715.61 including Cash and Investment Report by Fund for the month of November 2019.

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

**C. Approval of the Local Agency Investment Fund (LAIF) for the Month of December 2019**

Presented by the Finance Director

The City Council is requested to approve the Local Agency Investment Fund (LAIF) Report for the month of December 2019 in the amount of \$5,048,584.71.

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

- D.** Approval of the City Demands and Payroll Including Cash and Investment Report for the Month of December 2019

Presented by the Finance Director

The City Council is requested to approve the Demands and Payroll in the amount of \$2,866,576.51 including Cash and Investment Report by Fund for the month of December 2019.

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

- E.** Consideration to Review and Approve the Draft Minutes of February 18, 2020, for the Regular Meeting of the City Council and the Joint Meeting of the City of Cudahy as Successor Agency and Housing Successor Agency to the Cudahy Development Commission and Special Meeting of the City Council and Successor Agency for March 16, 2020, March 23, 2020, and March 30, 2020

Presented by the City Clerk

The City Council is requested to review and approve the City Council / Successor Agency Draft Minutes for February 18, 2020, March 16, 2020, March 23, 2020, and March 30, 2020.

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

- F.** Approval of the Renewal of the City's General Services Agreement with the County of Los Angeles

Presented by the Finance Director

The City Council is requested to approve and renew the City's General Services Agreement (GSA) with the County of Los Angeles and authorize the City Manager to sign a five-year agreement to be effective from July 1, 2020 to June 30, 2025.

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

**11. PUBLIC HEARING - NONE**

**12. BUSINESS SESSION**

- A.** Consideration and Adoption of a Resolution Declaring a Local Emergency Due to the Public Threat Caused by the Coronavirus (COVID-19)

Presented by the City Attorney's Office

The City Council is recommended to adopt a Resolution declaring a local emergency due to the public threat caused by the coronavirus (COVID-19).

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

- B.** Consideration and Adoption of an Urgency Ordinance Enacting a Temporary Moratorium on Evictions for Residential and Non-Essential Commercial Tenants

Presented by the City Attorney's Office

The City Council is recommended to adopt an Urgency Ordinance enacting a temporary moratorium on evictions due to the nonpayment of rent for residential and non-essential commercial tenants where failure to pay rent results from income loss resulting from the novel Coronavirus (COVID-19).

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

- C. Consideration and Adoption of an Urgency Ordinance Enacting a Temporary Moratorium on Utility Cutoffs for Both Residential and Commercial Tenants

Presented by the City Attorney's Office

The City Council is recommended to adopt an Urgency Ordinance enacting a temporary moratorium on utility cutoffs for both residential and commercial tenants due to nonpayment where the failure to pay results from income loss resulting from the novel Coronavirus (COVID-19).

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

- D. Adoption of Proposed Resolution No. 20-09 A Resolution of the City Council of the City of Cudahy Recognizing the State of California-Governor's Office of Emergency Services, Form 130 For Designation of Authorized Agents for Non-State Agencies

Presented by the Human Resources Manager

The City Council is requested to authorize the Acting City Manager to execute the completion of the State of California-Governor's Office of Emergency Services (Cal-OES) Form 130 (attached), and the City Council representatives to confirm the document, and provide a resolution regarding the authorization, execution, and confirmation, and all said documents to be provide to the State of California-Governor's Office of Emergency Services (Cal-OES).

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

- E. Adoption of the Proposed City of Cudahy Emergency Covid-19 Policy Regarding Employee Leave Use and Advanced Paid Leave Policy

Presented by the Human Resources Manager

The City Council is requested to approve proposed City of Cudahy Emergency Covid-19 Policy Regarding Employee Leave Use and Advanced Paid Leave Policy.

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

- F. Approve the Contract Services Agreement Between the City of Cudahy and Luis Alvarado Public Affairs LLC

Presented by the City Manager's Office

City Staff is recommending that the City Council approve the attached Contract Services Agreement between the City of Cudahy and Luis Alvarado Public Affairs LLC for certain strategic

planning design services, including but not limited to public relations, marketing and media outreach activities related to the Delta Air Lines Fuel Dump Incident.

**Motion:** It was motioned by Council Member Guerrero and seconded by Mayor Alcantar to direct staff to coordinate with Luis Alvarado Public Affairs LLC modify the fee structure to an hourly basis rate based on work performed for a not-to-exceed \$84,000 contract amount and then bring back the item to a subsequent council meeting for approval. The motion carried (5-0-0) by the following roll call vote:

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None  
ABSTAIN: None

**G. Adoption of a Proposed Resolution No. 20-10 Amending the City of Cudahy Fiscal Year (FY) 2019-2020 City Budget**

Presented by the Finance Director

The City Council is requested to:

1. Receive and file the Fiscal Year (FY) 2019-2020 Mid-Year Budget review and related reports; and
2. Adopt Proposed Resolution No. 20-10 approving the requested amendments to the FY 2019-2020 City Budget as follows: increasing certain revenues in the General Fund by \$305,500, increasing certain General Fund expenditures by \$485,950, and certain Special Revenue fund expenditures by \$24,900.

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

**H. Approve the First Amendment of the Master Services Contract with Willdan Engineering for Interim Building Official and Interim City Engineer Services**

Presented by the City Manager's Office

City Staff is recommending that the City Council approve the attached First Amendment to Contract Services Agreement between the City of Cudahy and Willdan Engineering for interim building official and interim city engineer services.

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

**13. COUNCIL DISCUSSION – NONE**

**RECESSED TO CLOSED SESSION AT 7:19 P.M.**

**14. CLOSED SESSION**

**DELIBERATING AS CUDAHY SUCCESSOR AGENCY**

- A. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:  
Site No. 1 Elizabeth Street Residential Property  
5256 Elizabeth Street APN: 6224-001-014  
5260 Elizabeth Street APN: 6224-001-015

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

B. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:  
Site No. 2 Atlantic Avenue/Santa Ana Street Commercial Property  
4734 Santa Ana Street APN: 6224-018-008  
8110 South Atlantic Avenue APN: 6224-018-071  
8100 South Atlantic Avenue APN: 6224-018-068  
Santa Ana Street APN: 6224-018-070  
4720 Santa Ana Street APN: 6224-018-069

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

C. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:  
Site No. 3 Santa Ana Street Residential Property  
4610 Santa Ana Street APN: 6224-019-014

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

D. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:  
Site No. 4 Atlantic Avenue/Cecilia Street Commercial Property  
8135 South Atlantic Avenue APN: 6224-022-001  
4629 Cecilia Street APN: 6224-022-004  
8201 South Atlantic Avenue APN: 6224-022-002  
8221 South Atlantic Avenue APN: 6224-022-012  
4633 Cecilia Street APN: 6224-022-003

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

E. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 5 Atlantic Avenue/Patata Street Commercial Property  
4819 Patata Street APN: 6224-034-014  
8420 South Atlantic Avenue APN: 6224-034-032 APN: 6224-034-040  
Patata Street APN: 6224-034-041

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

F. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 6 Atlantic Avenue/Clara Street Commercial Property  
4613 Clara Street APN: 6226-022-002  
7660 South Atlantic Avenue APN: 6226-022-008  
7630 South Atlantic Avenue APN: 6226-022-019 APN: 6226-022-020  
7638 South Atlantic Avenue APN: 6226-022-023  
7644 South Atlantic Avenue APN: 6226-022-022  
No address APN: 6226-022-021 APN: 6226-022-024

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

G. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiator

Properties:

– 8100 Atlantic Ave., 4720 Santa Ana St., 8110 Atlantic Ave., 4734 Santa Ana St. (APN 6224-018-068, 069, 070, 071, 008)  
– 8135 Atlantic Ave., 4629 Cecilia St., 8201 S. Atlantic, 4633 Cecilia St., 8221 S. Atlantic Ave. (APN 6224-022-001, 004, 002, 003, 012)  
– 4819 Patata, 8420 S. Atlantic Ave. (APN 6224-034-014, 032, 040, 041)  
– 4613/4615 Clara St., 7630 Atlantic Blvd., 7660 Atlantic Blvd., 7638 Atlantic Blvd., 7644 Atlantic Blvd. (APN 6226-022-002, 019, 020, 008, 021, 022, 023, 024)  
– 4610 Santa Ana St. (APN 6224-019-014)

City Negotiators: Acting City Manager, Santor Nishizaki and City Attorney  
Negotiating Parties: Cudahy LF, LLC  
Under Negotiation: Price and terms of payment

**DELIBERATING AS CITY COUNCIL**

H. Closed Session Pursuant to Government Code Section 54956.9(d)(4) – Conference with Legal Counsel to Discuss the Initiation of Litigation – Three Matters

- I. Closed Session Pursuant to Government Code Section 54957 – Public Employee Recruitment  
Title of Position Under Consideration: City Manager
- J. Closed Session Pursuant to Government Code Section 54957 – Public Employee Appointment/Employment – Title: Interim City Manager
- K. Closed Session Pursuant to Government Code Section 54957 – Public Employee Performance Evaluation  
Title of Employee: City Manager
- L. Closed Session Pursuant to Government Code Section 54957.6 – Conference with Labor Negotiator  
City's Designated Representative: Victor Ponto, City Attorney  
Unrepresented Employee: City Manager

**15. CLOSED SESSION ANNOUNCEMENT**

Deputy City Attorney Victor Ponto reported that for closed sessions item 14I-L legal counsel was given, direction was received, no further reportable action.

**16. ADJOURNMENT**

The City Council / Agency meeting was adjourned at 9:51 p.m.

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Elizabeth Alcantar  
Mayor

ATTEST:

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Richard Iglesias  
Assistant City Clerk

MINUTES

**CUDAHY CITY COUNCIL SPECIAL MEETING and  
CITY OF CUDAHY AS SUCCESSOR AGENCY and  
HOUSING SUCCESSOR AGENCY TO THE CUDAHY  
DEVELOPMENT COMMISSION JOINT MEETING**

**April 10, 2020 5:00 P.M.**

**1. CALL TO ORDER**

Mayor / Chair Alcantar called the meeting to order at 5:05 p.m.

**2. ROLL CALL**

PRESENT: Council / Agency Member Garcia (arrived at 5:12 p.m.)  
Council / Agency Member Guerrero  
Council / Agency Member Lozoya  
Vice Mayor / Vice Chair Gonzalez (arrived at 6:19 p.m.)  
Mayor / Chair Alcantar

ABSENT: None

ALSO PRESENT: Acting City Manager Santor Nishizaki, City Attorney, Victor Ponto, Assistant City Clerk, Richard Iglesias, Finance Director, Steven Dobrenen Human Resources Manager Jennifer Hernandez, and Junior Deputy City Clerk, Andres Rangel.

**3. PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was led by Council Member Lozoya.

**4. PUBLIC COMMENTS - NONE**

**IT WAS MOTIONED BY COUNCIL MEMBER GARCIA AND SECONDED BY COUNCIL MEMBER GUERRERO TO PROCEED WITH CLOSED SESSION AFTER PUBLIC COMMENT. THE MOTION CARRIED (4-0-1) BY THE FOLLOWING ROLL CALL VOTE:**

AYES: Garcia, Guerrero, Lozoya, and Alcantar  
NOES: None  
ABSENT: Gonzalez  
ABSTAIN: None

**5. WAIVER OF FULL READING OF RESOLUTIONS AND ORDINANCES**

**Motion:** It was motioned by Mayor Alcantar and seconded by Vice Mayor Gonzalez to direct staff to waive the full reading of resolutions and ordinances. The motion carried (5-0-0) by the following roll call vote:

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None

ABSTAIN: None

## 6. BUSINESS SESSION

### A. Consideration and Adoption of a Resolution Declaring a Local Emergency Due to the Public Threat Caused by the Coronavirus (COVID-19)

Presented by the City Attorney's Office

The City Council is recommended to adopt a Resolution declaring a local emergency due to the public threat caused by the coronavirus (COVID-19).

**Motion:** It was motioned by Council Member Guerrero and seconded by Mayor Alcantar to adopt a Resolution declaring a local emergency due to the public threat caused by the coronavirus (COVID-19) with the addition of striking section four of the ordinance and that there be a sunset provision to align with the later date of the county safer at home order, federal or state declaration. The motion carried (5-0-0) by the following roll call vote:

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None  
ABSTAIN: None

### B. Approval of the Renewal of the City's General Services Agreement with the County of Los Angeles

Presented by the Finance Director

The City Council is requested to approve and renew the City's General Services Agreement (GSA) with the County of Los Angeles and authorize the City Manager to sign a five-year agreement to be effective from July 1, 2020 to June 30, 2025.

**Motion:** It was motioned by Mayor Alcantar and seconded by Council Member Lozoya to approve and renew the City's General Services Agreement (GSA) with the County of Los Angeles and authorize the City Manager to sign a five-year agreement to be effective from July 1, 2020 to June 30, 2025. The motion carried (5-0-0) by the following roll call vote:

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None  
ABSTAIN: None

### C. Adoption of Proposed Resolution No. 20-09 A Resolution of the City Council of the City of Cudahy Recognizing the State of California-Governor's Office of Emergency Services, Form 130 For Designation of Authorized Agents for Non-State Agencies

Presented by the Human Resources Manager

The City Council is requested to authorize the Acting City Manager to execute the completion of the State of California-Governor's Office of Emergency Services (Cal-OES) Form 130 (attached), and the City Council representatives to confirm the document, and provide a resolution regarding the authorization, execution, and confirmation, and all said documents to be provide to the State of California-Governor's Office of Emergency Services (Cal-OES).

**Motion:** It was motioned by Vice Mayor Gonzalez and seconded by Council Member Garcia to authorize the Acting City Manager to execute the completion of the State of California-Governor's Office of Emergency Services (Cal-OES) Form 130 (attached), and the City Council representatives to confirm the document, and provide a resolution regarding the authorization, execution, and confirmation, and all said documents to be provide to the State of California-Governor's Office of Emergency Services (Cal-OES). The motion carried (5-0-0) by the following roll call vote:

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None  
ABSTAIN: None

**D. Adoption of the Proposed City of Cudahy Emergency Covid-19 Policy Regarding Employee Leave Use and Advanced Paid Leave Policy**

Presented by the Human Resources Manager

The City Council is requested to approve proposed City of Cudahy Emergency Covid-19 Policy Regarding Employee Leave Use and Advanced Paid Leave Policy.

**Motion:** It was motioned by Vice Mayor Gonzalez and seconded by Council Member Garcia to approve proposed City of Cudahy Emergency Covid-19 Policy Regarding Employee Leave Use and Advanced Paid Leave Policy. The motion carried (5-0-0) by the following roll call vote:

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None  
ABSTAIN: None

**E. Approve the Contract Services Agreement Between the City of Cudahy and Luis Alvarado Public Affairs LLC**

Presented by the City Manager's Office

City Staff is recommending that the City Council approve the attached Contract Services Agreement between the City of Cudahy and Luis Alvarado Public Affairs LLC for certain strategic planning design services, including but not limited to public relations, marketing and media outreach activities related to the Delta Air Lines Fuel Dump Incident.

**Motion:** It was motioned by Council Member Guerrero and seconded by Vice Mayor Gonzalez to approve the attached Contract Services Agreement between the City of Cudahy and Luis Alvarado Public Affairs LLC for certain strategic planning design services, including but not limited to public relations, marketing and media outreach activities related to the Delta Air Lines Fuel Dump Incident with the addition that the modification of the fee schedule reflecting monthly bases and administrative costs. The motion carried (5-0-0) by the following roll call vote:

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None  
ABSTAIN: None

**F. Approve the First Amendment of the Master Services Contract with Willdan Engineering for Interim Building Official and Interim City Engineer Services**

Presented by the City Manager's Office

City Staff is recommending that the City Council approve the attached First Amendment to Contract Services Agreement between the City of Cudahy and Willdan Engineering for interim building official and interim city engineer services.

**Motion:** It was motioned by Council Member Guerrero and seconded by Vice Mayor Gonzalez to approve the attached First Amendment to Contract Services Agreement between the City of Cudahy and Willdan Engineering for interim building official and interim city engineer services and also initiate an RFP process for engineering services within the next few months. The motion carried (5-0-0) by the following roll call vote:

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None  
ABSTAIN: None

**7. CLOSED SESSION**

- A. Closed Session Pursuant to Government Code Section 54956.9(d)(4) – Conference with Legal Counsel to Discuss the Initiation of Litigation – Three Matters
- B. Closed Session Pursuant to Government Code Section 54957 – Public Employee Recruitment  
Title of Position Under Consideration: City Manager
- C. Closed Session Pursuant to Government Code Section 54957 – Public Employee Appointment/Employment – Title: Interim City Manager.
- D. Closed Session Pursuant to Government Code Section 54957 – Public Employee Performance Evaluation  
Title of Employee: City Manager
- E. Closed Session Pursuant to Government Code Section 54957 – Public Employee Discipline, Dismissal, and Release.
- F. Closed Session Pursuant to Government Code Section 54957.6 – Conference with Labor Negotiator  
City's Designated Representative: Victor Ponto, City Attorney  
Unrepresented Employee: City Manager

**8. CLOSED SESSION ANNOUNCEMENT**

Deputy City Attorney Victor Ponto reported that for closed sessions items legal counsel was given, direction was received, no further reportable action.

**9. ADJOURNMENT**

The City Council / Agency meeting was adjourned at 9:09 p.m.

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Elizabeth Alcantar  
Mayor

ATTEST:

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Richard Iglesias  
Assistant City Clerk

DRAFT

MINUTES

**CUDAHY CITY COUNCIL REGUAR MEETING and  
CITY OF CUDAHY AS SUCCESSOR AGENCY and  
HOUSING SUCCESSOR AGENCY TO THE CUDAHY  
DEVELOPMENT COMMISSION JOINT MEETING**

**April 21, 2020 6:30 P.M.**

**1. CALL TO ORDER**

Mayor / Chair Alcantar called the meeting to order at 6:34 p.m.

**2. ROLL CALL**

PRESENT: Council / Agency Member Garcia (arrived at 6:39 p.m.)  
Council / Agency Member Guerrero  
Council / Agency Member Lozoya  
Vice Mayor / Vice Chair Gonzalez (arrived at 6:36 p.m.)  
Mayor / Chair Alcantar

ABSENT: None

ALSO PRESENT: Acting City Manager Santor Nishizaki, City Attorney, Victor Ponto, Assistant City Clerk, Richard Iglesias, Finance Director, Steven Dobrenen Human Resources Manager Jennifer Hernandez, and Junior Deputy City Clerk, Andres Rangel.

**3. PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was led by Council Member Guerrero.

**IT WAS MOTIONED BY COUNCIL MEMBER GUERRERO AND SECONDED BY COUNCIL MEMBER LOZOYA TO PULL BUSINESS SESSION ITEMS 12 A,B, AND D AS WELL AS CLOSED SESSION ITEMS A-G. THE MOTION CARRIED (5-0-0) BY THE FOLLOWING ROLL CALL VOTE:**

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None  
ABSTAIN: None

**4. PRESENTATIONS - NONE**

**5. PUBLIC COMMENTS - NONE**

**6. CITY COUNCIL COMMENTS**

Council Member Guerrero, welcomed Henry Garcia as executive advisor to the city, and asked staff why the agreement was not placed on tonight's agenda.

Council Member Lozoya, welcomed Henry Garcia to the City.

Vice Mayor Gonzalez, welcomed Henry Garcia to the City. He also thanked the city manager as staff for being proactive during the COVID pandemic.

Mayor Alcantar, welcomed Henry Garcia to the City. She went on to announce testing units in the city of Bell over the weekend.

**7. CITY MANAGER REPORT (information only)**

**8. REPORTS REGARDING AD HOC, ADVISORY, STANDING OR OTHER COMMITTEE MEETINGS - NONE**

**9. WAIVER OF FULL READING OF RESOLUTIONS AND ORDINANCES**

**10. CONSENT CALENDAR (COUNCIL MEMBER GUERRERO PULLED ITEMS A-F FOR DISCUSSION)**

**A. Approval of the Local Agency Investment Fund (LAIF) for the Month of November 2019**

Presented by the Finance Director

The City Council is requested to approve the Local Agency Investment Fund (LAIF) Report for the month of November 2019 in the amount of \$5,048,584.71.

**Motion:** It was motioned by Council Member Garcia and seconded by Vice Mayor Gonzalez to approve the Local Agency Investment Fund (LAIF) Report for the month of November 2019 in the amount of \$5,048,584.71. The motion carried (4-1-0) by the following roll call vote:

AYES: Garcia, Lozoya, Gonzalez, and Alcantar  
NOES: Guerrero  
ABSENT: None  
ABSTAIN: None

**B. Approval of the City Demands and Payroll Including Cash and Investment Report for the Month of November 2019**

Presented by the Finance Director

The City Council is requested to approve the Demands and Payroll in the amount of \$835,715.61 including Cash and Investment Report by Fund for the month of November 2019.

**Motion:** It was motioned by Council Member Garcia and seconded by Vice Mayor Gonzalez to approve the Demands and Payroll in the amount of \$835,715.61 including Cash and Investment Report by Fund for the month of November 2019. The motion carried (4-1-0) by the following roll call vote:

AYES: Garcia, Lozoya, Gonzalez, and Alcantar  
NOES: Guerrero  
ABSENT: None  
ABSTAIN: None

**C. Approval of the Local Agency Investment Fund (LAIF) for the Month of December 2019**

Presented by the Finance Director

The City Council is requested to approve the Local Agency Investment Fund (LAIF) Report for the month of December 2019 in the amount of \$5,048,584.71.

**Motion:** It was motioned by Council Member Garcia and seconded by Vice Mayor Gonzalez to approve the Local Agency Investment Fund (LAIF) Report for the month of December 2019 in the amount of \$5,048,584.71. The motion carried (4-1-0) by the following roll call vote:

AYES: Garcia, Lozoya, Gonzalez, and Alcantar  
NOES: Guerrero  
ABSENT: None  
ABSTAIN: None

**D. Approval of the City Demands and Payroll Including Cash and Investment Report for the Month of December 2019**

Presented by the Finance Director

The City Council is requested to approve the Demands and Payroll in the amount of \$2,866,576.51 including Cash and Investment Report by Fund for the month of December 2019.

**Motion:** It was motioned by Council Member Garcia and seconded by Vice Mayor Gonzalez to approve the Demands and Payroll in the amount of \$2,866,576.51 including Cash and Investment Report by Fund for the month of December 2019. The motion carried (4-1-0) by the following roll call vote:

AYES: Garcia, Lozoya, Gonzalez, and Alcantar  
NOES: Guerrero  
ABSENT: None  
ABSTAIN: None

**E. Approval of the Local Agency Investment Fund (LAIF) for the Month of January 2020**

Presented by the Finance Director

The City Council is requested to approve the Local Agency Investment Fund (LAIF) Report for the month of January 2020 in the amount of \$5,077,584.51.

**Motion:** It was motioned by Council Member Garcia and seconded by Vice Mayor Gonzalez to The City Council is requested to approve the Local Agency Investment Fund (LAIF) Report for the month of January 2020 in the amount of \$5,077,584.51. The motion carried (4-1-0) by the following roll call vote:

AYES: Garcia, Lozoya, Gonzalez, and Alcantar  
NOES: Guerrero  
ABSENT: None  
ABSTAIN: None

**F. Approval of the City Demands and Payroll Including Cash and Investment Report for the Month of January 2020**

Presented by the Finance Director

The City Council is requested to approve the Demands and Payroll in the amount of \$699,291.67 including Cash and Investment Report by Fund for the month of January 2020.

**Motion:** It was motioned by Council Member Garcia and seconded by Vice Mayor Gonzalez to approve the Demands and Payroll in the amount of \$699,291.67 including Cash and Investment Report by Fund for the month of January 2020. The motion carried (4-1-0) by the following roll call vote:

AYES: Garcia, Lozoya, Gonzalez, and Alcantar  
NOES: Guerrero  
ABSENT: None  
ABSTAIN: None

**G.** Consideration to Review and Approve the Draft Minutes of February 18, 2020, for the Regular Meeting of the City Council and the Joint Meeting of the City of Cudahy as Successor Agency and Housing Successor Agency to the Cudahy Development Commission and Special Meeting of the City Council and Successor Agency for March 16, 2020, March 23, 2020, and March 30, 2020

Presented by the City Clerk's Office

The City Council is requested to review and approve the City Council / Successor Agency Draft Minutes for February 18, 2020, March 16, 2020, March 23, 2020, and March 30, 2020.

**Motion:** It was motioned by Vice Mayor Gonzalez and seconded by Council Member Guerrero to review and approve the City Council / Successor Agency Draft Minutes for February 18, 2020, March 16, 2020, March 23, 2020, and March 30, 2020. The motion carried (5-0-0) by the following roll call vote:

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
NOES: None  
ABSENT: None  
ABSTAIN: None

## 11. PUBLIC HEARING

**A.** Conditional Use Permit No.38-371 to approve a 50% density bonus permitting three of the nine proposed dwelling units for the development at 7919 Wilcox Avenue in the High Density Residential (HDR) Zone, including associated concessions for the property located at 7919 Wilcox Avenue (APN 6224-003-021)

Presented by the Interim Community Development Director

The City Council is requested to:

1. Open the public hearing to receive comments on the proposed Conditional Use Permit request and then close the public hearing; and
2. Approve Resolution No. 20-11, approving Conditional Use Permit No. 38-371 to allow a 50 percent density bonus of the number of "base" units allowed in the underlying zone, and incorporating affordable housing units.

**Motion:** It was motioned by Council Member Guerrero and seconded by Council Member Lozoya to table this item to the next regularly scheduled council meeting on May 5, 2020. The motion carried (3-1-0) by the following roll call vote:

AYES: Garcia, Guerrero, and Lozoya  
NOES: Alcantar  
ABSENT: None  
ABSTAIN: Gonzalez

**MAYOR ALCANTAR OPENED THE FLOOR TO PUBLIC COMMENT AT 7:37 PM**

Susie de Santiago, asked council if there is a way to send notices to all residents, and not just property owners. She also asked if the public notices can also be translated in Spanish.

Jesse Estrada, asked if the KIPP development project be presented after the COVID pandemic and public notices be sent out in Spanish as well.

**MAYOR ALCANTAR CLOSED THE FLOOR TO PUBLIC COMMENT AT 7:42 PM**

**12. BUSINESS SESSION**

**A. Consideration and Adoption of an Urgency Ordinance Enacting a Temporary Moratorium on Evictions for Residential and Non-Essential Commercial Tenants**

Presented by the City Attorney's Office

The City Council is recommended to adopt an Urgency Ordinance enacting a temporary moratorium on evictions due to the nonpayment of rent for residential and non-essential commercial tenants where failure to pay rent results from income loss resulting from the novel Coronavirus (COVID-19).

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING.**

**B. Consideration and Adoption of an Urgency Ordinance Enacting a Temporary Moratorium on Utility Cutoffs for Both Residential and Commercial Tenants**

Presented by the City Attorney's Office

The City Council is recommended to adopt an Urgency Ordinance enacting a temporary moratorium on utility cutoffs for both residential and commercial tenants due to nonpayment where the failure to pay results from income loss resulting from the novel Coronavirus (COVID-19).

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING.**

**C. Adoption of a Proposed Resolution No. 20-10 Amending the City of Cudahy Fiscal Year (FY) 2019-2020 City Budget**

Presented by the Finance Director

The City Council is requested to:

1. Receive and file the Fiscal Year (FY) 2019-2020 Mid-Year Budget review and related reports; and
2. Adopt Proposed Resolution No. 20-10 approving the requested amendments to the FY 2019-2020 City Budget as follows: increasing certain revenues in the General Fund by \$305,500, increasing certain General Fund expenditures by \$485,950, and certain Special Revenue fund expenditures by \$24,900.

**Motion:** It was motioned by Council Member Garcia and seconded by Vice Mayor Gonzalez to table this item to the next regularly scheduled council meeting. The motion carried (5-0-0) by the following roll call vote:

AYES: Garcia, Guerrero, Lozoya, Gonzalez, and Alcantar  
 NOES: None  
 ABSENT: None  
 ABSTAIN: None

- D. Amendment No. 2 to Agreement for Solid Waste and Recyclable Materials Collection Services between the City of Cudahy and Consolidated Disposal Service, LLC. (the “Second Amendment”)

Presented by the City Manager

The City Council is requested to approve the Second Amendment for execution between the City of Cudahy (City) and Consolidated Disposal Services (Republic Services).

**ITEM WAS TABLED TO A SUBSEQUENT COUNCIL MEETING**

**13. COUNCIL DISCUSSION**

A. Council Member Guerrero

- i. Adopted Ordinance No. 630, which added Chapter 2.56 of Title 2 of the Cudahy municipal code establishing post-government employment restrictions.

**14. CLOSED SESSION**

**DELIBERATING AS CUDAHY SUCCESSOR AGENCY**

A. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:  
 Site No. 1 Elizabeth Street Residential Property  
 5256 Elizabeth Street APN: 6224-001-014  
 5260 Elizabeth Street APN: 6224-001-015

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
 Negotiating parties: Chief Administrative Officer  
 Under Negotiation: Price and Terms

B. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 2 Atlantic Avenue/Santa Ana Street Commercial Property  
4734 Santa Ana Street APN: 6224-018-008  
8110 South Atlantic Avenue APN: 6224-018-071  
8100 South Atlantic Avenue APN: 6224-018-068  
Santa Ana Street APN: 6224-018-070  
4720 Santa Ana Street APN: 6224-018-069

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

C. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 3 Santa Ana Street Residential Property  
4610 Santa Ana Street APN: 6224-019-014

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

D. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 4 Atlantic Avenue/Cecilia Street Commercial Property  
8135 South Atlantic Avenue APN: 6224-022-001  
4629 Cecilia Street APN: 6224-022-004  
8201 South Atlantic Avenue APN: 6224-022-002  
8221 South Atlantic Avenue APN: 6224-022-012  
4633 Cecilia Street APN: 6224-022-003

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

E. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 5 Atlantic Avenue/Patata Street Commercial Property  
4819 Patata Street APN: 6224-034-014  
8420 South Atlantic Avenue APN: 6224-034-032 APN: 6224-034-040  
Patata Street APN: 6224-034-041

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

F. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiators

Property Location:

Site No. 6 Atlantic Avenue/Clara Street Commercial Property

4613 Clara Street APN: 6226-022-002

7660 South Atlantic Avenue APN: 6226-022-008

7630 South Atlantic Avenue APN: 6226-022-019 APN: 6226-022-020

7638 South Atlantic Avenue APN: 6226-022-023

7644 South Atlantic Avenue APN: 6226-022-022

No address APN: 6226-022-021 APN: 6226-022-024

Successor Agency Negotiator: Santor Nishizaki, Executive Director, Dave Gondek, Deputy City Attorney, Victor Ponto, City Attorney  
Negotiating parties: Chief Administrative Officer  
Under Negotiation: Price and Terms

G. Closed Session Pursuant to Government Code Section 54956.8 – Conference with Real Property Negotiator

Properties:

– 8100 Atlantic Ave., 4720 Santa Ana St., 8110 Atlantic Ave., 4734 Santa Ana St. (APN 6224-018-068, 069, 070, 071, 008)

– 8135 Atlantic Ave., 4629 Cecilia St., 8201 S. Atlantic, 4633 Cecilia St., 8221 S. Atlantic Ave. (APN 6224-022-001, 004, 002, 003, 012)

– 4819 Patata, 8420 S. Atlantic Ave. (APN 6224-034-014, 032, 040, 041)

– 4613/4615 Clara St., 7630 Atlantic Blvd., 7660 Atlantic Blvd., 7638 Atlantic Blvd., 7644 Atlantic Blvd. (APN 6226-022-002, 019, 020, 008, 021, 022, 023, 024)

– 4610 Santa Ana St. (APN 6224-019-014)

City Negotiators: Acting City Manager, Santor Nishizaki and City Attorney

Negotiating Parties: Cudahy LF, LLC

Under Negotiation: Price and terms of payment

## **DELIBERATING AS CITY COUNCIL**

H. Closed Session Pursuant to Government Code Section 54956.9(d)(4) – Conference with Legal Counsel to Discuss the Initiation of Litigation – One Matter

## **15. CLOSED SESSION ANNOUNCEMENT**

Deputy City Attorney Victor Ponto reported that for each closed session items, legal counsel was given, direction was received, no further reportable action.

## **16. ADJOURNMENT**

The City Council / Agency meeting was adjourned at 9:12 p.m.

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Elizabeth Alcantar  
Mayor

ATTEST:

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Richard Iglesias  
Assistant City Clerk

DRAFT

RESOLUTION NO. 16-38

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CUDAHY APPROVING THE CITY CLERK'S USE OF SUMMARY ACTION MINUTES AS THE OFFICIAL RECORD OF THE MEETINGS OF THE CITY COUNCIL OF THE CITY OF CUDAHY**

WHEREAS, pursuant to Section 2.20.010(1) of the Municipal Code of the City of Cudahy, the City clerk is required to perform such duties as are set forth in the Government Code and in the City's Municipal Code and as the City Council from time to time shall direct or authorize; and

WHEREAS, under Government Code Section 40801, the City Clerk is tasked with keeping accurate records of the proceeding of the legislative body; and

WHEREAS, pursuant to Government Code Section 36814, the City Council shall cause the City Clerk to keep a correct record of its proceedings;

WHEREAS, the City Clerk currently prepares and keeps full written minutes of the City Council's meetings and proceedings; and

WHEREAS, instead of summary minutes, the City Council now wishes for the City Clerk to prepare and keep summary action minutes as the official record of its meetings or proceedings; and

BASED UPON THE ABOVE RECITALS, THE CITY COUNCIL OF THE CITY OF CUDAHY, CALIFORNIA, DOES HEREBY FIND, DETERMINE AND RESOLVE AS FOLLOWS:

SECTION 1. The recitals set forth above are true and correct and incorporated herein by reference.

SECTION 2. The City Council hereby approves the use of summary action minutes as the official record of its meetings or proceedings in lieu of full form written minutes.

SECTION 3. This Resolution shall take effect immediately upon its adoption by the City Council and the City Clerk shall certify to the passage and adoption of this Resolution and enter it into the book of original Resolutions.

**PASSED, APPROVED AND ADOPTED** by the City Council of the City of Cudahy at its regular meeting on this 12<sup>th</sup> day of December, 2016.



Baru Sanchez  
Mayor

ATTEST:



Richard Iglesias  
Deputy City Clerk

STATE OF CALIFORNIA        )  
COUNTY OF LOS ANGELES    )     SS:  
CITY OF CUDAHY             )

I, Richard Iglesias, Deputy City Clerk of the City of Cudahy, hereby certify that the foregoing Resolution No. 16-38 was passed and adopted by the City Council of the City of Cudahy, signed by the Mayor and attested by the Deputy City Clerk at a regular meeting of said Council held on the 12th day of December, 2016, and that said Resolution was adopted by the following vote, to-wit:

AYES: Garcia, Markovich, Hernandez, Sanchez

NOES: None

ABSENT: None

ABSTAIN: Guerrero



Richard Iglesias  
Deputy City Clerk



# Item Number 11A

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## STAFF REPORT

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**Date:** June 2, 2020

**To:** Honorable Mayor/Chair and City Council/Agency Members

**From:** Henry Garcia, Interim City Manager/Executive Director  
By: Salvador Lopez Jr., Interim Community Development Manager

**Subject:** **Appeal of the Planning Commission’s decision to deny Development Review Permit No. 41-532 to allow the construction of a 67,148 square foot charter school located at 7801-7835 Otis Avenue (APN 6225-026-0201/002/003/013/014)**

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### RECOMMENDATION

The City Council is requested to reverse the Planning Commission’s decision and adopted Resolution No. 20-15, approving Development Review Permit No. 41-532 (DRP 41-532) to allow the design, site layout, and construction of a new 67,148 square foot site of the art charter school.

### BACKGROUND

1. On February 24, 2020, this project was considered by the Planning Commission at their February 24, 2020 meeting. Staff provided an overview of the proposed development with a recommendation of approval. After public testimony in support and opposition, and questions of the applicant and staff, the Commission denied the project with a 3-1 vote.
2. On March 4, 2020, staff received a letter from the applicant’s attorney appealing the decision of the Planning Commission’s denial to the City Council (See Attachment C).
3. On May 21, 2020, staff received a letter outlining their subsequent grounds for their appeal (See Attachment D). In summary the letter provides the following reasons:
  - The Project satisfies all the mandatory evaluation criteria identified in CMC section 20.84.210;
  - The Planning Commission improperly denied the Project based on conclusions that are inconsistent with evidence in the record;

- The community concerns regarding environmental and traffic issues have been addressed in comprehensive technical reports prepared by subject matter experts;
- The Planning Commission improperly rejected a use permitted by-right on the Project Site; and
- The Planning Commission violated KIPP's due process rights by failing to provide a fair hearing.

Additionally, the applicant's appeal further asserts the following:

1. The Applicant Has Undertaken Substantial Efforts to Engage with the Community;
2. The Commission Violated the CMC by Failing to Evaluate or Consider the Required Findings for Design Review Permits as Required by Law;
3. The Planning Commission's Denial Is Not Supported by Evidence in the Record;
4. The Project May Not be Denied Solely Based on the Proposed By-Right Use of the Project Site; and
5. The Project Denial is a Violation of Applicant's Procedural Due Process Rights.

Attached to this report as Attachment E is a series of support letters (provided by the applicant) from Cudahy residents in support of the project.

Also attached to this report as Attachment F are 2 letters of opposition received by city staff.

## **ANALYSIS**

### **PROJECT DESCRIPTION:**

The subject property is located on an approximately 95,832 square foot (2.2 acres) lot located at 7801-7835 Otis Avenue in the City of Cudahy in the Low Density Residential (LDR) Zone. The site is currently vacant with demolition of the former Covert Iron Works and an auto shop already complete. The immediate area is developed with a mix of multi-family and single-family residential land uses, as well as Lugo Park and Recreation Center directly to the east.

The applicant, Etmny Cornejo, proposes to construct a 67,148 square foot elementary and middle charter school (Kipp Pueblo Unido School). According to the plans submitted to the city's Planning Division the development will consist of a single two-story structure with a subterranean parking garage. The building would house an elementary and middle school, including fifty classrooms, offices, bathrooms, multi-function rooms, and associated outdoor accessories like a basketball court and playground equipment. There are 99 parking spaces proposed for the site in order to fulfill the zoning code's requirement of one parking space for every classroom on site plus one for every employee.

Vehicular ingress to the Project's drop-off/pick-up area and subterranean parking garage will be provided via one driveway along the west side of Otis Avenue approximately midway

between Olive Street and Elizabeth Street. The ingress driveway is proposed to accommodate right-turn vehicular ingress only (i.e., right-turn egress and left-turn ingress and egress movements will not be permitted). Signage on Otis Avenue prohibiting northbound left-turn ingress movements during drop-off/pick-up periods will be provided. Additionally, staff and parents/caregivers will be provided with information regarding the site access scheme prior to the start of the school year. Therefore, motorists destined to the Project will be aware of the right-turn only ingress operation at the Otis Avenue driveway and will plan their travel routes in advance so as to arrive at the Project site via southbound Otis Avenue. Traffic destined to the Project to drop-off or pick-up students will enter the proposed Otis Avenue ingress driveway, travel within the site in the proposed drop-off/pick-up lane, complete the student drop-off or pick-up, and then exit onto Olive Street via the proposed driveway at the northwesterly portion of the Project Site. Traffic destined to the Project to access the subterranean parking garage will enter the Otis Avenue driveway and travel down the ramp to the parking garage. Traffic departing the Project from the parking garage will travel up the ramp at the northwesterly portion of the Project Site and exit via the proposed Olive Street egress driveway.

Vehicular egress from the Project's drop-off/pick-up area, as well as from the subterranean parking garage, will be provided via one driveway along the south side of Olive Street, at the northwest portion of the Project Site. The Olive Street driveway is proposed to accommodate vehicular egress movements only (i.e., left-turn and right-turn ingress movements are not permitted).

The proposed student drop-off/pick-up area destined to the Project to drop-off or pick-up students will enter the site via the proposed ingress driveway on Otis Avenue, travel within the site in the proposed drop-off/pick-up lane, complete the student drop-off or pick-up for Grades 5-8, continue northbound within the site in the proposed drop-off/ pick-up lane, complete the student drop-off or pick-up for Grades K-4, and then exit via the northwesterly driveway onto Olive Street. The proposed drop-off/pick-up lane can accommodate approximately 26 vehicles queued within the site. The proposed on-site drop-off/pick-up area lane is approximately 20 feet in width, which is sufficient to accommodate one lane of queued vehicles, plus a bypass lane to allow vehicles to bypass the queue should there be delay related to the passenger loading/unloading of one or more of the queued vehicles.

This configuration will provide efficient and safe ingress and egress from the site while maintaining less vehicular conflict points to both Otis and Olive Street. These driveways and additional emergency access as shown on the site plan have been reviewed and approved by the Los Angeles County Fire Department.

The project architecture is modern contemporary. Treatments incorporate a blend of contemporary and traditional architectural forms and details which include a flat façade, hip style roof, plaster walls, and articulated facades such as inset windows and doors, offset/projected wall features and recessed entryways. Proposed building colors incorporate an earth-tone palette with a dark grey smooth stucco finish, brown trims, and decorative veneers.

The buildings would be set back from the eastern side of the property by 15 feet, the rear setback by 20 feet, the western setback by 15 feet, and the front setback by 20 feet. A six-foot tall, ivy-covered, concrete-masonry-unit (CMU) wall would be constructed along the rear perimeter of the property. A preliminary landscape plan has been submitted showing landscape areas on the buildings' perimeter and in interior open space areas and within the front yard setback. A more detailed plan will be submitted with the formal plan check submittal. Project lighting would consist of security lighting and wall lights on the building perimeters, using LED fixtures. All lighting would be designed to avoid light spillage to neighboring properties.

A minimum number of on-site parking spaces is required for the property, based on the number of classrooms and employees. The table below identifies the number of spaces required by the zoning code.

Number of classrooms plus number of employees	Required parking spaces	Parking spaces provided
99	99	99

The applicant has provided a Traffic Impact Study (See Attachment G) analyzing the proposed development. This traffic impact analysis has been prepared to evaluate the potential impacts to the local street system. Twenty intersections were identified and analyzed in order to determine changes in operations following construction and occupancy of the proposed Project. Application of the impact threshold criteria consulted with the City of Cudahy indicate that none of the 20 study intersections would be significantly impacted by the forecast Project traffic. Incremental, but not significant, impacts are noted at the 20 study intersections evaluated in this analysis. As no significant impacts are expected due to the proposed Project, no traffic mitigation measures are required or recommended for the study intersections. A VMT assessment has been prepared in accordance with SB 743 for informational purposes. Based on available census and VMT data provided by Caltrans, the Project VMT is determined to be 35.97 miles per Employee.

**General Plan and Zoning.** The General Plan designates the site and surrounding area as "Low Density Residential" as noted above, the property's zoning is Low Density Residential (LDR). Table 1 below shows the project site and surrounding area's zoning and land uses.

**Table 1  
Zoning and Land Use**

	ZONING	LAND USE
<b>PROJECT SITE</b>	LDR	Previously developed, rough graded
<b>NORTH</b>	LDR	Single-Family Residential
<b>EAST</b>	City Parks	Lugo Park

<b>SOUTH</b>	City Parks	Parklet
<b>WEST</b>	LDR	Single-Family Residential

The proposed project meets General Plan and Zoning standards for use (described above), building height, and front and side setbacks. Table 2 below compares the project's characteristics with development standards.

**Table 2**  
**Development Standards: Required vs. Proposed Project**

	<b>General Plan</b>	<b>Zoning</b>	<b>Density</b>	<b>Height</b>	<b>Setbacks</b>	<b>Min Floor Area</b>	<b>Parking</b>
<b>Required</b>	LDR	LDR	15 du/acre maximum	2 stories; 35 feet	Front: 20 ft Side: 5/15 ft. Rear: 10 ft.	N/A	Greater than or equal to the number of classrooms plus employees (99)
<b>Proposed</b>	LDR	LDR	-	1 story	Front: 20 ft. Side: 15 ft. Rear: 10 ft.	N/A	99
<b>Consistent?</b>	<b>YES</b>	<b>YES</b>	<b>N/A</b>	<b>YES</b>	<b>YES</b>	<b>N/A</b>	<b>YES</b>

Table 2 shows that the proposed development complies strictly with all applicable development standards for development of the proposed use in the LDR zone, where applicable.

**REQUIRED FINDINGS:**

**DEVELOPMENT REVIEW PERMIT**

**CMC § 20.84.210, Basis for Approval or Denial of a Development Review Permit.**

- **20.84.210(a) The project is consistent with the City of Cudahy General Plan, any applicable specific plan, and any plan of another governmental agency made applicable by statute or ordinance.**

*Support for Finding:* The project is compatible with the City of Cudahy's General Plan because it proposes a coherent development incidental to residential use in the Low-Density Residential zone.

- **20.84.210(b) The height, bulk, and other design features of structures are in proportion to the building site, and external features are balanced and unified to present a harmonious appearance.**

*Support for Finding:* There is sufficient area in the 20-foot front setback for ample and dense landscaping, presenting a harmonious appearance with nearby residences and parks that also face the Otis Avenue. Accordingly, the project is consistent with the height, bulk, and other design features required by the City Zoning design guidelines and provides a unified and uniform appearance.

- **20.84.210(c) The project design contributes to the physical character of the community, relates harmoniously to existing and anticipated development in the vicinity, and is not monotonously repetitive in and of itself or in conjunction with neighboring uses and does not contribute to excessive variety among neighboring uses.**

*Support for Finding:* The existing surrounding properties include single story and two-story single-family residents, a park, and a parklet. The proposed development includes features more consistent with residential and recreational areas, particularly when compared to the previous industrial uses on the site. The proposed surface articulations on the proposed structure itself, including trimmed windows, pop-out terraces etc., avoid monotonous repetition.

- **20.84.210(d) The site layout and the orientation and location of structures and their relationship to one another and to open spaces, parking areas, pedestrian walks, signs, illumination, and landscaping achieve safe, efficient, and harmonious development.**

*Support for Finding:* The proposed site layout presents a balanced plan that relates to similar structures along Otis Avenue and surrounding streets. The development's orientation beyond the setback helps to screen the building's mass from the public right of way and adjacent properties. There are areas available for landscaping, including the front setback, the rear setback, the private open space and common areas. The driveway entrances permit good visibility along the length of the project interior and will have security lighting for safety.

- **20.84.210(e) The grading and site development show due regard for the qualities of the natural terrain and landscape and do not call for the indiscriminate destruction of trees, shrubs, and other natural features.**

*Support for Finding:* The proposed development requires precise grading; the site is previously developed, graded, and the existing structures have been demolished. Some of the lot is currently dirt and does not contain any trees. However, the rest of the site is urbanized, flat and there is little evidence of "natural" terrain. There are no "natural" features on the site. Moreover, the project would add new landscaping, including trees and shrubs.

- **20.84.210(f) The design, lighting, and placement of signs are appropriately related to the structure and grounds and are in harmony with the general development of the site.**

*Support for Finding:* The project will not have illuminated signage, with the exception for possible illuminated identifying address signs on the front elevation. That sign must meet CMC standards for property identification signs and the conditions of approval for the project, and thus would be in harmony with the general development of the site.

- **20.84.210(g) Mechanical equipment, machinery, trash, and other exterior service areas are screened or treated in a manner which is in harmony with the design of the structures and grounds.**

*Support for Finding:* There are no proposed exterior mechanical equipment, machinery, or service areas except for the trash enclosures which are located behind decorative view obscuring doors to prevent stormwater runoff and to provide further screening and meets zoning code requirements for multi-family developments. Other mechanical equipment must comply with CMC design guidelines and Building Code standards, which require that all mechanical equipment, machinery, trash, and other exterior service areas be screened from public view.

- **20.84.210(h) The project shows proper consideration for adjacent residentially zoned or occupied property and does not adversely affect the character of such property.**

*Support for Finding:* The proposed project would re-develop a site that was previously industrial and therefore not compatible with surrounding residential and park uses. By introducing new, up-to-date development in the form of a school with new landscaping, the project would improve the character of the adjacent properties and maintain or improve property value. The design is consistent with the City's General Plan and zoning designation, meets all development standards within the provisions of the Development Review Permit for the project, is compatible with the surrounding residential use, and will not adversely affect the value or quality of the neighborhood.

#### **Additional Findings for Approval:**

- **There are adequate provisions for public and emergency vehicle access, fire protection, sanitation, water, and public utilities and services to ensure that the proposed development would not be detrimental to public health and safety.**

*Support for Finding:* Planning staff and the Los Angeles County Fire Department reviewed the site plan. With application of the conditions of approval, the proposed site plan complies with the City's Zoning Code and Fire Department requirements related to vehicle access, fire protection, sanitation, water, and public utilities and services.

**CEQA (CALIFORNIA ENVIRONMENTAL QUALITY ACT):**

In accordance with the provisions of the California Environmental Quality Act (CEQA), an environmental analysis has been completed for this case. As a result of that analysis, it has been determined that this case is exempt from the requirements of CEQA and no further environmental documentation will be required, pursuant to Article 18, Statutory Exemptions Section 15268, *Ministerial Projects*, of the California Environmental Quality Act.

**FISCAL IMPACT**

There will be no fiscal impact to the city's General Fund.

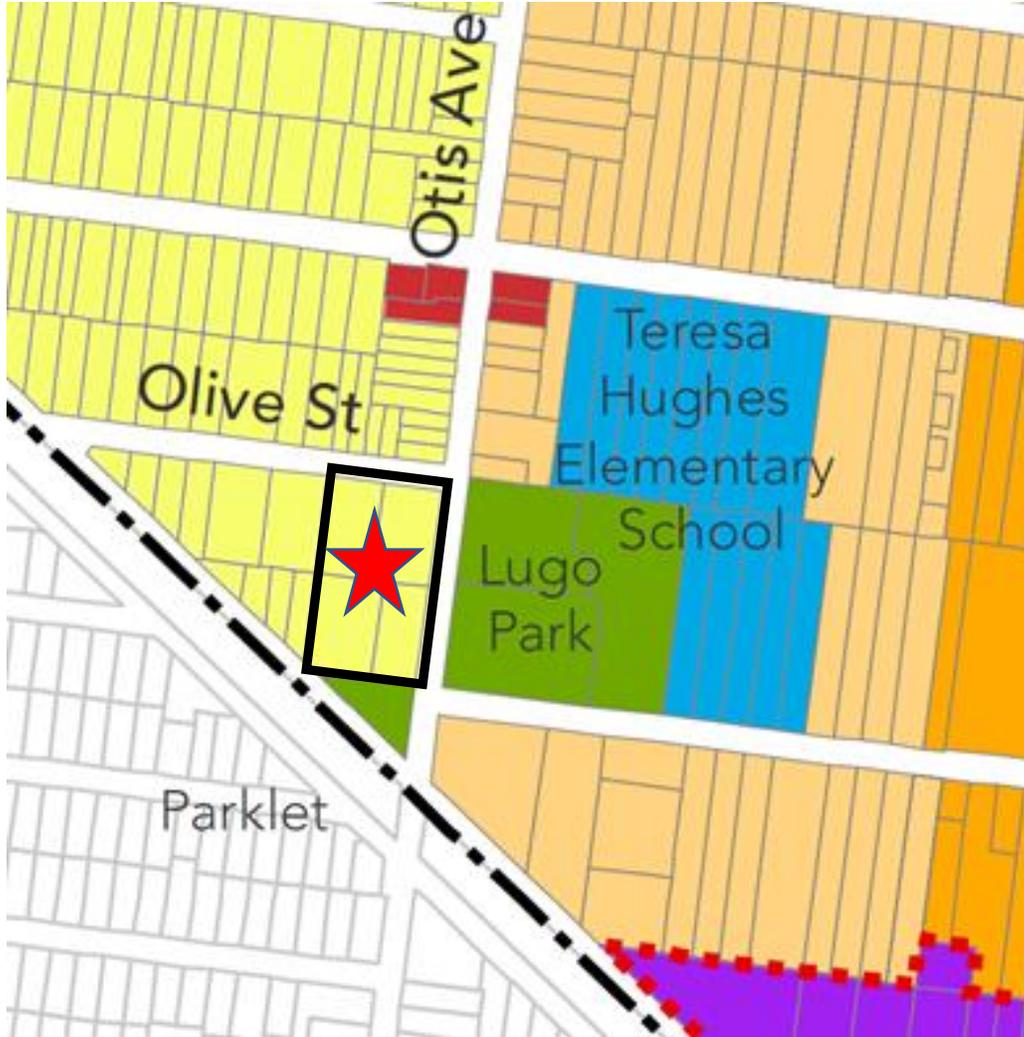
**ATTACHMENTS**

- A. Location Map
- B. Proposed Development Plans
- C. Applicant's Appeal Letter
- D. Applicant's Subsequent Appeal Letter
- E. Letters of Support
- F. Letter of Opposition
- G. Traffic Impact Study
- H. Resolution No. 20-15

# ATTACHMENT A

# LOCATION MAP

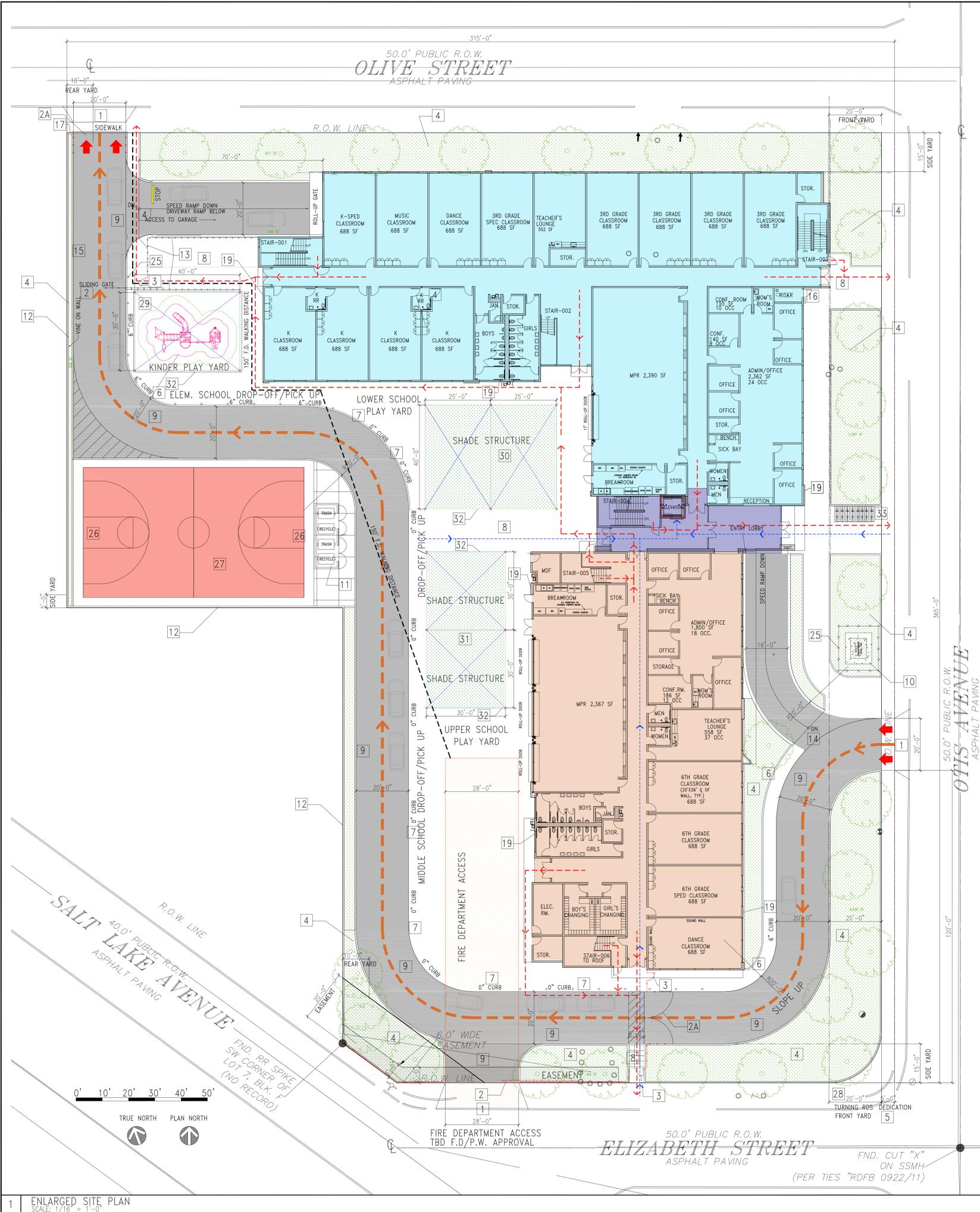
# LOCATION MAP



**7801 – 7835 Otis Avenue**

# ATTACHMENT B

# PROPOSED DEVELOPMENT PLANS



PROJECT INFORMATION	
PROJECT:	KIPP SCHOOL - OTIS AVE.
LOCATION:	7801-7835 OTIS AVE., CUDAHY, CA
BUILDING USE:	EDUCATION - K THRU 8TH GRADE (LOWER SCHOOL AND UPPER SCHOOL)
APPLICABLE CODES:	2016 CA BUILDING CODE (2016 CBC), 2016 CA ELECTRICAL CODE, 2016 CA MECHANICAL CODE, 2016 CA PLUMBING CODE, 2016 CA GREEN BUILDING STANDARD CODE, 2016 CA ENERGY CODE
OCCUPANCY:	E OCCUPANCY, A-3 AND B
CONSTRUCTION TYPE:	TYPE V-A, FULLY SPRINKLERED
ZONING:	LDR
BUILDING HEIGHT:	2-STORY, 31'-6" (HEIGHT LIMIT: 35' MAX.) WITH UNDERGROUND PARKING GARAGE (-12'-0")
FAR:	NONE

SCOPE OF WORK	
TWO NEW 2-STORY CLASSROOM BUILDINGS AND SITE DEVELOPMENT FOR LOWER AND UPPER SCHOOL - K THRU 8TH GRADE	
INCLUDING: ONE FULLY-SPRINKLERED TWO-STORY BUILDING WITH BASEMENT PARKING GARAGE; 33 CLASSROOMS FOR K THRU 5TH GRADES	
ONE FULLY-SPRINKLERED TWO-STORY BUILDING; 17 CLASSROOMS FOR 6TH THRU 8TH GRADES	

LEGAL DESCRIPTION	
REFER TO LEGAL DESCRIPTION ON ALTA SURVEY	

SITE AREA SUMMARY	
SITE PLAN SUMMARY	
LOT AREA:	2.20 ACRES (95,832 SF)
TOTAL BUILDING AREA:	67,148 SF
FAR = 67,148 / 2.2 AC = 0.70	

BUILDING FLOOR AREA SUMMARY	
BASEMENT AREA:	45,300 SF
ELEMENTARY SCHOOL (NORTH)	MIDDLE SCHOOL (SOUTH)
GROUND FLOOR AREA: 21,092 SF	GROUND FLOOR AREA: 12,667 SF
SECOND FLOOR AREA: 21,351 SF	SECOND FLOOR AREA: 12,482 SF
TOTAL BUILDING GROSS FLOOR AREA: 42,443 SF	TOTAL BUILDING GROSS FLOOR AREA: 25,149 SF

PARKING SUMMARY	
BLDG 1: LOWER SCHOOL - K TO 5TH	BLDG 2: UPPER SCHOOL - 6TH TO 8TH
K-5TH SCHOOL REQ'D PARKING CALCULATION:	
REQUIRED PARKING SPACES : 1 PER EMPLOYEE PLUS 1 PER CLASSROOM	
PARKING SPACE REQUIRED: 33 + 32(EMPLOYEES) = 65	PARKING SPACE PROVIDED: 65
6TH-8TH SCHOOL REQ'D PARKING CALCULATION:	
REQUIRED PARKING SPACES : 1 PER EMPLOYEE PLUS 1 PER CLASSROOM	
PARKING SPACE REQUIRED: 17 + 17(EMPLOYEES) = 34	PARKING SPACE PROVIDED: 34
TOTAL PARKING SPACES REQUIRED FOR BOTH SCHOOLS:	99
TOTAL PARKING SPACES PROVIDED FOR BOTH SCHOOLS:	99

BIKE PARKING SUMMARY	
BIKE PARKING SPACES REQUIRED: SHORT TERM: 8 FOR STUDENTS AND 4 FOR STAFFS (PER CAL GREEN CODE 5106.4.2.1 AND 5106.4.2.2)	
LONG TERM: 5 (5% OF TENANT VEHICLE PARKING SPACES 5106.4.1.2)	
BIKE PARKING SPACES PROVIDED:	SHORT TERM: 12
	LONG TERM: 5

LANDSCAPE SUMMARY	
LANDSCAPE AREA:	
PROVIDED: 12,462 SF (12,462/95,832) = 13% OF THE LOT AREA	

VICINITY MAP	

INDEX TO DRAWINGS	
NUMBER	TITLE
A1.0	DRAWING INDEX, PROJECT INFORMATION & SITE PLAN
A0.1.1	ALTA SURVEY
A0.1.2	ALTA SURVEY
A2.0	FLOOR PLANS
A3.0	FLOOR PLANS
A4.0	BUILDING ELEVATIONS
A5.1	RENDERINGS
A5.2	RENDERINGS
C1.0	CIVIL CONCEPTUAL PLAN - BASEMENT
C2.0	CIVIL CONCEPTUAL PLAN - FIRST FLOOR
L1.0	LANDSCAPE CONCEPTUAL PLAN

LEGENDS	
	PATH OF TRAVEL, LESS THAN 5% SLOPE UNLESS PROVIDE A RAMP AND CANNOT BE MORE THAN 2% CROSS SLOPE
	PATH OF EGRESS
	FIRE DEPARTMENT ACCESS BOX BOX SHALL BE KNOX CO. MODEL 3502 COLOR: RED
	DROP-OFF/PICK-UP CIRCULATION
	LANDSCAPED AREA
	FIRE HYDRANT
	FLOOR LEVEL EXIT SIGN
	MIN. UNOBSTRUCTED WIDTH OF 28' FIRE DEPT. ACCESS TO WITHIN 150' OF ALL PORTION OF THE EXTERIOR WALLS OF THE 1ST STORY OF THE BUILDING

SITE KEY NOTES	
1	NEW CONC. DRIVEWAY CURB-CUT, SEE CIVIL PLANS
2	NEW MOTORIZED SLIDING VEHICULAR GATE-SEE DOOR SCHEDULE
2A	NEW MOTORIZED SWING VEHICULAR GATE-SEE DOOR SCHEDULE
3	NEW W.I. ACCESSIBLE PEDESTRIAN GATE WITH PERFORATED PANEL & PANIC HARDWARE-SEE DOOR SCHEDULE
4	LANDSCAPE AREA, SEE LANDSCAPE PLAN
5	5' DEDICATION ALONG OTIS AVE.
6	6" CONCRETE CURB
7	0" CURB
8	SCORED CONCRETE PAVING
9	ASPHALT CONC. PAVING
10	NEW TRANSFORMER, SEE ELECTRICAL PLANS
11	FULLY ENCLOSED TRASH ENCLOSURE W/STEEL GATES
12	8'-0" HT. PROTO II WALL WITH GREY SPLIT-FACE BLOCK
13	8' WROUGHT IRON FENCE, W/PERFORATED PANEL, NO MORE THAN 50% OF THE FACE IS OPEN
14	DRIVEWAY SLOPE UP TO ACHIEVE 0" CURB
15	DRIVEWAY SLOPE DOWN TO ACHIEVE 6" CURB
16	FDC LOCATION
17	ADD SIGN: "WRONG WAY, DO NOT ENTER."
18	PROVIDE CONDUIT AND JUNCTION BOX FOR VOICE/INTERCOM /VIDEO SYSTEM - HFX-700M AT EXTERIOR ENTRY GATE.
19	INSTALL A HOSE BIB AT THIS LOCATION. REFER TO PLUMBING ENGINEERING PLANS FOR FURTHER INFO.
20	CONCRETE WHEEL STOP
21	DOUBLE STRIPING OF STALLS SHALL BE PER FIG.7 OF THE CITY OF LA BLDG. DEPT. STANDARDS
22	PAINT LETTERS "VISITOR" ON GROUND.
23	NO PARKING-IN 12" WHITE LETTERS
24	UPRIGHT DISABLED ACCESS PARKING SIGN
25	STANDARD 31" H STEEL BOLLARD INSTALLED 60" O.C. MFG: RELIANCE FOUNDRY CO., LTD. MODEL: R7835, INSTALLED BY ANCHOR CASTING
26	FIXED-HEIGHT PERMANENT PLAYGROUND BASKETBALL SYSTEM W/PERFORATED STEEL BACKBOARD GOAL AND POLE: STEEL FINISH: DARK BRONZE POWDER-COATED MANUFACTURER: SCHOOL OUTFITTERS - BISON SPORTS OR EQUAL
27	OUTDOOR PLAY AREA W/ BASKETBALL COURT
28	20' RADIUS CURB AT CORNER - REQUIRED DEDICATION
29	RUBBERIZED SURFACE O/DEPRESSED CONCRETE SLAB W/DRAINAGE
30	TURF OVER DEPRESSED CONCRETE W/DRAINAGE SYSTEM
31	TURF OVER DEPRESSED PERMEABLE CONCRETE
32	SHADE STRUCTURE(S)
33	SHORT TERM BIKE PARKING

FRANCO ARCHITECTS INC.  
12345 Ventura Blvd. H  
Studio City, CA 91604  
Tel 818 754-2030  
Fax 818 754-2032  
Architecture and Planning

**KIPP PUEBLO UNIDO SCHOOL**  
7801-7835 OTIS AVE., CUDAHY, CA

REV	DESCRIPTION	DATE
1	PLANNING SUBMITTAL	11/12/2019

PROJECT	PROJECT ADDRESS
KIPP PUEBLO UNIDO SCHOOL	7801-7835 OTIS AVE., CUDAHY, CA

DRAWING TITLE	DRAWING INDEX, PROJECT INFORMATION & SITE PLAN
DATE	2/14/2020
SCALE	DRAWING SCALE
PROJECT NUMBER	
DRAWING NUMBER	

PROJECT INFORMATION	
PROJECT:	KIPP PUEBLO UNIDO SCHOOL
PROJECT ADDRESS:	7801-7835 OTIS AVE., CUDAHY, CA
DRAWING TITLE:	DRAWING INDEX, PROJECT INFORMATION & SITE PLAN
DATE:	2/14/2020
SCALE:	DRAWING SCALE
PROJECT NUMBER:	
DRAWING NUMBER:	



- PARKING GARAGE
- ACCESSORY SPACE
- 1-HR RATED EXIT ENCLOSURE AND ELEVATOR



1 BASEMENT FLOOR PLAN  
SCALE: 1/16" = 1'-0"

# KIPP PUEBLO UNIDO SCHOOL

7801-7835 OTIS AVE., CUDAHY, CA

REV	DESCRIPTION	DATE
1	PLANNING SUBMITTAL	11/12/2019

PROJECT	KIPP PUEBLO UNIDO SCHOOL
PROJECT ADDRESS	7801-7835 OTIS AVE., CUDAHY, CA
DRAWING TITLE	BASEMENT FLOOR PLAN
DRAWN BY	
ISSUE DATE	1/15/2020
JOB NUMBER	
DRAWING SCALE	
APPROVED BY	
DRAWING NUMBER	

A2.0

**KIPP PUEBLO UNIDO SCHOOL**  
 7801-7835 OTIS AVE., CUDAHY, CA

REV	DESCRIPTION	DATE
1	PLANNING SUBMITTAL	11/12/2019

PROJECT	KIPP PUEBLO UNIDO SCHOOL
PROJECT ADDRESS	7801-7835 OTIS AVE., CUDAHY, CA
DRAWING TITLE	FLOOR PLANS
DRAWN BY	ISSUE DATE
CHECKED BY	1/15/2020
DATE	DRAWING SCALE
PROJECT NUMBER	
DRAWING NUMBER	

A3.0



- 1-HR RATED CORRIDOR AND STAIRS
- A-3 MULTI-PURPOSE ROOM
- B OCCUPANCY
- E OCCUPANCY-CLASSROOM
- ACCESSORY SPACE
- 1-HR RATED EXIT ENCLOSURE AND ELEVATOR



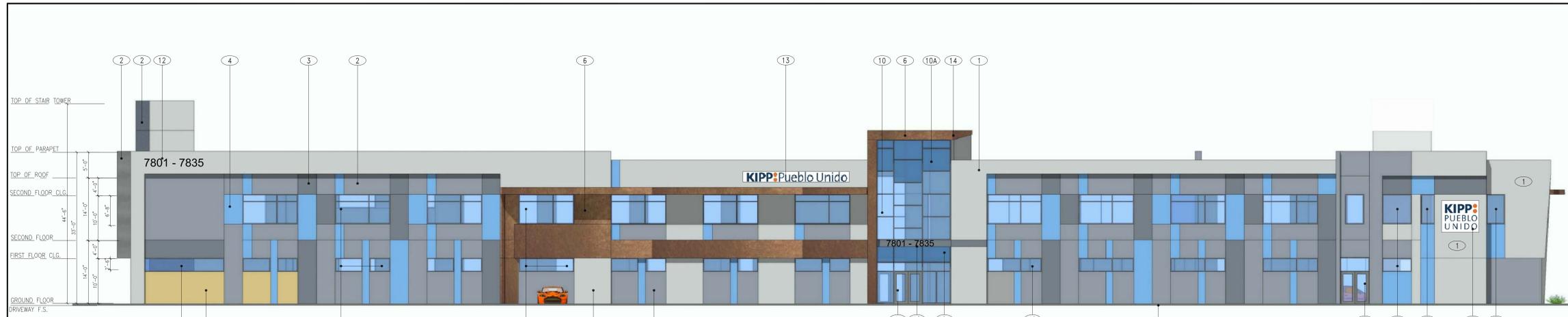
1 FIRST FLOOR PLAN  
 SCALE: 1/16" = 1'-0"



- 1-HR RATED CORRIDOR AND STAIRS
- A-3 MULTI-PURPOSE ROOM
- B OCCUPANCY
- E OCCUPANCY-CLASSROOM
- ACCESSORY SPACE
- 1-HR RATED VERTICAL TRANSPORTATION



2 SECOND FLOOR PLAN  
 SCALE: 1/16" = 1'-0"



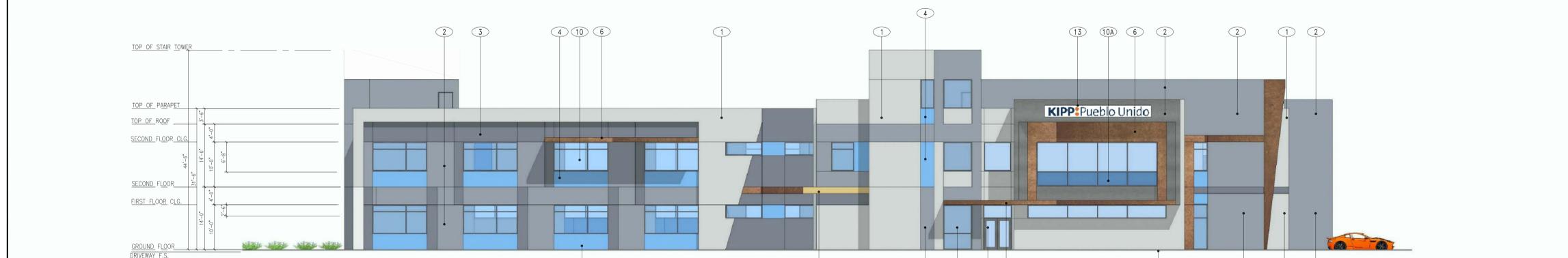
EAST ELEVATION



NORTH ELEVATION

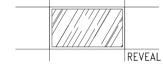


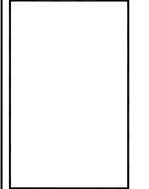
WEST ELEVATION



SOUTH ELEVATION

LEGEND:

- 1 PTD. STUCCO O/LATH, O/WRB, O/5/8" EXTERIOR GYP. BD, O/EXT. PLYWOOD, O/ WOOD FRAMING  
STUCCO WALL - LA HABRA STUCCO  
FINISH - SMOOTH  
PAINT: DUNN EDWARDS  
COLOR- LIGHT GRAY, TBD  
ALL EXTERIOR STUCCO TO BE PAINTED WITH ELASTOMERIC 10 FLAT FINISH  
PRIOR TO APPLYING FINAL ACRIBOND FLAT PAINT COLOR.  
CONTRACTOR SHALL SUBMIT 8"X11" FINISH SAMPLE FOR APPROVAL
- 2 STUCCO: ACCENT PAINT- DUNN EDWARDS  
COLOR- MED. GRAY, TBD.
- 3 STUCCO: ACCENT PAINT- DUNN EDWARDS  
COLOR- DARK GRAY, TBD.
- 4 STUCCO: ACCENT COLOR- MED. BLUE, TBD.
- 5 STUCCO: ACCENT COLOR- YELLOW, TBD.
- 6 POWDER COATED ALUMINUM WALL PANEL  
RESEMBLE COR-TEN STEEL COLOR AND TEXTURE
- 7 3/4" CLEAR ALUM. REVEAL/CONTROL JOINT, SEE 18/D1.0
- 8 OUTDOOR DRINKING FOUNTAIN: HYDRO-STATION
- 9 PROVIDE ANTI-GRAFFITI FINISH AT THE FIRST 9 FEET, MEASURED FROM GRADE, AT EXTERIOR WALLS AND DOORS. (6306)  
(PAINTED SURFACE - LARR #25601T, UNFINISHED SURFACE - LARR #25286T)
- 10  REVEAL  
STOREFRONT GLASS WINDOW:  
1" LOW-E INSULATED TEMPERED DUAL GLAZED GLASS,  
2" X 4 1/2" CLEAR ALUMINUM STOREFRONT FRAME  
GLASS SPEC. - PPG VISTA COOL(2) AZURIA SOLORBAN 60
- 10A STOREFRONT SPANDREL GLASS WINDOW:  
1" LOW-E INSULATED TEMPERED DUAL GLAZED GLASS,  
2" X 4 1/2" CLEAR ANODIZED ALUMINUM FRAME  
GLASS SPEC. - PPG VISTA COOL(2) AZURIA SOLORBAN 60
- 11 6'-0" W X 7'-0" HT. PAIR OF STOREFRONT TEMPERED GLASS DOORS  
CLEAR ANODIZED ALUMINUM FRAME.
- 12 BUILDING ADDRESS - ALUMINUM LETTERS  
FONT & COLOR SPEC TO FOLLOW
- 13 SCHOOL LOGO/SIGN - 1/4" THK. STAINLESS STEEL LETTERS  
FONT & COLOR SPEC TO FOLLOW
- 14 CANOPY WITH PAINTED METAL GUTTER FASCIA
- 15 42" GUARDRAIL (1-1/2 DIA GUARDRAIL ON TOP OF PARAPET)
- 16 GALVANIZED MTL. FLASHING AT BUILDING BASELINE, TYP. PAINTED
- 17 20'-0" W X 10'-0" HT.  
NON-RATED, MOTORIZED OVER HEAD DOOR  
SPEC: "RENILITA S-3000 FOLDAWAY" OR EQUAL



REV.	DESCRIPTION	DATE
1	PLANNING SUBMITTAL	11/12/2019

PROJECT	KIPP PUEBLO UNIDO SCHOOL
PROJECT ADDRESS	7801-7835 OTIS AVE., CUDAHY, CA
DRAWING TITLE	BUILDING ELEVATIONS
DRAWN BY	ISSUE DATE
JOB NUMBER	DRAWING SCALE
APPROVED BY	
DRAWING NUMBER	



**KIPP PUEBLO UNIDO SCHOOL**  
 7801-7835 OTIS AVE., CUDAHY, CA

REV	DESCRIPTION	DATE
1	PLANNING SUBMITTAL	11/12/2019

PROJECT	KIPP PUEBLO UNIDO SCHOOL
PROJECT ADDRESS	7801-7835 OTIS AVE., CUDAHY, CA
DRAWING TITLE	RENDERINGS
DRAWN BY	
ISSUE DATE	11/15/2020
JOB NUMBER	
DRAWING SCALE	
APPROVED BY	
DRAWING NUMBER	



FRANCO ARCHITECTS INC.  
 12345 Ventura Blvd. H  
 Studio City, CA 91604  
 Architecture and Planning  
 Tel: 818 754-2030  
 Fax: 818 754-2032

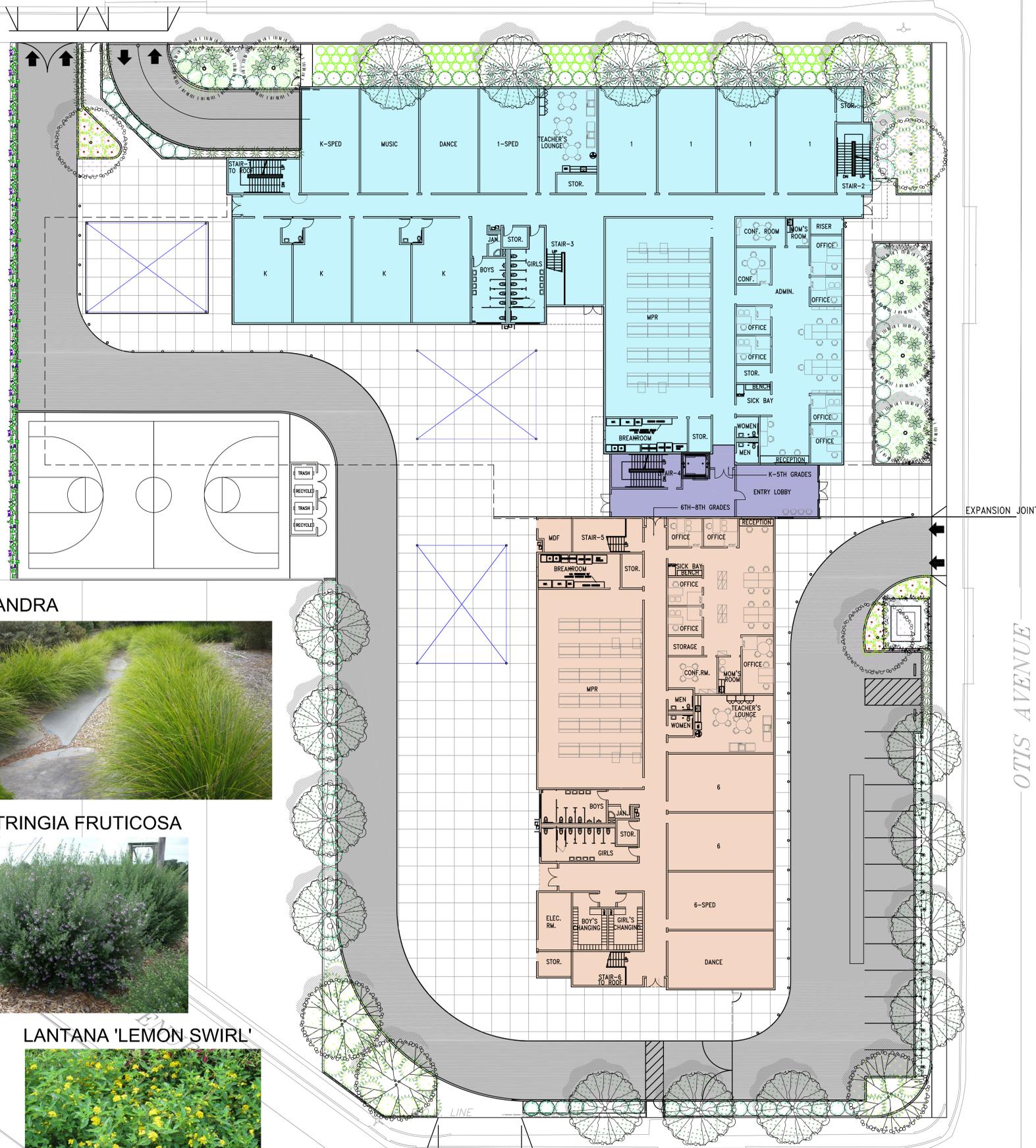
**KIPP PUEBLO UNIDO SCHOOL**  
 7801-7835 OTIS AVE., CUDAHY, CA

REV	DESCRIPTION	DATE
1	PLANNING SUBMITTAL	11/12/2019

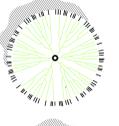
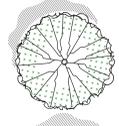
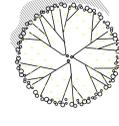
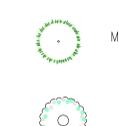
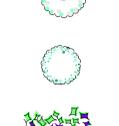
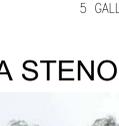
PROJECT	KIPP PUEBLO UNIDO SCHOOL
PROJECT ADDRESS	7801-7835 OTIS AVE., CUDAHY, CA
DRAWING TITLE	RENDERINGS
DRAWN BY	ISSUE DATE
CHECKED BY	DATE
APPROVED BY	DATE
DRAWING NUMBER	

A5.2

OLIVE STREET



PROPOSED PLANT MATERIAL

-  ACACIA STENOPHYLLA  
SHOESTRING ACACIA  
24" BOX STANDARD  
LOW WATER USE
-  RHUS LANCEA  
AFRICAN SUMAC  
36" BOX STANDARD  
LOW WATER USE
-  CHITALPA TASHKENTENSIS  
24" BOX STANDARD  
LOW WATER USE
-  TIPUANA TIPU  
TIPU TREE  
24" BOX STANDARD  
LOW WATER USE
-  ANIGOZANTHOS 'HARMONY'  
HARMONY KANGAROO PAWS  
5 GALLON - LOW WATER USE
-  LANTANA 'LEMON SWIRL'  
HYBRID LANTANA  
5 GALLON - LOW WATER USE
-  AGAVE BLUE FLAME  
BLUE FLAME AGAVE  
15 GALLON - LOW WATER USE
-  LOMANDRA TENAKA 'LONGIFOLIA'  
BREEZE GRASS  
1 GALLON - MEDIUM LOW WATER USE
-  CALLISTEMON VIMINALIS 'LITTLE JOHN'  
DWARF BOTTLEBRUSH  
5 GALLON - LOW WATER USE
-  MYRTUS COMMUNIS 'COMPACTA'  
DWARF MYRTLE  
15 GALLON - LOW WATER USE
-  CAREX DIVULSA (TUMULICOLA)  
BERKELEY SEDGE  
PLUGS 15" O.C - LOW WATER USE
-  OLEA EUROPAEA 'LITTLE OLLIE'  
DWARF OLIVE  
15 GALLON - LOW WATER USE
-  DIANELLA CAERULEA 'SILVER STREAK'  
VARIEGATED FLAX LILY  
5 GALLON - MEDIUM LOW WATER USE
-  WESTRINGIA FRUTICOSA  
COAST ROSEMARY  
5 GALLON - LOW WATER USE
-  DIETES VEGETA 'VARIEGATA'  
VARIEGATED BUTTERFLY LILY  
5 GALLON - MEDIUM LOW WATER USE
-  HARDENBERGIA VIOLACEA  
LILAC VINE - TIE TO WALL  
15 GALLON - LOW WATER USE

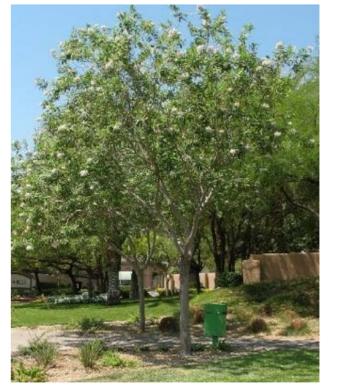
ACACIA STENOPHYLLA



RHUS LANCEA



CHITALPA TASHKENTENSIS



TIPUANA TIPU



HARDENBERGIA



ANIGOZANTHOS 'HARMONY'



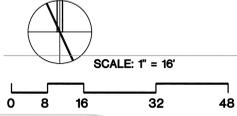
LOMANDRA



WESTRINGIA FRUTICOSA



LANTANA 'LEMON SWIRL'



ELIZABETH STREET

OTIS AVENUE

FRANCO ARCHITECTS INC.  
12345 Ventura Blvd. H  
Studio City, CA 91604  
Tel 818 754-2030  
Fax 818 754-2032  
Architecture and Planning

CONSULTANT  
CARTER ROMANEK  
Landscape Architects, Inc.  
28720 Roadside Drive, Suite 100  
Beverly Hills, California 91301  
(310)477-3900

KIPP SCHOOL  
7801-7835 OTIS AVE., CUDAHY, CA

REV	DESCRIPTION	DATE
PLANNING	SUBMITTAL	10/21/2019

PROJECT	KIPP SCHOOL
PROJECT ADDRESS	7801-7835 OTIS AVE., CUDAHY, CA
DRAWING TITLE	CONCEPTUAL LANDSCAPE PLAN
DATE	10/22/2019
DRAWING SCALE	

L1.0  
Page 104 of 555

# ATTACHMENT C

## Applicant's Appeal Letter

March 4, 2020

**VIA HAND DELIVERY & E-MAIL**

Richard Iglesias  
City Clerk  
City of Cudahy  
5220 Santa Ana Street  
Cudahy, CA 90201

Re: Initial Request for Appeal of Planning Commission's Denial of Development Review Permit No. 41-532

Dear Mr. Iglesias,

This firm represents KIPP Socal Public Schools ("KIPP") in connection with the development of a proposed two-story, 67,148-square-foot school facility for elementary school and middle school students (the "Project"). Etmny Cornejo of Franco Architects (the "Applicant") submitted the Project application on KIPP's behalf. The Project is located at 7801-7835 Otis Avenue ("Project Site") in the city of Cudahy ("City"). We submit this letter on behalf of KIPP to appeal the Cudahy Planning Commission's ("Commission") decision to deny the Project on February 24, 2020. We reserve the right to submit additional information prior to the City Council hearing on the appeal.

The Commission's denial of the Project occurred despite the fact that the Project meets all required criteria for approval. In a letter dated February 14, 2020, the Applicant received notification from the City that the Project had been reviewed by the Cudahy Community Development Department, and would be recommended for approval. In a staff report to the Commission dated February 24, 2020, Cudahy's Community Development Director, Salvador Lopez, also recommended that the Project be approved on the grounds that the Project complies with the evaluation criteria in Section 20.84.210 of the Cudahy Municipal Code ("CMC").

Notwithstanding recommendations from City staff, the Commission:

- Denied the Project based on conclusions that are inconsistent with evidence in the record;
- Failed to evaluate the mandatory evaluation criteria in CMC Section 20.84.210;
- Rejected a use permitted by right on the Project Site; and
- Violated KIPP's due process rights by failing to provide a fair hearing.

For these reasons, we respectfully appeal the Commission's February 24 denial of the Project as permitted by CMC Section 20.84.160 and request that Cudahy's City Council consider and approve the Project.

**I. The Commission’s Reasons for Denial are Not Supported by Evidence in the Record.**

The Commission must approve an application for Design Review “based on findings and conclusions drawn from information and evidence presented at a public hearing.” CMC § 20.84.210. However, the Commission improperly relied on general complaints from the public to draw cursory conclusions, even though many of these public complaints are unrelated to the Project or already addressed by experts in technical reports prepared at the behest of the Applicant. For example, the Commission did not evaluate or consider the Applicant’s comprehensive traffic study, or the analysis of proposed soil remediation measures contained in the Phase I and Phase II reports. During the public hearing, the Commission cited generalized public complaints about traffic and environmental concerns as reasons for denying the Project without reference or comparison to technical evidence. For this reason, the Commission’s reliance on the public concerns is not supported by the evidence in the record.

**II. The Commission Violated the CMC by Failing to Evaluate or Consider the Required Findings for Design Review Permits as Required by Law.**

The Commission must “approve any case which is in general accord with the [codified] principles and standards” in CMC Section 20.84.210, (“Evaluation Criteria”). The Evaluation Criteria include: (i) Consistency; (ii) Proportionality; (iii) Design; (iv) Site Layout; (v) Site Development; (vi) Signs; (vii) Equipment and Service Areas; and (viii) Compatibility. However, during the public hearing, the Commission failed to reference, evaluate, or make conclusions or findings regarding any of these Evaluation Criteria. Instead, the Commission improperly relied on public comment only to justify denial of the Project without providing a meaningful analysis of the Project or potential impacts based on the evidence in the record. Because the Commission’s denial of the Project was improper and inconsistent with Cudahy’s mandatory permit evaluation procedures, this appeal is required.

**III. The Commission May Not Object to the Proposed Use at the Project Site.**

The Commission may not object to the Project based on the proposed use as a school. The Project Site is zoned for “Low-Density Residential” uses, which include public elementary and secondary schools by right. CMC § 20.16-1. The Project is a public elementary school and middle school within the Low-Density Residential zone. Therefore, the Commission may not subsequently determine that the school is not an appropriate use on the Project Site where schools are permitted by right. For this reason, the Commission’s evaluation of the use, and reliance on public objections to this use during the public hearing were improper.

#### **IV. The Applicant Has Not Received a Fair Hearing, in Violation of Its Procedural Due Process Rights.**

It is well established that procedural due process requirements are applicable to quasi-judicial proceedings like planning commission hearings. *Beck Development Co. v. Southern Pacific Transportation Co.* (1996) 44 Cal.App.4th 1160, 1188. The lynchpin of procedural due process is a fair hearing. *Nightlife Partners, Ltd. v. City of Beverly Hills* (2003) 108 Cal.App.4th 81, 90. (“Due process in an administrative hearing ... demands an appearance of fairness.”) Here, the public hearing cannot be classified as “fair” where there was no meaningful evaluation of the facts in the record, no findings or conclusions based on the evidence presented, and no reference to the Evaluation Criteria as required in the CMC. Furthermore, the Commission did not consult the City Attorney regarding its obligations to draw findings and conclusions based on the evidence in the record, even though this issue was raised during the Commission’s deliberations. In addition, denying the Project without regard for the substantial amount of time, funding, and environmental analysis that KIPP has already invested in the Project (consistent with the advice and recommendations of Cudahy’s planning staff) illustrate that Cudahy’s mandatory evaluation procedures were violated in denying this Project.

For the reasons stated above, we respectfully appeal the Commission’s decision and request that City Council consider the entire record and approve DRP No. 41-532. We reserve the right to provide additional legal foundation for appeal prior to the City Council hearing.

Sincerely,



Alfred Fraijo Jr.  
for SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

SMRH:4843-7582-1750.7

cc: Kyle Salyer, KIPP  
Etmny Cornejo, Franco Architects  
Elizabeth Alcantar, Mayor  
Jose Gonzalez, Vice Mayor  
Jack Guerrero, Councilmember  
Chris Garcia, Councilmember  
Blanca Lozoya, Councilmember  
Robert McMurry, City Attorney

# ATTACHMENT D

## Applicant's Subsequent Appeal Letter

May 21, 2020

**VIA US MAIL & E-MAIL**

Richard Iglesias  
City Clerk  
City of Cudahy  
5220 Santa Ana Street  
Cudahy, CA 90201  
Email: Cityclerk@cityofcudahyca.gov

Re: Supplemental Grounds for Appeal of Planning Commission's Denial of Development Review Permit No. 41-532

Dear Mr. Iglesias,

On behalf of our client KIPP SoCal Public Schools ("KIPP" or the "Applicant"<sup>1</sup>), we appreciate the opportunity to submit this correspondence in connection with the proposed development of a two-story, 67,148-square-foot charter transitional kindergarten through eighth-grade school facility (the "Project"). The Project is proposed to be sited on a 2.2-acre site located at 7801-7835 Otis Avenue<sup>2</sup> ("Project Site"), in the City of Cudahy ("City"). We respectfully submit this correspondence on behalf of KIPP as additional support for our appeal, dated March 4, 2020.

By way of background, on February 24, 2020, the Cudahy Planning Commission ("Planning Commission") denied the Project despite City staff's recommendation to approve and the evidence provided that the Project satisfies all applicable regulations and requirements contained in the Cudahy Municipal Code ("CMC"). Throughout Project processing, KIPP worked closely with the City to alleviate and address the concerns raised prior to and during the Planning Commission hearing, demonstrating the Project was subject to comprehensive review and analysis. In establishing itself as a community partner, KIPP has executed a comprehensive community outreach strategy and has further committed itself to substantial environmental cleanup of the Project Site.

For the following reasons, we respectfully request the Cudahy City Council ("City Council") reverse the Planning Commission's denial of the Project as permitted by CMC section 20.84.160 and approve the Project:

---

<sup>1</sup> Etmny Cornejo and Franco Architects submitted the application on behalf of KIPP and is listed as the "Applicant" on various Project application materials. As used herein, "Applicant" shall mean KIPP and any consultants acting on its behalf and at its direction, including Franco Architects, collectively.

<sup>2</sup> Assessor Parcel Numbers 6225-026-001, -002, -003, -013 and -014.

- The Project satisfies all of the mandatory evaluation criteria identified in CMC section 20.84.210;
- The Planning Commission improperly denied the Project based on conclusions that are inconsistent with evidence in the record;
- The community concerns regarding environmental and traffic issues have been addressed in comprehensive technical reports prepared by subject matter experts;
- The Planning Commission improperly rejected a use permitted by-right on the Project Site; and
- The Planning Commission violated KIPP's due process rights by failing to provide a fair hearing.

## **I. The Applicant Has Undertaken Substantial Efforts to Engage with the Community**

Since the Planning Commission hearing, KIPP has prioritized its engagement efforts with the community to address misconceptions about the Project and its anticipated impacts. KIPP is dedicated to building relationships within the community and being a good neighbor. KIPP has reached out to the City Councilmembers, Mayor Alcantar, local residents, environmental organizations, educational organizations, and other stakeholders to encourage open conversation about KIPP's accessibility to the community as a public school, and how the Project will serve its students and the broader community. In addition, KIPP is collaborating with community members to coordinate a virtual town hall meeting to ensure that information and opportunities to ask questions are made available to the public in light of gathering restrictions due to the COVID-19 pandemic. The town hall meeting is scheduled for May 27, 2020.

## **II. The Commission Violated the CMC by Failing to Evaluate or Consider the Required Findings for Design Review Permits as Required by Law.**

Section 20.84.210 of the CMC requires the Planning Commission to "approve any case which is in general accord with the [codified] principles and standards" in the CMC ("Evaluation Criteria"). The identified Evaluation Criteria include: (i) Consistency; (ii) Proportionality; (iii) Design; (iv) Site Layout; (v) Site Development; (vi) Signs; (vii) Equipment and Service Areas; and (viii) Compatibility. As demonstrated in the February 24, 2020 comprehensive staff report to the Planning Commission ("Staff Report"), and as described in more detail below, the Project satisfies each of the Evaluation Criteria.

### **A. The Project Meets All Consistency Requirements.**

A project meets consistency requirements if it complies "with the general plan, any applicable specific plan,<sup>3</sup> all applicable provisions of this zoning code, all other City ordinances and regulations, and any plan of another governmental agency made applicable by statute or

---

<sup>3</sup> Because the Project Site is not subject to a Specific Plan, the Consistency analysis is limited to the applicable General Plan and zoning requirements.

ordinance.” (CMC § 20.84.210.) As required by the Evaluation Criteria, the Project is consistent with all applicable land use plans and related regulations.

The Project Site is designated “Low-Density Residential” in the City of Cudahy General Plan<sup>4</sup> (“General Plan”) and is zoned “Low-Density Residential”. As discussed, the proposed school use is permitted by-right in the Low-Density Residential zone. (CMC § 20.16.020, Table 20.16-1.) The Project is consistent with the Land Use Element policies of the General Plan, which includes “integrating schools, ... community centers, infrastructure, green spaces and parks ... into each neighborhood.”<sup>5</sup> In addition, the Project is consistent with the guiding principles of the General Plan, which include: (i) fostering Cudahy’s family-oriented values; and (ii) protecting and enhancing community health and the environment.<sup>6</sup> The Project will provide exceptional educational opportunities for local families and residents adjacent to a serene park setting. Moreover, the Project includes substantial soil removal and remediation of existing soil contamination on the Project Site, as part of KIPP’s dedication to responsible stewardship of the property and to the safety of the broader community.

The Project, as proposed, will consist of a single two-story structure with a subterranean parking garage. The building would house an elementary and middle school, including fifty (50) classrooms, offices, bathrooms, multi-function rooms, and associated outdoor accessories like a basketball court and playground equipment. The Project will include ninety-nine (99) parking spaces in order to fulfill the zoning code’s requirement of one parking space for every classroom on the Project Site, plus one for every employee. The Project buildings would include the following setbacks: (i) side-yard setbacks – (15) feet; (ii) rear setback – ten (10) feet; and (iii) front setback – twenty (20) feet. An eight-foot tall, ivy-covered, concrete-masonry-unit wall would be constructed along the rear perimeter of the Project Site. A preliminary landscape plan has been submitted showing landscape areas on the buildings’ perimeter and in interior open space areas and within the front yard setback. A more detailed plan will be submitted with the formal plan check submittal. Project lighting would consist of security lighting and wall lights on the building perimeters, using LED fixtures. All lighting would be designed to avoid light spillage to neighboring properties. As evidenced in the table below, the Project will comply with the applicable development standards. (CMC § 20.16.030, Table 20.16-2.)

---

<sup>4</sup> *City of Cudahy General Plan, Land Use Element, Exhibit LU-4 (General Plan).*

<sup>5</sup> *General Plan, Land Use Element, Policy LUE 6.1.*

<sup>6</sup> *General Plan, pg. I-8-I-9.*

**Development Standards: Required vs. Proposed Project**

	General Plan	Zoning	Residential Density	Height Limit	Min Floor Area	Parking
Required	LDR	LDR	15 du /acre maximum	2 Stories; 35 feet	N/A	99
Proposed	LDR	LDR	--	2 stories; 33 feet, 6 inches	N/A	99
Consistent	Yes	Yes	N/A	Yes	Yes	Yes

Therefore, it is our position, as confirmed by City staff, the Project complies with the General Plan, the City zoning code and applicable development regulations in the CMC.

**B. The Project Meets All Proportionality Requirements.**

Proportionality is evaluated by determining that “the height, bulk, and other design features of structures are in proportion to the building site, and external features are balanced and unified so as to present a harmonious appearance.” (CMC § 20.84.210(B).) The properties surrounding the Project Site include Lugo Park, a parklet at the corner of Elizabeth Street and Otis Avenue, Teresa Hughes Elementary School, and single-story and two-story single-family residences. The proposed development includes features more consistent with the residential and recreational areas, particularly when compared to the previous industrial uses onsite.

The Project’s two-story school building, with an average height of 33 feet, 6 inches, is compatible with the surrounding residential neighborhood in mass, character, and use. The Project will utilize color blocks (gray and school accent colors) to add rhythms and interest around the windows, as well as rustic metal panels on the façade to add warmth and contemporary characters to the architecture. The colors, rhythms, and patterns on the façade will have the effect of reducing the large institutional scale to a more residential scale, while presenting an intriguing yet friendly image that is harmonious with the scale of surrounding properties. The 38-foot tall entrance hall connecting the elementary and middle schools provides a light-filled focal point to complement the façade facing Otis Avenue. The Project also includes a 20-foot front setback to create ample and dense landscaping. This additional landscaping and greenspace will create continuity with nearby properties.

The proposed Project layout presents a balanced plan that relates to similar structures along Otis Avenue and surrounding streets. The development's orientation beyond the setback assists in screening the building from the public right-of-way and adjacent properties. In the context of the surrounding neighborhood, these elements create an aesthetically-balanced design.

In summary, the Project would re-develop a site that was previously industrial, and incompatible with surrounding residential and park uses. By introducing new and updated development with improved landscaping, the Project will enhance the characters of the adjacent properties and maintain or improve property value due to its proportionality to the surrounding uses and buildings.

### **C. The Project Meets All Design Requirements.**

Compliance with the Design factor of the Evaluation Criteria requires that “the project design contributes to the physical character of the community, relates harmoniously to existing and anticipated development in the vicinity, and is not monotonously repetitive in and of itself or in conjunction with neighboring uses, and does not contribute to excessive variety among neighboring uses.” (CMC § 20.84.210(C).) As discussed above, the Project is a desirable, family-oriented addition to the community which complements the mixed-use nature of the surrounding neighborhood. As described in more detail in Section I(B), *supra*, the proposed charter school harmonizes with these existing uses. The Project's design is consistent with the General Plan and zoning designation, meets all the development standards within the provisions of the Development Review Permit, compatible with the surrounding residential use, and will not adversely affect the value or quality of the neighborhood.

### **D. The Project Meets All Site Layout Requirements.**

Site Layout mean that the “the orientation and location of structures and their relationship to one another and to open spaces, parking areas, pedestrian walks, signs, illumination, and landscaping achieve safe, efficient, and harmonious development.” (CMC § 20.84.210(D).) The proposed Project layout presents a balanced plan that relates to similar structures along Otis Avenue and surrounding streets. The development's orientation beyond the setback assists in screening the building from the public right-of-way and adjacent properties. As discussed in Section I(A), the Project is similar to nearby related structures in mass, character, and use. For example, the nearby Teresa Hughes Elementary School, which serves kindergarten through sixth grade students, is multiple stories. The adjacent Lugo Park Community Center is similar in layout, and provides a soccer field and other opportunities for recreation to the community.

The Project's school buildings are situated along Otis Avenue and Olive Street, with an underground parking garage and limited street parking on the east side of the building along Otis Avenue for visitor parking. The school playground is on the west of the building, away from traffic. The Project implements a longer queuing route to relieve traffic on Otis Avenue by entering the school site on Otis Avenue and exiting on Olive Street. The location of the

driveways have been vetted for safety and accepted by the Los Angeles County Fire Department (“LACFD”). Signage will be placed on the building facing Otis Avenue, Olive Street and Elizabeth Street to assist with queueing and traffic. The Project will also include landscape buffers along Otis Avenue, Olive Street and Elizabeth Street, as opposed to fences, to maintain existing aesthetics and provide a pedestrian friendly area compatible with surrounding residential neighborhood. All exterior walls will be illuminated by wall scones. Project open space will be illuminated by appropriate landscape lighting, and parking and play area will have light poles shielded to prevent spillover into residential properties.

## **E. The Project Meets All Site Development Requirements.**

The “Site Development” factor of the Evaluation Criteria requires that “the grading and site development show due regard for the qualities of the natural terrain and landscape and do not call for the indiscriminate destruction of trees, shrubs, and other natural features.” (CMC § 20.84.210(E).) The proposed development requires precise grading as the Project Site was previously flat, paved, and used for industrial purposes. The existing structures have since been demolished and the Project Site currently has very limited natural terrain with no natural features onsite. As disused in Section I(A), *supra*, the Project includes generous front and rear setbacks to incorporate additional landscaping that will include shrubs and trees. More specifically, the Project reserves thirteen percent (13%) of the Project Site for landscaping to provide screening for adjacent properties and to tie green spaces to adjacent maintained open spaces. The Project’s landscaping has been designed to create a welcoming, green environment for future students, and a pleasing aesthetic for the community.

## **F. The Project Meets All Requirements for Signage.**

The CMC requires that “the design, lighting, and placement of signs are appropriately related to the structure and grounds and are in harmony with the general development of the site.” (CMC § 20.84.210(F).) The only illuminated signage for the Project is an address sign which was designed to harmonize with the scale and modern aesthetic of the school. The address signage as proposed is compliant with all CMC standards and proportionate with the development.

## **G. The Project Meets All Requirements for Equipment and Service Areas.**

The CMC requires that “mechanical equipment, machinery, trash, and other exterior service areas are screened or treated in a manner that is in harmony with the design of the structures and grounds.” (CMC § 20.84.210(G).) The Project’s trash enclosures will be screened behind decorative doors designed to complement the school facility to keep the trash areas hidden from view. The Project does not include any other exterior mechanical equipment, machinery, or service areas.

**H. The Project Meets All Compatibility Requirements.**

To satisfy compatibility requirements, a project must demonstrate “proper consideration for adjacent residentially zoned or occupied property and ... not adversely affect the character of such property.” (CMC § 20.84.210(H).) The Project provides substantial environmental benefits to the community, and will improve the character of the Project Site and surrounding parcels. The Project Site was formerly used as an iron works facility and mechanic shop, and is currently vacant. As part of the Applicant’s due diligence for the Project, testing on the Project Site revealed evidence of existing soil contamination. The Applicant has already commenced clean-up of the Project Site in accordance with all applicable regulations. For this reason, the Project will result in improved environmental conditions for the surrounding community, which is essential for sensitive segments of the population, such as children and the elderly. In addition, the Project is a charter school open to the public, which will serve the surrounding residences with elementary and middle-school-aged children. Thus, the Project will improve the character of the Project Site and through it, the property values and character of surrounding properties.

Because the Project complies with all of the Evaluation Criteria described above and adds tangible community benefits, it is our position the Development Review Permit should have been approved. It is our position that the decision to deny the Project application failed to take into consideration the applicable Evaluation Criteria, or the evidence and materials presented during the public hearing. Without the consideration of these City-mandated standards, the decision to deny the Project is inconsistent with the CMC and mandatory hearing procedures. Specifically, as noted in our prior correspondence, public comment was improperly utilized to justify denial of the Project. Reliance on non-expert and unsupported testimony resulted in an insufficient analysis of the Project based on the evidence in the record. Because of the substantial evidence demonstrating the Project’s compliance with the Evaluation Criteria, we respectfully request that City Council reverse the Planning Commission’s decision and approve the Project as proposed.

**III. The Planning Commission’s Denial Is Not Supported by Evidence in the Record.**

The Planning Commission is required to issue a determination on an application for Design Review “based on findings and conclusions drawn from information and evidence presented at a public hearing.” (CMC § 20.84.210.) However, here, general public comments regarding unsubstantiated environmental and traffic concerns formed the basis of the Project denial, despite the fact this testimony was rooted in a lack of understanding of plausible impacts when it denied the Project. Many of the public comments relating to environmental and traffic concerns have been previously addressed by experts at length in these technical reports. Other comments are wholly unrelated to the Project. (*Jensen v. City of Santa Rosa* (2018) 23 Cal.App.5th 877, 894 [Interpretation of technical or scientific information requires an expert evaluation. Testimony by members of the public on such issues does not qualify as evidence.]<sup>7</sup>)

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<sup>7</sup> See also, *Joshua Tree Downtown Bus. Alliance v. County of San Bernardino* (2016) 1 Cal.App.5th 677, 691 (attorney who was also business owner was not qualified to give opinion on whether project would have adverse economic impact causing urban decay); *Porterville Citizens for Responsible Hillside Dev. v. City of Porterville*

The safety and well-being of the students, and of the surrounding community is a top priority for KIPP. As demonstrated by the Phase I and Phase II environmental site assessment reports (collectively, “ESAs”), and the comprehensive traffic study, KIPP has gone above and beyond what is required to ensure that the Project Site will provide a safe environment for students and the community at large.

## **A. Environmental Concerns.**

The denial of the Project cited the public concerns regarding soil contamination on the Project Site as a justification. However, this denial failed to consider, evaluate, or reference the extensive environmental investigations that have already been conducted on the Project Site during the ESA-related evaluations. Prior to the Planning Commission hearing, KIPP had completed substantial clean up and remediation of the Project Site in connection with the recommendations in the ESAs, including demolition and removal of the two existing structures on the property, removal of two large underground storage tanks. In connection with Project preparation, KIPP has removed approximately 50 cubic yards of soil from the Project Site. The Project Site fully conforms to State environmental standards for use as a public school. However, the denial did not consider the current status of the Project Site, or scope of soil remediation and other measures previously completed on the Project Site in anticipation of ultimate development. Instead, the denial relied on the unsupported environmental fears, notwithstanding the expert opinion and the obvious benefits of privately-funded site cleanup to the community as a whole. For this reason, the denial’s dependence on the public’s vague environmental concerns was inappropriate and is not substantiated by the evidence in the record.

## **B. Traffic Concerns.**

Similarly, the denial improperly relied on public concerns regarding traffic without considering the evidence in the Applicant’s comprehensive traffic study. This traffic study was made available to both the Planning Commission and the public, and included an in-depth analysis of twenty (20) intersections adjacent to the Project Site, including locations in the City, and the neighboring cities of Bell, Huntington Park, and South Gate. The study locations were evaluated using the Highway Capacity Manual (“HCM 2010”) method of analysis in accordance with City directive. Based on this review, the traffic study indicates that although some of the twenty (20) intersections would experience incremental traffic increases, *none of the intersections would be significantly impacted by the Project*. Because no significant impacts are expected due to the proposed Project, no traffic mitigation measures were recommended in the traffic study. In addition, the driveways for student pick-up and drop-off, as well as additional

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(2007) 157 Cal.App.4th 885, 907 (neighbors’ general concerns about erosion and drainage were not substantial evidence because neighbors had no demonstrated expertise in those subject matters); *Bowman v. City of Berkeley* (2004) 122 Cal.App.4th 572, 583 (neighbors’ “lay reading” of technical report on hazardous material contamination was not substantial evidence because neighbors did not show expertise that would qualify them to interpret report); *Pala Band of Mission Indians .v County of San Diego* (1998) 68 Cal.App.4th 556, 580 (attorney’s comment consisting of argument and opinion did not qualify as substantial evidence).

emergency access points, were reviewed and accepted by the LACFD.<sup>8</sup> The Project also features staggered pick-up and drop-off times for students, space for queuing at least sixty-six (66) vehicles onsite, space for onsite overflow parking, and valet parking during events to further reduce traffic concerns related to the Project. However, the traffic study or these project features were not discussed during the hearing. For these reasons, the Project denial's reliance on general public grievances related to traffic were inappropriate and are not supported by evidence in the record.

#### **IV. The Project May Not be Denied Solely Based on the Proposed By-Right Use of the Project Site.**

It is our position, the Project may not be denied solely based on the proposed use as a school. The Project Site is zoned for "Low-Density Residential" uses, which include public elementary and secondary schools as "by right" uses. (CMC § 20.16-1.) The Project is a public elementary school and middle school within the Low-Density Residential zone. Therefore, the any denial of the Project may not premised on the determination that the school is not an appropriate use on the Project Site. For this reason, the evaluation of the use, and reliance on public objections to this use during the public hearing were improper.

#### **V. The Project Denial is a Violation of Applicant's Procedural Due Process Rights.**

It is well established that procedural due process requirements are applicable to quasi-judicial proceedings like planning commission hearings. (*Beck Dev. Co. v. S. Pac. Trans. Co.* (1996) 44 Cal.App.4th 1160, 1188.) The lynchpin of procedural due process is a fair hearing. (*Nightlife Partners, Ltd. v. City of Beverly Hills* (2003) 108 Cal.App.4th 81, 90 ["Due process in an administrative hearing ... demands an appearance of fairness."] ) Here, the public hearing cannot be classified as "fair" where the Project denial is not based on meaningful evaluation of the facts in the record, no findings or conclusions based on the evidence presented and no reference to the Evaluation Criteria as required in the CMC. Furthermore, the City Attorney was not consulted regarding its obligations to draw findings and conclusions based on the evidence in the record, even though this issue was raised during the Planning Commission's deliberations. In addition, denying the Project without regard for the substantial amount of time, funding, and environmental analysis that KIPP has already invested in the Project (consistent with the advice and recommendations of City's planning staff) illustrate that the City's mandatory evaluation procedures were violated in the denial of this Project.

#### **VI. Conclusion.**

For the foregoing reasons, we respectfully request that the City Council reverse the Planning Commission's decision and consider the entire record and approve the Project entitlements. Please do not hesitate to contact the undersigned with any questions, concerns or

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<sup>8</sup> February 24, 2020 Staff Report: *Design Review Permit 41-532*, pg. 2.

# SheppardMullin

City Council  
City of Cudahy  
May 21, 2020  
Page 10

comments related to this Project, the application materials, or the contents of this correspondence. We reserve the right to supplement our appeal with additional materials.

Sincerely,



Alfred Fraijo Jr.  
for SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

SMRH:4838-1867-3341.4

cc: Kyle Salyer, KIPP  
Etmny Cornejo, Franco Architects  
Salvador Lopez, Director of Community Development  
Elizabeth Alcantar, Mayor  
Jose Gonzalez, Vice Mayor  
Jack Guerrero, Councilmember  
Chris Garcia, Councilmember  
Blanca Lozoya, Councilmember  
Victor Ponto, City Attorney

# ATTACHMENT E

## Letters of Support

Dear City Council Member,

My name is Rosemary, my daughter is in kindergarten and we are Cudahy residents. I am writing this letter in support of the new campus for KIPP Pueblo Unido in the city of Cudahy. Although I have two local schools that are walking distance from our home, I chose to enroll my daughter at KIPP Pueblo Unido in the city of Maywood.

After I attended their family orientation and met their staff who took the time to go over their educational curriculum, I was convinced and I enrolled my daughter at KIPP. It was the best decision I ever made!

Being a charter school parent is different for me. I attended public schools when I was a student but seeing the learning environment at KIPP encouraged me to become a KIPP parent.

At KIPP, the staff works hard to provide a high-quality learning experience that is nourishing for every student. School administrators also go out of their way to get to know their students. Every day, students are greeted at the door by their principal. Growing up, students who "misbehaved" were sent to the principal's office. As a result, those were the only students the principal knew on a first-name basis. At KIPP misbehavior is not a standard used to get to know students and their families.

When it comes to my daughter's academic curriculum my daughter's kindergarten learning includes a rigorous math and reading program. Within months of starting at KIPP, my daughter learned to add and subtract. At times she can solve math problems by just looking at the question. Currently, she reads at a first-grade reading level. I credit her teacher for taking the time to elevate every student in her class. Her teacher also sends unique reading and math learning packets to our home that ensure Rosemary is on track to hit her learning marks.

At Pueblo Unido, teachers and school administrators are accessible at all times. Our school has an app that helps families communicate with educators during non-school hours. Knowing that her teacher and school staff is always available is one of the many reasons why Rosemary feels supported and loved at KIPP.

As a proud community resident and parent, I ask that you take into account the positive impact that Pueblo Unido is already making in our great City. I hope you'll join our family in supporting our school. Thank you for your time.

Respectfully,

Rosemary Moreno

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**April 8, 2020**

**Cudahy City Council  
5220 Santa Ana St  
Cudahy, CA 90201**

**Subject: Support for Kipp Pueblo Unido in the City of Cudahy**

Dear School Board Member,

My name is Randy Espinoza, I am Luna Espinoza's father. Luna is a current kindergartener at KIPP Pueblo Unido. The reason I am writing this letter is to show support for the new campus project in the city of Cudahy.

When Luna was graduating from preschool I was worried about choosing the right school for my daughter. My wife and I searched for a school that had a great academic program and held it's students to high standards. Thankfully we found a home at KIPP Pueblo Unido.

Pueblo Unido, United People that's the translation of our school's name and is the exact representation of what it means to be part of our school community. Our students and educators are a community that works together to ensure our children have the right tools to succeed. As a united community we celebrate our student's hard work and civic accomplishments. Students who exemplify good citizenship traits are recognized at our "juntas". This is especially important because early on students learn the importance of being part of a larger community.

At only five years old, Luna is already reading and excelling in math. Besides her newly found love for adding and subtracting, Luna recently discovered her passion for music. At KIPP Luna gets to participate in music class. Seeing Luna excelling in her schoolwork and personal interests is another reason why we are proud to be KIPP parents.

As a parent and a resident of the City of Cudahy, I ask that you support the relocation of our existing school into our community. Thank you for your time and support!

Sincerely,

Randy Espinoza

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My name is Maricela. I am a proud parent and mother of a Kippsters, Sofia Bella Castrejon.

When looking for schools that would encourage Sofia's curiosity I came across a few schools. After meeting the teachers, principal, and families at KIPP Corazon I knew this would be a great place for my daughter and our family.

This past year, I was nominated to be a Family Ambassador by my child's school principal. Part of our responsibilities as Family Ambassadors is to share educational resources with other KIPP families in our school. KIPP's Family Ambassador Program has offered me countless resources and opportunities to advocate on behalf of my daughter and other students.

KIPP has been a great place for my family to learn and grow. They have helped parents like myself develop their leadership skills and have provided me with a place where I could feel welcomed.

I am proud to be able to contribute to helping our community blossom. KIPP continues to build partnerships to support our families and our communities. KIPP is a community and I am happy to be part of this educational family.

Thank you for supporting KIPP Pueblo Unido. We look forward to having our sister school closer to us.

Sincerely,

Maricela Acuna

[REDACTED]  
[REDACTED]  
[REDACTED]

Dear Council Member,

My name is Carmen Rodriguez. My daughter is in 1<sup>st</sup> grade and attends Kipp Corazon. I write this letter in support of the new campus for Kipp Pueblo Unido in the city of Cudahy. I believe Kipp schools are a great asset to low-income communities like ours. My daughter believes in the power of learning because of the positive reinforcement she receives at her school.

KIPP shows students that education goes beyond academics. At KIPP, students understand the importance of respect. Early on students are cultivated to grow into kind and respectful adults. Seeing this behavior carried out through Carmen's school makes me proud to know my daughter is a KIPPster.

When it comes to academics, I know my daughter is ahead of the curve. I attribute her high test scores to her teacher. Carmen loves reading and her love for books is encouraged by her teacher everyday. Each week her teacher sends home a reading list so that learning can continue at home.

At Carmen's school students are greeted at the door every morning. Our principal welcomes students and their families with a high five or a handshake. The principal makes an effort to know everyone's name. In our short time at KIPP we have befriended parents and students from every grade level. We see one another as one community and know we can count on each other.

I hope that you'll support the relocation of our existing school to a physical location to our city. Please don't hesitate to reach out if you have any questions or if I can be of any help in your decision making.

Thank you,

Carmen Rodriguez



Dear City Council Member,

My name is Diana Martinez and my daughter is a current kindergartener at KIPP Corazon. I write this letter in support of the new campus for KIPP Pueblo Unido in the city of Cudahy.

One of the reasons why I chose KIPP for my child was its student to teacher classroom ratio. It is proven that smaller class sizes are beneficial for students and teachers. I know my daughter is more likely to receive the support she needs from her teacher. Her teacher also goes above and beyond for every child in her classroom. Students can seek additional academic support before or after school. Teachers top priority is student learning. Knowing that my daughter has a teacher who cares so much gives me peace of mind.

KIPP also offers families online tools like Clever and Lexia. Clever is used to help students develop their math skills and Lexia supports students with reading comprehension. My daughter loves to spend time on Clever and has dramatically improved her math skills. where she has reached level 7. On Lexia, my daughter has reached level 6 and has learned new words and immensely improved her vocabulary. Her grades have also gotten better. When she first started at KIPP her grade ranks were in the 2-3 level rank. In her most recent report card, my daughter scored almost all 5's the highest number rank granted in her grade. Our daughter has blossomed into a confident young woman. Her vocabulary and level of communication has increased greatly.

As someone who was born and raised in the city of Cudahy, I attended elementary school at Park Ave. and completed middle school/high school at Elizabeth Learning Center. While my experience at my local schools was a good fit for me, I wanted a school that would fit the needs of my daughter. Seeing my daughter thrive so much at KIPP proves that KIPP was the right choice for her.

Thank you for listening to parents like myself. We hope we can count on your support relocating our sister KIPP school, Pueblo Unido to a physical location in our community.

Sincerely,

Diana Martinez

██████████  
██████████

Dear Councilmembers,

My name is Tamara Manzanares and I am the guardian of Julia Herrera. My child is in 5th grade and will begin her final year at KIPP this coming year. I write to ask that you support KIPP Pueblo Unido as it makes its way to our own backyard.

As a current KIPP parent and resident of Cudahy, we chose Pueblo Unido because we believe in it's an excellent public school system. The educators and faculty at KIPP are focused on empowering every student to be creative and reach their full potential.

Likewise, my child is excited to continue her education at her school, KIPP Pueblo Unido as it moves closer to us. KIPP Pueblo Unido has been looking for a permanent home and we could not be more proud to have our school in our community.

I wholeheartedly believe that KIPP has improved my daughters academic achievements. Watching my child explore every academic subject with confidence reassures me that KIPP is the right school for her. If she's struggling in any subject, her teacher is there to give her extra practice materials.

KIPP Pueblo is more than a school; it is a community. I ask that you allow our school to officially join our great city of Cudahy. Having our school in our hometown will be great for our family and for so many other families in our community. Thank you for your time and consideration.

Sincerely,

Tamara Manzanares

[REDACTED]

Dear City Council Members,

Good afternoon, my name is Morena Mejia and I am submitting this letter to express my support for the construction of the KIPP Charter School at 7801-7835 Otis Avenue in Cudahy, CA.

As a resident of Cudahy, I welcome the opportunity of having a great school like KIPP SoCal Public Schools. One of the reasons why I decided to express my support for the school is because a friend of mine has her children in a KIPP school and her kids have achieved tremendous growth. As a parent, we want the best for our kids and having a great school such as KIPP Pueblo Unido would be beneficial for our community.

Please support the construction of a new building for the KIPP campus in the City of Cudahy that provides a high-quality education for the entire community.

Thank you, Cudahy City Council members, for listening to parents like myself who live in Cudahy and who can attest to why students in our community would benefit from having KIPP Pueblo Unido in our own backyard.

Sincerely,  
Morena Mejia

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Dear City Council Members,

Good afternoon, my name is Jose Rodriguez and I am submitting this letter to express my support for the construction of the KIPP Charter School at 7801-7835 Otis Avenue in Cudahy, CA.

I am a proud resident of Cudahy and I welcome the opportunity of having a great school like KIPP. For too long our community has been asking for quality options for its residents and having a quality school like KIPP Pueblo Unido will provide a tremendous option for Cudahy.

I trust that you will support the construction of a new building for the KIPP campus in the City of Cudahy that provides a high-quality education for the entire community.

Thank you, Cudahy City Council members, for listening to parents like myself who live in Cudahy and who can attest to why students in our community would benefit from having a great school.

Sincerely,  
Jose Rodriguez

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Dear City Council Members,

Good afternoon, my name is Maria Lopez and I am submitting this letter to express my support for the construction of the KIPP Charter School at 7801-7835 Otis Avenue in Cudahy, CA.

I am a resident of Cudahy and I am excited about having KIPP Pueblo Unido be a part of our community. As a community member, I see a lot of great benefits for our children to have a KIPP school here in Cudahy. I have heard a lot of great things about how KIPP helps their students academically and socially. Also, how they keep parents very involved in their children's education which is a great thing for me.

Thank you, Cudahy City Council members and please support the construction of a new building for the KIPP campus in the City of Cudahy that provides a high-quality education for the entire community.

Sincerely,  
Maria Lopez

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Dear City Council Members,

Good afternoon, my name is Soledad Barajas and I am submitting this letter to express my support for the construction of the KIPP Charter School at 7801-7835 Otis Avenue in Cudahy, CA.

As a resident of Cudahy, I welcome the opportunity of having a great school like KIPP SoCal Public Schools. I've heard a lot of great things about KIPP which is why I decided to express my support to you today. My friend has her kids at a KIPP school and has shared with me how KIPP is more than a school and how it is like a family. The schools from KIPP do a great job for its students and truly care about them.

I hope that you support the new permanent home for KIPP Pueblo Unido to be here in our community of Cudahy. Thank you for your time.

Sincerely,  
Soledad Barajas

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Dear City Council Members,

Good afternoon, my name is Trinidad Gomez and I am submitting this letter to express my support for the construction of the KIPP Charter School at 7801-7835 Otis Avenue in Cudahy, CA.

I am a proud community member of Cudahy and I have actually seen how KIPP is involved within the communities that they serve. KIPP is doing a great job for its current students and I hope my children and the kids within Cudahy have the same opportunity to benefit from having a great school like KIPP.

Thank you and I hope that you support the new campus for KIPP Pueblo Unido.

Sincerely,  
Trinidad Gomez

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Councilors of the City of Cudahy CA

My name is Gabriela Juarez and I live in this City of Cudahy CA. My interest and concern for my son's education is paramount, he currently attends the KIPP Start school in Huntington Park, a wonderful school that cares about our children instilling what today is very difficult to find in other schools, PRINCIPLES AND VALUES.

KIPP Begins emphasizes the principles and values of each student. Today there are so many influences outside of our homes that they can influence our children negatively. Through its system and plan of education, KIPP Start ensures that our children think about their personal growth. KIPP is an educational system that cares about our children, and leaves no detail to overlook.

At KIPP the staff is attentive. professional and effective. The teachers and administration are 100% dedicated to the education of our children. KIPP understands that the future of this country is our children.

As a resident of Cudahy I ask you, my representatives, to support the relocation of KIPP Pueblo Unido to our community. It would be a privilege to have your support! Thank you for giving me the opportunity to communicate with you and for paying attention to me. I thank you in advance for your work and everything you do for your residents.

With respect,

Gabriella Juarez

My name is Laura López and the reason I am writing this letter is because I want to support the KIPP Pueblo Unido school in the city of Cudahy where I live.

My children have attended KIPP Starts since kindergarten. My daughter is in eighth grade and my son is in seventh grade.

Our family has been with KIPP for nine years and we have appreciated how KIPP has supported all of its students. In particular, we appreciate that each student's goal is to graduate from a University. It is this culture of improvement that has kept us with KIPP.

To this day, the fundamental education my children received during their early years at KIPP has helped them in their academic career in recent years. My two children are advanced students in mathematics, literature, and science.

This year my child started his seventh year in school in the City of Bell. All the subjects his teachers taught him were a repetition of what he had already learned the previous year at KIPP. For this reason my child and I decided to reapply to a KIPP school for next year.

Another reason I have always liked KIPP schools is because parents and teachers work together to help our children achieve their goals of graduating from a University. Since students are young, KIPP teachers name each classroom in honor of the University from which the teacher graduated. This University culture inspires students to go to the same universities where their teachers went.

I hope that you can support the KIPP Pueblo Unido school in its recollection to our community, so that more Latino children have the opportunity to move forward and achieve all their goals. Thank you members of the Cudahy City Council for listening to moms like me who live in the City of Cudahy.

Sincerely,

Laura Lopez

[REDACTED]  
[REDACTED]

Good afternoon, my name is Francisca Sorto and I am a proud Cudahy resident. My son Kevin and daughter Axelle attend the KIPP Start school.

Today you have in front of you an application for KIPP Pueblo Unido so they can obtain a permanent home in Cudahy.

Today I am in front of you because having a great public school for my children is of special importance to me. I hope you support the application of KIPP Pueblo Unido. To demonstrate KIPP's commitment to the community, I would like to share our experience with you.

I remember when I was looking for a school that my children could attend and I clearly remember that KIPP Start had the best academic performance in the neighborhood.

As soon as you enter school, you feel welcome. All teachers and staff greet you and welcome you to school with open dialogue.

KIPP Start has been a great blessing to my children as they are always encouraged to excel in their academic studies. My son used to have difficulties in math, however, from the beginning, the teachers provided us with adequate information to improve him.

They catered to his needs and catered to his unique learning style by giving him extra time so that he could better learn the subject. What I like the most about Start is that from an early stage, they pointed out my son's difficulties with the subject. They provided us with the necessary information so that it could improve and develop throughout the year. I have seen my children continually excel in their academic studies.

The school also addresses the needs of the family through monthly meetings that address the issues of establishing a college environment and a better understanding of my children and their academics.

KIPP is serving my family and community, so I kindly ask you to support the request for KIPP Pueblo Unido to have a permanent home in Cudahy. Supporting this application will allow other children like Kevin and Axelle and their peers the opportunity to be successful in Cudahy. Thank you!

Subject: Support for KIPP Pueblo Unido in the City of Cudahy  
Dear Members of the City Council of Cudahy,

My name is Cristina Dueñas. Currently my children are in TK, at KIPP Pueblo Unido. I am writing this letter with the greatest intention of supporting the school relocation of KIPP Pueblo Unido to the City of Cudahy.

I chose KIPP, mainly because I had very good recommendations from other moms who attend KIPP. Throughout this time attending KIPP, my children have learned and developed their reading and math skills. They like going to school and attend with great enthusiasm every day. Interacting with high quality of teachers, they have learned to do things for themselves and above all to respect and help others.

The children entered the school without knowing how to read or write. Now they know how to read on a new level, in mathematics they know how to add and subtract, they know how to write and identify letters and words, among many other things. In the current situation, KIPP has proven to be more than a school, it is aware of our community.

They have offered us resources, food, information and above all they have kept in touch with all the students and parents. We have always been welcome and motivated to submit any suggestion with no problem. We have felt very comfortable and included in every way.

In closing, I want to request in the most respectful way, the relocation of our KIPP Pueblo Unido school to a physical location in the City of Cudahy.

Thank you, Cudahy City Council Members, for listening to parents like me who live in Cudahy and who can testify to the benefits of having KIPP Pueblo Unido in our community.

Sincerely,  
Cristina Duenas

# **ATTACHMENT F**

## **LETTERS OF OPPOSITION**

Daniel E. McKay

[REDACTED]  
Cudahy, CA 90201

Development Services Department  
Planning Division  
5220 Santa Ana Street  
Cudahy, CA 90201

RE: Development Review Permit No. 41-532

April 15, 2020

Dear Council Members:

I wish to go on record in firm opposition to the building of the proposed Charter School. Building such a school on the proposed site would create a traffic nightmare worse than that which currently exists on nearby 2-lane streets already used by persons transporting students to and from Teresa Hughes School on Clara Street, located only 5 lots west of the intersection of Otis and Clara Streets. Heavy foot traffic and school buses on Otis and Clara, resulting from the presence of Teresa Hughes School, make for very heavy traffic around the opening and closing times of school.

I live directly across Clara Street from the entrance to the Teresa Hughes staff parking lot, and I have frequently had difficulty in getting out of my own driveway, not to mention waiting through multiple cycles of the traffic signal at the corner of Otis and Clara as the crosswalk is frequently full of students (and the crossing guard) until the light changes and one or two cars get through.

To place yet another school only 2 blocks from the existing school would be intolerable. More school buses ( and even the Metro bus using Otis ) would turn a nightmare into a disaster.

There is plenty of vacant land in Cudahy if another school is truly needed. Adding the burden of additional vehicle and pedestrian traffic to small 2-lane streets like Otis or Olive Streets is entirely unnecessary.

Please uphold our Planning Commission's decision to deny the permit.

Sincerely,

  
Daniel E. McKay

## KIPP Appeal

Susie de Santiago <[REDACTED]>

Fri 4/17/2020 7:28 PM

To: Elizabeth Alcantar <ealcantar@cityofcudahyca.gov>; Jose R. Gonzalez <jgonzalez@cityofcudahyca.gov>; Jack Guerrero <jguerrero@cityofcudahyca.gov>; Chris Garcia <cgarcia@cityofcudahyca.gov>; Blanca Lozoya <blozoya@cityofcudahyca.gov>  
Cc: Santor Nishizaki <snishizaki@cityofcudahyca.gov>; City Clerk <cityclerk@cityofcudahyca.gov>

Good afternoon Mayor Alcantar, Vice Mayor Gonzalez, Council Members Guerrero, Garcia and Lozoya:

I am writing, on behalf of the Cudahy Community and myself, to express our strong opposition of the Public Hearing.

For the record; we the Cudahy Community, oppose the construction of a KIPP: Pueblo Unido Charter School in the City of Cudahy.

We support the Planning Commission's decision to deny the permit for KIPP: Pueblo Unido to build a new school in Cudahy. The construction of KIPP Pueblo Unido would have a detrimental effect in Cudahy. Already, KIPP Pueblo Unido has disrupted the quality of life of Cudahy residents with children enrolled at Teresa Hughes Elementary. KIPP is notorious for the amount of idling car lines at morning drop-off and afternoon pick-ups. There are many concerns regarding the environmental impact that this project would have on the air quality and noise pollution. Additionally, it is imperative council members are aware of the negative economic and educational impacts the charter industry has on Los Angeles Unified School District.

For the record; We oppose the public hearing which is scheduled for April 21, 2020. We urge the council to schedule KIPP: Pueblo Unido's appeal hearing at a safer time, when residents can attend the council meeting to show support for the Planning Commission's vote. As you know, residents are practicing social distancing and following the stay-at-home-order due to the COVID-19 pandemic. These orders will likely continue through the end of April. The appeal should be heard after the orders are lifted. Again, the project does not have the support of Cudahy residents.

Sincerely,

Susie de Santiago

# **ATTACHMENT G**

## **TRAFFIC IMPACT STUDY**

TRAFFIC IMPACT STUDY  
7801-7835 OTIS AVENUE  
CHARTER SCHOOL PROJECT  
City of Cudahy, California  
February 18, 2020

Prepared for:  
**KLARE 16, LLC**  
3601 E. 1<sup>st</sup> Street  
Los Angeles, CA 90063

LLG Ref. 5-19-0474-1



Prepared by:  
  
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# TABLE OF CONTENTS

SECTION	PAGE
<b>1.0 Introduction .....</b>	<b>1</b>
1.1 Study Area .....	3
<b>2.0 Project Description.....</b>	<b>4</b>
2.1 Site Location .....	4
2.2 Existing Project Site.....	4
2.3 Proposed Project Description .....	4
<b>3.0 Site Access and Circulation.....</b>	<b>6</b>
3.1 Existing Vehicular Site Access.....	6
3.2 Vehicular Project Site Access.....	6
3.3 Proposed Student Drop-Off and Pick-Up Operations .....	7
3.3.1 Estimated Peak Vehicle Queue .....	7
<b>4.0 Existing Street System .....</b>	<b>8</b>
4.1 Regional Highway System .....	8
4.2 Local Roadway System .....	8
4.3 Roadway Descriptions .....	9
4.4 Public Transit Services .....	13
<b>5.0 Traffic Counts.....</b>	<b>17</b>
<b>6.0 Cumulative Development Projects.....</b>	<b>22</b>
6.1 Related Projects .....	22
6.2 Ambient Traffic Growth Factor.....	28
<b>7.0 Traffic Forecasting Methodology .....</b>	<b>29</b>
7.1 Project Traffic Generation .....	29
7.2 Project Traffic Distribution and Assignment .....	30
<b>8.0 Traffic Impact Analysis Methodology .....</b>	<b>35</b>
8.1 Impact Criteria and Thresholds .....	35
8.1.1 City of Cudahy Impact Criteria and Thresholds .....	35
8.2 Traffic Impact Analysis Scenarios .....	36
<b>9.0 City of Cudahy Traffic Analysis.....</b>	<b>37</b>
9.1 Existing Conditions.....	37
9.1.1 Existing Conditions .....	37
9.1.2 Existing with Project Conditions .....	37
9.2 Future Conditions .....	37
9.2.1 Future Cumulative Baseline Conditions .....	37
9.2.2 Future Cumulative with Project Conditions .....	42

## TABLE OF CONTENTS *(continued)*

SECTION	PAGE
<b>10.0 City of Bell Traffic Analysis</b> .....	<b>47</b>
10.1 Existing Conditions.....	47
10.1.1 Existing Conditions.....	47
10.1.2 Existing with Project Conditions .....	47
10.2 Future Conditions .....	47
10.2.1 Future Cumulative Baseline Conditions .....	47
10.2.2 Future Cumulative with Project Conditions .....	49
<b>11.0 City of Huntington Park Traffic Analysis</b> .....	<b>50</b>
11.1 Existing Conditions.....	50
11.1.1 Existing Conditions.....	50
11.1.2 Existing with Project Conditions .....	50
11.2 Future Conditions .....	50
11.2.1 Future Cumulative Baseline Conditions .....	50
11.2.2 Future Cumulative with Project Conditions .....	52
<b>12.0 City of South Gate Traffic Analysis</b> .....	<b>53</b>
12.1 Existing Conditions.....	53
12.1.1 Existing Conditions.....	53
12.1.2 Existing with Project Conditions .....	53
12.2 Future Conditions .....	53
12.2.1 Future Cumulative Baseline Conditions .....	53
12.2.2 Future Cumulative with Project Conditions .....	55
<b>13.0 Congestion Management Program Traffic Impact Assessment</b> .....	<b>56</b>
13.1 Intersections .....	56
13.2 Freeways .....	57
13.3 Transit Impact Review.....	57
<b>14.0 Vehicle Miles Traveled Assessment</b> .....	<b>58</b>
14.1 Introduction.....	58
14.2 Project VMT .....	58
<b>15.0 Conclusions</b> .....	<b>60</b>

TABLE OF CONTENTS *(continued)*

LIST OF FIGURES

SECTION—FIGURE #	PAGE
1-1 Vicinity Map .....	2
2-1 Project Site Plan .....	5
4-1 Existing Lane Configurations .....	10
4-2 Existing Public Transit Routes.....	16
5-1 Existing Traffic Volumes – Weekday AM Peak Hour .....	20
5-2 Existing Traffic Volumes – Weekday PM Peak Hour .....	21
6-1 Location of Related Projects .....	25
6-2 Related Projects Traffic Volumes – Weekday AM Peak Hour.....	26
6-3 Related Projects Traffic Volumes – Weekday PM Peak Hour .....	27
7-1 Project Trip Distribution .....	32
7-2 Net New Project Traffic Volumes – Weekday AM Peak Hour .....	33
7-3 Net New Project Traffic Volumes – Weekday PM Peak Hour.....	34
9-1 Existing with Project Traffic Volumes – Weekday AM Peak Hour.....	40
9-2 Existing with Project Traffic Volumes – Weekday PM Peak Hour.....	41
9-3 Future Cumulative Baseline Traffic Volumes – Weekday AM Peak Hour.....	43
9-4 Future Cumulative Baseline Traffic Volumes – Weekday PM Peak Hour .....	44
9-5 Future Cumulative with Project Traffic Volumes – Weekday AM Peak Hour.....	45
9-6 Future Cumulative with Project Traffic Volumes – Weekday PM Peak Hour.....	46
14-1 Caltrans VMT TAZ Map.....	59

## TABLE OF CONTENTS *(continued)*

### LIST OF TABLES

SECTION—TABLE #	PAGE
4-1 Existing Public Transit Routes.....	14
5-1 Existing Traffic Volumes.....	18
6-1 Related Projects List and Trip Generation.....	23
7-1 Project Trip Generation.....	31
8-1 City of Cudahy Signalized Intersection Impact Threshold Criteria.....	35
8-2 City of Cudahy Unsignalized Intersection Impact Threshold Criteria.....	36
9-1 City of Cudahy Levels of Service Summary .....	38
10-1 City of Bell Levels of Service Summary .....	48
11-1 City of Huntington Park Levels of Service Summary.....	51
12-1 City of South Gate Levels of Service Summary.....	54

### APPENDICES

#### APPENDIX

- A. Manual Traffic Count Data
- B. HCM and Levels of Service Explanation  
City of Cudahy HCM Data Worksheets – AM and PM Peak Hours
- C. HCM and Levels of Service Explanation  
City of Bell HCM Data Worksheets – AM and PM Peak Hours
- D. HCM and Levels of Service Explanation  
City of Huntington Park HCM Data Worksheets – AM and PM Peak Hours
- E. HCM and Levels of Service Explanation  
City of South Gate HCM Data Worksheets – AM and PM Peak Hours

TRAFFIC IMPACT STUDY  
7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT  
City of Cudahy, California  
February 18, 2020

## 1.0 INTRODUCTION

This traffic analysis has been conducted to identify and evaluate the potential traffic impacts of the proposed charter school project (the “Project”) located at 7801-7835 Otis Avenue in the City of Cudahy, California (the “Project Site”). The Project proposes the development of a charter school (Grades K-8) accommodating a maximum enrollment of 1,075 students. Two two-story buildings are proposed to be developed on the site. One building will be dedicated to Grades K-4 and will accommodate a maximum enrollment of 575 students. The other building will be dedicated to Grades 5-8 and will accommodate a maximum enrollment of 500 students. The Project Site is bounded by Olive Street to the north, Elizabeth Street to the south, Otis Avenue to the east, and industrial uses to the west. The Project Site location and general vicinity are shown in *Figure 1-1*.

As directed by the City of Cudahy (the “City”), the traffic analysis follows Los Angeles County Department of Public Works (LACDPW) traffic study guidelines<sup>1</sup> and is consistent with traffic impact assessment guidelines set forth in the Los Angeles County Congestion Management Program<sup>2</sup>. This traffic analysis evaluates potential Project-related impacts at 20 key intersections in the vicinity of the Project Site. The study intersections were determined in consultation with City staff. As directed by the City, the Highway Capacity Manual 2010 (HCM) method was used to determine average control delays and corresponding Levels of Service (LOS) at the 20 study intersections located within or shared with the City of Cudahy, the City of Bell, the City of Huntington Park, and the City of South Gate. A review also was conducted of Los Angeles County Metropolitan Transportation Authority (Metro) freeway and intersection monitoring stations to determine if a Congestion Management Program transportation impact assessment analysis is required for the proposed Project. In addition, as directed by the City, an assessment is provided of the Project’s Vehicle Miles Traveled (VMT) transportation impact.

This study (i) presents existing traffic volumes, (ii) includes existing traffic volumes with the forecast net new traffic volumes from the proposed Project, (iii) recommends mitigation measures, where necessary, (iv) forecasts future cumulative baseline traffic volumes, (v) forecasts future traffic volumes with the proposed Project, (vi) determines future forecast with Project-related impacts, and (vii) recommends mitigation measures, where necessary. In addition, this study presents the VMT assessment based on Senate Bill 743.

---

<sup>1</sup> County of Los Angeles’ *Traffic Impact Analysis Report Guidelines*, January 1997.

<sup>2</sup> *2010 Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, 2010.



**FIGURE 1-1**  
**VICINITY MAP**

MAP SOURCE: GOOGLE MAPS  
 PROJECT SITE  
 STUDY INTERSECTION

  
**NOT TO SCALE**

7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

## 1.1 Study Area

Upon coordination with City staff, 20 study intersections have been identified for evaluation during the weekday morning and afternoon peak hours. The study intersections were evaluated from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM to determine the respective peak commuter hours. The 20 study intersections provide local access to the study area and define the extent of the boundaries for this traffic impact analysis. Further discussion of the existing street system and study area is provided in Section 4.0.

The general location of the Project in relation to the study locations and surrounding street system is presented in *Figure 1-1*. The traffic analysis study area is generally comprised of those locations which have the greatest potential to experience significant traffic impacts due to the proposed Project as defined by the Lead Agency. In the traffic engineering practice, the study area generally includes those intersections that are:

- a. Immediately adjacent or in close proximity to the Project Site;
- b. In the vicinity of the Project Site that are documented to have current or projected future adverse operational issues; and
- c. In the vicinity of the Project Site that are forecast to experience a relatively greater percentage of Project-related vehicular turning movements (e.g., at freeway ramp intersections).

The locations selected for analysis were based on the above criteria, the peak-hour vehicle trip generation associated with the proposed Project, the anticipated distribution of Project vehicular trips, and existing intersection/corridor operations.

## 2.0 PROJECT DESCRIPTION

### 2.1 Site Location

The proposed Project Site is located at 7801-7835 Otis Avenue in the City of Cudahy. The Project Site is bounded by Olive Street to the north, Elizabeth Street to the south, Otis Avenue to the east, and industrial uses to the west. The Project Site location and general vicinity are shown in *Figure 1-1*.

### 2.2 Existing Project Site

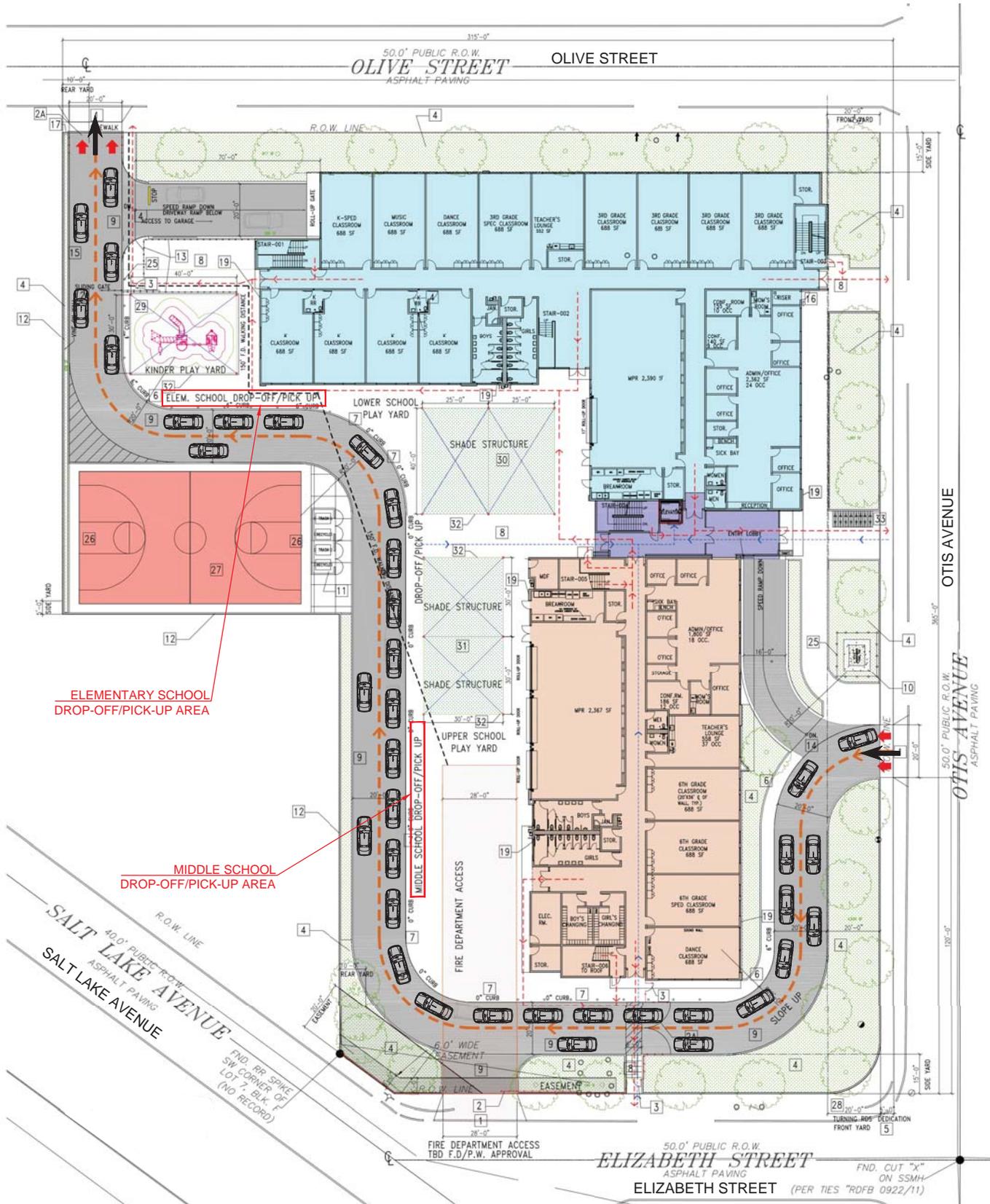
The Project Site is currently occupied by an auto repair shop with approximately 3,600 square feet of building floor area and an industrial site with approximately 30,265 square feet of building floor area. Vehicular access to the existing Project Site is provided via two driveways along the west side of Otis Avenue and one driveway along the south side of Olive Street. An additional driveway along the south side of Olive Street is currently fenced off.

### 2.3 Proposed Project Description

The Project applicant seeks to remove the existing buildings and construct a charter elementary school (Grades K-4) accommodating an enrollment of 575 students and a charter middle school (Grades 5-8) accommodating an enrollment of 500 students. An on-site subterranean parking garage providing 99 spaces is proposed as part of the Project to be used by staff and visitors. Construction and occupancy of the proposed Project is planned to be completed by the year 2021. The site plan for the proposed Project is illustrated in *Figure 2-1*.

Vehicular access to the Project's drop-off/pick-up area and subterranean parking garage will be provided via one inbound driveway along the west side of Otis Avenue at the easterly portion of the Project Site, as well as one outbound driveway along the south side of Olive Street, at the northwest portion of the Project Site. Further discussion on the Project Site access and circulation schemes is provided in Section 3.0.

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ELEMENTARY SCHOOL  
DROP-OFF/PICK-UP AREA

MIDDLE SCHOOL  
DROP-OFF/PICK-UP AREA



SOURCE: FRANCO ARCHITECTS INC.

# FIGURE 2-1 PROJECT SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

### 3.0 SITE ACCESS AND CIRCULATION

The proposed site access scheme for the Project is displayed in *Figure 2-1*. A description of the proposed site access and circulation scheme is provided in the following subsections.

#### 3.1 Existing Vehicular Site Access

Vehicular access to the existing Project Site is provided via two driveways along the west side of Otis Avenue and one driveway along the south side of Olive Street.

#### 3.2 Vehicular Project Site Access

Descriptions of the Project Site driveways are provided in the following paragraphs:

- *Otis Avenue Driveway:*

Vehicular ingress to the Project's drop-off/pick-up area and subterranean parking garage will be provided via one driveway along the west side of Otis Avenue approximately midway between Olive Street and Elizabeth Street. The ingress driveway is proposed to accommodate right-turn vehicular ingress only (i.e., right-turn egress and left-turn ingress and egress movements will not be permitted). Signage on Otis Avenue prohibiting northbound left-turn ingress movements during drop-off/pick-up periods will be provided. Additionally, staff and parents/caregivers will be provided with information regarding the site access scheme prior to the start of the school year. Therefore, motorists destined to the Project will be aware of the right-turn only ingress operation at the Otis Avenue driveway and will plan their travel routes in advance so as to arrive at the Project site via southbound Otis Avenue. Traffic destined to the Project to drop-off or pick-up students will enter the proposed Otis Avenue ingress driveway, travel within the site in the proposed drop-off/pick-up lane, complete the student drop-off or pick-up, and then exit onto Olive Street via the proposed driveway at the northwesterly portion of the Project Site. Traffic destined to the Project to access the subterranean parking garage will enter the Otis Avenue driveway and travel down the ramp to the parking garage. Traffic departing the Project from the parking garage will travel up the ramp at the northwesterly portion of the Project Site and exit via the proposed Olive Street egress driveway.

- *Olive Street Driveway:*

Vehicular egress from the Project's drop-off/pick-up area, as well as from the subterranean parking garage, will be provided via one driveway along the south side of Olive Street, at the northwest portion of the Project Site. The Olive Street driveway is proposed to accommodate vehicular egress movements only (i.e., left-turn and right-turn ingress movements are not permitted).

### 3.3 Proposed Student Drop-Off and Pick-Up Operations

The proposed student drop-off/pick-up area is shown in *Figure 2-1*. Vehicles destined to the Project to drop-off or pick-up students will enter the site via the proposed ingress driveway on Otis Avenue, travel within the site in the proposed drop-off/pick-up lane, complete the student drop-off or pick-up for Grades 5-8, continue northbound within the site in the proposed drop-off/pick-up lane, complete the student drop-off or pick-up for Grades K-4, and then exit via the northwesterly driveway onto Olive Street. The proposed drop-off/pick-up lane can accommodate approximately 26 vehicles queued within the site. As shown, the proposed on-site drop-off/pick-up area lane is approximately 20 feet in width, which is sufficient to accommodate one lane of queued vehicles, plus a bypass lane to allow vehicles to bypass the queue should there be delay related to the passenger loading/unloading of one or more of the queued vehicles.

#### 3.3.1 *Estimated Peak Vehicle Queue*

Private vehicles are the main component that contributes to the vehicle queuing analysis during the peak student drop-off and pick-up periods. The analysis focuses on the morning student drop-off period as the pick-up of students tends to be dispersed on a relative basis throughout the afternoon, particularly as students are involved with after-school activities.

The proposed Project is forecast to generate 365 inbound trips and 310 outbound trips during the AM peak hour (refer to Section 7.0, Traffic Forecasting Methodology, for a discussion of the Project's trip generation forecasts). While the ITE trip rates do not distinguish between trips related to staff arrivals and student drop-offs in the morning, it can be generally assumed that the 310 outbound trips during the AM peak hour would correlate with at least 310 inbound trips during this period related to student drop-off operations. The remaining inbound vehicle trips during the AM peak hour are likely due to administrative staff, visitors, etc., at the campus. Therefore, for this queuing analysis, it has been assumed that approximately 310 vehicles would utilize the on-site vehicle queue area as part of the student drop-off operations.

While the ITE forecasts are made for a peak one-hour (i.e., 60-minute) period, it has been observed that student drop-offs are typically concentrated in shorter timeframes leading up to the start of classes for the day. Thus, for this analysis it has been conservatively (i.e., worst case) assumed that the 310 vehicles would arrive in a 30-minute period, which is equivalent to approximately 10.3 vehicles per minute. Multiplying this average arrival by two to approximate the 95<sup>th</sup> percentile confidence level of a Poisson distribution (which is typically used by traffic engineers in planning the lengths of left and right-turn pockets at intersections) results in an estimated maximum of 21 vehicles during the peak minute. As previously noted, the on-site vehicle queue area can accommodate a maximum of 26 queued vehicles within the site. Accordingly, Project-related trips are not expected to queue onto Otis Avenue. Therefore, it is concluded that the planned on-site vehicle queue area can adequately accommodate the forecast peak demand of 21 queued vehicles during the morning student drop-off operation. It is noted that vehicles are expected to depart the Project Site at a similar peak rate (21 exiting vehicles during the peak one-minute period).

## 4.0 EXISTING STREET SYSTEM

### 4.1 Regional Highway System

Regional access to the Project Site is provided by the I-105 (Glenn Anderson) Freeway and I-710 (Long Beach) Freeway. Brief descriptions of the I-105 and I-710 Freeways are provided in the following paragraphs.

*I-105 (Glenn Anderson) Freeway* is an east-west freeway connecting the City of Norwalk to the City of El Segundo. In the Project vicinity, three-mixed flow lanes are generally provided in each direction on the I-105 Freeway with auxiliary merge/weave lanes provided between some interchanges as well as one carpool lane in each direction. Eastbound and westbound ramps are provided on the I-105 Freeway at Long Beach Boulevard in the Project vicinity, which are located approximately 2.8 miles south of the Project Site.

*I-710 (Long Beach) Freeway* is a north-south oriented freeway connecting the City of Long Beach with the City of Los Angeles. In the Project vicinity, four mixed flow lanes are generally provided in each direction on the I-710 Freeway with auxiliary merge/weave lanes provided between some interchanges. Northbound and southbound ramps are provided on the I-710 Freeway at Florence Avenue in the Project vicinity, which are located approximately 1.5 miles north of the Project Site.

### 4.2 Local Roadway System

Immediate access to the Project Site is provided via Otis Avenue and Olive Street. The following study intersections were selected in consultation with City staff for analysis of potential impacts due to the proposed Project:

1. Salt Lake Avenue – California Avenue / Florence Avenue (City of Huntington Park)
2. California Avenue / Hope Street (City of Huntington Park)
3. California Avenue / Santa Ana Street (City of Huntington Park / City of South Gate)
4. California Avenue / Independence Avenue (City of South Gate)
5. California Avenue / Ardmore Avenue (City of South Gate)
6. California Avenue – Salt Lake Avenue / Florence Avenue (City of Bell / City of Huntington Park)
7. Otis Avenue / Florence Avenue (City of Bell)
8. Otis Avenue / Live Oak Street (City of Cudahy)
9. Otis Avenue / Clara Street (City of Cudahy)

10. Otis Avenue – Otis Street / Santa Ana Street (City of Huntington Park / City of South Gate)
11. Otis Street / Independence Avenue (City of South Gate)
12. Otis Street / Ardmore Avenue (City of South Gate)
13. Atlantic Avenue / Florence Avenue (City of Bell / City of Cudahy)
14. Atlantic Avenue / Live Oak Street (City of Cudahy)
15. Atlantic Avenue / Clara Street (City of Cudahy)
16. Atlantic Avenue / Elizabeth Street (City of Cudahy)
17. Atlantic Avenue / Santa Ana Street (City of Cudahy)
18. Atlantic Avenue / N. Cecilia Street (City of Cudahy)
19. Atlantic Avenue / S. Cecilia Street (City of Cudahy)
20. Otis Avenue / Elizabeth Street (City of Cudahy)

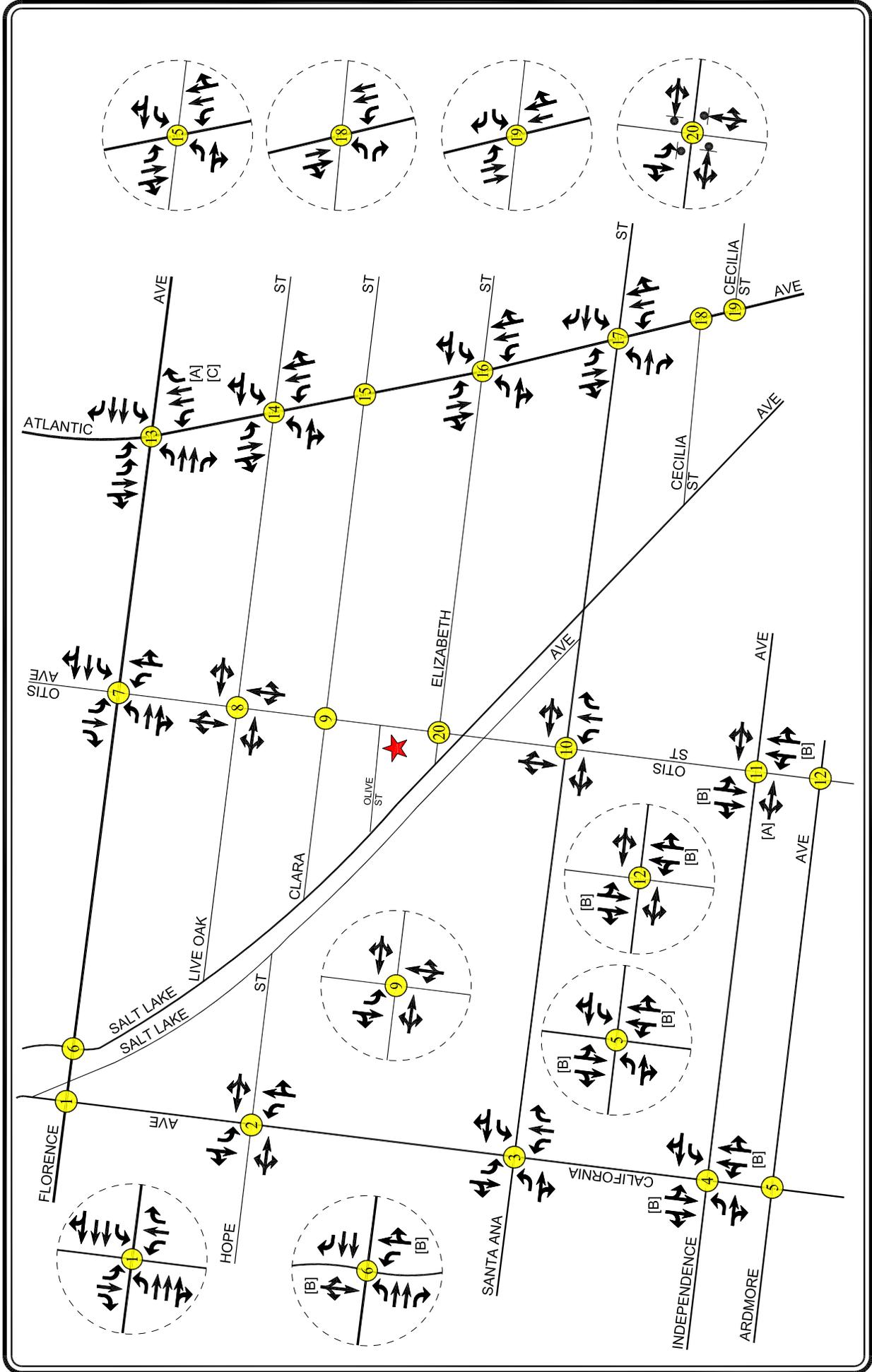
Nineteen of the 20 study intersections selected for analysis are presently controlled by traffic signals. The Otis Avenue / Elizabeth Street intersection is currently under the control of stop signs. The existing lane configurations at the study intersections are displayed in *Figure 4-1*.

### 4.3 Roadway Descriptions

A brief description of the roadways in the Project vicinity is provided in the following paragraphs.

*California Avenue* is a north-south oriented roadway located west of the Project Site. Within the Project study area, California Avenue is designated as a Collector Roadway by the City of Bell, as a Local Street by the City of Huntington Park, and as a Secondary Arterial by the City of South Gate. North of Santa Ana Street, one through travel lane is provided in each direction on California Avenue within the Project study area. South of Santa Ana Street, two through travel lanes are provided in each direction on California Avenue. Separate exclusive left-turn lanes are provided in each direction on California Avenue at the Florence Avenue, Hope Street, and Santa Ana Street intersections. North of Florence Avenue, California Avenue becomes Salt Lake Avenue. California Avenue is posted for a speed limit of 35 miles per hour within the Project study area.

*Salt Lake Avenue* is a north-south oriented roadway located west of the Project Site. Within the Project study area, Salt Lake Avenue is designated as a Collector Roadway by the City of Bell, as a Collector Street by the City of Cudahy, and as a Collector Roadway by the City of Huntington Park. One through travel lane is provided in each direction on Salt Lake Avenue



**FIGURE 4-1**  
**EXISTING LANE CONFIGURATIONS**  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

**PROJECT SITE** (Red Star)

**STUDY INTERSECTION** (Yellow Circle)

**STOP SIGN** (Black Circle)

**[A] NO RIGHT-TURN ON RED**

**[B] SPLIT PHASING**

**[C] RIGHT-TURN OVERLAP**

**NOT TO SCALE**

**LINSCOTT, LAW & GREENSPAN, engineers**

within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Salt Lake Avenue at major intersections. North of Florence Avenue, Salt Lake Avenue becomes California Avenue. North of Florence Avenue, Salt Lake Avenue is posted for a speed limit of 25 miles per hour within the Project study area. South of Florence Avenue, Salt Lake Avenue is posted for a speed limit of 35 miles per hour within the Project study area.

*Otis Avenue* is a north-south oriented roadway that borders the Project Site to the east. Within the Project study area, Otis Avenue is designated as a Collector Roadway by the City of Bell, as a Collector Street by the City of Cudahy, and as a Local Street by the City of Huntington Park. One through travel lane is provided in each direction on Otis Avenue within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Otis Avenue at the Florence Avenue intersection, and separate exclusive left-turn lanes are provided in the southbound direction on Otis Avenue at the Clara Street and Elizabeth Street intersections. South of Santa Ana Street, Otis Avenue becomes Otis Street. North of Florence Avenue, Otis Avenue is posted for a speed limit of 30 miles per hour within the Project study area. South of Florence Avenue, Otis Avenue is posted for a speed limit of 25 miles per hour within the Project study area.

*Otis Street* is a north-south oriented roadway located east of the Project Site. Within the Project study area, Otis Street is designated as a Collector Street by the City of South Gate. Two through travel lanes are provided in each direction on Otis Street within the Project study area. North of Santa Ana Street, Otis Street becomes Otis Avenue. Otis Street is posted for a speed limit of 30 miles per hour within the Project study area.

*Atlantic Avenue* is a north-south oriented roadway located east of the Project Site. Within the Project study area, Atlantic Avenue is designated as an Arterial Roadway by the City of Bell, as a Major Highway by the City of Cudahy, and as a Primary Arterial by the City of South Gate. Two through travel lanes are provided in each direction on Atlantic Avenue within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Atlantic Avenue at major intersections. Atlantic Avenue is posted for a speed limit of 35 miles per hour within the Project study area.

*Florence Avenue* is an east-west oriented roadway located north of the Project Site. Within the Project study area, Florence Avenue is designated as an Arterial Roadway by the City of Bell and as a Major Arterial by the City of Huntington Park. Two through travel lanes are provided in each direction on Florence Avenue within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Florence Avenue at major intersections. Florence Avenue is posted for a speed limit of 35 miles per hour within the Project study area.

*Live Oak Street* is an east-west oriented roadway located north of the Project Site. Within the Project study area, Live Oak Street is designated as a Local Street by the City of Cudahy and as a Local Street by the City of Huntington Park. One through travel lane is provided in each direction on Live Oak Street within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Live Oak Street at the Atlantic Avenue intersection. Live Oak Street is posted for a speed limit of 25 miles per hour within the Project study area.

*Hope Street* is an east-west oriented roadway located north of the Project Site. Within the Project study area, Hope Street is designated as a Local Street by the City of Huntington Park. One through travel lane is provided in each direction on Hope Street within the Project study area. Hope Street is posted for a speed limit of 25 miles per hour within the Project study area.

*Clara Street* is an east-west oriented roadway located north of the Project Site. Within the Project study area, Clara Street is designated as a Collector Street by the City of Cudahy. One through travel lane is provided in each direction on Clara Street within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Clara Street at the Atlantic Avenue intersection. West of Atlantic Avenue, Clara Street is posted for a speed limit of 30 miles per hour within the Project study area. East of Atlantic Avenue, Clara Street is posted for a speed limit of 25 miles per hour within the Project study area.

*Olive Street* is an east-west oriented roadway that borders the Project Site to the north. Within the Project study area, Olive Street is designated as a Local Street by the City of Cudahy and as a Local Street by the City of Huntington Park. One through travel lane is provided in each direction on Olive Street within the Project study area. Olive Street is posted for a speed limit of 25 miles per hour within the Project study area.

*Elizabeth Street* is an east-west oriented roadway located south of the Project Site. Within the Project study area, Elizabeth Street is designated as a Collector Street by the City of Cudahy. One through travel lane is provided in each direction on Elizabeth Street within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Elizabeth Street at the Atlantic Avenue intersection. Elizabeth Street is posted for a speed limit of 25 miles per hour within the Project study area.

*Santa Ana Street* is an east-west oriented roadway located south of the Project Site. Within the Project study area, Santa Ana Street is designated as a Collector Street by the City of Cudahy and as a Collector Street by the City of South Gate. One through travel lane is provided in each direction on Santa Ana Street within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Santa Ana Street at the California Avenue and Atlantic Avenue intersections. West of Atlantic Avenue, Santa Ana Street is posted for a speed limit of 30 miles per hour within the Project study area. East of Atlantic Avenue, Santa Ana Street is posted for a speed limit of 25 miles per hour within the Project study area.

*Cecilia Street* is an east-west oriented roadway located south of the Project Site. Within the Project study area, Cecilia Street is designated as a Local Street by the City of Cudahy. One through travel lane is provided in each direction on Cecilia Street within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Cecilia Street at the Atlantic Avenue intersection. Cecilia Street is posted for a speed limit of 25 miles per hour within the Project study area.

*Independence Avenue* is an east-west oriented roadway located south of the Project Site. Within the Project study area, Independence Avenue is designated as a Collector Street by the City of South Gate. One through travel lane is provided in each direction on Independence Avenue

within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Independence Avenue at the California Avenue intersection. West of Otis Street, Independence Avenue is posted for a speed limit of 35 miles per hour within the Project study area. There is no speed limit posted on Independence Avenue east of Otis Street within the Project study area, thus a prima facie speed limit of 25 miles per hour is assumed, consistent with the State of California Vehicle Code.

*Ardmore Avenue* is an east-west oriented roadway located south of the Project Site. Within the Project study area, Ardmore Avenue is designated as a Collector Street by the City of South Gate. One through travel lane is provided in each direction on Ardmore Avenue within the Project study area. Separate exclusive left-turn lanes are provided in each direction on Ardmore Avenue at the California Avenue intersection. Ardmore Avenue terminates at the Otis Street intersection. West of Otis Street, Ardmore Avenue is posted for a speed limit of 35 miles per hour within the Project study area.

#### 4.4 Public Transit Services

Public transit service within the Project study area is currently provided by the Los Angeles County Metropolitan Transit Authority (Metro), the City of Cudahy Transit (Cudahy Area Rapid Transit), the City of Bell Transit (La Campana), and the City of Huntington Park Transit (Huntington Park Express). A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in *Table 4-1*. The existing public transit routes in the Project site vicinity are illustrated in *Figure 4-2*.

It is noted that the Union Pacific Railroad tracks run through the Project study area. However, upon visiting the Project study area, it was observed that train operations were infrequent.

Table 4-1  
EXISTING PUBLIC TRANSIT ROUTES [1]

10-Dec-19

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro 111	Norwalk Station to LAX City Bus Center (via Florence Avenue)	Florence Avenue	EB WB	5 5	6 5
Metro 260	Alhambra to Artesia Station (via Fair Oaks Avenue and Atlantic Avenue)	Atlantic Avenue	NB SB	5 4	3 5
Metro 611	Cudahy to Bell (via Santa Ana Street, Leonis Boulevard and Wilcox Avenue)	Santa Ana Street	CW CCW	1 1	1 2
Metro 612	Roundtrip from Willowbrook/Rosa Parks Station (via Wilmington Avenue, Florence Avenue, Otis Street and Imperial Highway)	Florence Avenue, Otis Street	CW CCW	1 1	1 1
Metro Rapid 762	Pasadena to Artesia Station (via Fair Oaks Avenue and Atlantic Avenue)	Atlantic Avenue	NB SB	2 3	2 2
Cudahy Area Rapid Transit	Roundtrip from Cudahy City Hall (via Santa Ana Street, Atlantic Avenue, Live Oak Street, and Otis Avenue)	Atlantic Avenue, Otis Avenue	CW CCW	0 2	0 1
La Campana	Roundtrip from Bell Civic Center (via Gage Avenue, Walker Avenue, Florence Avenue and California Avenue)	Atlantic Avenue, Florence Avenue	CW CCW	2 0	2 0

Table 4-1 (Continued)  
EXISTING PUBLIC TRANSIT ROUTES [1]

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Huntington Park Express	Roundtrip from Huntington Park City Hall (via Saturn Avenue, Santa Fe Avenue, Slauson Avenue, and California Avenue)	California Avenue	CW CCW	3 0	2 0
<b>Total</b>			<b>35</b>	<b>33</b>	

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) website, 2019.  
 City of Cudahy Transit website, 2019.  
 City of Bell (La Campana) Transit website, 2019.  
 City of Huntington Park Transit website, 2019.  
 CW = Clockwise  
 CCW = Counterclockwise



## 5.0 TRAFFIC COUNTS

Manual traffic counts of vehicular turning movements were conducted on Wednesday, October 16, 2019 at 19 of the 20 study intersections during the weekday morning and afternoon commuter periods to determine the peak hour traffic volumes. The manual traffic counts of vehicular turning movements for the Otis Avenue / Elizabeth Street intersection were conducted on Thursday, November 7, 2019. The manual traffic counts at the 20 study intersections were conducted from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM to determine the respective peak commuter hours.

The weekday AM and PM peak period manual counts of vehicle movements at the study intersections are summarized in *Table 5-1*. The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are shown in *Figures 5-1* and *5-2*, respectively. Summary data worksheets of the manual traffic counts at the study intersections are contained in *Appendix A*.

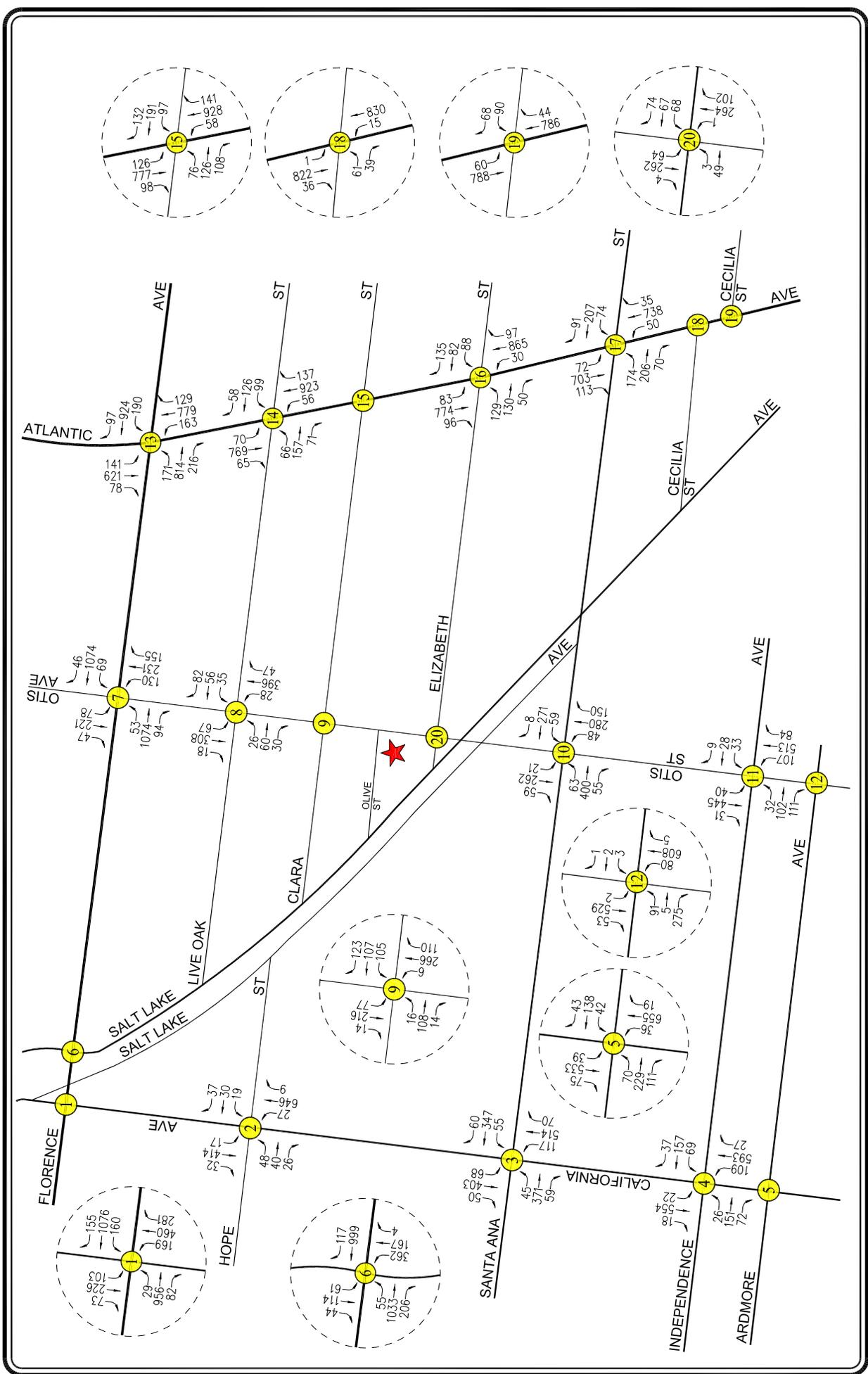
Table 5-1  
EXISTING TRAFFIC VOLUMES [1]

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
1	Salt Lake Avenue-California Avenue / Florence Avenue	10/16/2019	NB	7:15	910	5:00	607
			SB		402		602
			EB		1,067		1,263
			WB		1,391		1,085
2	California Avenue / Hope Street	10/16/2019	NB	7:00	682	5:00	494
			SB		463		639
			EB		114		64
			WB		86		42
3	California Avenue / Santa Ana Street	10/16/2019	NB	7:00	701	5:00	612
			SB		521		640
			EB		475		585
			WB		462		430
4	California Avenue / Independence Avenue	10/16/2019	NB	7:00	729	5:00	595
			SB		594		593
			EB		249		201
			WB		263		181
5	California Avenue / Ardmore Avenue	10/16/2019	NB	7:15	710	5:00	607
			SB		647		635
			EB		410		326
			WB		223		133
6	California Avenue - Salt Lake Avenue / Florence Avenue	10/16/2019	NB	7:00	533	4:45	310
			SB		219		288
			EB		1,294		1,409
			WB		1,116		852
7	Otis Avenue / Florence Avenue	10/16/2019	NB	7:00	516	5:00	355
			SB		346		392
			EB		1,221		1,108
			WB		1,189		953
8	Otis Avenue / Live Oak Street	10/16/2019	NB	7:00	471	5:00	357
			SB		393		397
			EB		116		88
			WB		173		124
9	Otis Avenue / Clara Street	10/16/2019	NB	7:00	382	5:00	379
			SB		307		374
			EB		138		132
			WB		335		264
10	Otis Avenue - Otis Street / Santa Ana Street	10/16/2019	NB	7:00	478	4:00	437
			SB		342		457
			EB		518		517
			WB		338		448
11	Otis Street / Independence Avenue	10/16/2019	NB	7:15	704	4:45	644
			SB		516		552
			EB		245		137
			WB		70		126
12	Otis Street / Ardmore Avenue	10/16/2019	NB	7:00	693	4:30	637
			SB		584		622
			EB		371		328
			WB		6		7

Table 5-1 (Continued)  
EXISTING TRAFFIC VOLUMES [1]

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
13	Atlantic Avenue / Florence Avenue	10/16/2019	NB	7:15	1,071	4:00	826
			SB		840		960
			EB		1,201		1,086
			WB		1,211		1,039
14	Atlantic Avenue / Live Oak Street	10/16/2019	NB	7:15	1,116	5:00	809
			SB		904		991
			EB		294		210
			WB		283		282
15	Atlantic Avenue / Clara Street	10/16/2019	NB	7:15	1,127	5:00	897
			SB		1,001		1,067
			EB		310		329
			WB		420		394
16	Atlantic Avenue / Elizabeth Street	10/16/2019	NB	7:15	992	5:00	825
			SB		953		1,037
			EB		309		276
			WB		305		228
17	Atlantic Avenue / Santa Ana Street	10/16/2019	NB	7:15	823	4:30	814
			SB		888		950
			EB		450		414
			WB		372		303
18	Atlantic Avenue / N. Cecilia Street	10/16/2019	NB	7:30	845	5:00	809
			SB		859		872
			EB		100		58
			WB		0		2
19	Atlantic Avenue / S. Cecilia Street	10/16/2019	NB	7:15	830	4:45	794
			SB		848		877
			EB		0		0
			WB		158		120
20	Otis Avenue / Elizabeth Street	11/07/2019	NB	7:15	367	4:00	394
			SB		330		375
			EB		52		66
			WB		209		190

[1] National Data & Surveying Services



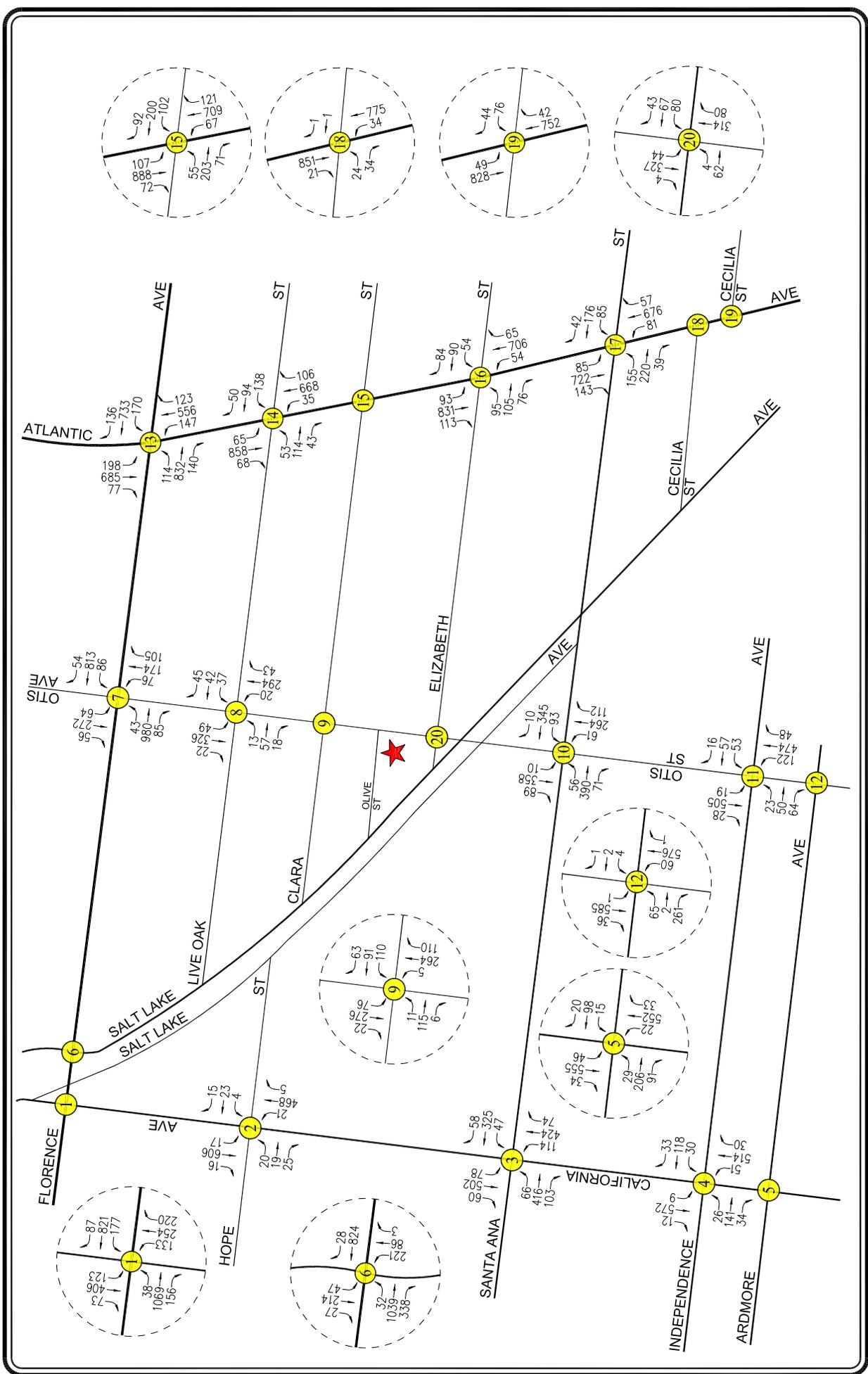
**NOT TO SCALE**

- ★ PROJECT SITE
- ⊗ STUDY INTERSECTION

**FIGURE 5-1**  
**EXISTING TRAFFIC VOLUMES**

WEEKDAY AM PEAK HOUR  
7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



**FIGURE 5-2**  
**EXISTING TRAFFIC VOLUMES**  
 WEEKDAY PM PEAK HOUR  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

 **NOT TO SCALE**  
 PROJECT SITE  
 STUDY INTERSECTION  
 LINSOTT, LAW & GREENSPAN, engineers

## 6.0 CUMULATIVE DEVELOPMENT PROJECTS

The forecast of future pre-Project conditions was prepared in accordance to procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two options for developing the future traffic volume forecast:

“(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or

(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.”

Accordingly, the traffic analysis provides a highly conservative estimate of future pre-Project traffic volumes as it incorporates both the “A” and “B” options outlined in CEQA Guidelines for purposes of developing the forecast.

### 6.1 Related Projects

A forecast of on-street traffic conditions prior to occupancy of the proposed Project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed Project can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the City of Cudahy Community Development Department, the City of Bell Community Development Department, the City of Huntington Park Community Development Department, the City of South Gate Community Development Department, and the County of Los Angeles Department of Regional Planning. The list of related projects in the Project site area is presented in **Table 6-1**. The location of the related projects is shown in **Figure 6-1**.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the Institute of Transportation Engineers’ (ITE) *Trip Generation Manual*<sup>3</sup>. The related projects’ respective traffic generation for the weekday AM and PM peak hours, as well as on a daily basis for a typical weekday, is summarized in **Table 6-1**. The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours are displayed in **Figures 6-2** and **6-3**, respectively.

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<sup>3</sup> Institute of Transportation Engineers *Trip Generation Manual*, 10<sup>th</sup> Edition, Washington, D.C., 2017.

Table 6-1  
RELATED PROJECTS LIST AND TRIP GENERATION [1]

12-Dec-19

MAP NO.	PROJECT NAME/ PROJECT NUMBER	PROJECT STATUS	ADDRESS/ LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2]	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			TOTAL
				LAND-USE	SIZE			IN	OUT	TOTAL	IN	OUT	TOTAL	
City of Cudahy														
CU1	4855 Cecilia Street Manufacturing Project	Proposed	4855 Cecilia Street	Manufacturing	3,200 GSF	[3]	13	2	0	2	1	1	2	
CU2	5252 Live Oak Street Residential Project	Approved	5252 Live Oak Street	Condominiums Single-Family Homes	19 DU (4) DU	[4] [5]	139 (38)	2 (1)	7 (2)	9 (3)	7 (3)	4 (1)	11 (4)	
CU3	5111 Elizabeth Street Residential Project	Approved	5111 Elizabeth Street	Condominiums Single-Family Home	6 DU (1) DU	[4] [5]	44 (9)	1 (0)	2 (1)	3 (1)	2 (1)	1 (0)	3 (1)	
CU4	7700 Atlantic Avenue Project	Proposed	7700 Atlantic Avenue	Car Wash	2,080 GSF	[6]	100	2	2	4	4	4	8	
CU5	4935-4937 Santa Ana Street Residential Project	Proposed	4935-4937 Santa Ana Street	Apartments Single-Family Homes	6 DU (3) DU	[4] [5]	44 (28)	1 (1)	2 (1)	3 (2)	2 (2)	1 (1)	3 (3)	
CU6	4302-4312 Elizabeth Street Residential Project	Proposed	4302-4312 Elizabeth Street	Apartments Single-Family Homes	48 DU (12) DU	[4] [5]	351 (113)	5 (2)	17 (7)	22 (9)	17 (8)	10 (4)	27 (12)	
CU7	4254 Elizabeth Street Residential Project	Proposed	4254 Elizabeth Street	Condominiums Single-Family Homes	6 DU (2) DU	[4] [5]	44 (19)	1 (0)	2 (1)	3 (1)	2 (1)	1 (1)	3 (2)	
CU8	5017 Clara Street Residential Project	Proposed	5017 Clara Street	Apartments Single-Family Home	8 DU (1) DU	[4] [5]	59 (9)	1 (0)	3 (1)	4 (1)	3 (1)	1 (0)	4 (1)	
CU9	5037 Live Oak Street Residential Project	Proposed	5037 Live Oak Street	Apartments Single-Family Homes	20 DU (2) DU	[4] [5]	146 (19)	2 (0)	7 (1)	9 (1)	7 (1)	4 (1)	11 (2)	
City of Bell														
B1	6619 King Avenue Residential Project	Proposed	6619 King Avenue	Apartments	7 DU	[4]	51	1	2	3	3	1	4	
B2	Aldi Supermarket and Commercial Center	Proposed	6400 Atlantic Avenue	Supermarket Retail	18,557 GSF 7,577 GSF	[7]	999	38	26	64	54	52	106	
B3	4704 Florence Avenue Residential Project	Approved	4704 Florence Avenue	Apartments	14 DU	[4]	102	1	5	6	5	3	8	
B4	4410 Gage Avenue Café	Proposed	4410 Gage Avenue	Café	2,938 GSF	[8]	331	16	13	29	18	11	29	
B5	6913 Vinevale Avenue Residential Project	Proposed	6913 Vinevale Avenue	Apartments Single-Family Home	5 DU (1) DU	[4] [5]	37 (9)	0 (0)	2 (1)	2 (1)	2 (1)	1 (0)	3 (1)	
B6	4148 Florence Avenue Mixed-Use Project	Under Construction	4148 Florence Avenue	Fast-Food Restaurant Retail Restaurant	2,485 GSF 1,883 GSF (5,284) GSF	[9] [10] [8]	1,170 71 (596)	51 1 (29)	49 1 (24)	100 2 (53)	42 3 (32)	39 4 (20)	81 7 (52)	

Table 6-1 (Continued)  
RELATED PROJECTS LIST AND TRIP GENERATION [1]

12-Dec-19

MAP NO.	PROJECT NAME/ PROJECT NUMBER	PROJECT STATUS	ADDRESS/ LOCATION	LAND USE DATA		PROJECT DATA SOURCE	DAILY TRIP ENDS [2]			AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
				LAND-USE	SIZE		TRIP ENDS [2]	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT
B7	3613 Gage Avenue Mixed-Use Project	Proposed	3613 Gage Avenue	Retail Office	1,872 1,200	[10] [11]	71 12	1 1	1 0	2 1	3 0	4 1	7 1		
B8	4737 Gage Avenue Retail Project	Proposed	4737 Gage Avenue	Retail	2,350	[10]	89	1	1	2	4	5	9		
<b>City of Huntington Park</b>															
HP1	6241 Maywood Avenue Storage Facility Project	Proposed	6241 Maywood Avenue	Self-Storage Facility	157,696	[12]	238	10	6	16	13	14	27		
<b>City of South Gate</b>															
SG1	3125 Firestone Boulevard Commercial Project	Proposed	3125 Firestone Boulevard	Commercial	23,353	[10]	882	14	8	22	43	46	89		
<b>County of Los Angeles</b>															
LC1	R2015-01262	Proposed	2814 Live Oak Street	Single-Family Home Single-Family Home	1 (1)	[5] [5]	9 (9)	0 0	1 (1)	1 (1)	1 (1)	0 0	1 (1)		
<b>TOTAL</b>							4,153	119	117	236	185	180	365		

[1] Source: City of Cudahy Community Development Department, City of Bell Community Development Department, City of Huntington Park Community Development Department, City of South Gate Community Development Department, and Los Angeles County Department of Regional Planning related projects lists. Trip generation for the related projects are based on the ITE "Trip Generation Manual", 10th Edition, 2017 (as referenced in the Project Data Source column), unless otherwise noted.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 140 (Manufacturing) trip generation average rates.

[4] ITE Land Use Code 220 (Multifamily Housing [Low-Rise]) trip generation average rates.

[5] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.

[6] Source: SANDAG "(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region", 2002. SANDAG Land Use (Self-Serve Car Wash) trip generation estimated rates.

[7] Source: Traffic Impact Study Aldi Market at Atlantic Avenue and Gage Avenue Bell, California, prepared by KOA Corporation, March 2016.

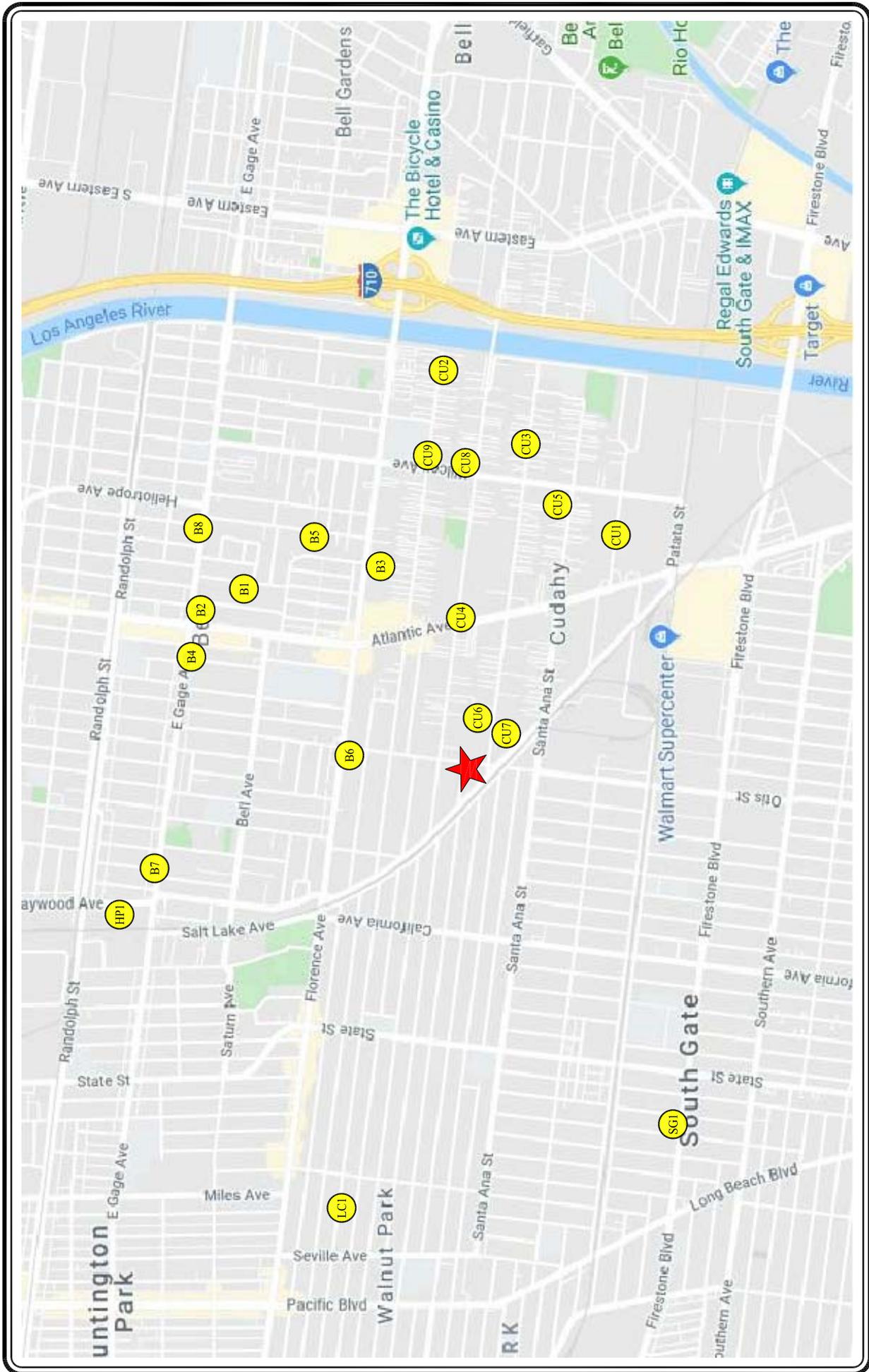
[8] ITE Land Use Code 932 High-Turnover [Sit-Down] Restaurant) trip generation average rates.

[9] ITE Land Use Code 934 (Fast-Food Restaurant with Drive-Through Window) trip generation average rates.

[10] ITE Land Use Code 820 (Shopping Center) trip generation average rates.

[11] ITE Land Use Code 710 (General Office Building) trip generation average rates.

[12] ITE Land Use Code 151 (Mini-Warehouse) trip generation average rates.



**FIGURE 6-1**  
**LOCATION OF RELATED PROJECTS**

MAP SOURCE: GOOGLE MAPS

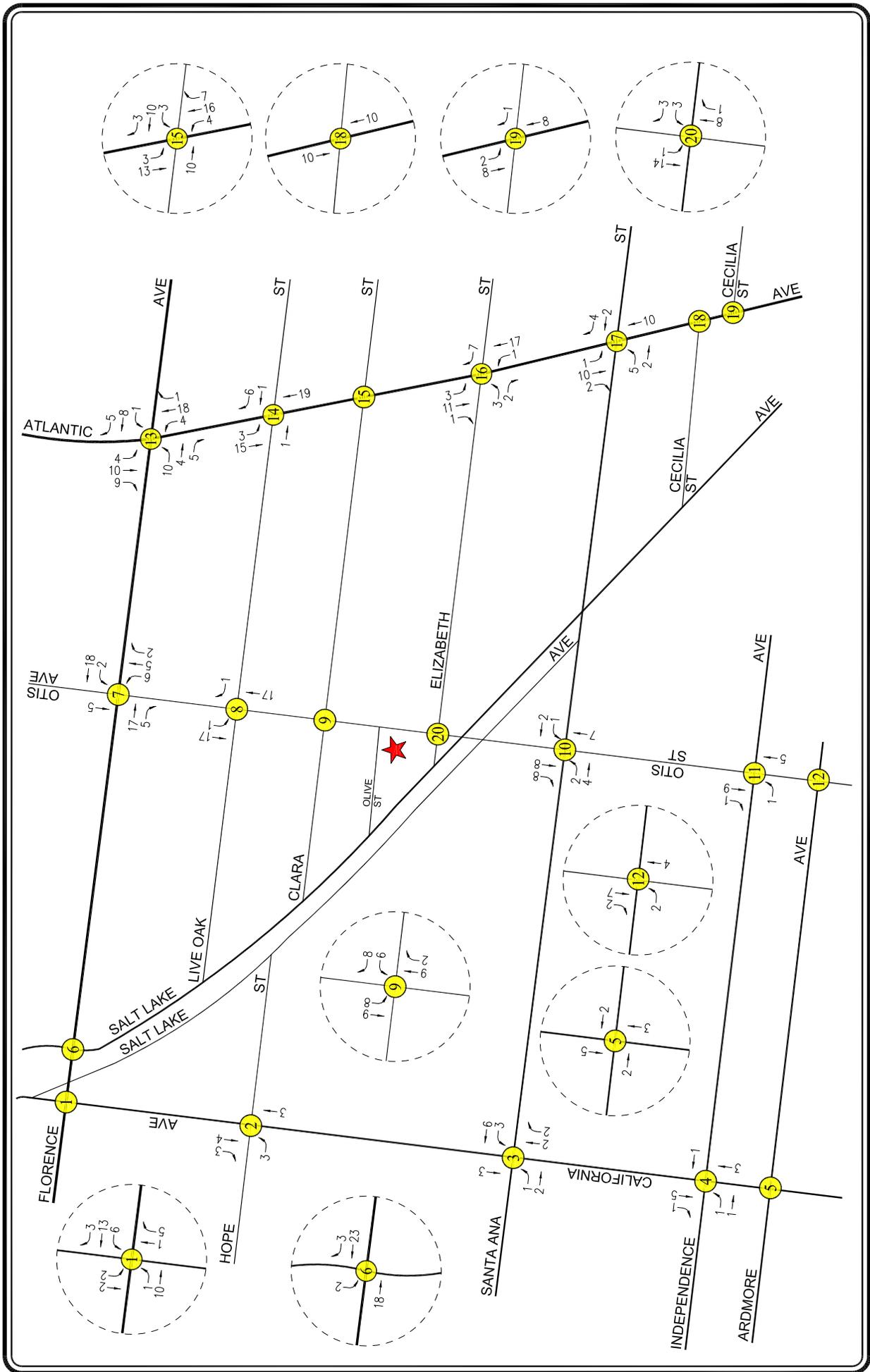
-  PROJECT SITE
-  RELATED PROJECT



**NOT TO SCALE**

LINSCOTT, LAW & GREENSPAN, engineers

7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

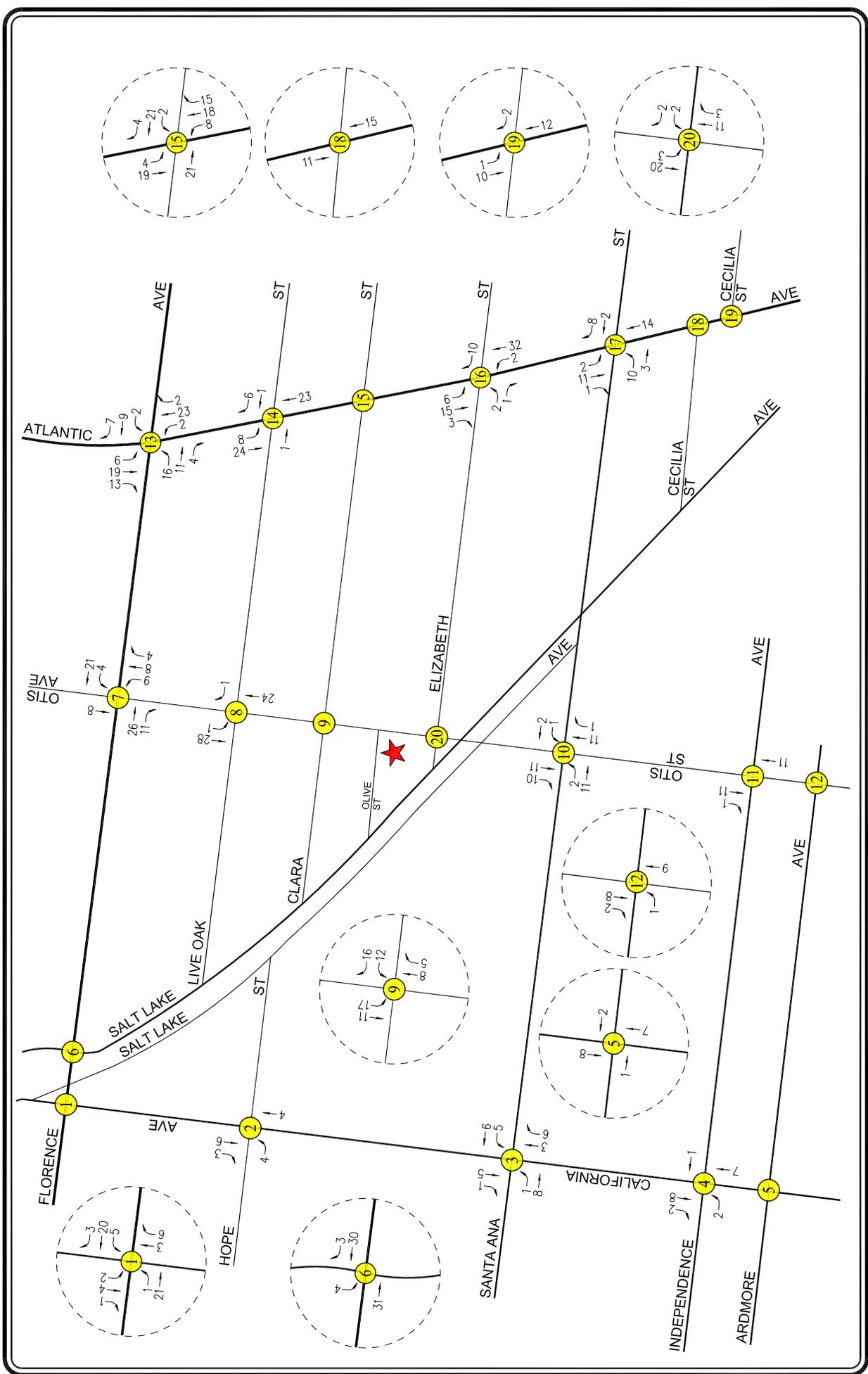


**FIGURE 6-2**  
**RELATED PROJECTS TRAFFIC VOLUMES**  
 WEEKDAY AM PEAK HOUR  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

★ PROJECT SITE  
 ● STUDY INTERSECTION

NOT TO SCALE

LINSCOTT, LAW & GREENSPAN, engineers



**FIGURE 6-3**  
**RELATED PROJECTS TRAFFIC VOLUMES**  
 WEEKDAY PM PEAK HOUR  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

 **NOT TO SCALE**  
 PROJECT SITE  
 STUDY INTERSECTION

LINSCOTT, LAW & GREENSPAN, engineers

## 6.2 Ambient Traffic Growth Factor

In order to account for unknown related projects not included in this analysis, the existing traffic volumes were increased at an annual rate of 1.0 percent (1.0%) per year to the year 2021 (i.e., the anticipated year of Project build-out). The ambient growth factor was based on general traffic growth factors provided in the *2010 Congestion Management Program for Los Angeles County* (“CMP manual”) and determined in consultation with City staff. It is noted that based on review of the general traffic growth factors provided in the CMP manual for the Project study area (i.e., RSA 21, Vernon), it is anticipated that the existing traffic volumes are expected to increase at an annual rate of approximately 0.79% per year between the years 2015 and 2025. Thus, application of an annual growth factor of 1.0% annual growth provides a conservative, worst case forecast of future traffic volumes in the area as it substantially exceeds the annual traffic growth rate published in the CMP manual. Further, it is noted that the CMP manual’s traffic growth rate is intended to anticipate future traffic generated by development projects in the Project vicinity. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

## 7.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed Project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the Project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound Project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of Project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and Project traffic assignments developed, the impact of the proposed Project is isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using existing and expected future traffic volumes without and with forecast Project traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the Project's impacts identified.

### 7.1 Project Traffic Generation

Traffic volumes expected to be generated by the proposed Project during the weekday AM and PM peak hours, as well as on a daily basis, were estimated using rates published in the ITE *Trip Generation Manual*. The following trip generation rates were used to forecast the traffic volumes expected to be generated by the Project:

- Elementary School: ITE Land Use Code 520 (Elementary School) trip generation average rates were used to forecast the traffic volumes expected to be generated by elementary school component of the Project.
- Middle School: ITE Land Use Code 522 (Middle School/Junior High School) trip generation average rates were used to forecast the traffic volumes expected to be generated by the middle school component of the Project.

In addition to the trip generation forecasts for the proposed Project (which are essentially an estimate of the number of vehicles that could be expected to enter and exit the Project Site access points), an adjustment was made to the trip generation forecast based on the Project Site's existing land uses. The existing land uses to be removed are an auto repair shop providing 3,600 square feet of floor area and an industrial site providing 30,265 square feet of floor area. ITE Land Use Code 943 (Automobile Parts and Service Center) and ITE Land Use Code 110

(General Light Industrial) trip generation average rates were used to estimate the trip reduction related to the removal of the existing use from the Project Site.

As presented in *Table 7-1*, the proposed Project is expected to generate 647 net new vehicle trips (342 inbound trips and 305 outbound trips) during the AM peak hour. During the PM peak hour, the proposed Project is expected to generate 156 net new vehicle trips (84 inbound trips and 72 outbound trips). Over a 24-hour period, the proposed Project is forecast to generate 1,943 daily trips ends (approximately 972 inbound trips and 971 outbound trips) during a typical weekday.

## 7.2 Project Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., California Avenue, Atlantic Avenue, Florence Avenue, I-710 Freeway, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress availability at the Project Site assuming the site access and circulation scheme described in Section 3.0;
- The location of existing and proposed parking areas;
- Nearby population and employment centers as well as adjacent residential neighborhoods;
- Input from City staff.

The general, directional traffic distribution patterns for the proposed Project are presented in *Figure 7-1*. The forecast net new weekday AM and PM peak hour Project traffic volumes at the study intersections associated with the proposed Project are presented in *Figures 7-2* and *7-3*, respectively. The traffic volume assignments presented in *Figures 7-2* and *7-3* reflect the traffic distribution characteristics shown in *Figure 7-1* and the Project traffic generation forecast presented in *Table 7-1*.

Table 7-1  
PROJECT TRIP GENERATION [1]

27-Aug-19

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]		PM PEAK HOUR VOLUMES [2]		
			IN	OUT	IN	OUT	TOTAL
<b>Proposed Project</b>							
Charter Elementary School [3]	575 Students	1,087	208	177	47	51	98
Charter Middle School [4]	500 Students	<u>1,065</u>	<u>157</u>	<u>133</u>	<u>42</u>	<u>43</u>	<u>85</u>
<b>Subtotal</b>		2,152	365	310	89	94	183
<b>Subtotal Project Driveway Trips</b>		<b>2,152</b>	<b>365</b>	<b>310</b>	<b>89</b>	<b>94</b>	<b>183</b>
<b>Existing Site</b>							
Auto Repair Shop [5]	(3,600) GSF	(59)	(5)	(2)	(3)	(5)	(8)
Light Industrial [6]	(30,265) GSF	<u>(150)</u>	<u>(18)</u>	<u>(3)</u>	<u>(2)</u>	<u>(17)</u>	<u>(19)</u>
<b>Subtotal</b>		(209)	(23)	(5)	(5)	(22)	(27)
<b>Subtotal Existing Driveway Trips</b>		<b>(209)</b>	<b>(23)</b>	<b>(5)</b>	<b>(5)</b>	<b>(22)</b>	<b>(27)</b>
<b>NET INCREASE DRIVEWAY TRIPS</b>		<b>1,943</b>	<b>342</b>	<b>305</b>	<b>84</b>	<b>72</b>	<b>156</b>

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017.

[2] Trips are one-way traffic movements, entering or leaving.

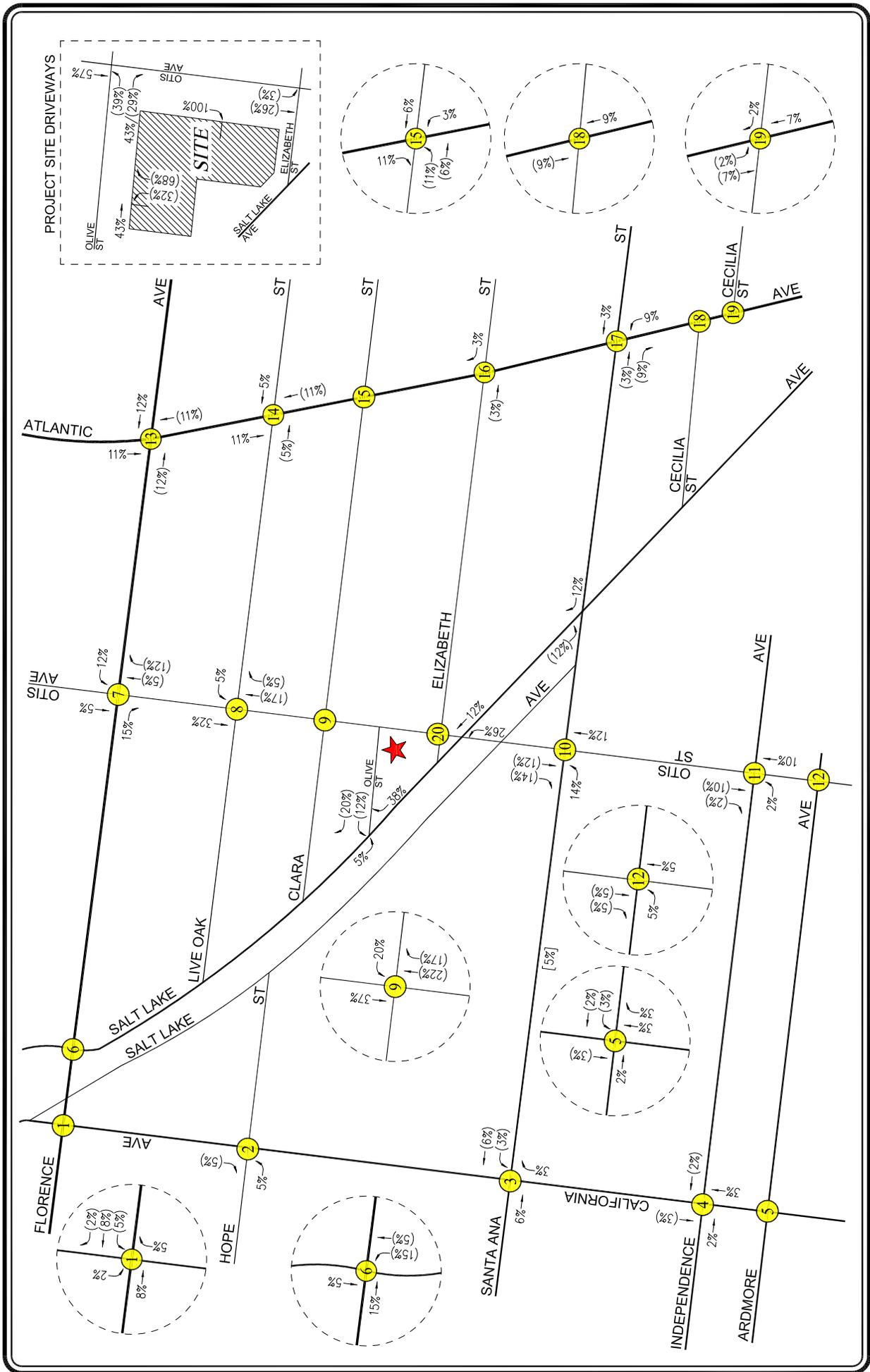
[3] ITE Land Use Code 520 (Elementary School) trip generation average rates per number of students.

- Daily Trip Rate: 1.89 trips/student; 50% inbound and 50% outbound  
 - AM Peak Hour Trip Rate: 0.67 trips/student; 54% inbound/46% outbound  
 - PM Peak Hour Trip Rate: 0.17 trips/student; 48% inbound/52% outbound

[4] ITE Land Use Code 522 (Middle School/Junior High School) trip generation average rates per number of students.  
 - Daily Trip Rate: 2.13 trips/student; 50% inbound and 50% outbound  
 - AM Peak Hour Trip Rate: 0.58 trips/student; 54% inbound/46% outbound  
 - PM Peak Hour Trip Rate: 0.17 trips/student; 49% inbound/51% outbound

[5] ITE Land Use Code 943 (Automobile Parts and Service Center) trip generation average rates.  
 - Daily Trip Rate: 16.28 trips/1,000 SF of floor area; 50% inbound and 50% outbound  
 - AM Peak Hour Trip Rate: 1.96 trips/1,000 SF of floor area; 73% inbound/27% outbound  
 - PM Peak Hour Trip Rate: 2.26 trips/1,000 SF of floor area; 40% inbound/60% outbound

[6] ITE Land Use Code 110 (General Light Industrial) trip generation average rates.  
 - Daily Trip Rate: 4.96 trips/1,000 SF of floor area; 50% inbound and 50% outbound  
 - AM Peak Hour Trip Rate: 0.70 trips/1,000 SF of floor area; 88% inbound/12% outbound  
 - PM Peak Hour Trip Rate: 0.63 trips/1,000 SF of floor area; 13% inbound/87% outbound

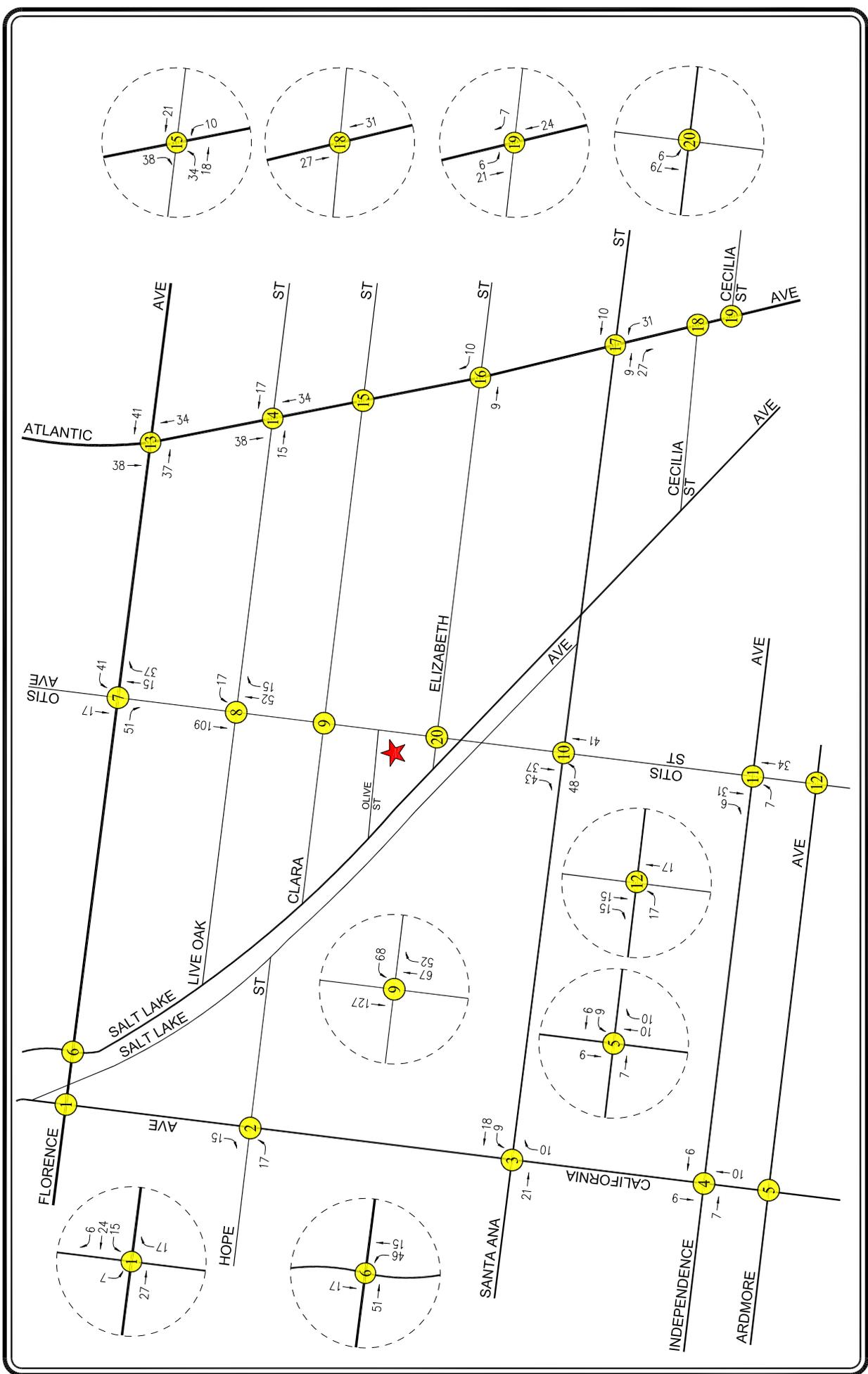


**FIGURE 7-1**  
**PROJECT TRIP DISTRIBUTION**

7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

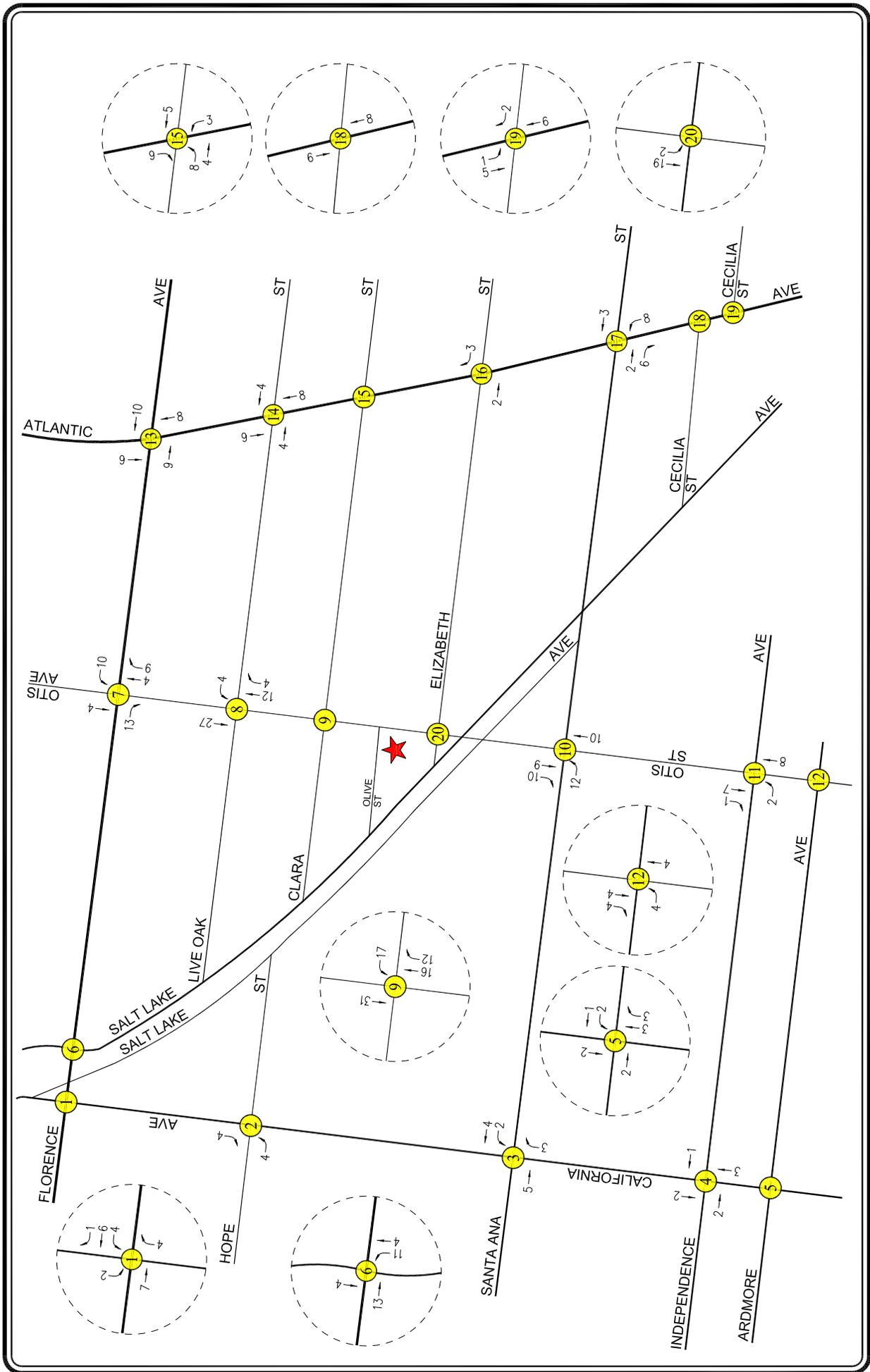
**NOT TO SCALE**
  
 ★ PROJECT SITE
   
 ● STUDY INTERSECTION
   
 ## = INBOUND PERCENTAGES
   
 (##) = OUTBOUND PERCENTAGES
   
 [##] = INTERNAL TRAFFIC PERCENTAGES

LINSCOTT, LAW & GREENSPAN, engineers



**FIGURE 7-2**  
**NET NEW PROJECT TRAFFIC VOLUMES**  
 WEEKDAY AM PEAK HOUR  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

 **NOT TO SCALE**  
 PROJECT SITE  
 STUDY INTERSECTION



**FIGURE 7-3**  
**NET NEW PROJECT TRAFFIC VOLUMES**

WEEKDAY PM PEAK HOUR  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

★ PROJECT SITE  
 ● STUDY INTERSECTION

NOT TO SCALE

LINSCOTT, LAW & GREENSPAN, engineers

## 8.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

Operations at the 20 study intersections located within the City of Cudahy and/or the City of Bell, the City of Huntington Park, and the City of South Gate were evaluated using the Highway Capacity Manual (HCM 2010) method of analysis based on direction from the City of Cudahy. Specifically, the HCM 2010 methodology estimates the average control delay for each of the subject movements and determines the LOS for each constrained movement. The overall intersection average control delay is subsequently assigned a LOS value to describe intersection operations.

The Levels of Service under the HCM 2010 methodology for both signalized and all-way stop controlled (AWSC) study intersections vary from LOS A (free flow) to LOS F (jammed condition). A description of the HCM 2010 method and corresponding LOS for the Cities of Cudahy, Bell, Huntington Park, and South Gate are provided in *Appendix B, C, D, and E*, respectively.

### 8.1 Impact Criteria and Thresholds

The relative impact of the added Project traffic volumes to be generated by the proposed Project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the study intersections, without and with the proposed Project. The previously discussed capacity analysis procedures were utilized to evaluate the future delay relationships and service level characteristics at each study intersection.

#### 8.1.1 City of Cudahy Impact Criteria and Thresholds

The significance of the potential impacts of Project-generated traffic at all 20 study intersections was identified in consultation with City staff. Accordingly, the impact is considered significant if the Project-related increase in delay equals or exceeds the thresholds presented in *Tables 8-1* and *8-2* for signalized and unsignalized intersections, respectively.

Table 8-1 CITY OF CUDAHY SIGNALIZED INTERSECTION IMPACT THRESHOLD CRITERIA		
Level of Service	Project Increase in Delay Commercial Corridor Intersection	Project Increase in Delay Signalized Intersection
D	12 seconds	8 seconds
E	8 seconds	8 seconds
F	8 seconds	5 seconds

Table 8-2 CITY OF CUDAHY UNSIGNALIZED INTERSECTION IMPACT THRESHOLD CRITERIA	
Level of Service	Project Increase in Delay Stop-Controlled Intersection
D	5 seconds
E	5 seconds
F	5 seconds

As required by the City, mitigation of Project traffic impacts are required whenever traffic generated by the proposed development causes an increase of the analyzed intersection delay by an amount equal to or greater than the values shown above.

## 8.2 Traffic Impact Analysis Scenarios

LOS calculations have been prepared for the following scenarios for the 20 study intersections:

- (a) Existing (2019) conditions.
- (b) Condition (a) with completion and occupancy of the Project.
- (c) Condition (b) with implementation of Project mitigation measures where necessary.
- (d) Condition (a) plus one percent (1.0%) annual ambient traffic growth through year 2021 and with completion and occupancy of the related projects (i.e., future cumulative baseline)
- (e) Condition (d) with completion and occupancy of the Project.
- (f) Condition (e) with implementation of Project mitigation measures where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the study intersections.

## 9.0 CITY OF CUDAHY TRAFFIC ANALYSIS

The traffic impact analysis prepared for the ten study intersections located within the City of Cudahy using the HCM 2010 methodology and application of the significant traffic impact criteria as consulted with the City is summarized in **Table 9-1**. The HCM 2010 data worksheets for the analyzed intersections are contained in *Appendix B*.

### 9.1 Existing Conditions

#### 9.1.1 Existing Conditions

As indicated in column [1] of *Table 9-1*, nine of the ten study intersections located within the City of Cudahy are presently operating at LOS C or better during the weekday AM and PM peak hours under existing conditions. The following intersection is presently operating at LOS D or worse during the peak hours shown below under existing conditions:

- Int. No. 13: Atlantic Avenue / Florence Avenue  
AM Peak Hour: Delay = 40.4 sec., LOS D  
PM Peak Hour: Delay = 37.3 sec., LOS D

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in *Figures 5-1* and *5-2*, respectively.

#### 9.1.2 Existing with Project Conditions

As shown in column [2] of *Table 9-1*, application of the threshold criteria to the “Existing with Project” scenario indicates that the Project is not expected to create significant impacts at any of the ten study intersections located within the City of Cudahy. Incremental, but not significant, impacts are noted at the study intersections. Therefore, no mitigation measures are required or recommended with respect to these intersections under the “Existing with Project” conditions. The “Existing with Project” traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in *Figures 9-1* and *9-2*, respectively.

### 9.2 Future Conditions

#### 9.2.1 Future Cumulative Baseline Conditions

The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The delay values at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 6-1*.

As presented in column [3] of *Table 9-1*, nine of the ten study intersections located within the City of Cudahy are expected to operate at LOS C or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related project traffic under the future cumulative baseline conditions. The following study intersection is expected to operate at LOS D during the peak hours shown below under future cumulative baseline conditions:

Table 9-1  
SUMMARY OF DELAY VALUES  
AND LEVELS OF SERVICE [A]  
AM AND PM PEAK HOURS  
CITY OF CUDAHY INTERSECTIONS

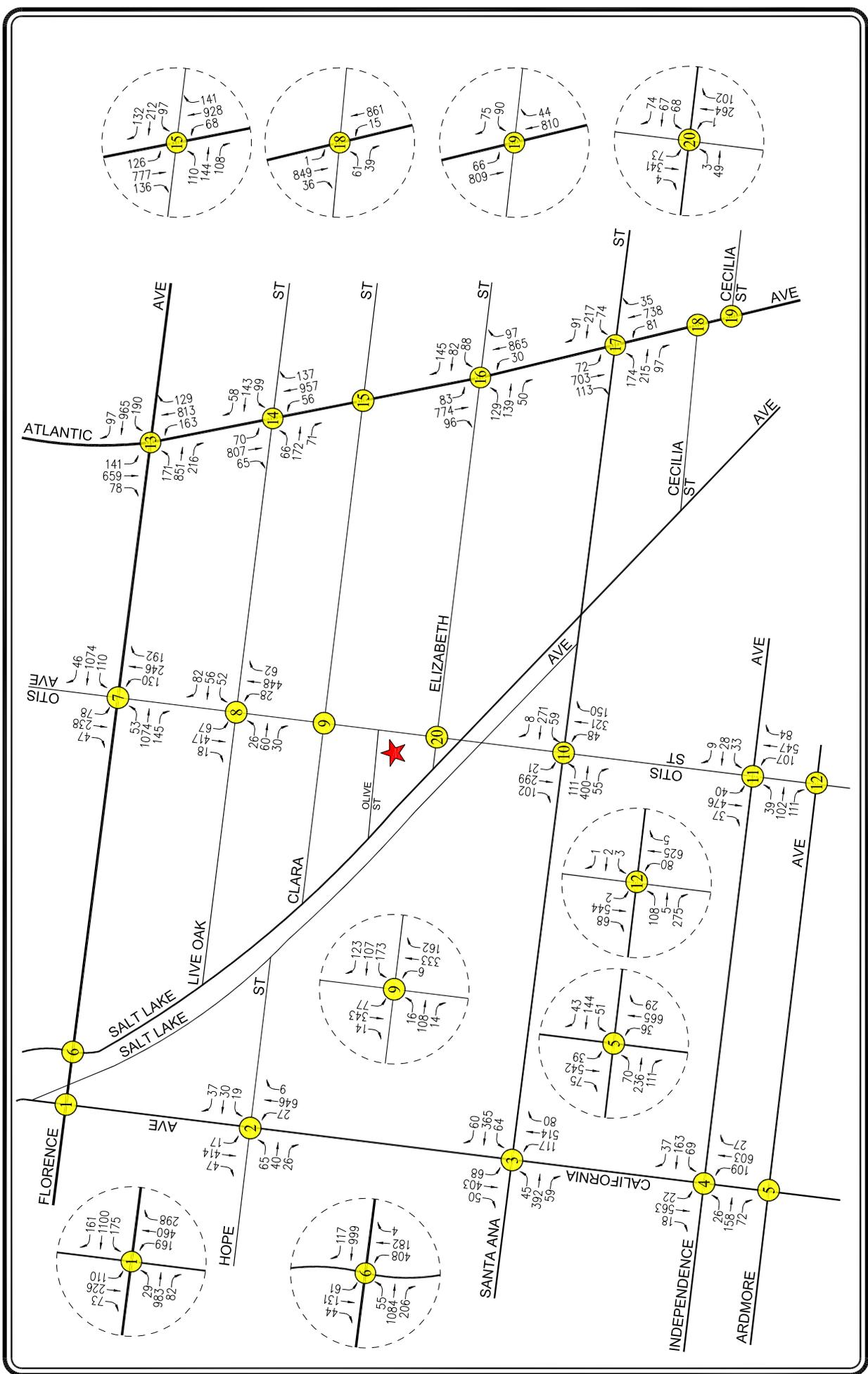
13 Dec 19

NO.	INTERSECTION	INTERSECTION TYPE	PEAK HOUR	[1]			[2]			[3]			[4]			
				YEAR 2019 EXISTING DELAY [B]	LOS [C]	SIGNIF. IMPACT [D]	YEAR 2019 EXISTING PLUS PROPOSED PROJECT DELAY	LOS	CHANGE DELAY [(2)-(1)]	YEAR 2021 FUTURE DELAY [B]	LOS [C]	SIGNIF. IMPACT [D]	YEAR 2021 FUTURE PLUS PROPOSED PROJECT DELAY	LOS	CHANGE DELAY [(4)-(3)]	SIGNIF. IMPACT [D]
8	Otis Avenue / Live Oak Street	Signalized	AM PM	12.5 10.9	B B	NO NO	12.3 10.8	B B	-0.2 -0.1	12.5 10.7	B B	NO NO	12.3 10.6	B B	-0.2 -0.1	NO NO
9	Otis Avenue / Clara Street	Signalized	AM PM	19.5 16.2	B B	NO NO	22.9 16.5	C B	3.4 0.3	20.1 17.2	C B	NO NO	25.6 17.6	C B	5.5 0.4	NO NO
13	Atlantic Avenue / Florence Avenue	Commercial Corridor	AM PM	40.4 37.3	D D	NO NO	42.5 37.7	D D	2.1 0.4	43.9 40.8	D D	NO NO	46.5 41.2	D D	2.6 0.4	NO NO
14	Atlantic Avenue / Live Oak Street	Commercial Corridor	AM PM	19.8 17.9	B B	NO NO	20.4 18.1	C B	0.6 0.2	20.3 18.4	C B	NO NO	20.9 18.6	C B	0.6 0.2	NO NO
15	Atlantic Avenue / Clara Street	Commercial Corridor	AM PM	26.6 23.2	C C	NO NO	28.6 23.5	C C	2.0 0.3	29.0 26.2	C C	NO NO	30.6 26.5	C C	1.6 0.3	NO NO
16	Atlantic Avenue / Elizabeth Street	Commercial Corridor	AM PM	20.4 18.6	C B	NO NO	20.8 18.7	C B	0.4 0.1	21.5 19.4	C B	NO NO	22.0 19.5	C B	0.5 0.1	NO NO
17	Atlantic Avenue / Santa Ana Street	Commercial Corridor	AM PM	21.4 21.2	C C	NO NO	22.8 21.5	C C	1.4 0.3	21.9 22.1	C C	NO NO	23.2 22.6	C C	1.3 0.5	NO NO
18	Atlantic Avenue / N. Cecilia Street	Commercial Corridor	AM PM	5.5 5.4	A A	NO NO	5.5 5.4	A A	0.0 0.0	5.5 5.4	A A	NO NO	5.5 5.4	A A	0.0 0.0	NO NO
19	Atlantic Avenue / S. Cecilia Street	Commercial Corridor	AM PM	7.1 6.0	A A	NO NO	7.2 6.0	A A	0.1 0.0	7.2 6.1	A A	NO NO	7.3 6.1	A A	0.1 0.0	NO NO
20	Otis Avenue / Elizabeth Street	All-Way Stop-Controlled	AM PM	13.8 16.2	B C	NO NO	15.7 16.9	C C	1.9 0.7	14.8 18.4	B C	NO NO	17.2 19.3	C C	2.4 0.9	NO NO

- [A] Intersection analysis based on the Highway Capacity Manual 2010 operational analysis methodologies, per the City of Cudahy.
- [B] Control delay reported in seconds per vehicle.
- [C] Signalized Intersection Levels of Service were based on the following criteria:
- |                              |            |
|------------------------------|------------|
| <u>Control Delay (s/veh)</u> | <u>LOS</u> |
| <= 10                        | A          |
| > 10-20                      | B          |
| > 20-35                      | C          |
| > 35-55                      | D          |
| > 55-80                      | E          |
| > 80                         | F          |
- [D] A transportation impact on an intersection shall be deemed significant in accordance with the following criteria:

<u>Project Related Increase in Delay</u>		
<u>LOS</u>	<u>Commercial Corridor</u>	<u>Stop-Controlled</u>
D	12 seconds	5 seconds
E	8 seconds	5 seconds
F	8 seconds	5 seconds

- Unsignalized Intersection Levels of Service were based on the following criteria:
- |                              |            |
|------------------------------|------------|
| <u>Control Delay (s/veh)</u> | <u>LOS</u> |
| <= 10                        | A          |
| > 10-15                      | B          |
| > 15-25                      | C          |
| > 25-35                      | D          |
| > 35-50                      | E          |
| > 50                         | F          |

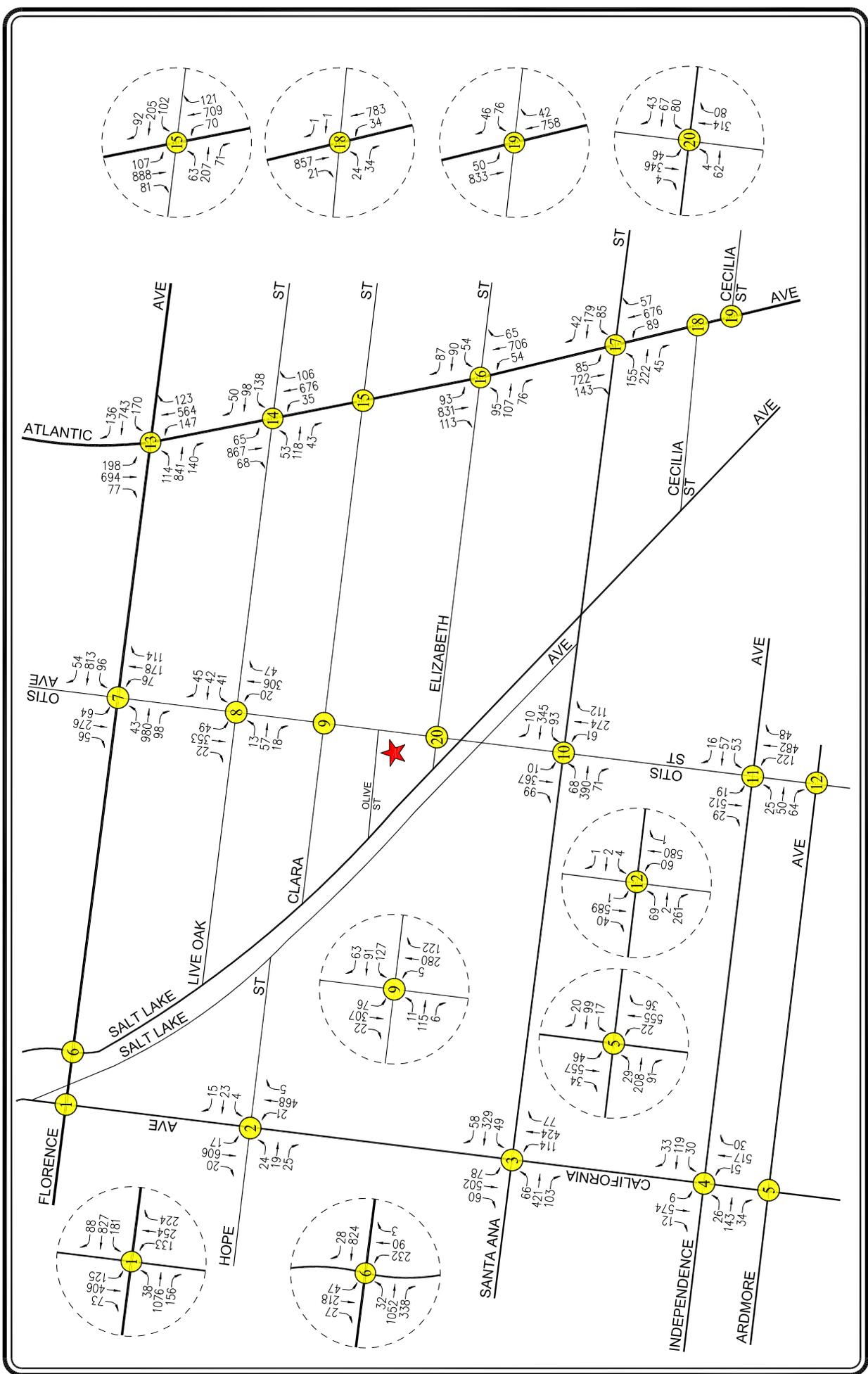


**FIGURE 9-1**  
**EXISTING WITH PROJECT TRAFFIC VOLUMES**  
 WEEKDAY AM PEAK HOUR  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

★ PROJECT SITE  
X STUDY INTERSECTION

N NOT TO SCALE

LINSCOTT, LAW & GREENSPAN, engineers



**FIGURE 9-2**  
**EXISTING WITH PROJECT TRAFFIC VOLUMES**  
 WEEKDAY PM PEAK HOUR  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

★ PROJECT SITE  
X STUDY INTERSECTION

NOT TO SCALE

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- Int. No. 13: Atlantic Avenue / Florence Avenue

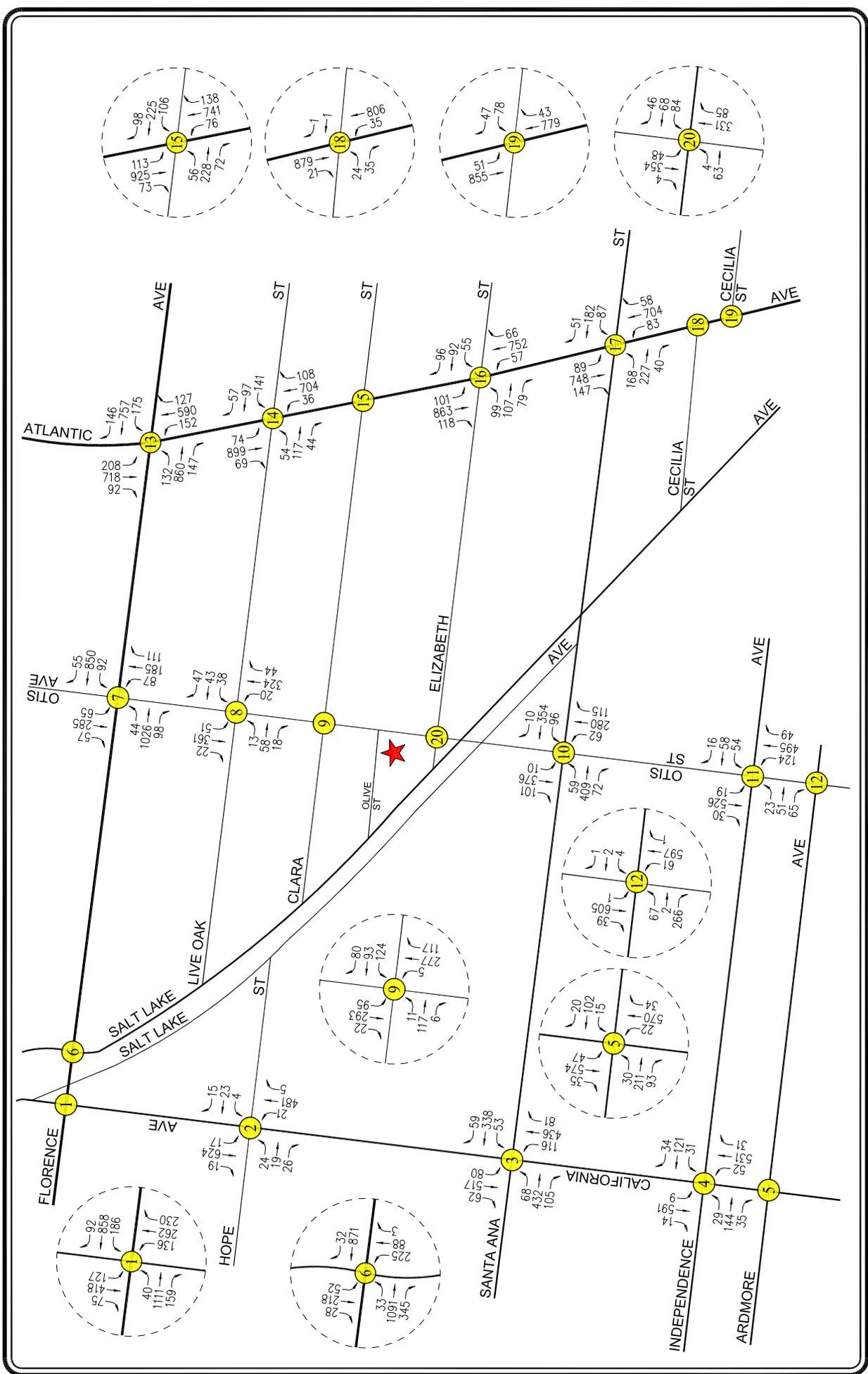
AM Peak Hour: Delay = 43.9 sec., LOS D  
PM Peak Hour: Delay = 40.8 sec., LOS D

The future cumulative baseline (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in **Figures 9-3** and **9-4**, respectively.

### 9.2.2 Future Cumulative with Project Conditions

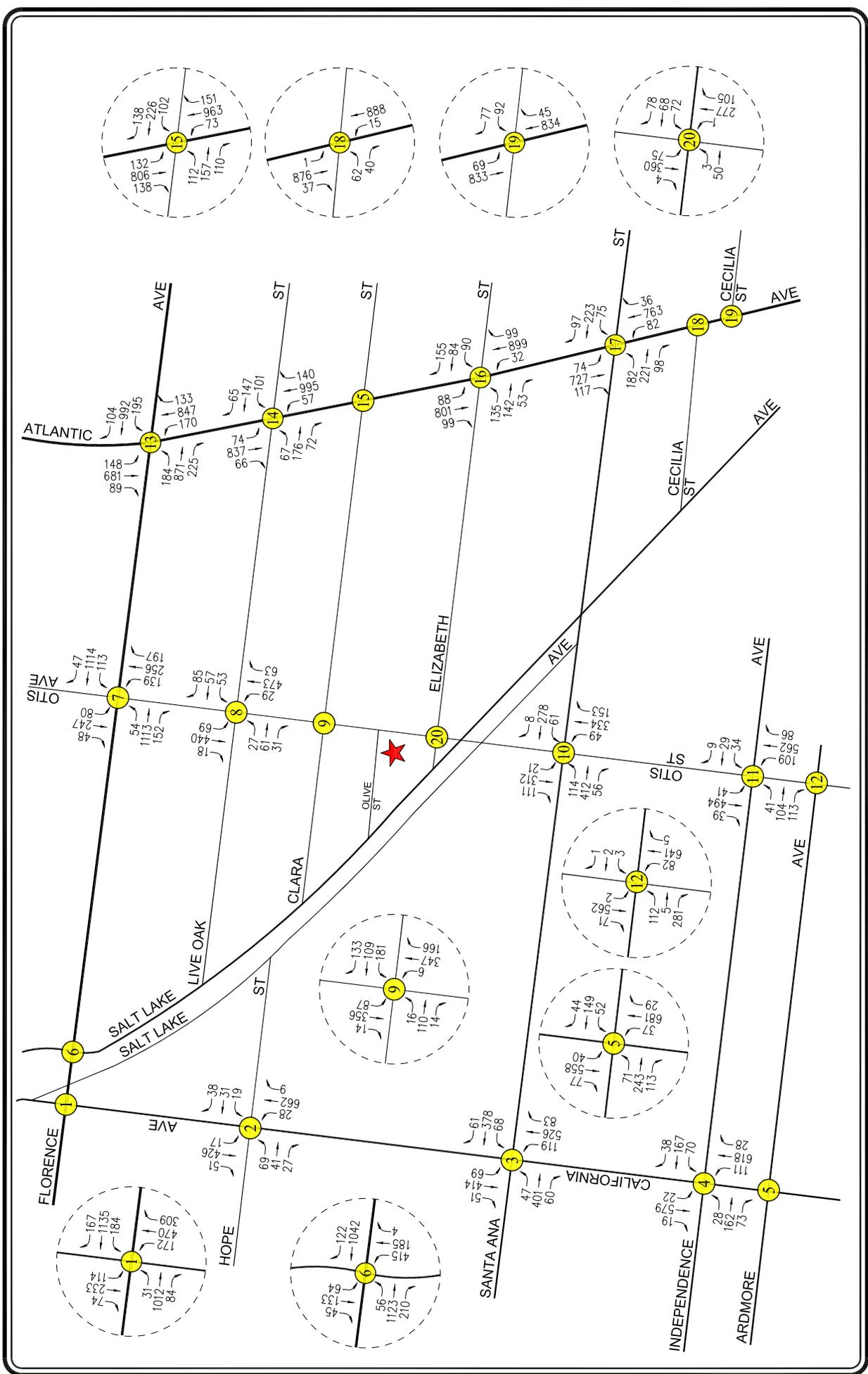
The “Future Cumulative with Project” conditions were forecast based on the addition of traffic generated by the Project plus completion and occupancy of related projects. As shown in column [4] of *Table 9-1*, application of the threshold criteria to the “Future Cumulative with Project” scenario indicates that the proposed Project is not expected to create significant impacts at any of the ten study intersections located within the City of Cudahy. Therefore, no mitigation measures are required or recommended with respect to these intersections under the “Future Cumulative with Project” conditions. The “Future Cumulative with Project” (existing, ambient growth, related projects, and Project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in **Figures 9-5** and **9-6**, respectively.





**FIGURE 9-4**  
**FUTURE CUMULATIVE BASELINE TRAFFIC VOLUMES**  
 WEEKDAY PM PEAK HOUR  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

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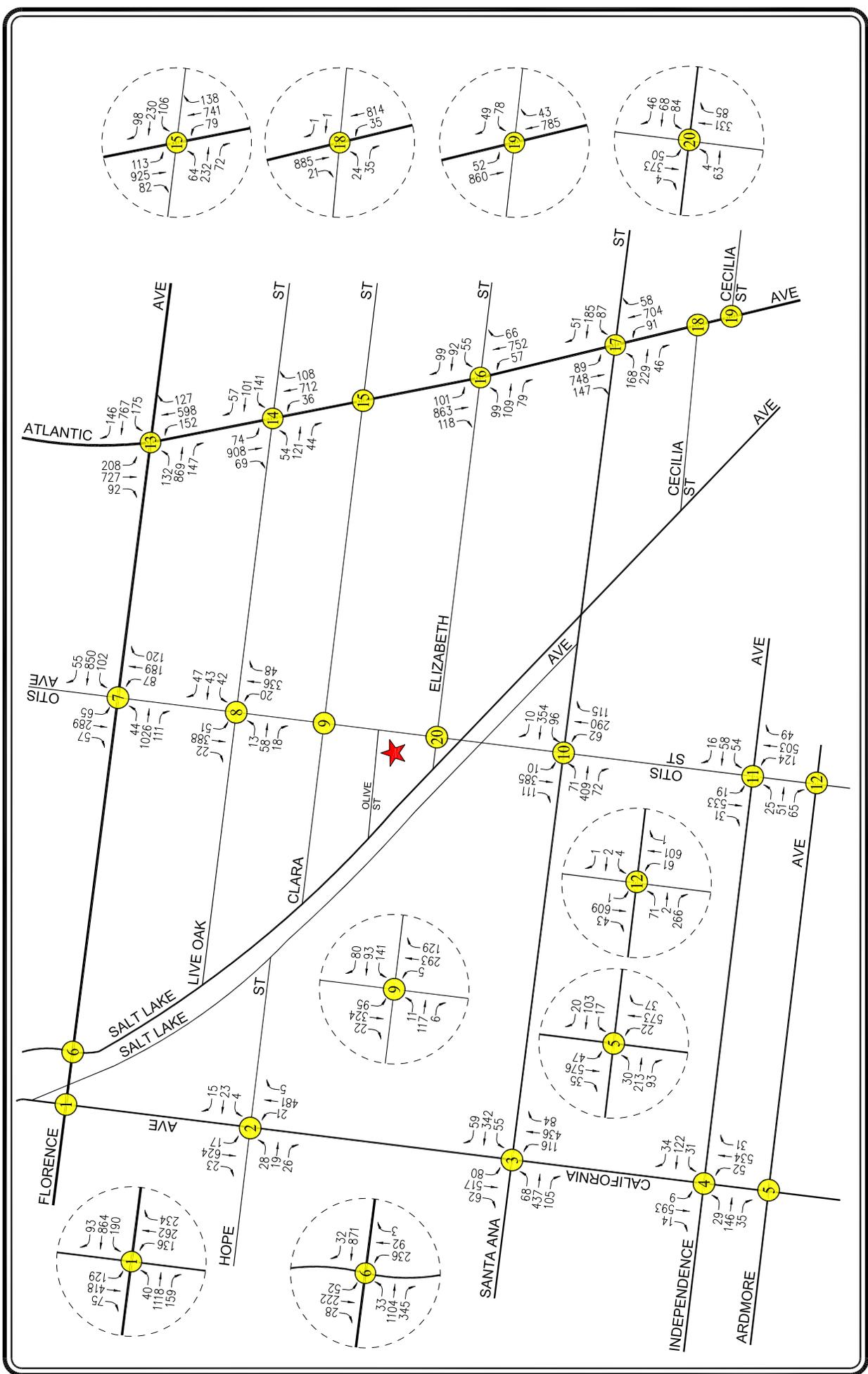


**FIGURE 9-5**  
**FUTURE CUMULATIVE WITH PROJECT TRAFFIC VOLUMES**  
 WEEKDAY AM PEAK HOUR  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

★ PROJECT SITE  
X STUDY INTERSECTION

NOT TO SCALE

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**FIGURE 9-6**  
**FUTURE CUMULATIVE WITH PROJECT TRAFFIC VOLUMES**  
 WEEKDAY PM PEAK HOUR  
 7801-7835 OTIS AVENUE CHARTER SCHOOL PROJECT

★ PROJECT SITE  
X STUDY INTERSECTION

N NOT TO SCALE

LINSCOTT, LAW & GREENSPAN, engineers

## 10.0 CITY OF BELL TRAFFIC ANALYSIS

The traffic impact analysis prepared for the three study intersections located within the City of Bell using the HCM 2010 methodology and application of the significant traffic impact criteria as consulted with the City of Cudahy is summarized in **Table 10-1**. The HCM 2010 data worksheets for the analyzed intersections are contained in *Appendix C*.

### 10.1 Existing Conditions

#### 10.1.1 Existing Conditions

As indicated in column [1] of *Table 10-1*, two of the three study intersections located within the City of Los Angeles are presently operating at LOS C or better during the weekday AM and PM peak hours under existing conditions. The following intersection is presently operating at LOS D or worse during the peak hours shown below under existing conditions:

- Int. No. 13: Atlantic Avenue / Florence Avenue  
AM Peak Hour: Delay = 40.4 sec., LOS D  
PM Peak Hour: Delay = 37.3 sec., LOS D

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 5-1* and *5-2*, respectively.

#### 10.1.2 Existing with Project Conditions

As shown in column [2] of *Table 10-1*, application of the City's threshold criteria to the "Existing with Project" scenario indicates that the Project is not expected to create significant impacts at any of the three study intersections located within the City of Bell. Incremental, but not significant, impacts are noted at the study intersections. Therefore, no mitigation measures are required or recommended with respect to these intersections under the "Existing with Project" conditions. The "Existing with Project" traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in *Figures 9-1* and *9-2*, respectively.

### 10.2 Future Conditions

#### 10.2.1 Future Cumulative Baseline Conditions

The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The delay values at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 6-1*.

As presented in column [3] of *Table 10-1*, two of the three study intersections located within the City of Bell are expected to operate at LOS C or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related project traffic under the future cumulative baseline conditions. The following study intersection is expected to operate at LOS D during the peak hour shown below under future cumulative baseline conditions:

Table 10-1  
SUMMARY OF DELAY VALUES  
AND LEVELS OF SERVICE [A]  
AM AND PM PEAK HOURS  
CITY OF BELL INTERSECTIONS

16Dec 19

NO.	INTERSECTION	INTERSECTION TYPE	PEAK HOUR	[1] YEAR 2019 EXISTING		[2] YEAR 2019 EXISTING PLUS PROPOSED PROJECT		[3] YEAR 2021 FUTURE		[4] YEAR 2021 FUTURE PLUS PROPOSED PROJECT		SIGNIF. IMPACT [D]	SIGNIF. IMPACT [D]
				DELAY [B]	LOS [C]	CHANGE DELAY [(2)-(1)]	SIGNIF. IMPACT [D]	DELAY [B]	LOS [C]	CHANGE DELAY [(4)-(3)]	SIGNIF. IMPACT [D]		
6	California Avenue - Salt Lake Avenue / Florence Avenue	Commercial Corridor	AM PM	27.5 22.9	C C	33.3 23.7	C C	28.7 23.8	C C	34.6 24.6	C C	5.9 0.8	NO NO
7	Otis Avenue / Florence Avenue	Commercial Corridor	AM PM	25.7 21.1	C C	30.7 21.8	C C	27.2 22.2	C C	32.4 22.9	C C	5.2 0.7	NO NO
13	Atlantic Avenue / Florence Avenue	Commercial Corridor	AM PM	40.4 37.3	D D	42.5 37.7	D D	43.9 40.8	D D	46.5 41.2	D D	2.6 0.4	NO NO

[A] Intersection analysis based on the Highway Capacity Manual 2010 operational analysis methodologies, per the City of Cudahy.

[B] Control delay reported in seconds per vehicle.

[C] Signalized Intersection Levels of Service were based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

Unsignalized Intersection Levels of Service were based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

[D] A transportation impact on an intersection shall be deemed significant in accordance with the following criteria:

LOS	Commercial Corridor	Signalized	Stop-Controlled
	D	12 seconds	8 seconds
E	8 seconds	5 seconds	5 seconds
F	8 seconds	5 seconds	5 seconds

- Int. No. 13: Atlantic Avenue / Florence Avenue

AM Peak Hour: Delay = 43.9 sec., LOS D  
PM Peak Hour: Delay = 40.8 sec., LOS D

The future cumulative baseline (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in *Figures 9-3* and *9-4*, respectively.

### 10.2.2 *Future Cumulative with Project Conditions*

The “Future Cumulative with Project” conditions were forecast based on the addition of traffic generated by the Project plus completion and occupancy of related projects. As shown in column [4] of *Table 10-1*, application of the City’s threshold criteria to the “Future Cumulative with Project” scenario indicates that the proposed Project is not expected to create significant impacts at any of the three study intersections located within the City of Bell. Therefore, no mitigation measures are required or recommended with respect to these intersections under the “Future Cumulative with Project” conditions. The “Future Cumulative with Project” (existing, ambient growth, related projects, and Project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in *Figures 9-5* and *9-6*, respectively.

## 11.0 CITY OF HUNTINGTON PARK TRAFFIC ANALYSIS

The traffic impact analysis prepared for the five study intersections located within the City of Huntington Park using the HCM 2010 methodology and application of the significant traffic impact criteria as consulted with the City of Cudahy is summarized in **Table 11-1**. The HCM 2010 data worksheets for the analyzed intersections are contained in *Appendix D*.

### 11.1 Existing Conditions

#### 11.1.1 Existing Conditions

As indicated in column [1] of *Table 11-1*, three of the five study intersections located within the City of Huntington Park are presently operating at LOS C or better during the weekday AM and PM peak hours under existing conditions. The following intersections are presently operating at LOS D or worse during the peak hours shown below under existing conditions:

- Int. No. 1: Salt Lake Avenue – California Avenue / Florence Avenue  
AM Peak Hour: Delay = 37.7 sec., LOS D  
PM Peak Hour: Delay = 36.1 sec., LOS D
- Int. No. 3: California Avenue / Santa Ana Street  
PM Peak Hour: Delay = 37.2 sec., LOS D

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 5-1* and *5-2*, respectively.

#### 11.1.2 Existing with Project Conditions

As shown in column [2] of *Table 11-1*, application of the City's threshold criteria to the "Existing with Project" scenario indicates that the Project is not expected to create significant impacts at any of the five study intersections located within the City of Huntington Park. Incremental, but not significant, impacts are noted at the study intersections. Therefore, no mitigation measures are required or recommended with respect to these intersections under the "Existing with Project" conditions. The "Existing with Project" traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in *Figures 9-1* and *9-2*, respectively.

### 11.2 Future Conditions

#### 11.2.1 Future Cumulative Baseline Conditions

The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The delay values at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 6-1*.

Table 11-1  
SUMMARY OF DELAY VALUES  
AND LEVELS OF SERVICE [A]  
AM AND PM PEAK HOURS  
CITY OF HUNTINGTON PARK INTERSECTIONS

16Dec 19

NO.	INTERSECTION	INTERSECTION TYPE	PEAK HOUR	[1]		[2]			[3]		[4]				
				YEAR 2019 EXISTING DELAY [B]	LOS [C]	YEAR 2019 EXISTING PROPOSED DELAY	LOS	CHANGE DELAY [(2)-(1)]	SIGNIF. IMPACT [D]	YEAR 2021 FUTURE DELAY [B]	LOS [C]	YEAR 2021 FUTURE PROPOSED DELAY	LOS	CHANGE DELAY [(4)-(3)]	SIGNIF. IMPACT [D]
1	Salt Lake Avenue - California Avenue / Florence Avenue	Commercial Corridor	AM PM	37.7 36.1	D D	39.4 36.5	D D	1.7 0.4	NO NO	39.5 37.9	D D	41.4 38.4	D D	1.9 0.5	NO NO
2	California Avenue / Hope Street	Signalized	AM PM	8.9 5.9	A A	9.5 6.0	A A	0.6 0.1	NO NO	9.1 6.0	A A	9.7 6.2	A A	0.6 0.2	NO NO
3	California Avenue / Santa Ana Street	Signalized	AM PM	25.6 37.2	C D	28.6 38.3	C D	3.0 1.1	NO NO	27.1 41.1	C D	30.9 42.3	C D	3.8 1.2	NO NO
6	California Avenue - Salt Lake Avenue / Florence Avenue	Commercial Corridor	AM PM	27.5 22.9	C C	33.3 23.7	C C	5.8 0.8	NO NO	28.7 23.8	C C	34.6 24.6	C C	5.9 0.8	NO NO
10	Otis Avenue - Otis Street / Santa Ana Street	Signalized	AM PM	20.0 21.1	C C	21.4 21.8	C C	1.4 0.7	NO NO	20.3 22.3	C C	21.9 23.2	C C	1.6 0.9	NO NO

[A] Intersection analysis based on the Highway Capacity Manual 2010 operational analysis methodologies, per the City of Cataly.

[B] Control delay reported in seconds per vehicle.

[C] Signalized Intersection Levels of Service were based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

[D] A transportation impact on an intersection shall be deemed significant in accordance with the following criteria:

LOS	Commercial Corridor	Signalized	Stop-Controlled
D	12 seconds	8 seconds	5 seconds
E	8 seconds	5 seconds	5 seconds
F	8 seconds	5 seconds	5 seconds

Unsignalized Intersection Levels of Service were based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

As presented in column [3] of *Table 11-1*, three of the five study intersections located within the City of Huntington Park are expected to operate at LOS C or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related project traffic under the future cumulative baseline conditions. The following study intersections are expected to operate at LOS D during the peak hour shown below under future cumulative baseline conditions:

- Int. No. 1: Salt Lake Avenue – AM Peak Hour: Delay = 39.5 sec., LOS D  
California Avenue / Florence Avenue PM Peak Hour: Delay = 37.9 sec., LOS D
- Int. No. 3: California Avenue / PM Peak Hour: Delay = 41.1 sec., LOS D  
Santa Ana Street

The future cumulative baseline (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in *Figures 9-3* and *9-4*, respectively.

### 11.2.2 *Future Cumulative with Project Conditions*

The “Future Cumulative with Project” conditions were forecast based on the addition of traffic generated by the Project plus completion and occupancy of related projects. As shown in column [4] of *Table 11-1*, application of the City’s threshold criteria to the “Future Cumulative with Project” scenario indicates that the proposed Project is not expected to create significant impacts at any of the five study intersections located within the City of Huntington Park. Therefore, no mitigation measures are required or recommended with respect to these intersections under the “Future Cumulative with Project” conditions. The “Future Cumulative with Project” (existing, ambient growth, related projects, and Project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in *Figures 9-5* and *9-6*, respectively.

## 12.0 CITY OF SOUTH GATE TRAFFIC ANALYSIS

The traffic impact analysis prepared for the six study intersections located within the City of South Gate using the HCM 2010 methodology and application of the significant traffic impact criteria as consulted with the City of Cudahy is summarized in **Table 12-1**. The HCM 2010 data worksheets for the analyzed intersections are contained in *Appendix E*.

### 12.1 Existing Conditions

#### 12.1.1 Existing Conditions

As indicated in column [1] of *Table 12-1*, five of the six study intersections located within the City of South Gate are presently operating at LOS C or better during the weekday AM and PM peak hours under existing conditions. The following intersection is presently operating at LOS D or worse during the peak hours shown below under existing conditions:

- Int. No. 3: California Avenue / Santa Ana Street PM Peak Hour: Delay = 37.2 sec., LOS D

The existing traffic volumes at the study intersections during the weekday AM and PM peak hours are displayed in *Figures 5-1* and *5-2*, respectively.

#### 12.1.2 Existing with Project Conditions

As shown in column [2] of *Table 12-1*, application of the City's threshold criteria to the "Existing with Project" scenario indicates that the Project is not expected to create significant impacts at any of the six study intersections located within the City South Gate. Incremental, but not significant, impacts are noted at the study intersections. Therefore, no mitigation measures are required or recommended with respect to these intersections under the "Existing with Project" conditions. The "Existing with Project" traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in *Figures 9-1* and *9-2*, respectively.

### 12.2 Future Conditions

#### 12.2.1 Future Cumulative Baseline Conditions

The future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The delay values at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 6-1*.

As presented in column [3] of *Table 12-1*, five of the six study intersections located within the City of South Gate are expected to operate at LOS C or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related project traffic under the future cumulative baseline conditions. The following study intersection is expected to operate at LOS D during the peak hour shown below under future cumulative baseline conditions:

Table 12-1  
SUMMARY OF DELAY VALUES  
AND LEVELS OF SERVICE [A]  
AM AND PM PEAK HOURS  
CITY OF SOUTH GATE INTERSECTIONS

13/Dec/19

NO.	INTERSECTION	INTERSECTION TYPE	PEAK HOUR	[1]		[2]			[3]		[4]		SIGNIF. IMPACT [D]	SIGNIF. IMPACT [D]	
				YEAR 2019 EXISTING DELAY [B]	LOS [C]	YEAR 2019 EXISTING PROPOSED DELAY	LOS	CHANGE DELAY [(2)-(1)]	YEAR 2021 FUTURE DELAY [B]	LOS [C]	YEAR 2021 FUTURE PROPOSED DELAY	LOS			CHANGE DELAY [(4)-(3)]
3	California Avenue / Santa Ana Street	Signalized	AM PM	25.6 37.2	C D	28.6 38.3	C D	3.0 1.1	NO NO	27.1 41.1	C D	30.9 42.3	C D	3.8 1.2	NO NO
4	California Avenue / Independence Avenue	Signalized	AM PM	32.9 31.5	C C	33.0 31.5	C C	0.1 0.0	NO NO	33.2 31.7	C C	33.3 31.7	C C	0.1 0.0	NO NO
5	California Avenue / Ardmore Avenue	Signalized	AM PM	32.0 31.9	C C	32.3 31.9	C C	0.3 0.0	NO NO	32.4 32.3	C C	32.8 32.3	C C	0.4 0.0	NO NO
10	Otis Avenue - Otis Street / Santa Ana Street	Signalized	AM PM	20.0 21.1	C C	21.4 21.8	C C	1.4 0.7	NO NO	20.3 22.3	C C	21.9 23.2	C C	1.6 0.9	NO NO
11	Otis Street / Independence Avenue	Signalized	AM PM	31.8 33.3	C C	31.8 33.4	C C	0.0 0.1	NO NO	31.8 33.6	C C	31.9 33.7	C C	0.1 0.1	NO NO
12	Otis Street / Ardmore Avenue	Signalized	AM PM	32.9 33.2	C C	33.5 33.3	C C	0.6 0.1	NO NO	33.2 33.5	C C	34.0 33.7	C C	0.8 0.2	NO NO

[A] Intersection analysis based on the Highway Capacity Manual 2010 operational analysis methodologies, per the City of Cudahy.

[B] Control delay reported in seconds per vehicle.

[C] Signalized Intersection Levels of Service were based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-20	B
> 20-35	C
> 35-55	D
> 55-80	E
> 80	F

Unsignalized Intersection Levels of Service were based on the following criteria:

Control Delay (s/veh)	LOS
<= 10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

[D] A transportation impact on an intersection shall be deemed significant in accordance with the following criteria:

LOS	Commercial Corridor	Stop-Controlled
D	12 seconds	8 seconds
E	8 seconds	5 seconds
F	8 seconds	5 seconds

- Int. No. 3: California Avenue /  
Santa Ana Street

PM Peak Hour: Delay = 41.1 sec., LOS D

The future cumulative baseline (existing, ambient growth and related projects) traffic volumes at the study intersections during the weekday AM and PM peak hours are presented in *Figures 9-3* and *9-4*, respectively.

### 12.2.2 *Future Cumulative with Project Conditions*

The “Future Cumulative with Project” conditions were forecast based on the addition of traffic generated by the Project plus completion and occupancy of related projects. As shown in column [4] of *Table 12-1*, application of the City’s threshold criteria to the “Future Cumulative with Project” scenario indicates that the proposed Project is not expected to create significant impacts at any of the six study intersections located within the City of South Gate. Therefore, no mitigation measures are required or recommended with respect to these intersections under the “Future Cumulative with Project” conditions. The “Future Cumulative with Project” (existing, ambient growth, related projects, and Project) traffic volumes at the study intersections during the weekday AM and PM peak hours are illustrated in *Figures 9-5* and *9-6*, respectively.

## 13.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the 2010 Congestion Management Program for Los Angeles County, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program for Los Angeles County*, County of Los Angeles Metropolitan Transportation Authority, 2010.

According to Section D.9.1 (Appendix D, page D-6) of the 2010 CMP manual, the criteria for determining a significant transportation impact is listed below:

“A significant transportation impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity ( $V/C \geq 0.02$ ), causing or worsening LOS F ( $V/C > 1.00$ ).”

The CMP impact criteria apply for analysis of both intersection and freeway monitoring locations.

### 13.1 Intersections

The following CMP intersection monitoring locations in the Project vicinity have been identified:

- | <u>CMP Station</u> | <u>Intersection</u>                          |
|--------------------|--|
| No. 17             | Old Rivers School Road / Firestone Boulevard |
| No. 23             | Alameda Street / Slauson Avenue              |
| No. 143            | Alameda Street / Firestone Boulevard         |
| No. 144            | Atlantic Avenue / Firestone Boulevard        |

The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed Project will add 50 or more trips during either the AM or PM weekday peak hours. As shown in *Figure 7-2* and *Figure 7-3*, the proposed Project would not add 50 or more trips during the AM or PM peak hours at any of the CMP monitoring locations. Therefore, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

## 13.2 Freeways

The following CMP freeway monitoring locations have been identified in the Project vicinity:

- | <u>CMP Station</u> | <u>Location</u>  |
|--------------------|--|
| No. 1080           | I-710 Freeway north of I-105 Freeway, north of Firestone Boulevard |

The CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed Project will add 150 or more trips (in either direction) during either the AM or PM weekday peak periods. The proposed Project will not add 150 or more trips (in either direction) during either the AM or PM weekday peak hours to the CMP freeway monitoring locations which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

## 13.3 Transit Impact Review

As required by the *2010 Congestion Management Program for Los Angeles County*, a review has been made of the potential impacts of the Project on transit service. As discussed in Subsection 4.4 herein, existing transit service is provided in the vicinity of the proposed Project.

The Project trip generation, as shown in *Table 7-1*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to the CMP guidelines, the proposed Project is forecast to generate demand for 32 transit trips during the AM peak hour and eight transit trips during the PM peak hour. The calculations are as follows:

- AM Peak Hour =  $647 \times 1.4 \times 0.035 = 32$  Transit Trips
- PM Peak Hour =  $156 \times 1.4 \times 0.035 = 8$  Transit Trips

As shown in *Table 4-1*, eight transit lines and routes are provided adjacent to or in close proximity to the Project Site. As outlined in *Table 4-1*, under the “No. of Buses/Trains During Peak Hour” column, these eight public transit lines provide services for an average of (i.e., average of the directional number of buses/trains during the peak hours) generally 35 buses/trains during the AM peak hour and roughly 33 buses/trains during the PM peak hour. Therefore, based on the above calculated AM and PM peak hour trips, this would correspond to an insignificant number of additional Project-generated transit trips per bus/train. It is anticipated that the existing transit service in the Project area will adequately accommodate the increase of Project-generated transit trips.

## 14.0 VEHICLE MILES TRAVELED ASSESSMENT

### 14.1 Introduction

VMT is defined as a measurement of miles traveled by vehicles within a specified region and for a specified time period. VMT is a measure of the use and efficiency of the transportation network. VMT's are calculated based on individual vehicle trips generated and their associated trip lengths. VMT accounts for two-way (round-trip) travel and is often estimated for a typical weekday for the purposes of measuring transportation impacts.

In September 2013, the Governor's Office signed Senate Bill 743 (SB 743)<sup>4</sup>, starting a process that fundamentally changes the way transportation impact analysis is conducted under the California Environmental Quality Act. SB 743 requires jurisdictions within California to utilize VMT for purposes of evaluating the potential transportation impacts related to development projects in CEQA documents. VMT will replace the prior roadway capacity-based Level of Service type of analysis previously used by many jurisdictions in evaluating the effects of traffic related to a development project. The justification for this paradigm shift is that LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions.

Under SB 743, local jurisdictions are required to adopt a methodology and thresholds of significance related to VMT by July 2020. Based on discussions with the City of Cudahy, it is noted that the City has not yet adopted a methodology or thresholds of significance related to VMT. Therefore, this VMT assessment is presented for informational purposes.

### 14.2 Project VMT

Available census and VMT data provided by Caltrans<sup>5</sup> was utilized for purposes of preparing this VMT assessment. Based on the Caltrans census and VMT data, the Project Site is within the Caltrans VMT Traffic Analysis Zone (TAZ) 4132. **Figure 14-1** presents the Caltrans VMT TAZ Map that shows the location of the Project Site within TAZ 4132. Details for the Caltrans VMT TAZ 4132 are shown below:

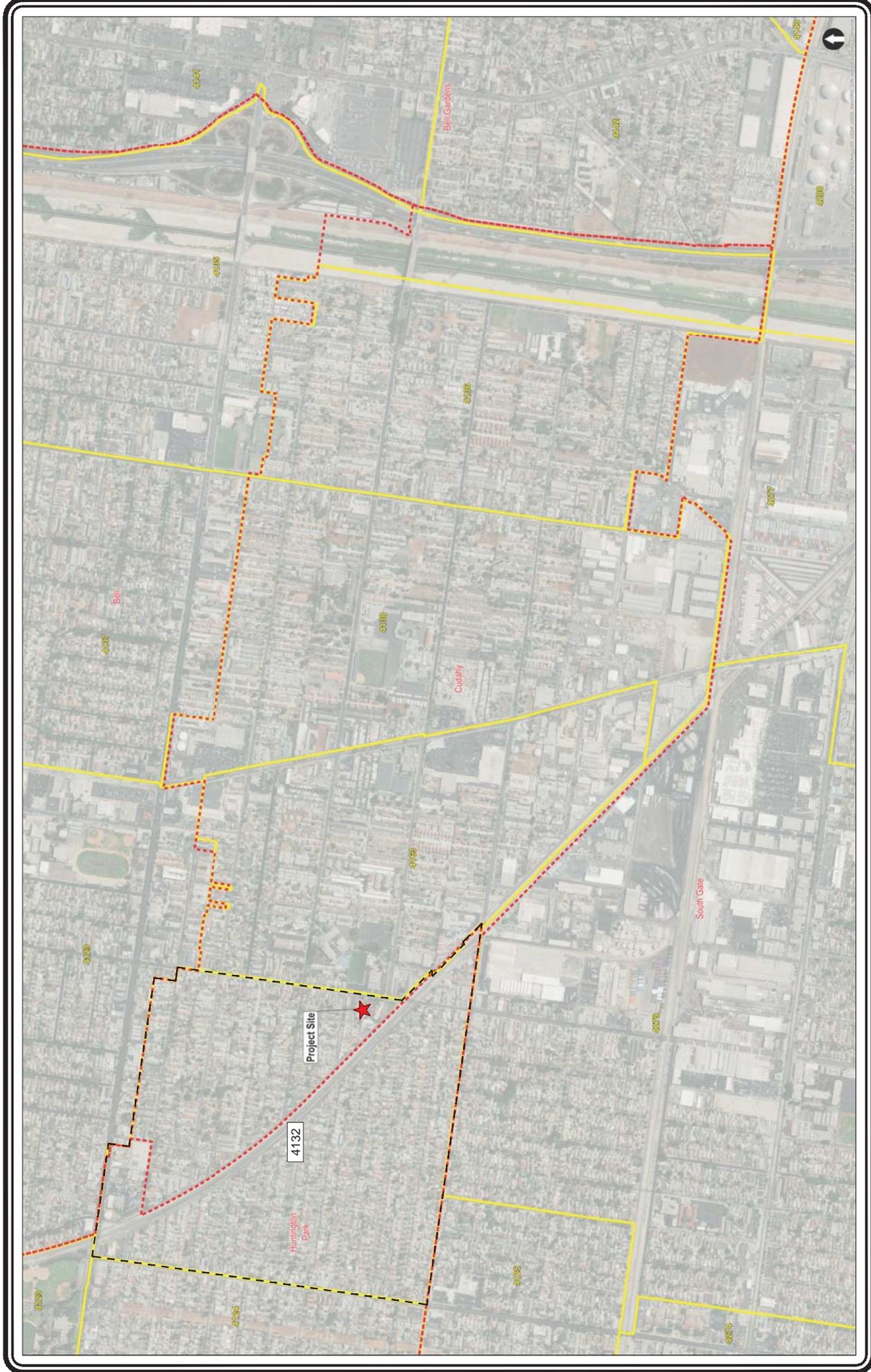
- VMT = 16,691
- Employees = 464
- Project VMT Per Employee = 35.97 (16,691/464)

As shown above, the existing per Employee VMT for the TAZ that the Project is located within is 35.97 miles per Employee.

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<sup>4</sup> <http://opr.ca.gov/ceqa/updates/sb-743/>

<sup>5</sup> <https://dot.ca.gov/programs/transportation-planning/multi-modal-system-planning/statewide-modeling/sb-743-vmt-impact-assessment>



**FIGURE 14-1**  
**CALTRANS VMT TAZ MAP**

MAP SOURCE: CALTRANS  
 ★ PROJECT SITE  
 [Red dashed line] CITY BOUNDARY  
 [Yellow dashed line] TAZ 4132 BOUNDARY

 **NOT TO SCALE**

## 15.0 CONCLUSIONS

This traffic impact analysis has been prepared to evaluate the potential impacts to the local street system due to the proposed charter school project located at 7801-7835 Otis Avenue in the City of Cudahy. Twenty intersections were identified and analyzed in order to determine changes in operations following construction and occupancy of the proposed Project. Application of the impact threshold criteria consulted with the City of Cudahy indicate that none of the 20 study intersections would be significantly impacted by the forecast Project traffic. Incremental, but not significant, impacts are noted at the 20 study intersections evaluated in this analysis. As no significant impacts are expected due to the proposed Project, no traffic mitigation measures are required or recommended for the study intersections.

A VMT assessment has been prepared in accordance with SB 743 for informational purposes. Based on available census and VMT data provided by Caltrans, the Project VMT is determined to be 35.97 miles per Employee.

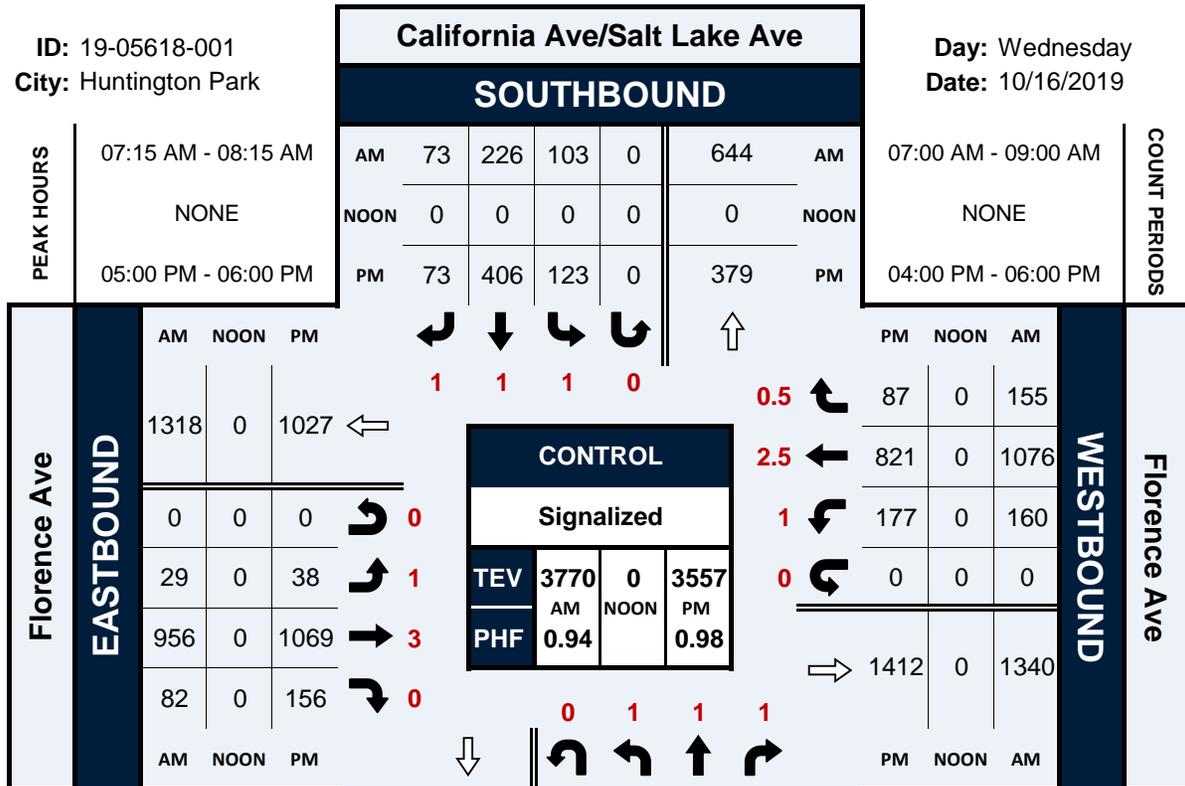
**APPENDIX A**  
**MANUAL TRAFFIC COUNT DATA**

# California Ave/Salt Lake Ave & Florence Ave

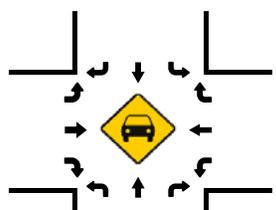
## Peak Hour Turning Movement Count

ID: 19-05618-001  
City: Huntington Park

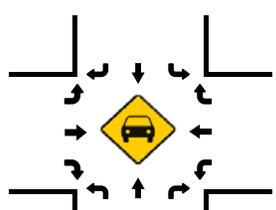
Day: Wednesday  
Date: 10/16/2019



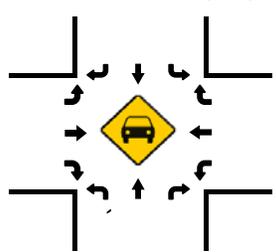
Total Vehicles (AM)



Total Vehicles (NOON)

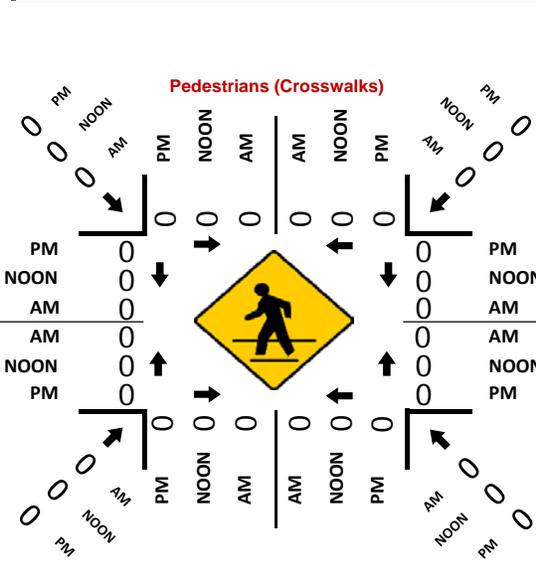


Total Vehicles (PM)

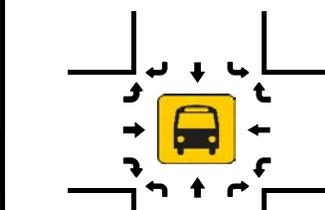


PM	739	0	133	254	220	PM
NOON	0	0	0	0	0	NOON
AM	468	0	169	460	281	AM

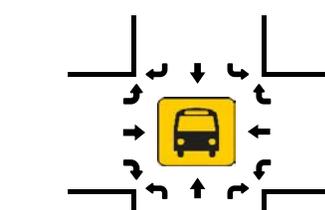
**California Ave/Salt Lake Ave NORTHBOUND**



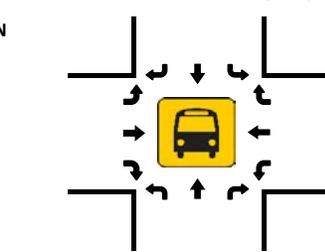
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: California Ave/Salt Lake Ave & Florence Ave  
 City: Huntington Park  
 Control: Signalized

Project ID: 19-05618-001  
 Date: 10/16/2019

### Total

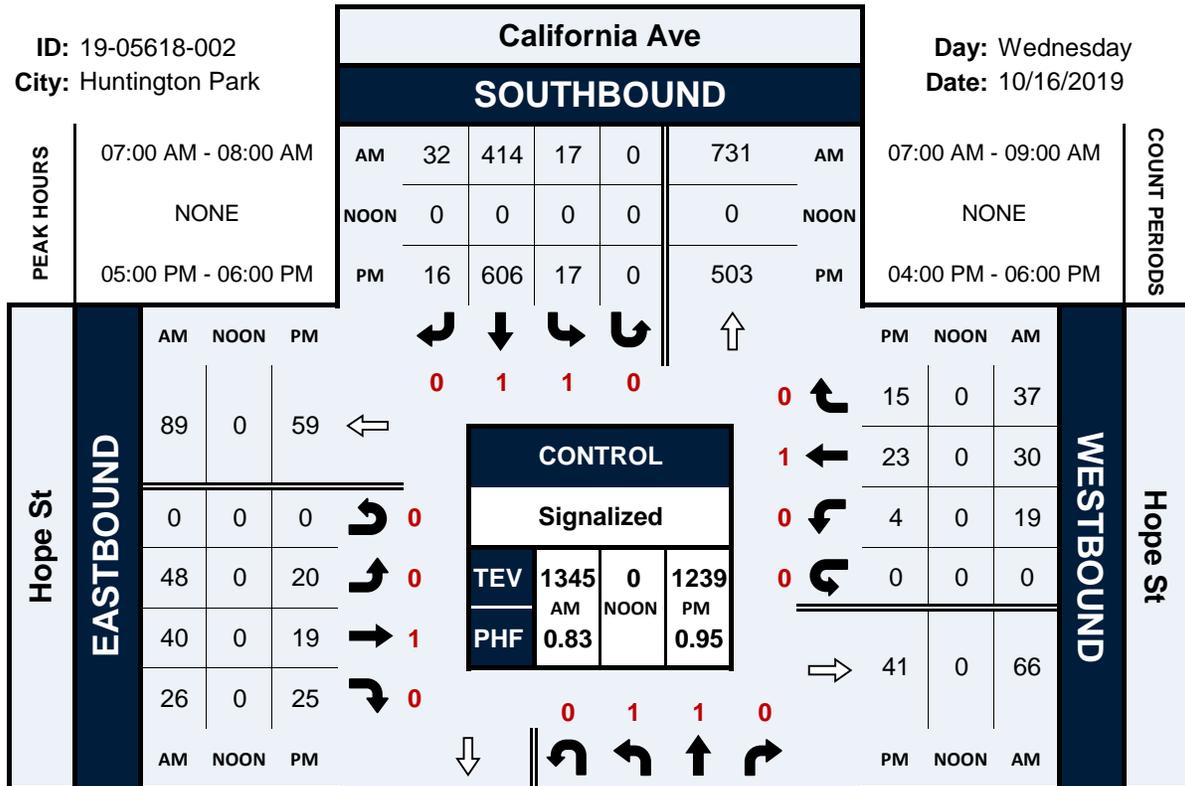
NS/EW Streets:	California Ave/Salt Lake Ave				California Ave/Salt Lake Ave				Florence Ave				Florence Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	1 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	3 ET	0 ER	0 EU	1 WL	2.5 WT	0.5 WR	0 WU	
7:00 AM	42	106	55	0	24	57	14	0	4	187	16	0	26	261	37	0	829
7:15 AM	42	107	78	0	19	58	15	0	6	243	13	0	34	275	45	0	935
7:30 AM	42	133	70	0	25	63	25	0	14	225	28	0	45	248	47	0	965
7:45 AM	42	108	82	0	28	55	16	0	3	273	21	0	43	295	36	0	1002
8:00 AM	43	112	51	0	31	50	17	0	6	215	20	0	38	258	27	0	868
8:15 AM	35	91	69	0	25	50	13	0	6	208	19	0	28	238	32	0	814
8:30 AM	29	73	60	0	21	66	14	0	6	187	19	0	31	198	30	0	734
8:45 AM	28	58	37	0	16	54	14	0	8	186	23	0	27	223	30	0	704
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	303	788	502	0	189	453	128	0	53	1724	159	0	272	1996	284	0	6851
	19.02%	49.47%	31.51%	0.00%	24.55%	58.83%	16.62%	0.00%	2.74%	89.05%	8.21%	0.00%	10.66%	78.21%	11.13%	0.00%	
<b>PEAK HR :</b>	07:15 AM - 08:15 AM																TOTAL
<b>PEAK HR VOL :</b>	169	460	281	0	103	226	73	0	29	956	82	0	160	1076	155	0	3770
<b>PEAK HR FACTOR :</b>	0.983	0.865	0.857	0.000	0.831	0.897	0.730	0.000	0.518	0.875	0.732	0.000	0.889	0.912	0.824	0.000	0.941
	0.929				0.889				0.898				0.930				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	1 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	3 ET	0 ER	0 EU	1 WL	2.5 WT	0.5 WR	0 WU	
4:00 PM	29	57	59	0	31	105	22	0	9	257	30	0	36	204	22	0	861
4:15 PM	27	54	46	0	32	102	18	0	9	274	41	0	35	185	21	0	844
4:30 PM	32	57	51	0	32	98	15	0	6	268	38	0	37	203	31	0	868
4:45 PM	26	52	50	0	28	86	17	0	4	270	35	0	44	190	19	0	821
5:00 PM	33	63	54	0	31	109	14	0	11	271	47	0	45	207	22	0	907
5:15 PM	30	61	44	0	25	94	22	0	10	272	40	0	45	220	17	0	880
5:30 PM	37	68	64	0	36	97	19	0	3	277	28	0	34	196	24	0	883
5:45 PM	33	62	58	0	31	106	18	0	14	249	41	0	53	198	24	0	887
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	247	474	426	0	246	797	145	0	66	2138	300	0	329	1603	180	0	6951
	21.53%	41.33%	37.14%	0.00%	20.71%	67.09%	12.21%	0.00%	2.64%	85.38%	11.98%	0.00%	15.58%	75.90%	8.52%	0.00%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																TOTAL
<b>PEAK HR VOL :</b>	133	254	220	0	123	406	73	0	38	1069	156	0	177	821	87	0	3557
<b>PEAK HR FACTOR :</b>	0.899	0.934	0.859	0.000	0.854	0.931	0.830	0.000	0.679	0.965	0.830	0.000	0.835	0.933	0.906	0.000	0.980
	0.898				0.971				0.960				0.962				

# California Ave & Hope St

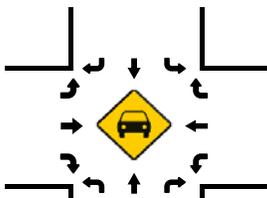
## Peak Hour Turning Movement Count

ID: 19-05618-002  
City: Huntington Park

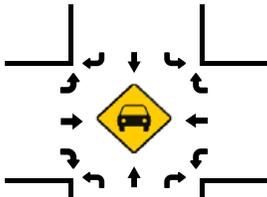
Day: Wednesday  
Date: 10/16/2019



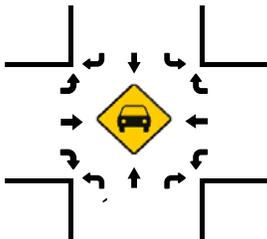
Total Vehicles (AM)



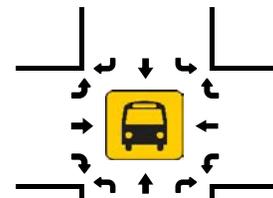
Total Vehicles (NOON)



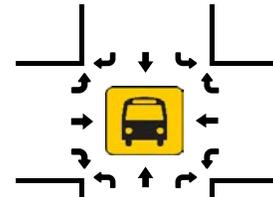
Total Vehicles (PM)



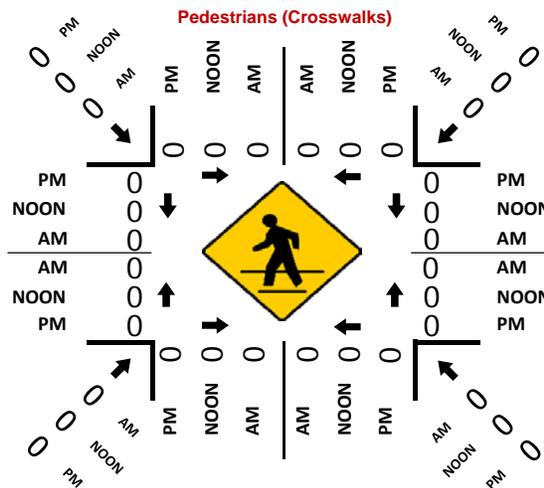
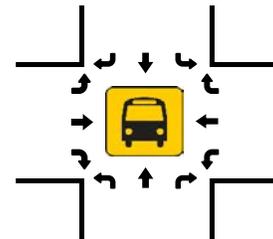
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: California Ave & Hope St  
 City: Huntington Park  
 Control: Signalized

Project ID: 19-05618-002  
 Date: 10/16/2019

### Total

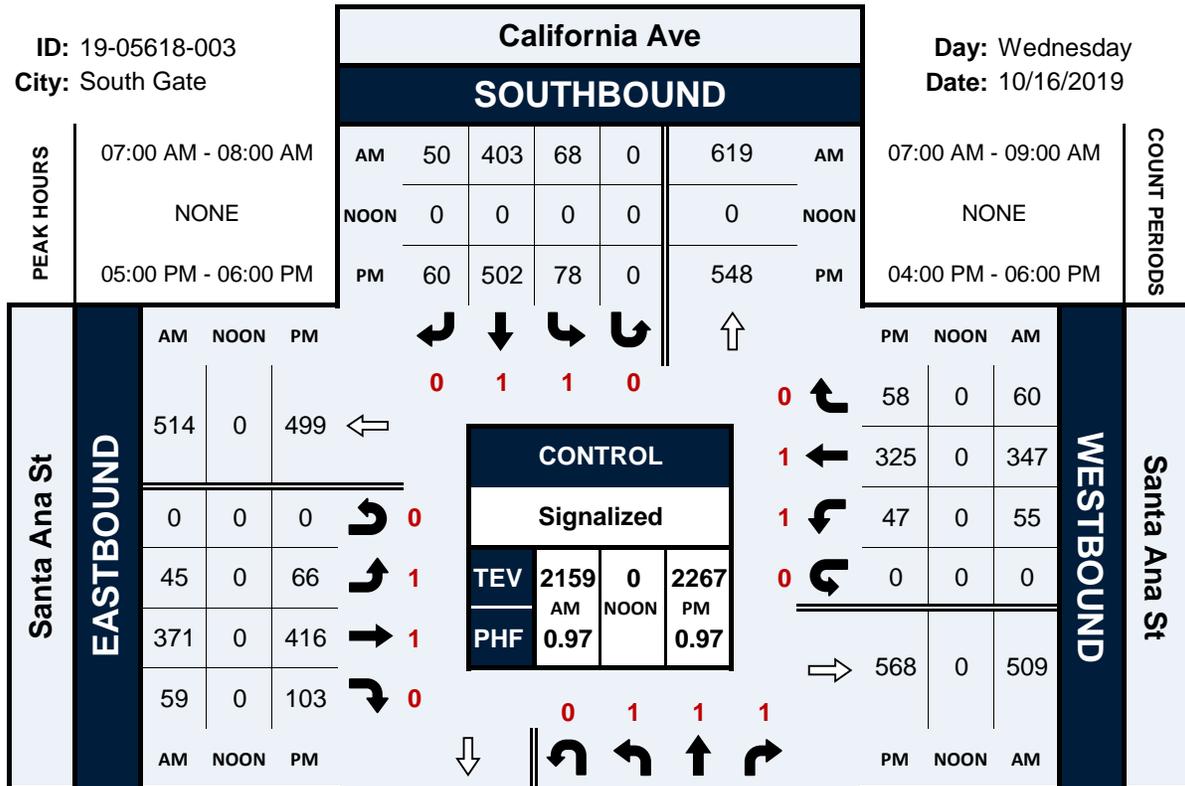
NS/EW Streets:	California Ave				California Ave				Hope St				Hope St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	7	162	1	0	3	81	6	0	4	5	4	0	4	7	9	0	293
7:15 AM	7	165	2	0	3	94	6	0	7	8	2	0	6	8	10	0	318
7:30 AM	5	155	0	0	4	100	10	0	15	11	8	0	2	10	9	0	329
7:45 AM	8	164	6	0	7	139	10	0	22	16	12	0	7	5	9	0	405
8:00 AM	1	132	2	0	3	70	1	0	2	2	4	0	1	1	2	0	221
8:15 AM	3	102	3	0	5	86	2	0	4	3	2	0	2	1	1	0	214
8:30 AM	1	109	1	0	3	111	2	0	4	2	4	0	4	2	4	0	247
8:45 AM	3	116	3	0	2	85	3	0	2	3	3	0	3	5	3	0	231
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	35	1105	18	0	30	766	40	0	60	50	39	0	29	39	47	0	2258
<b>APPROACH %'s :</b>	3.02%	95.42%	1.55%	0.00%	3.59%	91.63%	4.78%	0.00%	40.27%	33.56%	26.17%	0.00%	25.22%	33.91%	40.87%	0.00%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	27	646	9	0	17	414	32	0	48	40	26	0	19	30	37	0	1345
<b>PEAK HR FACTOR :</b>	0.844	0.979	0.375	0.000	0.607	0.745	0.800	0.000	0.545	0.625	0.542	0.000	0.679	0.750	0.925	0.000	0.830
	0.958				0.742				0.570				0.896				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	5	109	2	1	2	124	4	0	7	2	6	0	0	7	4	0	273
4:15 PM	4	92	2	0	4	136	4	0	11	3	11	0	5	4	2	0	278
4:30 PM	3	107	1	0	3	126	5	0	7	3	11	0	3	5	4	0	278
4:45 PM	3	115	1	0	4	135	4	0	7	6	6	0	0	4	1	0	286
5:00 PM	3	107	2	1	5	154	4	0	4	2	3	0	0	6	3	0	294
5:15 PM	1	115	1	0	4	151	4	0	4	4	3	0	0	6	3	0	296
5:30 PM	9	123	1	0	4	143	3	0	11	10	8	0	1	9	3	0	325
5:45 PM	7	123	1	0	4	158	5	0	1	3	11	0	3	2	6	0	324
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	35	891	11	2	30	1127	33	0	52	33	59	0	12	43	26	0	2354
<b>APPROACH %'s :</b>	3.73%	94.89%	1.17%	0.21%	2.52%	94.71%	2.77%	0.00%	36.11%	22.92%	40.97%	0.00%	14.81%	53.09%	32.10%	0.00%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																TOTAL
<b>PEAK HR VOL :</b>	20	468	5	1	17	606	16	0	20	19	25	0	4	23	15	0	1239
<b>PEAK HR FACTOR :</b>	0.556	0.951	0.625	0.250	0.850	0.959	0.800	0.000	0.455	0.475	0.568	0.000	0.333	0.639	0.625	0.000	0.953
	0.929				0.957				0.552				0.808				

# California Ave & Santa Ana St

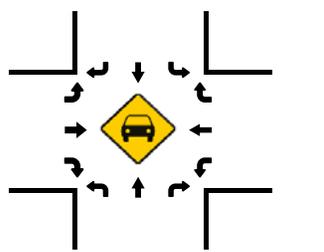
## Peak Hour Turning Movement Count

ID: 19-05618-003  
City: South Gate

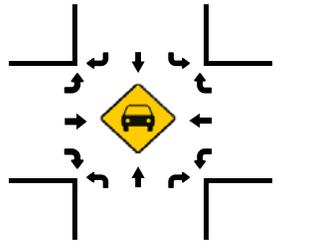
Day: Wednesday  
Date: 10/16/2019



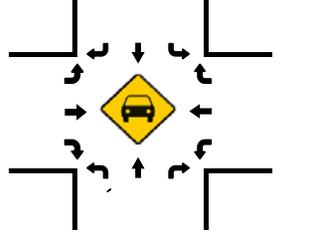
Total Vehicles (AM)



Total Vehicles (NOON)



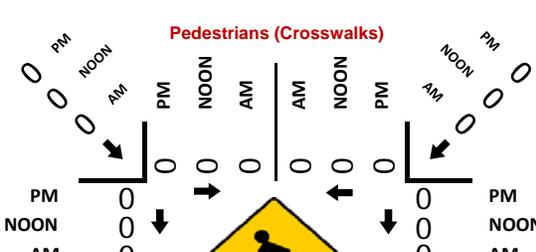
Total Vehicles (PM)



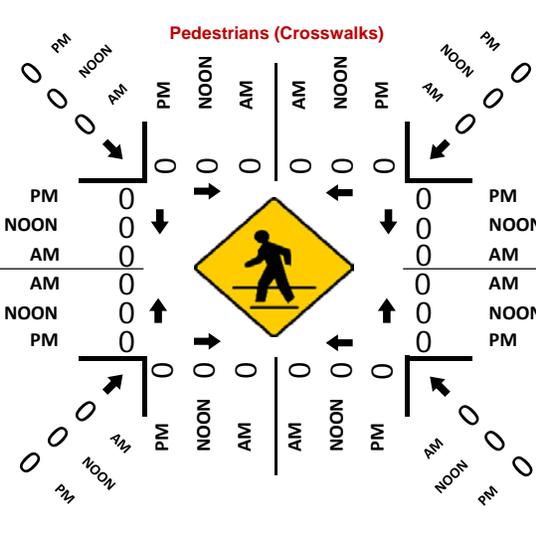
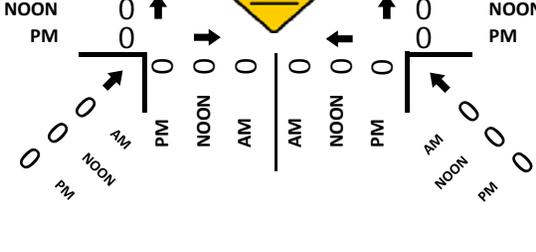
PM	652	0	114	424	74	PM
NOON	0	0	0	0	0	NOON
AM	517	0	117	514	70	AM

### California Ave NORTHBOUND

Total Vehicles (AM)



Total Vehicles (NOON)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: California Ave & Santa Ana St  
 City: South Gate  
 Control: Signalized

Project ID: 19-05618-003  
 Date: 10/16/2019

### Total

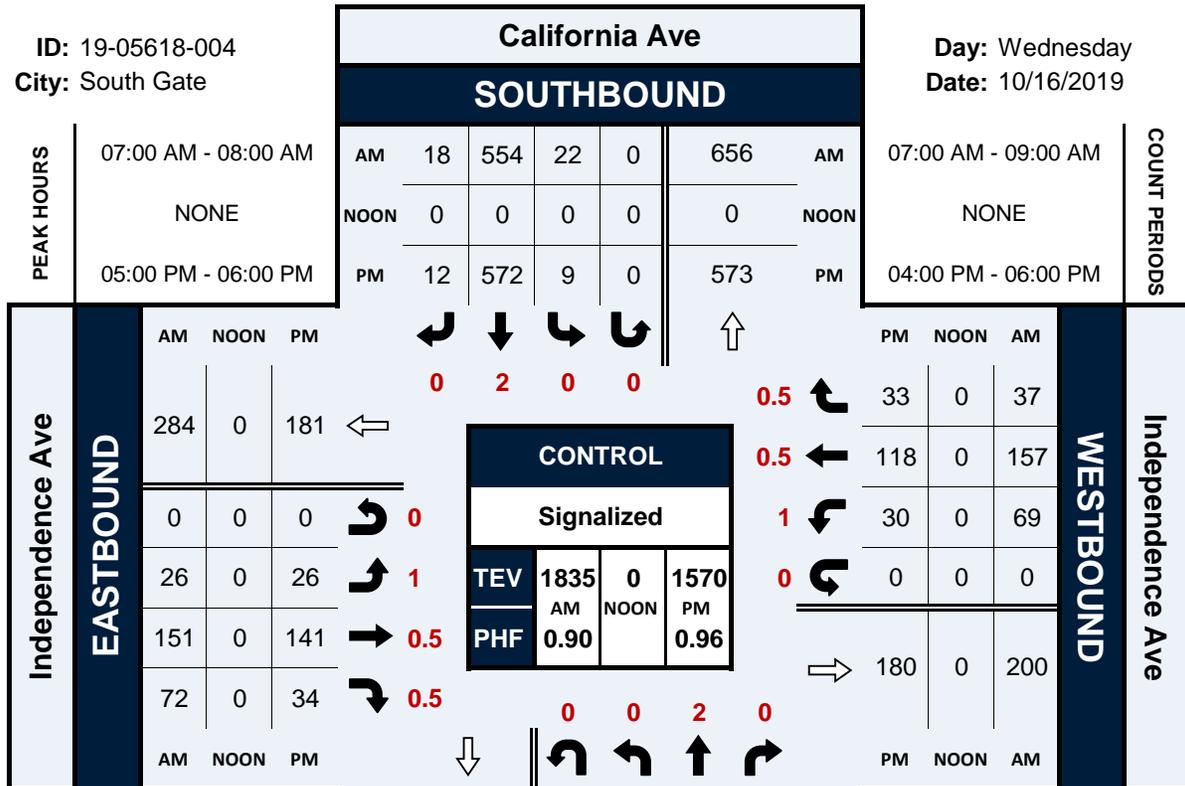
NS/EW Streets:		California Ave				California Ave				Santa Ana St				Santa Ana St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
	1	1	1	0	1	1	0	0	1	1	0	0	1	1	0	0	TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	37	114	18	0	18	92	5	0	11	107	12	0	7	85	5	0	511	
7:15 AM	35	132	11	0	12	100	12	0	8	89	16	0	14	98	17	0	544	
7:30 AM	23	124	24	0	24	103	17	0	18	75	17	0	20	84	21	0	550	
7:45 AM	22	144	17	0	14	108	16	0	8	100	14	0	14	80	17	0	554	
8:00 AM	26	130	16	0	18	66	18	0	18	81	10	0	16	75	7	0	481	
8:15 AM	22	90	13	0	11	85	11	0	11	77	13	0	12	62	7	0	414	
8:30 AM	20	95	15	0	17	77	13	0	11	65	13	0	13	60	6	0	405	
8:45 AM	18	74	13	0	9	64	14	0	8	69	12	0	8	60	10	0	359	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>	
<b>APPROACH %'s :</b>	203	903	127	0	123	695	106	0	93	663	107	0	104	604	90	0	3818	
	16.46%	73.24%	10.30%	0.00%	13.31%	75.22%	11.47%	0.00%	10.78%	76.83%	12.40%	0.00%	13.03%	75.69%	11.28%	0.00%		
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																<b>TOTAL</b>	
<b>PEAK HR VOL :</b>	117	514	70	0	68	403	50	0	45	371	59	0	55	347	60	0	2159	
<b>PEAK HR FACTOR :</b>	0.791	0.892	0.729	0.000	0.708	0.933	0.735	0.000	0.625	0.867	0.868	0.000	0.688	0.885	0.714	0.000	0.974	
	0.958				0.905				0.913				0.895					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
	1	1	1	0	1	1	0	0	1	1	0	0	1	1	0	0	TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	26	102	20	0	14	110	11	0	14	89	23	0	10	90	8	0	517	
4:15 PM	15	94	13	0	17	88	12	0	10	108	24	0	15	93	7	0	496	
4:30 PM	24	105	19	0	14	120	12	0	7	93	24	0	13	88	14	0	533	
4:45 PM	33	107	19	0	17	109	11	0	16	106	33	0	12	99	5	0	567	
5:00 PM	32	99	21	0	17	125	20	0	15	99	28	0	15	78	12	0	561	
5:15 PM	31	107	13	0	27	123	12	0	19	118	21	0	12	88	14	0	585	
5:30 PM	29	110	17	0	17	123	13	0	17	85	20	0	7	82	14	0	534	
5:45 PM	22	108	23	0	17	131	15	0	15	114	34	0	13	77	18	0	587	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>	
<b>APPROACH %'s :</b>	212	832	145	0	140	929	106	0	113	812	207	0	97	695	92	0	4380	
	17.83%	69.97%	12.20%	0.00%	11.91%	79.06%	9.02%	0.00%	9.98%	71.73%	18.29%	0.00%	10.97%	78.62%	10.41%	0.00%		
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																<b>TOTAL</b>	
<b>PEAK HR VOL :</b>	114	424	74	0	78	502	60	0	66	416	103	0	47	325	58	0	2267	
<b>PEAK HR FACTOR :</b>	0.891	0.964	0.804	0.000	0.722	0.958	0.750	0.000	0.868	0.881	0.757	0.000	0.783	0.923	0.806	0.000	0.966	
	0.981				0.982				0.897				0.943					

# California Ave & Independence Ave

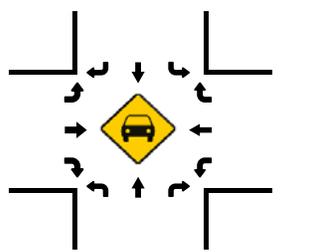
## Peak Hour Turning Movement Count

ID: 19-05618-004  
City: South Gate

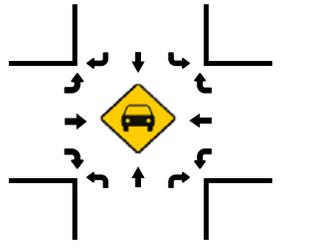
Day: Wednesday  
Date: 10/16/2019



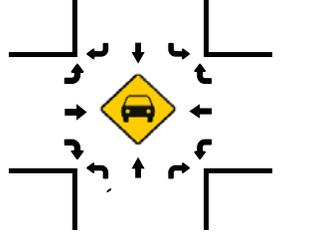
Total Vehicles (AM)



Total Vehicles (NOON)



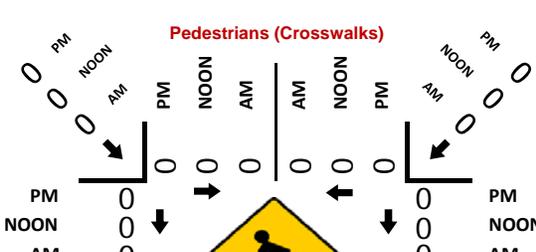
Total Vehicles (PM)



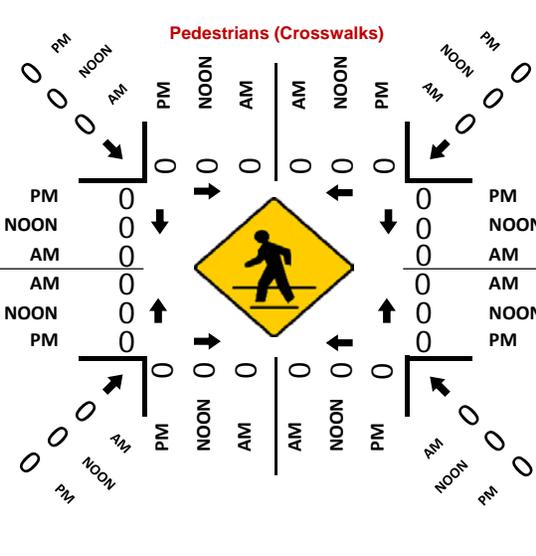
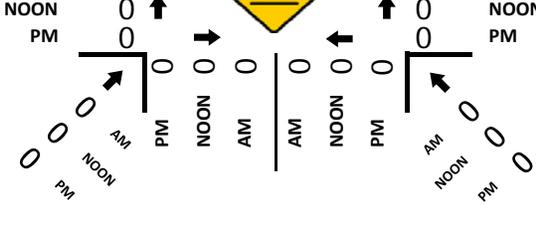
PM	636	0	51	514	30	PM
NOON	0	0	0	0	0	NOON
AM	695	0	109	593	27	AM

**California Ave NORTHBOUND**

Total Vehicles (AM)



Total Vehicles (NOON)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: California Ave & Independence Ave  
 City: South Gate  
 Control: Signalized

Project ID: 19-05618-004  
 Date: 10/16/2019

### Total

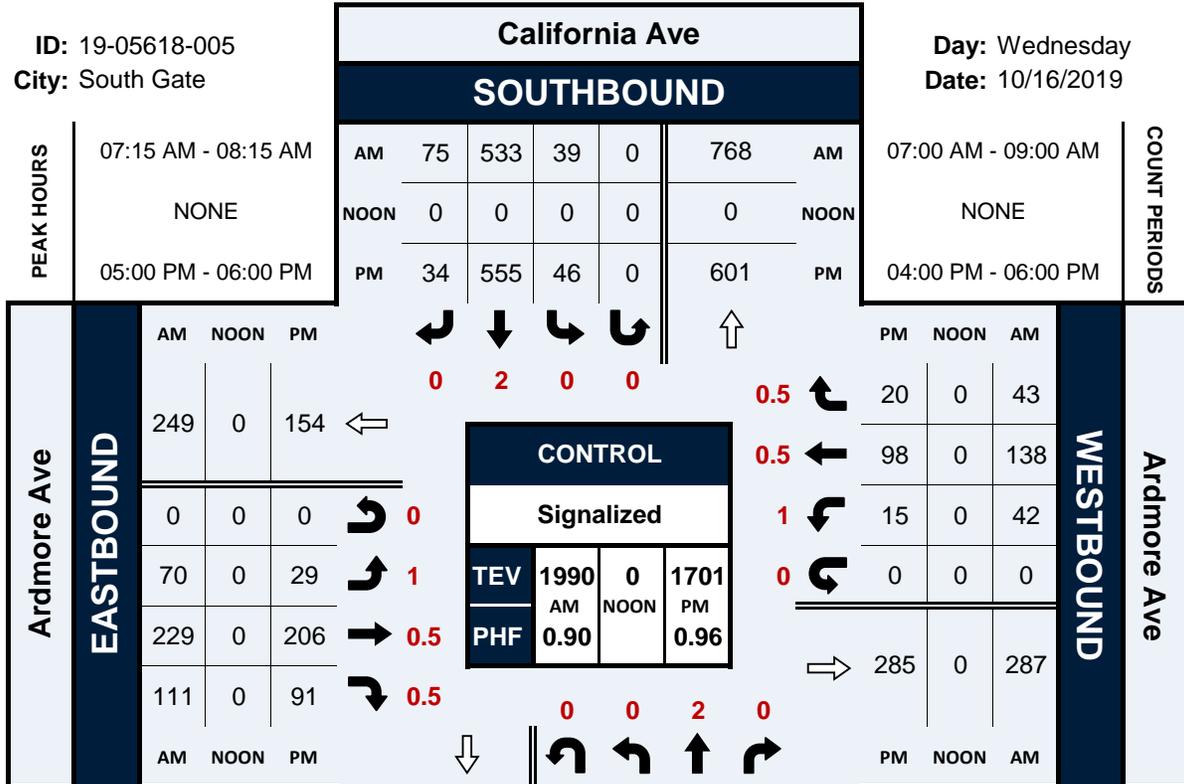
NS/EW Streets:	California Ave				California Ave				Independence Ave				Independence Ave					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	13	137	6	0	4	131	5	0	3	32	10	0	10	36	12	0	399	
7:15 AM	37	140	8	0	8	117	3	0	9	41	13	0	15	39	11	0	441	
7:30 AM	38	170	8	0	6	148	6	0	2	31	24	0	16	50	11	0	510	
7:45 AM	21	146	5	0	4	158	4	0	12	47	25	0	28	32	3	0	485	
8:00 AM	18	159	13	0	0	89	4	0	5	29	7	0	9	25	11	0	369	
8:15 AM	8	122	11	0	2	109	1	0	4	20	7	0	11	18	8	0	321	
8:30 AM	9	90	5	0	2	92	4	0	4	20	4	0	8	18	4	0	260	
8:45 AM	12	94	4	0	1	91	5	0	2	14	7	0	5	16	7	0	258	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
	156	1058	60	0	27	935	32	0	41	234	97	0	102	234	67	0	3043	
<b>APPROACH %'s :</b>	12.24%	83.05%	4.71%	0.00%	2.72%	94.06%	3.22%	0.00%	11.02%	62.90%	26.08%	0.00%	25.31%	58.06%	16.63%	0.00%		
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																	<b>TOTAL</b>
<b>PEAK HR VOL :</b>	109	593	27	0	22	554	18	0	26	151	72	0	69	157	37	0	1835	
<b>PEAK HR FACTOR :</b>	0.717	0.872	0.844	0.000	0.688	0.877	0.750	0.000	0.542	0.803	0.720	0.000	0.616	0.785	0.771	0.000	0.900	
	0.844				0.895				0.741				0.854					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	11	121	6	0	0	134	1	0	8	20	3	0	5	24	4	0	337	
4:15 PM	15	113	13	0	3	119	8	0	6	36	8	0	5	30	13	0	369	
4:30 PM	10	129	5	0	5	122	3	0	7	40	6	0	5	23	7	0	362	
4:45 PM	11	141	3	0	3	138	3	0	0	21	8	0	6	24	3	0	361	
5:00 PM	13	127	10	0	3	150	7	0	8	32	7	0	7	37	9	0	410	
5:15 PM	15	140	10	0	2	133	2	0	4	28	7	0	8	24	11	0	384	
5:30 PM	14	141	5	0	3	135	2	0	8	31	11	0	6	31	6	0	393	
5:45 PM	9	106	5	0	1	154	1	0	6	50	9	0	9	26	7	0	383	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
	98	1018	57	0	20	1085	27	0	47	258	59	0	51	219	60	0	2999	
<b>APPROACH %'s :</b>	8.35%	86.79%	4.86%	0.00%	1.77%	95.85%	2.39%	0.00%	12.91%	70.88%	16.21%	0.00%	15.45%	66.36%	18.18%	0.00%		
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																	<b>TOTAL</b>
<b>PEAK HR VOL :</b>	51	514	30	0	9	572	12	0	26	141	34	0	30	118	33	0	1570	
<b>PEAK HR FACTOR :</b>	0.850	0.911	0.750	0.000	0.750	0.929	0.429	0.000	0.813	0.705	0.773	0.000	0.833	0.797	0.750	0.000	0.957	
	0.902				0.927				0.773				0.854					

# California Ave & Ardmore Ave

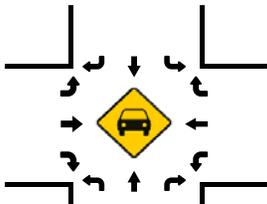
## Peak Hour Turning Movement Count

ID: 19-05618-005  
City: South Gate

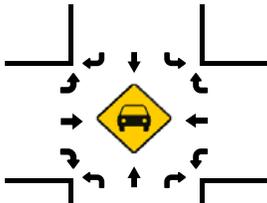
Day: Wednesday  
Date: 10/16/2019



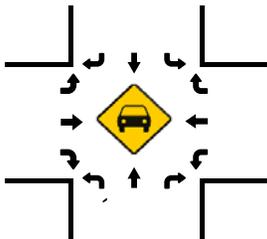
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)

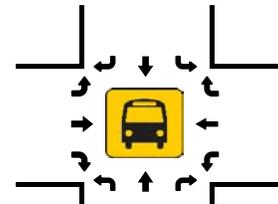


PM	661	0	22	552	33	PM
NOON	0	0	0	0	0	NOON
AM	686	0	36	655	19	AM

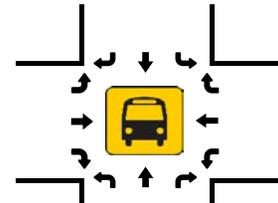
### NORTHBOUND

### California Ave

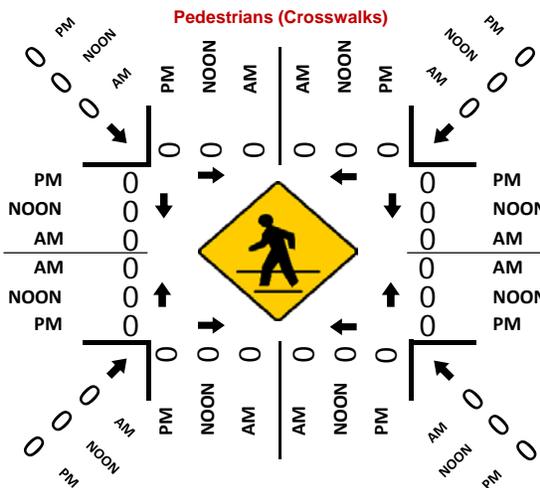
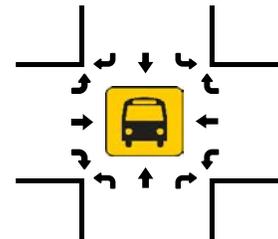
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: California Ave & Ardmore Ave  
 City: South Gate  
 Control: Signalized

Project ID: 19-05618-005  
 Date: 10/16/2019

### Total

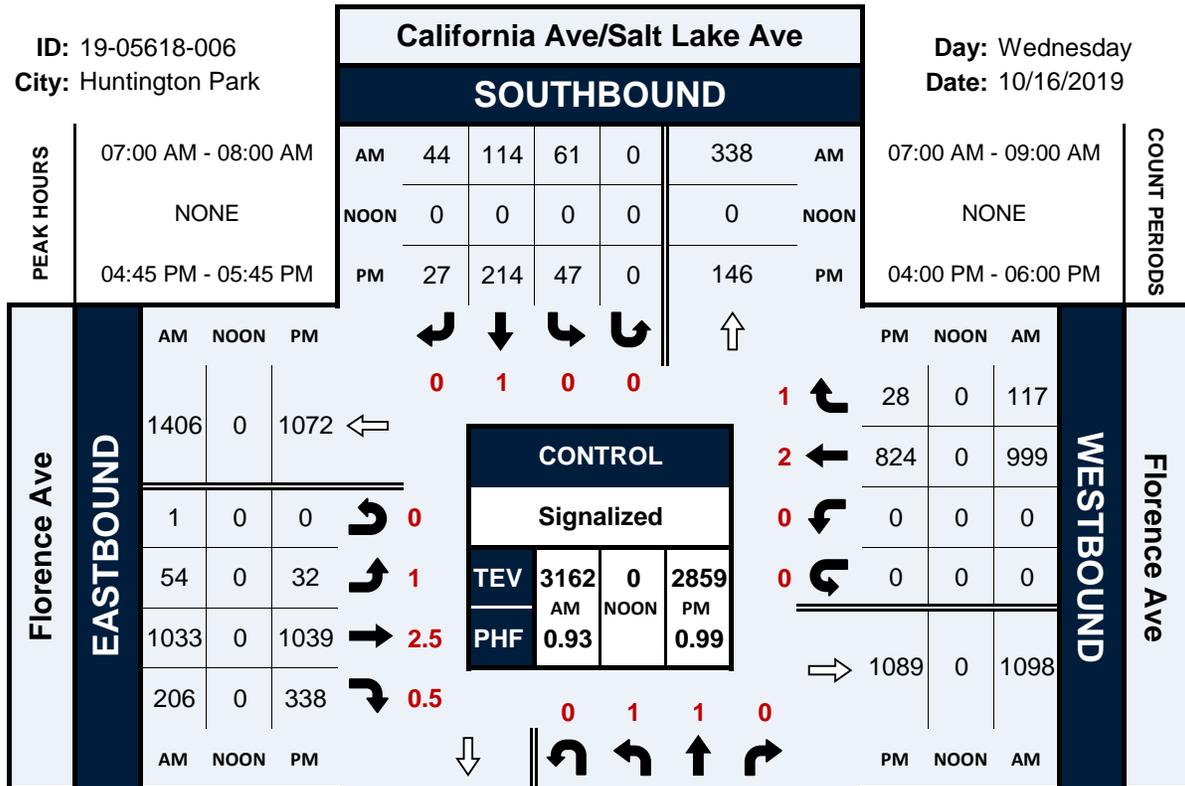
NS/EW Streets:	California Ave				California Ave				Ardmore Ave				Ardmore Ave				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	4	144	2	0	13	127	14	0	9	51	13	0	7	22	3	0	409
7:15 AM	7	172	5	0	9	122	11	0	6	77	26	0	4	31	7	0	477
7:30 AM	14	174	8	0	17	152	20	0	23	48	21	0	11	39	15	0	542
7:45 AM	10	141	5	0	8	171	31	0	24	51	40	0	19	44	11	0	555
8:00 AM	5	168	1	0	5	88	13	0	17	53	24	0	8	24	10	0	416
8:15 AM	5	124	4	0	8	110	8	0	5	26	13	0	5	19	5	0	332
8:30 AM	8	93	3	0	4	93	7	0	9	32	16	0	4	21	4	0	294
8:45 AM	6	100	5	0	7	87	9	0	6	27	6	0	1	13	4	0	271
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	59	1116	33	0	71	950	113	0	99	365	159	0	59	213	59	0	3296
	4.88%	92.38%	2.73%	0.00%	6.26%	83.77%	9.96%	0.00%	15.89%	58.59%	25.52%	0.00%	17.82%	64.35%	17.82%	0.00%	
<b>PEAK HR :</b>	07:15 AM - 08:15 AM																TOTAL
<b>PEAK HR VOL :</b>	36	655	19	0	39	533	75	0	70	229	111	0	42	138	43	0	1990
<b>PEAK HR FACTOR :</b>	0.643	0.941	0.594	0.000	0.574	0.779	0.605	0.000	0.729	0.744	0.694	0.000	0.553	0.784	0.717	0.000	0.896
	0.906				0.770				0.891				0.753				
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	6	118	12	0	9	126	5	0	8	38	21	0	0	15	6	0	364
4:15 PM	5	138	5	0	7	120	7	0	6	50	19	0	7	20	5	0	389
4:30 PM	4	128	7	0	8	113	8	0	9	52	23	0	6	18	5	0	381
4:45 PM	3	144	10	0	11	137	9	0	6	54	17	0	5	12	3	0	411
5:00 PM	4	134	9	0	6	149	8	0	14	41	20	0	4	27	4	0	420
5:15 PM	4	159	7	0	10	130	5	0	5	64	28	0	2	29	2	0	445
5:30 PM	7	145	10	0	17	132	9	0	6	49	13	0	7	21	8	0	424
5:45 PM	7	114	7	0	13	144	12	0	4	52	30	0	2	21	6	0	412
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	40	1080	67	0	81	1051	63	0	58	400	171	0	33	163	39	0	3246
	3.37%	90.99%	5.64%	0.00%	6.78%	87.95%	5.27%	0.00%	9.22%	63.59%	27.19%	0.00%	14.04%	69.36%	16.60%	0.00%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																TOTAL
<b>PEAK HR VOL :</b>	22	552	33	0	46	555	34	0	29	206	91	0	15	98	20	0	1701
<b>PEAK HR FACTOR :</b>	0.786	0.868	0.825	0.000	0.676	0.931	0.708	0.000	0.518	0.805	0.758	0.000	0.536	0.845	0.625	0.000	0.956
	0.893				0.939				0.840				0.924				

# California Ave/Salt Lake Ave & Florence Ave

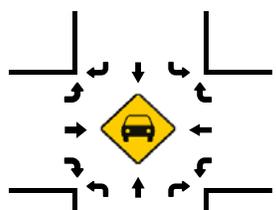
## Peak Hour Turning Movement Count

ID: 19-05618-006  
City: Huntington Park

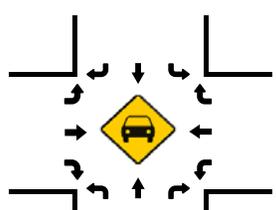
Day: Wednesday  
Date: 10/16/2019



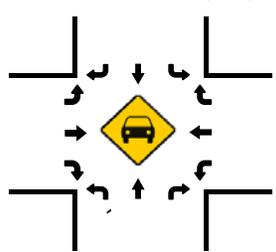
Total Vehicles (AM)



Total Vehicles (NOON)



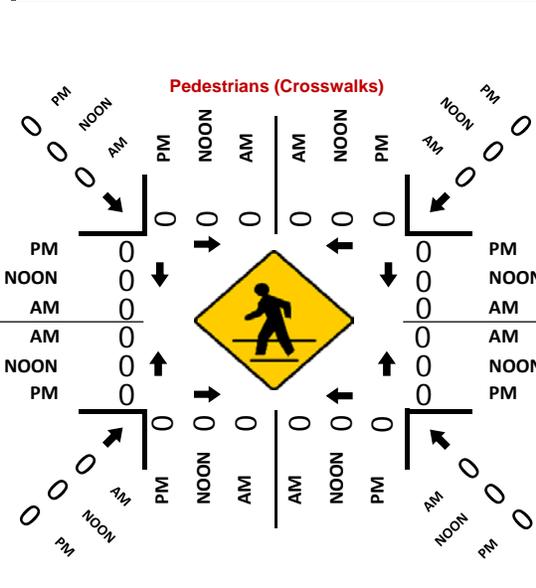
Total Vehicles (PM)



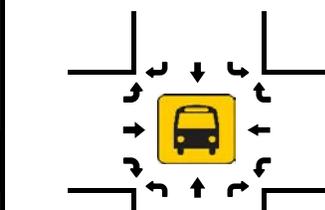
PM	552	0	221	86	3	PM
NOON	0	0	0	0	0	NOON
AM	320	0	362	167	4	AM

### NORTHBOUND

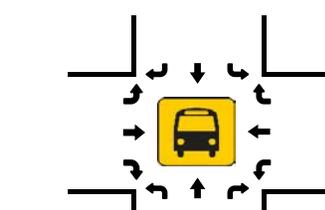
California Ave/Salt Lake Ave



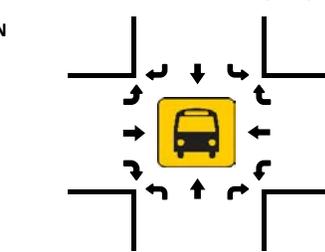
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: California Ave/Salt Lake Ave & Florence Ave  
 City: Huntington Park  
 Control: Signalized

Project ID: 19-05618-006  
 Date: 10/16/2019

### Total

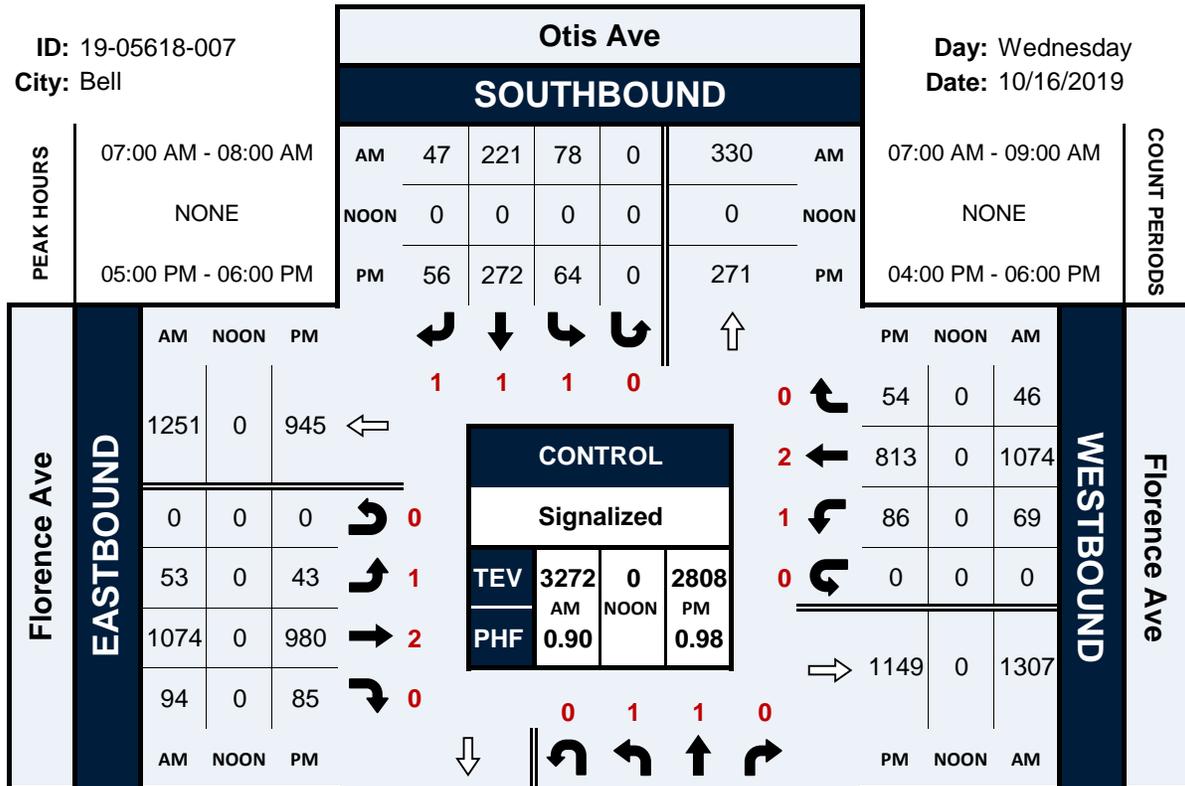
NS/EW Streets:	California Ave/Salt Lake Ave				California Ave/Salt Lake Ave				Florence Ave				Florence Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	97	32	1	0	14	13	9	0	11	221	45	0	0	256	26	0	725
7:15 AM	79	54	2	0	24	38	11	0	15	250	53	1	0	233	29	0	789
7:30 AM	98	54	1	0	9	37	8	0	11	281	54	0	0	269	32	0	854
7:45 AM	88	27	0	0	14	26	16	0	17	281	54	0	0	241	30	0	794
8:00 AM	88	29	0	0	9	18	7	0	13	226	55	0	0	251	15	0	711
8:15 AM	75	18	2	0	13	22	8	0	10	201	54	0	0	194	10	0	607
8:30 AM	66	17	4	0	8	21	7	0	7	227	46	1	0	202	7	0	613
8:45 AM	62	13	1	0	5	9	8	0	5	167	30	0	0	192	7	0	499
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>
	653	244	11	0	96	184	74	0	89	1854	391	2	0	1838	156	0	5592
<b>APPROACH %'s :</b>	71.92%	26.87%	1.21%	0.00%	27.12%	51.98%	20.90%	0.00%	3.81%	79.37%	16.74%	0.09%	0.00%	92.18%	7.82%	0.00%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	362	167	4	0	61	114	44	0	54	1033	206	1	0	999	117	0	3162
<b>PEAK HR FACTOR :</b>	0.923	0.773	0.500	0.000	0.635	0.750	0.688	0.000	0.794	0.919	0.954	0.250	0.000	0.928	0.914	0.000	0.926
	0.871				0.750				0.919				0.927				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	46	24	1	0	17	51	10	0	5	265	69	0	0	199	10	0	697
4:15 PM	55	18	1	0	10	34	6	0	7	248	98	0	0	181	17	0	675
4:30 PM	65	23	0	0	13	37	9	0	4	260	78	0	0	189	9	0	687
4:45 PM	54	19	1	0	10	49	6	0	10	257	94	0	0	203	5	0	708
5:00 PM	58	23	0	0	14	54	7	0	10	254	76	0	0	204	8	0	708
5:15 PM	51	18	0	0	13	51	8	0	9	256	80	0	0	227	8	0	721
5:30 PM	58	26	2	0	10	60	6	0	3	272	88	0	0	190	7	0	722
5:45 PM	55	18	0	0	12	55	12	0	7	258	67	0	0	212	9	0	705
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>
	442	169	5	0	99	391	64	0	55	2070	650	0	0	1605	73	0	5623
<b>APPROACH %'s :</b>	71.75%	27.44%	0.81%	0.00%	17.87%	70.58%	11.55%	0.00%	1.98%	74.59%	23.42%	0.00%	0.00%	95.65%	4.35%	0.00%	
<b>PEAK HR :</b>	04:45 PM - 05:45 PM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	221	86	3	0	47	214	27	0	32	1039	338	0	0	824	28	0	2859
<b>PEAK HR FACTOR :</b>	0.953	0.827	0.375	0.000	0.839	0.892	0.844	0.000	0.800	0.955	0.899	0.000	0.000	0.907	0.875	0.000	0.990
	0.901				0.947				0.970				0.906				

# Otis Ave & Florence Ave

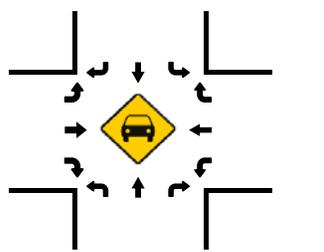
## Peak Hour Turning Movement Count

ID: 19-05618-007  
City: Bell

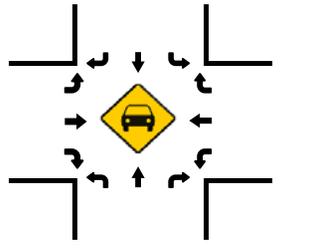
Day: Wednesday  
Date: 10/16/2019



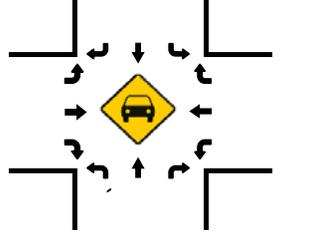
Total Vehicles (AM)



Total Vehicles (NOON)

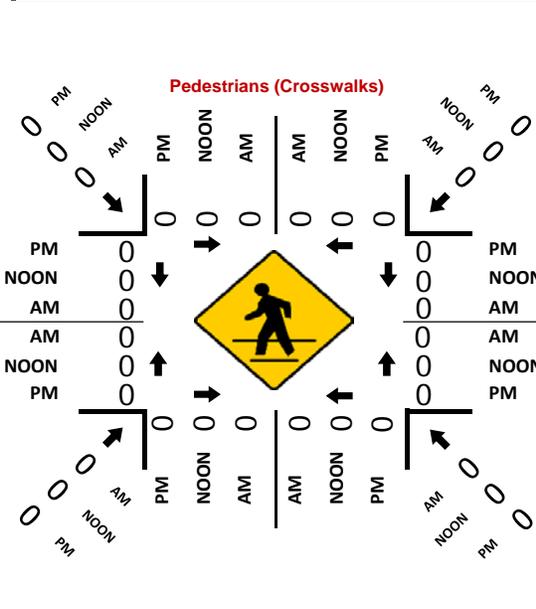


Total Vehicles (PM)

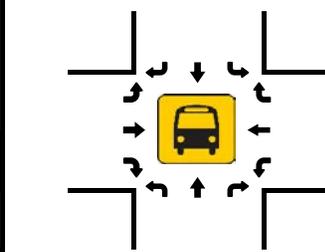


PM	443	0	76	174	105	PM
NOON	0	0	0	0	0	NOON
AM	384	0	130	231	155	AM

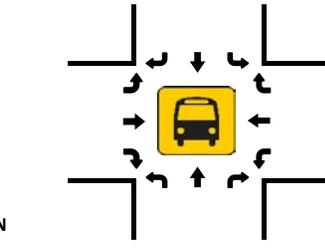
### OTIS AVE NORTHBOUND



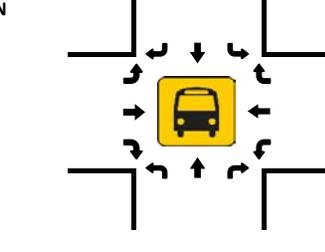
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Otis Ave & Florence Ave  
 City: Bell  
 Control: Signalized

Project ID: 19-05618-007  
 Date: 10/16/2019

### Total

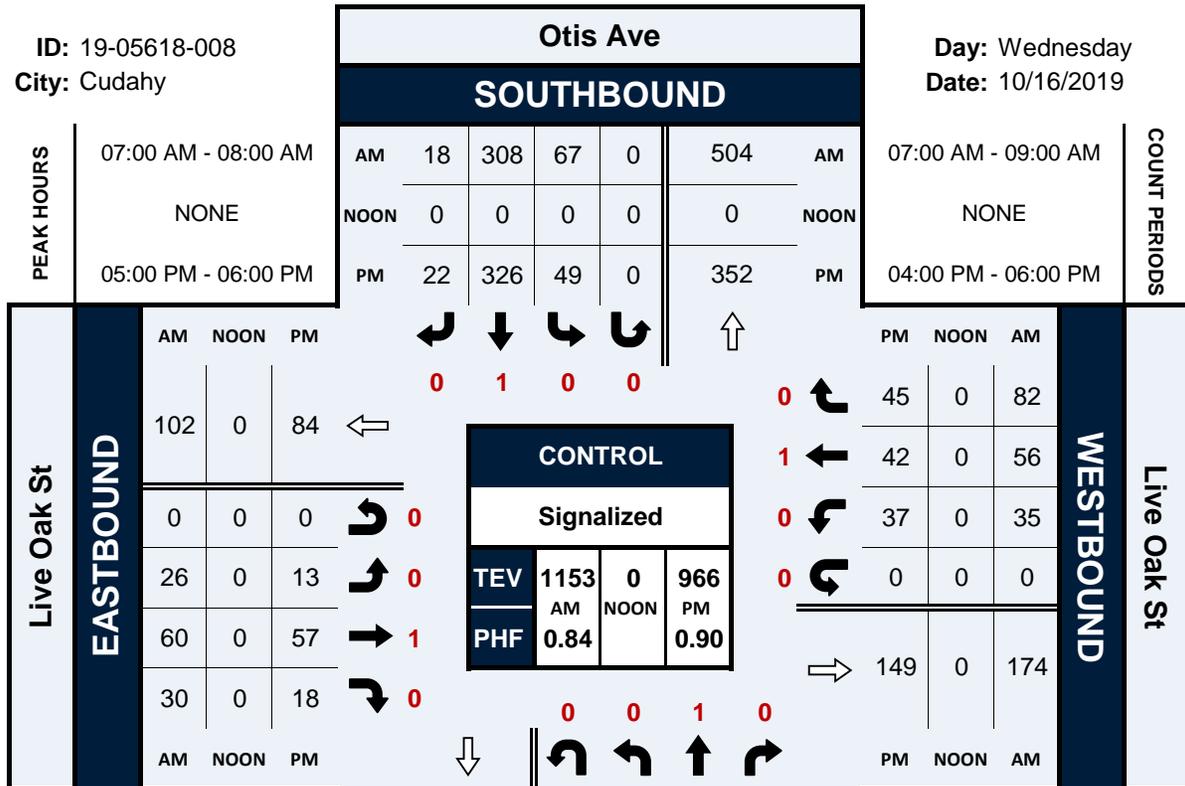
NS/EW Streets:	Otis Ave				Otis Ave				Florence Ave				Florence Ave				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	1	0	0	1	1	1	0	1	2	0	0	1	2	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	39	58	43	0	24	31	10	0	5	200	17	0	18	243	9	0	697
7:15 AM	35	54	37	0	20	43	12	0	19	303	24	0	19	329	16	0	911
7:30 AM	28	62	35	0	21	79	10	0	11	264	21	0	12	264	15	0	822
7:45 AM	28	57	40	0	13	68	15	0	18	307	32	0	20	238	6	0	842
8:00 AM	20	51	30	0	15	51	12	0	12	217	11	0	14	208	16	0	657
8:15 AM	14	41	21	0	18	31	8	0	10	215	13	0	5	223	7	0	606
8:30 AM	14	28	26	0	19	29	4	0	5	206	11	0	15	185	10	0	552
8:45 AM	12	29	20	0	9	26	5	0	7	177	12	0	13	231	6	0	547
<b>TOTAL VOLUMES :</b>	190	380	252	0	139	358	76	0	87	1889	141	0	116	1921	85	0	5634
<b>APPROACH %'s :</b>	23.11%	46.23%	30.66%	0.00%	24.26%	62.48%	13.26%	0.00%	4.11%	89.23%	6.66%	0.00%	5.47%	90.53%	4.01%	0.00%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	130	231	155	0	78	221	47	0	53	1074	94	0	69	1074	46	0	3272
<b>PEAK HR FACTOR :</b>	0.833	0.931	0.901	0.000	0.813	0.699	0.783	0.000	0.697	0.875	0.734	0.000	0.863	0.816	0.719	0.000	0.898
	0.921				0.786				0.855				0.817				
PM	1	1	0	0	1	1	1	0	1	2	0	0	1	2	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	15	38	19	0	13	68	13	0	11	257	25	0	23	216	12	0	710
4:15 PM	17	45	19	0	13	62	8	0	7	234	21	0	23	189	10	0	648
4:30 PM	15	51	14	0	24	72	7	0	7	252	21	0	16	220	15	0	714
4:45 PM	13	48	17	0	18	69	13	0	9	238	18	0	21	203	17	0	684
5:00 PM	17	45	22	0	20	75	11	0	13	239	26	0	17	218	13	0	716
5:15 PM	19	47	28	0	22	63	17	0	8	242	12	0	17	185	16	0	676
5:30 PM	13	41	20	0	11	62	14	0	11	255	24	0	23	210	14	0	698
5:45 PM	27	41	35	0	11	72	14	0	11	244	23	0	29	200	11	0	718
<b>TOTAL VOLUMES :</b>	136	356	174	0	132	543	97	0	77	1961	170	0	169	1641	108	0	5564
<b>APPROACH %'s :</b>	20.42%	53.45%	26.13%	0.00%	17.10%	70.34%	12.56%	0.00%	3.49%	88.81%	7.70%	0.00%	8.81%	85.56%	5.63%	0.00%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	76	174	105	0	64	272	56	0	43	980	85	0	86	813	54	0	2808
<b>PEAK HR FACTOR :</b>	0.704	0.926	0.750	0.000	0.727	0.907	0.824	0.000	0.827	0.961	0.817	0.000	0.741	0.932	0.844	0.000	0.978
	0.862				0.925				0.955				0.961				

# Otis Ave & Live Oak St

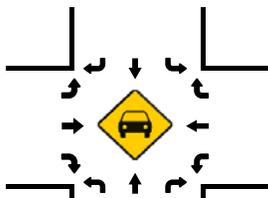
## Peak Hour Turning Movement Count

ID: 19-05618-008  
City: Cudahy

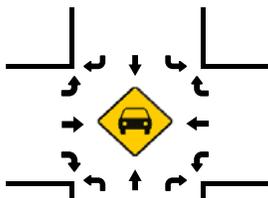
Day: Wednesday  
Date: 10/16/2019



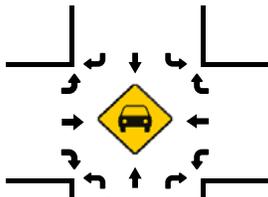
Total Vehicles (AM)



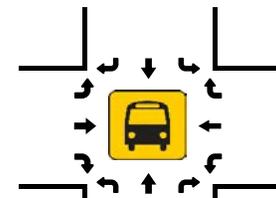
Total Vehicles (NOON)



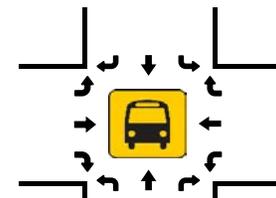
Total Vehicles (PM)



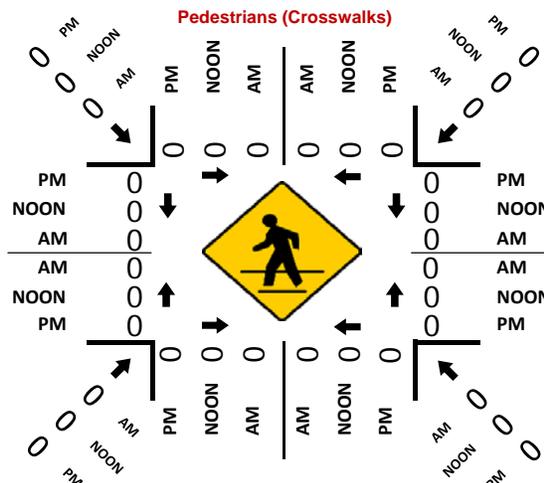
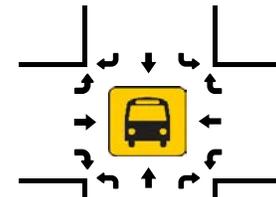
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Otis Ave & Live Oak St  
 City: Cudahy  
 Control: Signalized

Project ID: 19-05618-008  
 Date: 10/16/2019

### Total

NS/EW Streets:	Otis Ave				Otis Ave				Live Oak St				Live Oak St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	6	103	13	0	8	56	4	0	7	4	5	0	4	12	12	0					234
7:15 AM	7	110	10	0	17	62	4	0	8	13	6	0	6	10	13	0					266
7:30 AM	6	82	11	0	19	97	5	0	5	21	11	0	13	16	25	0					311
7:45 AM	9	101	13	0	23	93	5	0	6	22	8	0	12	18	32	0					342
8:00 AM	6	70	14	0	10	58	4	0	1	12	7	0	10	12	11	0					215
8:15 AM	2	64	9	0	6	39	1	0	1	7	6	0	8	8	12	0					163
8:30 AM	3	49	6	0	2	55	1	0	2	9	3	0	3	12	1	0					146
8:45 AM	2	55	10	0	3	45	1	0	6	9	3	0	7	6	3	0					150
<b>TOTAL VOLUMES :</b>	41	634	86	0	88	505	25	0	36	97	49	0	63	94	109	0					1827
<b>APPROACH %'s :</b>	5.39%	83.31%	11.30%	0.00%	14.24%	81.72%	4.05%	0.00%	19.78%	53.30%	26.92%	0.00%	23.68%	35.34%	40.98%	0.00%					
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																				<b>TOTAL</b>
<b>PEAK HR VOL :</b>	28	396	47	0	67	308	18	0	26	60	30	0	35	56	82	0					1153
<b>PEAK HR FACTOR :</b>	0.778	0.900	0.904	0.000	0.728	0.794	0.900	0.000	0.813	0.682	0.682	0.000	0.673	0.778	0.641	0.000					0.843
			0.927				0.812				0.784				0.698						
PM	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	TOTAL				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	4	60	16	0	8	94	3	0	0	16	8	0	13	10	10	0	242				
4:15 PM	4	68	10	0	8	80	4	0	2	13	1	0	8	9	9	0	216				
4:30 PM	8	70	14	0	11	76	9	0	2	13	5	0	6	8	10	0	232				
4:45 PM	5	57	15	0	5	81	2	0	1	15	5	0	6	13	15	0	220				
5:00 PM	4	68	7	0	10	96	3	0	5	12	5	0	8	11	13	0	242				
5:15 PM	5	84	10	0	10	71	4	0	0	12	4	0	9	11	4	0	224				
5:30 PM	9	61	17	0	14	79	8	0	4	9	7	0	8	7	10	0	233				
5:45 PM	2	81	9	0	15	80	7	0	4	24	2	0	12	13	18	0	267				
<b>TOTAL VOLUMES :</b>	41	549	98	0	81	657	40	0	18	114	37	0	70	82	89	0	1876				
<b>APPROACH %'s :</b>	5.96%	79.80%	14.24%	0.00%	10.41%	84.45%	5.14%	0.00%	10.65%	67.46%	21.89%	0.00%	29.05%	34.02%	36.93%	0.00%					
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																<b>TOTAL</b>				
<b>PEAK HR VOL :</b>	20	294	43	0	49	326	22	0	13	57	18	0	37	42	45	0	966				
<b>PEAK HR FACTOR :</b>	0.556	0.875	0.632	0.000	0.817	0.849	0.688	0.000	0.650	0.594	0.643	0.000	0.771	0.808	0.625	0.000	0.904				
			0.902				0.911				0.733				0.721						



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Otis Ave & Clara St  
 City: Cudahy  
 Control: Signalized

Project ID: 19-05618-009  
 Date: 10/16/2019

### Total

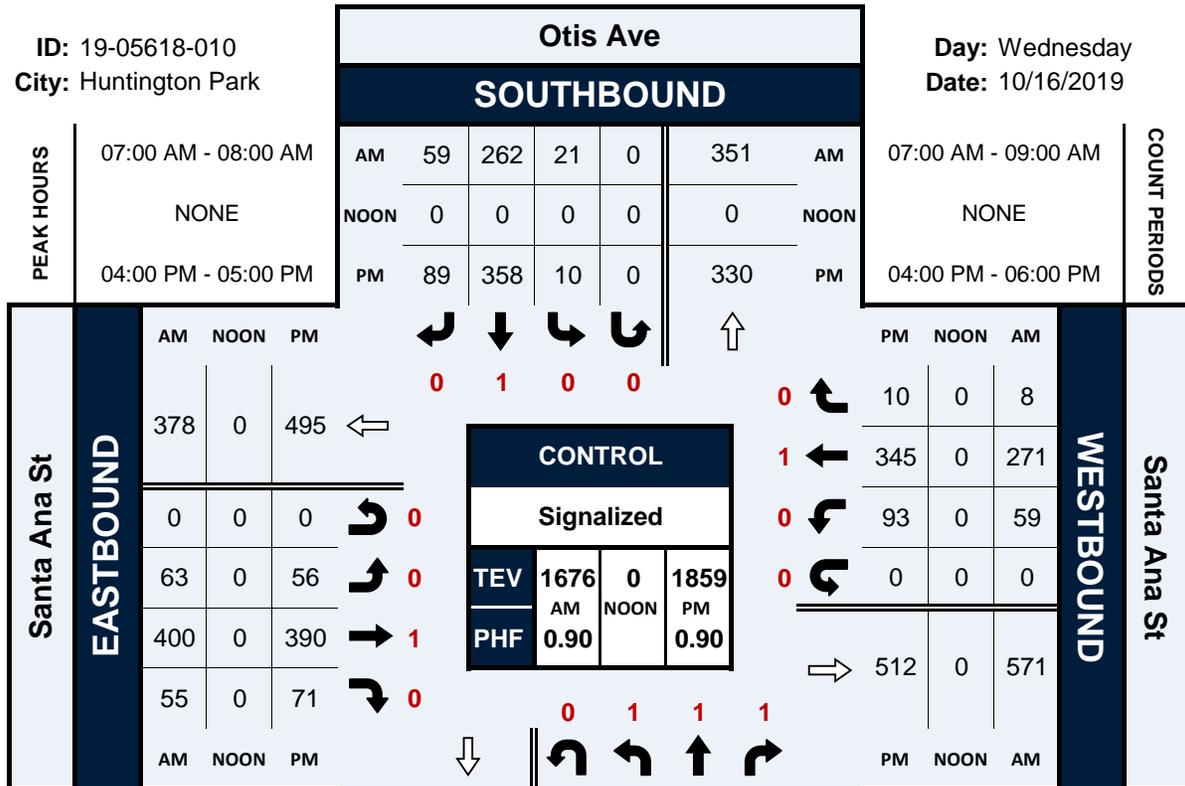
NS/EW Streets:	Otis Ave				Otis Ave				Clara St				Clara St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	0	1	0	0	1	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	4	80	21	0	16	40	1	0	3	21	1	0	15	19	24	0					245
7:15 AM	1	76	30	0	13	47	3	0	4	22	5	0	22	17	24	0					264
7:30 AM	0	45	35	0	26	53	8	0	3	35	5	0	28	30	29	0					297
7:45 AM	1	65	24	0	22	76	2	0	6	30	3	0	40	41	46	0					356
8:00 AM	0	63	15	0	9	61	3	0	0	20	5	0	18	26	16	0					236
8:15 AM	0	60	21	0	4	50	0	0	2	16	1	0	17	24	13	0					208
8:30 AM	1	40	17	0	11	48	3	0	2	14	1	0	16	21	5	0					179
8:45 AM	0	54	19	0	8	46	2	0	3	5	1	0	20	18	13	0					189
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
<b>APPROACH %'s :</b>	7	483	182	0	109	421	22	0	23	163	22	0	176	196	170	0					1974
	1.04%	71.88%	27.08%	0.00%	19.75%	76.27%	3.99%	0.00%	11.06%	78.37%	10.58%	0.00%	32.47%	36.16%	31.37%	0.00%					
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																				TOTAL
<b>PEAK HR VOL :</b>	6	266	110	0	77	216	14	0	16	108	14	0	105	107	123	0					1162
<b>PEAK HR FACTOR :</b>	0.375	0.831	0.786	0.000	0.740	0.711	0.438	0.000	0.667	0.771	0.700	0.000	0.656	0.652	0.668	0.000					0.816
			0.893				0.768				0.802				0.659						
PM	0	1	0	0	1	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	2	67	21	0	24	65	4	0	1	28	2	0	22	21	12	0					269
4:15 PM	0	53	13	0	11	71	2	0	1	28	0	0	28	21	20	0					248
4:30 PM	2	74	27	0	13	60	3	0	1	18	3	0	28	14	18	0					261
4:45 PM	1	58	17	0	12	72	1	0	1	25	2	0	21	17	18	0					245
5:00 PM	0	59	31	0	15	78	8	0	1	24	3	0	23	21	9	0					272
5:15 PM	3	69	23	0	21	66	7	0	4	32	2	0	26	15	11	0					279
5:30 PM	0	67	23	0	20	65	3	0	3	36	0	0	31	26	21	0					295
5:45 PM	2	69	33	0	20	67	4	0	3	23	1	0	30	29	22	0					303
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
<b>APPROACH %'s :</b>	10	516	188	0	136	544	32	0	15	214	13	0	209	164	131	0					2172
	1.40%	72.27%	26.33%	0.00%	19.10%	76.40%	4.49%	0.00%	6.20%	88.43%	5.37%	0.00%	41.47%	32.54%	25.99%	0.00%					
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																				TOTAL
<b>PEAK HR VOL :</b>	5	264	110	0	76	276	22	0	11	115	6	0	110	91	63	0					1149
<b>PEAK HR FACTOR :</b>	0.417	0.957	0.833	0.000	0.905	0.885	0.688	0.000	0.688	0.799	0.500	0.000	0.887	0.784	0.716	0.000					0.948
			0.911				0.926				0.846				0.815						

# Otis Ave & Santa Ana St

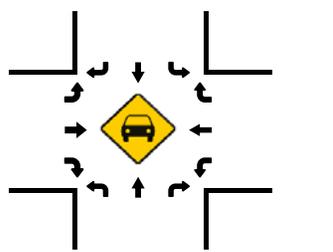
## Peak Hour Turning Movement Count

ID: 19-05618-010  
City: Huntington Park

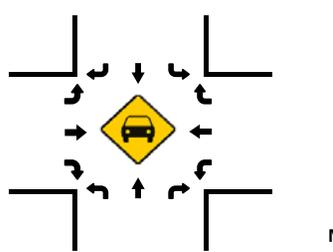
Day: Wednesday  
Date: 10/16/2019



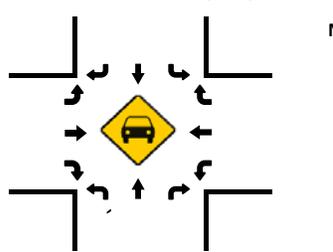
Total Vehicles (AM)



Total Vehicles (NOON)



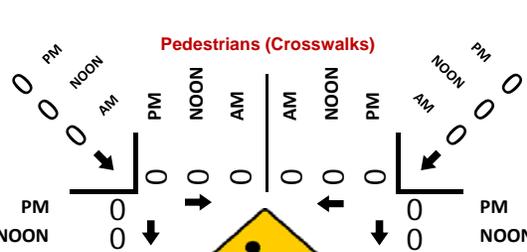
Total Vehicles (PM)



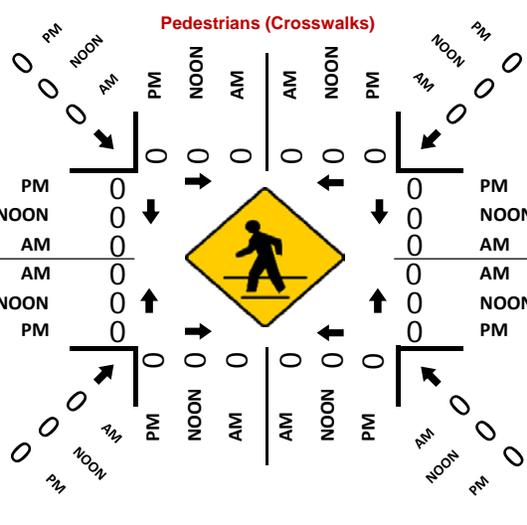
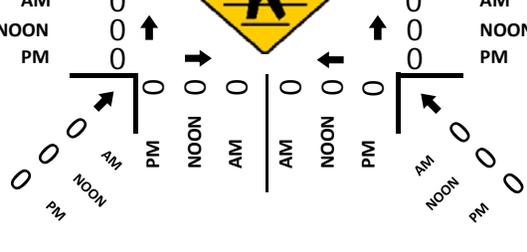
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Otis Ave & Santa Ana St  
 City: Huntington Park  
 Control: Signalized

Project ID: 19-05618-010  
 Date: 10/16/2019

### Total

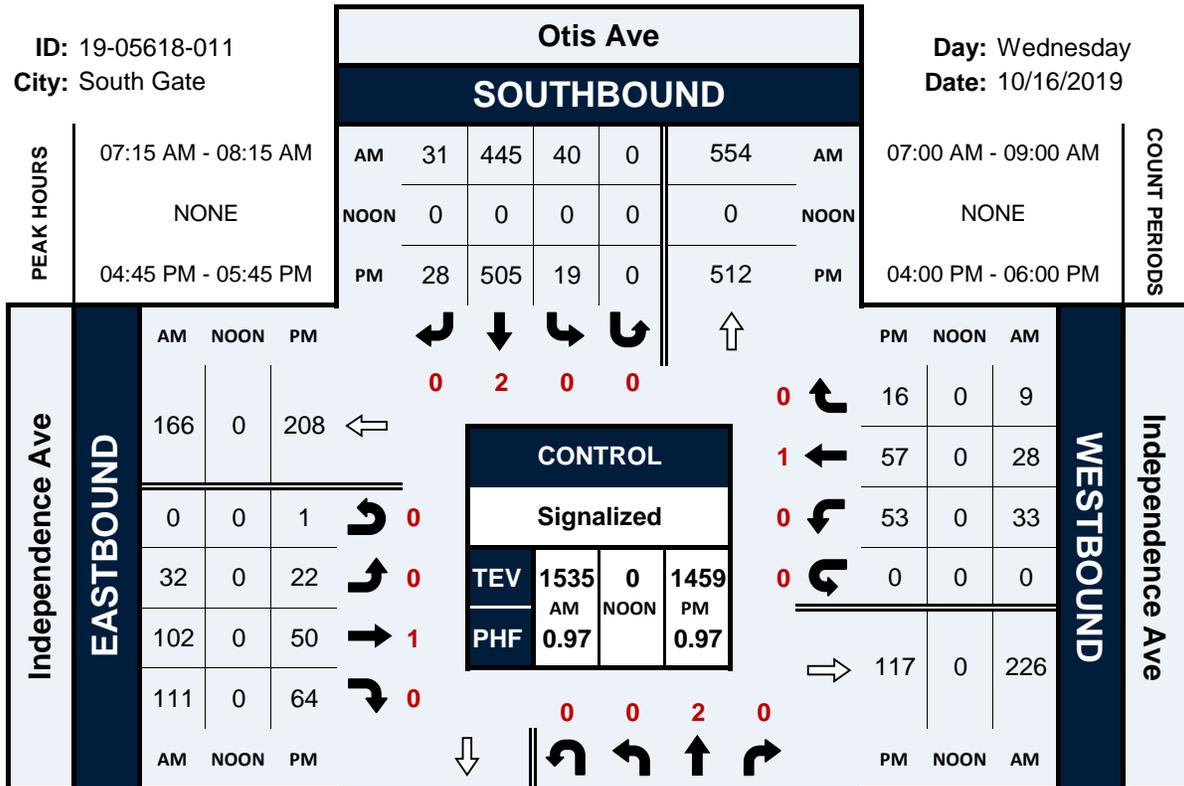
NS/EW Streets:	Otis Ave				Otis Ave				Santa Ana St				Santa Ana St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1	1	1	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	11	66	43	0	7	75	13	0	17	115	11	0	13	90	2	0	463
7:15 AM	19	82	46	0	2	72	23	0	24	92	16	0	17	69	1	0	463
7:30 AM	11	69	39	0	6	69	11	0	9	100	21	0	16	59	1	0	411
7:45 AM	7	63	22	0	6	46	12	0	13	93	7	0	13	53	4	0	339
8:00 AM	14	62	23	0	4	58	19	0	10	78	9	0	10	52	5	0	344
8:15 AM	15	59	26	0	4	53	20	0	17	75	15	0	8	54	3	0	349
8:30 AM	9	42	17	0	2	54	21	0	13	62	11	0	12	50	2	0	295
8:45 AM	13	45	19	0	1	40	14	0	10	80	10	0	8	49	2	0	291
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	99	488	235	0	32	467	133	0	113	695	100	0	97	476	20	0	2955
	12.04%	59.37%	28.59%	0.00%	5.06%	73.89%	21.04%	0.00%	12.44%	76.54%	11.01%	0.00%	16.36%	80.27%	3.37%	0.00%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																TOTAL
<b>PEAK HR VOL :</b>	48	280	150	0	21	262	59	0	63	400	55	0	59	271	8	0	1676
<b>PEAK HR FACTOR :</b>	0.632	0.854	0.815	0.000	0.750	0.873	0.641	0.000	0.656	0.870	0.655	0.000	0.868	0.753	0.500	0.000	0.905
			0.813				0.881				0.906				0.805		
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1	1	1	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	20	65	36	0	1	88	27	0	13	91	12	0	17	89	1	0	460
4:15 PM	16	51	25	0	2	73	25	0	14	94	17	0	30	88	4	0	439
4:30 PM	13	77	34	0	4	97	16	0	15	109	27	0	24	97	2	0	515
4:45 PM	12	71	17	0	3	100	21	0	14	96	15	0	22	71	3	0	445
5:00 PM	18	60	32	0	4	76	20	0	19	89	14	0	13	89	1	0	435
5:15 PM	19	62	34	0	3	73	20	0	22	97	13	0	11	101	3	0	458
5:30 PM	23	66	26	0	1	93	22	0	12	103	18	0	10	113	4	0	491
5:45 PM	19	71	39	0	2	80	15	0	23	103	15	0	22	83	0	0	472
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	140	523	243	0	20	680	166	0	132	782	131	0	149	731	18	0	3715
	15.45%	57.73%	26.82%	0.00%	2.31%	78.52%	19.17%	0.00%	12.63%	74.83%	12.54%	0.00%	16.59%	81.40%	2.00%	0.00%	
<b>PEAK HR :</b>	04:00 PM - 05:00 PM																TOTAL
<b>PEAK HR VOL :</b>	61	264	112	0	10	358	89	0	56	390	71	0	93	345	10	0	1859
<b>PEAK HR FACTOR :</b>	0.763	0.857	0.778	0.000	0.625	0.895	0.824	0.000	0.933	0.894	0.657	0.000	0.775	0.889	0.625	0.000	0.902
			0.881				0.921				0.856				0.911		

# Otis Ave & Independence Ave

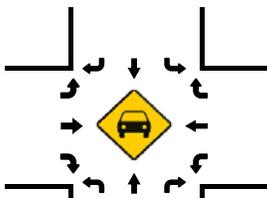
## Peak Hour Turning Movement Count

ID: 19-05618-011  
City: South Gate

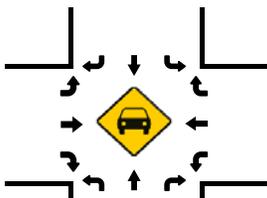
Day: Wednesday  
Date: 10/16/2019



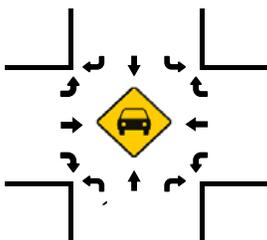
Total Vehicles (AM)



Total Vehicles (NOON)



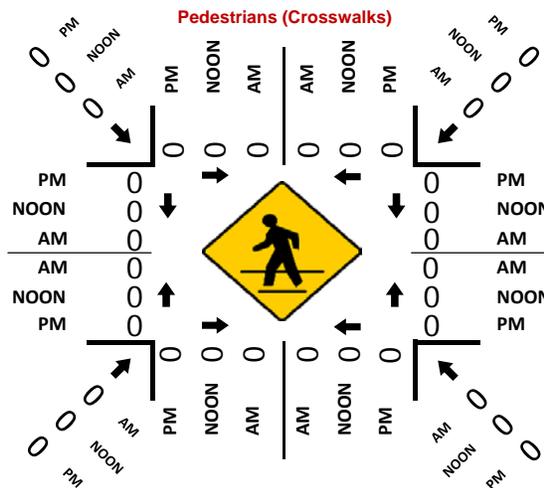
Total Vehicles (PM)



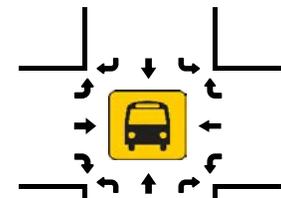
PM	622	0	122	474	48	PM
NOON	0	0	0	0	0	NOON
AM	589	0	107	513	84	AM

### NORTHBOUND

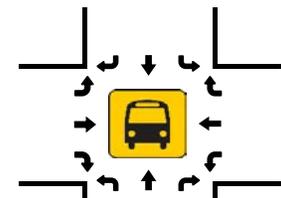
Otis Ave



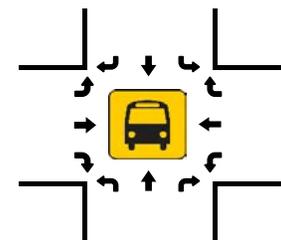
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Otis Ave & Independence Ave  
 City: South Gate  
 Control: Signalized

Project ID: 19-05618-011  
 Date: 10/16/2019

### Total

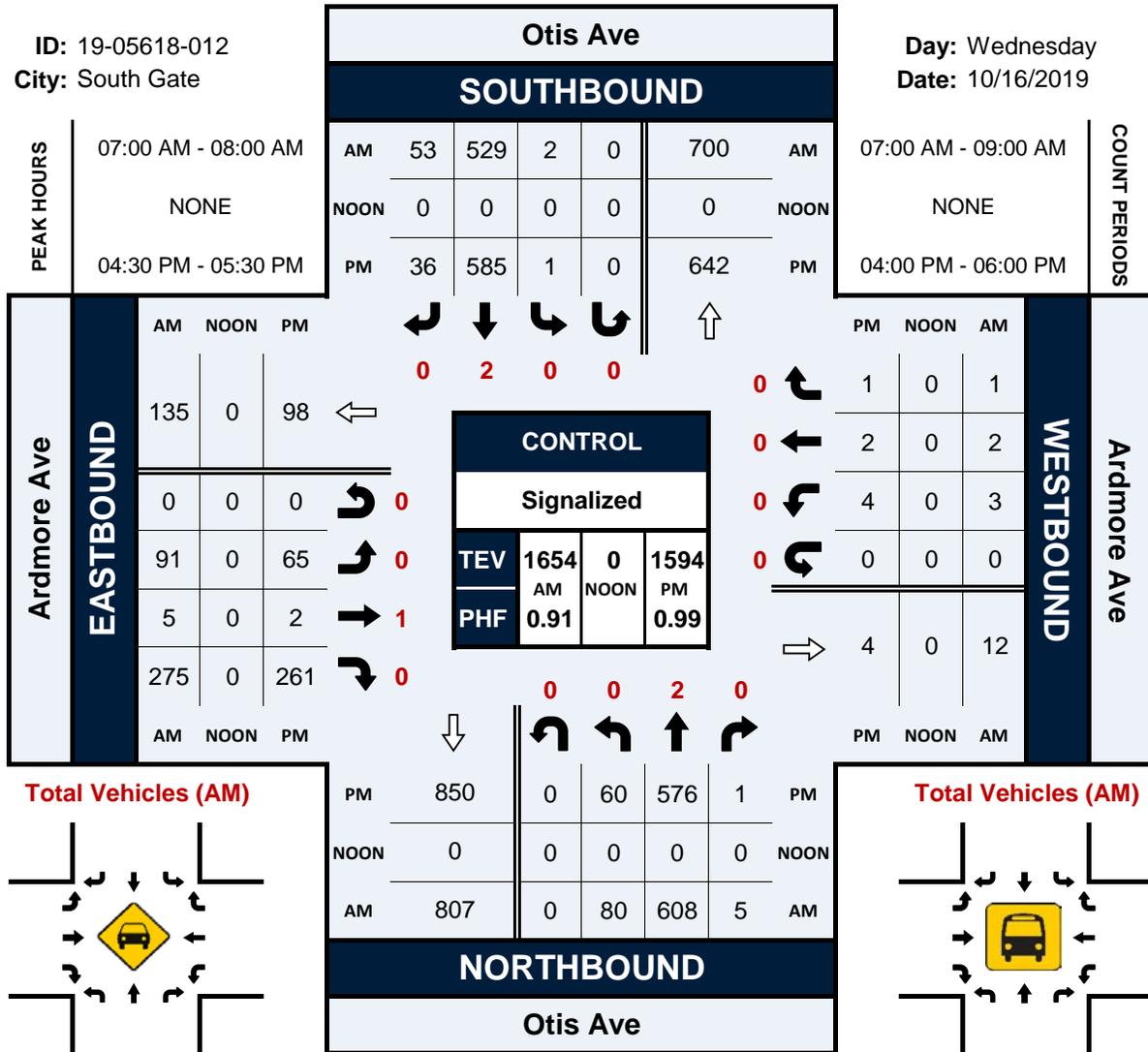
NS/EW Streets:	Otis Ave				Otis Ave				Independence Ave				Independence Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	28	117	10	0	11	103	6	0	5	21	32	0	5	8	1	0	347
7:15 AM	30	136	14	0	10	114	7	0	6	36	29	0	10	5	0	0	397
7:30 AM	35	122	32	0	16	102	10	0	8	27	27	0	7	9	2	0	397
7:45 AM	22	128	22	0	12	112	8	0	11	23	32	0	11	6	4	0	391
8:00 AM	20	127	16	0	2	117	6	0	7	16	23	0	5	8	3	0	350
8:15 AM	24	82	6	0	7	78	8	0	7	11	17	0	11	4	2	0	257
8:30 AM	10	89	4	0	1	72	5	0	7	15	14	0	9	5	0	0	231
8:45 AM	18	81	15	0	1	88	7	0	4	10	5	0	9	7	3	0	248
<b>TOTAL VOLUMES:</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	187	882	119	0	60	786	57	0	55	159	179	0	67	52	15	0	2618
<b>APPROACH %'s:</b>	15.74%	74.24%	10.02%	0.00%	6.64%	87.04%	6.31%	0.00%	13.99%	40.46%	45.55%	0.00%	50.00%	38.81%	11.19%	0.00%	
<b>PEAK HR:</b>	07:15 AM - 08:15 AM																TOTAL
<b>PEAK HR VOL:</b>	107	513	84	0	40	445	31	0	32	102	111	0	33	28	9	0	1535
<b>PEAK HR FACTOR:</b>	0.764	0.943	0.656	0.000	0.625	0.951	0.775	0.000	0.727	0.708	0.867	0.000	0.750	0.778	0.563	0.000	0.967
	0.931				0.977				0.863				0.833				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	32	108	7	0	2	112	8	0	4	6	11	0	11	10	4	0	315
4:15 PM	39	102	6	0	3	104	4	0	10	16	16	0	16	10	1	0	327
4:30 PM	25	133	9	0	4	122	3	0	3	12	20	0	11	13	2	0	357
4:45 PM	22	113	21	0	4	135	6	0	5	8	13	1	17	19	7	0	371
5:00 PM	37	127	12	0	2	114	6	0	9	17	15	0	17	17	2	0	375
5:15 PM	27	114	5	0	8	135	9	0	3	13	12	0	11	10	3	0	350
5:30 PM	36	120	10	0	5	121	7	0	5	12	24	0	8	11	4	0	363
5:45 PM	31	112	9	0	2	109	7	0	9	17	22	0	11	14	1	0	344
<b>TOTAL VOLUMES:</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	249	929	79	0	30	952	50	0	48	101	133	1	102	104	24	0	2802
<b>APPROACH %'s:</b>	19.81%	73.91%	6.28%	0.00%	2.91%	92.25%	4.84%	0.00%	16.96%	35.69%	47.00%	0.35%	44.35%	45.22%	10.43%	0.00%	
<b>PEAK HR:</b>	04:45 PM - 05:45 PM																TOTAL
<b>PEAK HR VOL:</b>	122	474	48	0	19	505	28	0	22	50	64	1	53	57	16	0	1459
<b>PEAK HR FACTOR:</b>	0.824	0.933	0.571	0.000	0.594	0.935	0.778	0.000	0.611	0.735	0.667	0.250	0.779	0.750	0.571	0.000	0.973
	0.915				0.908				0.835				0.733				

# Otis Ave & Ardmore Ave

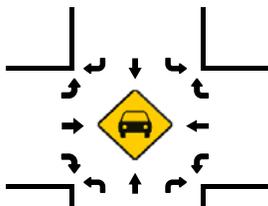
## Peak Hour Turning Movement Count

ID: 19-05618-012  
City: South Gate

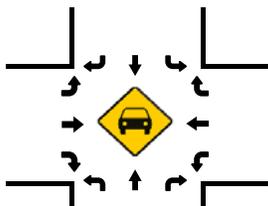
Day: Wednesday  
Date: 10/16/2019



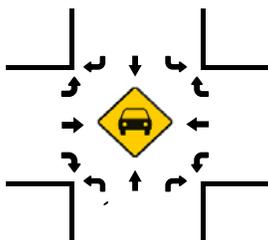
Total Vehicles (AM)



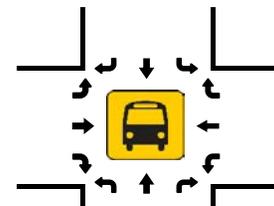
Total Vehicles (NOON)



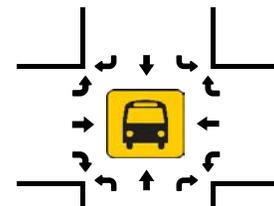
Total Vehicles (PM)



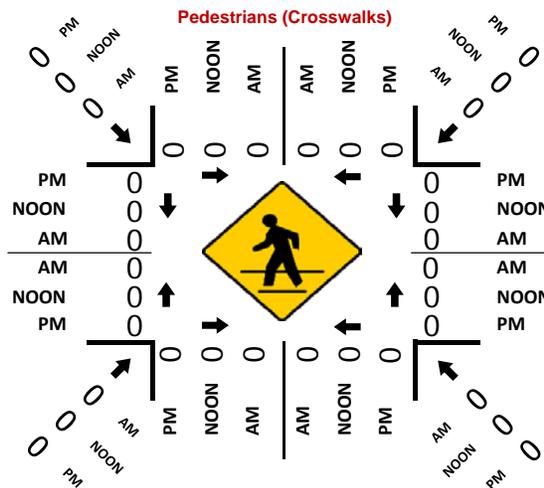
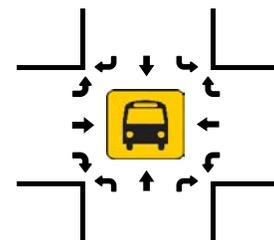
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Otis Ave & Ardmore Ave  
 City: South Gate  
 Control: Signalized

Project ID: 19-05618-012  
 Date: 10/16/2019

### Total

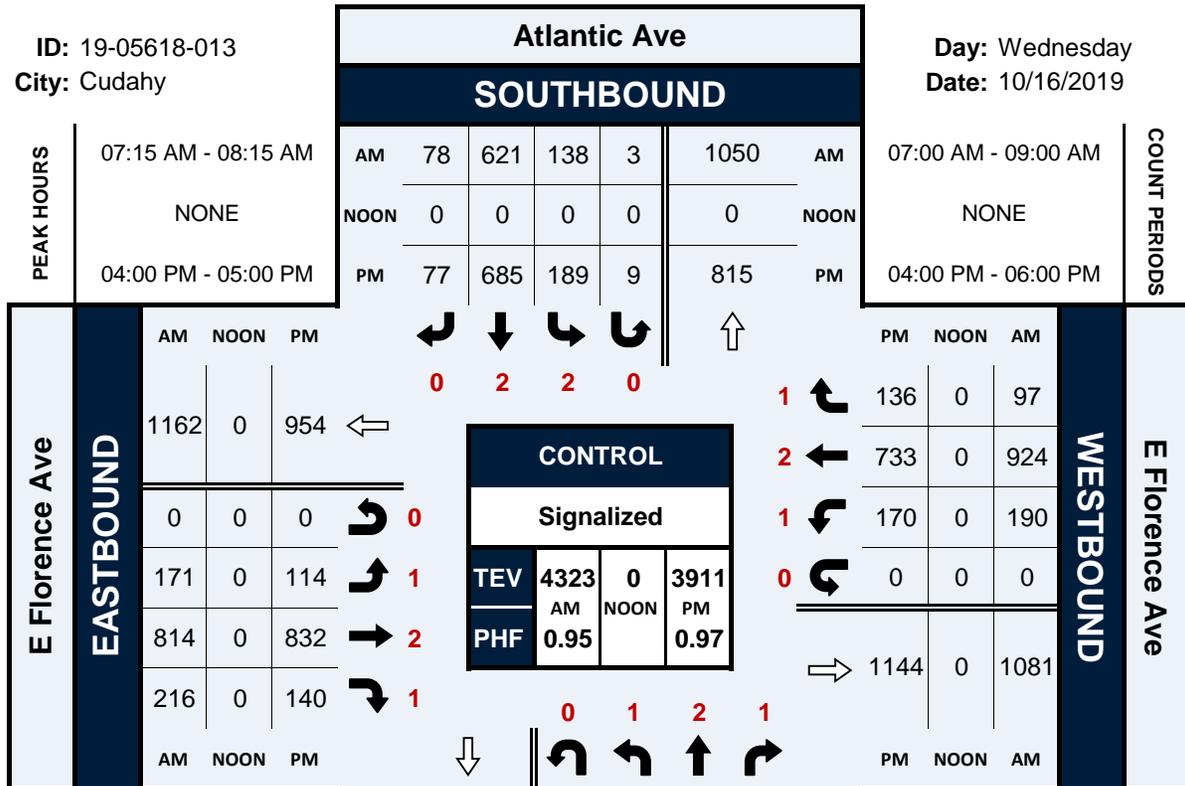
NS/EW Streets:	Otis Ave				Otis Ave				Ardmore Ave				Ardmore Ave				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	13	142	0	0	0	132	8	0	14	0	72	0	0	0	0	0	381
7:15 AM	28	155	2	0	0	147	8	0	24	2	88	0	0	0	0	0	454
7:30 AM	23	156	2	0	1	120	13	0	31	2	59	0	2	1	0	0	410
7:45 AM	16	155	1	0	1	130	24	0	22	1	56	0	1	1	1	0	409
8:00 AM	14	135	2	0	0	137	8	0	23	0	58	0	0	0	1	0	378
8:15 AM	15	97	1	0	1	101	4	0	15	0	26	0	0	0	0	0	260
8:30 AM	12	95	2	0	0	86	8	0	14	0	41	0	1	1	0	0	260
8:45 AM	7	98	1	0	0	97	6	0	10	2	36	0	0	1	0	0	258
<b>TOTAL VOLUMES :</b>	128	1033	11	0	3	950	79	0	153	7	436	0	4	4	2	0	2810
<b>APPROACH %'s :</b>	10.92%	88.14%	0.94%	0.00%	0.29%	92.05%	7.66%	0.00%	25.67%	1.17%	73.15%	0.00%	40.00%	40.00%	20.00%	0.00%	
<b>PEAK HR :</b>	07:00 AM - 08:00 AM																
<b>PEAK HR VOL :</b>	80	608	5	0	2	529	53	0	91	5	275	0	3	2	1	0	1654
<b>PEAK HR FACTOR :</b>	0.714	0.974	0.625	0.000	0.500	0.900	0.552	0.000	0.734	0.625	0.781	0.000	0.375	0.500	0.250	0.000	0.911
	0.936				0.942				0.814				0.500				
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	9	137	2	0	1	125	8	0	8	1	46	0	1	1	2	0	341
4:15 PM	12	139	0	0	0	129	7	0	14	0	51	0	3	2	0	0	357
4:30 PM	16	141	1	0	0	146	5	0	20	0	66	0	0	0	0	0	395
4:45 PM	10	135	0	0	1	159	7	0	17	1	68	0	4	0	0	0	402
5:00 PM	20	162	0	0	0	137	10	0	18	0	51	0	0	1	0	0	399
5:15 PM	14	138	0	0	0	143	14	0	10	1	76	0	0	1	1	0	398
5:30 PM	10	146	1	0	1	142	7	0	15	1	67	0	0	0	2	0	392
5:45 PM	9	144	1	0	0	138	7	0	8	0	67	0	2	0	0	0	376
<b>TOTAL VOLUMES :</b>	100	1142	5	0	3	1119	65	0	110	4	492	0	10	5	5	0	3060
<b>APPROACH %'s :</b>	8.02%	91.58%	0.40%	0.00%	0.25%	94.27%	5.48%	0.00%	18.15%	0.66%	81.19%	0.00%	50.00%	25.00%	25.00%	0.00%	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																
<b>PEAK HR VOL :</b>	60	576	1	0	1	585	36	0	65	2	261	0	4	2	1	0	1594
<b>PEAK HR FACTOR :</b>	0.750	0.889	0.250	0.000	0.250	0.920	0.643	0.000	0.813	0.500	0.859	0.000	0.250	0.500	0.250	0.000	0.991
	0.875				0.931				0.943				0.438				

# Atlantic Ave & E Florence Ave

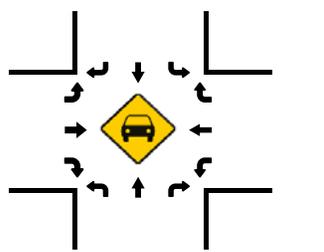
## Peak Hour Turning Movement Count

ID: 19-05618-013  
City: Cudahy

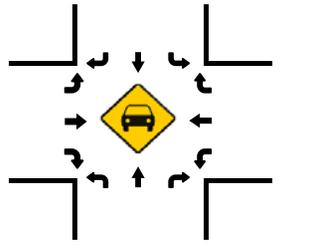
Day: Wednesday  
Date: 10/16/2019



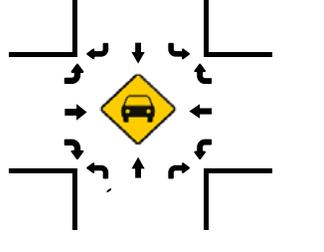
Total Vehicles (AM)



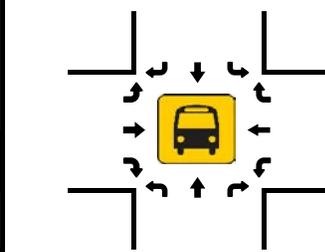
Total Vehicles (NOON)



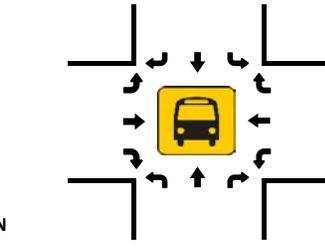
Total Vehicles (PM)



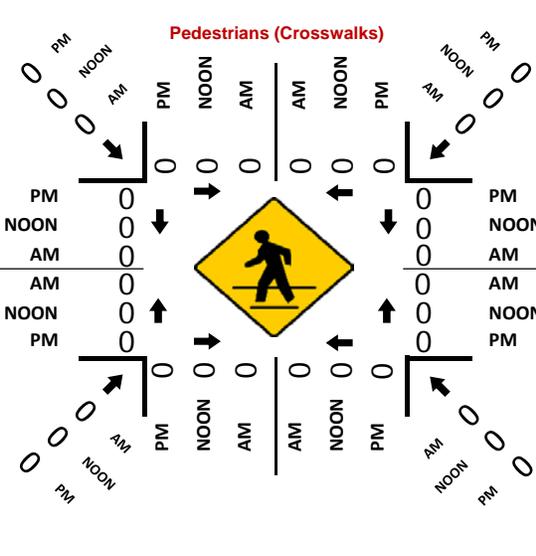
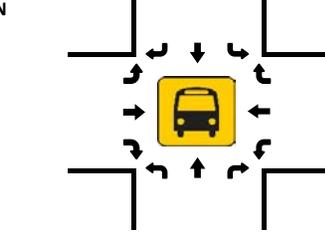
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Atlantic Ave & E Florence Ave  
 City: Cudahy  
 Control: Signalized

Project ID: 19-05618-013  
 Date: 10/16/2019

### Total

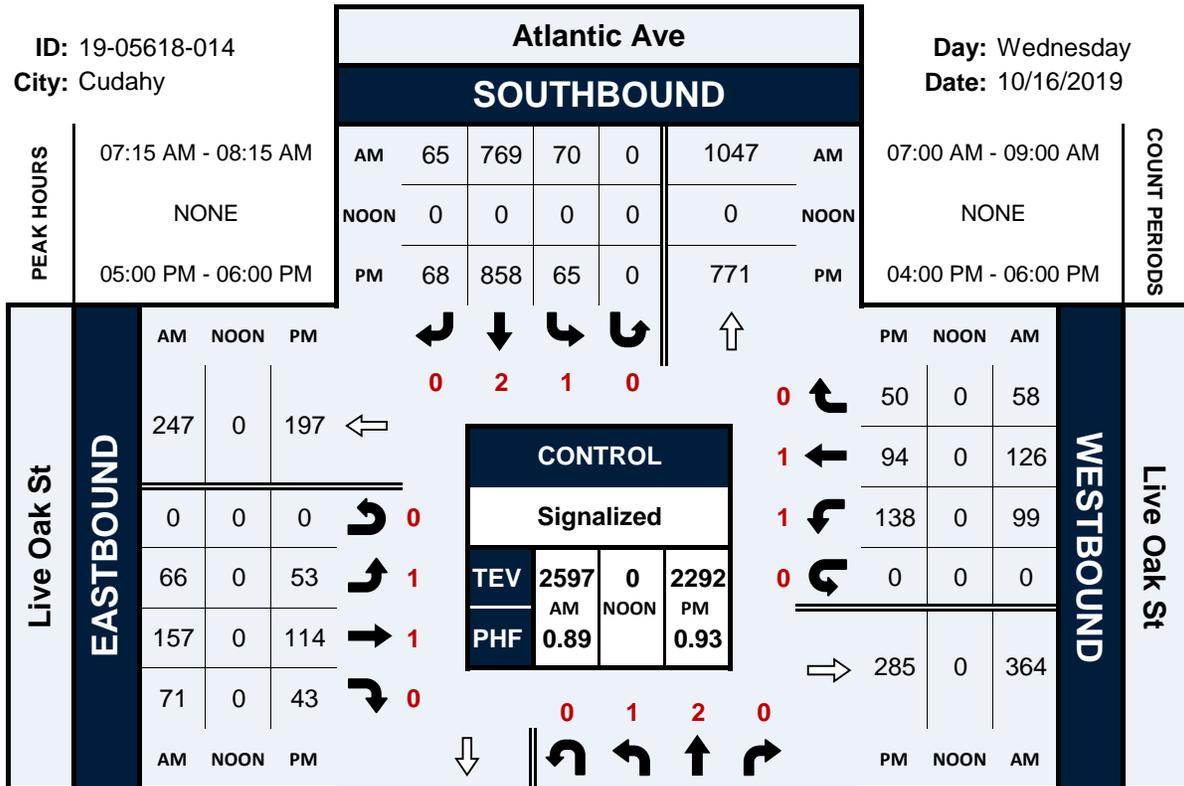
NS/EW Streets:		Atlantic Ave				Atlantic Ave				E Florence Ave				E Florence Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	1 NL	2 NT	1 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	2 WT	1 WR	0 WU		
7:00 AM	49	185	28	0	35	91	15	0	45	188	27	0	33	243	18	0	957	
7:15 AM	61	217	20	1	38	140	19	1	45	203	47	0	33	280	27	0	1132	
7:30 AM	22	204	32	1	36	164	20	0	45	202	64	0	54	239	30	0	1113	
7:45 AM	50	194	42	0	30	151	16	2	44	224	64	0	49	195	19	0	1080	
8:00 AM	27	164	35	1	34	166	23	0	37	185	41	0	54	210	21	0	998	
8:15 AM	34	129	16	0	37	155	15	0	29	171	28	0	46	192	22	0	874	
8:30 AM	24	106	20	0	37	117	19	1	35	187	32	0	56	169	20	0	823	
8:45 AM	32	146	25	0	33	109	24	1	20	152	23	0	39	196	32	0	832	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
<b>APPROACH %'s :</b>	299	1345	218	3	280	1093	151	5	300	1512	326	0	364	1724	189	0	7809	
	16.03%	72.12%	11.69%	0.16%	18.31%	71.48%	9.88%	0.33%	14.03%	70.72%	15.25%	0.00%	15.99%	75.71%	8.30%	0.00%		
<b>PEAK HR :</b>	07:15 AM - 08:15 AM																<b>TOTAL</b>	
<b>PEAK HR VOL :</b>	160	779	129	3	138	621	78	3	171	814	216	0	190	924	97	0	4323	
<b>PEAK HR FACTOR :</b>	0.656	0.897	0.768	0.750	0.908	0.935	0.848	0.375	0.950	0.908	0.844	0.000	0.880	0.825	0.808	0.000	0.955	
	0.895				0.942				0.904				0.890					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	1 NL	2 NT	1 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	2 WT	1 WR	0 WU		
4:00 PM	31	131	31	1	39	175	16	0	29	193	42	0	43	183	39	0	953	
4:15 PM	37	132	33	0	46	177	18	1	30	207	28	0	37	175	34	0	955	
4:30 PM	34	161	32	1	36	182	22	5	27	211	27	0	47	180	38	0	1003	
4:45 PM	42	132	27	1	68	151	21	3	28	221	43	0	43	195	25	0	1000	
5:00 PM	31	139	28	1	39	186	21	0	21	201	39	0	38	162	32	0	938	
5:15 PM	29	115	20	0	48	171	15	1	33	200	33	0	48	183	42	0	938	
5:30 PM	45	146	20	0	22	201	16	1	42	199	34	0	50	172	26	0	974	
5:45 PM	29	141	37	1	52	185	19	1	29	219	35	0	42	200	31	0	1021	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
<b>APPROACH %'s :</b>	278	1097	228	5	350	1428	148	12	239	1651	281	0	348	1450	267	0	7782	
	17.29%	68.22%	14.18%	0.31%	18.06%	73.68%	7.64%	0.62%	11.01%	76.05%	12.94%	0.00%	16.85%	70.22%	12.93%	0.00%		
<b>PEAK HR :</b>	04:00 PM - 05:00 PM																<b>TOTAL</b>	
<b>PEAK HR VOL :</b>	144	556	123	3	189	685	77	9	114	832	140	0	170	733	136	0	3911	
<b>PEAK HR FACTOR :</b>	0.857	0.863	0.932	0.750	0.695	0.941	0.875	0.450	0.950	0.941	0.814	0.000	0.904	0.940	0.872	0.000	0.975	
	0.906				0.980				0.930				0.980					

# Atlantic Ave & Live Oak St

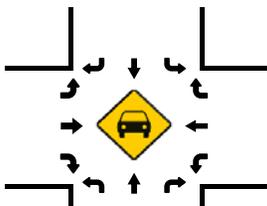
## Peak Hour Turning Movement Count

ID: 19-05618-014  
City: Cudahy

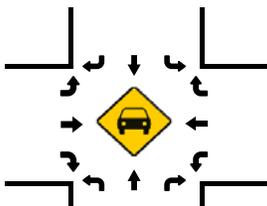
Day: Wednesday  
Date: 10/16/2019



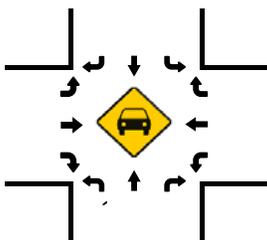
Total Vehicles (AM)



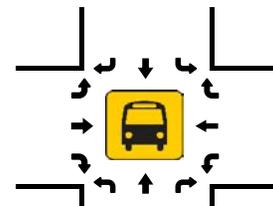
Total Vehicles (NOON)



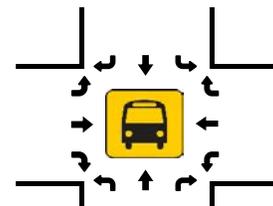
Total Vehicles (PM)



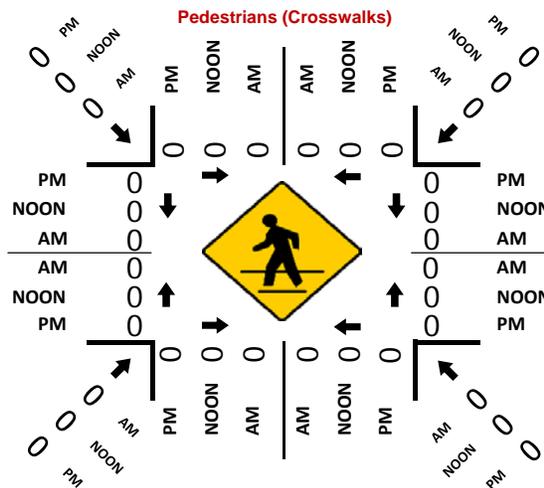
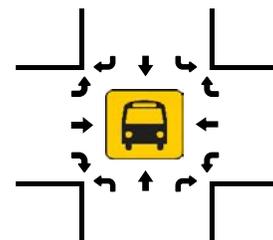
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Atlantic Ave & Live Oak St  
 City: Cudahy  
 Control: Signalized

Project ID: 19-05618-014  
 Date: 10/16/2019

### Total

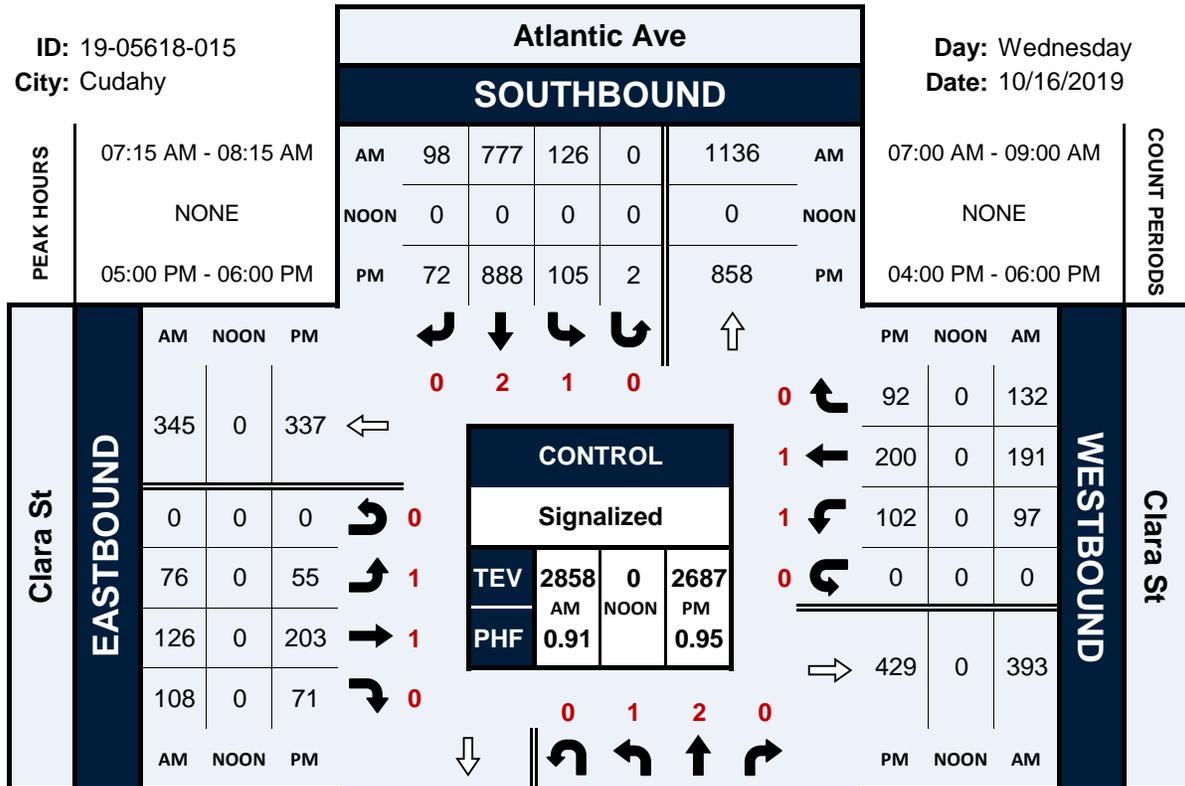
NS/EW Streets:		Atlantic Ave				Atlantic Ave				Live Oak St				Live Oak St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	6	269	25	0	8	132	5	0	7	19	7	0	11	16	26	0	531	
7:15 AM	4	240	28	0	12	154	12	0	11	33	15	0	20	21	21	0	571	
7:30 AM	20	247	37	0	20	218	17	0	16	43	26	0	28	39	16	0	727	
7:45 AM	22	241	37	0	28	177	26	0	19	48	19	0	24	41	8	0	690	
8:00 AM	10	195	35	0	10	220	10	0	20	33	11	0	27	25	13	0	609	
8:15 AM	8	156	28	0	10	198	7	0	8	29	9	0	19	21	9	0	502	
8:30 AM	3	150	17	0	4	183	5	0	6	15	7	0	21	12	7	0	430	
8:45 AM	3	165	18	0	5	146	6	0	14	11	6	0	18	16	13	0	421	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
<b>APPROACH %'s :</b>	76	1663	225	0	97	1428	88	0	101	231	100	0	168	191	113	0	4481	
	3.87%	84.67%	11.46%	0.00%	6.01%	88.53%	5.46%	0.00%	23.38%	53.47%	23.15%	0.00%	35.59%	40.47%	23.94%	0.00%		
<b>PEAK HR :</b>	07:15 AM - 08:15 AM																<b>TOTAL</b>	
<b>PEAK HR VOL :</b>	56	923	137	0	70	769	65	0	66	157	71	0	99	126	58	0	2597	
<b>PEAK HR FACTOR :</b>	0.636	0.934	0.926	0.000	0.625	0.874	0.625	0.000	0.825	0.818	0.683	0.000	0.884	0.768	0.690	0.000	0.893	
	0.918				0.886				0.855				0.852					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	0	0		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	7	163	20	0	19	205	14	0	16	35	9	0	31	17	9	0	545	
4:15 PM	9	189	16	0	8	222	8	0	10	34	9	0	38	24	11	0	578	
4:30 PM	7	197	28	0	14	194	19	0	13	25	9	0	34	22	12	0	574	
4:45 PM	4	164	30	0	13	205	11	0	16	37	7	0	37	22	8	0	554	
5:00 PM	15	159	21	0	21	203	19	0	5	21	9	0	23	16	14	0	526	
5:15 PM	9	146	28	0	13	206	12	0	16	25	8	0	40	26	8	0	537	
5:30 PM	7	189	30	0	15	235	16	0	8	32	8	0	34	19	20	0	613	
5:45 PM	4	174	27	0	16	214	21	0	24	36	18	0	41	33	8	0	616	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
<b>APPROACH %'s :</b>	62	1381	200	0	119	1684	120	0	108	245	77	0	278	179	90	0	4543	
	3.77%	84.05%	12.17%	0.00%	6.19%	87.57%	6.24%	0.00%	25.12%	56.98%	17.91%	0.00%	50.82%	32.72%	16.45%	0.00%		
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																<b>TOTAL</b>	
<b>PEAK HR VOL :</b>	35	668	106	0	65	858	68	0	53	114	43	0	138	94	50	0	2292	
<b>PEAK HR FACTOR :</b>	0.583	0.884	0.883	0.000	0.774	0.913	0.810	0.000	0.552	0.792	0.597	0.000	0.841	0.712	0.625	0.000	0.930	
	0.895				0.931				0.673				0.860					

# Atlantic Ave & Clara St

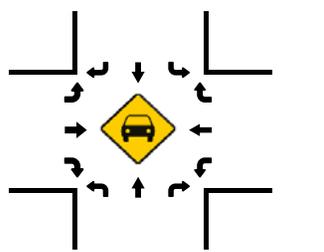
## Peak Hour Turning Movement Count

ID: 19-05618-015  
City: Cudahy

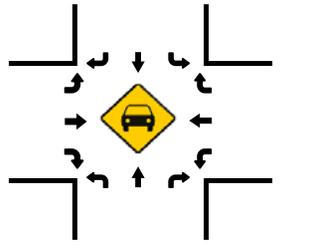
Day: Wednesday  
Date: 10/16/2019



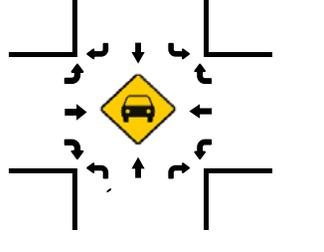
Total Vehicles (AM)



Total Vehicles (NOON)



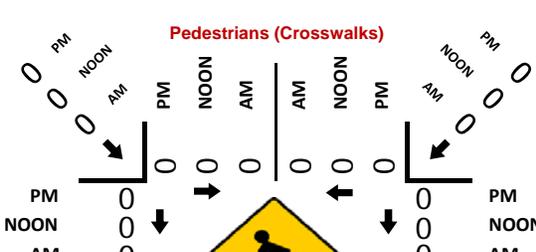
Total Vehicles (PM)



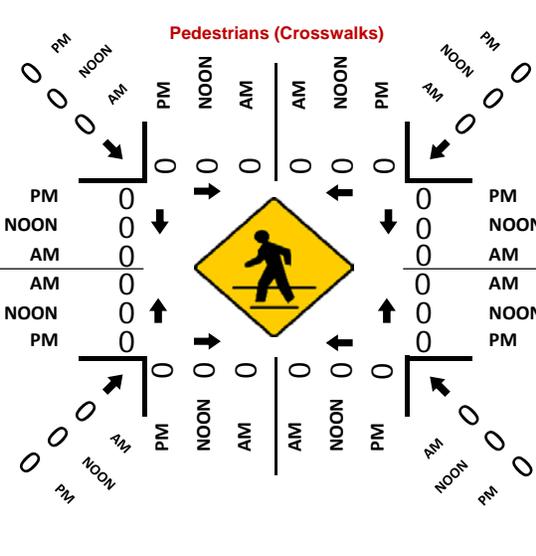
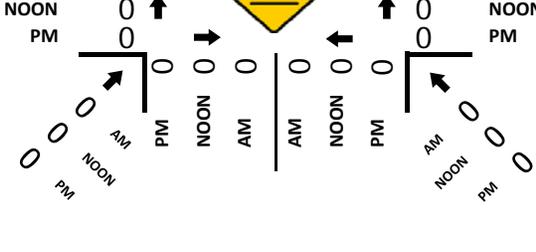
PM	1063	2	65	709	121	PM
NOON	0	0	0	0	0	NOON
AM	984	2	56	928	141	AM

### Atlantic Ave NORTHBOUND

Total Vehicles (AM)



Total Vehicles (NOON)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Atlantic Ave & Clara St  
 City: Cudahy  
 Control: Signalized

Project ID: 19-05618-015  
 Date: 10/16/2019

### Total

NS/EW Streets:	Atlantic Ave				Atlantic Ave				Clara St				Clara St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
7:00 AM	4	247	19	0	18	124	8	0	13	41	18	0	23	42	33	0	590
7:15 AM	11	223	19	1	38	148	22	0	15	38	15	0	23	53	42	0	648
7:30 AM	21	256	37	0	29	221	47	0	21	21	46	0	20	42	27	0	788
7:45 AM	15	241	40	1	35	185	17	0	25	28	26	0	25	57	37	0	732
8:00 AM	9	208	45	0	24	223	12	0	15	39	21	0	29	39	26	0	690
8:15 AM	9	185	12	1	14	207	6	0	8	41	12	0	26	46	24	0	591
8:30 AM	11	141	17	0	6	191	9	0	8	29	14	0	15	31	13	0	485
8:45 AM	10	169	14	0	14	142	9	0	6	21	6	0	28	38	18	0	475
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	90	1670	203	3	178	1441	130	0	111	258	158	0	189	348	220	0	4999
	4.58%	84.94%	10.33%	0.15%	10.18%	82.39%	7.43%	0.00%	21.06%	48.96%	29.98%	0.00%	24.97%	45.97%	29.06%	0.00%	
<b>PEAK HR :</b>	07:15 AM - 08:15 AM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	56	928	141	2	126	777	98	0	76	126	108	0	97	191	132	0	2858
<b>PEAK HR FACTOR :</b>	0.667	0.906	0.783	0.500	0.829	0.871	0.521	0.000	0.760	0.808	0.587	0.000	0.836	0.838	0.786	0.000	0.907
	0.897				0.843				0.881				0.882				
PM	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
4:00 PM	7	200	6	0	10	220	10	0	8	35	9	0	22	18	19	0	564
4:15 PM	9	188	8	1	10	212	12	0	10	38	11	0	24	22	23	0	568
4:30 PM	10	195	12	0	18	210	15	0	14	42	14	0	25	35	28	0	618
4:45 PM	15	174	20	1	22	206	14	0	10	49	16	0	21	55	22	0	625
5:00 PM	20	179	31	0	32	211	16	0	12	47	16	0	25	47	20	0	656
5:15 PM	18	161	38	1	17	208	14	0	16	58	17	0	29	46	23	0	646
5:30 PM	17	174	26	1	34	225	26	1	12	45	20	0	26	46	28	0	681
5:45 PM	10	195	26	0	22	244	16	1	15	53	18	0	22	61	21	0	704
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	106	1466	167	4	165	1736	123	2	97	367	121	0	194	330	184	0	5062
	6.08%	84.11%	9.58%	0.23%	8.14%	85.69%	6.07%	0.10%	16.58%	62.74%	20.68%	0.00%	27.40%	46.61%	25.99%	0.00%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	65	709	121	2	105	888	72	2	55	203	71	0	102	200	92	0	2687
<b>PEAK HR FACTOR :</b>	0.813	0.909	0.796	0.500	0.772	0.910	0.692	0.500	0.859	0.875	0.888	0.000	0.879	0.820	0.821	0.000	0.954
	0.971				0.933				0.904				0.947				



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Atlantic Ave & Elizabeth St  
 City: Cudahy  
 Control: Signalized

Project ID: 19-05618-016  
 Date: 10/16/2019

### Total

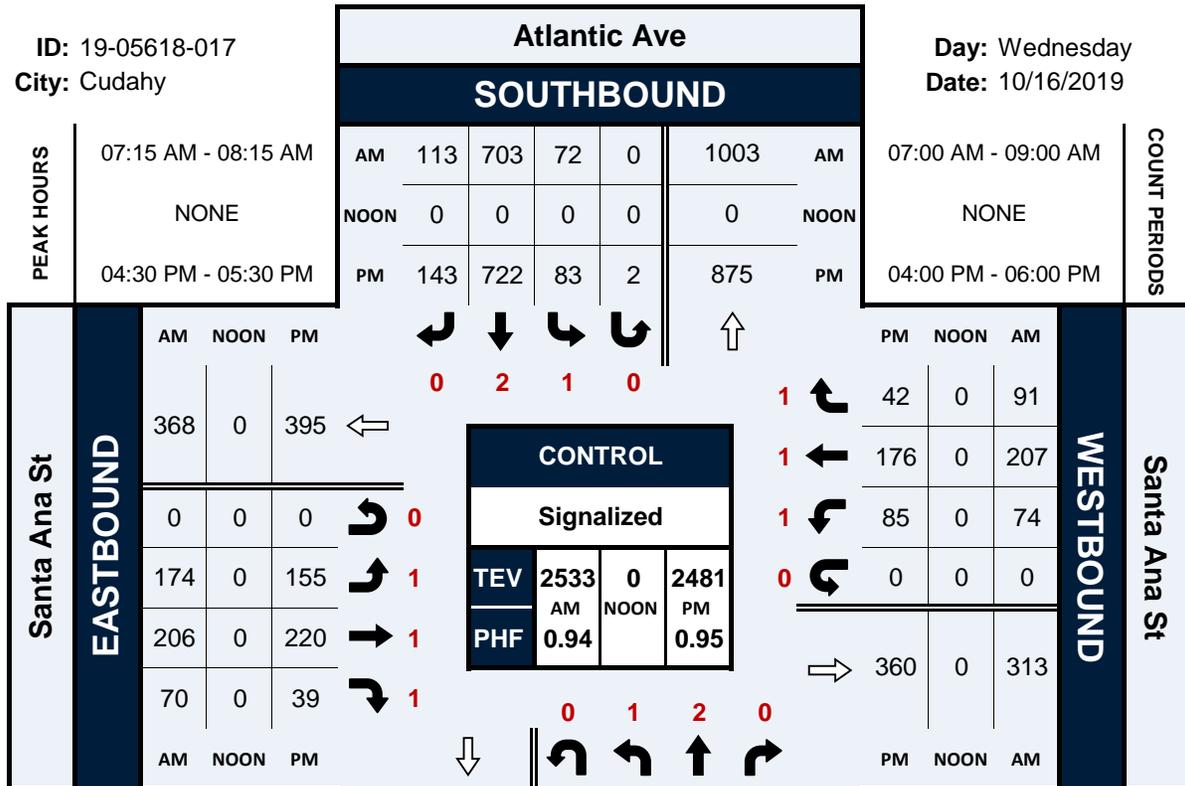
NS/EW Streets:	Atlantic Ave				Atlantic Ave				Elizabeth St				Elizabeth St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	0.5 ET	0.5 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
7:00 AM	3	224	14	0	8	137	14	0	37	24	13	0	11	12	15	0	
7:15 AM	4	229	8	0	13	172	17	0	28	23	12	0	12	12	18	0	
7:30 AM	7	222	35	0	23	216	33	0	41	41	11	0	15	24	26	0	
7:45 AM	10	220	41	0	30	170	26	0	36	44	19	0	25	21	46	0	
8:00 AM	9	194	13	0	17	216	20	0	24	22	8	0	36	25	45	0	
8:15 AM	4	180	11	0	18	203	27	1	18	19	7	0	18	10	20	0	
8:30 AM	5	143	6	0	13	175	12	0	13	8	10	0	15	18	9	0	
8:45 AM	15	172	10	0	12	125	17	0	18	15	8	0	13	10	18	0	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
<b>APPROACH %'s :</b>	57	1584	138	0	134	1414	166	1	215	196	88	0	145	132	197	0	
	3.20%	89.04%	7.76%	0.00%	7.81%	82.45%	9.68%	0.06%	43.09%	39.28%	17.64%	0.00%	30.59%	27.85%	41.56%	0.00%	
<b>PEAK HR :</b>	07:15 AM - 08:15 AM																
<b>PEAK HR VOL :</b>	30	865	97	0	83	774	96	0	129	130	50	0	88	82	135	0	
<b>PEAK HR FACTOR :</b>	0.750	0.944	0.591	0.000	0.692	0.896	0.727	0.000	0.787	0.739	0.658	0.000	0.611	0.820	0.734	0.000	
	0.915				0.876				0.780				0.719				
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	0.5 ET	0.5 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
4:00 PM	8	179	15	0	16	202	37	0	28	35	12	0	17	14	23	0	
4:15 PM	14	167	6	0	24	205	27	0	28	16	7	0	15	29	20	0	
4:30 PM	13	193	14	0	19	211	28	0	23	23	12	0	14	21	19	0	
4:45 PM	8	167	16	0	23	194	19	0	25	36	11	0	14	19	12	0	
5:00 PM	13	196	14	2	24	212	25	1	29	25	29	0	18	19	20	0	
5:15 PM	10	155	11	0	20	197	24	0	24	22	19	0	7	18	17	0	
5:30 PM	11	198	25	0	27	226	31	1	15	30	16	0	8	23	16	0	
5:45 PM	18	157	15	0	20	196	33	0	27	28	12	0	21	30	31	0	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
<b>APPROACH %'s :</b>	95	1412	116	2	173	1643	224	2	199	215	118	0	114	173	158	0	
	5.85%	86.89%	7.14%	0.12%	8.47%	80.46%	10.97%	0.10%	37.41%	40.41%	22.18%	0.00%	25.62%	38.88%	35.51%	0.00%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																
<b>PEAK HR VOL :</b>	52	706	65	2	91	831	113	2	95	105	76	0	54	90	84	0	
<b>PEAK HR FACTOR :</b>	0.722	0.891	0.650	0.250	0.843	0.919	0.856	0.500	0.819	0.875	0.655	0.000	0.643	0.750	0.677	0.000	
	0.881				0.910				0.831				0.695				

# Atlantic Ave & Santa Ana St

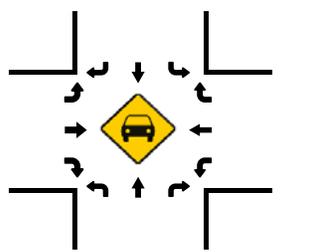
## Peak Hour Turning Movement Count

ID: 19-05618-017  
City: Cudahy

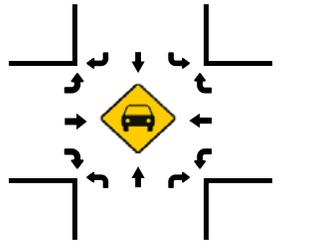
Day: Wednesday  
Date: 10/16/2019



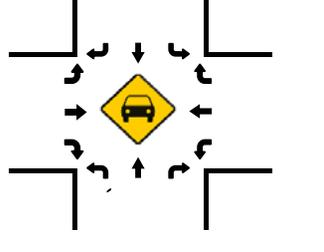
Total Vehicles (AM)



Total Vehicles (NOON)



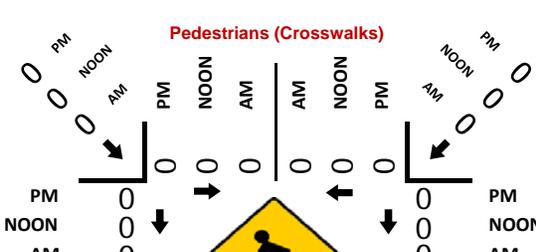
Total Vehicles (PM)



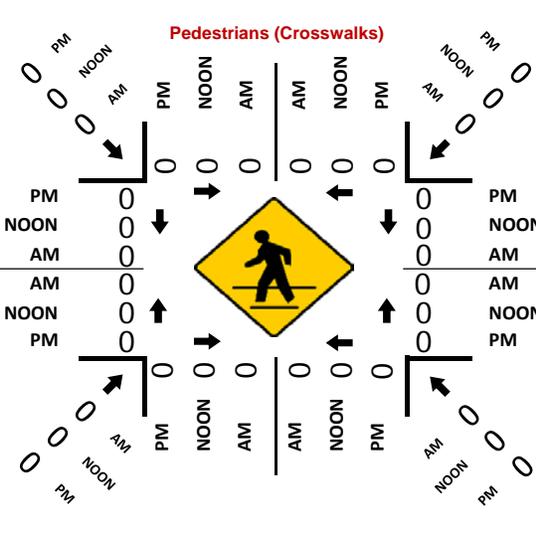
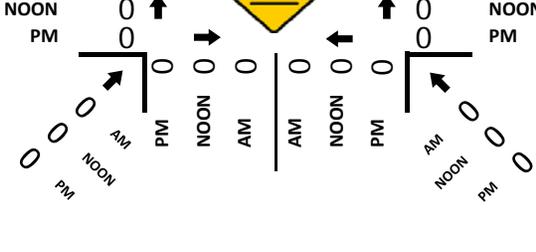
PM	851	5	76	676	57	PM
NOON	0	0	0	0	0	NOON
AM	849	2	48	738	35	AM

### Atlantic Ave NORTHBOUND

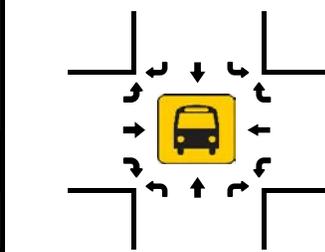
Total Vehicles (AM)



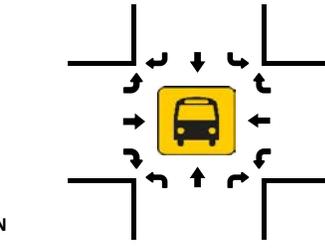
Total Vehicles (NOON)



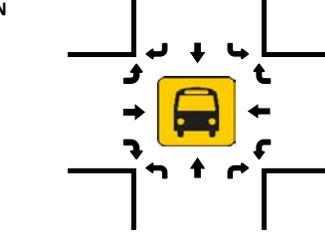
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Atlantic Ave & Santa Ana St  
 City: Cudahy  
 Control: Signalized

Project ID: 19-05618-017  
 Date: 10/16/2019

### Total

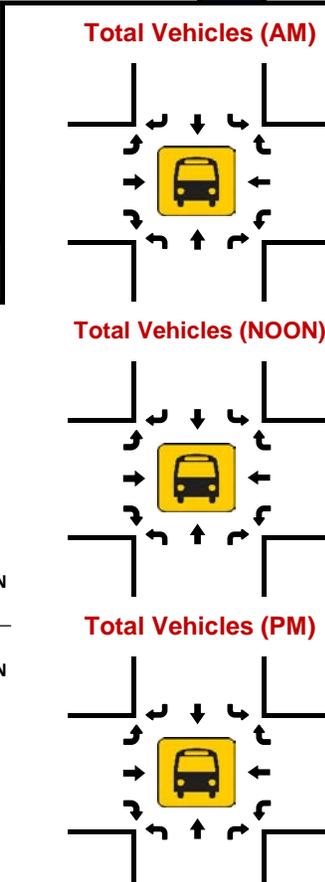
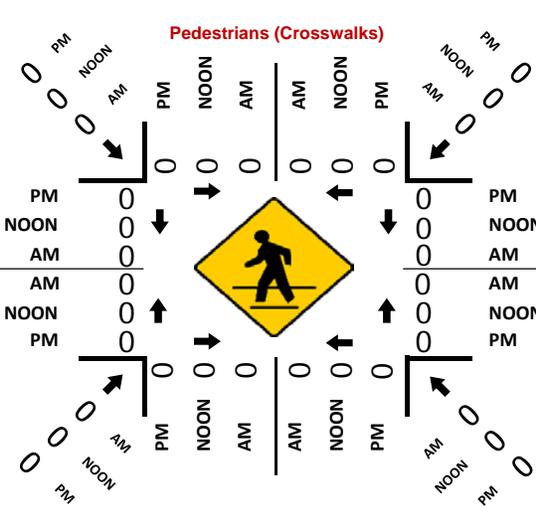
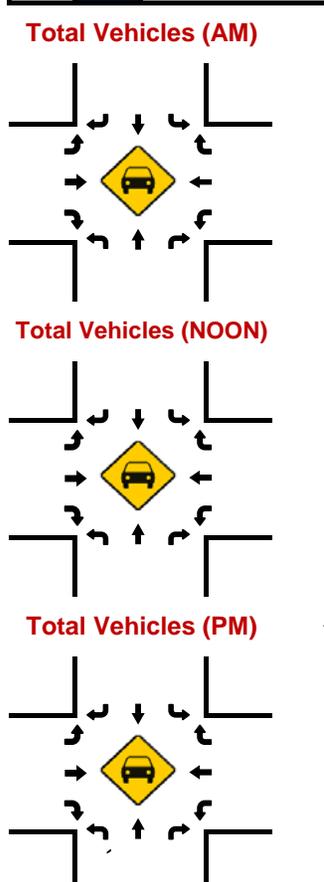
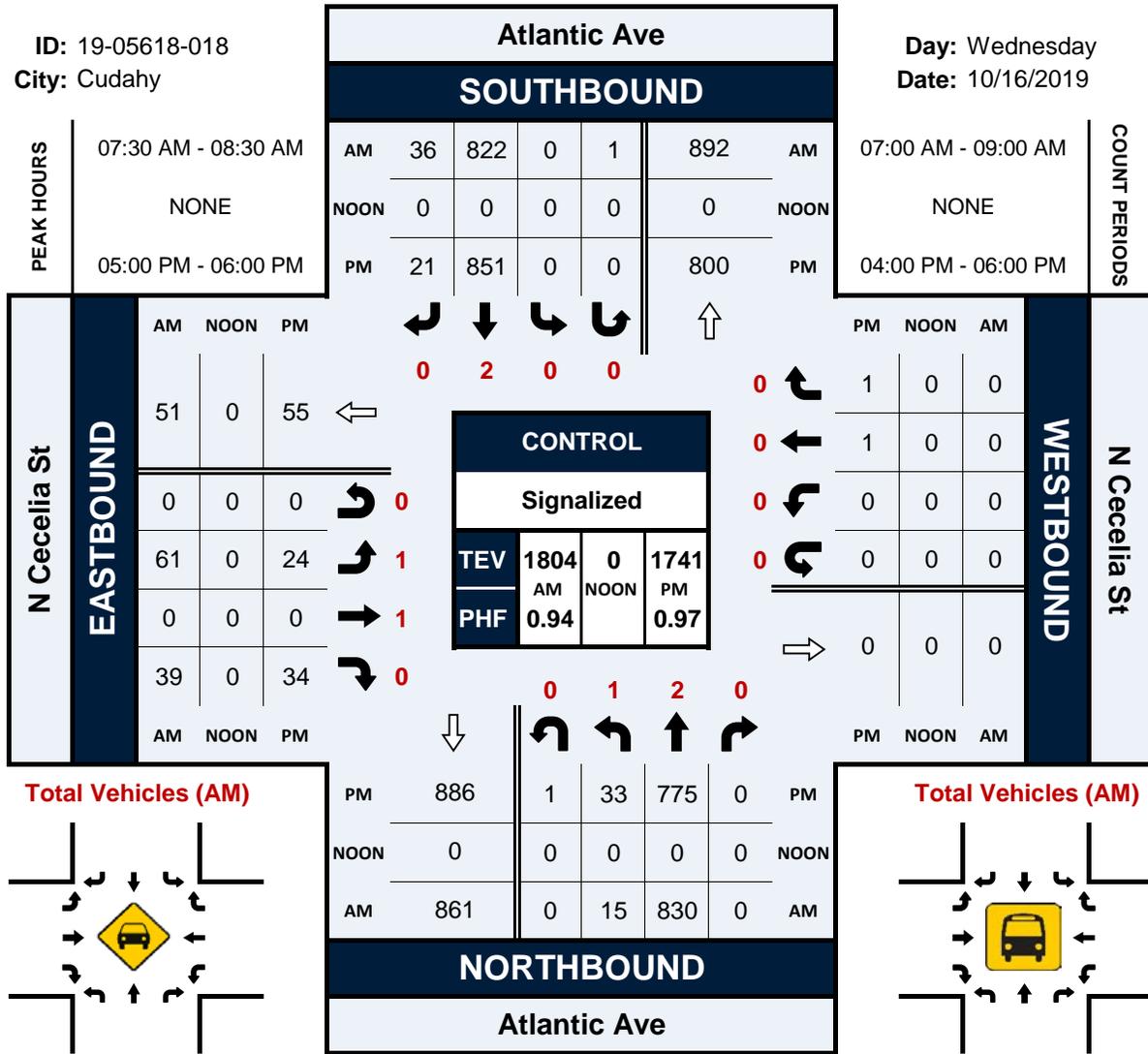
NS/EW Streets:	Atlantic Ave				Atlantic Ave				Santa Ana St				Santa Ana St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	1 ET	1 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	13	166	4	0	8	139	15	0	38	43	17	0	14	46	24	0	527
7:15 AM	11	179	4	1	7	150	28	0	35	50	23	0	26	57	24	0	595
7:30 AM	6	194	8	0	19	194	28	0	53	58	19	0	11	53	29	0	672
7:45 AM	15	201	10	1	21	170	27	0	42	57	11	0	21	59	24	0	659
8:00 AM	16	164	13	0	25	189	30	0	44	41	17	0	16	38	14	0	607
8:15 AM	11	165	8	1	11	182	26	0	34	40	18	0	10	30	9	0	545
8:30 AM	15	128	7	2	7	151	21	0	35	33	15	0	10	40	7	0	471
8:45 AM	11	138	6	1	14	129	19	0	38	37	17	0	9	35	17	0	471
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	98	1335	60	6	112	1304	194	0	319	359	137	0	117	358	148	0	4547
	6.54%	89.06%	4.00%	0.40%	6.96%	80.99%	12.05%	0.00%	39.14%	44.05%	16.81%	0.00%	18.78%	57.46%	23.76%	0.00%	
<b>PEAK HR :</b>	07:15 AM - 08:15 AM																TOTAL
<b>PEAK HR VOL :</b>	48	738	35	2	72	703	113	0	174	206	70	0	74	207	91	0	2533
<b>PEAK HR FACTOR :</b>	0.750	0.918	0.673	0.500	0.720	0.906	0.942	0.000	0.821	0.888	0.761	0.000	0.712	0.877	0.784	0.000	0.942
	0.906				0.910				0.865				0.869				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	1 ET	1 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
4:00 PM	11	151	14	0	22	164	33	0	38	51	14	0	19	55	10	0	582
4:15 PM	27	144	11	1	26	170	35	1	32	64	11	0	20	42	9	0	593
4:30 PM	21	191	8	1	21	181	36	1	41	48	11	0	14	39	11	0	624
4:45 PM	14	161	13	2	19	173	37	0	36	55	5	0	21	47	13	0	596
5:00 PM	18	166	20	1	25	192	35	1	41	49	15	0	30	50	12	0	655
5:15 PM	23	158	16	1	18	176	35	0	37	68	8	0	20	40	6	0	606
5:30 PM	15	171	19	2	21	177	26	0	38	42	10	0	16	42	17	0	596
5:45 PM	18	159	11	1	15	200	34	0	38	55	8	0	20	37	11	0	607
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	147	1301	112	9	167	1433	271	3	301	432	82	0	160	352	89	0	4859
	9.37%	82.92%	7.14%	0.57%	8.91%	76.47%	14.46%	0.16%	36.93%	53.01%	10.06%	0.00%	26.62%	58.57%	14.81%	0.00%	
<b>PEAK HR :</b>	04:30 PM - 05:30 PM																TOTAL
<b>PEAK HR VOL :</b>	76	676	57	5	83	722	143	2	155	220	39	0	85	176	42	0	2481
<b>PEAK HR FACTOR :</b>	0.826	0.885	0.713	0.625	0.830	0.940	0.966	0.500	0.945	0.809	0.650	0.000	0.708	0.880	0.808	0.000	0.947
	0.921				0.939				0.916				0.823				

# Atlantic Ave & N Cecelia St

## Peak Hour Turning Movement Count

ID: 19-05618-018  
City: Cudahy

Day: Wednesday  
Date: 10/16/2019



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Atlantic Ave & N Cecelia St  
 City: Cudahy  
 Control: Signalized

Project ID: 19-05618-018  
 Date: 10/16/2019

### Total

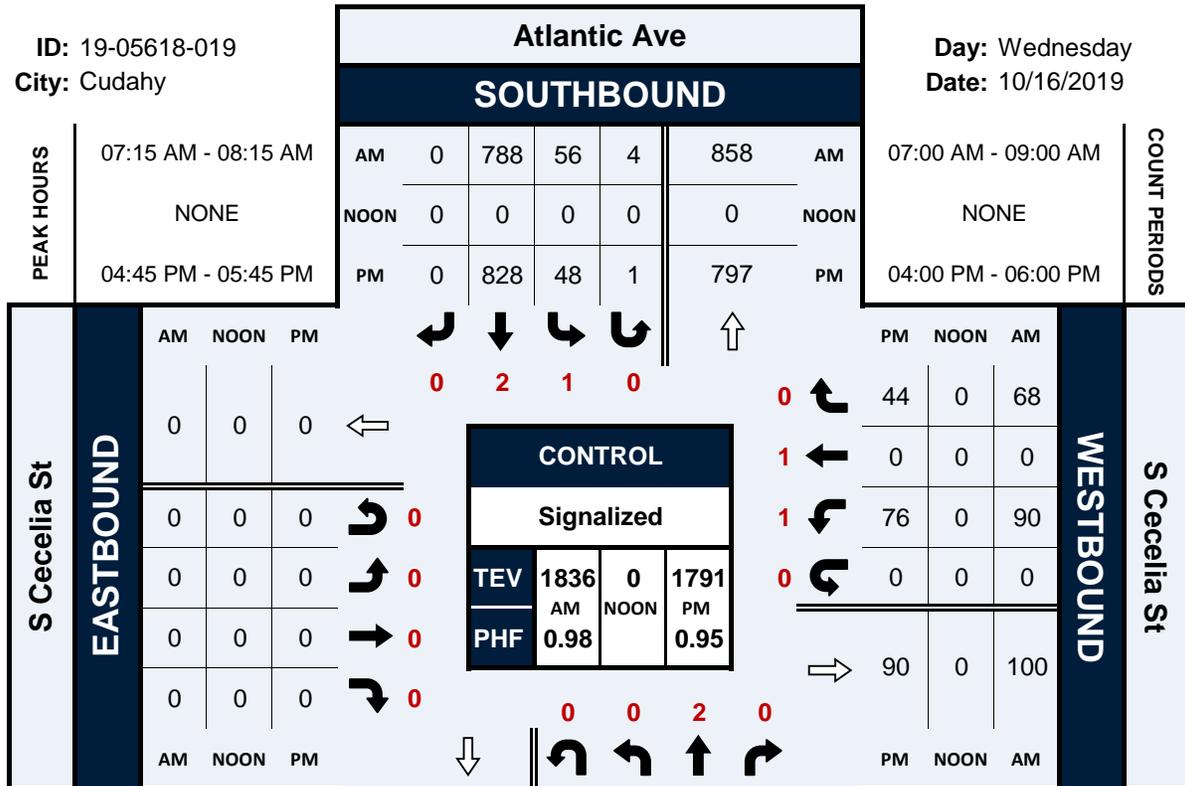
NS/EW Streets:	Atlantic Ave				Atlantic Ave				N Cecelia St				N Cecelia St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	9	210	0	0	0	166	8	0	5	0	3	0	0	0	0	0	401
7:15 AM	8	189	0	0	0	168	5	0	10	0	15	0	0	0	0	0	395
7:30 AM	1	210	0	0	0	224	8	1	16	0	18	0	0	0	0	0	478
7:45 AM	6	227	0	0	0	189	14	0	24	0	8	0	0	0	0	0	468
8:00 AM	5	197	0	0	0	208	8	0	11	0	5	0	0	0	0	0	434
8:15 AM	3	196	0	0	0	201	6	0	10	0	8	0	0	0	0	0	424
8:30 AM	3	163	0	0	0	190	2	0	6	0	6	0	0	0	0	0	370
8:45 AM	1	151	0	0	0	145	5	1	6	0	4	0	0	0	1	0	314
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	36	1543	0	0	0	1491	56	2	88	0	67	0	0	0	1	0	3284
	2.28%	97.72%	0.00%	0.00%	0.00%	96.26%	3.62%	0.13%	56.77%	0.00%	43.23%	0.00%	0.00%	0.00%	100.00%	0.00%	
<b>PEAK HR :</b>	07:30 AM - 08:30 AM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	15	830	0	0	0	822	36	1	61	0	39	0	0	0	0	0	1804
<b>PEAK HR FACTOR :</b>	0.625	0.914	0.000	0.000	0.000	0.917	0.643	0.250	0.635	0.000	0.542	0.000	0.000	0.000	0.000	0.000	0.944
	0.907				0.922				0.735								
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	8	162	0	0	0	183	7	0	9	0	5	0	0	0	0	0	374
4:15 PM	5	193	0	0	0	210	9	0	6	0	6	0	0	0	0	0	429
4:30 PM	2	191	0	0	0	188	6	1	7	0	13	0	0	0	0	0	408
4:45 PM	16	175	0	1	0	199	7	0	10	0	6	0	0	0	0	0	414
5:00 PM	9	202	0	0	0	216	4	0	3	0	13	0	0	0	0	0	447
5:15 PM	10	185	0	0	0	222	4	0	8	0	7	0	0	0	0	0	436
5:30 PM	5	204	0	0	0	201	6	0	6	0	7	0	0	1	1	0	431
5:45 PM	9	184	0	1	0	212	7	0	7	0	7	0	0	0	0	0	427
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	64	1496	0	2	0	1631	50	1	56	0	64	0	0	1	1	0	3366
	4.10%	95.77%	0.00%	0.13%	0.00%	96.97%	2.97%	0.06%	46.67%	0.00%	53.33%	0.00%	0.00%	50.00%	50.00%	0.00%	
<b>PEAK HR :</b>	05:00 PM - 06:00 PM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	33	775	0	1	0	851	21	0	24	0	34	0	0	1	1	0	1741
<b>PEAK HR FACTOR :</b>	0.825	0.950	0.000	0.250	0.000	0.958	0.750	0.000	0.750	0.000	0.654	0.000	0.000	0.250	0.250	0.000	0.974
	0.959				0.965				0.906				0.250				

# Atlantic Ave & S Cecelia St

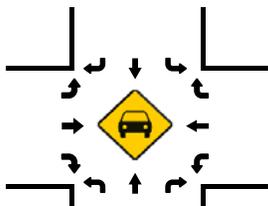
## Peak Hour Turning Movement Count

ID: 19-05618-019  
City: Cudahy

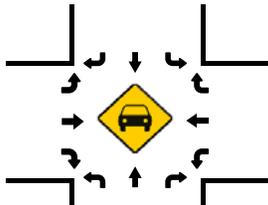
Day: Wednesday  
Date: 10/16/2019



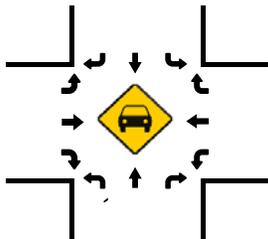
Total Vehicles (AM)



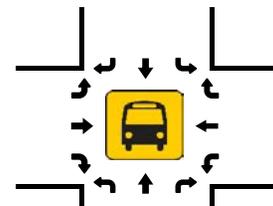
Total Vehicles (NOON)



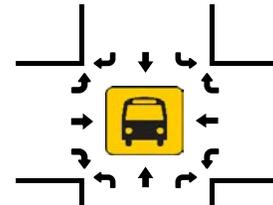
Total Vehicles (PM)



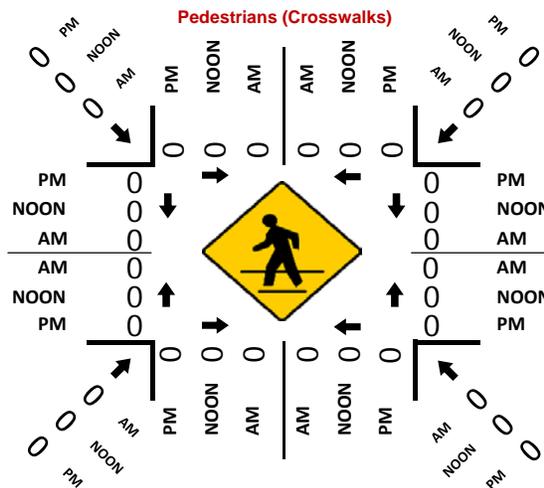
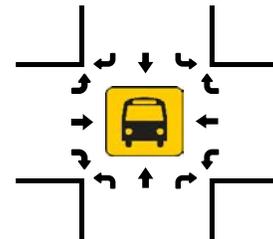
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Atlantic Ave & S Cecelia St  
 City: Cudahy  
 Control: Signalized

Project ID: 19-05618-019  
 Date: 10/16/2019

### Total

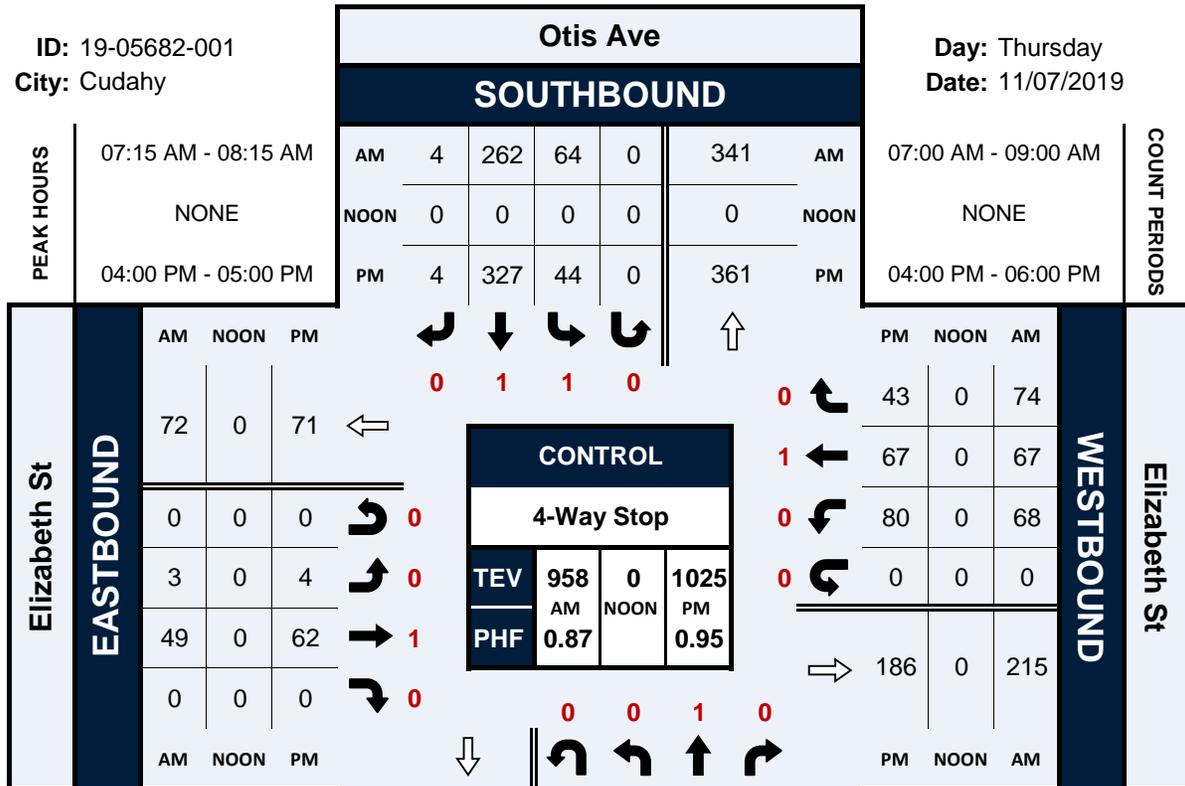
NS/EW Streets:	Atlantic Ave				Atlantic Ave				S Cecelia St				S Cecelia St					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	0	186	6	0	8	154	0	1	0	0	0	0	16	0	17	0	388	
7:15 AM	0	188	6	0	12	194	0	1	0	0	0	0	26	0	15	0	442	
7:30 AM	0	187	9	0	14	216	0	0	0	0	0	0	21	0	13	0	460	
7:45 AM	0	221	13	0	20	167	0	2	0	0	0	0	21	0	26	0	470	
8:00 AM	0	190	16	0	10	211	0	1	0	0	0	0	22	0	14	0	464	
8:15 AM	0	171	18	0	13	190	0	1	0	0	0	0	19	0	17	0	429	
8:30 AM	0	158	11	0	13	174	0	1	0	0	0	0	15	0	9	0	381	
8:45 AM	0	146	7	0	9	145	0	0	0	0	0	0	16	0	9	0	332	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
	0	1447	86	0	99	1451	0	7	0	0	0	0	156	0	120	0	3366	
<b>APPROACH %'s :</b>	0.00%	94.39%	5.61%	0.00%	6.36%	93.19%	0.00%	0.45%					56.52%	0.00%	43.48%	0.00%		
<b>PEAK HR :</b>	07:15 AM - 08:15 AM																	TOTAL
<b>PEAK HR VOL :</b>	0	786	44	0	56	788	0	4	0	0	0	0	90	0	68	0	1836	
<b>PEAK HR FACTOR :</b>	0.000	0.889	0.688	0.000	0.700	0.912	0.000	0.500	0.000	0.000	0.000	0.000	0.865	0.000	0.654	0.000	0.977	
		0.887				0.922								0.840				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	0	175	10	0	6	191	0	0	0	0	0	0	23	0	14	0	419	
4:15 PM	0	174	8	0	13	188	0	2	0	0	0	0	16	0	8	0	409	
4:30 PM	0	185	10	0	10	202	0	2	0	0	0	0	15	0	13	0	437	
4:45 PM	0	194	14	0	14	185	0	0	0	0	0	0	21	0	7	0	435	
5:00 PM	0	173	9	0	12	241	0	0	0	0	0	0	19	0	18	0	472	
5:15 PM	0	188	11	0	14	195	0	1	0	0	0	0	20	0	15	0	444	
5:30 PM	0	197	8	0	8	207	0	0	0	0	0	0	16	0	4	0	440	
5:45 PM	0	173	9	0	9	201	0	1	0	0	0	0	21	0	8	0	422	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
	0	1459	79	0	86	1610	0	6	0	0	0	0	151	0	87	0	3478	
<b>APPROACH %'s :</b>	0.00%	94.86%	5.14%	0.00%	5.05%	94.59%	0.00%	0.35%					63.45%	0.00%	36.55%	0.00%		
<b>PEAK HR :</b>	04:45 PM - 05:45 PM																	TOTAL
<b>PEAK HR VOL :</b>	0	752	42	0	48	828	0	1	0	0	0	0	76	0	44	0	1791	
<b>PEAK HR FACTOR :</b>	0.000	0.954	0.750	0.000	0.857	0.859	0.000	0.250	0.000	0.000	0.000	0.000	0.905	0.000	0.611	0.000	0.949	
		0.954				0.867								0.811				

# Otis Ave & Elizabeth St

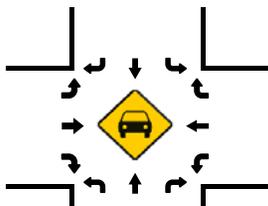
## Peak Hour Turning Movement Count

ID: 19-05682-001  
City: Cudahy

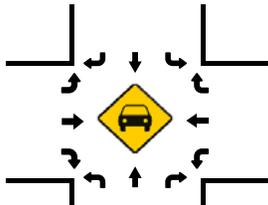
Day: Thursday  
Date: 11/07/2019



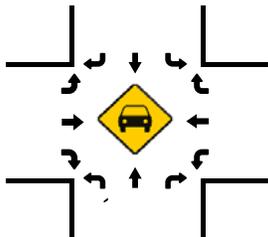
Total Vehicles (AM)



Total Vehicles (NOON)



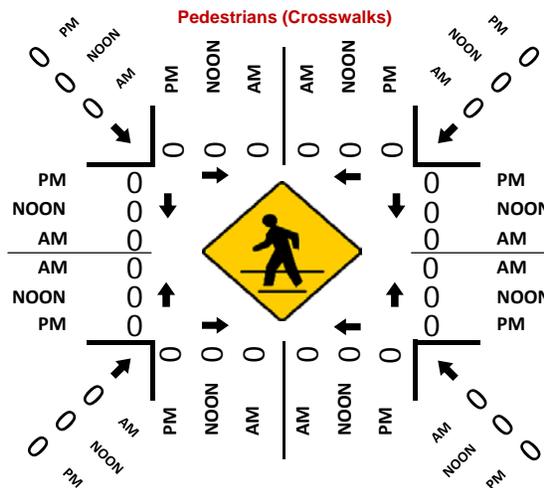
Total Vehicles (PM)



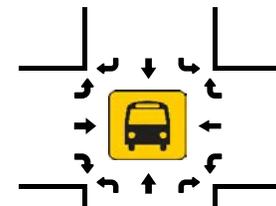
PM	407	0	0	314	80	PM
NOON	0	0	0	0	0	NOON
AM	330	0	1	264	102	AM

### NORTHBOUND

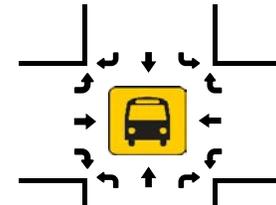
Otis Ave



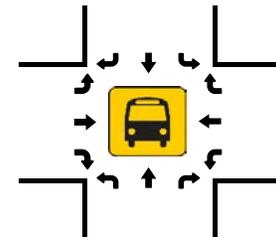
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



# National Data & Surveying Services

## Intersection Turning Movement Count

Location: Otis Ave & Elizabeth St  
 City: Cudahy  
 Control: 4-Way Stop

Project ID: 19-05682-001  
 Date: 11/7/2019

### Total

NS/EW Streets:	Otis Ave				Otis Ave				Elizabeth St				Elizabeth St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	84	11	0	17	47	1	0	0	5	0	0	14	16	14	0	209
7:15 AM	0	83	26	0	13	66	0	0	1	8	0	0	21	31	25	0	274
7:30 AM	0	56	32	0	20	59	1	0	1	14	0	0	26	13	26	0	248
7:45 AM	0	60	22	0	20	71	3	0	1	11	0	0	8	12	11	0	219
8:00 AM	1	65	22	0	11	66	0	0	0	16	0	0	13	11	12	0	217
8:15 AM	0	65	23	0	15	55	1	0	0	8	0	0	13	9	4	0	193
8:30 AM	0	58	22	0	8	50	0	0	0	8	0	0	15	10	8	0	179
8:45 AM	0	63	20	0	9	51	1	0	0	8	0	0	15	8	11	0	186
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	1	534	178	0	113	465	7	0	3	78	0	0	125	110	111	0	1725
	0.14%	74.89%	24.96%	0.00%	19.32%	79.49%	1.20%	0.00%	3.70%	96.30%	0.00%	0.00%	36.13%	31.79%	32.08%	0.00%	
<b>PEAK HR :</b>	07:15 AM - 08:15 AM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	1	264	102	0	64	262	4	0	3	49	0	0	68	67	74	0	958
<b>PEAK HR FACTOR :</b>	0.250	0.795	0.797	0.000	0.800	0.923	0.333	0.000	0.750	0.766	0.000	0.000	0.654	0.540	0.712	0.000	0.874
	0.842				0.878				0.813				0.679				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	80	18	0	10	87	1	0	1	17	0	0	18	18	11	0	261
4:15 PM	0	78	22	0	8	84	0	0	0	18	0	0	23	20	12	0	265
4:30 PM	0	87	20	0	12	83	3	0	1	14	0	0	19	17	13	0	269
4:45 PM	0	69	20	0	14	73	0	0	2	13	0	0	20	12	7	0	230
5:00 PM	0	82	18	0	15	66	0	0	0	17	0	0	20	16	16	0	250
5:15 PM	0	89	17	0	8	68	0	0	0	17	0	0	23	14	13	0	249
5:30 PM	0	84	23	0	18	72	0	0	0	18	0	0	13	7	8	0	243
5:45 PM	0	72	17	0	13	72	0	0	0	22	0	0	12	15	12	0	235
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>	0	641	155	0	98	605	4	0	4	136	0	0	148	119	92	0	2002
	0.00%	80.53%	19.47%	0.00%	13.86%	85.57%	0.57%	0.00%	2.86%	97.14%	0.00%	0.00%	41.23%	33.15%	25.63%	0.00%	
<b>PEAK HR :</b>	04:00 PM - 05:00 PM																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0	314	80	0	44	327	4	0	4	62	0	0	80	67	43	0	1025
<b>PEAK HR FACTOR :</b>	0.000	0.902	0.909	0.000	0.786	0.940	0.333	0.000	0.500	0.861	0.000	0.000	0.870	0.838	0.827	0.000	0.953
	0.921				0.957				0.917				0.864				

## APPENDIX B

### HCM AND LEVELS OF SERVICE EXPLANATION HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS CITY OF CUDAHY

## LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections	
Level of Service	Average Control Delay (Sec/Veh)
A	$\leq 10$
B	$> 10$ and $\leq 15$
C	$> 15$ and $\leq 25$
D	$> 25$ and $\leq 35$
E	$> 35$ and $\leq 50$
F	$> 50$

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

**LOS A** describes operations with very low control delay, up to 10 seconds per vehicle.

**LOS B** describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

**LOS C** describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

**LOS D** describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

**LOS E** describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

**LOS F** describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

## LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of incidents, and when there are no other vehicles on the road. Only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for traffic signals are stated in terms of the average control delay per vehicle. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the  $v/c$  ratio for the lane group in question.

Level of Service Criteria for Signalized Intersections	
Level of Service	Control Delay (Sec/Veh)
A	$\leq 10$
B	$> 10$ and $\leq 20$
C	$> 20$ and $\leq 35$
D	$> 35$ and $\leq 55$
E	$> 55$ and $\leq 80$
F	$> 80$

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

**LOS A** describes operations with very low control delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay values.

**LOS B** describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

**LOS C** describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

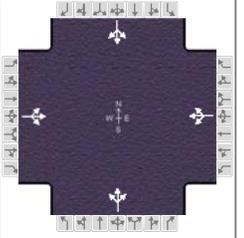
**LOS D** describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high  $v/c$  ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

**LOS E** describes operations with control delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high  $v/c$  ratios. Individual cycle failures are frequent occurrences.

**LOS F** describes operations with control delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the lane groups. It may also occur at high  $v/c$  ratios with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 13, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - AM	PHF	0.92		
Urban Street	Otis / Live Oak	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	Interesction #8	File Name	08AM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	26	60	30	35	56	82	28	396	47	67	308	18

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	68.7	12.3	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
				Red	1.0	1.0	0.0	0.0	0.0	0.0				

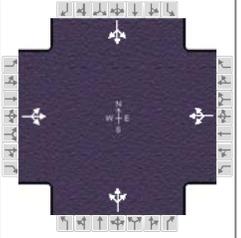
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		16.8		16.8		73.2		73.2
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		7.9		11.7				
Green Extension Time ( g <sub>e</sub> ), s		0.6		0.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	126			188			512			427		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1728			1680			1816			1641		
Queue Service Time ( g <sub>s</sub> ), s	0.0			3.8			0.0			0.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.9			9.7			8.0			6.2		
Green Ratio ( g/C )	0.14			0.14			0.76			0.76		
Capacity ( c ), veh/h	284			277			1429			1300		
Volume-to-Capacity Ratio ( X )	0.443			0.679			0.358			0.329		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	117			183.8			115.6			91.6		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.7			7.4			4.6			3.7		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	36.1			37.7			3.5			3.2		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.4			1.1			0.7			0.7		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	36.5			38.8			4.2			3.9		
Level of Service ( LOS )	D			D			A			A		
Approach Delay, s/veh / LOS	36.5		D	38.8		D	4.2		A	3.9		A
Intersection Delay, s/veh / LOS	12.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.71	B	1.61	B	1.61	B
Bicycle LOS Score / LOS	0.70	A	0.80	A	1.33	A	1.19	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 13, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - PM	PHF	0.92		
Urban Street	Otis / Live Oak	Analysis Year	2019	Analysis Period	1 > 17:00		
Intersection	Interesction #8	File Name	08PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	13	57	18	37	42	45	20	294	43	49	326	22

Signal Information				Signal Phases							
Cycle, s	90.0	Reference Phase	2	1	2	3	4	5	6	7	8
Offset, s	0	Reference Point	End	Green	71.6	9.4	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0

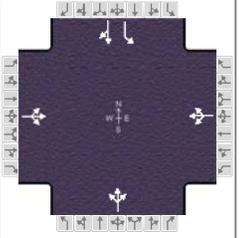
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		13.9		13.9		76.1		76.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.2		3.2		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		6.5		9.0				
Green Extension Time ( g <sub>e</sub> ), s		0.4		0.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	96			135			388			432		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1790			1659			1810			1740		
Queue Service Time ( g <sub>s</sub> ), s	0.0			2.6			0.0			0.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	4.5			7.0			4.8			5.5		
Green Ratio ( g/C )	0.10			0.10			0.80			0.80		
Capacity ( c ), veh/h	232			225			1483			1430		
Volume-to-Capacity Ratio ( X )	0.412			0.599			0.262			0.302		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	88.9			129.9			51.6			59.9		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.6			5.2			2.1			2.4		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	38.1			39.2			2.4			2.4		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.4			1.0			0.4			0.5		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	38.5			40.1			2.8			3.0		
Level of Service ( LOS )	D			D			A			A		
Approach Delay, s/veh / LOS	38.5	D		40.1	D		2.8	A		3.0	A	
Intersection Delay, s/veh / LOS	10.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.72	B	1.72	B	1.60	B	1.60	B
Bicycle LOS Score / LOS	0.65	A	0.71	A	1.13	A	1.20	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 13, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - AM	PHF	0.92		
Urban Street	Otis / Clara	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	Interesction #9	File Name	09AM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	16	108	14	105	107	123	6	266	110	77	216	14

Signal Information															
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On	Green	58.6	22.4	0.0	0.0	0.0	0.0	1		2	3	4
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6	7	8
				Red	1.0	1.0	0.0	0.0	0.0	0.0					

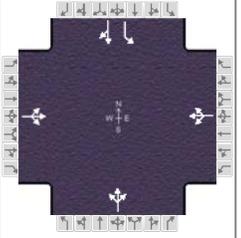
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		6.0
Phase Duration, s		26.9		26.9		63.1		63.1
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( $g_s$ ), s		7.9		21.9				
Green Extension Time ( $g_e$ ), s		1.1		0.5		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.87				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( $v$ ), veh/h	150			364			415			84	250	
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1798			1596			1802			992	1879	
Queue Service Time ( $g_s$ ), s	0.0			14.0			0.0			3.8	4.8	
Cycle Queue Clearance Time ( $g_c$ ), s	5.9			19.9			9.4			13.1	4.8	
Green Ratio ( $g/C$ )	0.25			0.25			0.65			0.65	0.65	
Capacity ( $c$ ), veh/h	492			450			1213			623	1223	
Volume-to-Capacity Ratio ( $X$ )	0.305			0.809			0.342			0.134	0.204	
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	117.4			333.1			159.1			39.1	84.5	
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	4.7			13.3			6.4			1.6	3.4	
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00			0.00			0.00			0.00	0.00	
Uniform Delay ( $d_1$ ), s/veh	27.6			32.7			7.1			10.1	6.3	
Incremental Delay ( $d_2$ ), s/veh	0.1			7.7			0.8			0.4	0.4	
Initial Queue Delay ( $d_3$ ), s/veh	0.0			0.0			0.0			0.0	0.0	
Control Delay ( $d$ ), s/veh	27.7			40.3			7.9			10.5	6.7	
Level of Service ( LOS )	C			D			A			B	A	
Approach Delay, s/veh / LOS	27.7	C		40.3	D		7.9	A		7.7	A	
Intersection Delay, s/veh / LOS	19.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.70	B	1.93	B	1.64	B	1.64	B
Bicycle LOS Score / LOS	0.74	A	1.09	A	1.17	A	1.04	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 13, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - PM	PHF	0.92		
Urban Street	Otis / Clara	Analysis Year	2019	Analysis Period	1 > 17:00		
Intersection	Interesction #9	File Name	09PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	11	115	6	110	91	63	5	264	110	76	276	22

Signal Information											
Cycle, s	90.0	Reference Phase	2								
Offset, s	0	Reference Point	End	Green	62.4	18.6	0.0	0.0	0.0	0.0	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	0.0	0.0	0.0	0.0	

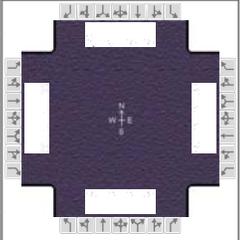
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		6.0
Phase Duration, s		23.1		23.1		66.9		66.9
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( $g_s$ ), s		7.9		18.0				
Green Extension Time ( $g_e$ ), s		0.9		0.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.08				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( $v$ ), veh/h	143			287			412			83 324		
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1854			1560			1801			994 1875		
Queue Service Time ( $g_s$ ), s	0.0			10.1			0.0			3.2 5.8		
Cycle Queue Clearance Time ( $g_c$ ), s	5.9			16.0			8.2			11.4 5.8		
Green Ratio ( $g/C$ )	0.21			0.21			0.69			0.69 0.69		
Capacity ( $c$ ), veh/h	427			380			1289			679 1299		
Volume-to-Capacity Ratio ( $X$ )	0.336			0.756			0.320			0.122 0.249		
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	119.3			262.2			131			32.6 95.7		
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	4.8			10.5			5.2			1.3 3.8		
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00			0.00			0.00			0.00 0.00		
Uniform Delay ( $d_1$ ), s/veh	30.6			34.5			5.5			7.8 5.1		
Incremental Delay ( $d_2$ ), s/veh	0.2			3.2			0.7			0.4 0.5		
Initial Queue Delay ( $d_3$ ), s/veh	0.0			0.0			0.0			0.0 0.0		
Control Delay ( $d$ ), s/veh	30.8			37.7			6.2			8.1 5.6		
Level of Service ( LOS )	C			D			A			A A		
Approach Delay, s/veh / LOS	30.8	C		37.7	D		6.2	A		6.1	A	
Intersection Delay, s/veh / LOS	16.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.93	B	1.63	B	1.63	B
Bicycle LOS Score / LOS	0.72	A	0.96	A	1.17	A	1.16	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Nov 25, 2019	Area Type	Other
Jurisdiction	City of Bell/City of Cudahy	Time Period	Existing - AM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersection #13	File Name	13AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	171	814	216	190	924	97	163	779	129	141	621	78

Signal Information				Signal Timing (s)																		
Cycle, s	90.0	Reference Phase	2	Green	11.0	0.6	30.5	5.9	2.6	21.5	Yellow	3.5	0.0	3.5	3.5	3.5	Red	1.0	0.0	1.0	1.0	1.0
Offset, s	0	Reference Point	End																			
Uncoordinated	No	Simult. Gap E/W	On																			
Force Mode	Fixed	Simult. Gap N/S	On																			

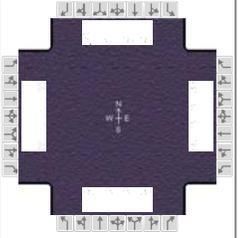
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	15.5	35.0	16.0	35.6	13.0	28.6	10.4	26.0
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( $g_s$ ), s	11.0		12.1		10.5	22.1	5.8	19.6
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	1.9	0.1	1.9
Phase Call Probability	0.99		0.99		0.99	1.00	0.98	1.00
Max Out Probability	1.00		1.00		1.00	0.84	1.00	0.85

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( $v$ ), veh/h	186	885	235	207	1004	105	177	847	140	153	387	373
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1825
Queue Service Time ( $g_s$ ), s	9.0	19.3	10.2	10.1	22.7	4.1	8.5	20.1	5.2	3.8	17.5	17.6
Cycle Queue Clearance Time ( $g_c$ ), s	9.0	19.3	10.2	10.1	22.7	4.1	8.5	20.1	5.2	3.8	17.5	17.6
Green Ratio ( $g/C$ )	0.12	0.34	0.34	0.13	0.35	0.35	0.09	0.27	0.40	0.07	0.24	0.24
Capacity ( $c$ ), veh/h	220	1226	546	232	1249	556	171	969	637	229	453	436
Volume-to-Capacity Ratio ( $X$ )	0.844	0.722	0.430	0.891	0.804	0.190	1.037	0.874	0.220	0.669	0.854	0.856
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	224.1	331.5	182.6	262.4	385.5	72.5	301.5	360.2	83.2	74.9	355	346.5
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	9.0	13.3	7.3	10.5	15.4	2.9	12.1	14.4	3.3	3.0	14.2	13.9
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	38.7	26.0	23.0	38.6	26.7	20.6	40.8	31.5	18.0	41.1	32.8	32.8
Incremental Delay ( $d_2$ ), s/veh	21.5	3.7	2.5	31.2	5.6	0.8	78.8	7.3	0.1	1.3	11.7	12.3
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	60.2	29.7	25.5	69.8	32.3	21.4	119.6	38.8	18.1	42.4	44.5	45.1
Level of Service ( LOS )	E	C	C	E	C	C	F	D	B	D	D	D
Approach Delay, s/veh / LOS	33.3		C	37.3		D	48.6		D	44.4		D
Intersection Delay, s/veh / LOS	40.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.56	B	1.57	B	1.45	A	1.24	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 25, 2019	Area Type	Other		
Jurisdiction	City of Bell/City of Cudahy	Time Period	Existing - PM	PHF	0.92		
Urban Street	Atlantic / Florence		Analysis Year	2019	Analysis Period	1 > 16:00	
Intersection	Intersection #13	File Name	13PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	114	832	140	170	733	136	147	556	123	198	685	77

Signal Information				Signal Timing (s)																		
Cycle, s	90.0	Reference Phase	2	Green	7.7	2.9	30.5	7.4	1.1	22.4	Yellow	3.5	0.0	3.5	3.5	3.5	Red	1.0	0.0	1.0	1.0	1.0
Offset, s	0	Reference Point	End																			
Uncoordinated	No	Simult. Gap E/W	On																			
Force Mode	Fixed	Simult. Gap N/S	On																			

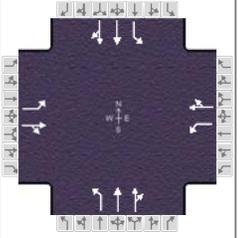
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	12.2	35.0	15.1	37.9	13.0	28.0	11.9	26.9
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( $g_s$ ), s	8.0		11.0		9.9	15.3	7.4	21.3
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	2.8	0.1	1.1
Phase Call Probability	0.95		0.99		0.98	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.26	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	124	904	152	185	797	148	160	604	134	215	421	407
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1832
Queue Service Time ( $g_s$ ), s	6.0	19.8	6.2	9.0	16.0	5.7	7.9	13.3	5.1	5.4	19.3	19.3
Cycle Queue Clearance Time ( $g_c$ ), s	6.0	19.8	6.2	9.0	16.0	5.7	7.9	13.3	5.1	5.4	19.3	19.3
Green Ratio ( $g/C$ )	0.09	0.34	0.34	0.12	0.37	0.37	0.09	0.26	0.38	0.08	0.25	0.25
Capacity ( $c$ ), veh/h	155	1226	546	214	1343	598	171	943	610	289	472	455
Volume-to-Capacity Ratio ( $X$ )	0.798	0.738	0.279	0.865	0.593	0.247	0.935	0.641	0.219	0.744	0.892	0.893
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	136.4	340.2	109.9	235.2	277	99.4	242.8	240.7	81.9	113.2	402.3	392.9
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	5.5	13.6	4.4	9.4	11.1	4.0	9.7	9.6	3.3	4.5	16.1	15.7
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	40.4	26.2	21.7	39.0	22.8	19.6	40.5	29.5	18.9	40.4	32.7	32.7
Incremental Delay ( $d_2$ ), s/veh	9.4	4.0	1.3	27.8	1.9	1.0	49.5	1.0	0.1	6.1	16.9	17.5
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	49.8	30.2	23.0	66.8	24.8	20.6	90.0	30.5	19.0	46.4	49.6	50.2
Level of Service (LOS)	D	C	C	E	C	C	F	C	B	D	D	D
Approach Delay, s/veh / LOS	31.3		C	31.1		C	39.4		D	49.2		D
Intersection Delay, s/veh / LOS	37.3						D					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	2.43	B	2.43	B
Bicycle LOS Score / LOS	1.46	A	1.42	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 25, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - AM	PHF	0.92		
Urban Street	Atlantic / Live Oak		Analysis Year	2019	Analysis Period	1 > 7:15	
Intersection	Interesction #14	File Name	14AM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	66	157	71	99	126	58	56	923	137	70	769	65

Signal Information				Signal Phases									
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	4.7	0.4	49.6	21.8	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0

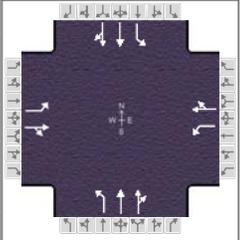
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		26.3		26.3	9.2	54.1	9.6	54.5
Change Period, ( $Y+R_c$ ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s		15.4		21.0	5.0		5.7	
Green Extension Time ( $g_e$ ), s		1.2		0.8	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.78		0.85	
Max Out Probability		0.05		0.61	0.03		0.13	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( $v$ ), veh/h	72	248		108	200		61	589	563	76	460	447
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1201	1799		1150	1798		1810	1900	1814	1810	1900	1847
Queue Service Time ( $g_s$ ), s	4.9	10.9		8.2	8.5		3.0	18.1	18.2	3.7	12.8	12.8
Cycle Queue Clearance Time ( $g_c$ ), s	13.4	10.9		19.0	8.5		3.0	18.1	18.2	3.7	12.8	12.8
Green Ratio ( $g/C$ )	0.24	0.24		0.24	0.24		0.05	0.55	0.55	0.06	0.56	0.56
Capacity ( $c$ ), veh/h	257	435		219	435		94	1048	1000	103	1056	1027
Volume-to-Capacity Ratio ( $X$ )	0.279	0.569		0.490	0.460		0.645	0.562	0.563	0.741	0.435	0.435
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	64.7	207.6		104.8	166.5		61.6	301.6	291.8	78.1	224.2	219.7
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	2.6	8.3		4.2	6.7		2.5	12.1	11.7	3.1	9.0	8.8
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	34.8	30.0		38.3	29.1		41.8	13.1	13.1	41.8	11.7	11.7
Incremental Delay ( $d_2$ ), s/veh	0.2	0.4		0.6	0.3		2.7	2.2	2.3	3.9	1.3	1.3
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	35.0	30.4		39.0	29.4		44.6	15.3	15.4	45.7	13.0	13.0
Level of Service (LOS)	D	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	31.5	C		32.7	C		16.8	B		15.6	B	
Intersection Delay, s/veh / LOS	19.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.01	A	1.00	A	1.49	A	1.30	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 25, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - PM	PHF	0.92		
Urban Street	Atlantic / Live Oak	Analysis Year	2019	Analysis Period	1 > 17:00		
Intersection	Intersecion #14	File Name	14PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	53	114	43	138	94	50	35	668	106	65	858	68

Signal Information				Phase Diagram								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	3.7	1.3	51.0	20.5	0.0	0.0						
Yellow	3.5	0.0	3.5	3.5	0.0	0.0						
Red	1.0	0.0	1.0	1.0	0.0	0.0						

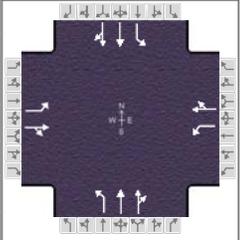
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		25.0		25.0	8.2	55.5	9.5	56.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		12.3		19.8	3.9		5.5	
Green Extension Time ( g <sub>e</sub> ), s		1.1		0.7	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.61		0.83	
Max Out Probability		0.01		0.30	0.00		0.01	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	58	171		150	157		38	431	410	71	510	497
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1250	1811		1234	1788		1810	1900	1809	1810	1900	1850
Queue Service Time ( g <sub>s</sub> ), s	3.7	7.2		10.6	6.7		1.9	11.4	11.4	3.5	13.8	13.8
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	10.3	7.2		17.8	6.7		1.9	11.4	11.4	3.5	13.8	13.8
Green Ratio ( g/C )	0.23	0.23		0.23	0.23		0.04	0.57	0.57	0.06	0.58	0.58
Capacity ( c ), veh/h	273	413		263	408		74	1077	1025	100	1104	1075
Volume-to-Capacity Ratio ( X )	0.211	0.413		0.571	0.384		0.514	0.400	0.400	0.706	0.462	0.462
Back of Queue ( Q ), ft/ln ( 95 th percentile)	50.7	142.3		145.5	129.5		38.4	203.9	196.9	72.2	236	231.4
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.0	5.7		5.8	5.2		1.5	8.2	7.9	2.9	9.4	9.3
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	33.7	29.6		37.2	29.4		42.3	10.9	10.9	41.8	10.8	10.8
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1	0.2		0.7	0.2		2.0	1.1	1.2	3.4	1.4	1.4
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	33.9	29.9		37.9	29.6		44.3	12.0	12.1	45.2	12.2	12.2
Level of Service ( LOS )	C	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	30.9	C		33.7	C		13.5	B		14.4	B	
Intersection Delay, s/veh / LOS	17.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.88	B	1.88	B
Bicycle LOS Score / LOS	0.86	A	0.99	A	1.21	A	1.38	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 26, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - AM	PHF	0.92		
Urban Street	Atlantic / Clara	Analysis Year	2019	Analysis Period	1 > 7:15		
Intersection	Interesction #15	File Name	15AM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	76	126	108	97	191	132	58	928	141	126	777	98

Signal Information				Phase Diagram								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	4.8	2.1	44.5	25.1	0.0	0.0						
Yellow	3.5	0.0	3.5	3.5	0.0	0.0						
Red	1.0	0.0	1.0	1.0	0.0	0.0						

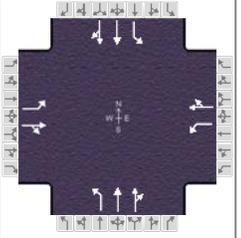
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		29.6		29.6	9.3	49.0	11.4	51.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		25.0		20.7	5.1		8.8	
Green Extension Time ( g <sub>e</sub> ), s		0.2		1.1	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.79		0.97	
Max Out Probability		1.00		0.61	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	83	254		105	351		63	594	568	137	485	466
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1046	1754		1143	1770		1810	1900	1812	1810	1900	1825
Queue Service Time ( g <sub>s</sub> ), s	6.9	11.0		7.7	16.1		3.1	20.7	20.8	6.8	14.9	14.9
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	23.0	11.0		18.7	16.1		3.1	20.7	20.8	6.8	14.9	14.9
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.05	0.49	0.49	0.08	0.52	0.52
Capacity ( c ), veh/h	186	490		259	494		96	940	896	138	984	945
Volume-to-Capacity Ratio ( X )	0.445	0.519		0.406	0.711		0.659	0.632	0.633	0.993	0.493	0.493
Back of Queue ( Q ), ft/ln ( 95 th percentile)	80.5	201.4		97.4	291.8		63.9	350.6	338.9	243.6	260.5	252.9
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.2	8.1		3.9	11.7		2.6	14.0	13.6	9.7	10.4	10.1
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	39.5	27.3		35.2	29.2		41.8	16.7	16.7	41.5	14.0	14.0
Incremental Delay ( d <sub>2</sub> ), s/veh	0.6	0.4		0.4	3.9		2.9	3.2	3.4	74.0	1.8	1.8
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	40.1	27.8		35.6	33.1		44.7	20.0	20.1	115.5	15.8	15.9
Level of Service ( LOS )	D	C		D	C		D	B	C	F	B	B
Approach Delay, s/veh / LOS	30.8	C		33.7	C		21.3	C		28.4	C	
Intersection Delay, s/veh / LOS	26.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.90	B	1.89	B
Bicycle LOS Score / LOS	1.04	A	1.24	A	1.50	A	1.39	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 26, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - PM	PHF	0.92		
Urban Street	Atlantic / Clara	Analysis Year	2019	Analysis Period	1 > 17:00		
Intersection	Interesction #15	File Name	15PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	55	203	71	102	200	92	67	709	121	107	888	72

Signal Information											
Cycle, s	90.0	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On								

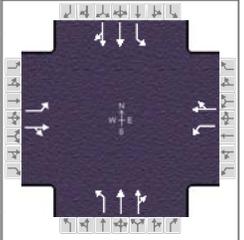
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		28.7		28.7	9.5	49.5	11.8	51.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		20.8		23.7	5.6		7.7	
Green Extension Time ( g <sub>e</sub> ), s		1.0		0.5	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.84		0.95	
Max Out Probability		0.60		1.00	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	60	298		111	317		73	463	439	116	529	515
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1079	1815		1099	1798		1810	1900	1803	1810	1900	1849
Queue Service Time ( g <sub>s</sub> ), s	4.7	12.9		8.8	14.1		3.6	14.5	14.5	5.7	16.5	16.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	18.8	12.9		21.7	14.1		3.6	14.5	14.5	5.7	16.5	16.5
Green Ratio ( g/C )	0.27	0.27		0.27	0.27		0.06	0.50	0.50	0.70	0.53	0.53
Capacity ( c ), veh/h	201	488		218	484		101	951	902	146	998	971
Volume-to-Capacity Ratio ( X )	0.297	0.610		0.509	0.656		0.720	0.487	0.487	0.796	0.530	0.530
Back of Queue ( Q ), ft/ln ( 95 th percentile)	55.7	238.8		108.3	260.5		74.4	257.3	247.5	149	282.7	277.1
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.2	9.6		4.3	10.4		3.0	10.3	9.9	6.0	11.3	11.1
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	37.5	28.8		38.3	29.2		41.8	14.9	14.9	40.6	14.1	14.1
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3	1.3		0.7	2.1		3.6	1.8	1.9	20.7	2.0	2.1
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	37.8	30.1		38.9	31.4		45.4	16.6	16.7	61.3	16.1	16.1
Level of Service ( LOS )	D	C		D	C		D	B	B	E	B	B
Approach Delay, s/veh / LOS	31.4	C		33.3	C		18.8	B		20.6	C	
Intersection Delay, s/veh / LOS	23.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.08	A	1.19	A	1.29	A	1.44	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 26, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - AM	PHF	0.92		
Urban Street	Atlantic / Elizabeth	Analysis Year	2019	Analysis Period	1 > 7:15		
Intersection	Interesction #16	File Name	16AM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	129	130	50	88	82	135	30	865	97	83	774	96

Signal Information				Signal Timing (s)									
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	3.3	2.4	47.1	23.7	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0			
				Red	1.0	0.0	1.0	1.0	0.0	0.0			

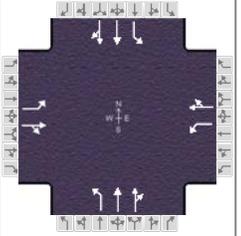
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		28.2		28.2	7.8	51.6	10.3	54.0
Change Period, ( $Y+R_c$ ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s		3.5		3.5	3.1	0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s		23.2		16.4	3.6		6.4	
Green Extension Time ( $g_e$ ), s		0.5		1.2	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.56		0.90	
Max Out Probability		1.00		0.09	0.05		1.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( $v$ ), veh/h	140	196		96	236		33	532	513	90	482	463
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1163	1810		1206	1709		1810	1900	1832	1810	1900	1826
Queue Service Time ( $g_s$ ), s	10.6	8.0		6.4	10.6		1.6	16.7	16.7	4.4	13.8	13.8
Cycle Queue Clearance Time ( $g_c$ ), s	21.2	8.0		14.4	10.6		1.6	16.7	16.7	4.4	13.8	13.8
Green Ratio ( $g/C$ )	0.26	0.26		0.26	0.26		0.04	0.52	0.52	0.68	0.55	0.55
Capacity ( $c$ ), veh/h	249	476		290	449		67	994	958	116	1045	1004
Volume-to-Capacity Ratio ( $X$ )	0.564	0.411		0.330	0.525		0.485	0.536	0.536	0.778	0.461	0.462
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	137.4	156.8		84.9	194.5		33	286.5	278.9	97.8	240.1	233.6
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	5.5	6.3		3.4	7.8		1.3	11.5	11.2	3.9	9.6	9.3
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	37.4	27.4		33.4	28.4		42.5	14.2	14.2	41.5	12.2	12.2
Incremental Delay ( $d_2$ ), s/veh	1.0	0.2		0.2	0.4		2.0	2.1	2.1	7.6	1.5	1.5
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	38.4	27.6		33.6	28.7		44.5	16.3	16.4	49.1	13.7	13.7
Level of Service ( LOS )	D	C		C	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	32.1	C		30.1	C		17.2	B		16.8	B	
Intersection Delay, s/veh / LOS	20.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.04	A	1.03	A	1.38	A	1.34	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 26, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - PM	PHF	0.92		
Urban Street	Atlantic / Elizabeth		Analysis Year	2019	Analysis Period	1 > 17:00	
Intersection	Interesction #16	File Name	16PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	95	105	76	54	90	84	54	706	65	93	831	113

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On											
Force Mode	Fixed	Simult. Gap N/S	On											
				Green	4.6	1.8	51.2	18.9	0.0	0.0	1	2	3	4
				Yellow	3.5	0.0	3.5	3.5	0.0	0.0				
				Red	1.0	0.0	1.0	1.0	0.0	0.0	5	6	7	8

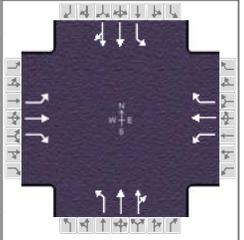
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		23.4		23.4	9.1	55.7	11.0	57.5
Change Period, ( $Y+R_c$ ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s		18.0		14.9	4.9		6.9	
Green Extension Time ( $g_e$ ), s		0.9		1.0	0.0	0.0	0.1	0.0
Phase Call Probability		1.00		1.00	0.77		0.92	
Max Out Probability		0.13		0.03	0.00		0.02	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( $v$ ), veh/h	103	197		59	189		59	425	413	101	524	502
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1213	1766		1205	1748		1810	1900	1843	1810	1900	1820
Queue Service Time ( $g_s$ ), s	7.4	8.9		4.1	8.6		2.9	11.2	11.2	4.9	14.1	14.1
Cycle Queue Clearance Time ( $g_c$ ), s	16.0	8.9		12.9	8.6		2.9	11.2	11.2	4.9	14.1	14.1
Green Ratio ( $g/C$ )	0.21	0.21		0.21	0.21		0.05	0.57	0.57	0.07	0.59	0.59
Capacity ( $c$ ), veh/h	219	370		214	366		93	1081	1048	130	1119	1072
Volume-to-Capacity Ratio ( $X$ )	0.472	0.531		0.274	0.516		0.632	0.394	0.394	0.779	0.468	0.468
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	100.6	172.5		55	165		59.3	200.5	196.2	102.9	237.7	230.3
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	4.0	6.9		2.2	6.6		2.4	8.0	7.8	4.1	9.5	9.2
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	38.6	31.6		37.4	31.5		41.9	10.8	10.8	41.1	10.5	10.5
Incremental Delay ( $d_2$ ), s/veh	0.6	0.4		0.3	0.4		2.6	1.1	1.1	3.8	1.4	1.5
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	39.2	32.1		37.6	31.9		44.5	11.9	11.9	44.9	11.9	12.0
Level of Service ( LOS )	D	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	34.5	C		33.3	C		14.0	B		14.9	B	
Intersection Delay, s/veh / LOS	18.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.88	B	1.88	B
Bicycle LOS Score / LOS	0.98	A	0.90	A	1.23	A	1.42	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 26, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - AM	PHF	0.92		
Urban Street	Atlantic / Santa Ana		Analysis Year	2019	Analysis Period	1 > 7:15	
Intersection	Interesction #17	File Name	17AM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	174	206	70	74	207	91	50	738	35	72	703	113

Signal Information				Signal Phases										
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	4.5	0.7	46.3	25.1	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0				
				Red	1.0	0.0	1.0	1.0	0.0	0.0				

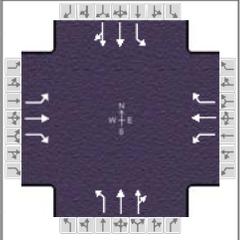
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		5.0		5.0	2.0	4.0	2.0	4.0
Phase Duration, s		29.6		29.6	9.0	50.8	9.7	51.5
Change Period, ( $Y+R_c$ ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s		24.9		16.1	4.6		5.8	
Green Extension Time ( $g_e$ ), s		0.2		1.6	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.74		0.86	
Max Out Probability		1.00		0.13	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( $v$ ), veh/h	189	224	76	80	225	99	54	423	417	78	454	433
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1174	1900	1610	1175	1900	1610	1810	1900	1869	1810	1900	1808
Queue Service Time ( $g_s$ ), s	14.1	8.7	3.2	5.4	8.7	4.2	2.6	12.5	12.5	3.8	13.5	13.5
Cycle Queue Clearance Time ( $g_c$ ), s	22.9	8.7	3.2	14.1	8.7	4.2	2.6	12.5	12.5	3.8	13.5	13.5
Green Ratio ( $g/C$ )	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.51	0.51	0.06	0.52	0.52
Capacity ( $c$ ), veh/h	293	529	449	294	529	449	90	977	961	104	991	943
Volume-to-Capacity Ratio ( $X$ )	0.645	0.423	0.170	0.273	0.425	0.220	0.606	0.434	0.434	0.756	0.458	0.459
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	190.7	174.3	54.8	69.8	178	73.3	54.8	227.2	224.6	87.8	240.7	232.1
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	7.6	7.0	2.2	2.8	7.1	2.9	2.2	9.1	9.0	3.5	9.6	9.3
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	35.9	26.5	24.6	32.3	26.6	24.9	41.9	13.7	13.7	41.8	13.5	13.5
Incremental Delay ( $d_2$ ), s/veh	3.5	0.2	0.1	0.2	0.2	0.1	2.4	1.4	1.4	9.6	1.5	1.6
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	39.5	26.7	24.6	32.5	26.8	25.0	44.4	15.1	15.1	51.4	15.1	15.1
Level of Service ( LOS )	D	C	C	C	C	C	D	B	B	D	B	B
Approach Delay, s/veh / LOS	31.3		C	27.5		C	16.9		B	18.0		B
Intersection Delay, s/veh / LOS	21.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	2.08	B	2.08	B
Bicycle LOS Score / LOS	1.29	A	1.15	A	1.23	A	1.28	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 26, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - PM	PHF	0.92		
Urban Street	Atlantic / Santa Ana		Analysis Year	2019	Analysis Period	1 > 16:30	
Intersection	Interesction #17	File Name	17PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	155	220	39	85	176	42	81	676	57	85	722	143

Signal Information				Signal Timing (s)								Signal Phases			
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On	Green	5.6	0.3	48.1	22.5	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0					
				Red	1.0	0.0	1.0	1.0	0.0	0.0					

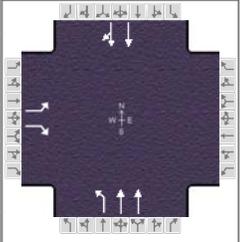
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		5.0		5.0	2.0	4.0	2.0	4.0
Phase Duration, s		27.0		27.0	10.1	52.6	10.4	52.9
Change Period, ( $Y+R_c$ ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s		3.3		3.3	3.1	0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s		21.7		18.4	6.3		6.5	
Green Extension Time ( $g_e$ ), s		0.8		1.2	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.89		0.90	
Max Out Probability		0.82		0.23	0.93		1.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( $v$ ), veh/h	168	239	42	92	191	46	88	404	393	92	484	456
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1211	1900	1610	1159	1900	1610	1810	1900	1848	1810	1900	1790
Queue Service Time ( $g_s$ ), s	12.1	9.7	1.8	6.7	7.6	2.0	4.3	11.3	11.3	4.5	14.2	14.2
Cycle Queue Clearance Time ( $g_c$ ), s	19.7	9.7	1.8	16.4	7.6	2.0	4.3	11.3	11.3	4.5	14.2	14.2
Green Ratio ( $g/C$ )	0.25	0.25	0.25	0.25	0.25	0.25	0.56	0.53	0.53	0.68	0.54	0.54
Capacity ( $c$ ), veh/h	281	475	403	245	475	403	113	1015	987	119	1021	962
Volume-to-Capacity Ratio ( $X$ )	0.599	0.503	0.105	0.377	0.403	0.113	0.776	0.398	0.398	0.778	0.474	0.474
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	162.3	195.2	31.2	85.9	155	34.1	90.6	206.9	202.8	94.8	248.7	238
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	6.5	7.8	1.2	3.4	6.2	1.4	3.6	8.3	8.1	3.8	9.9	9.5
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	36.3	28.9	26.0	36.0	28.1	26.0	41.6	12.4	12.4	41.4	12.9	12.9
Incremental Delay ( $d_2$ ), s/veh	1.2	0.3	0.0	0.4	0.2	0.0	4.2	1.2	1.2	4.1	1.6	1.7
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	37.5	29.3	26.0	36.3	28.3	26.1	45.8	13.6	13.6	45.5	14.5	14.6
Level of Service (LOS)	D	C	C	D	C	C	D	B	B	D	B	B
Approach Delay, s/veh / LOS	32.0	C		30.3	C		16.8	B		17.3	B	
Intersection Delay, s/veh / LOS	21.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.08	B	2.08	B
Bicycle LOS Score / LOS	1.23	A	1.03	A	1.22	A	1.34	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Nov 27, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing - AM	PHF	0.92
Urban Street	Atlantic / N. Cecilia	Analysis Year	2019	Analysis Period	1 > 7:30
Intersection	Interesction #18	File Name	18AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	61		39				15	830			823	36

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	2.0	68.5	6.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

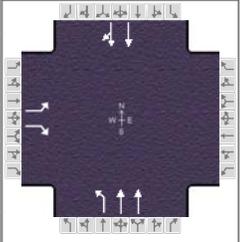
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		10.5			6.5	79.5		73.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5			4.5	4.5		4.5
Max Allow Headway ( MAH ), s		3.3			3.1	0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		5.2			2.8			
Green Extension Time ( g <sub>e</sub> ), s		0.2			0.0	0.0		0.0
Phase Call Probability		1.00			0.33			
Max Out Probability		0.00			0.00			

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2		6		16
Adjusted Flow Rate ( v ), veh/h	66		42				16	902		470		463
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810		1610				1810	1809		1900		1872
Queue Service Time ( g <sub>s</sub> ), s	3.2		2.3				0.8	5.0		15.0		7.1
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	3.2		2.3				0.8	5.0		15.0		7.1
Green Ratio ( g/C )	0.07		0.07				0.31	0.83		0.76		0.76
Capacity ( c ), veh/h	121		107				40	3015		1446		1424
Volume-to-Capacity Ratio ( X )	0.550		0.395				0.404	0.299		0.325		0.325
Back of Queue ( Q ), ft/ln ( 95 th percentile)	66.2		41.6				17	33.6		92		90.8
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.6		1.7				0.7	1.3		3.7		3.6
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00		0.00				0.00	0.00		0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	40.7		40.3				43.4	1.7		3.4		3.4
Incremental Delay ( d <sub>2</sub> ), s/veh	1.4		0.9				2.4	0.3		0.6		0.6
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0	0.0		0.0		0.0
Control Delay ( d ), s/veh	42.1		41.1				45.8	1.9		4.0		4.0
Level of Service ( LOS )	D		D				D	A		A		A
Approach Delay, s/veh / LOS	41.7		D	0.0			2.7	A		4.0		A
Intersection Delay, s/veh / LOS	5.5						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.31	B	2.15	B	0.61	A	1.84	B
Bicycle LOS Score / LOS		F			1.25	A	1.26	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Nov 27, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing - PM	PHF	0.92
Urban Street	Atlantic / N. Cecilia	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Interesction #18	File Name	18PM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	24		34				34	776			851	21

Signal Information															
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On	Green	3.6	66.9	6.0	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0					
				Red	1.0	1.0	1.0	0.0	0.0	0.0					

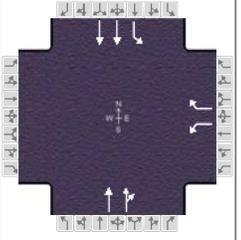
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		10.5			8.1	79.5		71.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5			4.5	4.5		4.5
Max Allow Headway ( MAH ), s		3.4			3.1	0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		4.0			3.8			
Green Extension Time ( g <sub>e</sub> ), s		0.1			0.0	0.0		0.0
Phase Call Probability		1.00			0.60			
Max Out Probability		0.00			0.00			

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3		18				1	6			2	12
Adjusted Flow Rate ( v ), veh/h	26		37				37	843			476	472
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810		1610				1810	1809			1900	1884
Queue Service Time ( g <sub>s</sub> ), s	1.2		2.0				1.8	4.6			15.2	7.7
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	1.2		2.0				1.8	4.6			15.2	7.7
Green Ratio ( g/C )	0.07		0.07				0.66	0.83			0.74	0.74
Capacity ( c ), veh/h	121		107				73	3015			1412	1400
Volume-to-Capacity Ratio ( X )	0.216		0.344				0.508	0.280			0.337	0.337
Back of Queue ( Q ), ft/ln ( 95 th percentile)	25.1		36.1				37.3	30.7			106.6	105.8
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.0		1.4				1.5	1.2			4.3	4.2
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	39.8		40.1				42.3	1.6			4.0	4.0
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3		0.7				2.0	0.2			0.6	0.7
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay ( d ), s/veh	40.1		40.8				44.3	1.9			4.6	4.6
Level of Service ( LOS )	D		D				D	A			A	A
Approach Delay, s/veh / LOS	40.5		D	0.0			3.6	A		4.6		A
Intersection Delay, s/veh / LOS	5.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.31	B	2.15	B	0.61	A	1.84	B
Bicycle LOS Score / LOS		F			1.21	A	1.27	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 27, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - AM	PHF	0.92		
Urban Street	Atlantic / S. Cecilia	Analysis Year	2019	Analysis Period	1 > 7:15		
Intersection	Interesction #19	File Name	19AM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h				90		68		786	44	60	788	

Signal Information															
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On	Green	4.8	64.6	7.1	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0					
				Red	1.0	1.0	1.0	0.0	0.0	0.0					

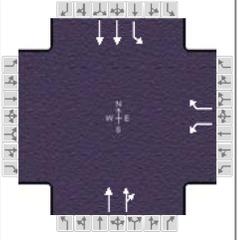
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2	1	6
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				11.6		69.1	9.3	78.4
Change Period, ( $Y+R_c$ ), s				4.5		4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s				3.4		0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s				6.7			2.7	
Green Extension Time ( $g_e$ ), s				0.3		0.0	0.1	0.0
Phase Call Probability				1.00			0.80	
Max Out Probability				0.00			0.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( $v$ ), veh/h				98		74		455	447	65		857
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln				1810		1610		1900	1864	1810		1809
Queue Service Time ( $g_s$ ), s				4.7		4.0		14.3	8.0	0.7		5.0
Cycle Queue Clearance Time ( $g_c$ ), s				4.7		4.0		14.3	8.0	0.7		5.0
Green Ratio ( $g/C$ )				0.08		0.08		0.72	0.72	0.79		0.82
Capacity ( $c$ ), veh/h				142		126		1364	1338	528		2972
Volume-to-Capacity Ratio ( $X$ )				0.690		0.586		0.334	0.334	0.124		0.288
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)				98.7		73.5		117.1	115.1	6.3		38.8
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)				3.9		2.9		4.7	4.6	0.3		1.6
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)				0.00		0.00		0.00	0.00	0.00		0.00
Uniform Delay ( $d_1$ ), s/veh				40.4		40.1		4.7	4.7	3.6		1.9
Incremental Delay ( $d_2$ ), s/veh				2.2		1.6		0.7	0.7	0.0		0.2
Initial Queue Delay ( $d_3$ ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( $d$ ), s/veh				42.6		41.7		5.4	5.4	3.7		2.1
Level of Service (LOS)				D		D		A	A	A		A
Approach Delay, s/veh / LOS	0.0			42.2		D		5.4	A	2.2		A
Intersection Delay, s/veh / LOS				7.1						A		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.15	B	2.31	B	1.85	B	0.61	A
Bicycle LOS Score / LOS				F	1.23	A	1.25	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 27, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing - PM	PHF	0.92		
Urban Street	Atlantic / S. Cecilia	Analysis Year	2019	Analysis Period	1 > 16:45		
Intersection	Interesction #19	File Name	19PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h				76		44		752	42	49	828	

Signal Information				Signal Phases									
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	4.4	65.9	6.2	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

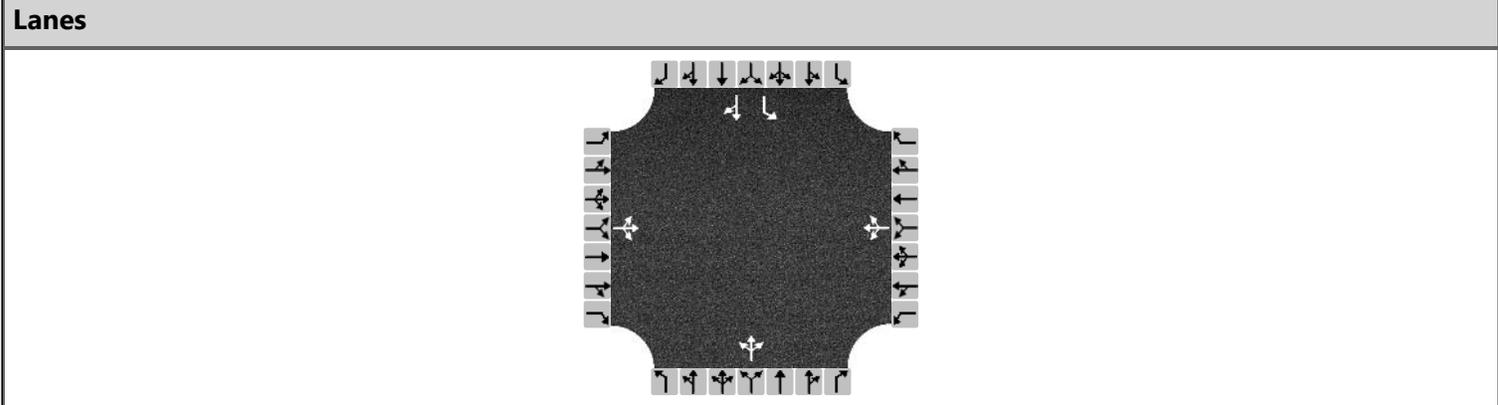
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				10.7		70.4	8.9	79.3
Change Period, ( Y+R <sub>c</sub> ), s				4.5		4.5	4.5	4.5
Max Allow Headway ( MAH ), s				3.3		0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s				6.0			2.5	
Green Extension Time ( g <sub>e</sub> ), s				0.2		0.0	0.1	0.0
Phase Call Probability				1.00			0.74	
Max Out Probability				0.00			0.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7		14		6	16	5	2	
Adjusted Flow Rate ( v ), veh/h				83		48		436	427	53	900	
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1810		1610		1900	1864	1810	1809	
Queue Service Time ( g <sub>s</sub> ), s				4.0		2.6		13.5	7.2	0.5	5.0	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				4.0		2.6		13.5	7.2	0.5	5.0	
Green Ratio ( g/C )				0.07		0.07		0.73	0.73	0.80	0.83	
Capacity ( c ), veh/h				125		111		1390	1364	547	3005	
Volume-to-Capacity Ratio ( X )				0.659		0.429		0.313	0.313	0.097	0.299	
Back of Queue ( Q ), ft/ln ( 95 th percentile)				83.7		47		101.7	100	4.5	35.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)				3.3		1.9		4.1	4.0	0.2	1.4	
Queue Storage Ratio ( RQ ) ( 95 th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh				40.8		40.2		4.2	4.2	3.3	1.7	
Incremental Delay ( d <sub>2</sub> ), s/veh				2.2		1.0		0.6	0.6	0.0	0.3	
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh				43.0		41.1		4.8	4.8	3.3	2.0	
Level of Service ( LOS )				D		D		A	A	A	A	
Approach Delay, s/veh / LOS	0.0			42.4		D		4.8	A	2.0	A	
Intersection Delay, s/veh / LOS				6.0						A		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.15	B	2.31	B	1.84	B	0.61	A
Bicycle LOS Score / LOS				F	1.20	A	1.27	A

# HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	AS	Intersection	Intersection #20
Agency/Co.	LLG Engineers	Jurisdiction	City of Cudahy
Date Performed	12/3/2019	East/West Street	Elizabeth Street
Analysis Year	2019	North/South Street	Otis Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing - AM		
Project Description	7801-7835 Otis Avenue Charter School		



**Vehicle Volume and Adjustments**

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	3	49	0	68	67	74	1	264	102	64	262	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			L TR		
Flow Rate, v (veh/h)	57			227			399			70 289		
Percent Heavy Vehicles	2			2			2			2 2		

**Departure Headway and Service Time**

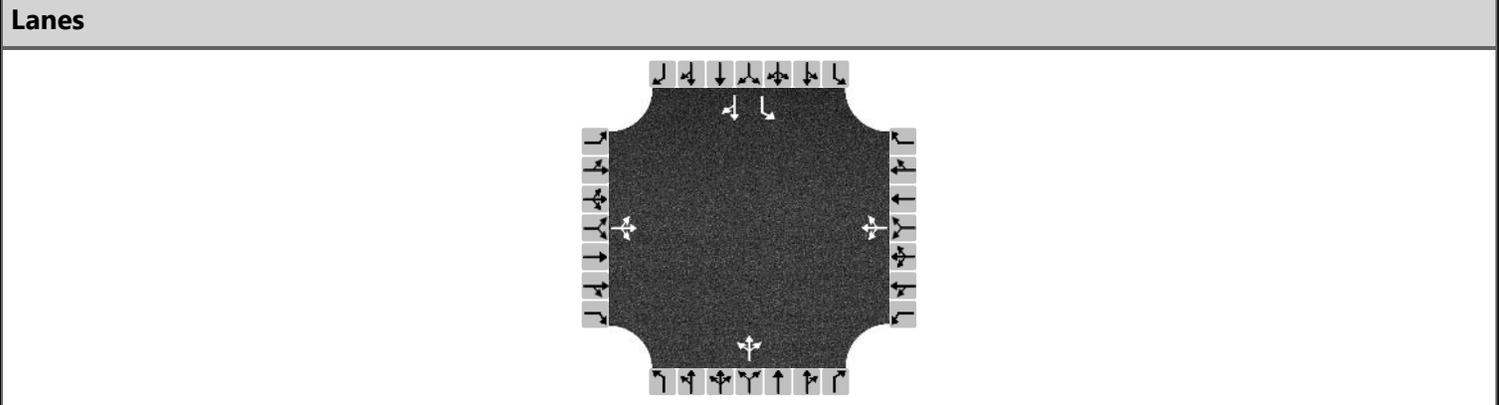
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20	3.20	
Initial Degree of Utilization, x	0.050			0.202			0.355			0.062	0.257	
Final Departure Headway, hd (s)	6.48			5.88			5.32			6.45	5.93	
Final Degree of Utilization, x	0.102			0.371			0.590			0.125	0.476	
Move-Up Time, m (s)	2.0			2.0			2.0			2.3	2.3	
Service Time, ts (s)	4.48			3.88			3.32			4.15	3.63	

**Capacity, Delay and Level of Service**

Flow Rate, v (veh/h)	57			227			399			70	289	
Capacity	556			612			676			558	607	
95% Queue Length, Q <sub>95</sub> (veh)	0.3			1.7			3.9			0.4	2.6	
Control Delay (s/veh)	10.2			12.3			15.7			10.1	13.9	
Level of Service, LOS	B			B			C			B	B	
Approach Delay (s/veh)	10.2			12.3			15.7			13.2		
Approach LOS	B			B			C			B		
Intersection Delay, s/veh   LOS	13.8						B					

# HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	AS	Intersection	Intersection #20
Agency/Co.	LLG Engineers	Jurisdiction	City of Cudahy
Date Performed	12/3/2019	East/West Street	Elizabeth Street
Analysis Year	2019	North/South Street	Otis Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing - PM		
Project Description	7801-7835 Otis Avenue Charter School		



**Vehicle Volume and Adjustments**

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	4	62	0	80	67	43	0	314	80	44	327	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			L TR		
Flow Rate, v (veh/h)	72			207			428			48 360		
Percent Heavy Vehicles	2			2			2			2 2		

**Departure Headway and Service Time**

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20	3.20	
Initial Degree of Utilization, x	0.064			0.184			0.381			0.043	0.320	
Final Departure Headway, hd (s)	6.76			6.29			5.51			6.55	6.04	
Final Degree of Utilization, x	0.135			0.361			0.656			0.087	0.603	
Move-Up Time, m (s)	2.0			2.0			2.0			2.3	2.3	
Service Time, ts (s)	4.76			4.29			3.51			4.25	3.74	

**Capacity, Delay and Level of Service**

Flow Rate, v (veh/h)	72			207			428			48	360	
Capacity	532			572			653			549	596	
95% Queue Length, Q <sub>95</sub> (veh)	0.5			1.6			4.9			0.3	4.0	
Control Delay (s/veh)	10.8			12.8			18.4			9.9	17.5	
Level of Service, LOS	B			B			C			A	C	
Approach Delay (s/veh)	10.8			12.8			18.4			16.6		
Approach LOS	B			B			C			C		
Intersection Delay, s/veh   LOS	16.2						C					

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Otis / Live Oak	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersecion #8	File Name	08AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	26	60	30	52	56	82	28	448	62	67	417	18

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	67.5	13.5	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0		
				Red	1.0	1.0	0.0	0.0	0.0	0.0		

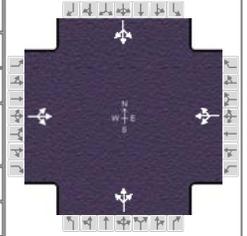
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		18.0		18.0		72.0		72.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.4		3.4		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		7.8		12.9				
Green Extension Time ( g <sub>e</sub> ), s		0.7		0.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	126			207			585			546		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1727			1646			1810			1680		
Queue Service Time ( g <sub>s</sub> ), s	0.0			5.1			0.0			0.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.8			10.9			10.3			9.1		
Green Ratio ( g/C )	0.15			0.15			0.75			0.75		
Capacity ( c ), veh/h	308			297			1400			1306		
Volume-to-Capacity Ratio ( X )	0.410			0.695			0.418			0.418		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	114.7			198.6			153.5			139.6		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.6			7.9			6.1			5.6		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	35.0			37.0			4.1			3.9		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3			1.1			0.9			1.0		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	35.3			38.1			5.0			4.9		
Level of Service ( LOS )	D			D			A			A		
Approach Delay, s/veh / LOS	35.3	D		38.1	D		5.0	A		4.9	A	
Intersection Delay, s/veh / LOS	12.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.71	B	1.61	B	1.61	B
Bicycle LOS Score / LOS	0.70	A	0.83	A	1.45	A	1.39	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Otis / Live Oak	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersecion #8	File Name	08PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	13	57	18	41	42	45	20	306	47	49	353	22

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	71.3	9.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

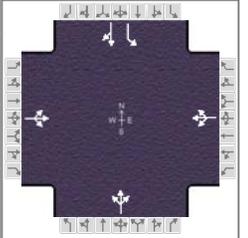
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		14.2		14.2		75.8		75.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.2		3.2		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		6.4		9.3				
Green Extension Time ( g <sub>e</sub> ), s		0.4		0.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	96			139			405			461		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1791			1648			1809			1748		
Queue Service Time ( g <sub>s</sub> ), s	0.0			2.9			0.0			0.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	4.4			7.3			5.2			6.1		
Green Ratio ( g/C )	0.11			0.11			0.79			0.79		
Capacity ( c ), veh/h	238			230			1476			1430		
Volume-to-Capacity Ratio ( X )	0.401			0.605			0.275			0.322		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	88.5			133.9			56.7			67.7		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.5			5.4			2.3			2.7		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	37.8			39.0			2.5			2.6		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.4			1.0			0.5			0.6		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	38.2			40.0			2.9			3.2		
Level of Service ( LOS )	D			D			A			A		
Approach Delay, s/veh / LOS	38.2	D		40.0	D		2.9	A		3.2	A	
Intersection Delay, s/veh / LOS	10.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.72	B	1.72	B	1.60	B	1.60	B
Bicycle LOS Score / LOS	0.65	A	0.72	A	1.16	A	1.25	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing with Project - AM	PHF	0.92		
Urban Street	Otis / Clara	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	Intersecion #9	File Name	09AM - Existing with Project.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	16	108	14	173	107	123	6	333	162	77	343	14

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	55.5	25.5	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

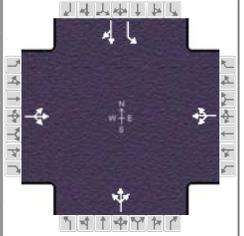
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		7.6		27.5				
Green Extension Time ( g <sub>e</sub> ), s		1.3		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		1.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	150			438			545			84 388		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1776			1523			1791			881 1887		
Queue Service Time ( g <sub>s</sub> ), s	0.0			19.9			0.0			5.2 8.9		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.6			25.5			15.0			20.2 8.9		
Green Ratio ( g/C )	0.28			0.28			0.62			0.62 0.62		
Capacity ( c ), veh/h	548			489			1145			476 1163		
Volume-to-Capacity Ratio ( X )	0.274			0.896			0.476			0.176 0.334		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	110.9			437.7			245.5			51 163.1		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.4			17.5			9.8			2.0 6.5		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00 0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	25.1			32.3			9.5			15.1 8.3		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1			18.4			1.4			0.8 0.8		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0 0.0		
Control Delay ( d ), s/veh	25.2			50.7			10.9			15.9 9.1		
Level of Service ( LOS )	C			D			B			B A		
Approach Delay, s/veh / LOS	25.2	C		50.7	D		10.9	B		10.3	B	
Intersection Delay, s/veh / LOS	22.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.70	B	1.92	B	1.65	B	1.65	B
Bicycle LOS Score / LOS	0.74	A	1.21	A	1.39	A	1.27	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Otis / Clara	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersecion #9	File Name	09PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	11	115	6	127	91	63	5	280	122	76	307	22

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	61.1	19.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

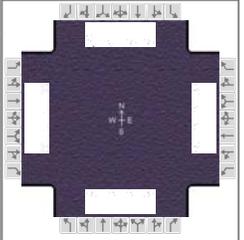
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		6.0
Phase Duration, s		24.4		24.4		65.6		65.6
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		7.8		19.3				
Green Extension Time ( g <sub>e</sub> ), s		0.9		0.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.18				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	143			305			442			83 358		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1854			1536			1798			967 1877		
Queue Service Time ( g <sub>s</sub> ), s	0.0			11.6			0.0			3.6 6.8		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.8			17.3			9.4			13.0 6.8		
Green Ratio ( g/C )	0.22			0.22			0.68			0.68 0.68		
Capacity ( c ), veh/h	454			398			1261			635 1274		
Volume-to-Capacity Ratio ( X )	0.316			0.767			0.351			0.130 0.281		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	116.7			279.1			154.2			35.8 115.6		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.7			11.2			6.2			1.4 4.6		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00 0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	29.5			33.9			6.2			8.9 5.7		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1			4.3			0.8			0.4 0.6		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0 0.0		
Control Delay ( d ), s/veh	29.7			38.2			6.9			9.3 6.3		
Level of Service ( LOS )	C			D			A			A A		
Approach Delay, s/veh / LOS	29.7	C		38.2	D		6.9	A		6.9	A	
Intersection Delay, s/veh / LOS	16.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.70	B	1.93	B	1.63	B	1.63	B
Bicycle LOS Score / LOS	0.72	A	0.99	A	1.22	A	1.21	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersection #13	File Name	13AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	171	851	216	190	965	97	163	813	129	141	659	78

Signal Information															
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On												
Force Mode	Fixed	Simult. Gap N/S	On												
		Green		10.9	30.5	5.9	2.6	22.1	0.0						
		Yellow		3.5	3.5	3.5	0.0	3.5	0.0						
		Red		1.0	1.0	1.0	0.0	1.0	0.0						

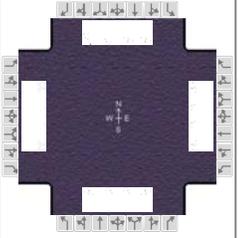
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	15.4	35.0	15.4	35.0	13.0	29.3	10.4	26.6
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( g <sub>s</sub> ), s	11.1		12.2		10.5	23.1	5.8	20.6
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	1.6	0.1	1.6
Phase Call Probability	0.99		0.99		0.99	1.00	0.98	1.00
Max Out Probability	1.00		1.00		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	186	925	235	207	1049	105	177	884	140	153	408	393
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1829
Queue Service Time ( g <sub>s</sub> ), s	9.1	20.4	10.2	10.2	24.3	4.2	8.5	21.1	5.2	3.8	18.6	18.6
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	9.1	20.4	10.2	10.2	24.3	4.2	8.5	21.1	5.2	3.8	18.6	18.6
Green Ratio ( g/C )	0.12	0.34	0.34	0.12	0.34	0.34	0.09	0.28	0.40	0.07	0.25	0.25
Capacity ( c ), veh/h	218	1226	546	218	1226	546	171	996	637	229	468	450
Volume-to-Capacity Ratio ( X )	0.852	0.754	0.430	0.947	0.856	0.193	1.037	0.887	0.220	0.669	0.872	0.873
Back of Queue ( Q ), ft/ln ( 95 th percentile)	231.3	350	182.6	288.8	418.1	73.3	301.5	378.6	83.2	74.9	380.5	371.2
Back of Queue ( Q ), veh/ln ( 95 th percentile)	9.3	14.0	7.3	11.6	16.7	2.9	12.1	15.1	3.3	3.0	15.2	14.8
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	38.8	26.4	23.0	39.3	27.7	21.0	40.8	31.3	18.0	41.1	32.6	32.6
Incremental Delay ( d <sub>2</sub> ), s/veh	25.1	4.3	2.5	45.6	7.8	0.8	78.8	8.6	0.1	1.3	14.2	14.8
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	63.9	30.8	25.5	84.9	35.5	21.8	119.6	39.9	18.1	42.4	46.8	47.4
Level of Service ( LOS )	E	C	C	F	D	C	F	D	B	D	D	D
Approach Delay, s/veh / LOS	34.4		C	41.9		D	49.1		D	46.3		D
Intersection Delay, s/veh / LOS	42.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.60	B	1.61	B	1.48	A	1.27	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2019	Analysis Period	1 > 16:00
Intersection	Intersection #13	File Name	13PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	114	841	140	170	743	136	147	564	123	198	694	77

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	7.7	2.8	30.5	7.4	1.1	22.5			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	3.5			
				Red	1.0	0.0	1.0	1.0	0.0	1.0			

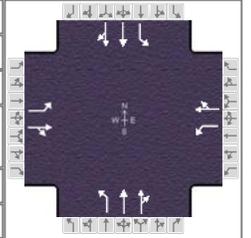
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	12.2	35.0	15.0	37.8	13.0	28.1	11.9	27.0
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( g <sub>s</sub> ), s	8.0		11.0		9.9	15.5	7.4	21.5
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	2.8	0.1	1.0
Phase Call Probability	0.95		0.99		0.98	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.28	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	124	914	152	185	808	148	160	613	134	215	426	412
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1833
Queue Service Time ( g <sub>s</sub> ), s	6.0	20.1	6.2	9.0	16.3	5.7	7.9	13.5	5.1	5.4	19.5	19.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	6.0	20.1	6.2	9.0	16.3	5.7	7.9	13.5	5.1	5.4	19.5	19.5
Green Ratio ( g/C )	0.09	0.34	0.34	0.12	0.37	0.37	0.09	0.26	0.38	0.08	0.25	0.25
Capacity ( c ), veh/h	155	1226	546	211	1337	595	171	949	610	289	476	459
Volume-to-Capacity Ratio ( X )	0.798	0.746	0.279	0.877	0.604	0.248	0.935	0.646	0.219	0.744	0.897	0.897
Back of Queue ( Q ), ft/ln ( 95 th percentile)	137.6	345.1	109.9	240	282.2	100	242.8	243.4	81.9	113.2	408.5	399.3
Back of Queue ( Q ), veh/ln ( 95 th percentile)	5.5	13.8	4.4	9.6	11.3	4.0	9.7	9.7	3.3	4.5	16.3	16.0
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	40.4	26.3	21.7	39.1	23.0	19.7	40.5	29.5	18.9	40.4	32.6	32.6
Incremental Delay ( d <sub>2</sub> ), s/veh	10.0	4.2	1.3	30.5	2.0	1.0	49.5	1.0	0.1	6.1	17.7	18.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	50.4	30.5	23.0	69.6	25.1	20.7	90.0	30.5	19.0	46.4	50.3	50.9
Level of Service ( LOS )	D	C	C	E	C	C	F	C	B	D	D	D
Approach Delay, s/veh / LOS	31.6	C		31.7	C		39.3	D		49.7	D	
Intersection Delay, s/veh / LOS	37.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.47	A	1.43	A	1.24	A	1.36	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Existing with Project - AM	PHF	0.92		
Urban Street	Atlantic / Live Oak		Analysis Year	2019	Analysis Period	1 > 7:15	
Intersection	Intersecion #14	File Name	14AM - Existing with Project.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	66	172	71	99	143	58	56	957	137	70	807	65

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	4.7	0.4	48.9	22.5	0.0	0.0						
Yellow	3.5	0.0	3.5	3.5	0.0	0.0						
Red	1.0	0.0	1.0	1.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		27.0		27.0	9.2	53.4	9.6	53.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		16.2		21.8	5.0		5.7	
Green Extension Time ( g <sub>e</sub> ), s		1.2		0.7	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.78		0.85	
Max Out Probability		0.08		0.89	0.11		0.40	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	72	264		108	218		61	607	582	76	480	468
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1181	1805		1133	1806		1810	1900	1816	1810	1900	1850
Queue Service Time ( g <sub>s</sub> ), s	5.0	11.6		8.3	9.3		3.0	19.3	19.4	3.7	13.8	13.8
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	14.2	11.6		19.8	9.3		3.0	19.3	19.4	3.7	13.8	13.8
Green Ratio ( g/C )	0.25	0.25		0.25	0.25		0.05	0.54	0.54	0.06	0.55	0.55
Capacity ( c ), veh/h	254	452		218	452		94	1032	986	103	1041	1013
Volume-to-Capacity Ratio ( X )	0.282	0.585		0.493	0.483		0.645	0.589	0.590	0.741	0.462	0.462
Back of Queue ( Q ), ft/ln ( 95 th percentile)	64.8	218.5		104.9	181.4		61.6	320.1	310.7	78.1	240.7	236
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.6	8.7		4.2	7.3		2.5	12.8	12.4	3.1	9.6	9.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	34.8	29.6		38.3	28.8		41.8	13.8	13.8	41.8	12.3	12.3
Incremental Delay ( d <sub>2</sub> ), s/veh	0.2	0.6		0.6	0.3		2.7	2.5	2.6	3.9	1.5	1.5
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	35.1	30.3		39.0	29.1		44.6	16.3	16.4	45.7	13.8	13.8
Level of Service ( LOS )	D	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	31.3	C		32.3	C		17.7	B		16.2	B	
Intersection Delay, s/veh / LOS	20.4						C					

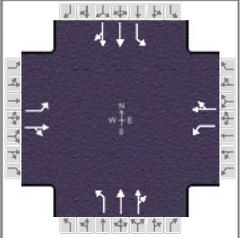
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.04	A	1.03	A	1.52	B	1.33	A

## HCS7 Signalized Intersection Results Summary

General Information					Intersection Information															
Agency	LLG Engineers				Duration, h	0.25														
Analyst	AS	Analysis Date	Dec 5, 2019		Area Type	Other														
Jurisdiction	City of Cudahy		Time Period	Existing with Project - PM	PHF	0.92														
Urban Street	Atlantic / Live Oak		Analysis Year	2019	Analysis Period	1 > 17:00														
Intersection	Intersection #14		File Name	14PM - Existing with Project.xus																
Project Description	7801-7835 Otis Avenue Charter School																			
Demand Information					EB			WB			NB			SB						
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R				
Demand ( v ), veh/h					53	118	43	138	98	50	35	676	106	65	867	68				
Signal Information																				
Cycle, s	90.0	Reference Phase	2																	
Offset, s	0	Reference Point	End																	
Uncoordinated	No	Simult. Gap E/W	On		Green	3.7	1.3	50.8	20.7	0.0	0.0									
Force Mode	Fixed	Simult. Gap N/S	On		Yellow	3.5	0.0	3.5	3.5	0.0	0.0									
					Red	1.0	0.0	1.0	1.0	0.0	0.0									
Timer Results					EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase							8				4		1		6		5		2	
Case Number							6.0				6.0		2.0		4.0		2.0		4.0	
Phase Duration, s							25.2				25.2		8.2		55.3		9.5		56.6	
Change Period, ( Y+R <sub>c</sub> ), s							4.5				4.5		4.5		4.5		4.5		4.5	
Max Allow Headway ( MAH ), s							3.4				3.4		3.1		0.0		3.1		0.0	
Queue Clearance Time ( g <sub>s</sub> ), s							12.5				20.0		3.9				5.5			
Green Extension Time ( g <sub>e</sub> ), s							1.1				0.7		0.0		0.0		0.0		0.0	
Phase Call Probability							1.00				1.00		0.61				0.83			
Max Out Probability							0.01				0.34		0.00				0.02			
Movement Group Results					EB			WB			NB			SB						
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R				
Assigned Movement					3	8	18	7	4	14	1	6	16	5	2	12				
Adjusted Flow Rate ( v ), veh/h					58	175		150	161		38	435	415	71	515	502				
Adjusted Saturation Flow Rate ( s ), veh/h/ln					1245	1813		1229	1791		1810	1900	1810	1810	1900	1851				
Queue Service Time ( g <sub>s</sub> ), s					3.7	7.4		10.7	6.8		1.9	11.6	11.7	3.5	14.1	14.1				
Cycle Queue Clearance Time ( g <sub>c</sub> ), s					10.5	7.4		18.0	6.8		1.9	11.6	11.7	3.5	14.1	14.1				
Green Ratio ( g/C )					0.23	0.23		0.23	0.23		0.04	0.56	0.56	0.06	0.58	0.58				
Capacity ( c ), veh/h					273	418		263	413		74	1072	1021	100	1100	1071				
Volume-to-Capacity Ratio ( X )					0.211	0.419		0.571	0.390		0.514	0.406	0.406	0.706	0.468	0.468				
Back of Queue ( Q ), ft/ln ( 95 th percentile)					50.7	145.7		145.6	132.9		38.4	207.8	200.7	72.2	239.9	235.3				
Back of Queue ( Q ), veh/ln ( 95 th percentile)					2.0	5.8		5.8	5.3		1.5	8.3	8.0	2.9	9.6	9.4				
Queue Storage Ratio ( RQ ) ( 95 th percentile)					0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00				
Uniform Delay ( d <sub>1</sub> ), s/veh					33.7	29.5		37.2	29.3		42.3	11.1	11.1	41.8	11.0	11.0				
Incremental Delay ( d <sub>2</sub> ), s/veh					0.1	0.2		0.7	0.2		2.0	1.1	1.2	3.4	1.4	1.5				
Initial Queue Delay ( d <sub>3</sub> ), s/veh					0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0				
Control Delay ( d ), s/veh					33.8	29.8		37.9	29.5		44.3	12.2	12.3	45.2	12.4	12.4				
Level of Service ( LOS )					C	C		D	C		D	B	B	D	B	B				
Approach Delay, s/veh / LOS					30.8		C	33.6		C	13.6		B	14.5		B				
Intersection Delay, s/veh / LOS					18.1						B									
Multimodal Results					EB			WB			NB			SB						
Pedestrian LOS Score / LOS					2.29		B	2.29		B	1.88		B	1.88		B				
Bicycle LOS Score / LOS					0.87		A	1.00		A	1.22		A	1.38		A				

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Atlantic / Clara	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersecion #15	File Name	15AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	110	144	108	97	212	132	68	928	141	126	777	136

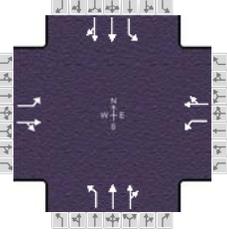
Signal Information				Signal Phases													
Cycle, s	90.0	Reference Phase	2														
Offset, s	0	Reference Point	End														
Uncoordinated	No	Simult. Gap E/W	On														
Force Mode	Fixed	Simult. Gap N/S	On														
		Green	5.1	1.4	44.5	25.5	0.0	0.0									
		Yellow	3.5	0.0	3.5	3.5	0.0	0.0									
		Red	1.0	0.0	1.0	1.0	0.0	0.0									

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		30.0		30.0	9.6	49.0	11.0	50.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		21.8	5.6		8.5	
Green Extension Time ( g <sub>e</sub> ), s		0.0		1.0	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.84		0.97	
Max Out Probability		1.00		0.91	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	120	274		105	374		74	594	568	137	509	483
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1025	1764		1123	1777		1810	1900	1812	1810	1900	1801
Queue Service Time ( g <sub>s</sub> ), s	8.3	11.9		7.9	17.2		3.6	20.7	20.8	6.5	16.1	16.1
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	11.9		19.8	17.2		3.6	20.7	20.8	6.5	16.1	16.1
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.06	0.49	0.49	0.07	0.51	0.51
Capacity ( c ), veh/h	175	500		250	504		102	939	896	131	970	919
Volume-to-Capacity Ratio ( X )	0.685	0.548		0.421	0.743		0.727	0.633	0.634	1.048	0.525	0.525
Back of Queue ( Q ), ft/ln ( 95 th percentile)	138.1	215.7		98.4	314.2		82.3	350.6	339	260.1	280.3	269.4
Back of Queue ( Q ), veh/ln ( 95 th percentile)	5.5	8.6		3.9	12.6		3.3	14.0	13.6	10.4	11.2	10.8
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	41.7	27.4		35.7	29.3		41.8	16.7	16.7	41.8	14.7	14.7
Incremental Delay ( d <sub>2</sub> ), s/veh	8.8	0.7		0.4	5.2		8.8	3.2	3.4	92.1	2.0	2.1
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	50.5	28.1		36.2	34.5		50.6	20.0	20.2	133.9	16.8	16.9
Level of Service ( LOS )	D	C		D	C		D	B	C	F	B	B
Approach Delay, s/veh / LOS	34.9	C		34.8	C		21.9	C		31.0	C	
Intersection Delay, s/veh / LOS	28.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.90	B	1.89	B
Bicycle LOS Score / LOS	1.14	A	1.28	A	1.51	B	1.42	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other	
Jurisdiction	City of Cudahy	Time Period	Existing with Project - PM	PHF	0.92	
Urban Street	Atlantic / Clara	Analysis Year	2019	Analysis Period	1 > 17:00	
Intersection	Intersection #15	File Name	15PM - Existing with Project.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	63	207	71	102	205	92	70	709	121	107	888	81

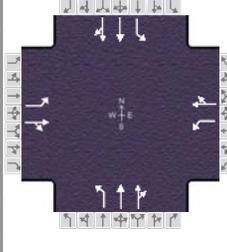
Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	5.1	2.2	44.8	24.4	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0		
				Red	1.0	0.0	1.0	1.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		28.9		28.9	9.6	49.3	11.8	51.5
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		21.8		24.0	5.7		7.7	
Green Extension Time ( g <sub>e</sub> ), s		0.9		0.4	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.85		0.95	
Max Out Probability		0.88		1.00	1.00		1.00	

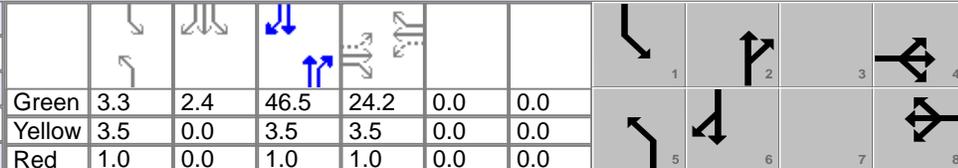
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	68	302		111	323		76	463	439	116	535	519
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1074	1816		1094	1800		1810	1900	1803	1810	1900	1844
Queue Service Time ( g <sub>s</sub> ), s	5.4	13.1		8.9	14.3		3.7	14.5	14.5	5.7	16.8	16.8
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	19.8	13.1		22.0	14.3		3.7	14.5	14.5	5.7	16.8	16.8
Green Ratio ( g/C )	0.27	0.27		0.27	0.27		0.06	0.50	0.50	0.08	0.52	0.52
Capacity ( c ), veh/h	200	492		217	488		103	947	898	146	992	963
Volume-to-Capacity Ratio ( X )	0.343	0.614		0.510	0.662		0.741	0.489	0.489	0.796	0.539	0.539
Back of Queue ( Q ), ft/ln ( 95 th percentile)	64.5	242.2		108.3	265		78.1	258.7	248.9	150.9	288.1	281.7
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.6	9.7		4.3	10.6		3.1	10.3	10.0	6.0	11.5	11.3
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	37.9	28.7		38.3	29.1		41.8	15.0	15.0	40.6	14.3	14.3
Incremental Delay ( d <sub>2</sub> ), s/veh	0.4	1.4		0.7	2.3		3.9	1.8	1.9	21.7	2.1	2.2
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	38.3	30.1		39.0	31.5		45.7	16.8	16.9	62.4	16.4	16.4
Level of Service ( LOS )	D	C		D	C		D	B	B	E	B	B
Approach Delay, s/veh / LOS	31.6	C		33.4	C		19.1	B		21.0	C	
Intersection Delay, s/veh / LOS	23.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.10	A	1.20	A	1.29	A	1.45	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other	
Jurisdiction	City of Cudahy	Time Period	Existing with Project - AM	PHF	0.92	
Urban Street	Atlantic / Elizabeth	Analysis Year	2019	Analysis Period	1 > 7:15	
Intersection	Intersecion #16	File Name	16AM - Existing with Project.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	129	139	50	88	82	145	30	865	97	83	774	96

Signal Information																								
Cycle, s	90.0	Reference Phase	2	Green	3.3	2.4	46.5	24.2	0.0	0.0	Yellow	3.5	0.0	3.5	3.5	0.0	0.0	Red	1.0	0.0	1.0	1.0	0.0	0.0
Offset, s	0	Reference Point	End	Uncoordinated	No	Simult. Gap E/W	On	Force Mode	Fixed	Simult. Gap N/S	On													

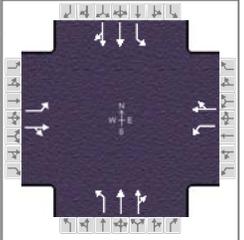
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		28.7		28.7	7.8	51.0	10.3	53.5
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.5		3.5	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		23.8		16.8	3.6		6.4	
Green Extension Time ( g <sub>e</sub> ), s		0.4		1.3	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.56		0.90	
Max Out Probability		1.00		0.12	0.13		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	140	205		96	247		33	532	513	90	482	463
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1151	1814		1195	1704		1810	1900	1832	1810	1900	1826
Queue Service Time ( g <sub>s</sub> ), s	10.7	8.4		6.5	11.1		1.6	16.9	16.9	4.4	14.0	14.0
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	21.8	8.4		14.8	11.1		1.6	16.9	16.9	4.4	14.0	14.0
Green Ratio ( g/C )	0.27	0.27		0.27	0.27		0.04	0.52	0.52	0.06	0.54	0.54
Capacity ( c ), veh/h	247	488		290	458		67	983	948	116	1034	993
Volume-to-Capacity Ratio ( X )	0.567	0.421		0.330	0.539		0.485	0.542	0.542	0.779	0.467	0.467
Back of Queue ( Q ), ft/ln ( 95 th percentile)	138.5	164.1		84.9	201.8		33	290.3	282.6	102.3	243.5	236.5
Back of Queue ( Q ), veh/ln ( 95 th percentile)	5.5	6.6		3.4	8.1		1.3	11.6	11.3	4.1	9.7	9.5
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	37.4	27.1		33.2	28.1		42.5	14.6	14.6	41.5	12.5	12.5
Incremental Delay ( d <sub>2</sub> ), s/veh	1.3	0.2		0.2	0.5		2.0	2.1	2.2	10.8	1.5	1.6
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	38.8	27.3		33.5	28.6		44.5	16.7	16.8	52.3	14.1	14.1
Level of Service ( LOS )	D	C		C	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	32.0	C		30.0	C		17.6	B		17.4	B	
Intersection Delay, s/veh / LOS	20.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.06	A	1.05	A	1.38	A	1.34	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Atlantic / Elizabeth	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersecion #16	File Name	16PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	95	107	76	54	90	87	54	706	65	93	831	113

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	4.6	1.8	51.0	19.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0				
				Red	1.0	0.0	1.0	1.0	0.0	0.0				

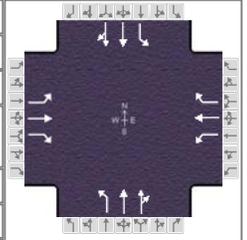
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		23.5		23.5	9.1	55.5	10.9	57.3
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		18.2		15.0	4.9		6.9	
Green Extension Time ( g <sub>e</sub> ), s		0.9		1.0	0.0	0.0	0.1	0.0
Phase Call Probability		1.00		1.00	0.77		0.92	
Max Out Probability		0.14		0.03	0.00		0.02	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	103	199		59	192		59	425	413	101	524	502
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1210	1768		1202	1746		1810	1900	1843	1810	1900	1820
Queue Service Time ( g <sub>s</sub> ), s	7.4	9.0		4.1	8.8		2.9	11.2	11.3	4.9	14.2	14.2
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	16.2	9.0		13.0	8.8		2.9	11.2	11.3	4.9	14.2	14.2
Green Ratio ( g/C )	0.21	0.21		0.21	0.21		0.05	0.57	0.57	0.07	0.59	0.59
Capacity ( c ), veh/h	219	374		215	369		93	1077	1045	130	1116	1068
Volume-to-Capacity Ratio ( X )	0.472	0.532		0.273	0.521		0.632	0.395	0.395	0.780	0.470	0.470
Back of Queue ( Q ), ft/ln ( 95 th percentile)	100.5	173.9		54.9	167.9		59.3	201.3	197.1	102.9	239.3	231.9
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.0	7.0		2.2	6.7		2.4	8.1	7.9	4.1	9.6	9.3
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	38.6	31.5		37.3	31.4		41.9	10.9	10.9	41.1	10.6	10.6
Incremental Delay ( d <sub>2</sub> ), s/veh	0.6	0.4		0.3	0.4		2.6	1.1	1.1	3.8	1.4	1.5
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	39.2	32.0		37.5	31.9		44.5	12.0	12.0	44.9	12.0	12.1
Level of Service ( LOS )	D	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	34.4	C		33.2	C		14.1	B		15.0	B	
Intersection Delay, s/veh / LOS	18.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.88	B	1.88	B
Bicycle LOS Score / LOS	0.99	A	0.90	A	1.23	A	1.42	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Atlantic / Santa Ana	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersecion #17	File Name	17AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	174	215	97	74	217	91	81	738	35	72	703	113

Signal Information				Signal Phases										
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On											
Force Mode	Fixed	Simult. Gap N/S	On											
Green	5.2	0.5	45.4	25.5	0.0	0.0								
Yellow	3.5	0.0	3.5	3.5	0.0	0.0								
Red	1.0	0.0	1.0	1.0	0.0	0.0								

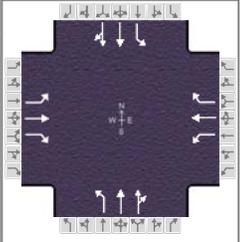
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		5.0		5.0	2.0	4.0	2.0	4.0
Phase Duration, s		30.0		30.0	10.1	50.4	9.7	49.9
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		25.5		16.5	6.3		5.8	
Green Extension Time ( g <sub>e</sub> ), s		0.0		1.7	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.89		0.86	
Max Out Probability		1.00		0.16	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	189	234	105	80	236	99	88	423	417	78	454	433
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1163	1900	1610	1165	1900	1610	1810	1900	1869	1810	1900	1808
Queue Service Time ( g <sub>s</sub> ), s	14.3	9.0	4.5	5.5	9.1	4.2	4.3	12.7	12.7	3.8	14.0	14.0
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	23.5	9.0	4.5	14.5	9.1	4.2	4.3	12.7	12.7	3.8	14.0	14.0
Green Ratio ( g/C )	0.28	0.28	0.28	0.28	0.28	0.28	0.06	0.51	0.51	0.06	0.50	0.50
Capacity ( c ), veh/h	291	538	456	293	538	456	113	968	953	104	959	912
Volume-to-Capacity Ratio ( X )	0.650	0.435	0.231	0.275	0.439	0.217	0.779	0.437	0.437	0.756	0.474	0.474
Back of Queue ( Q ), ft/ln ( 95 th percentile)	192.1	181.9	76.7	69.8	186.3	72.7	111	229.4	226.7	91.4	250.1	241.1
Back of Queue ( Q ), veh/ln ( 95 th percentile)	7.7	7.3	3.1	2.8	7.5	2.9	4.4	9.2	9.1	3.7	10.0	9.6
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	36.0	26.4	24.8	32.3	26.4	24.6	41.6	13.9	13.9	41.8	14.5	14.5
Incremental Delay ( d <sub>2</sub> ), s/veh	4.0	0.2	0.1	0.2	0.2	0.1	18.7	1.4	1.5	12.4	1.7	1.8
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	40.0	26.6	24.8	32.5	26.6	24.7	60.3	15.4	15.4	54.2	16.2	16.3
Level of Service ( LOS )	D	C	C	C	C	C	E	B	B	D	B	B
Approach Delay, s/veh / LOS	31.0	C		27.3	C		19.6	B		19.3	B	
Intersection Delay, s/veh / LOS	22.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	2.08	B	2.08	B
Bicycle LOS Score / LOS	1.36	A	1.17	A	1.25	A	1.28	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Atlantic / Santa Ana	Analysis Year	2019	Analysis Period	1 > 16:30
Intersection	Intersecion #17	File Name	17PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	155	222	45	85	179	42	89	676	57	85	722	143

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	5.9	0.3	47.7	22.7	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0				
				Red	1.0	0.0	1.0	1.0	0.0	0.0				

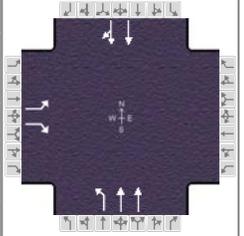
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		5.0		5.0	2.0	4.0	2.0	4.0
Phase Duration, s		27.2		27.2	10.7	52.4	10.4	52.2
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.3		3.3	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		21.8		18.5	6.7		6.5	
Green Extension Time ( g <sub>e</sub> ), s		0.8		1.2	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.91		0.90	
Max Out Probability		0.88		0.24	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	168	241	49	92	195	46	97	404	393	92	484	456
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1207	1900	1610	1157	1900	1610	1810	1900	1848	1810	1900	1790
Queue Service Time ( g <sub>s</sub> ), s	12.2	9.8	2.1	6.7	7.7	2.0	4.7	11.4	11.4	4.5	14.5	14.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	19.8	9.8	2.1	16.5	7.7	2.0	4.7	11.4	11.4	4.5	14.5	14.5
Green Ratio ( g/C )	0.25	0.25	0.25	0.25	0.25	0.25	0.07	0.53	0.53	0.07	0.53	0.53
Capacity ( c ), veh/h	281	478	406	246	478	406	124	1012	984	119	1006	948
Volume-to-Capacity Ratio ( X )	0.599	0.504	0.121	0.376	0.407	0.113	0.781	0.399	0.399	0.778	0.481	0.481
Back of Queue ( Q ), ft/ln ( 95 th percentile)	162.5	196.4	36.1	85.9	157.6	34.1	101.2	207.3	203.3	94.8	253.1	242.3
Back of Queue ( Q ), veh/ln ( 95 th percentile)	6.5	7.9	1.4	3.4	6.3	1.4	4.0	8.3	8.1	3.8	10.1	9.7
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	36.3	28.9	26.0	35.9	28.1	25.9	41.3	12.5	12.5	41.4	13.4	13.4
Incremental Delay ( d <sub>2</sub> ), s/veh	1.2	0.3	0.0	0.4	0.2	0.0	5.4	1.2	1.2	4.1	1.6	1.7
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	37.6	29.2	26.0	36.3	28.3	26.0	46.6	13.7	13.7	45.5	15.0	15.1
Level of Service ( LOS )	D	C	C	D	C	C	D	B	B	D	B	B
Approach Delay, s/veh / LOS	31.9	C		30.2	C		17.3	B		17.8	B	
Intersection Delay, s/veh / LOS	21.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.08	B	2.08	B
Bicycle LOS Score / LOS	1.24	A	1.04	A	1.22	A	1.34	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Atlantic / N. Cecilia	Analysis Year	2019	Analysis Period	1 > 7:30
Intersection	Intersecion #18	File Name	18AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	61		39				15	861			850	36

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	2.0	68.5	6.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

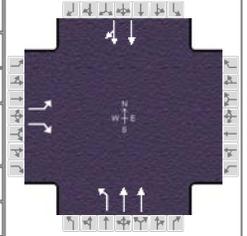
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		10.5			6.5	79.5		73.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5			4.5	4.5		4.5
Max Allow Headway ( MAH ), s		3.3			3.1	0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		5.2			2.8			
Green Extension Time ( g <sub>e</sub> ), s		0.2			0.0	0.0		0.0
Phase Call Probability		1.00			0.33			
Max Out Probability		0.00			0.00			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate ( v ), veh/h	66		42				16	936			485	478
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810		1610				1810	1809			1900	1872
Queue Service Time ( g <sub>s</sub> ), s	3.2		2.3				0.8	5.2			15.6	7.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	3.2		2.3				0.8	5.2			15.6	7.4
Green Ratio ( g/C )	0.07		0.07				0.02	0.83			0.76	0.76
Capacity ( c ), veh/h	121		107				40	3015			1446	1425
Volume-to-Capacity Ratio ( X )	0.550		0.395				0.404	0.310			0.335	0.335
Back of Queue ( Q ), ft/ln ( 95 th percentile)	66.2		41.6				17	35.5			95.6	94.4
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.6		1.7				0.7	1.4			3.8	3.8
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	40.7		40.3				43.4	1.7			3.5	3.5
Incremental Delay ( d <sub>2</sub> ), s/veh	1.4		0.9				2.4	0.3			0.6	0.6
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay ( d ), s/veh	42.1		41.1				45.8	2.0			4.1	4.1
Level of Service ( LOS )	D		D				D	A			A	A
Approach Delay, s/veh / LOS	41.7		D	0.0			2.7	A		4.1		A
Intersection Delay, s/veh / LOS	5.5						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.31	B	2.15	B	0.61	A	1.84	B
Bicycle LOS Score / LOS		F			1.27	A	1.28	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Atlantic / N. Cecilia	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersecion #18	File Name	18PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	24		34				34	784			857	21

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	3.6	66.9	6.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0				
				Red	1.0	1.0	1.0	0.0	0.0	0.0				

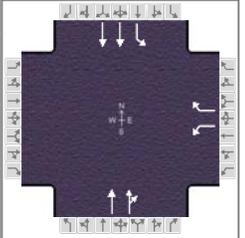
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		10.5			8.1	79.5		71.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5			4.5	4.5		4.5
Max Allow Headway ( MAH ), s		3.4			3.1	0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		4.0			3.8			
Green Extension Time ( g <sub>e</sub> ), s		0.1			0.0	0.0		0.0
Phase Call Probability		1.00			0.60			
Max Out Probability		0.00			0.00			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3		18				1	6			2	12
Adjusted Flow Rate ( v ), veh/h	26		37				37	852			479	475
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810		1610				1810	1809			1900	1884
Queue Service Time ( g <sub>s</sub> ), s	1.2		2.0				1.8	4.6			15.3	7.8
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	1.2		2.0				1.8	4.6			15.3	7.8
Green Ratio ( g/C )	0.07		0.07				0.04	0.83			0.74	0.74
Capacity ( c ), veh/h	121		107				73	3015			1412	1400
Volume-to-Capacity Ratio ( X )	0.216		0.344				0.508	0.283			0.339	0.339
Back of Queue ( Q ), ft/ln ( 95 th percentile)	25.1		36.1				37.3	31.6			107.4	106.6
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.0		1.4				1.5	1.3			4.3	4.3
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	39.8		40.1				42.3	1.6			4.0	4.0
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3		0.7				2.0	0.2			0.7	0.7
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay ( d ), s/veh	40.1		40.8				44.3	1.9			4.6	4.6
Level of Service ( LOS )	D		D				D	A			A	A
Approach Delay, s/veh / LOS	40.5		D	0.0			3.6	A		4.6		A
Intersection Delay, s/veh / LOS	5.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.31	B	2.15	B	0.61	A	1.84	B
Bicycle LOS Score / LOS		F			1.22	A	1.27	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Atlantic / S. Cecilia	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersecion #19	File Name	19AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h				90		75			810	44	66	809

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	5.0	64.4	7.1	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

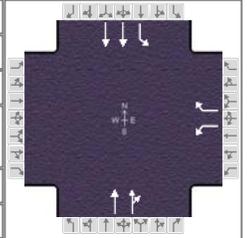
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2	1	6
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				11.6		68.9	9.5	78.4
Change Period, ( Y+R <sub>c</sub> ), s				4.5		4.5	4.5	4.5
Max Allow Headway ( MAH ), s				3.4		0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s				6.7			2.8	
Green Extension Time ( g <sub>e</sub> ), s				0.3		0.0	0.1	0.0
Phase Call Probability				1.00			0.83	
Max Out Probability				0.00			0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( v ), veh/h				98		82		468	460	72		879
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1810		1610		1900	1865	1810		1809
Queue Service Time ( g <sub>s</sub> ), s				4.7		4.4		14.9	8.4	0.8		5.2
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				4.7		4.4		14.9	8.4	0.8		5.2
Green Ratio ( g/C )				0.08		0.08		0.72	0.72	0.79		0.82
Capacity ( c ), veh/h				142		127		1360	1335	518		2972
Volume-to-Capacity Ratio ( X )				0.688		0.644		0.344	0.344	0.139		0.296
Back of Queue ( Q ), ft/ln ( 95 th percentile)				98.7		81.9		123.6	121.6	6.9		39.9
Back of Queue ( Q ), veh/ln ( 95 th percentile)				3.9		3.3		4.9	4.9	0.3		1.6
Queue Storage Ratio ( RQ ) ( 95 th percentile)				0.00		0.00		0.00	0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				40.4		40.2		4.8	4.8	3.8		1.9
Incremental Delay ( d <sub>2</sub> ), s/veh				2.2		2.0		0.7	0.7	0.0		0.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				42.6		42.3		5.5	5.5	3.8		2.2
Level of Service ( LOS )				D		D		A	A	A		A
Approach Delay, s/veh / LOS	0.0			42.5		D		5.5	A	2.3		A
Intersection Delay, s/veh / LOS	7.2						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.15	B	2.31	B	1.85	B	0.61	A
Bicycle LOS Score / LOS				F	1.25	A	1.27	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Atlantic / S. Cecilia	Analysis Year	2019	Analysis Period	1 > 16:45
Intersection	Intersecion #19	File Name	19PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h				76		46			758	42	50	833

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	4.5	65.8	6.2	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

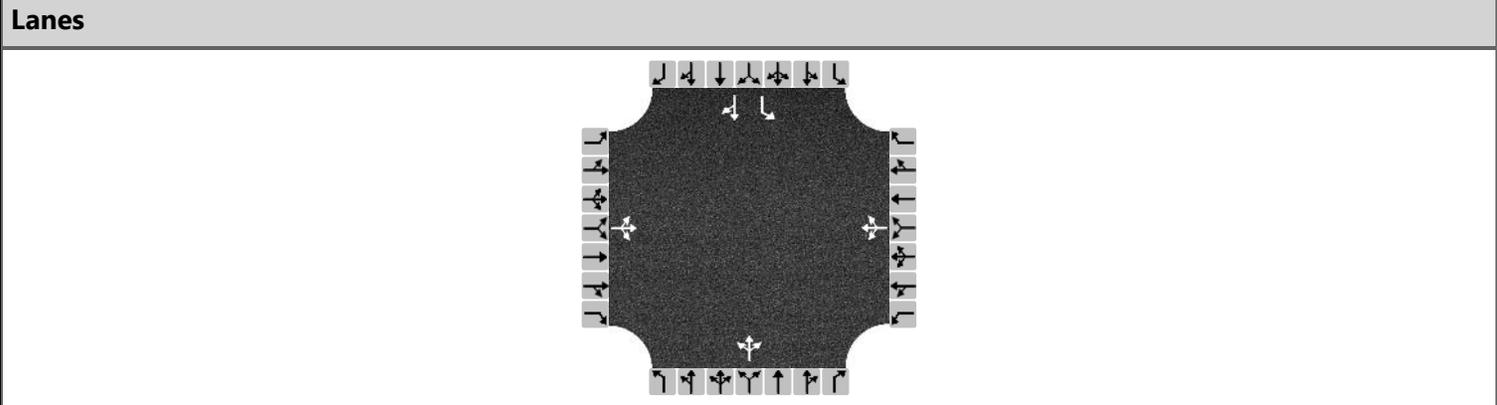
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				10.7		70.3	9.0	79.3
Change Period, ( Y+R <sub>c</sub> ), s				4.5		4.5	4.5	4.5
Max Allow Headway ( MAH ), s				3.3		0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s				6.0			2.5	
Green Extension Time ( g <sub>e</sub> ), s				0.2		0.0	0.1	0.0
Phase Call Probability				1.00			0.74	
Max Out Probability				0.00			0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7		14		6	16	5	2	
Adjusted Flow Rate ( v ), veh/h				83		50		439	431	54	905	
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1810		1610		1900	1864	1810	1809	
Queue Service Time ( g <sub>s</sub> ), s				4.0		2.7		13.7	7.3	0.5	5.1	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				4.0		2.7		13.7	7.3	0.5	5.1	
Green Ratio ( g/C )				0.07		0.07		0.73	0.73	0.80	0.83	
Capacity ( c ), veh/h				125		112		1389	1363	544	3005	
Volume-to-Capacity Ratio ( X )				0.659		0.448		0.316	0.316	0.100	0.301	
Back of Queue ( Q ), ft/ln ( 95 th percentile)				83.7		49.2		103.1	101.4	4.6	35.4	
Back of Queue ( Q ), veh/ln ( 95 th percentile)				3.3		2.0		4.1	4.1	0.2	1.4	
Queue Storage Ratio ( RQ ) ( 95 th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh				40.8		40.2		4.2	4.2	3.3	1.7	
Incremental Delay ( d <sub>2</sub> ), s/veh				2.2		1.0		0.6	0.6	0.0	0.3	
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh				43.0		41.3		4.8	4.8	3.3	2.0	
Level of Service ( LOS )				D		D		A	A	A	A	
Approach Delay, s/veh / LOS	0.0			42.4		D	4.8	A		2.1	A	
Intersection Delay, s/veh / LOS				6.0				A				

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.15	B	2.31	B	1.84	B	0.61	A
Bicycle LOS Score / LOS				F	1.20	A	1.28	A

# HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	AS	Intersection	Intersection #20
Agency/Co.	LLG Engineers	Jurisdiction	City of Cudahy
Date Performed	12/5/2019	East/West Street	Elizabeth Street
Analysis Year	2019	North/South Street	Otis Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing with Project- AM		
Project Description	7801-7835 Otis Avenue Charter School		



**Vehicle Volume and Adjustments**

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	3	49	0	68	67	74	1	264	102	73	341	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			L	TR	
Flow Rate, v (veh/h)	57			227			399			79	375	
Percent Heavy Vehicles	2			2			2			2	2	

**Departure Headway and Service Time**

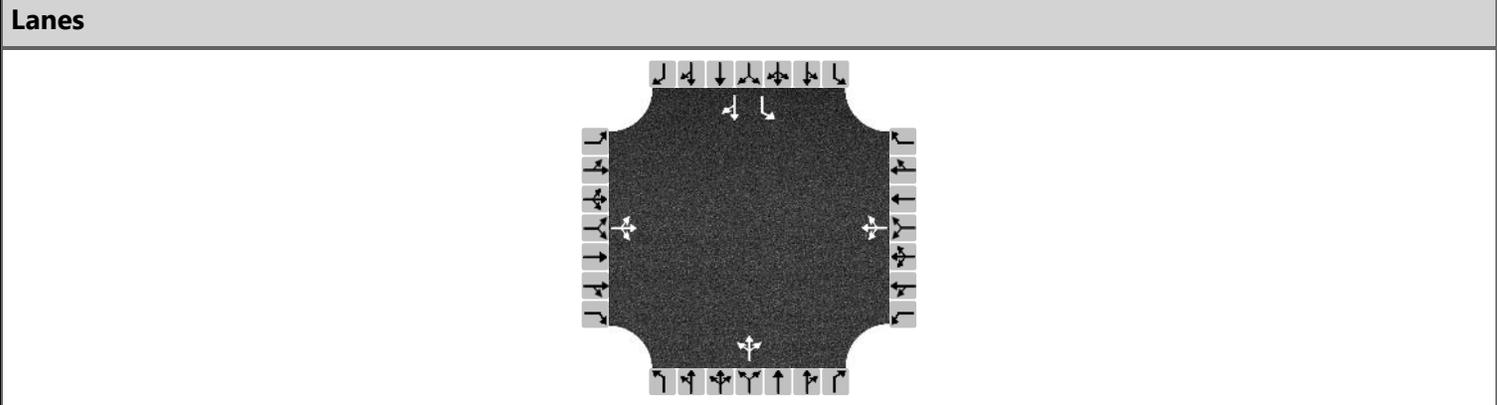
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20	3.20	
Initial Degree of Utilization, x	0.050			0.202			0.355			0.071	0.333	
Final Departure Headway, hd (s)	6.80			6.14			5.51			6.51	6.00	
Final Degree of Utilization, x	0.107			0.387			0.611			0.144	0.625	
Move-Up Time, m (s)	2.0			2.0			2.0			2.3	2.3	
Service Time, ts (s)	4.80			4.14			3.51			4.21	3.70	

**Capacity, Delay and Level of Service**

Flow Rate, v (veh/h)	57			227			399			79	375	
Capacity	529			586			653			553	600	
95% Queue Length, Q <sub>95</sub> (veh)	0.4			1.8			4.2			0.5	4.3	
Control Delay (s/veh)	10.6			13.0			16.8			10.3	18.2	
Level of Service, LOS	B			B			C			B	C	
Approach Delay (s/veh)	10.6			13.0			16.8			16.8		
Approach LOS	B			B			C			C		
Intersection Delay, s/veh   LOS	15.7						C					

# HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	AS	Intersection	Intersection #20
Agency/Co.	LLG Engineers	Jurisdiction	City of Cudahy
Date Performed	12/5/2019	East/West Street	Elizabeth Street
Analysis Year	2019	North/South Street	Otis Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Existing with Project- PM		
Project Description	7801-7835 Otis Avenue Charter School		



**Vehicle Volume and Adjustments**

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	4	62	0	80	67	43	0	314	80	46	346	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			L TR		
Flow Rate, v (veh/h)	72			207			428			50 380		
Percent Heavy Vehicles	2			2			2			2 2		

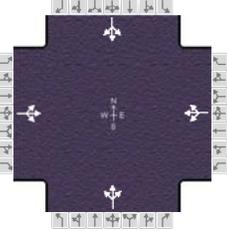
**Departure Headway and Service Time**

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20	3.20	
Initial Degree of Utilization, x	0.064			0.184			0.381			0.044	0.338	
Final Departure Headway, hd (s)	6.84			6.36			5.56			6.57	6.05	
Final Degree of Utilization, x	0.136			0.365			0.662			0.091	0.640	
Move-Up Time, m (s)	2.0			2.0			2.0			2.3	2.3	
Service Time, ts (s)	4.84			4.36			3.56			4.27	3.75	

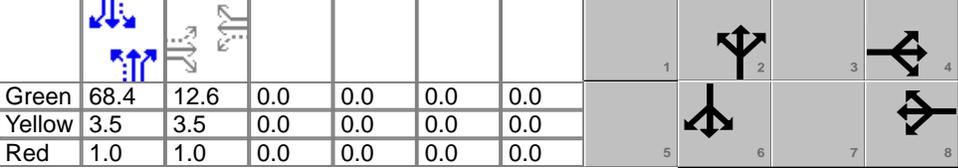
**Capacity, Delay and Level of Service**

Flow Rate, v (veh/h)	72			207			428			50	380	
Capacity	526			566			647			548	595	
95% Queue Length, Q <sub>95</sub> (veh)	0.5			1.7			5.0			0.3	4.6	
Control Delay (s/veh)	10.9			13.0			18.8			9.9	18.9	
Level of Service, LOS	B			B			C			A	C	
Approach Delay (s/veh)	10.9			13.0			18.8			17.8		
Approach LOS	B			B			C			C		
Intersection Delay, s/veh   LOS	16.9						C					

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Cudahy	Time Period	Future - AM	PHF	0.92	
Urban Street	Otis / Live Oak	Analysis Year	2021	Analysis Period	1 > 7:00	
Intersection	Interesction #8	File Name	08AM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	27	61	31	36	57	85	29	421	48	69	331	18

Signal Information														
Cycle, s	90.0	Reference Phase	2	Green	68.4	12.6	0.0	0.0	0.0	0.0	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

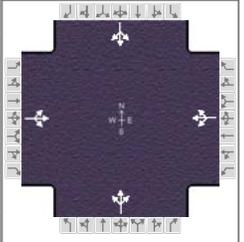
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		17.1		17.1		72.9		72.9
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.4		3.4		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		8.1		12.0				
Green Extension Time ( g <sub>e</sub> ), s		0.6		0.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	129			193			541			454		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1724			1679			1816			1640		
Queue Service Time ( g <sub>s</sub> ), s	0.0			3.9			0.0			0.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	6.1			10.0			8.8			6.8		
Green Ratio ( g/C )	0.14			0.14			0.76			0.76		
Capacity ( c ), veh/h	290			283			1423			1293		
Volume-to-Capacity Ratio ( X )	0.446			0.685			0.380			0.351		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	119.6			188.9			127.4			101.9		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.8			7.6			5.1			4.1		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	35.9			37.5			3.6			3.4		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.4			1.1			0.8			0.8		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	36.3			38.6			4.4			4.2		
Level of Service ( LOS )	D			D			A			A		
Approach Delay, s/veh / LOS	36.3	D		38.6	D		4.4	A		4.2	A	
Intersection Delay, s/veh / LOS	12.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.71	B	1.61	B	1.61	B
Bicycle LOS Score / LOS	0.70	A	0.81	A	1.38	A	1.24	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future - PM	PHF	0.92
Urban Street	Otis / Live Oak	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Interesction #8	File Name	08PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	13	58	18	38	43	47	20	324	44	51	361	22

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	71.4	9.6	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
				Red	1.0	1.0	0.0	0.0	0.0	0.0				

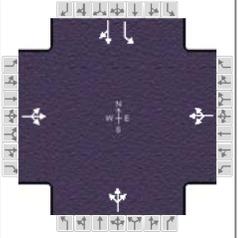
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		14.1		14.1		75.9		75.9
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.2		3.2		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		6.5		9.3				
Green Extension Time ( g <sub>e</sub> ), s		0.4		0.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	97			139			422			472		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1791			1658			1815			1741		
Queue Service Time ( g <sub>s</sub> ), s	0.0			2.8			0.0			0.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	4.5			7.3			5.5			6.2		
Green Ratio ( g/C )	0.11			0.11			0.79			0.79		
Capacity ( c ), veh/h	237			229			1482			1426		
Volume-to-Capacity Ratio ( X )	0.407			0.607			0.285			0.331		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	89.5			133.7			59.5			70.1		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.6			5.3			2.4			2.8		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	37.9			39.0			2.5			2.6		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.4			1.0			0.5			0.6		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	38.3			40.0			3.0			3.2		
Level of Service ( LOS )	D			D			A			A		
Approach Delay, s/veh / LOS	38.3	D		40.0	D		3.0	A		3.2	A	
Intersection Delay, s/veh / LOS	10.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.72	B	1.72	B	1.60	B	1.60	B
Bicycle LOS Score / LOS	0.65	A	0.72	A	1.18	A	1.27	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future - AM	PHF	0.92
Urban Street	Otis / Clara	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Interesction #9	File Name	09AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	16	110	14	113	109	133	6	280	114	87	229	14

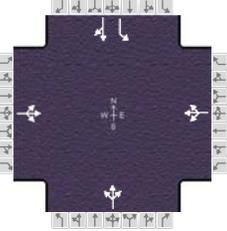
Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	57.4	23.6	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		6.0
Phase Duration, s		28.1		28.1		61.9		61.9
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		7.9		23.2				
Green Extension Time ( g <sub>e</sub> ), s		1.2		0.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		1.00				

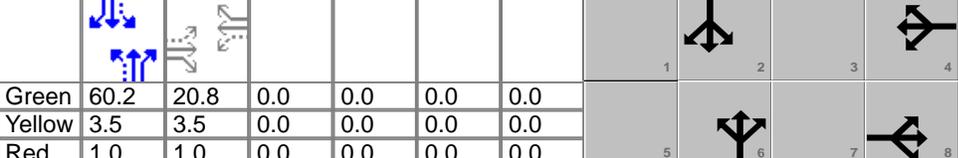
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	152			386			435			95 264		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1789			1588			1803			975 1880		
Queue Service Time ( g <sub>s</sub> ), s	0.0			15.4			0.0			4.6 5.3		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.9			21.2			10.3			14.9 5.3		
Green Ratio ( g/C )	0.26			0.26			0.64			0.64 0.64		
Capacity ( c ), veh/h	514			469			1190			590 1199		
Volume-to-Capacity Ratio ( X )	0.296			0.822			0.365			0.160 0.220		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	116.6			354.7			178.1			47.9 94.8		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.7			14.2			7.1			1.9 3.8		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00 0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	26.7			32.1			7.8			11.3 6.9		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1			9.1			0.9			0.6 0.4		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0 0.0		
Control Delay ( d ), s/veh	26.8			41.3			8.7			11.9 7.3		
Level of Service ( LOS )	C			D			A			B A		
Approach Delay, s/veh / LOS	26.8	C		41.3	D		8.7	A		8.5	A	
Intersection Delay, s/veh / LOS	20.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.70	B	1.93	B	1.64	B	1.64	B
Bicycle LOS Score / LOS	0.74	A	1.12	A	1.20	A	1.08	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Cudahy	Time Period	Future - PM	PHF	0.92	
Urban Street	Otis / Clara	Analysis Year	2021	Analysis Period	1 > 17:00	
Intersection	Interesction #9	File Name	09PM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( $v$ ), veh/h	11	117	6	124	93	80	5	277	117	95	293	22

Signal Information													
Cycle, s	90.0	Reference Phase	2	Green	60.2	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On										

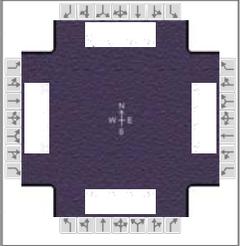
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		6.0
Phase Duration, s		25.3		25.3		64.7		64.7
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( $g_s$ ), s		7.8		20.2				
Green Extension Time ( $g_e$ ), s		1.0		0.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.31				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( $v$ ), veh/h	146			323			434			103	342	
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1854			1548			1800			975	1876	
Queue Service Time ( $g_s$ ), s	0.0			12.4			0.0			4.6	6.6	
Cycle Queue Clearance Time ( $g_c$ ), s	5.8			18.2			9.4			14.1	6.6	
Green Ratio ( $g/C$ )	0.23			0.23			0.67			0.67	0.67	
Capacity ( $c$ ), veh/h	471			414			1246			630	1256	
Volume-to-Capacity Ratio ( $X$ )	0.309			0.780			0.348			0.164	0.273	
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	117			295.1			155.6			47.1	114.1	
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	4.7			11.8			6.2			1.9	4.6	
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00			0.00			0.00			0.00	0.00	
Uniform Delay ( $d_1$ ), s/veh	28.9			33.5			6.5			9.5	6.0	
Incremental Delay ( $d_2$ ), s/veh	0.1			5.3			0.8			0.6	0.5	
Initial Queue Delay ( $d_3$ ), s/veh	0.0			0.0			0.0			0.0	0.0	
Control Delay ( $d$ ), s/veh	29.0			38.8			7.2			10.1	6.6	
Level of Service (LOS)	C			D			A			B	A	
Approach Delay, s/veh / LOS	29.0	C		38.8	D		7.2	A		7.4	A	
Intersection Delay, s/veh / LOS	17.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.70	B	1.93	B	1.64	B	1.64	B
Bicycle LOS Score / LOS	0.73	A	1.02	A	1.20	A	1.22	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future - AM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersection #13	File Name	13AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	184	834	225	195	951	104	170	813	133	148	643	89

Signal Information				Signal Timing (s)								Signal Phases			
Cycle, s	90.0	Reference Phase	2	Green	10.8	30.5	6.0	2.5	22.2	0.0	1	2	3	4	
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	3.5	0.0	5	6	7	8	
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	1.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On												

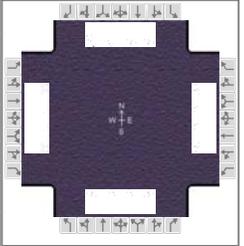
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	15.3	35.0	15.3	35.0	13.0	29.2	10.5	26.7
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( $g_s$ ), s	11.8		12.5		10.5	23.1	6.0	20.5
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	1.6	0.1	1.6
Phase Call Probability	0.99		1.00		0.99	1.00	0.98	1.00
Max Out Probability	1.00		1.00		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( $v$ ), veh/h	200	907	245	212	1034	113	185	884	145	161	406	389
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1819
Queue Service Time ( $g_s$ ), s	9.8	19.9	10.7	10.5	23.8	4.5	8.5	21.1	5.4	4.0	18.4	18.5
Cycle Queue Clearance Time ( $g_c$ ), s	9.8	19.9	10.7	10.5	23.8	4.5	8.5	21.1	5.4	4.0	18.4	18.5
Green Ratio ( $g/C$ )	0.12	0.34	0.34	0.12	0.34	0.34	0.09	0.27	0.39	0.07	0.25	0.25
Capacity ( $c$ ), veh/h	218	1226	546	218	1226	546	171	992	635	234	468	448
Volume-to-Capacity Ratio ( $X$ )	0.918	0.739	0.448	0.973	0.843	0.207	1.081	0.891	0.228	0.687	0.868	0.869
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	269.6	341.8	191.4	307.5	409.1	79.2	327.2	380.8	86.2	78.7	377	366.6
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	10.8	13.7	7.7	12.3	16.4	3.2	13.1	15.2	3.4	3.1	15.1	14.7
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	39.1	26.2	23.2	39.4	27.5	21.2	40.8	31.4	18.1	41.1	32.5	32.5
Incremental Delay ( $d_2$ ), s/veh	38.6	4.0	2.7	53.0	7.2	0.9	92.2	9.0	0.1	1.3	13.7	14.4
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	77.7	30.3	25.8	92.4	34.7	22.0	132.9	40.4	18.2	42.4	46.2	46.9
Level of Service ( LOS )	E	C	C	F	C	C	F	D	B	D	D	D
Approach Delay, s/veh / LOS	36.5		D	42.7		D	51.8		D	45.8		D
Intersection Delay, s/veh / LOS	43.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.60	B	1.61	B	1.49	A	1.28	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future - PM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2021	Analysis Period	1 > 16:00
Intersection	Intersection #13	File Name	13PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	132	860	147	175	757	146	152	590	127	208	718	92

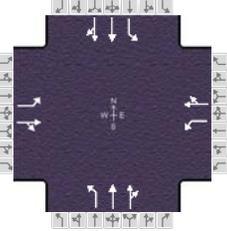
Signal Information				Signal Timing (s)																				
Cycle, s	90.0	Reference Phase	2	Green	8.8	1.1	30.5	7.7	0.8	23.2	Yellow	3.5	0.0	3.5	3.5	0.0	3.5	Red	1.0	0.0	1.0	1.0	0.0	1.0
Offset, s	0	Reference Point	End																					
Uncoordinated	No	Simult. Gap E/W	On																					
Force Mode	Fixed	Simult. Gap N/S	On																					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	13.3	35.0	14.3	36.1	13.0	28.5	12.2	27.7
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( $g_s$ ), s	9.0		11.4		10.2	16.2	7.7	22.7
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.5
Phase Call Probability	0.97		0.99		0.98	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.36	1.00	1.00

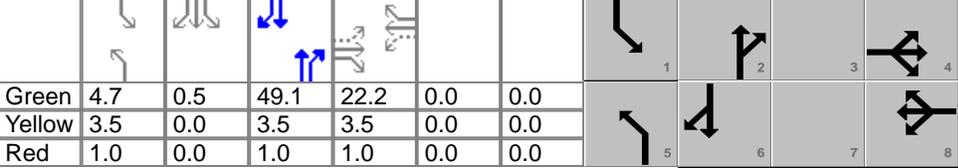
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	143	935	160	190	823	159	165	641	138	226	449	431
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1824
Queue Service Time ( $g_s$ ), s	7.0	20.7	6.6	9.4	17.2	6.4	8.2	14.2	5.3	5.7	20.7	20.7
Cycle Queue Clearance Time ( $g_c$ ), s	7.0	20.7	6.6	9.4	17.2	6.4	8.2	14.2	5.3	5.7	20.7	20.7
Green Ratio ( $g/C$ )	0.10	0.34	0.34	0.11	0.35	0.35	0.09	0.27	0.38	0.09	0.26	0.26
Capacity ( $c$ ), veh/h	176	1226	546	198	1269	565	171	964	605	300	489	469
Volume-to-Capacity Ratio ( $X$ )	0.814	0.762	0.293	0.961	0.648	0.281	0.967	0.665	0.228	0.754	0.919	0.919
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	176.5	355.1	116.1	281.9	298.1	112.5	261.3	254.5	85.3	120.8	442.9	431
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	7.1	14.2	4.6	11.3	11.9	4.5	10.5	10.2	3.4	4.8	17.7	17.2
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	39.8	26.5	21.8	39.9	24.5	21.0	40.6	29.4	19.2	40.2	32.5	32.5
Incremental Delay ( $d_2$ ), s/veh	18.2	4.5	1.4	52.3	2.6	1.2	58.5	1.4	0.1	7.1	21.6	22.3
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	58.0	31.0	23.2	92.2	27.1	22.3	99.1	30.8	19.3	47.4	54.1	54.8
Level of Service (LOS)	E	C	C	F	C	C	F	C	B	D	D	D
Approach Delay, s/veh / LOS	33.2	C		37.0	D		41.1	D		53.0	D	
Intersection Delay, s/veh / LOS	40.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.51	B	1.45	A	1.27	A	1.40	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Cudahy	Time Period	Future - AM	PHF	0.92	
Urban Street	Atlantic / Live Oak	Analysis Year	2021	Analysis Period	1 > 7:15	
Intersection	Intersecion #14	File Name	14AM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	67	161	72	101	130	65	57	961	140	74	799	66

Signal Information																								
Cycle, s	90.0	Reference Phase	2	Green	4.7	0.5	49.1	22.2	0.0	0.0	Yellow	3.5	0.0	3.5	3.5	0.0	0.0	Red	1.0	0.0	1.0	1.0	0.0	0.0
Offset, s	0	Reference Point	End																					
Uncoordinated	No	Simult. Gap E/W	On																					
Force Mode	Fixed	Simult. Gap N/S	On																					

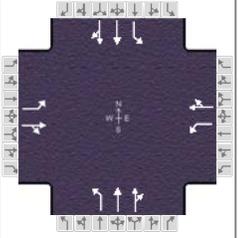
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		26.7		26.7	9.2	53.6	9.7	54.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		16.1		21.4	5.0		5.9	
Green Extension Time ( g <sub>e</sub> ), s		1.2		0.7	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.79		0.87	
Max Out Probability		0.07		0.75	0.07		0.33	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	73	253		110	212		62	611	585	80	477	464
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1188	1800		1144	1792		1810	1900	1815	1810	1900	1849
Queue Service Time ( g <sub>s</sub> ), s	5.0	11.1		8.4	9.1		3.0	19.4	19.5	3.9	13.5	13.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	14.1	11.1		19.4	9.1		3.0	19.4	19.5	3.9	13.5	13.5
Green Ratio ( g/C )	0.25	0.25		0.25	0.25		0.05	0.55	0.55	0.06	0.55	0.55
Capacity ( c ), veh/h	253	443		221	442		95	1037	991	104	1047	1019
Volume-to-Capacity Ratio ( X )	0.288	0.571		0.497	0.480		0.652	0.589	0.591	0.770	0.455	0.455
Back of Queue ( Q ), ft/ln ( 95 th percentile)	65.9	210.6		107	176.8		62.7	320.1	310.6	83.3	235.8	231.1
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.6	8.4		4.3	7.1		2.5	12.8	12.4	3.3	9.4	9.2
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	35.0	29.7		38.3	29.0		41.8	13.7	13.7	41.8	12.1	12.1
Incremental Delay ( d <sub>2</sub> ), s/veh	0.2	0.4		0.6	0.3		2.8	2.5	2.6	4.4	1.4	1.5
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	35.2	30.2		38.9	29.3		44.6	16.1	16.3	46.2	13.5	13.6
Level of Service ( LOS )	D	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	31.3	C		32.6	C		17.6	B		16.1	B	
Intersection Delay, s/veh / LOS	20.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.03	A	1.02	A	1.53	B	1.33	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future - PM	PHF	0.92
Urban Street	Atlantic / Live Oak	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Interesction #14	File Name	14PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	54	117	44	141	97	57	36	704	108	74	899	69

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On											
Force Mode	Fixed	Simult. Gap N/S	On											
				Green	3.7	1.5	50.4	21.0	0.0	0.0	1	2	3	4
				Yellow	3.5	0.0	3.5	3.5	0.0	0.0	5	6	7	8
				Red	1.0	0.0	1.0	1.0	0.0	0.0				

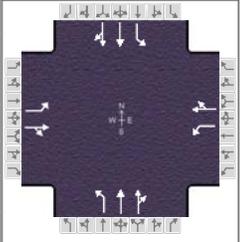
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		25.5		25.5	8.2	54.9	9.7	56.3
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		12.9		20.2	3.9		5.9	
Green Extension Time ( g <sub>e</sub> ), s		1.1		0.7	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.62		0.87	
Max Out Probability		0.01		0.39	0.00		0.06	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	59	175		153	167		39	452	431	80	533	519
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1237	1811		1229	1781		1810	1900	1811	1810	1900	1852
Queue Service Time ( g <sub>s</sub> ), s	3.8	7.4		10.9	7.2		1.9	12.4	12.4	3.9	14.9	14.9
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	10.9	7.4		18.2	7.2		1.9	12.4	12.4	3.9	14.9	14.9
Green Ratio ( g/C )	0.23	0.23		0.23	0.23		0.04	0.56	0.56	0.06	0.58	0.58
Capacity ( c ), veh/h	270	422		266	415		75	1063	1013	104	1094	1066
Volume-to-Capacity Ratio ( X )	0.217	0.415		0.577	0.404		0.520	0.425	0.425	0.770	0.487	0.487
Back of Queue ( Q ), ft/ln ( 95 th percentile)	51.8	145.2		148.6	138.5		39.5	218.3	210.9	83.3	251.2	246.5
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.1	5.8		5.9	5.5		1.6	8.7	8.4	3.3	10.0	9.9
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	33.8	29.3		37.0	29.2		42.2	11.5	11.5	41.8	11.3	11.3
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1	0.2		0.7	0.2		2.1	1.2	1.3	4.4	1.6	1.6
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	34.0	29.6		37.8	29.5		44.3	12.7	12.8	46.2	12.8	12.9
Level of Service ( LOS )	C	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	30.7	C		33.4	C		14.1	B		15.2	B	
Intersection Delay, s/veh / LOS	18.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.88	B	1.88	B
Bicycle LOS Score / LOS	0.87	A	1.02	A	1.25	A	1.42	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Future - AM	PHF	0.92		
Urban Street	Atlantic / Clara	Analysis Year	2021	Analysis Period	1 > 7:15		
Intersection	Interesction #15	File Name	15AM - Future.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	78	139	110	102	205	138	63	963	151	132	806	100

Signal Information				Phase Diagrams								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	4.9	1.6	44.5	25.5	0.0	0.0		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	0.0		

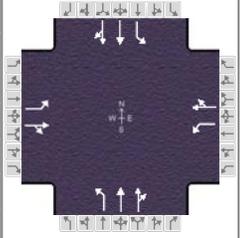
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		30.0		30.0	9.4	49.0	11.0	50.6
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		26.6		22.0	5.3		8.5	
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.9	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.82		0.97	
Max Out Probability		1.00		0.99	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	85	271		111	373		68	619	592	143	502	483
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1026	1760		1126	1772		1810	1900	1810	1810	1900	1826
Queue Service Time ( g <sub>s</sub> ), s	7.4	11.7		8.3	17.2		3.3	22.0	22.1	6.5	15.8	15.8
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	24.6	11.7		20.0	17.2		3.3	22.0	22.1	6.5	15.8	15.8
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.05	0.49	0.49	0.07	0.51	0.51
Capacity ( c ), veh/h	175	499		252	502		99	939	895	131	973	935
Volume-to-Capacity Ratio ( X )	0.485	0.543		0.439	0.743		0.693	0.659	0.661	1.097	0.516	0.516
Back of Queue ( Q ), ft/ln ( 95 th percentile)	84	213.4		103.8	313.9		71.8	370.8	359.1	282.9	274.8	266.8
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.4	8.5		4.2	12.6		2.9	14.8	14.4	11.3	11.0	10.7
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	40.4	27.3		35.8	29.3		41.8	17.1	17.1	41.7	14.6	14.6
Incremental Delay ( d <sub>2</sub> ), s/veh	0.8	0.7		0.4	5.2		4.9	3.6	3.8	107.2	2.0	2.0
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	41.2	28.0		36.2	34.5		46.7	20.7	20.9	149.0	16.5	16.6
Level of Service ( LOS )	D	C		D	C		D	C	C	F	B	B
Approach Delay, s/veh / LOS	31.1	C		34.9	C		22.2	C		33.4	C	
Intersection Delay, s/veh / LOS	29.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.90	B	1.89	B
Bicycle LOS Score / LOS	1.07	A	1.29	A	1.54	B	1.42	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Future - PM	PHF	0.92		
Urban Street	Atlantic / Clara	Analysis Year	2021	Analysis Period	1 > 17:00		
Intersection	Interesction #15	File Name	15PM - Future.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	56	228	72	106	225	98	76	741	138	113	925	73

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	5.3	1.2	44.5	25.5	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0			
				Red	1.0	0.0	1.0	1.0	0.0	0.0			

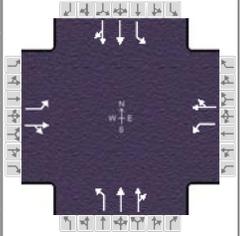
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		30.0		30.0	9.8	49.0	11.0	50.2
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		22.6		25.5	6.1		8.1	
Green Extension Time ( g <sub>e</sub> ), s		0.8		0.0	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.87		0.95	
Max Out Probability		1.00		1.00	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	61	326		115	351		83	491	464	123	549	535
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1046	1821		1070	1802		1810	1900	1796	1810	1900	1851
Queue Service Time ( g <sub>s</sub> ), s	4.9	14.1		9.5	15.6		4.1	15.9	15.9	6.1	18.0	18.0
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	20.6	14.1		23.5	15.6		4.1	15.9	15.9	6.1	18.0	18.0
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.06	0.49	0.49	0.07	0.51	0.51
Capacity ( c ), veh/h	195	516		216	510		106	939	888	131	965	940
Volume-to-Capacity Ratio ( X )	0.312	0.632		0.533	0.688		0.777	0.523	0.523	0.940	0.569	0.570
Back of Queue ( Q ), ft/ln ( 95 th percentile)	57.2	258.8		115	287.4		101.4	278.9	267.5	210.1	307.9	302
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.3	10.4		4.6	11.5		4.1	11.2	10.7	8.4	12.3	12.1
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	37.9	28.2		38.4	28.7		41.8	15.5	15.5	41.6	15.3	15.3
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3	1.9		1.3	3.2		16.4	2.1	2.2	59.6	2.4	2.5
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	38.2	30.1		39.8	31.9		58.2	17.6	17.7	101.2	17.8	17.8
Level of Service ( LOS )	D	C		D	C		E	B	B	F	B	B
Approach Delay, s/veh / LOS	31.3	C		33.9	C		20.9	C		26.3	C	
Intersection Delay, s/veh / LOS	26.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.90	B	1.89	B
Bicycle LOS Score / LOS	1.13	A	1.26	A	1.34	A	1.48	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future - AM	PHF	0.92
Urban Street	Atlantic / Elizabeth	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersecion #16	File Name	16AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	135	133	53	90	84	145	32	899	99	88	801	99

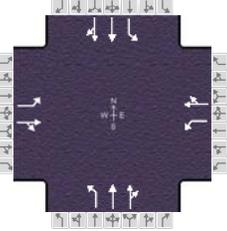
Signal Information				Phase Diagrams													
Cycle, s	90.0	Reference Phase	2														
Offset, s	0	Reference Point	End	Green	3.5	2.6	45.8	24.6	0.0	0.0	Yellow	3.5	0.0	3.5	3.5	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	0.0	1.0	1.0	0.0	0.0	Red	1.0	0.0	1.0	1.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On														

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		29.1		29.1	8.0	50.3	10.6	52.9
Change Period, ( $Y+R_c$ ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s		3.5		3.5	3.1	0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s		24.4		16.8	3.7		6.7	
Green Extension Time ( $g_e$ ), s		0.3		1.3	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.58		0.91	
Max Out Probability		1.00		0.12	0.37		1.00	

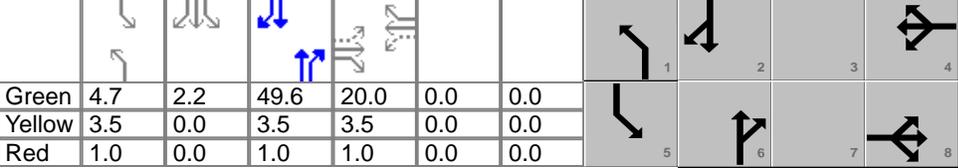
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( $v$ ), veh/h	147	202		98	249		35	552	533	96	499	479
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1149	1807		1199	1706		1810	1900	1833	1810	1900	1826
Queue Service Time ( $g_s$ ), s	11.2	8.2		6.5	11.2		1.7	18.1	18.1	4.7	14.8	14.8
Cycle Queue Clearance Time ( $g_c$ ), s	22.4	8.2		14.8	11.2		1.7	18.1	18.1	4.7	14.8	14.8
Green Ratio ( $g/C$ )	0.27	0.27		0.27	0.27		0.04	0.51	0.51	0.07	0.54	0.54
Capacity ( $c$ ), veh/h	252	495		299	467		70	966	933	122	1021	982
Volume-to-Capacity Ratio ( $X$ )	0.582	0.409		0.328	0.533		0.496	0.571	0.571	0.783	0.488	0.488
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	146.7	160		86	202.1		35.2	309.6	301.6	116.2	257	249.6
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	5.9	6.4		3.4	8.1		1.4	12.4	12.1	4.6	10.3	10.0
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	37.3	26.7		32.8	27.8		42.4	15.3	15.3	41.3	13.1	13.1
Incremental Delay ( $d_2$ ), s/veh	1.8	0.2		0.2	0.5		2.0	2.4	2.5	15.9	1.7	1.7
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	39.1	26.9		33.0	28.3		44.4	17.8	17.9	57.2	14.7	14.8
Level of Service ( LOS )	D	C		C	C		D	B	B	E	B	B
Approach Delay, s/veh / LOS	32.1	C		29.6	C		18.6	B		18.5	B	
Intersection Delay, s/veh / LOS	21.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.06	A	1.06	A	1.41	A	1.37	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Cudahy	Time Period	Future - PM	PHF	0.92	
Urban Street	Atlantic / Elizabeth	Analysis Year	2021	Analysis Period	1 > 17:00	
Intersection	Interesction #16	File Name	16PM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	99	107	79	55	92	96	57	752	66	101	863	118

Signal Information																		
Cycle, s	90.0	Reference Phase	2	Green	4.7	2.2	49.6	20.0	0.0	0.0	Yellow	3.5	0.0	3.5	3.5	0.0	0.0	
Offset, s	0	Reference Point	End	Red	1.0	0.0	1.0	1.0	0.0	0.0	Uncoordinated	No	Simult. Gap E/W	On	Force Mode	Fixed	Simult. Gap N/S	On

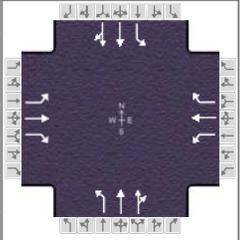
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		24.5		24.5	9.2	54.1	11.4	56.3
Change Period, ( $Y+R_c$ ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s		19.1		15.2	5.0		7.4	
Green Extension Time ( $g_e$ ), s		0.9		1.1	0.0	0.0	0.1	0.0
Phase Call Probability		1.00		1.00	0.79		0.94	
Max Out Probability		0.24		0.04	0.00		0.13	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( $v$ ), veh/h	108	202		60	204		62	451	438	110	545	522
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1196	1765		1199	1740		1810	1900	1846	1810	1900	1819
Queue Service Time ( $g_s$ ), s	7.8	9.1		4.1	9.3		3.0	12.6	12.6	5.4	15.3	15.3
Cycle Queue Clearance Time ( $g_c$ ), s	17.1	9.1		13.2	9.3		3.0	12.6	12.6	5.4	15.3	15.3
Green Ratio ( $g/C$ )	0.22	0.22		0.22	0.22		0.05	0.55	0.55	0.08	0.58	0.58
Capacity ( $c$ ), veh/h	222	391		226	386		95	1047	1017	140	1094	1048
Volume-to-Capacity Ratio ( $X$ )	0.485	0.517		0.265	0.530		0.652	0.431	0.431	0.786	0.498	0.498
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	104.7	174.5		55.3	177		62.7	222.2	217.6	111.4	257.4	249.4
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	4.2	7.0		2.2	7.1		2.5	8.9	8.7	4.5	10.3	10.0
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	38.4	30.8		36.5	30.9		41.8	11.9	11.9	40.8	11.4	11.4
Incremental Delay ( $d_2$ ), s/veh	0.6	0.4		0.2	0.4		2.8	1.3	1.3	3.7	1.6	1.7
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	39.0	31.2		36.8	31.3		44.6	13.2	13.2	44.5	13.0	13.0
Level of Service (LOS)	D	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	33.9	C		32.5	C		15.2	B		15.9	B	
Intersection Delay, s/veh / LOS	19.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.89	B	1.88	B
Bicycle LOS Score / LOS	1.00	A	0.92	A	1.27	A	1.46	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other		
Jurisdiction	City of Cudahy	Time Period	Future - AM	PHF	0.92		
Urban Street	Atlantic / Santa Ana		Analysis Year	2021	Analysis Period	1 > 7:15	
Intersection	Interesction #17	File Name	17AM - Future.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	182	212	71	75	213	97	51	763	36	74	727	117

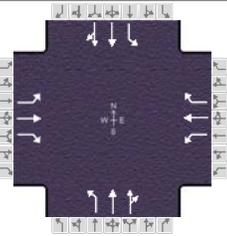
Signal Information				Signal Phases									
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	4.5	0.7	45.8	25.5	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0			
				Red	1.0	0.0	1.0	1.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		5.0		5.0	2.0	4.0	2.0	4.0
Phase Duration, s		30.0		30.0	9.0	50.3	9.7	51.0
Change Period, ( $Y+R_c$ ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s		25.9		16.4	4.7		5.9	
Green Extension Time ( $g_e$ ), s		0.0		1.7	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.75		0.87	
Max Out Probability		1.00		0.15	1.00		1.00	

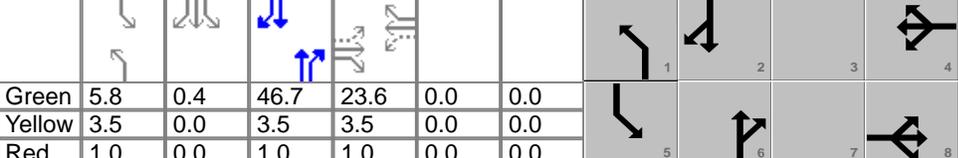
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( $v$ ), veh/h	198	230	77	82	232	105	55	438	431	80	470	447
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1167	1900	1610	1168	1900	1610	1810	1900	1869	1810	1900	1807
Queue Service Time ( $g_s$ ), s	15.0	8.9	3.2	5.5	9.0	4.5	2.7	13.2	13.2	3.9	14.3	14.3
Cycle Queue Clearance Time ( $g_c$ ), s	23.9	8.9	3.2	14.4	9.0	4.5	2.7	13.2	13.2	3.9	14.3	14.3
Green Ratio ( $g/C$ )	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.51	0.51	0.06	0.52	0.52
Capacity ( $c$ ), veh/h	295	538	456	295	538	456	90	967	951	104	982	934
Volume-to-Capacity Ratio ( $X$ )	0.671	0.428	0.169	0.276	0.430	0.231	0.613	0.453	0.453	0.770	0.479	0.479
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	201.6	178.5	55.2	70.6	182.2	77.9	56	237.5	234.7	96.8	252.4	243.3
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	8.1	7.1	2.2	2.8	7.3	3.1	2.2	9.5	9.4	3.9	10.1	9.7
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	36.1	26.3	24.3	32.2	26.3	24.7	41.9	14.1	14.1	41.8	14.0	14.0
Incremental Delay ( $d_2$ ), s/veh	4.8	0.2	0.1	0.2	0.2	0.1	2.5	1.5	1.6	14.8	1.7	1.8
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	40.9	26.5	24.3	32.4	26.5	24.8	44.4	15.6	15.7	56.6	15.6	15.7
Level of Service ( LOS )	D	C	C	C	C	C	D	B	B	E	B	B
Approach Delay, s/veh / LOS	31.8	C		27.2	C		17.4	B		19.0	B	
Intersection Delay, s/veh / LOS	21.9						C					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	2.28	B	2.28	B
Bicycle LOS Score / LOS	1.32	A	1.18	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Cudahy	Time Period	Future - PM	PHF	0.92	
Urban Street	Atlantic / Santa Ana	Analysis Year	2021	Analysis Period	1 > 16:30	
Intersection	Interesction #17	File Name	17PM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	168	227	40	87	182	51	83	704	58	89	748	147

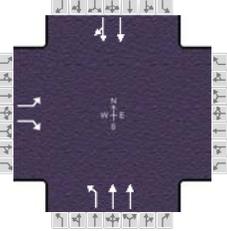
Signal Information																	
Cycle, s	90.0	Reference Phase	2	Green	5.8	0.4	46.7	23.6	0.0	0.0	Yellow	3.5	0.0	3.5	3.5	0.0	0.0
Offset, s	0	Reference Point	End	Red	1.0	0.0	1.0	1.0	0.0	0.0	Force Mode	Fixed	Simult. Gap E/W	On	Simult. Gap N/S	On	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		5.0		5.0	2.0	4.0	2.0	4.0
Phase Duration, s		28.1		28.1	10.3	51.2	10.7	51.6
Change Period, ( $Y+R_c$ ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s		3.3		3.3	3.1	0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s		23.0		18.7	6.4		6.7	
Green Extension Time ( $g_e$ ), s		0.7		1.3	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.90		0.91	
Max Out Probability		1.00		0.28	1.00		1.00	

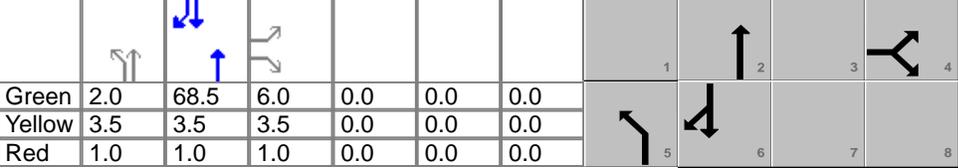
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( $v$ ), veh/h	183	247	43	95	198	55	90	420	409	97	501	472
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1204	1900	1610	1151	1900	1610	1810	1900	1849	1810	1900	1791
Queue Service Time ( $g_s$ ), s	13.3	9.9	1.8	6.8	7.7	2.4	4.4	12.3	12.3	4.7	15.3	15.3
Cycle Queue Clearance Time ( $g_c$ ), s	21.0	9.9	1.8	16.7	7.7	2.4	4.4	12.3	12.3	4.7	15.3	15.3
Green Ratio ( $g/C$ )	0.26	0.26	0.26	0.26	0.26	0.26	0.06	0.52	0.52	0.07	0.52	0.52
Capacity ( $c$ ), veh/h	293	499	423	255	499	423	116	986	960	124	995	938
Volume-to-Capacity Ratio ( $X$ )	0.624	0.495	0.103	0.370	0.397	0.131	0.778	0.425	0.426	0.782	0.503	0.503
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	179.2	197.6	31.4	86.9	158	40.9	97.5	222.5	218.2	108.8	266.5	255.1
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	7.2	7.9	1.3	3.5	6.3	1.6	3.9	8.9	8.7	4.4	10.7	10.2
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	35.9	28.1	25.2	35.2	27.3	25.4	41.5	13.4	13.4	41.3	13.9	13.9
Incremental Delay ( $d_2$ ), s/veh	2.2	0.3	0.0	0.3	0.2	0.1	7.4	1.3	1.4	10.3	1.8	1.9
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	38.1	28.4	25.2	35.6	27.5	25.4	48.9	14.7	14.7	51.5	15.7	15.8
Level of Service (LOS)	D	C	C	D	C	C	D	B	B	D	B	B
Approach Delay, s/veh / LOS	31.9	C		29.4	C		18.1	B		19.0	B	
Intersection Delay, s/veh / LOS	22.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.08	B	2.08	B
Bicycle LOS Score / LOS	1.27	A	1.06	A	1.25	A	1.37	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Cudahy	Time Period	Future - AM	PHF	0.92	
Urban Street	Atlantic / N. Cecilia	Analysis Year	2021	Analysis Period	1 > 7:30	
Intersection	Interesction #18	File Name	18AM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	62		40				15	857			850	37

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	2.0	68.5	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Yellow	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

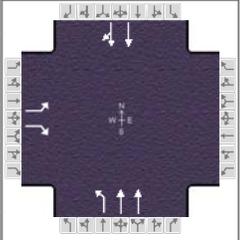
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		10.5			6.5	79.5		73.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5			4.5	4.5		4.5
Max Allow Headway ( MAH ), s		3.3			3.1	0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		5.2			2.8			
Green Extension Time ( g <sub>e</sub> ), s		0.2			0.0	0.0		0.0
Phase Call Probability		1.00			0.33			
Max Out Probability		0.00			0.00			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2		6		16
Adjusted Flow Rate ( v ), veh/h	67		43				16	932		486		478
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810		1610				1810	1809		1900		1872
Queue Service Time ( g <sub>s</sub> ), s	3.2		2.3				0.8	5.2		15.6		7.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	3.2		2.3				0.8	5.2		15.6		7.4
Green Ratio ( g/C )	0.07		0.07				0.02	0.83		0.76		0.76
Capacity ( c ), veh/h	121		107				40	3015		1446		1424
Volume-to-Capacity Ratio ( X )	0.559		0.405				0.404	0.309		0.336		0.336
Back of Queue ( Q ), ft/ln ( 95 th percentile)	67.3		42.7				17	35.3		95.7		94.5
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.7		1.7				0.7	1.4		3.8		3.8
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00		0.00				0.00	0.00		0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	40.7		40.3				43.4	1.7		3.5		3.5
Incremental Delay ( d <sub>2</sub> ), s/veh	1.5		0.9				2.4	0.3		0.6		0.6
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0	0.0		0.0		0.0
Control Delay ( d ), s/veh	42.2		41.2				45.8	2.0		4.1		4.1
Level of Service ( LOS )	D		D				D	A		A		A
Approach Delay, s/veh / LOS	41.8		D	0.0			2.7	A		4.1		A
Intersection Delay, s/veh / LOS	5.5						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.31	B	2.15	B	0.61	A	1.84	B
Bicycle LOS Score / LOS		F			1.27	A	1.28	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future - PM	PHF	0.92
Urban Street	Atlantic / N. Cecilia	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Interesction #18	File Name	18PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	24		35				35	807			879	21

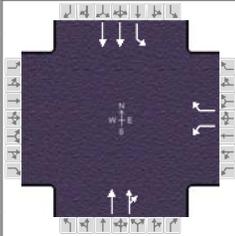
Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	3.7	66.8	6.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		10.5			8.2	79.5		71.3
Change Period, ( Y+R <sub>c</sub> ), s		4.5			4.5	4.5		4.5
Max Allow Headway ( MAH ), s		3.4			3.1	0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		4.0			3.9			
Green Extension Time ( g <sub>e</sub> ), s		0.1			0.0	0.0		0.0
Phase Call Probability		1.00			0.61			
Max Out Probability		0.00			0.00			

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3		18				1	6		2		12
Adjusted Flow Rate ( v ), veh/h	26		38				38	877		491		487
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810		1610				1810	1809		1900		1884
Queue Service Time ( g <sub>s</sub> ), s	1.2		2.0				1.9	4.8		15.9		8.1
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	1.2		2.0				1.9	4.8		15.9		8.1
Green Ratio ( g/C )	0.07		0.07				0.04	0.83		0.74		0.74
Capacity ( c ), veh/h	121		107				74	3015		1411		1399
Volume-to-Capacity Ratio ( X )	0.216		0.354				0.514	0.291		0.348		0.348
Back of Queue ( Q ), ft/ln ( 95 th percentile)	25.1		37.2				38.4	32.6		110.8		110
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.0		1.5				1.5	1.3		4.4		4.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00		0.00				0.00	0.00		0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	39.8		40.1				42.3	1.7		4.0		4.0
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3		0.7				2.0	0.2		0.7		0.7
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0	0.0		0.0		0.0
Control Delay ( d ), s/veh	40.1		40.9				44.3	1.9		4.7		4.7
Level of Service ( LOS )	D		D				D	A		A		A
Approach Delay, s/veh / LOS	40.6		D	0.0			3.7	A		4.7		A
Intersection Delay, s/veh / LOS	5.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.31	B	2.15	B	0.61	A	1.84	B
Bicycle LOS Score / LOS		F			1.24	A	1.29	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Cudahy	Time Period	Future - AM	PHF	0.92	
Urban Street	Atlantic / S. Cecilia	Analysis Year	2021	Analysis Period	1 > 7:15	
Intersection	Interesction #19	File Name	19AM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( $v$ ), veh/h				92		70		810	45	63	812	

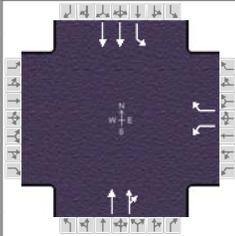
Signal Information															
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On	Green	4.9	64.4	7.2	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0					
				Red	1.0	1.0	1.0	0.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2	1	6
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				11.7		68.9	9.4	78.3
Change Period, ( $Y+R_c$ ), s				4.5		4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s				3.4		0.0	3.1	0.0
Queue Clearance Time ( $g_s$ ), s				6.8			2.7	
Green Extension Time ( $g_e$ ), s				0.3		0.0	0.1	0.0
Phase Call Probability				1.00			0.82	
Max Out Probability				0.00			0.00	

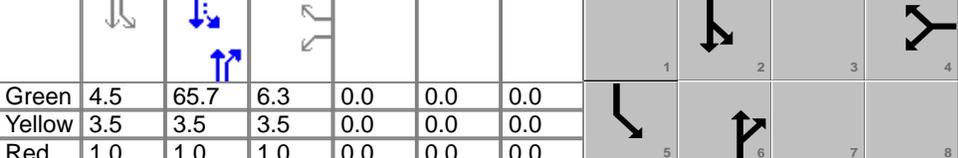
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( $v$ ), veh/h				100		76		469	460	68		883
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln				1810		1610		1900	1864	1810		1809
Queue Service Time ( $g_s$ ), s				4.8		4.1		14.9	8.4	0.7		5.2
Cycle Queue Clearance Time ( $g_c$ ), s				4.8		4.1		14.9	8.4	0.7		5.2
Green Ratio ( $g/C$ )				0.08		0.08		0.72	0.72	0.79		0.82
Capacity ( $c$ ), veh/h				144		128		1360	1334	515		2968
Volume-to-Capacity Ratio ( $X$ )				0.694		0.593		0.345	0.345	0.133		0.297
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)				100.9		75.7		123.8	121.7	6.7		41.2
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)				4.0		3.0		5.0	4.9	0.3		1.6
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)				0.00		0.00		0.00	0.00	0.00		0.00
Uniform Delay ( $d_1$ ), s/veh				40.3		40.0		4.8	4.8	3.8		1.9
Incremental Delay ( $d_2$ ), s/veh				2.2		1.6		0.7	0.7	0.0		0.3
Initial Queue Delay ( $d_3$ ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( $d$ ), s/veh				42.6		41.6		5.5	5.5	3.8		2.2
Level of Service (LOS)				D		D		A	A	A		A
Approach Delay, s/veh / LOS	0.0			42.2		D		5.5	A	2.3		A
Intersection Delay, s/veh / LOS				7.2						A		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.15	B	2.31	B	1.85	B	0.61	A
Bicycle LOS Score / LOS				F	1.25	A	1.27	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Cudahy	Time Period	Future - PM	PHF	0.92	
Urban Street	Atlantic / S. Cecilia	Analysis Year	2021	Analysis Period	1 > 16:45	
Intersection	Interesction #19	File Name	19PM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h				78		47			779	43	51	855

Signal Information														
Cycle, s	90.0	Reference Phase	2	Green	4.5	65.7	6.3	0.0	0.0	0.0	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

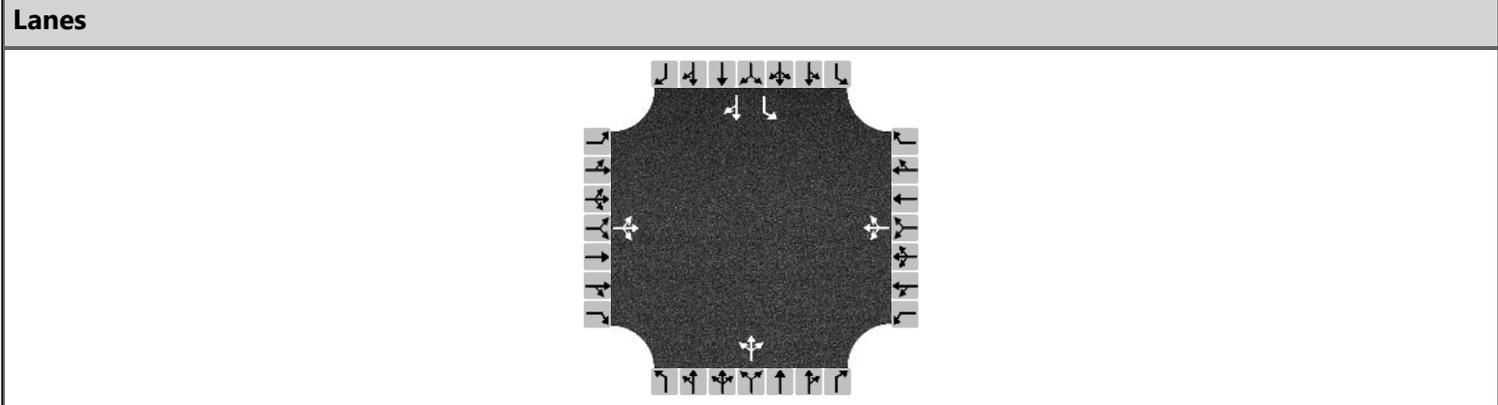
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				10.8		70.2	9.0	79.2
Change Period, ( Y+R <sub>c</sub> ), s				4.5		4.5	4.5	4.5
Max Allow Headway ( MAH ), s				3.3		0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s				6.1			2.6	
Green Extension Time ( g <sub>e</sub> ), s				0.2		0.0	0.1	0.0
Phase Call Probability				1.00			0.75	
Max Out Probability				0.00			0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7		14		6	16	5	2	
Adjusted Flow Rate ( v ), veh/h				85		51		451	443	55	929	
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1810		1610		1900	1865	1810	1809	
Queue Service Time ( g <sub>s</sub> ), s				4.1		2.7		14.1	7.6	0.6	5.3	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				4.1		2.7		14.1	7.6	0.6	5.3	
Green Ratio ( g/C )				0.07		0.07		0.73	0.73	0.80	0.83	
Capacity ( c ), veh/h				128		114		1386	1360	532	3001	
Volume-to-Capacity Ratio ( X )				0.664		0.450		0.325	0.325	0.104	0.310	
Back of Queue ( Q ), ft/ln ( 95 th percentile)				85.9		50.3		108.3	106.5	4.9	37.6	
Back of Queue ( Q ), veh/ln ( 95 th percentile)				3.4		2.0		4.3	4.3	0.2	1.5	
Queue Storage Ratio ( RQ ) ( 95 th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh				40.8		40.1		4.3	4.3	3.4	1.8	
Incremental Delay ( d <sub>2</sub> ), s/veh				2.2		1.0		0.6	0.6	0.0	0.3	
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh				43.0		41.2		4.9	5.0	3.4	2.0	
Level of Service ( LOS )				D		D		A	A	A	A	
Approach Delay, s/veh / LOS	0.0			42.3		D		4.9	A	2.1	A	
Intersection Delay, s/veh / LOS				6.1						A		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.15	B	2.31	B	1.85	B	0.61	A
Bicycle LOS Score / LOS				F	1.22	A	1.30	A

# HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	AS	Intersection	Intersection #20
Agency/Co.	LLG Engineers	Jurisdiction	City of Cudahy
Date Performed	12/13/2019	East/West Street	Elizabeth Street
Analysis Year	2021	North/South Street	Otis Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Future - AM		
Project Description	7801-7835 Otis Avenue Charter School		



**Vehicle Volume and Adjustments**

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	3	50	0	72	68	78	1	277	105	66	281	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			L TR		
Flow Rate, v (veh/h)	58			237			416			72 310		
Percent Heavy Vehicles	2			2			2			2 2		

**Departure Headway and Service Time**

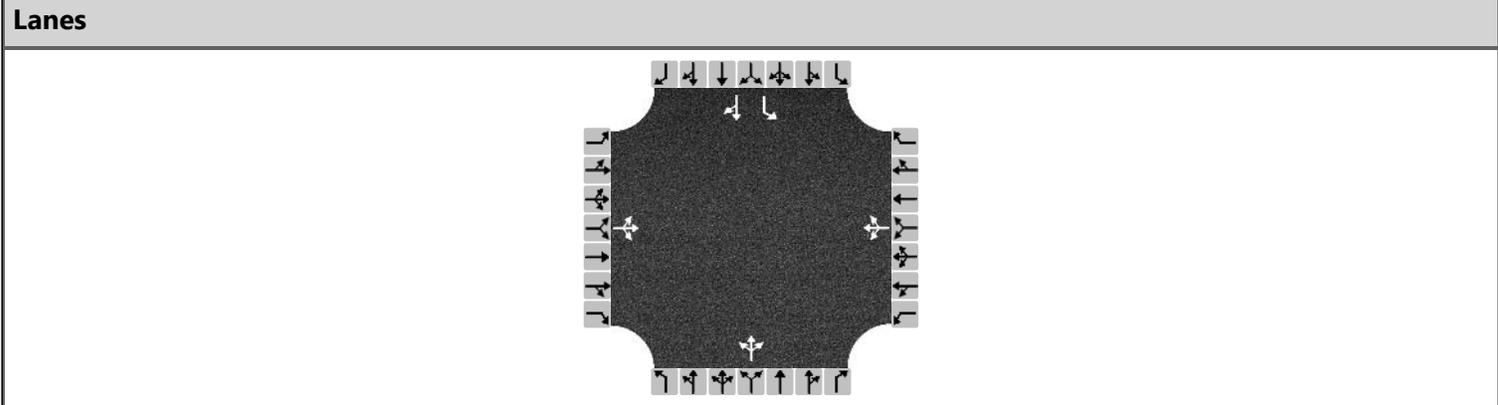
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20	3.20	
Initial Degree of Utilization, x	0.051			0.211			0.370			0.064	0.275	
Final Departure Headway, hd (s)	6.67			6.01			5.43			6.55	6.03	
Final Degree of Utilization, x	0.107			0.396			0.628			0.131	0.519	
Move-Up Time, m (s)	2.0			2.0			2.0			2.3	2.3	
Service Time, ts (s)	4.67			4.01			3.43			4.25	3.73	

**Capacity, Delay and Level of Service**

Flow Rate, v (veh/h)	58			237			416			72	310	
Capacity	540			599			663			550	597	
95% Queue Length, Q <sub>95</sub> (veh)	0.4			1.9			4.4			0.4	3.0	
Control Delay (s/veh)	10.5			12.9			17.1			10.2	15.1	
Level of Service, LOS	B			B			C			B	C	
Approach Delay (s/veh)	10.5			12.9			17.1			14.1		
Approach LOS	B			B			C			B		
Intersection Delay, s/veh   LOS	14.8						B					

# HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	AS	Intersection	Intersection #20
Agency/Co.	LLG Engineers	Jurisdiction	City of Cudahy
Date Performed	12/13/2019	East/West Street	Elizabeth Street
Analysis Year	2021	North/South Street	Otis Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Future - PM		
Project Description	7801-7835 Otis Avenue Charter School		



**Vehicle Volume and Adjustments**

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	4	63	0	84	68	46	0	331	85	48	354	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			L TR		
Flow Rate, v (veh/h)	73			215			452			52 389		
Percent Heavy Vehicles	2			2			2			2 2		

**Departure Headway and Service Time**

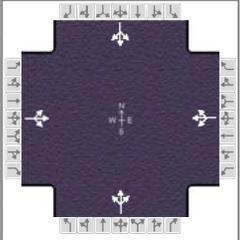
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20	3.20	
Initial Degree of Utilization, x	0.065			0.191			0.402			0.046	0.346	
Final Departure Headway, hd (s)	7.02			6.49			5.66			6.68	6.17	
Final Degree of Utilization, x	0.142			0.388			0.710			0.097	0.667	
Move-Up Time, m (s)	2.0			2.0			2.0			2.3	2.3	
Service Time, ts (s)	5.02			4.49			3.66			4.38	3.87	

**Capacity, Delay and Level of Service**

Flow Rate, v (veh/h)	73			215			452			52	389	
Capacity	513			555			637			539	584	
95% Queue Length, Q <sub>95</sub> (veh)	0.5			1.8			5.9			0.3	5.0	
Control Delay (s/veh)	11.2			13.5			21.3			10.1	20.3	
Level of Service, LOS	B			B			C			B	C	
Approach Delay (s/veh)	11.2			13.5			21.3			19.1		
Approach LOS	B			B			C			C		
Intersection Delay, s/veh   LOS	18.4						C					

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project- AM	PHF	0.92
Urban Street	Otis / Live Oak	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersecion #8	File Name	08AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	27	61	31	53	57	85	29	473	63	69	440	18

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	67.2	13.8	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0		
				Red	1.0	1.0	0.0	0.0	0.0	0.0		

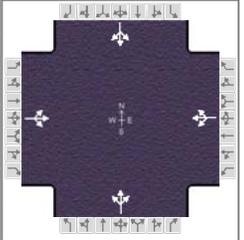
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		18.3		18.3		71.7		71.7
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.4		3.4		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		7.9		13.2				
Green Extension Time ( g <sub>e</sub> ), s		0.7		0.6		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	129			212			614			573		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1717			1645			1810			1676		
Queue Service Time ( g <sub>s</sub> ), s	0.0			5.2			0.0			0.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.9			11.2			11.2			9.9		
Green Ratio ( g/C )	0.15			0.15			0.75			0.75		
Capacity ( c ), veh/h	312			303			1394			1297		
Volume-to-Capacity Ratio ( X )	0.415			0.700			0.441			0.442		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	117.4			202.4			168.1			153		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.7			8.1			6.7			6.1		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	34.8			36.9			4.3			4.1		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3			1.1			1.0			1.1		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	35.1			38.0			5.3			5.2		
Level of Service ( LOS )	D			D			A			A		
Approach Delay, s/veh / LOS	35.1	D		38.0	D		5.3	A		5.2	A	
Intersection Delay, s/veh / LOS	12.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.71	B	1.61	B	1.61	B
Bicycle LOS Score / LOS	0.70	A	0.84	A	1.50	B	1.43	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Otis / Live Oak	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Interesction #8	File Name	08PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	13	58	18	42	43	47	20	336	48	51	388	22

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	71.1	9.9	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
				Red	1.0	1.0	0.0	0.0	0.0	0.0				

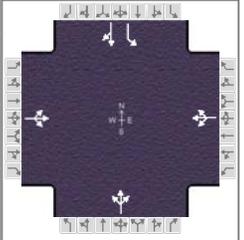
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		8.0
Phase Duration, s		14.4		14.4		75.6		75.6
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.2		3.2		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		6.5		9.5				
Green Extension Time ( g <sub>e</sub> ), s		0.4		0.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	97			143			439			501		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1792			1647			1814			1748		
Queue Service Time ( g <sub>s</sub> ), s	0.0			3.1			0.0			0.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	4.5			7.5			5.8			6.9		
Green Ratio ( g/C )	0.11			0.11			0.79			0.79		
Capacity ( c ), veh/h	243			234			1475			1425		
Volume-to-Capacity Ratio ( X )	0.398			0.613			0.298			0.352		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	89.1			137.9			65.5			78.6		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.6			5.5			2.6			3.1		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	37.6			38.9			2.6			2.7		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.4			1.0			0.5			0.7		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	38.0			39.9			3.1			3.4		
Level of Service ( LOS )	D			D			A			A		
Approach Delay, s/veh / LOS	38.0	D		39.9	D		3.1	A		3.4	A	
Intersection Delay, s/veh / LOS	10.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.72	B	1.72	B	1.60	B	1.60	B
Bicycle LOS Score / LOS	0.65	A	0.72	A	1.21	A	1.31	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Otis / Clara	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersecion #9	File Name	09AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	16	110	14	181	109	133	6	347	166	87	356	14

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	55.5	25.5	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0		
				Red	1.0	1.0	0.0	0.0	0.0	0.0		

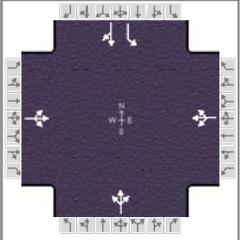
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		8.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.4		3.4		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		7.7		27.5				
Green Extension Time ( g <sub>e</sub> ), s		1.4		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	152			460			564			95 402		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1779			1520			1792			865 1887		
Queue Service Time ( g <sub>s</sub> ), s	0.0			19.8			0.0			6.2 9.3		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.7			25.5			15.8			22.0 9.3		
Green Ratio ( g/C )	0.28			0.28			0.62			0.62 0.62		
Capacity ( c ), veh/h	549			488			1145			462 1164		
Volume-to-Capacity Ratio ( X )	0.277			0.943			0.493			0.205 0.346		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	112.9			492.8			255.6			59.7 170.7		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.5			19.7			10.2			2.4 6.8		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00 0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	25.2			32.9			9.6			15.8 8.4		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1			26.7			1.5			1.0 0.8		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0 0.0		
Control Delay ( d ), s/veh	25.3			59.6			11.2			16.8 9.2		
Level of Service ( LOS )	C			E			B			B A		
Approach Delay, s/veh / LOS	25.3	C		59.6	E		11.2	B		10.7	B	
Intersection Delay, s/veh / LOS	25.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.70	B	1.92	B	1.65	B	1.65	B
Bicycle LOS Score / LOS	0.74	A	1.25	A	1.42	A	1.31	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Otis / Clara	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersecion #9	File Name	09PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	11	117	6	141	93	80	5	293	129	95	324	22

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	59.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
				Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0

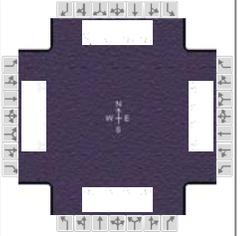
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		8.0		6.0
Phase Duration, s		26.5		26.5		63.5		63.5
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		7.7		21.5				
Green Extension Time ( g <sub>e</sub> ), s		1.0		0.5		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.69				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	146			341			464			103 376		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1854			1527			1798			948 1879		
Queue Service Time ( g <sub>s</sub> ), s	0.0			13.8			0.0			5.1 7.8		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.7			19.5			10.8			15.9 7.8		
Green Ratio ( g/C )	0.24			0.24			0.66			0.66 0.66		
Capacity ( c ), veh/h	497			432			1219			588 1231		
Volume-to-Capacity Ratio ( X )	0.293			0.791			0.381			0.176 0.305		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	114.4			312.5			181.5			51.4 135.9		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.6			12.5			7.3			2.1 5.4		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00 0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	27.8			32.9			7.2			10.9 6.7		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1			6.5			0.9			0.7 0.6		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0 0.0		
Control Delay ( d ), s/veh	28.0			39.4			8.1			11.5 7.3		
Level of Service ( LOS )	C			D			A			B A		
Approach Delay, s/veh / LOS	28.0	C		39.4	D		8.1	A		8.2	A	
Intersection Delay, s/veh / LOS	17.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.70	B	1.93	B	1.64	B	1.64	B
Bicycle LOS Score / LOS	0.73	A	1.05	A	1.25	A	1.28	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersection #13	File Name	13AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	184	871	225	195	992	104	170	847	133	148	681	89

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
	Green	10.3	30.5	6.0	2.5	22.7	0.0						
	Yellow	3.5	3.5	3.5	0.0	3.5	0.0						
	Red	1.0	1.0	1.0	0.0	1.0	0.0						

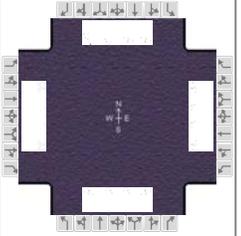
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	14.8	35.0	14.8	35.0	13.0	29.7	10.5	27.2
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( g <sub>s</sub> ), s	11.9		12.3		10.5	24.1	6.0	21.5
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	1.1	0.1	1.2
Phase Call Probability	0.99		1.00		0.99	1.00	0.98	1.00
Max Out Probability	1.00		1.00		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	200	947	245	212	1078	113	185	921	145	161	427	410
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1823
Queue Service Time ( g <sub>s</sub> ), s	9.9	21.1	10.7	10.3	25.3	4.5	8.5	22.1	5.4	4.0	19.5	19.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	9.9	21.1	10.7	10.3	25.3	4.5	8.5	22.1	5.4	4.0	19.5	19.5
Green Ratio ( g/C )	0.11	0.34	0.34	0.11	0.34	0.34	0.09	0.28	0.39	0.07	0.25	0.25
Capacity ( c ), veh/h	206	1226	546	206	1226	546	171	1014	635	234	480	460
Volume-to-Capacity Ratio ( X )	0.969	0.772	0.448	1.027	0.880	0.207	1.081	0.908	0.228	0.687	0.890	0.890
Back of Queue ( Q ), ft/ln ( 95 th percentile)	294.5	361.4	191.4	333.8	438.3	79.2	327.2	401.7	86.2	78.7	405.3	394.3
Back of Queue ( Q ), veh/ln ( 95 th percentile)	11.8	14.5	7.7	13.4	17.5	3.2	13.1	16.1	3.4	3.1	16.2	15.8
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	39.7	26.6	23.2	39.9	28.0	21.2	40.8	31.3	18.1	41.1	32.4	32.4
Incremental Delay ( d <sub>2</sub> ), s/veh	53.3	4.8	2.7	69.8	9.2	0.9	92.2	10.8	0.1	1.3	16.8	17.5
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	93.0	31.4	25.8	109.7	37.2	22.0	132.9	42.1	18.2	42.4	49.2	49.9
Level of Service ( LOS )	F	C	C	F	D	C	F	D	B	D	D	D
Approach Delay, s/veh / LOS	39.3		D	46.9		D	52.7		D	48.4		D
Intersection Delay, s/veh / LOS	46.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.64	B	1.65	B	1.52	B	1.31	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2021	Analysis Period	1 > 16:00
Intersection	Intersection #13	File Name	13PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	132	869	147	175	767	146	152	598	127	208	727	92

Signal Information				Signal Timing (s)																				
Cycle, s	90.0	Reference Phase	2	Green	8.8	1.0	30.5	7.7	0.8	23.3	Yellow	3.5	0.0	3.5	3.5	0.0	3.5	Red	1.0	0.0	1.0	1.0	0.0	1.0
Offset, s	0	Reference Point	End																					
Uncoordinated	No	Simult. Gap E/W	On																					
Force Mode	Fixed	Simult. Gap N/S	On																					

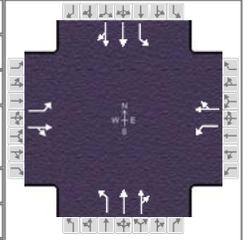
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	13.3	35.0	14.2	36.0	13.0	28.6	12.2	27.8
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( g <sub>s</sub> ), s	9.0		11.4		10.2	16.4	7.7	23.0
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.3
Phase Call Probability	0.97		0.99		0.98	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.39	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	143	945	160	190	834	159	165	650	138	226	454	436
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1825
Queue Service Time ( g <sub>s</sub> ), s	7.0	21.0	6.6	9.4	17.5	6.4	8.2	14.4	5.3	5.7	21.0	21.0
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	7.0	21.0	6.6	9.4	17.5	6.4	8.2	14.4	5.3	5.7	21.0	21.0
Green Ratio ( g/C )	0.10	0.34	0.34	0.11	0.35	0.35	0.09	0.27	0.38	0.09	0.26	0.26
Capacity ( c ), veh/h	176	1226	546	195	1265	563	171	969	605	300	491	472
Volume-to-Capacity Ratio ( X )	0.814	0.770	0.293	0.973	0.659	0.282	0.967	0.671	0.228	0.754	0.924	0.924
Back of Queue ( Q ), ft/ln ( 95 th percentile)	177.6	360.6	116.3	287.6	302.9	112.7	261.3	257.9	85.3	120.8	451.1	439
Back of Queue ( Q ), veh/ln ( 95 th percentile)	7.1	14.4	4.7	11.5	12.1	4.5	10.5	10.3	3.4	4.8	18.0	17.6
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	39.8	26.6	21.8	40.0	24.7	21.1	40.6	29.4	19.2	40.2	32.5	32.5
Incremental Delay ( d <sub>2</sub> ), s/veh	18.7	4.7	1.4	56.1	2.7	1.3	58.5	1.4	0.1	7.1	22.6	23.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	58.5	31.3	23.2	96.1	27.4	22.4	99.1	30.9	19.3	47.4	55.1	55.8
Level of Service ( LOS )	E	C	C	F	C	C	F	C	B	D	E	E
Approach Delay, s/veh / LOS	33.4	C		37.8	D		41.0	D		53.8	D	
Intersection Delay, s/veh / LOS	41.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.52	B	1.46	A	1.27	A	1.41	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Atlantic / Live Oak	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersecion #14	File Name	14AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	67	176	72	101	147	65	57	995	140	74	837	66

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	4.7	0.5	48.4	22.9	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0		
				Red	1.0	0.0	1.0	1.0	0.0	0.0		

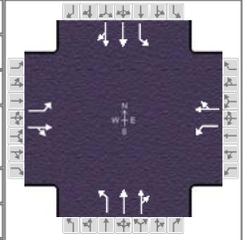
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		27.4		27.4	9.2	52.9	9.7	53.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		16.9		22.3	5.0		5.9	
Green Extension Time ( g <sub>e</sub> ), s		1.2		0.7	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.79		0.87	
Max Out Probability		0.11		1.00	0.23		0.97	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	73	270		110	230		62	630	604	80	497	484
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1168	1806		1127	1801		1810	1900	1818	1810	1900	1851
Queue Service Time ( g <sub>s</sub> ), s	5.1	11.8		8.5	9.8		3.0	20.6	20.7	3.9	14.6	14.6
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	14.9	11.8		20.3	9.8		3.0	20.6	20.7	3.9	14.6	14.6
Green Ratio ( g/C )	0.25	0.25		0.25	0.25		0.05	0.54	0.54	0.06	0.54	0.54
Capacity ( c ), veh/h	250	460		220	458		95	1022	977	104	1032	1005
Volume-to-Capacity Ratio ( X )	0.291	0.586		0.499	0.503		0.652	0.616	0.618	0.770	0.482	0.482
Back of Queue ( Q ), ft/ln ( 95 th percentile)	66.1	221.7		107.1	191.1		62.7	340.5	330.4	83.3	252.7	247.9
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.6	8.9		4.3	7.6		2.5	13.6	13.2	3.3	10.1	9.9
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	35.0	29.4		38.3	28.7		41.8	14.4	14.4	41.8	12.7	12.7
Incremental Delay ( d <sub>2</sub> ), s/veh	0.2	0.7		0.7	0.3		2.8	2.8	2.9	4.4	1.6	1.7
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	35.3	30.1		38.9	29.0		44.6	17.2	17.3	46.2	14.3	14.4
Level of Service ( LOS )	D	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	31.2	C		32.2	C		18.6	B		16.8	B	
Intersection Delay, s/veh / LOS	20.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.05	A	1.05	A	1.56	B	1.36	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Atlantic / Live Oak	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersecion #14	File Name	14PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	54	121	44	141	101	57	36	712	108	74	908	69

Signal Information				Signal Timing (s)						Signal Phases				
Cycle, s	90.0	Reference Phase	2	Green	3.7	1.5	50.1	21.2	0.0	0.0	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	3.5	0.0	3.5	3.5	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	0.0	1.0	1.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

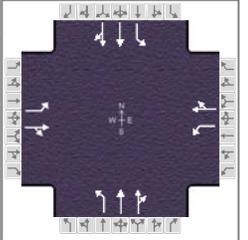
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		25.7		25.7	8.2	54.6	9.7	56.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		13.1		20.5	3.9		5.9	
Green Extension Time ( g <sub>e</sub> ), s		1.1		0.7	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.62		0.87	
Max Out Probability		0.01		0.44	0.00		0.08	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	59	179		153	172		39	456	435	80	538	524
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1232	1813		1224	1784		1810	1900	1812	1810	1900	1852
Queue Service Time ( g <sub>s</sub> ), s	3.8	7.6		10.9	7.3		1.9	12.6	12.6	3.9	15.2	15.2
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	11.1	7.6		18.5	7.3		1.9	12.6	12.6	3.9	15.2	15.2
Green Ratio ( g/C )	0.24	0.24		0.24	0.24		0.04	0.56	0.56	0.06	0.57	0.57
Capacity ( c ), veh/h	270	426		266	420		75	1058	1009	104	1089	1062
Volume-to-Capacity Ratio ( X )	0.217	0.421		0.577	0.409		0.520	0.431	0.431	0.770	0.494	0.494
Back of Queue ( Q ), ft/ln ( 95 th percentile)	51.8	148.8		148.6	142.1		39.5	221.9	214.4	83.3	255.7	251
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.1	6.0		5.9	5.7		1.6	8.9	8.6	3.3	10.2	10.0
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	33.8	29.2		37.0	29.1		42.2	11.6	11.6	41.8	11.4	11.4
Incremental Delay ( d <sub>2</sub> ), s/veh	0.1	0.2		0.7	0.2		2.1	1.3	1.3	4.4	1.6	1.6
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	34.0	29.5		37.8	29.4		44.3	12.9	13.0	46.2	13.0	13.1
Level of Service ( LOS )	C	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	30.6	C		33.3	C		14.2	B		15.4	B	
Intersection Delay, s/veh / LOS	18.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.88	B	1.88	B
Bicycle LOS Score / LOS	0.88	A	1.02	A	1.26	A	1.43	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Atlantic / Clara	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersecion #15	File Name	15AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	112	157	110	102	226	138	73	963	151	132	806	138

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	5.2	1.3	44.5	25.5	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0				
				Red	1.0	0.0	1.0	1.0	0.0	0.0				

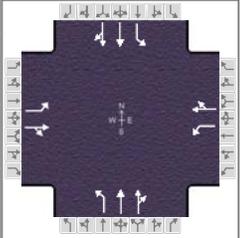
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		30.0		30.0	9.7	49.0	11.0	50.3
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.5		3.5	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		23.3	5.9		8.5	
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.7	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.86		0.97	
Max Out Probability		1.00		1.00	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	122	290		111	396		79	619	592	143	527	500
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1004	1769		1106	1779		1810	1900	1810	1810	1900	1803
Queue Service Time ( g <sub>s</sub> ), s	7.0	12.7		8.6	18.5		3.9	22.0	22.1	6.5	16.9	16.9
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	12.7		21.3	18.5		3.9	22.0	22.1	6.5	16.9	16.9
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.06	0.49	0.49	0.07	0.51	0.51
Capacity ( c ), veh/h	159	501		238	504		104	939	895	131	967	918
Volume-to-Capacity Ratio ( X )	0.767	0.579		0.466	0.785		0.763	0.659	0.661	1.098	0.544	0.544
Back of Queue ( Q ), ft/ln ( 95 th percentile)	157.1	229.3		105.7	341.2		94.1	369.7	358	283	292	280.8
Back of Queue ( Q ), veh/ln ( 95 th percentile)	6.3	9.2		4.2	13.6		3.8	14.8	14.3	11.3	11.7	11.2
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	42.7	27.6		36.8	29.7		41.8	17.1	17.1	41.8	15.0	15.0
Incremental Delay ( d <sub>2</sub> ), s/veh	18.2	1.1		0.5	7.3		13.7	3.6	3.8	107.4	2.2	2.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	61.0	28.8		37.3	37.1		55.5	20.7	20.9	149.1	17.2	17.3
Level of Service ( LOS )	E	C		D	D		E	C	C	F	B	B
Approach Delay, s/veh / LOS	38.3		D	37.1		D	22.9		C	33.4		C
Intersection Delay, s/veh / LOS	30.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.90	B	1.89	B
Bicycle LOS Score / LOS	1.17	A	1.32	A	1.55	B	1.45	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Atlantic / Clara	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersecion #15	File Name	15PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	64	232	72	106	230	98	79	741	138	113	925	82

Signal Information				EB						WB				NB				SB			
Cycle, s	90.0	Reference Phase	2																		
Offset, s	0	Reference Point	End																		
Uncoordinated	No	Simult. Gap E/W	On																		
Force Mode	Fixed	Simult. Gap N/S	On																		
Green	5.5	1.0	44.5	25.5	0.0	0.0															
Yellow	3.5	0.0	3.5	3.5	0.0	0.0															
Red	1.0	0.0	1.0	1.0	0.0	0.0															

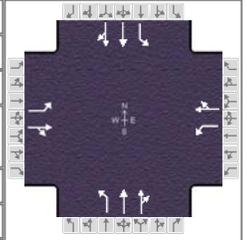
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		30.0		30.0	10.0	49.0	11.0	50.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		23.7		25.8	6.2		8.1	
Green Extension Time ( g <sub>e</sub> ), s		0.6		0.0	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.88		0.95	
Max Out Probability		1.00		1.00	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	70	330		115	357		86	491	464	123	555	539
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1041	1822		1066	1803		1810	1900	1796	1810	1900	1845
Queue Service Time ( g <sub>s</sub> ), s	5.8	14.3		9.5	15.9		4.2	15.9	15.9	6.1	18.4	18.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	21.7	14.3		23.8	15.9		4.2	15.9	15.9	6.1	18.4	18.4
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.06	0.49	0.49	0.07	0.51	0.51
Capacity ( c ), veh/h	191	516		213	511		110	939	888	131	961	933
Volume-to-Capacity Ratio ( X )	0.364	0.640		0.541	0.698		0.778	0.523	0.523	0.940	0.578	0.578
Back of Queue ( Q ), ft/ln ( 95 th percentile)	66.2	262.8		115.7	292.8		107.4	278.9	267.5	210.2	313.5	306.8
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.6	10.5		4.6	11.7		4.3	11.2	10.7	8.4	12.5	12.3
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	38.5	28.2		38.7	28.8		41.7	15.5	15.5	41.6	15.5	15.5
Incremental Delay ( d <sub>2</sub> ), s/veh	0.4	2.1		1.5	3.5		17.9	2.1	2.2	59.7	2.5	2.6
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	38.9	30.3		40.2	32.3		59.6	17.6	17.7	101.2	18.1	18.1
Level of Service ( LOS )	D	C		D	C		E	B	B	F	B	B
Approach Delay, s/veh / LOS	31.8	C		34.3	C		21.1	C		26.5	C	
Intersection Delay, s/veh / LOS	26.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.90	B	1.89	B
Bicycle LOS Score / LOS	1.15	A	1.27	A	1.35	A	1.49	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Atlantic / Elizabeth	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersecion #16	File Name	16AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	135	142	53	90	84	155	32	899	99	88	801	99

Signal Information				Signal Phases									
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	3.5	2.6	45.3	25.1	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0

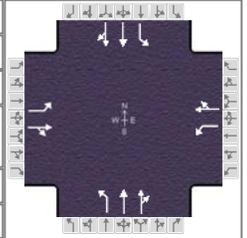
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		29.6		29.6	8.0	49.8	10.6	52.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.5		3.5	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		25.0		17.2	3.7		6.7	
Green Extension Time ( g <sub>e</sub> ), s		0.1		1.3	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.58		0.91	
Max Out Probability		1.00		0.15	0.93		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	147	212		98	260		35	552	533	96	499	479
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1137	1811		1188	1701		1810	1900	1833	1810	1900	1826
Queue Service Time ( g <sub>s</sub> ), s	11.3	8.6		6.6	11.7		1.7	18.3	18.3	4.7	15.0	15.0
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	23.0	8.6		15.2	11.7		1.7	18.3	18.3	4.7	15.0	15.0
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.04	0.50	0.50	0.07	0.53	0.53
Capacity ( c ), veh/h	250	506		299	475		70	956	922	122	1011	971
Volume-to-Capacity Ratio ( X )	0.587	0.419		0.328	0.547		0.496	0.577	0.578	0.783	0.494	0.494
Back of Queue ( Q ), ft/ln ( 95 th percentile)	148	167.2		86	209.7		35.2	313.6	305.5	121.4	260.5	253
Back of Queue ( Q ), veh/ln ( 95 th percentile)	5.9	6.7		3.4	8.4		1.4	12.5	12.2	4.9	10.4	10.1
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	37.4	26.5		32.7	27.6		42.4	15.7	15.7	41.3	13.4	13.4
Incremental Delay ( d <sub>2</sub> ), s/veh	2.2	0.2		0.2	0.7		2.0	2.5	2.6	19.4	1.7	1.8
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	39.6	26.7		32.9	28.3		44.4	18.2	18.3	60.7	15.1	15.2
Level of Service ( LOS )	D	C		C	C		D	B	B	E	B	B
Approach Delay, s/veh / LOS	32.0	C		29.5	C		19.1	B		19.2	B	
Intersection Delay, s/veh / LOS	22.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	1.89	B	1.89	B
Bicycle LOS Score / LOS	1.08	A	1.08	A	1.41	A	1.37	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Atlantic / Elizabeth	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersecion #16	File Name	16PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	99	109	79	55	92	99	57	752	66	101	863	118

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	4.7	2.2	49.4	20.1	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0				
				Red	1.0	0.0	1.0	1.0	0.0	0.0				

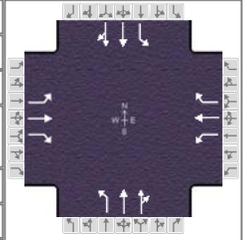
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	2.0	4.0	2.0	4.0
Phase Duration, s		24.6		24.6	9.2	53.9	11.4	56.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		19.3		15.2	5.0		7.4	
Green Extension Time ( g <sub>e</sub> ), s		0.9		1.1	0.0	0.0	0.1	0.0
Phase Call Probability		1.00		1.00	0.79		0.94	
Max Out Probability		0.26		0.04	0.00		0.17	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	108	204		60	208		62	451	438	110	545	522
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1193	1766		1196	1738		1810	1900	1846	1810	1900	1819
Queue Service Time ( g <sub>s</sub> ), s	7.9	9.1		4.2	9.5		3.0	12.6	12.6	5.4	15.4	15.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	17.3	9.1		13.2	9.5		3.0	12.6	12.6	5.4	15.4	15.4
Green Ratio ( g/C )	0.22	0.22		0.22	0.22		0.05	0.55	0.55	0.08	0.57	0.57
Capacity ( c ), veh/h	222	395		227	389		95	1043	1014	140	1090	1044
Volume-to-Capacity Ratio ( X )	0.485	0.517		0.264	0.534		0.652	0.432	0.432	0.786	0.500	0.500
Back of Queue ( Q ), ft/ln ( 95 th percentile)	104.7	175.9		55.2	179.6		62.7	223.5	218.9	111.4	259	251
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.2	7.0		2.2	7.2		2.5	8.9	8.8	4.5	10.4	10.0
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	38.4	30.7		36.5	30.8		41.8	12.0	12.0	40.8	11.5	11.5
Incremental Delay ( d <sub>2</sub> ), s/veh	0.6	0.4		0.2	0.4		2.8	1.3	1.3	3.7	1.6	1.7
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	39.0	31.1		36.7	31.2		44.6	13.3	13.3	44.5	13.1	13.2
Level of Service ( LOS )	D	C		D	C		D	B	B	D	B	B
Approach Delay, s/veh / LOS	33.8	C		32.4	C		15.4	B		16.1	B	
Intersection Delay, s/veh / LOS	19.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	1.89	B	1.88	B
Bicycle LOS Score / LOS	1.00	A	0.93	A	1.27	A	1.46	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Atlantic / Santa Ana	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersecion #17	File Name	17AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	182	221	98	75	223	97	82	763	36	74	727	117

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	5.2	0.5	45.3	25.5	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0				
				Red	1.0	0.0	1.0	1.0	0.0	0.0				

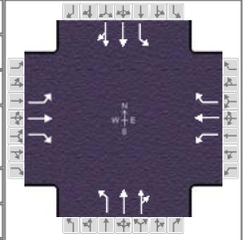
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	5	2	1	6
Case Number		5.0		5.0	2.0	4.0	2.0	4.0
Phase Duration, s		30.0		30.0	10.2	50.3	9.7	49.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.4		3.4	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		26.7		16.9	6.4		5.9	
Green Extension Time ( g <sub>e</sub> ), s		0.0		1.7	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.89		0.87	
Max Out Probability		1.00		0.20	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	198	240	107	82	242	105	89	438	431	80	470	447
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1156	1900	1610	1158	1900	1610	1810	1900	1869	1810	1900	1807
Queue Service Time ( g <sub>s</sub> ), s	15.3	9.3	4.6	5.6	9.4	4.5	4.4	13.2	13.2	3.9	14.7	14.7
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	24.7	9.3	4.6	14.9	9.4	4.5	4.4	13.2	13.2	3.9	14.7	14.7
Green Ratio ( g/C )	0.28	0.28	0.28	0.28	0.28	0.28	0.06	0.51	0.51	0.06	0.50	0.50
Capacity ( c ), veh/h	286	538	456	288	538	456	114	967	951	104	957	910
Volume-to-Capacity Ratio ( X )	0.691	0.446	0.233	0.283	0.450	0.231	0.780	0.453	0.453	0.770	0.491	0.491
Back of Queue ( Q ), ft/ln ( 95 th percentile)	205.6	187.3	77.6	71.1	191.4	77.9	113.4	237.5	234.7	96.8	260.1	250.7
Back of Queue ( Q ), veh/ln ( 95 th percentile)	8.2	7.5	3.1	2.8	7.7	3.1	4.5	9.5	9.4	3.9	10.4	10.0
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	36.6	26.5	24.7	32.6	26.5	24.7	41.5	14.1	14.1	41.8	14.7	14.7
Incremental Delay ( d <sub>2</sub> ), s/veh	5.8	0.2	0.1	0.2	0.2	0.1	19.4	1.5	1.6	14.8	1.8	1.9
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	42.5	26.7	24.8	32.8	26.7	24.8	60.9	15.6	15.7	56.6	16.5	16.6
Level of Service ( LOS )	D	C	C	C	C	C	E	B	B	E	B	B
Approach Delay, s/veh / LOS	32.1	C		27.4	C		19.9	B		19.8	B	
Intersection Delay, s/veh / LOS	23.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	2.08	B	2.08	B
Bicycle LOS Score / LOS	1.39	A	1.20	A	1.28	A	1.31	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Atlantic / Santa Ana	Analysis Year	2021	Analysis Period	1 > 16:30
Intersection	Intersecion #17	File Name	17PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	168	229	46	87	185	51	91	704	58	89	748	147

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	6.2	0.1	46.5	23.8	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0		
				Red	1.0	0.0	1.0	1.0	0.0	0.0		

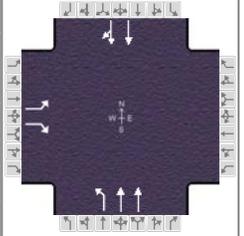
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		5.0		5.0	2.0	4.0	2.0	4.0
Phase Duration, s		28.3		28.3	10.8	51.1	10.7	51.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s		3.3		3.3	3.1	0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s		23.1		18.8	6.8		6.7	
Green Extension Time ( g <sub>e</sub> ), s		0.6		1.3	0.0	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	0.92		0.91	
Max Out Probability		1.00		0.29	1.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	183	249	50	95	201	55	99	420	409	97	501	472
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1200	1900	1610	1149	1900	1610	1810	1900	1849	1810	1900	1791
Queue Service Time ( g <sub>s</sub> ), s	13.3	10.0	2.1	6.8	7.8	2.4	4.8	12.3	12.3	4.7	15.6	15.6
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	21.1	10.0	2.1	16.8	7.8	2.4	4.8	12.3	12.3	4.7	15.6	15.6
Green Ratio ( g/C )	0.26	0.26	0.26	0.26	0.26	0.26	0.07	0.52	0.52	0.07	0.52	0.52
Capacity ( c ), veh/h	292	502	425	256	502	425	126	983	957	124	981	924
Volume-to-Capacity Ratio ( X )	0.625	0.496	0.118	0.369	0.401	0.130	0.783	0.427	0.427	0.782	0.511	0.511
Back of Queue ( Q ), ft/ln ( 95 th percentile)	179.7	199	36.2	86.9	160.6	40.9	113.7	223.4	219	110	271.1	259.5
Back of Queue ( Q ), veh/ln ( 95 th percentile)	7.2	8.0	1.4	3.5	6.4	1.6	4.5	8.9	8.8	4.4	10.8	10.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	36.0	28.0	25.2	35.2	27.3	25.2	41.2	13.4	13.4	41.3	14.3	14.3
Incremental Delay ( d <sub>2</sub> ), s/veh	2.3	0.3	0.0	0.3	0.2	0.1	11.9	1.4	1.4	11.1	1.9	2.0
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	38.2	28.3	25.2	35.5	27.5	25.3	53.1	14.8	14.8	52.3	16.2	16.3
Level of Service ( LOS )	D	C	C	D	C	C	D	B	B	D	B	B
Approach Delay, s/veh / LOS	31.8	C		29.3	C		18.9	B		19.5	B	
Intersection Delay, s/veh / LOS	22.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.29	B	2.08	B	2.08	B
Bicycle LOS Score / LOS	1.28	A	1.07	A	1.25	A	1.37	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Atlantic / N. Cecilia	Analysis Year	2021	Analysis Period	1 > 7:30
Intersection	Intersecion #18	File Name	18AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	62		40				15	888			877	37

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	2.0	68.5	6.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

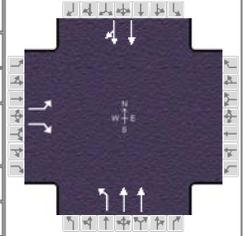
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		10.5			6.5	79.5		73.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5			4.5	4.5		4.5
Max Allow Headway ( MAH ), s		3.3			3.1	0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		5.2			2.8			
Green Extension Time ( g <sub>e</sub> ), s		0.2			0.0	0.0		0.0
Phase Call Probability		1.00			0.33			
Max Out Probability		0.00			0.00			

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	16
Adjusted Flow Rate ( v ), veh/h	67		43				16	965			500	493
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810		1610				1810	1809			1900	1873
Queue Service Time ( g <sub>s</sub> ), s	3.2		2.3				0.8	5.5			16.3	7.7
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	3.2		2.3				0.8	5.5			16.3	7.7
Green Ratio ( g/C )	0.07		0.07				0.02	0.83			0.76	0.76
Capacity ( c ), veh/h	121		107				40	3015			1446	1425
Volume-to-Capacity Ratio ( X )	0.559		0.405				0.404	0.320			0.346	0.346
Back of Queue ( Q ), ft/ln ( 95 th percentile)	67.3		42.7				17	37.3			100.1	98.8
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.7		1.7				0.7	1.5			4.0	4.0
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	40.7		40.3				43.4	1.7			3.5	3.5
Incremental Delay ( d <sub>2</sub> ), s/veh	1.5		0.9				2.4	0.3			0.7	0.7
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay ( d ), s/veh	42.2		41.2				45.8	2.0			4.1	4.2
Level of Service ( LOS )	D		D				D	A			A	A
Approach Delay, s/veh / LOS	41.8		D	0.0			2.7	A		4.2		A
Intersection Delay, s/veh / LOS	5.5						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.31	B	2.15	B	0.61	A	1.84	B
Bicycle LOS Score / LOS		F			1.30	A	1.31	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Atlantic / N. Cecilia	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersecion #18	File Name	18PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	24		35				35	815			885	21

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	3.7	66.8	6.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

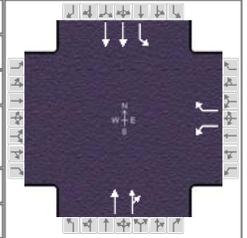
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		10.5			8.2	79.5		71.3
Change Period, ( Y+R <sub>c</sub> ), s		4.5			4.5	4.5		4.5
Max Allow Headway ( MAH ), s		3.4			3.1	0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		4.0			3.9			
Green Extension Time ( g <sub>e</sub> ), s		0.1			0.0	0.0		0.0
Phase Call Probability		1.00			0.61			
Max Out Probability		0.00			0.00			

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3		18				1	6			2	12
Adjusted Flow Rate ( v ), veh/h	26		38				38	886			494	490
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810		1610				1810	1809			1900	1884
Queue Service Time ( g <sub>s</sub> ), s	1.2		2.0				1.9	4.9			16.0	8.2
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	1.2		2.0				1.9	4.9			16.0	8.2
Green Ratio ( g/C )	0.07		0.07				0.04	0.83			0.74	0.74
Capacity ( c ), veh/h	121		107				74	3015			1411	1399
Volume-to-Capacity Ratio ( X )	0.216		0.354				0.514	0.294			0.351	0.351
Back of Queue ( Q ), ft/ln ( 95 th percentile)	25.1		37.2				38.4	32.9			112.2	111.4
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.0		1.5				1.5	1.3			4.5	4.5
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	39.8		40.1				42.3	1.7			4.0	4.0
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3		0.7				2.0	0.2			0.7	0.7
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay ( d ), s/veh	40.1		40.9				44.3	1.9			4.7	4.7
Level of Service ( LOS )	D		D				D	A			A	A
Approach Delay, s/veh / LOS	40.6		D	0.0			3.7	A		4.7		A
Intersection Delay, s/veh / LOS	5.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.31	B	2.15	B	0.61	A	1.84	B
Bicycle LOS Score / LOS		F			1.25	A	1.30	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Atlantic / S. Cecilia	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Interesction #19	File Name	19AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h				92		77			834	45	69	833

Signal Information														
Cycle, s	90.0	Reference Phase	2	Green	5.1	64.2	7.2	0.0	0.0	0.0				
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	0.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

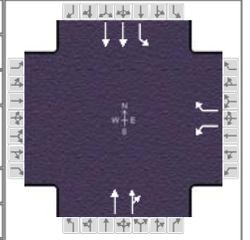
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		2	1	6
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				11.7		68.7	9.6	78.3
Change Period, ( Y+R <sub>c</sub> ), s				4.5		4.5	4.5	4.5
Max Allow Headway ( MAH ), s				3.4		0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s				6.8			2.8	
Green Extension Time ( g <sub>e</sub> ), s				0.3		0.0	0.1	0.0
Phase Call Probability				1.00			0.85	
Max Out Probability				0.00			0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		2	12	1		6
Adjusted Flow Rate ( v ), veh/h				100		84		482	473	75		905
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1810		1610		1900	1865	1810		1809
Queue Service Time ( g <sub>s</sub> ), s				4.8		4.5		15.5	8.8	0.8		5.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				4.8		4.5		15.5	8.8	0.8		5.4
Green Ratio ( g/C )				0.08		0.08		0.71	0.71	0.79		0.82
Capacity ( c ), veh/h				144		129		1356	1331	506		2967
Volume-to-Capacity Ratio ( X )				0.692		0.651		0.356	0.356	0.148		0.305
Back of Queue ( Q ), ft/ln ( 95 th percentile)				100.9		84.1		129.9	127.8	7.5		42.3
Back of Queue ( Q ), veh/ln ( 95 th percentile)				4.0		3.4		5.2	5.1	0.3		1.7
Queue Storage Ratio ( RQ ) ( 95 th percentile)				0.00		0.00		0.00	0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				40.3		40.2		4.9	4.9	4.0		1.9
Incremental Delay ( d <sub>2</sub> ), s/veh				2.2		2.1		0.7	0.7	0.0		0.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				42.5		42.3		5.7	5.7	4.0		2.2
Level of Service ( LOS )				D		D		A	A	A		A
Approach Delay, s/veh / LOS	0.0			42.4		D		5.7	A	2.3		A
Intersection Delay, s/veh / LOS				7.3						A		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.15	B	2.31	B	1.85	B	0.61	A
Bicycle LOS Score / LOS				F	1.28	A	1.30	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Cudahy	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Atlantic / S. Cecilia	Analysis Year	2021	Analysis Period	1 > 16:45
Intersection	Intersecion #19	File Name	19PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB			
	L	T	R	L	T	R	L	T	R	L	T	R	
Approach Movement													
Demand ( v ), veh/h				78		49			785	43	52	860	

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	4.5	65.6	6.4	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

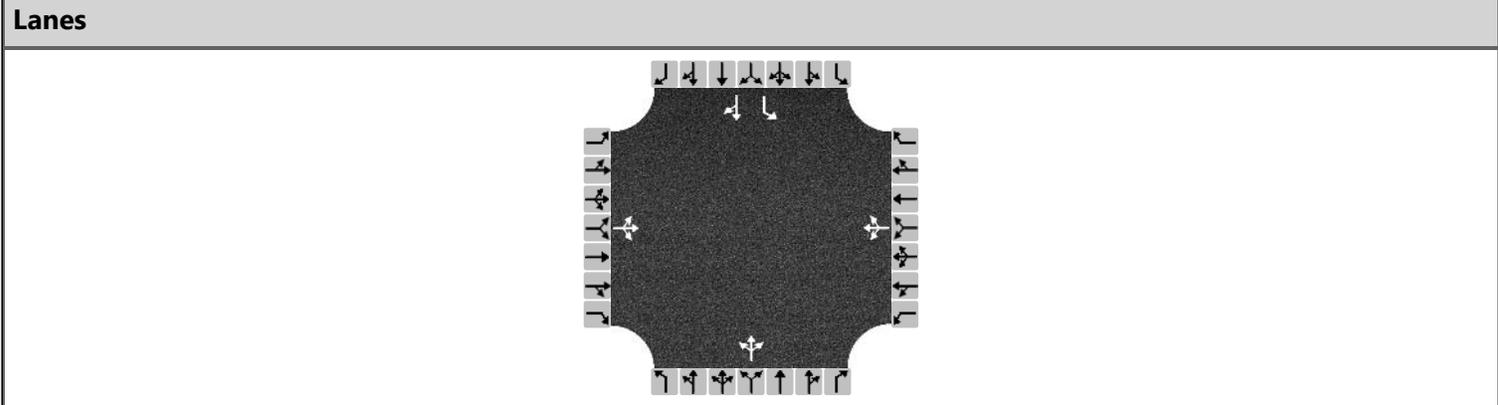
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				10.9		70.1	9.0	79.1
Change Period, ( Y+R <sub>c</sub> ), s				4.5		4.5	4.5	4.5
Max Allow Headway ( MAH ), s				3.3		0.0	3.1	0.0
Queue Clearance Time ( g <sub>s</sub> ), s				6.1			2.6	
Green Extension Time ( g <sub>e</sub> ), s				0.2		0.0	0.1	0.0
Phase Call Probability				1.00			0.76	
Max Out Probability				0.00			0.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7		14		6	16	5		2
Adjusted Flow Rate ( v ), veh/h				85		53		454	446	57		935
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1810		1610		1900	1865	1810		1809
Queue Service Time ( g <sub>s</sub> ), s				4.1		2.9		14.3	7.7	0.6		5.3
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				4.1		2.9		14.3	7.7	0.6		5.3
Green Ratio ( g/C )				0.07		0.07		0.73	0.73	0.80		0.83
Capacity ( c ), veh/h				128		114		1385	1359	530		3000
Volume-to-Capacity Ratio ( X )				0.664		0.469		0.328	0.328	0.107		0.312
Back of Queue ( Q ), ft/ln ( 95 th percentile)				85.9		52.5		109.2	107.4	4.9		37.8
Back of Queue ( Q ), veh/ln ( 95 th percentile)				3.4		2.1		4.4	4.3	0.2		1.5
Queue Storage Ratio ( RQ ) ( 95 th percentile)				0.00		0.00		0.00	0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh				40.8		40.2		4.3	4.3	3.4		1.8
Incremental Delay ( d <sub>2</sub> ), s/veh				2.2		1.1		0.6	0.6	0.0		0.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0		0.0		0.0	0.0	0.0		0.0
Control Delay ( d ), s/veh				43.0		41.3		5.0	5.0	3.5		2.0
Level of Service ( LOS )				D		D		A	A	A		A
Approach Delay, s/veh / LOS	0.0			42.3		D	5.0	A		2.1		A
Intersection Delay, s/veh / LOS	6.1						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.15	B	2.31	B	1.85	B	0.61	A
Bicycle LOS Score / LOS				F	1.23	A	1.31	A

# HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	AS	Intersection	Intersection #20
Agency/Co.	LLG Engineers	Jurisdiction	City of Cudahy
Date Performed	12/13/2019	East/West Street	Elizabeth Street
Analysis Year	2021	North/South Street	Otis Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Future with Project - AM		
Project Description	7801-7835 Otis Avenue Charter School		



**Vehicle Volume and Adjustments**

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	3	50	0	72	68	78	1	277	105	75	360	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			L	TR	
Flow Rate, v (veh/h)	58			237			416			82	396	
Percent Heavy Vehicles	2			2			2			2	2	

**Departure Headway and Service Time**

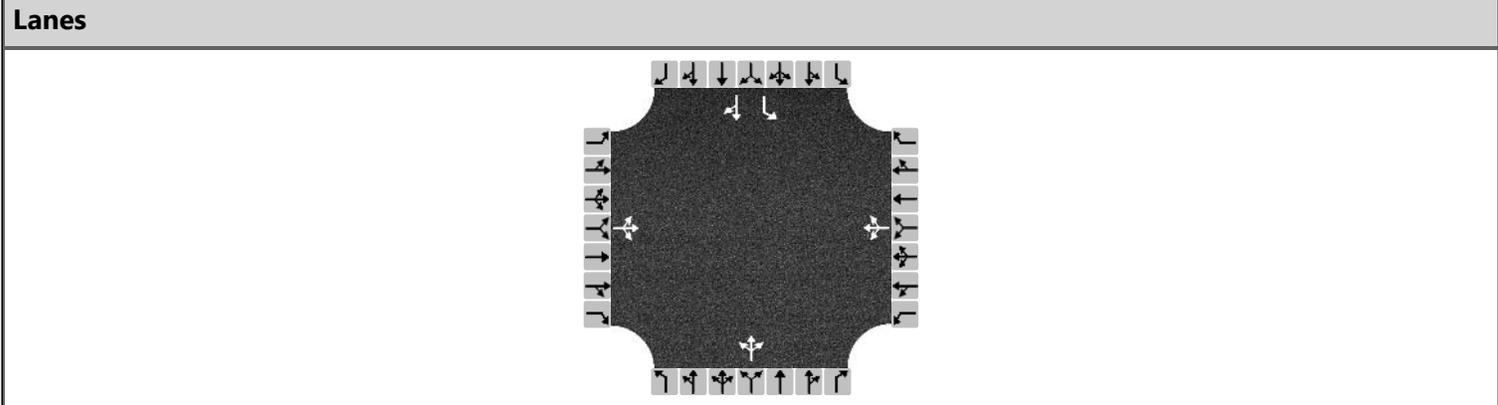
Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20	3.20	
Initial Degree of Utilization, x	0.051			0.211			0.370			0.072	0.352	
Final Departure Headway, hd (s)	7.00			6.28			5.63			6.62	6.11	
Final Degree of Utilization, x	0.112			0.413			0.651			0.150	0.671	
Move-Up Time, m (s)	2.0			2.0			2.0			2.3	2.3	
Service Time, ts (s)	5.00			4.28			3.63			4.32	3.81	

**Capacity, Delay and Level of Service**

Flow Rate, v (veh/h)	58			237			416			82	396	
Capacity	514			574			640			544	590	
95% Queue Length, Q <sub>95</sub> (veh)	0.4			2.0			4.8			0.5	5.1	
Control Delay (s/veh)	10.9			13.6			18.5			10.5	20.4	
Level of Service, LOS	B			B			C			B	C	
Approach Delay (s/veh)	10.9			13.6			18.5			18.7		
Approach LOS	B			B			C			C		
Intersection Delay, s/veh   LOS	17.2						C					

# HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst	AS	Intersection	Intersection #20
Agency/Co.	LLG Engineers	Jurisdiction	City of Cudahy
Date Performed	12/13/2019	East/West Street	Elizabeth Street
Analysis Year	2021	North/South Street	Otis Avenue
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.92
Time Analyzed	Future with Project - PM		
Project Description	7801-7835 Otis Avenue Charter School		



**Vehicle Volume and Adjustments**

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	4	63	0	84	68	46	0	331	85	50	373	4
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LTR			LTR			LTR			L TR		
Flow Rate, v (veh/h)	73			215			452			54 410		
Percent Heavy Vehicles	2			2			2			2 2		

**Departure Headway and Service Time**

Initial Departure Headway, hd (s)	3.20			3.20			3.20			3.20	3.20	
Initial Degree of Utilization, x	0.065			0.191			0.402			0.048	0.364	
Final Departure Headway, hd (s)	7.10			6.56			5.71			6.70	6.18	
Final Degree of Utilization, x	0.144			0.392			0.717			0.101	0.704	
Move-Up Time, m (s)	2.0			2.0			2.0			2.3	2.3	
Service Time, ts (s)	5.10			4.56			3.71			4.40	3.88	

**Capacity, Delay and Level of Service**

Flow Rate, v (veh/h)	73			215			452			54	410	
Capacity	507			549			631			537	582	
95% Queue Length, Q <sub>95</sub> (veh)	0.5			1.9			6.0			0.3	5.7	
Control Delay (s/veh)	11.3			13.7			21.8			10.2	22.3	
Level of Service, LOS	B			B			C			B	C	
Approach Delay (s/veh)	11.3			13.7			21.8			20.8		
Approach LOS	B			B			C			C		
Intersection Delay, s/veh   LOS	19.3						C					

## APPENDIX C

### HCM AND LEVELS OF SERVICE EXPLANATION HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS CITY OF BELL

## LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of incidents, and when there are no other vehicles on the road. Only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for traffic signals are stated in terms of the average control delay per vehicle. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the  $v/c$  ratio for the lane group in question.

Level of Service Criteria for Signalized Intersections	
Level of Service	Control Delay (Sec/Veh)
A	$\leq 10$
B	$> 10$ and $\leq 20$
C	$> 20$ and $\leq 35$
D	$> 35$ and $\leq 55$
E	$> 55$ and $\leq 80$
F	$> 80$

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

**LOS A** describes operations with very low control delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay values.

**LOS B** describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

**LOS C** describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

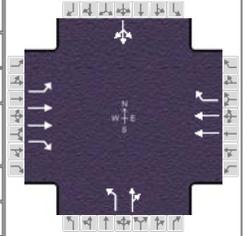
**LOS D** describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high  $v/c$  ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

**LOS E** describes operations with control delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high  $v/c$  ratios. Individual cycle failures are frequent occurrences.

**LOS F** describes operations with control delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the lane groups. It may also occur at high  $v/c$  ratios with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Existing - AM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #6	File Name	06AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB				
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R		
Demand ( v ), veh/h	55	1033	206				999	117	362	167	4	61	114	44

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On											
Force Mode	Float	Simult. Gap N/S	On											
		Green	42.2	13.8	20.5	0.0	0.0	0.0						
		Yellow	3.5	3.5	3.5	0.0	0.0	0.0						
		Red	1.0	1.0	1.0	0.0	0.0	0.0						

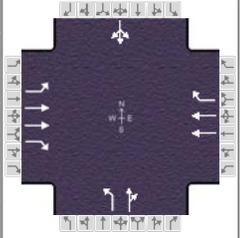
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		46.7		46.7		25.0		18.3
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						21.3		13.5
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.3
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.04

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	60	1123	224		1086	127	393	186			238	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	528	1809	1610		1809	1610	1810	1892			1809	
Queue Service Time ( g <sub>s</sub> ), s	8.7	21.5	7.7		20.5	4.1	19.3	7.6			11.5	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	29.2	21.5	7.7		20.5	4.1	19.3	7.6			11.5	
Green Ratio ( g/C )	0.47	0.47	0.47		0.47	0.47	0.23	0.23			0.15	
Capacity ( c ), veh/h	207	1695	755		1695	755	412	431			278	
Volume-to-Capacity Ratio ( X )	0.289	0.662	0.297		0.640	0.169	0.955	0.431			0.857	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	57.2	341	128.7		327	67.8	444.6	155.6			239.1	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.3	13.6	5.1		13.1	2.7	17.8	6.2			9.6	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	29.3	18.4	14.8		18.2	13.8	34.3	29.8			37.1	
Incremental Delay ( d <sub>2</sub> ), s/veh	3.5	2.1	1.0		1.9	0.5	32.5	0.3			7.7	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	
Control Delay ( d ), s/veh	32.7	20.5	15.8		20.0	14.3	66.8	30.0			44.8	
Level of Service ( LOS )	C	C	B		C	B	E	C			D	
Approach Delay, s/veh / LOS	20.2	C		19.4	B		55.0	D		44.8	D	
Intersection Delay, s/veh / LOS	27.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.67	B	2.31	B	2.44	B
Bicycle LOS Score / LOS	1.65	B	1.49	A	1.44	A	0.88	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Existing - PM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2019	Analysis Period	1 > 16:45
Intersection	Intersection #6	File Name	06PM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB					
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand ( v ), veh/h	32	1039	338				824	28		221	86	3	47	214	27

Signal Information																						
Cycle, s	90.0	Reference Phase	2																			
Offset, s	0	Reference Point	End																			
Uncoordinated	No	Simult. Gap E/W	On	Green	45.4	17.1	14.0	0.0	0.0	0.0	1			2			3			4		
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5			6			7			8		
				Red	1.0	1.0	1.0	0.0	0.0	0.0												

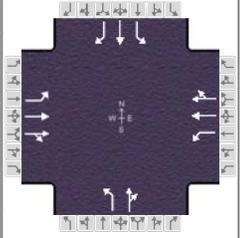
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		49.9		49.9		18.5		21.6
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						13.6		16.8
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.4		0.3
Phase Call Probability						1.00		1.00
Max Out Probability						0.07		0.69

Movement Group Results	EB			WB			NB			SB			
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( v ), veh/h	35	1129	367		896	30	240	97			313		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	631	1809	1610		1809	1610	1810	1889			1854		
Queue Service Time ( g <sub>s</sub> ), s	3.5	20.3	13.2		14.7	0.9	11.6	4.1			14.8		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	18.1	20.3	13.2		14.7	0.9	11.6	4.1			14.8		
Green Ratio ( g/C )	0.50	0.50	0.50		0.50	0.50	0.16	0.16			0.19		
Capacity ( c ), veh/h	295	1824	812		1824	812	282	295			352		
Volume-to-Capacity Ratio ( X )	0.118	0.619	0.453		0.491	0.037	0.850	0.328			0.890		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	25.2	317.3	211.2		242.9	13.8	240.4	85.4			323.2		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.0	12.7	8.4		9.7	0.6	9.6	3.4			12.9		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	20.7	16.1	14.3		14.7	11.3	37.0	33.8			35.6		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.8	1.6	1.8		0.9	0.1	7.6	0.2			16.4		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0		
Control Delay ( d ), s/veh	21.5	17.7	16.2		15.6	11.4	44.5	34.0			51.9		
Level of Service ( LOS )	C	B	B		B	B	D	C			D		
Approach Delay, s/veh / LOS	17.4	B		15.5	B		41.5	D			51.9	D	
Intersection Delay, s/veh / LOS	22.9						C						

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	1.67	B	2.31	B	2.45	B
Bicycle LOS Score / LOS	1.75	B	1.25	A	1.04	A	1.00	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 22, 2019	Area Type	Other		
Jurisdiction	City of Bell	Time Period	Existing - AM	PHF	0.92		
Urban Street	Otis / Florence	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	Intersection #7	File Name	07AM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	53	1074	94	69	1074	46	130	231	155	78	221	47

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	4.6	0.5	42.3	29.1	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0				
				Red	1.0	0.0	1.0	1.0	0.0	0.0				

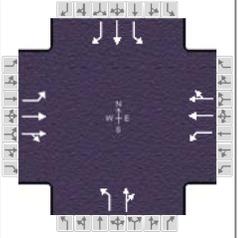
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		5.0
Phase Duration, s	9.1	46.8	9.6	47.3		33.6		33.6
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time ( $g_s$ ), s	4.8		5.7			20.9		28.4
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0		1.8		0.7
Phase Call Probability	0.76		0.85			1.00		1.00
Max Out Probability	0.99		1.00			0.14		1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	58	643	626	75	613	604	141	420		85	240	51
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1900	1846	1810	1900	1872	1158	1772		982	1900	1610
Queue Service Time ( $g_s$ ), s	2.8	24.4	24.5	3.7	22.4	22.5	9.7	18.9		7.5	8.8	2.0
Cycle Queue Clearance Time ( $g_c$ ), s	2.8	24.4	24.5	3.7	22.4	22.5	18.5	18.9		26.4	8.8	2.0
Green Ratio ( $g/C$ )	0.05	0.47	0.47	0.06	0.48	0.48	0.32	0.32		0.32	0.32	0.32
Capacity ( $c$ ), veh/h	92	894	869	102	905	892	341	572		191	614	520
Volume-to-Capacity Ratio ( $X$ )	0.626	0.719	0.721	0.734	0.677	0.678	0.415	0.733		0.444	0.392	0.098
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	58.2	413.3	406.2	76.9	381.6	377.8	122.3	330		82	175	33.5
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	2.3	16.5	16.2	3.1	15.3	15.1	4.9	13.2		3.3	7.0	1.3
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	41.9	19.1	19.1	41.8	18.2	18.2	30.8	27.0		38.7	23.6	21.3
Incremental Delay ( $d_2$ ), s/veh	2.6	5.0	5.1	3.8	4.1	4.1	0.3	3.7		0.6	0.2	0.0
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	44.5	24.0	24.2	45.6	22.3	22.4	31.1	30.8		39.4	23.8	21.3
Level of Service (LOS)	D	C	C	D	C	C	C	C		D	C	C
Approach Delay, s/veh / LOS	25.0		C	23.7		C	30.8		C	27.0		C
Intersection Delay, s/veh / LOS	25.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	2.09	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	1.58	B	1.55	B	1.41	A	1.11	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other		
Jurisdiction	City of Bell	Time Period	Existing - PM	PHF	0.92		
Urban Street	Otis / Florence	Analysis Year	2019	Analysis Period	1 > 17:00		
Intersection	Intersection #7	File Name	07PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	43	980	85	86	813	54	76	174	105	64	272	56

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
	Green	4.1	1.9	47.8	22.7	0.0	0.0						
	Yellow	3.5	0.0	3.5	3.5	0.0	0.0						
	Red	1.0	0.0	1.0	1.0	0.0	0.0						

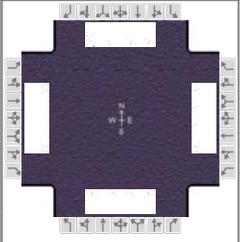
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		5.0
Phase Duration, s	8.6	52.3	10.5	54.2		27.2		27.2
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s	4.3		6.6			20.8		21.2
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.1	0.0		1.5		1.5
Phase Call Probability	0.69		0.90			1.00		1.00
Max Out Probability	0.00		0.00			0.09		0.11

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	47	587	571	93	476	466	83	303		70	296	61
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1846	1810	1900	1858	1101	1779		1093	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	2.3	18.9	18.9	4.6	13.5	13.5	6.5	13.8		5.5	12.4	2.6
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.3	18.9	18.9	4.6	13.5	13.5	18.8	13.8		19.2	12.4	2.6
Green Ratio ( g/C )	0.05	0.53	0.53	0.07	0.55	0.55	0.25	0.25		0.25	0.25	0.25
Capacity ( c ), veh/h	83	1009	981	121	1049	1025	207	449		189	479	406
Volume-to-Capacity Ratio ( X )	0.562	0.581	0.582	0.774	0.454	0.454	0.399	0.676		0.368	0.617	0.150
Back of Queue ( Q ), ft/ln ( 95 th percentile)	47	315.6	309.2	95.6	235.8	231.9	79.4	248.8		66.7	237.3	45.3
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.9	12.6	12.4	3.8	9.4	9.3	3.2	10.0		2.7	9.5	1.8
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	42.0	14.3	14.3	41.3	12.1	12.1	38.1	30.3		38.9	29.8	26.2
Incremental Delay ( d <sub>2</sub> ), s/veh	2.2	2.4	2.5	4.0	1.4	1.5	0.5	0.7		0.4	0.5	0.1
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay ( d ), s/veh	44.3	16.8	16.8	45.3	13.5	13.5	38.5	31.1		39.4	30.3	26.2
Level of Service ( LOS )	D	B	B	D	B	B	D	C		D	C	C
Approach Delay, s/veh / LOS	17.9		B	16.4		B	32.6		C	31.2		C
Intersection Delay, s/veh / LOS	21.1						C					

Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	1.89	B	2.08	B	2.29	B	2.29
Bicycle LOS Score / LOS	1.48	A	1.34	A	1.12	A	1.19	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Nov 25, 2019	Area Type	Other
Jurisdiction	City of Bell/City of Cudahy	Time Period	Existing - AM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersection #13	File Name	13AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	171	814	216	190	924	97	163	779	129	141	621	78

Signal Information				Signal Timing (s)									
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	11.0	0.6	30.5	5.9	2.6	21.5			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	3.5			
				Red	1.0	0.0	1.0	1.0	0.0	1.0			

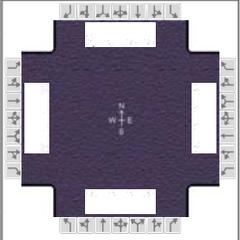
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	15.5	35.0	16.0	35.6	13.0	28.6	10.4	26.0
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( $g_s$ ), s	11.0		12.1		10.5	22.1	5.8	19.6
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	1.9	0.1	1.9
Phase Call Probability	0.99		0.99		0.99	1.00	0.98	1.00
Max Out Probability	1.00		1.00		1.00	0.84	1.00	0.85

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( $v$ ), veh/h	186	885	235	207	1004	105	177	847	140	153	387	373
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1825
Queue Service Time ( $g_s$ ), s	9.0	19.3	10.2	10.1	22.7	4.1	8.5	20.1	5.2	3.8	17.5	17.6
Cycle Queue Clearance Time ( $g_c$ ), s	9.0	19.3	10.2	10.1	22.7	4.1	8.5	20.1	5.2	3.8	17.5	17.6
Green Ratio ( $g/C$ )	0.12	0.34	0.34	0.13	0.35	0.35	0.09	0.27	0.40	0.07	0.24	0.24
Capacity ( $c$ ), veh/h	220	1226	546	232	1249	556	171	969	637	229	453	436
Volume-to-Capacity Ratio ( $X$ )	0.844	0.722	0.430	0.891	0.804	0.190	1.037	0.874	0.220	0.669	0.854	0.856
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	224.1	331.5	182.6	262.4	385.5	72.5	301.5	360.2	83.2	74.9	355	346.5
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	9.0	13.3	7.3	10.5	15.4	2.9	12.1	14.4	3.3	3.0	14.2	13.9
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	38.7	26.0	23.0	38.6	26.7	20.6	40.8	31.5	18.0	41.1	32.8	32.8
Incremental Delay ( $d_2$ ), s/veh	21.5	3.7	2.5	31.2	5.6	0.8	78.8	7.3	0.1	1.3	11.7	12.3
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	60.2	29.7	25.5	69.8	32.3	21.4	119.6	38.8	18.1	42.4	44.5	45.1
Level of Service ( LOS )	E	C	C	E	C	C	F	D	B	D	D	D
Approach Delay, s/veh / LOS	33.3		C	37.3		D	48.6		D	44.4		D
Intersection Delay, s/veh / LOS	40.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.56	B	1.57	B	1.45	A	1.24	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Nov 25, 2019	Area Type	Other
Jurisdiction	City of Bell/City of Cudahy	Time Period	Existing - PM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2019	Analysis Period	1 > 16:00
Intersection	Intersection #13	File Name	13PM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	114	832	140	170	733	136	147	556	123	198	685	77

Signal Information				Signal Timing Diagram								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	7.7	2.9	30.5	7.4	1.1	22.4						
Yellow	3.5	0.0	3.5	3.5	0.0	3.5						
Red	1.0	0.0	1.0	1.0	0.0	1.0						

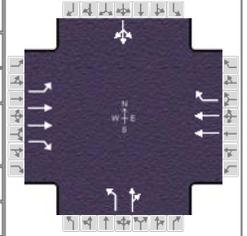
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	12.2	35.0	15.1	37.9	13.0	28.0	11.9	26.9
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( $g_s$ ), s	8.0		11.0		9.9	15.3	7.4	21.3
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	2.8	0.1	1.1
Phase Call Probability	0.95		0.99		0.98	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.26	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	124	904	152	185	797	148	160	604	134	215	421	407
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1832
Queue Service Time ( $g_s$ ), s	6.0	19.8	6.2	9.0	16.0	5.7	7.9	13.3	5.1	5.4	19.3	19.3
Cycle Queue Clearance Time ( $g_c$ ), s	6.0	19.8	6.2	9.0	16.0	5.7	7.9	13.3	5.1	5.4	19.3	19.3
Green Ratio ( $g/C$ )	0.09	0.34	0.34	0.12	0.37	0.37	0.09	0.26	0.38	0.08	0.25	0.25
Capacity ( $c$ ), veh/h	155	1226	546	214	1343	598	171	943	610	289	472	455
Volume-to-Capacity Ratio ( $X$ )	0.798	0.738	0.279	0.865	0.593	0.247	0.935	0.641	0.219	0.744	0.892	0.893
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	136.4	340.2	109.9	235.2	277	99.4	242.8	240.7	81.9	113.2	402.3	392.9
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	5.5	13.6	4.4	9.4	11.1	4.0	9.7	9.6	3.3	4.5	16.1	15.7
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	40.4	26.2	21.7	39.0	22.8	19.6	40.5	29.5	18.9	40.4	32.7	32.7
Incremental Delay ( $d_2$ ), s/veh	9.4	4.0	1.3	27.8	1.9	1.0	49.5	1.0	0.1	6.1	16.9	17.5
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	49.8	30.2	23.0	66.8	24.8	20.6	90.0	30.5	19.0	46.4	49.6	50.2
Level of Service (LOS)	D	C	C	E	C	C	F	C	B	D	D	D
Approach Delay, s/veh / LOS	31.3		C	31.1		C	39.4		D	49.2		D
Intersection Delay, s/veh / LOS	37.3						D					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	2.43	B	2.43	B
Bicycle LOS Score / LOS	1.46	A	1.42	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #6	File Name	06AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB				
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R		
Demand ( v ), veh/h	55	1084	206				999	117	408	182	4	61	131	44

Signal Information																						
Cycle, s	90.0	Reference Phase	2																			
Offset, s	0	Reference Point	End																			
Uncoordinated	No	Simult. Gap E/W	On	Green	41.3	14.7	20.5	0.0	0.0	0.0	1			2			3			4		
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5			6			7			8		
				Red	1.0	1.0	1.0	0.0	0.0	0.0												

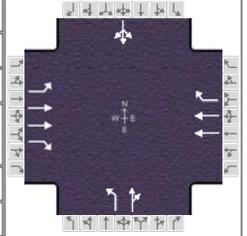
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		45.8		45.8		25.0		19.2
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						22.5		14.4
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.3
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.09

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	60	1178	224		1086	127	443	202			257	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	528	1809	1610		1809	1610	1810	1893			1816	
Queue Service Time ( g <sub>s</sub> ), s	8.9	23.5	7.9		20.9	4.2	20.5	8.3			12.4	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	29.8	23.5	7.9		20.9	4.2	20.5	8.3			12.4	
Green Ratio ( g/C )	0.46	0.46	0.46		0.46	0.46	0.23	0.23			0.16	
Capacity ( c ), veh/h	200	1661	739		1661	739	412	431			296	
Volume-to-Capacity Ratio ( X )	0.299	0.709	0.303		0.654	0.172	1.076	0.469			0.866	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	58.7	370.1	131.5		333.1	69.4	601.5	170.9			260.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.3	14.8	5.3		13.3	2.8	24.1	6.8			10.4	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	30.3	19.5	15.3		18.8	14.3	34.8	30.0			36.7	
Incremental Delay ( d <sub>2</sub> ), s/veh	3.8	2.6	1.1		2.0	0.5	66.1	0.3			10.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	
Control Delay ( d ), s/veh	34.1	22.1	16.3		20.8	14.8	100.9	30.3			46.9	
Level of Service ( LOS )	C	C	B		C	B	F	C			D	
Approach Delay, s/veh / LOS	21.7	C		20.2	C		78.8	E		46.9	D	
Intersection Delay, s/veh / LOS	33.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.68	B	2.31	B	2.44	B
Bicycle LOS Score / LOS	1.69	B	1.49	A	1.55	B	0.91	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2019	Analysis Period	1 > 16:45
Intersection	Intersection #6	File Name	06PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	32	1052	338		824	28	232	90	3	47	218	27

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	44.6	17.3	14.6	0.0	0.0	0.0	1		2		3		4	
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	1.0	0.0	0.0	0.0								

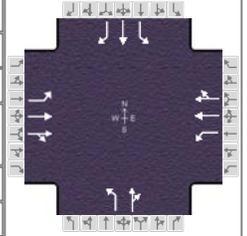
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		49.1		49.1		19.1		21.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						14.2		17.0
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.4		0.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.11		0.81

Movement Group Results	EB			WB			NB			SB			
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( v ), veh/h	35	1143	367		896	30	252	101			317		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	631	1809	1610		1809	1610	1810	1889			1854		
Queue Service Time ( g <sub>s</sub> ), s	3.5	21.0	13.4		14.9	0.9	12.2	4.3			15.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	18.5	21.0	13.4		14.9	0.9	12.2	4.3			15.0		
Green Ratio ( g/C )	0.50	0.50	0.50		0.50	0.50	0.16	0.16			0.19		
Capacity ( c ), veh/h	288	1793	798		1793	798	294	307			356		
Volume-to-Capacity Ratio ( X )	0.121	0.638	0.460		0.500	0.038	0.857	0.329			0.892		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	25.7	328.1	214.8		247	14.1	253.9	88.7			328.3		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.0	13.1	8.6		9.9	0.6	10.2	3.5			13.1		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	21.4	16.7	14.8		15.2	11.7	36.7	33.3			35.5		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.9	1.7	1.9		1.0	0.1	9.2	0.2			16.9		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0		
Control Delay ( d ), s/veh	22.3	18.5	16.7		16.2	11.8	45.9	33.6			52.3		
Level of Service ( LOS )	C	B	B		B	B	D	C			D		
Approach Delay, s/veh / LOS	18.2	B		16.1	B		42.3	D			52.3	D	
Intersection Delay, s/veh / LOS	23.7						C						

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.67	B	2.31	B	2.45	B
Bicycle LOS Score / LOS	1.76	B	1.25	A	1.07	A	1.01	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Bell	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Otis / Florence	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #7	File Name	07AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	53	1074	145	110	1074	46	130	246	192	78	238	47

Signal Information				Signal Phases									
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
	Green	4.6	1.9	39.5	30.5	0.0	0.0						
	Yellow	3.5	0.0	3.5	3.5	0.0	0.0						
	Red	1.0	0.0	1.0	1.0	0.0	0.0						

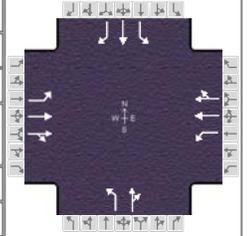
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		5.0
Phase Duration, s	9.1	44.0	11.0	45.9		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time ( g <sub>s</sub> ), s	4.8		7.9			24.0		32.2
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0		1.7		0.0
Phase Call Probability	0.76		0.95			1.00		1.00
Max Out Probability	1.00		1.00			0.42		1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	58	675	650	120	613	604	141	476		85	259	51
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1821	1810	1900	1872	1139	1761		933	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	2.8	27.8	28.1	5.9	23.1	23.2	9.8	22.0		8.2	9.4	1.9
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.8	27.8	28.1	5.9	23.1	23.2	19.1	22.0		30.2	9.4	1.9
Green Ratio ( g/C )	0.05	0.44	0.44	0.07	0.46	0.46	0.34	0.34		0.34	0.34	0.34
Capacity ( c ), veh/h	92	834	799	131	874	862	347	597		168	644	546
Volume-to-Capacity Ratio ( X )	0.626	0.809	0.814	0.914	0.701	0.702	0.407	0.798		0.506	0.402	0.094
Back of Queue ( Q ), ft/ln ( 95 th percentile)	58.2	484.7	473.7	198.6	396.3	392.3	120.8	386.2		85.1	185.2	32.6
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.3	19.4	18.9	7.9	15.9	15.7	4.8	15.4		3.4	7.4	1.3
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	41.9	22.0	22.0	41.5	19.4	19.4	30.1	27.0		40.6	22.8	20.3
Incremental Delay ( d <sub>2</sub> ), s/veh	2.6	8.4	8.9	52.4	4.7	4.7	0.3	6.9		1.0	0.2	0.0
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay ( d ), s/veh	44.5	30.3	30.9	93.9	24.0	24.1	30.4	33.9		41.6	22.9	20.3
Level of Service ( LOS )	D	C	C	F	C	C	C	C		D	C	C
Approach Delay, s/veh / LOS	31.2		C	30.3		C	33.1		C	26.6		C
Intersection Delay, s/veh / LOS	30.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	2.09	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	1.63	B	1.59	B	1.51	B	1.14	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Bell	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Otis / Florence	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersection #7	File Name	07PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	43	980	98	96	813	54	76	178	114	64	276	56

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	4.1	2.5	46.4	23.4	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0				
				Red	1.0	0.0	1.0	1.0	0.0	0.0				

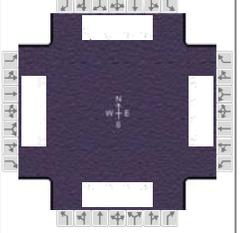
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		5.0
Phase Duration, s	8.6	50.9	11.1	53.4		27.9		27.9
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s	4.3		7.1			20.8		22.0
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.1	0.0		1.5		1.5
Phase Call Probability	0.69		0.93			1.00		1.00
Max Out Probability	0.00		0.01			0.10		0.15

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	47	595	577	104	476	466	83	317		70	300	61
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1839	1810	1900	1858	1096	1775		1079	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	2.3	19.9	19.9	5.1	13.7	13.7	6.4	14.5		5.6	12.5	2.6
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.3	19.9	19.9	5.1	13.7	13.7	18.8	14.5		20.0	12.5	2.6
Green Ratio ( g/C )	0.05	0.52	0.52	0.07	0.54	0.54	0.26	0.26		0.26	0.26	0.26
Capacity ( c ), veh/h	83	980	949	134	1033	1011	214	462		188	494	419
Volume-to-Capacity Ratio ( X )	0.562	0.607	0.608	0.781	0.461	0.461	0.385	0.687		0.370	0.607	0.145
Back of Queue ( Q ), ft/ln ( 95 th percentile)	47	333.5	326.4	106.1	240.6	236.7	78.6	259.1		66.6	237.7	44.7
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.9	13.3	13.1	4.2	9.6	9.5	3.1	10.4		2.7	9.5	1.8
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	42.0	15.3	15.4	41.0	12.5	12.5	37.5	30.0		38.9	29.3	25.6
Incremental Delay ( d <sub>2</sub> ), s/veh	2.2	2.8	2.9	3.7	1.5	1.5	0.4	1.1		0.4	0.5	0.1
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay ( d ), s/veh	44.3	18.1	18.2	44.7	14.0	14.0	37.9	31.1		39.4	29.7	25.7
Level of Service ( LOS )	D	B	B	D	B	B	D	C		D	C	C
Approach Delay, s/veh / LOS	19.2	B		17.0	B		32.5	C		30.7	C	
Intersection Delay, s/veh / LOS	21.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	2.08	B	2.29	B	2.29	B
Bicycle LOS Score / LOS	1.49	A	1.35	A	1.15	A	1.20	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Cudahy	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersection #13	File Name	13AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	171	851	216	190	965	97	163	813	129	141	659	78

Signal Information				Signal Timing (s)								Signal Phases			
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On	Green	10.9	30.5	5.9	2.6	22.1	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	3.5	0.0					
				Red	1.0	1.0	1.0	0.0	1.0	0.0					

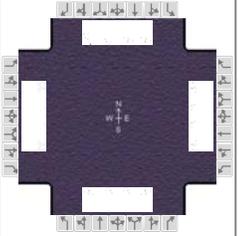
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	15.4	35.0	15.4	35.0	13.0	29.3	10.4	26.6
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( g <sub>s</sub> ), s	11.1		12.2		10.5	23.1	5.8	20.6
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	1.6	0.1	1.6
Phase Call Probability	0.99		0.99		0.99	1.00	0.98	1.00
Max Out Probability	1.00		1.00		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	186	925	235	207	1049	105	177	884	140	153	408	393
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1829
Queue Service Time ( g <sub>s</sub> ), s	9.1	20.4	10.2	10.2	24.3	4.2	8.5	21.1	5.2	3.8	18.6	18.6
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	9.1	20.4	10.2	10.2	24.3	4.2	8.5	21.1	5.2	3.8	18.6	18.6
Green Ratio ( g/C )	0.12	0.34	0.34	0.12	0.34	0.34	0.09	0.28	0.40	0.07	0.25	0.25
Capacity ( c ), veh/h	218	1226	546	218	1226	546	171	996	637	229	468	450
Volume-to-Capacity Ratio ( X )	0.852	0.754	0.430	0.947	0.856	0.193	1.037	0.887	0.220	0.669	0.872	0.873
Back of Queue ( Q ), ft/ln ( 95 th percentile)	231.3	350	182.6	288.8	418.1	73.3	301.5	378.6	83.2	74.9	380.5	371.2
Back of Queue ( Q ), veh/ln ( 95 th percentile)	9.3	14.0	7.3	11.6	16.7	2.9	12.1	15.1	3.3	3.0	15.2	14.8
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	38.8	26.4	23.0	39.3	27.7	21.0	40.8	31.3	18.0	41.1	32.6	32.6
Incremental Delay ( d <sub>2</sub> ), s/veh	25.1	4.3	2.5	45.6	7.8	0.8	78.8	8.6	0.1	1.3	14.2	14.8
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	63.9	30.8	25.5	84.9	35.5	21.8	119.6	39.9	18.1	42.4	46.8	47.4
Level of Service ( LOS )	E	C	C	F	D	C	F	D	B	D	D	D
Approach Delay, s/veh / LOS	34.4		C	41.9		D	49.1		D	46.3		D
Intersection Delay, s/veh / LOS	42.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.60	B	1.61	B	1.48	A	1.27	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 5, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Cudahy	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2019	Analysis Period	1 > 16:00
Intersection	Intersection #13	File Name	13PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	114	841	140	170	743	136	147	564	123	198	694	77

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	7.7	2.8	30.5	7.4	1.1	22.5			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	3.5			
				Red	1.0	0.0	1.0	1.0	0.0	1.0			

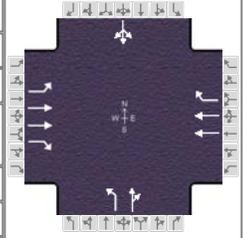
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	12.2	35.0	15.0	37.8	13.0	28.1	11.9	27.0
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( g <sub>s</sub> ), s	8.0		11.0		9.9	15.5	7.4	21.5
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	2.8	0.1	1.0
Phase Call Probability	0.95		0.99		0.98	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.28	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	124	914	152	185	808	148	160	613	134	215	426	412
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1833
Queue Service Time ( g <sub>s</sub> ), s	6.0	20.1	6.2	9.0	16.3	5.7	7.9	13.5	5.1	5.4	19.5	19.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	6.0	20.1	6.2	9.0	16.3	5.7	7.9	13.5	5.1	5.4	19.5	19.5
Green Ratio ( g/C )	0.09	0.34	0.34	0.12	0.37	0.37	0.09	0.26	0.38	0.08	0.25	0.25
Capacity ( c ), veh/h	155	1226	546	211	1337	595	171	949	610	289	476	459
Volume-to-Capacity Ratio ( X )	0.798	0.746	0.279	0.877	0.604	0.248	0.935	0.646	0.219	0.744	0.897	0.897
Back of Queue ( Q ), ft/ln ( 95 th percentile)	137.6	345.1	109.9	240	282.2	100	242.8	243.4	81.9	113.2	408.5	399.3
Back of Queue ( Q ), veh/ln ( 95 th percentile)	5.5	13.8	4.4	9.6	11.3	4.0	9.7	9.7	3.3	4.5	16.3	16.0
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	40.4	26.3	21.7	39.1	23.0	19.7	40.5	29.5	18.9	40.4	32.6	32.6
Incremental Delay ( d <sub>2</sub> ), s/veh	10.0	4.2	1.3	30.5	2.0	1.0	49.5	1.0	0.1	6.1	17.7	18.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	50.4	30.5	23.0	69.6	25.1	20.7	90.0	30.5	19.0	46.4	50.3	50.9
Level of Service ( LOS )	D	C	C	E	C	C	F	C	B	D	D	D
Approach Delay, s/veh / LOS	31.6	C		31.7	C		39.3	D		49.7	D	
Intersection Delay, s/veh / LOS	37.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.47	A	1.43	A	1.24	A	1.36	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Future - AM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #6	File Name	06AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB					
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand ( v ), veh/h	56	1072	210				1042	122		369	170	4	64	116	45

Signal Information																				
Cycle, s	90.0	Reference Phase	2																	
Offset, s	0	Reference Point	End																	
Uncoordinated	No	Simult. Gap E/W	On	Green	41.9	14.1	20.5	0.0	0.0	0.0	1			2		3			4	
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5			6		7			8	
				Red	1.0	1.0	1.0	0.0	0.0	0.0										

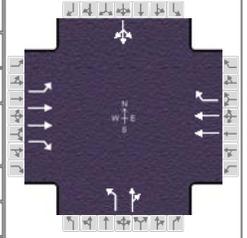
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		46.4		46.4		25.0		18.6
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						21.8		13.9
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.3
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.05

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	61	1165	228		1133	133	401	189			245	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	505	1809	1610		1809	1610	1810	1892			1809	
Queue Service Time ( g <sub>s</sub> ), s	9.6	22.9	8.0		21.9	4.3	19.8	7.7			11.9	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	31.6	22.9	8.0		21.9	4.3	19.8	7.7			11.9	
Green Ratio ( g/C )	0.47	0.47	0.47		0.47	0.47	0.23	0.23			0.16	
Capacity ( c ), veh/h	192	1683	749		1683	749	412	431			284	
Volume-to-Capacity Ratio ( X )	0.317	0.692	0.305		0.673	0.177	0.973	0.439			0.860	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	61.2	359.9	132.8		347.1	71.6	466.8	158.6			246.7	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.4	14.4	5.3		13.9	2.9	18.7	6.3			9.9	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	31.0	19.0	15.0		18.7	14.0	34.5	29.8			37.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	4.3	2.4	1.1		2.2	0.5	37.0	0.3			8.7	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	
Control Delay ( d ), s/veh	35.3	21.4	16.1		20.9	14.5	71.5	30.1			45.6	
Level of Service ( LOS )	D	C	B		C	B	E	C			D	
Approach Delay, s/veh / LOS	21.1	C		20.2	C		58.2	E		45.6	D	
Intersection Delay, s/veh / LOS	28.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.67	B	2.31	B	2.44	B
Bicycle LOS Score / LOS	1.69	B	1.53	B	1.46	A	0.89	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Future - PM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2021	Analysis Period	1 > 16:45
Intersection	Intersection #6	File Name	06PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB					
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand ( v ), veh/h	33	1091	345				871	32		225	88	3	52	218	28

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	44.7	17.6	14.3	0.0	0.0	0.0	1		2		3		4	
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	1.0	0.0	0.0	0.0								

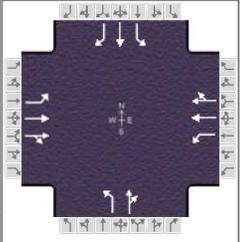
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		49.2		49.2		18.8		22.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						13.8		17.3
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.4		0.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.08		1.00

Movement Group Results	EB			WB			NB			SB			
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( v ), veh/h	36	1186	375		947	35	245	99			324		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	602	1809	1610		1809	1610	1810	1889			1853		
Queue Service Time ( g <sub>s</sub> ), s	3.9	22.1	13.8		16.1	1.0	11.8	4.2			15.3		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	20.0	22.1	13.8		16.1	1.0	11.8	4.2			15.3		
Green Ratio ( g/C )	0.50	0.50	0.50		0.50	0.50	0.16	0.16			0.20		
Capacity ( c ), veh/h	271	1795	799		1795	799	287	299			362		
Volume-to-Capacity Ratio ( X )	0.132	0.661	0.469		0.527	0.044	0.853	0.330			0.895		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	27.4	343.1	219.2		262.6	16.2	245.3	87.2			336.3		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.1	13.7	8.8		10.5	0.6	9.8	3.5			13.5		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	22.3	17.0	14.9		15.5	11.7	36.8	33.6			35.3		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.0	1.9	2.0		1.1	0.1	8.2	0.2			17.7		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0		
Control Delay ( d ), s/veh	23.3	18.9	16.9		16.6	11.8	45.0	33.9			53.0		
Level of Service ( LOS )	C	B	B		B	B	D	C			D		
Approach Delay, s/veh / LOS	18.5	B		16.4	B		41.8	D			53.0	D	
Intersection Delay, s/veh / LOS	23.8						C						

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.67	B	2.31	B	2.45	B
Bicycle LOS Score / LOS	1.80	B	1.30	A	1.05	A	1.02	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell	Time Period	Future - AM	PHF	0.92
Urban Street	Otis / Florence	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #7	File Name	07AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	54	1113	101	72	1114	47	139	241	160	80	230	48

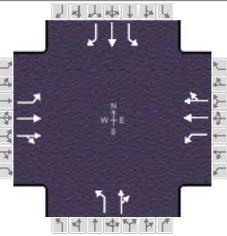
Signal Information				Signal Timing (s)								Signal Phases				
Cycle, s	90.0	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	4.6	0.5	41.5	29.8	0.0	0.0						
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0	3.5	3.5	0.0	0.0						
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.0	1.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		5.0
Phase Duration, s	9.1	46.0	9.7	46.5		34.3		34.3
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time ( g <sub>s</sub> ), s	4.9		5.8			21.6		29.5
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0		1.9		0.4
Phase Call Probability	0.77		0.86			1.00		1.00
Max Out Probability	1.00		1.00			0.20		1.00

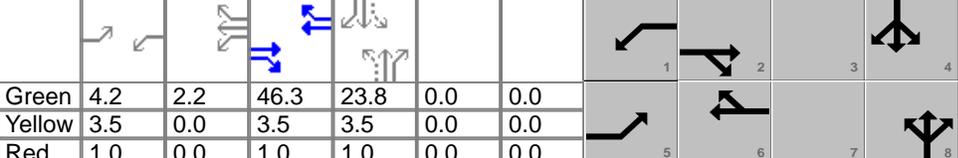
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	59	668	651	78	635	627	151	436		87	250	52
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1844	1810	1900	1873	1148	1773		968	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	2.9	26.3	26.5	3.8	24.1	24.1	10.5	19.6		7.9	9.1	2.0
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.9	26.3	26.5	3.8	24.1	24.1	19.6	19.6		27.5	9.1	2.0
Green Ratio ( g/C )	0.05	0.46	0.46	0.06	0.47	0.47	0.33	0.33		0.33	0.33	0.33
Capacity ( c ), veh/h	93	876	851	104	888	875	344	588		190	630	534
Volume-to-Capacity Ratio ( X )	0.632	0.763	0.765	0.756	0.715	0.716	0.439	0.742		0.458	0.397	0.098
Back of Queue ( Q ), ft/ln ( 95 th percentile)	59.3	448	440.7	85.6	409.4	406.1	131.2	341.6		84.3	180.3	33.7
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.4	17.9	17.6	3.4	16.4	16.2	5.2	13.7		3.4	7.2	1.3
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	41.9	20.1	20.2	41.8	19.2	19.2	30.7	26.7		38.8	23.2	20.8
Incremental Delay ( d <sub>2</sub> ), s/veh	2.6	6.2	6.5	7.9	4.9	5.0	0.3	4.2		0.6	0.2	0.0
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay ( d ), s/veh	44.5	26.4	26.7	49.7	24.1	24.2	31.0	30.9		39.5	23.3	20.8
Level of Service ( LOS )	D	C	C	D	C	C	C	C		D	C	C
Approach Delay, s/veh / LOS	27.3		C	25.6		C	30.9		C	26.6		C
Intersection Delay, s/veh / LOS	27.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	2.09	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	1.62	B	1.59	B	1.46	A	1.13	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Bell	Time Period	Future - PM	PHF	0.92	
Urban Street	Otis / Florence	Analysis Year	2021	Analysis Period	1 > 17:00	
Intersection	Intersection #7	File Name	07PM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( $v$ ), veh/h	44	1026	98	92	850	55	87	185	111	65	285	57

Signal Information																								
Cycle, s	90.0	Reference Phase	2	Green	4.2	2.2	46.3	23.8	0.0	0.0	Yellow	3.5	0.0	3.5	3.5	0.0	0.0	Red	1.0	0.0	1.0	1.0	0.0	0.0
Offset, s	0	Reference Point	End	Uncoordinated	No	Simult. Gap E/W	On	Force Mode	Fixed	Simult. Gap N/S	On													

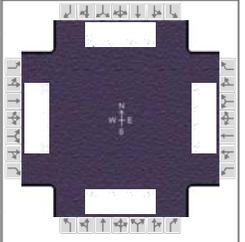
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		5.0
Phase Duration, s	8.7	50.8	10.9	53.0		28.3		28.3
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time ( $g_s$ ), s	4.3		6.9			22.3		22.2
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.1	0.0		1.5		1.5
Phase Call Probability	0.70		0.92			1.00		1.00
Max Out Probability	0.00		0.02			0.18		0.18

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	48	620	602	100	497	486	95	322		71	310	62
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1900	1841	1810	1900	1859	1087	1780		1075	1900	1610
Queue Service Time ( $g_s$ ), s	2.3	21.2	21.2	4.9	14.7	14.7	7.5	14.6		5.7	12.9	2.6
Cycle Queue Clearance Time ( $g_c$ ), s	2.3	21.2	21.2	4.9	14.7	14.7	20.3	14.6		20.2	12.9	2.6
Green Ratio ( $g/C$ )	0.05	0.51	0.51	0.07	0.54	0.54	0.26	0.26		0.26	0.26	0.26
Capacity ( $c$ ), veh/h	84	977	947	128	1023	1001	213	471		191	503	426
Volume-to-Capacity Ratio ( $X$ )	0.568	0.634	0.636	0.779	0.486	0.486	0.444	0.682		0.369	0.616	0.145
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	48.2	353.3	346.3	102	255.3	251.2	91.3	261		67.5	243.6	45.1
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	1.9	14.1	13.9	4.1	10.2	10.0	3.7	10.4		2.7	9.7	1.8
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	42.0	15.8	15.8	41.1	13.0	13.0	38.0	29.7		38.7	29.1	25.3
Incremental Delay ( $d_2$ ), s/veh	2.2	3.1	3.3	3.8	1.7	1.7	0.5	1.2		0.4	0.5	0.1
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	44.3	18.9	19.0	44.9	14.6	14.7	38.5	30.8		39.2	29.5	25.4
Level of Service ( LOS )	D	B	B	D	B	B	D	C		D	C	C
Approach Delay, s/veh / LOS	19.9		B	17.4		B	32.6		C	30.5		C
Intersection Delay, s/veh / LOS	22.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	2.08	B	2.29	B	2.29	B
Bicycle LOS Score / LOS	1.53	B	1.38	A	1.17	A	1.22	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell/City of Cudahy	Time Period	Future - AM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersection #13	File Name	13AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	184	834	225	195	951	104	170	813	133	148	643	89

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
	Green	10.8	30.5	6.0	2.5	22.2	0.0						
	Yellow	3.5	3.5	3.5	0.0	3.5	0.0						
	Red	1.0	1.0	1.0	0.0	1.0	0.0						

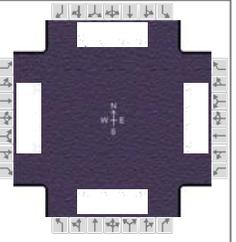
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	15.3	35.0	15.3	35.0	13.0	29.2	10.5	26.7
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( $g_s$ ), s	11.8		12.5		10.5	23.1	6.0	20.5
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	1.6	0.1	1.6
Phase Call Probability	0.99		1.00		0.99	1.00	0.98	1.00
Max Out Probability	1.00		1.00		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( $v$ ), veh/h	200	907	245	212	1034	113	185	884	145	161	406	389
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1819
Queue Service Time ( $g_s$ ), s	9.8	19.9	10.7	10.5	23.8	4.5	8.5	21.1	5.4	4.0	18.4	18.5
Cycle Queue Clearance Time ( $g_c$ ), s	9.8	19.9	10.7	10.5	23.8	4.5	8.5	21.1	5.4	4.0	18.4	18.5
Green Ratio ( $g/C$ )	0.12	0.34	0.34	0.12	0.34	0.34	0.09	0.27	0.39	0.07	0.25	0.25
Capacity ( $c$ ), veh/h	218	1226	546	218	1226	546	171	992	635	234	468	448
Volume-to-Capacity Ratio ( $X$ )	0.918	0.739	0.448	0.973	0.843	0.207	1.081	0.891	0.228	0.687	0.868	0.869
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	269.6	341.8	191.4	307.5	409.1	79.2	327.2	380.8	86.2	78.7	377	366.6
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	10.8	13.7	7.7	12.3	16.4	3.2	13.1	15.2	3.4	3.1	15.1	14.7
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	39.1	26.2	23.2	39.4	27.5	21.2	40.8	31.4	18.1	41.1	32.5	32.5
Incremental Delay ( $d_2$ ), s/veh	38.6	4.0	2.7	53.0	7.2	0.9	92.2	9.0	0.1	1.3	13.7	14.4
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	77.7	30.3	25.8	92.4	34.7	22.0	132.9	40.4	18.2	42.4	46.2	46.9
Level of Service ( LOS )	E	C	C	F	C	C	F	D	B	D	D	D
Approach Delay, s/veh / LOS	36.5		D	42.7		D	51.8		D	45.8		D
Intersection Delay, s/veh / LOS	43.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.60	B	1.61	B	1.49	A	1.28	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell/City of Cudahy	Time Period	Future - PM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2021	Analysis Period	1 > 16:00
Intersection	Intersection #13	File Name	13PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	132	860	147	175	757	146	152	590	127	208	718	92

Signal Information				Signal Timing (s)																				
Cycle, s	90.0	Reference Phase	2	Green	8.8	1.1	30.5	7.7	0.8	23.2	Yellow	3.5	0.0	3.5	3.5	0.0	3.5	Red	1.0	0.0	1.0	1.0	0.0	1.0
Offset, s	0	Reference Point	End																					
Uncoordinated	No	Simult. Gap E/W	On																					
Force Mode	Fixed	Simult. Gap N/S	On																					

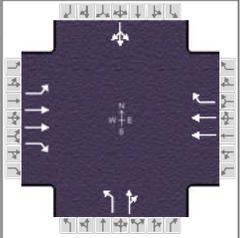
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	13.3	35.0	14.3	36.1	13.0	28.5	12.2	27.7
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( $g_s$ ), s	9.0		11.4		10.2	16.2	7.7	22.7
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.5
Phase Call Probability	0.97		0.99		0.98	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.36	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	143	935	160	190	823	159	165	641	138	226	449	431
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1824
Queue Service Time ( $g_s$ ), s	7.0	20.7	6.6	9.4	17.2	6.4	8.2	14.2	5.3	5.7	20.7	20.7
Cycle Queue Clearance Time ( $g_c$ ), s	7.0	20.7	6.6	9.4	17.2	6.4	8.2	14.2	5.3	5.7	20.7	20.7
Green Ratio ( $g/C$ )	0.10	0.34	0.34	0.11	0.35	0.35	0.09	0.27	0.38	0.09	0.26	0.26
Capacity ( $c$ ), veh/h	176	1226	546	198	1269	565	171	964	605	300	489	469
Volume-to-Capacity Ratio ( $X$ )	0.814	0.762	0.293	0.961	0.648	0.281	0.967	0.665	0.228	0.754	0.919	0.919
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	176.5	355.1	116.1	281.9	298.1	112.5	261.3	254.5	85.3	120.8	442.9	431
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	7.1	14.2	4.6	11.3	11.9	4.5	10.5	10.2	3.4	4.8	17.7	17.2
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	39.8	26.5	21.8	39.9	24.5	21.0	40.6	29.4	19.2	40.2	32.5	32.5
Incremental Delay ( $d_2$ ), s/veh	18.2	4.5	1.4	52.3	2.6	1.2	58.5	1.4	0.1	7.1	21.6	22.3
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	58.0	31.0	23.2	92.2	27.1	22.3	99.1	30.8	19.3	47.4	54.1	54.8
Level of Service (LOS)	E	C	C	F	C	C	F	C	B	D	D	D
Approach Delay, s/veh / LOS	33.2	C		37.0	D		41.1	D		53.0	D	
Intersection Delay, s/veh / LOS	40.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.51	B	1.45	A	1.27	A	1.40	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Future with Project - AM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #6	File Name	06AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	56	1123	210		1042	122	415	185	4	64	133	45

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Float	Simult. Gap N/S	On									
		Green	41.0	15.0	20.5	0.0	0.0	0.0				
		Yellow	3.5	3.5	3.5	0.0	0.0	0.0				
		Red	1.0	1.0	1.0	0.0	0.0	0.0				

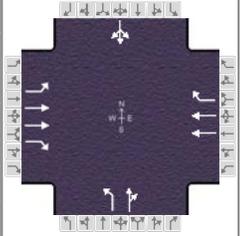
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		45.5		45.5		25.0		19.5
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						22.5		14.7
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.3
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.12

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	61	1221	228		1133	133	451	205			263	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	505	1809	1610		1809	1610	1810	1893			1815	
Queue Service Time ( g <sub>s</sub> ), s	9.8	24.9	8.1		22.3	4.4	20.5	8.5			12.7	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	32.1	24.9	8.1		22.3	4.4	20.5	8.5			12.7	
Green Ratio ( g/C )	0.46	0.46	0.46		0.46	0.46	0.23	0.23			0.17	
Capacity ( c ), veh/h	185	1648	734		1648	734	412	431			302	
Volume-to-Capacity Ratio ( X )	0.329	0.741	0.311		0.687	0.181	1.094	0.476			0.870	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	62.9	390.9	135.7		354.1	73.1	629	173.9			267.9	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.5	15.6	5.4		14.2	2.9	25.2	7.0			10.7	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	32.1	20.1	15.5		19.4	14.5	34.8	30.1			36.6	
Incremental Delay ( d <sub>2</sub> ), s/veh	4.7	3.0	1.1		2.4	0.5	72.3	0.3			11.1	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	
Control Delay ( d ), s/veh	36.9	23.2	16.6		21.8	15.1	107.0	30.4			47.6	
Level of Service ( LOS )	D	C	B		C	B	F	C			D	
Approach Delay, s/veh / LOS	22.7	C		21.1	C		83.0	F		47.6	D	
Intersection Delay, s/veh / LOS	34.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.68	B	2.31	B	2.44	B
Bicycle LOS Score / LOS	1.73	B	1.53	B	1.57	B	0.92	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Future with Project - PM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2021	Analysis Period	1 > 16:45
Intersection	Intersection #6	File Name	06PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB					
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand ( v ), veh/h	33	1104	345				871	32		236	92	3	52	222	28

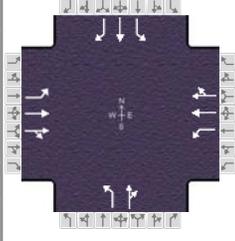
Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	43.9	17.8	14.8	0.0	0.0	0.0	1		2		3		4	
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	1.0	0.0	0.0	0.0								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		48.4		48.4		19.3		22.3
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						14.4		17.5
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.4		0.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.13		1.00

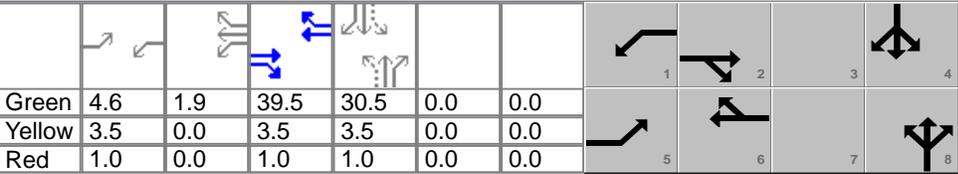
Movement Group Results	EB			WB			NB			SB			
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( v ), veh/h	36	1200	375		947	35	257	103			328		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	602	1809	1610		1809	1610	1810	1889			1853		
Queue Service Time ( g <sub>s</sub> ), s	4.0	22.9	14.0		16.3	1.0	12.4	4.3			15.5		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	20.3	22.9	14.0		16.3	1.0	12.4	4.3			15.5		
Green Ratio ( g/C )	0.49	0.49	0.49		0.49	0.49	0.16	0.16			0.20		
Capacity ( c ), veh/h	264	1764	785		1764	785	298	312			366		
Volume-to-Capacity Ratio ( X )	0.136	0.680	0.478		0.537	0.044	0.860	0.331			0.897		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	28	355.7	223.6		267.7	16.6	258.9	90.3			341.2		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.1	14.2	8.9		10.7	0.7	10.4	3.6			13.6		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	23.1	17.7	15.4		16.0	12.1	36.6	33.2			35.2		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.1	2.1	2.1		1.2	0.1	9.8	0.2			18.2		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0		
Control Delay ( d ), s/veh	24.1	19.8	17.5		17.2	12.2	46.3	33.4			53.4		
Level of Service ( LOS )	C	B	B		B	B	D	C			D		
Approach Delay, s/veh / LOS	19.4	B		17.0	B		42.6	D			53.4	D	
Intersection Delay, s/veh / LOS	24.6						C						

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.67	B	2.31	B	2.45	B
Bicycle LOS Score / LOS	1.82	B	1.30	A	1.08	A	1.03	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Bell	Time Period	Future with Project - AM	PHF	0.92	
Urban Street	Otis / Florence	Analysis Year	2021	Analysis Period	1 > 7:00	
Intersection	Intersection #7	File Name	07AM - Future with Project.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	54	1113	152	113	1114	47	139	256	197	80	247	48

Signal Information														
Cycle, s	90.0	Reference Phase	2	Green	4.6	1.9	39.5	30.5	0.0	0.0				
Offset, s	0	Reference Point	End	Yellow	3.5	0.0	3.5	3.5	0.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	0.0	1.0	1.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

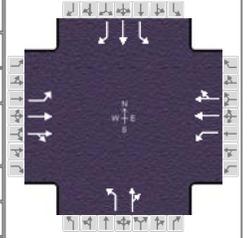
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		5.0
Phase Duration, s	9.1	44.0	11.0	45.9		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time ( g <sub>s</sub> ), s	4.9		8.1			25.1		32.5
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0		1.6		0.0
Phase Call Probability	0.77		0.95			1.00		1.00
Max Out Probability	1.00		1.00			0.58		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	59	700	675	123	635	627	151	492		87	268	52
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1820	1810	1900	1873	1128	1762		919	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	2.9	29.4	29.8	6.1	24.4	24.5	10.7	23.1		7.4	9.8	2.0
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.9	29.4	29.8	6.1	24.4	24.5	20.5	23.1		30.5	9.8	2.0
Green Ratio ( g/C )	0.05	0.44	0.44	0.07	0.46	0.46	0.34	0.34		0.34	0.34	0.34
Capacity ( c ), veh/h	93	834	799	131	874	861	340	597		156	644	546
Volume-to-Capacity Ratio ( X )	0.632	0.839	0.845	0.940	0.727	0.728	0.445	0.825		0.558	0.417	0.096
Back of Queue ( Q ), ft/ln ( 95 th percentile)	59.3	515.8	506.8	210.1	417.5	413.6	131.6	408.3		91.7	192.3	33.3
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.4	20.6	20.3	8.4	16.7	16.5	5.3	16.3		3.7	7.7	1.3
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	41.9	22.4	22.5	41.6	19.7	19.7	30.8	27.3		41.8	22.9	20.3
Incremental Delay ( d <sub>2</sub> ), s/veh	2.6	9.9	10.7	59.6	5.3	5.4	0.3	8.6		2.7	0.2	0.0
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay ( d ), s/veh	44.5	32.3	33.2	101.2	25.0	25.1	31.1	35.9		44.5	23.1	20.4
Level of Service ( LOS )	D	C	C	F	C	C	C	D		D	C	C
Approach Delay, s/veh / LOS	33.2	C		31.8	C		34.8	C		27.3	C	
Intersection Delay, s/veh / LOS	32.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	2.09	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	1.67	B	1.63	B	1.55	B	1.16	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Otis / Florence	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersection #7	File Name	07PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	44	1026	111	102	850	55	87	189	120	65	289	57

Signal Information				Signal Timing (s)						Signal Phases				
Cycle, s	90.0	Reference Phase	2	Green	4.2	2.8	45.0	24.4	0.0	0.0	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	3.5	0.0	3.5	3.5	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	0.0	1.0	1.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

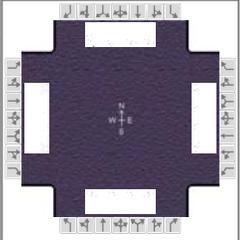
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		5.0
Phase Duration, s	8.7	49.5	11.5	52.4		28.9		28.9
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0		3.4		3.4
Queue Clearance Time ( g <sub>s</sub> ), s	4.3		7.4			22.4		23.0
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.1	0.0		1.5		1.5
Phase Call Probability	0.70		0.94			1.00		1.00
Max Out Probability	0.00		0.07			0.20		0.24

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	48	628	608	111	497	486	95	336		71	314	62
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1834	1810	1900	1859	1082	1776		1061	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	2.3	22.2	22.3	5.4	14.9	14.9	7.5	15.3		5.8	13.0	2.6
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.3	22.2	22.3	5.4	14.9	14.9	20.4	15.3		21.0	13.0	2.6
Green Ratio ( g/C )	0.05	0.50	0.50	0.08	0.53	0.53	0.27	0.27		0.27	0.27	0.27
Capacity ( c ), veh/h	84	951	918	141	1011	989	219	482		189	516	437
Volume-to-Capacity Ratio ( X )	0.568	0.660	0.662	0.786	0.492	0.492	0.432	0.697		0.374	0.609	0.142
Back of Queue ( Q ), ft/ln ( 95 th percentile)	48.2	371.5	363.3	112.3	259.3	255.2	90.5	272		67.7	244.7	44.7
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.9	14.9	14.5	4.5	10.4	10.2	3.6	10.9		2.7	9.8	1.8
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	42.0	16.8	16.8	40.8	13.3	13.3	37.5	29.5		38.8	28.6	24.8
Incremental Delay ( d <sub>2</sub> ), s/veh	2.2	3.6	3.7	3.6	1.7	1.7	0.5	1.6		0.5	0.4	0.1
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay ( d ), s/veh	44.3	20.4	20.5	44.4	15.1	15.1	38.0	31.0		39.3	29.0	24.9
Level of Service ( LOS )	D	C	C	D	B	B	D	C		D	C	C
Approach Delay, s/veh / LOS	21.3	C		18.0	B		32.6	C		30.1	C	
Intersection Delay, s/veh / LOS	22.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	2.08	B	2.28	B	2.28	B
Bicycle LOS Score / LOS	1.55	B	1.39	A	1.20	A	1.22	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Cudahy	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersection #13	File Name	13AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	184	871	225	195	992	104	170	847	133	148	681	89

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	10.3	30.5	6.0	2.5	22.7	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	3.5	0.0		
				Red	1.0	1.0	1.0	0.0	1.0	0.0		

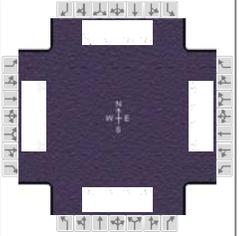
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	14.8	35.0	14.8	35.0	13.0	29.7	10.5	27.2
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( g <sub>s</sub> ), s	11.9		12.3		10.5	24.1	6.0	21.5
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	1.1	0.1	1.2
Phase Call Probability	0.99		1.00		0.99	1.00	0.98	1.00
Max Out Probability	1.00		1.00		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	200	947	245	212	1078	113	185	921	145	161	427	410
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1823
Queue Service Time ( g <sub>s</sub> ), s	9.9	21.1	10.7	10.3	25.3	4.5	8.5	22.1	5.4	4.0	19.5	19.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	9.9	21.1	10.7	10.3	25.3	4.5	8.5	22.1	5.4	4.0	19.5	19.5
Green Ratio ( g/C )	0.11	0.34	0.34	0.11	0.34	0.34	0.09	0.28	0.39	0.07	0.25	0.25
Capacity ( c ), veh/h	206	1226	546	206	1226	546	171	1014	635	234	480	460
Volume-to-Capacity Ratio ( X )	0.969	0.772	0.448	1.027	0.880	0.207	1.081	0.908	0.228	0.687	0.890	0.890
Back of Queue ( Q ), ft/ln ( 95 th percentile)	294.5	361.4	191.4	333.8	438.3	79.2	327.2	401.7	86.2	78.7	405.3	394.3
Back of Queue ( Q ), veh/ln ( 95 th percentile)	11.8	14.5	7.7	13.4	17.5	3.2	13.1	16.1	3.4	3.1	16.2	15.8
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	39.7	26.6	23.2	39.9	28.0	21.2	40.8	31.3	18.1	41.1	32.4	32.4
Incremental Delay ( d <sub>2</sub> ), s/veh	53.3	4.8	2.7	69.8	9.2	0.9	92.2	10.8	0.1	1.3	16.8	17.5
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	93.0	31.4	25.8	109.7	37.2	22.0	132.9	42.1	18.2	42.4	49.2	49.9
Level of Service ( LOS )	F	C	C	F	D	C	F	D	B	D	D	D
Approach Delay, s/veh / LOS	39.3	D		46.9	D		52.7	D		48.4	D	
Intersection Delay, s/veh / LOS	46.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.64	B	1.65	B	1.52	B	1.31	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Cudahy	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Atlantic / Florence	Analysis Year	2021	Analysis Period	1 > 16:00
Intersection	Intersection #13	File Name	13PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	132	869	147	175	767	146	152	598	127	208	727	92

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	8.8	1.0	30.5	7.7	0.8	23.3				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	0.0	3.5	3.5	0.0	3.5				
				Red	1.0	0.0	1.0	1.0	0.0	1.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	4.0
Phase Duration, s	13.3	35.0	14.2	36.0	13.0	28.6	12.2	27.8
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time ( g <sub>s</sub> ), s	9.0		11.4		10.2	16.4	7.7	23.0
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.3
Phase Call Probability	0.97		0.99		0.98	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.39	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	143	945	160	190	834	159	165	650	138	226	454	436
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1809	1610	1757	1900	1825
Queue Service Time ( g <sub>s</sub> ), s	7.0	21.0	6.6	9.4	17.5	6.4	8.2	14.4	5.3	5.7	21.0	21.0
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	7.0	21.0	6.6	9.4	17.5	6.4	8.2	14.4	5.3	5.7	21.0	21.0
Green Ratio ( g/C )	0.10	0.34	0.34	0.11	0.35	0.35	0.09	0.27	0.38	0.09	0.26	0.26
Capacity ( c ), veh/h	176	1226	546	195	1265	563	171	969	605	300	491	472
Volume-to-Capacity Ratio ( X )	0.814	0.770	0.293	0.973	0.659	0.282	0.967	0.671	0.228	0.754	0.924	0.924
Back of Queue ( Q ), ft/ln ( 95 th percentile)	177.6	360.6	116.3	287.6	302.9	112.7	261.3	257.9	85.3	120.8	451.1	439
Back of Queue ( Q ), veh/ln ( 95 th percentile)	7.1	14.4	4.7	11.5	12.1	4.5	10.5	10.3	3.4	4.8	18.0	17.6
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	39.8	26.6	21.8	40.0	24.7	21.1	40.6	29.4	19.2	40.2	32.5	32.5
Incremental Delay ( d <sub>2</sub> ), s/veh	18.7	4.7	1.4	56.1	2.7	1.3	58.5	1.4	0.1	7.1	22.6	23.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	58.5	31.3	23.2	96.1	27.4	22.4	99.1	30.9	19.3	47.4	55.1	55.8
Level of Service ( LOS )	E	C	C	F	C	C	F	C	B	D	E	E
Approach Delay, s/veh / LOS	33.4	C		37.8	D		41.0	D		53.8	D	
Intersection Delay, s/veh / LOS	41.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.52	B	1.46	A	1.27	A	1.41	A

## APPENDIX D

### HCM AND LEVELS OF SERVICE EXPLANATION HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS CITY OF HUNTINGTON PARK

## LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of incidents, and when there are no other vehicles on the road. Only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for traffic signals are stated in terms of the average control delay per vehicle. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the  $v/c$  ratio for the lane group in question.

Level of Service Criteria for Signalized Intersections	
Level of Service	Control Delay (Sec/Veh)
A	$\leq 10$
B	$> 10$ and $\leq 20$
C	$> 20$ and $\leq 35$
D	$> 35$ and $\leq 55$
E	$> 55$ and $\leq 80$
F	$> 80$

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

**LOS A** describes operations with very low control delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay values.

**LOS B** describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

**LOS C** describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

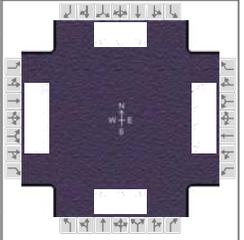
**LOS D** describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high  $v/c$  ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

**LOS E** describes operations with control delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high  $v/c$  ratios. Individual cycle failures are frequent occurrences.

**LOS F** describes operations with control delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the lane groups. It may also occur at high  $v/c$  ratios with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of Huntington Park	Time Period	Existing - AM	PHF	0.92
Urban Street	Salt Lake - California / F...	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersection #1	File Name	01AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	29	956	82	160	1076	155	169	460	281	103	226	73

Signal Information				Signal Phases											
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	3.3	1.7	30.2	7.0	1.5	23.8	Yellow	3.5	3.5	3.5	3.5
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	1.0	0.0	1.0	Red	1.0	1.0	1.0	1.0
Force Mode	Float	Simult. Gap N/S	On												

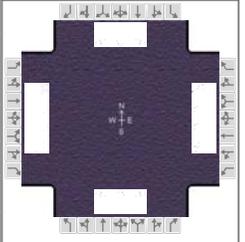
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	7.8	34.7	14.0	40.9	13.0	29.8	11.5	28.3
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.2	3.3	3.2
Queue Clearance Time ( $g_s$ ), s	3.5		10.6		10.5	25.1	7.5	11.8
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	0.2	0.0	2.2
Phase Call Probability	0.55		0.99		0.99	1.00	0.94	1.00
Max Out Probability	0.00		1.00		1.00	1.00	1.00	0.05

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( $v$ ), veh/h	32	762	366	174	912	426	184	500	305	112	246	79
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1900	1820	1810	1900	1774	1810	1900	1610	1810	1900	1610
Queue Service Time ( $g_s$ ), s	1.5	15.0	15.0	8.6	16.9	16.9	8.5	23.1	15.2	5.5	9.8	3.4
Cycle Queue Clearance Time ( $g_c$ ), s	1.5	15.0	15.0	8.6	16.9	16.9	8.5	23.1	15.2	5.5	9.8	3.4
Green Ratio ( $g/C$ )	0.04	0.34	0.34	0.42	0.40	0.40	0.09	0.28	0.28	0.08	0.26	0.26
Capacity ( $c$ ), veh/h	66	1275	611	191	1538	718	171	534	452	141	503	426
Volume-to-Capacity Ratio ( $X$ )	0.479	0.598	0.599	0.911	0.593	0.593	1.075	0.937	0.675	0.792	0.489	0.186
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	31.9	277.4	280.9	244.7	297.1	293.5	323.4	491.7	250.5	136.3	198.6	59.3
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	1.3	11.1	11.2	9.8	11.9	11.7	12.9	19.7	10.0	5.5	7.9	2.4
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	42.5	24.9	24.9	39.8	21.0	21.0	40.8	31.6	28.7	40.8	28.0	25.6
Incremental Delay ( $d_2$ ), s/veh	2.0	2.1	4.3	40.1	1.7	3.6	90.2	23.7	3.2	15.2	0.3	0.1
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	44.5	26.9	29.2	80.0	22.7	24.6	130.9	55.3	31.9	56.0	28.2	25.7
Level of Service (LOS)	D	C	C	E	C	C	F	E	C	E	C	C
Approach Delay, s/veh / LOS	28.1		C	29.8		C	62.1		E	34.9		C
Intersection Delay, s/veh / LOS	37.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.27	B	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.13	A	1.32	A	2.12	B	1.21	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other		
Jurisdiction	City of Huntington Park	Time Period	Existing - PM	PHF	0.92		
Urban Street	Salt Lake - California / F...	Analysis Year	2019	Analysis Period	1 > 17:00		
Intersection	Intersection #1	File Name	01PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	38	1069	156	177	821	87	133	254	220	123	406	73

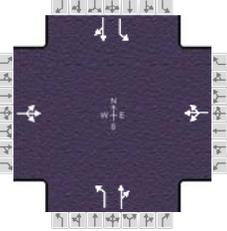
Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	3.9	1.1	30.8	8.2	0.3	23.2			
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	3.5	0.0	3.5			
				Red	1.0	1.0	1.0	1.0	0.0	1.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	8.4	35.3	14.0	40.9	13.0	28.0	12.7	27.7
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.2	3.3	3.2
Queue Clearance Time ( $g_s$ ), s	4.0		11.5		9.1	13.6	8.5	22.2
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.0
Phase Call Probability	0.64		0.99		0.97	1.00	0.96	1.00
Max Out Probability	0.02		1.00		1.00	0.06	1.00	0.97

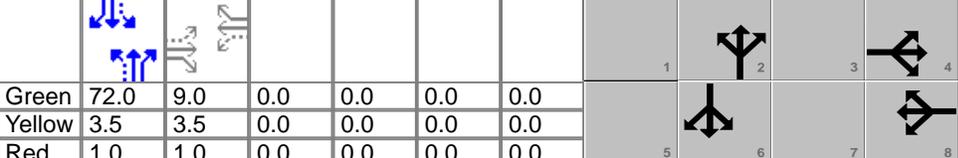
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	41	908	424	192	668	319	145	276	239	134	441	79
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1900	1772	1810	1900	1804	1810	1900	1610	1810	1900	1610
Queue Service Time ( $g_s$ ), s	2.0	18.6	18.6	9.5	11.4	11.5	7.1	11.3	11.6	6.5	20.2	3.5
Cycle Queue Clearance Time ( $g_c$ ), s	2.0	18.6	18.6	9.5	11.4	11.5	7.1	11.3	11.6	6.5	20.2	3.5
Green Ratio ( $g/C$ )	0.04	0.34	0.34	0.11	0.40	0.40	0.09	0.26	0.26	0.09	0.26	0.26
Capacity ( $c$ ), veh/h	78	1301	607	191	1539	730	171	495	420	165	490	415
Volume-to-Capacity Ratio ( $X$ )	0.532	0.698	0.698	1.007	0.434	0.436	0.846	0.557	0.570	0.809	0.901	0.191
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	41.6	332.3	332.6	305.9	215.3	214.8	197.8	217.9	195.8	175.6	422.7	60
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	1.7	13.3	13.3	12.2	8.6	8.6	7.9	8.7	7.8	7.0	16.9	2.4
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	42.2	25.6	25.6	40.3	19.3	19.4	40.1	28.8	28.9	40.1	32.3	26.1
Incremental Delay ( $d_2$ ), s/veh	2.1	3.1	6.5	67.0	0.9	1.9	29.2	0.5	0.7	22.0	16.4	0.1
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	44.3	28.7	32.1	107.3	20.2	21.2	69.3	29.2	29.6	62.1	48.7	26.2
Level of Service (LOS)	D	C	C	F	C	C	E	C	C	E	D	C
Approach Delay, s/veh / LOS	30.2		C	34.7		C	38.1		D	48.7		D
Intersection Delay, s/veh / LOS	36.1						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.27	B	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.24	A	1.14	A	1.58	B	1.57	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other	
Jurisdiction	City of Huntington Park	Time Period	Existing - AM	PHF	0.92	
Urban Street	California / Hope	Analysis Year	2019	Analysis Period	1 > 7:00	
Intersection	Interesction #2	File Name	02AM - Existing.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	48	40	26	19	30	37	27	646	9	17	414	32

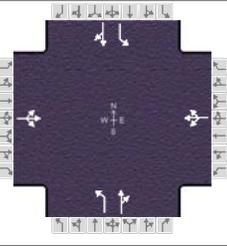
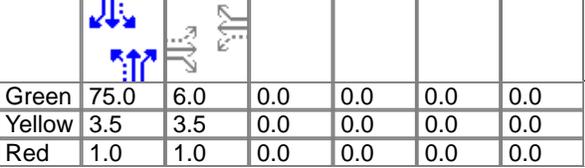
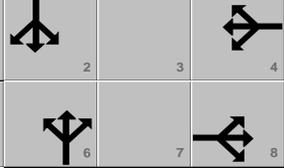
Signal Information														
Cycle, s	90.0	Reference Phase	2	Green	72.0	9.0	0.0	0.0	0.0	0.0	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		13.5		13.5		76.5		76.5
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		8.6		6.6				
Green Extension Time ( g <sub>e</sub> ), s		0.4		0.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	124			93			29	712		18	485	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1622			1719			925	1895		750	1876	
Queue Service Time ( g <sub>s</sub> ), s	2.1			0.0			0.8	10.8		0.7	6.3	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	6.6			4.6			7.1	10.8		11.6	6.3	
Green Ratio ( g/C )	0.10			0.10			0.80	0.80		0.80	0.80	
Capacity ( c ), veh/h	219			221			756	1516		589	1501	
Volume-to-Capacity Ratio ( X )	0.566			0.423			0.039	0.470		0.031	0.323	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	121.8			89.4			5.9	117.7		4.9	67.1	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	4.9			3.6			0.2	4.7		0.2	2.7	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00		0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	39.3			38.5			3.4	2.9		4.7	2.4	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.9			0.5			0.1	1.0		0.1	0.6	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0		0.0	0.0	
Control Delay ( d ), s/veh	40.2			39.0			3.5	3.9		4.8	3.0	
Level of Service ( LOS )	D			D			A	A		A	A	
Approach Delay, s/veh / LOS	40.2		D	39.0		D	3.9		A	3.1		A
Intersection Delay, s/veh / LOS	8.9						A					

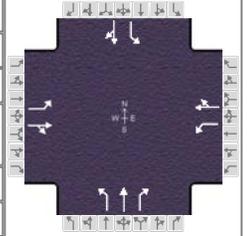
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.94	B	1.60	B	1.60	B
Bicycle LOS Score / LOS	0.69	A	0.64	A	1.71	B	1.32	A

## HCS7 Signalized Intersection Results Summary

General Information						Intersection Information											
Agency	LLG Engineers					Duration, h	0.25										
Analyst	AS	Analysis Date	Dec 2, 2019			Area Type	Other										
Jurisdiction	City of Huntington Park		Time Period	Existing - PM		PHF	0.92										
Urban Street	California / Hope		Analysis Year	2019		Analysis Period	1 > 17:00										
Intersection	Interesction #2		File Name	02PM - Existing.xus													
Project Description	7801-7835 Otis Avenue Charter School																
Demand Information						EB			WB			NB			SB		
Approach Movement						L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h						20	19	25	4	23	15	21	468	5	17	606	16
Signal Information																	
Cycle, s	90.0	Reference Phase	2			Green	75.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End			Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On			Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On														
Timer Results						EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase							8		4		6		2				
Case Number							8.0		8.0		6.0		6.0				
Phase Duration, s							10.5		10.5		79.5		79.5				
Change Period, ( Y+R <sub>c</sub> ), s							4.5		4.5		4.5		4.5				
Max Allow Headway ( MAH ), s							3.3		3.3		0.0		0.0				
Queue Clearance Time ( g <sub>s</sub> ), s							5.6		4.2								
Green Extension Time ( g <sub>e</sub> ), s							0.2		0.2		0.0		0.0				
Phase Call Probability							1.00		1.00								
Max Out Probability							0.00		0.00								
Movement Group Results						EB			WB			NB			SB		
Approach Movement						L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement						3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h						70			46			23 514			18 676		
Adjusted Saturation Flow Rate ( s ), veh/h/ln						1655			1768			775 1896			900 1891		
Queue Service Time ( g <sub>s</sub> ), s						1.4			0.0			0.7 5.6			0.4 8.3		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s						3.6			2.2			9.1 5.6			6.0 8.3		
Green Ratio ( g/C )						0.07			0.07			0.83 0.83			0.83 0.83		
Capacity ( c ), veh/h						163			162			654 1580			774 1576		
Volume-to-Capacity Ratio ( X )						0.427			0.282			0.035 0.325			0.024 0.429		
Back of Queue ( Q ), ft/ln ( 95 th percentile)						68.7			44.3			4.4 44.9			2.7 67.6		
Back of Queue ( Q ), veh/ln ( 95 th percentile)						2.7			1.8			0.2 1.8			0.1 2.7		
Queue Storage Ratio ( RQ ) ( 95 th percentile)						0.00			0.00			0.00 0.00			0.00 0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh						40.8			40.2			3.1 1.7			2.4 1.9		
Incremental Delay ( d <sub>2</sub> ), s/veh						0.7			0.4			0.1 0.5			0.1 0.9		
Initial Queue Delay ( d <sub>3</sub> ), s/veh						0.0			0.0			0.0 0.0			0.0 0.0		
Control Delay ( d ), s/veh						41.5			40.6			3.2 2.3			2.5 2.8		
Level of Service ( LOS )						D			D			A A			A A		
Approach Delay, s/veh / LOS						41.5	D	40.6	D	2.3	A	2.8	A				
Intersection Delay, s/veh / LOS						5.9						A					
Multimodal Results						EB			WB			NB			SB		
Pedestrian LOS Score / LOS						1.94	B	1.94	B	1.58	B	1.58	B				
Bicycle LOS Score / LOS						0.60	A	0.56	A	1.37	A	1.63	B				

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing - AM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersecion #3	File Name	03AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	45	371	59	55	347	60	117	514	70	68	403	50

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	55.5	25.5	0.0	0.0	0.0	0.0				
		Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

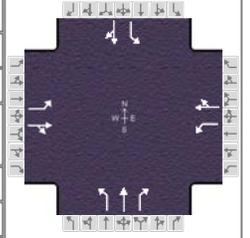
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		26.8		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	49	467		60	442		127	559	76	74	492	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	962	1854		940	1851		919	1900	1610	864	1863	
Queue Service Time ( g <sub>s</sub> ), s	4.5	21.7		3.8	20.3		7.5	14.4	1.7	4.6	12.4	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	24.8	21.7		25.5	20.3		19.9	14.4	1.7	18.9	12.4	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	136	525		119	524		520	1172	993	475	1149	
Volume-to-Capacity Ratio ( X )	0.360	0.890		0.501	0.844		0.245	0.477	0.077	0.156	0.429	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	48.9	435.8		61.3	391.6		73.1	236.2	25.1	42.2	206.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.0	17.4		2.5	15.7		2.9	9.4	1.0	1.7	8.2	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	42.0	30.9		43.8	30.4		14.2	9.4	6.9	14.5	9.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.6	16.5		1.2	11.4		1.1	1.4	0.2	0.7	1.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	42.6	47.4		45.0	41.7		15.3	10.8	7.1	15.2	10.2	
Level of Service ( LOS )	D	D		D	D		B	B	A	B	B	
Approach Delay, s/veh / LOS	47.0		D	42.1		D	11.1		B	10.8		B
Intersection Delay, s/veh / LOS	25.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.34	A	1.32	A	1.74	B	1.42	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing - PM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersecion #3	File Name	03PM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	66	416	103	47	325	58	114	424	74	78	502	60

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	55.5	25.5	0.0	0.0	0.0	0.0				
		Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

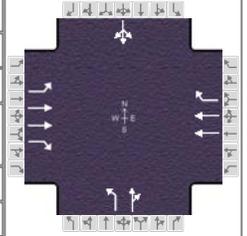
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	72	564		51	416		124	461	80	85	611	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	985	1834		860	1850		823	1900	1610	946	1864	
Queue Service Time ( g <sub>s</sub> ), s	6.5	25.5		0.0	18.7		9.1	11.0	1.8	4.5	16.8	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.3	25.5		25.5	18.7		25.9	11.0	1.8	15.5	16.8	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	154	520		80	524		434	1172	993	547	1150	
Volume-to-Capacity Ratio ( X )	0.466	1.085		0.639	0.794		0.286	0.393	0.081	0.155	0.531	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	72.1	724.9		63.1	353.8		82.2	191.3	26.7	44.1	266	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.9	29.0		2.5	14.2		3.3	7.7	1.1	1.8	10.6	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	41.5	32.2		45.0	29.8		17.2	8.7	7.0	12.7	9.8	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.8	64.6		12.4	7.6		1.6	1.0	0.2	0.6	1.8	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	42.3	96.8		57.4	37.4		18.9	9.7	7.1	13.3	11.6	
Level of Service ( LOS )	D	F		E	D		B	A	A	B	B	
Approach Delay, s/veh / LOS	90.7	F		39.6	D		11.1	B		11.8	B	
Intersection Delay, s/veh / LOS	37.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.54	B	1.26	A	1.59	B	1.64	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Existing - AM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #6	File Name	06AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB				
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R		
Demand ( v ), veh/h	55	1033	206				999	117	362	167	4	61	114	44

Signal Information																						
Cycle, s	90.0	Reference Phase	2																			
Offset, s	0	Reference Point	End																			
Uncoordinated	No	Simult. Gap E/W	On	Green	42.2	13.8	20.5	0.0	0.0	0.0	1			2			3			4		
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5			6			7			8		
				Red	1.0	1.0	1.0	0.0	0.0	0.0												

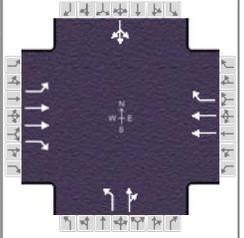
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		46.7		46.7		25.0		18.3
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						21.3		13.5
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.3
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.04

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	60	1123	224		1086	127	393	186			238	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	528	1809	1610		1809	1610	1810	1892			1809	
Queue Service Time ( g <sub>s</sub> ), s	8.7	21.5	7.7		20.5	4.1	19.3	7.6			11.5	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	29.2	21.5	7.7		20.5	4.1	19.3	7.6			11.5	
Green Ratio ( g/C )	0.47	0.47	0.47		0.47	0.47	0.23	0.23			0.15	
Capacity ( c ), veh/h	207	1695	755		1695	755	412	431			278	
Volume-to-Capacity Ratio ( X )	0.289	0.662	0.297		0.640	0.169	0.955	0.431			0.857	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	57.2	341	128.7		327	67.8	444.6	155.6			239.1	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.3	13.6	5.1		13.1	2.7	17.8	6.2			9.6	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	29.3	18.4	14.8		18.2	13.8	34.3	29.8			37.1	
Incremental Delay ( d <sub>2</sub> ), s/veh	3.5	2.1	1.0		1.9	0.5	32.5	0.3			7.7	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	
Control Delay ( d ), s/veh	32.7	20.5	15.8		20.0	14.3	66.8	30.0			44.8	
Level of Service ( LOS )	C	C	B		C	B	E	C			D	
Approach Delay, s/veh / LOS	20.2	C		19.4	B		55.0	D		44.8	D	
Intersection Delay, s/veh / LOS	27.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.67	B	2.31	B	2.44	B
Bicycle LOS Score / LOS	1.65	B	1.49	A	1.44	A	0.88	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Existing - PM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2019	Analysis Period	1 > 16:45
Intersection	Intersection #6	File Name	06PM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB					
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand ( v ), veh/h	32	1039	338				824	28		221	86	3	47	214	27

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	45.4	17.1	14.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	1.0	0.0	0.0	0.0								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		49.9		49.9		18.5		21.6
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						13.6		16.8
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.4		0.3
Phase Call Probability						1.00		1.00
Max Out Probability						0.07		0.69

Movement Group Results	EB			WB			NB			SB			
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( v ), veh/h	35	1129	367		896	30	240	97			313		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	631	1809	1610		1809	1610	1810	1889			1854		
Queue Service Time ( g <sub>s</sub> ), s	3.5	20.3	13.2		14.7	0.9	11.6	4.1			14.8		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	18.1	20.3	13.2		14.7	0.9	11.6	4.1			14.8		
Green Ratio ( g/C )	0.50	0.50	0.50		0.50	0.50	0.16	0.16			0.19		
Capacity ( c ), veh/h	295	1824	812		1824	812	282	295			352		
Volume-to-Capacity Ratio ( X )	0.118	0.619	0.453		0.491	0.037	0.850	0.328			0.890		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	25.2	317.3	211.2		242.9	13.8	240.4	85.4			323.2		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.0	12.7	8.4		9.7	0.6	9.6	3.4			12.9		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	20.7	16.1	14.3		14.7	11.3	37.0	33.8			35.6		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.8	1.6	1.8		0.9	0.1	7.6	0.2			16.4		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0		
Control Delay ( d ), s/veh	21.5	17.7	16.2		15.6	11.4	44.5	34.0			51.9		
Level of Service ( LOS )	C	B	B		B	B	D	C			D		
Approach Delay, s/veh / LOS	17.4	B		15.5	B		41.5	D			51.9	D	
Intersection Delay, s/veh / LOS	22.9						C						

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	1.67	B	2.31	B	2.45	B
Bicycle LOS Score / LOS	1.75	B	1.25	A	1.04	A	1.00	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Nov 22, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing - AM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #10	File Name	10AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	63	400	55	59	271	8	48	280	150	21	262	59

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	56.7	24.3	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

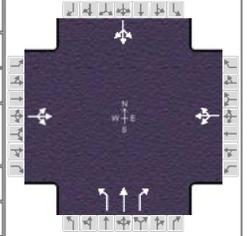
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		61.2		61.2		28.8		28.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						23.2		20.2
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.4		1.7
Phase Call Probability						1.00		1.00
Max Out Probability						0.24		0.08

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	563			367			52	304	163	372		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1751			1644			1048	1900	1610	1731		
Queue Service Time ( g <sub>s</sub> ), s	0.3			0.0			4.3	12.6	7.4	6.1		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	14.3			8.0			21.2	12.6	7.4	18.2		
Green Ratio ( g/C )	0.63			0.63			0.27	0.27	0.27	0.27		
Capacity ( c ), veh/h	1152			1087			164	508	431	506		
Volume-to-Capacity Ratio ( X )	0.489			0.338			0.318	0.599	0.378	0.735		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	235.6			145.1			50.5	238.9	127	308.4		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	9.4			5.8			2.0	9.6	5.1	12.3		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	8.7			7.5			40.1	28.7	26.9	30.6		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.5			0.8			0.4	0.4	0.2	2.4		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	10.2			8.4			40.5	29.2	27.1	32.9		
Level of Service ( LOS )	B			A			D	C	C	C		
Approach Delay, s/veh / LOS	10.2	B		8.4	A		29.6	C		32.9	C	
Intersection Delay, s/veh / LOS	20.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.23	B	1.65	B	1.70	B	1.70	B
Bicycle LOS Score / LOS	1.42	A	1.09	A	1.34	A	1.10	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Nov 22, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing - PM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2019	Analysis Period	1 > 16:00
Intersection	Intersection #10	File Name	10PM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	56	390	71	93	345	10	61	264	112	10	358	89

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	50.5	30.5	0.0	0.0	0.0	0.0				
		Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

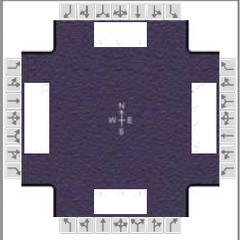
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		55.0		55.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						30.5		24.2
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		1.5
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.38

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	562			487			66	287	122	497		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1744			1579			924	1900	1610	1825		
Queue Service Time ( g <sub>s</sub> ), s	1.0			0.0			6.3	10.6	4.9	3.3		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	17.5			16.5			28.5	10.6	4.9	22.2		
Green Ratio ( g/C )	0.56			0.56			0.34	0.34	0.34	0.34		
Capacity ( c ), veh/h	1023			935			166	643	545	659		
Volume-to-Capacity Ratio ( X )	0.549			0.521			0.400	0.446	0.223	0.754		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	287.1			255.5			64.9	204.6	81.5	387.7		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	11.5			10.2			2.6	8.2	3.3	15.5		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	12.4			11.9			39.9	23.2	21.3	27.0		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.1			2.1			0.6	0.2	0.1	4.4		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	14.6			14.0			40.5	23.4	21.4	31.4		
Level of Service ( LOS )	B			B			D	C	C	C		
Approach Delay, s/veh / LOS	14.6	B		14.0	B		25.2	C		31.4	C	
Intersection Delay, s/veh / LOS	21.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.66	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.41	A	1.29	A	1.27	A	1.31	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Salt Lake - California / F...	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersection #1	File Name	01AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	29	983	82	175	1100	161	169	460	298	110	226	73

Signal Information				Signal Timing (s)																				
Cycle, s	90.0	Reference Phase	2	Green	3.3	1.7	29.8	7.5	1.0	24.2	Yellow	3.5	3.5	3.5	3.5	0.0	3.5	Red	1.0	1.0	1.0	1.0	0.0	1.0
Offset, s	0	Reference Point	End																					
Uncoordinated	No	Simult. Gap E/W	On																					
Force Mode	Float	Simult. Gap N/S	On																					

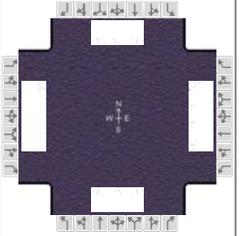
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	7.8	34.3	14.0	40.5	13.0	29.8	12.0	28.7
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.2	3.3	3.2
Queue Clearance Time ( g <sub>s</sub> ), s	3.5		11.5		10.5	25.1	7.8	11.8
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	0.2	0.0	2.3
Phase Call Probability	0.55		0.99		0.99	1.00	0.95	1.00
Max Out Probability	0.00		1.00		1.00	1.00	1.00	0.05

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	32	782	376	190	935	436	184	500	324	120	246	79
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1822	1810	1900	1772	1810	1900	1610	1810	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	1.5	15.6	15.6	9.5	17.6	17.6	8.5	23.1	16.3	5.8	9.8	3.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	1.5	15.6	15.6	9.5	17.6	17.6	8.5	23.1	16.3	5.8	9.8	3.4
Green Ratio ( g/C )	0.04	0.33	0.33	0.11	0.40	0.40	0.09	0.28	0.28	0.08	0.27	0.27
Capacity ( c ), veh/h	66	1257	603	191	1520	709	171	534	452	150	512	434
Volume-to-Capacity Ratio ( X )	0.479	0.622	0.623	0.996	0.615	0.615	1.075	0.937	0.716	0.797	0.480	0.183
Back of Queue ( Q ), ft/ln ( 95 th percentile)	31.9	287.3	291.7	299	308.5	305	323.4	491.6	270	149.9	197.3	58.9
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.3	11.5	11.7	12.0	12.3	12.2	12.9	19.7	10.8	6.0	7.9	2.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	42.5	25.4	25.4	40.2	21.5	21.5	40.8	31.6	29.1	40.5	27.6	25.3
Incremental Delay ( d <sub>2</sub> ), s/veh	2.0	2.3	4.8	63.8	1.9	4.0	90.2	23.7	4.5	17.7	0.3	0.1
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	44.5	27.7	30.2	104.0	23.4	25.5	130.9	55.3	33.7	58.2	27.9	25.3
Level of Service ( LOS )	D	C	C	F	C	C	F	E	C	E	C	C
Approach Delay, s/veh / LOS	28.9	C		33.8	C		62.1	E		35.6	D	
Intersection Delay, s/veh / LOS	39.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.27	B	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.14	A	1.35	A	2.15	B	1.22	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Salt Lake - California / F...	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersection #1	File Name	01PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	38	1076	156	181	827	88	133	254	224	125	406	73

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	3.9	1.1	30.8	8.3	0.2	23.2			
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	3.5	0.0	3.5			
				Red	1.0	1.0	1.0	1.0	0.0	1.0			

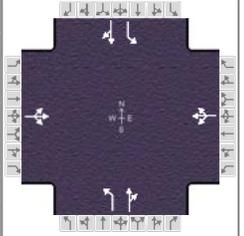
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	8.4	35.3	14.0	40.9	13.0	27.9	12.8	27.7
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.2	3.3	3.2
Queue Clearance Time ( g <sub>s</sub> ), s	4.0		11.5		9.1	13.9	8.6	22.2
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	1.9	0.0	1.0
Phase Call Probability	0.64		0.99		0.97	1.00	0.97	1.00
Max Out Probability	0.02		1.00		1.00	0.07	1.00	0.97

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	41	913	426	197	673	321	145	276	243	136	441	79
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1773	1810	1900	1803	1810	1900	1610	1810	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	2.0	18.7	18.7	9.5	11.5	11.6	7.1	11.3	11.9	6.6	20.2	3.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.0	18.7	18.7	9.5	11.5	11.6	7.1	11.3	11.9	6.6	20.2	3.5
Green Ratio ( g/C )	0.04	0.34	0.34	0.11	0.40	0.40	0.09	0.26	0.26	0.09	0.26	0.26
Capacity ( c ), veh/h	78	1301	607	191	1539	730	171	493	418	168	490	415
Volume-to-Capacity Ratio ( X )	0.532	0.702	0.702	1.030	0.438	0.440	0.846	0.560	0.583	0.810	0.901	0.191
Back of Queue ( Q ), ft/ln ( 95 th percentile)	41.6	334.5	335	319.4	217	216.2	197.8	218.2	199.9	179.6	422.6	60
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.7	13.4	13.4	12.8	8.7	8.6	7.9	8.7	8.0	7.2	16.9	2.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	42.2	25.6	25.6	40.3	19.4	19.4	40.1	28.9	29.1	40.1	32.3	26.1
Incremental Delay ( d <sub>2</sub> ), s/veh	2.1	3.2	6.7	73.2	0.9	1.9	29.2	0.5	0.9	22.6	16.4	0.1
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	44.3	28.8	32.3	113.4	20.3	21.3	69.3	29.4	29.9	62.6	48.7	26.2
Level of Service ( LOS )	D	C	C	F	C	C	E	C	C	E	D	C
Approach Delay, s/veh / LOS	30.3	C		35.9	D		38.3	D		48.8	D	
Intersection Delay, s/veh / LOS	36.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.27	B	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.25	A	1.14	A	1.58	B	1.57	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	California / Hope	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersecion #2	File Name	02AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	65	40	26	19	30	37	27	646	9	17	414	47

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	70.7	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

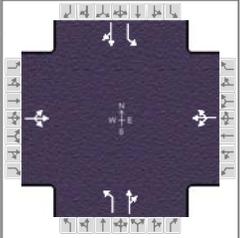
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		14.8		14.8		75.2		75.2
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		9.8		6.5				
Green Extension Time ( g <sub>e</sub> ), s		0.4		0.4		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	142			93			29	712		18	501	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1578			1723			911	1895		750	1866	
Queue Service Time ( g <sub>s</sub> ), s	3.4			0.0			0.9	11.6		0.8	7.1	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	7.8			4.5			8.0	11.6		12.4	7.1	
Green Ratio ( g/C )	0.11			0.11			0.79	0.79		0.79	0.79	
Capacity ( c ), veh/h	240			245			725	1490		573	1467	
Volume-to-Capacity Ratio ( X )	0.594			0.381			0.040	0.478		0.032	0.342	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	139.7			87.7			6.7	135.3		5.4	80.6	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	5.6			3.5			0.3	5.4		0.2	3.2	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00		0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	38.7			37.3			4.0	3.3		5.4	2.8	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.9			0.4			0.1	1.1		0.1	0.6	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0		0.0	0.0	
Control Delay ( d ), s/veh	39.6			37.7			4.1	4.4		5.5	3.5	
Level of Service ( LOS )	D			D			A	A		A	A	
Approach Delay, s/veh / LOS	39.6	D		37.7	D		4.4	A		3.5	A	
Intersection Delay, s/veh / LOS	9.5						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.94	B	1.60	B	1.60	B
Bicycle LOS Score / LOS	0.72	A	0.64	A	1.71	B	1.34	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	California / Hope	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersecion #2	File Name	02PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	24	19	25	4	23	15	21	468	5	17	606	20

Signal Information				EB				WB				NB				SB			
Cycle, s	90.0	Reference Phase	2	Green	74.9	6.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On																

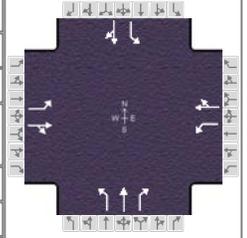
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		10.6		10.6		79.4		79.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		5.9		4.2				
Green Extension Time ( g <sub>e</sub> ), s		0.2		0.2		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	74			46			23	514		18	680	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1640			1772			772	1896		900	1889	
Queue Service Time ( g <sub>s</sub> ), s	1.7			0.0			0.7	5.6		0.4	8.5	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	3.9			2.2			9.2	5.6		6.1	8.5	
Green Ratio ( g/C )	0.07			0.07			0.83	0.83		0.83	0.83	
Capacity ( c ), veh/h	165			164			650	1579		773	1573	
Volume-to-Capacity Ratio ( X )	0.448			0.279			0.035	0.326		0.024	0.433	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	73.3			44.2			4.4	44.9		2.8	68.1	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.9			1.8			0.2	1.8		0.1	2.7	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00		0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	40.9			40.1			3.2	1.7		2.4	2.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.7			0.3			0.1	0.5		0.1	0.9	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0		0.0	0.0	
Control Delay ( d ), s/veh	41.6			40.5			3.3	2.3		2.5	2.8	
Level of Service ( LOS )	D			D			A	A		A	A	
Approach Delay, s/veh / LOS	41.6	D		40.5	D		2.3	A		2.8	A	
Intersection Delay, s/veh / LOS	6.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.94	B	1.58	B	1.58	B
Bicycle LOS Score / LOS	0.61	A	0.56	A	1.37	A	1.64	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersecion #3	File Name	03AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	45	392	59	64	365	60	117	514	80	68	403	50

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	55.5	25.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

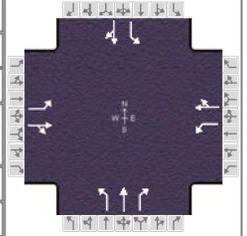
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	49	490		70	462		127	559	87	74	492	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	945	1856		921	1853		919	1900	1610	864	1863	
Queue Service Time ( g <sub>s</sub> ), s	4.1	23.1		2.4	21.4		7.5	14.4	2.0	4.6	12.4	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	23.1		25.5	21.4		19.9	14.4	2.0	18.9	12.4	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	123	526		104	525		520	1172	993	475	1149	
Volume-to-Capacity Ratio ( X )	0.398	0.932		0.668	0.880		0.245	0.477	0.088	0.156	0.429	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	49.8	485.5		85.4	425.4		73.1	236.2	28.9	42.2	206.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.0	19.4		3.4	17.0		2.9	9.4	1.2	1.7	8.2	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	43.2	31.4		44.6	30.8		14.2	9.4	7.0	14.5	9.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.8	23.3		12.5	15.3		1.1	1.4	0.2	0.7	1.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	44.0	54.7		57.1	46.1		15.3	10.8	7.2	15.2	10.2	
Level of Service ( LOS )	D	D		E	D		B	B	A	B	B	
Approach Delay, s/veh / LOS	53.7	D		47.5	D		11.1	B		10.8	B	
Intersection Delay, s/veh / LOS	28.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.38	A	1.36	A	1.76	B	1.42	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersecion #3	File Name	03PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	66	421	103	49	329	58	114	424	77	78	502	60

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	55.5	25.5	0.0	0.0	0.0	0.0				
		Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

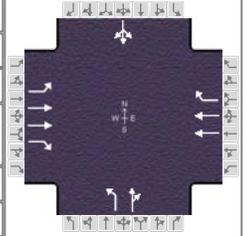
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	72	570		53	421		124	461	84	85	611	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	982	1835		856	1850		823	1900	1610	946	1864	
Queue Service Time ( g <sub>s</sub> ), s	6.5	25.5		0.0	19.0		9.1	11.0	1.9	4.5	16.8	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	25.5		25.5	19.0		25.9	11.0	1.9	15.5	16.8	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	151	520		80	524		434	1172	993	547	1150	
Volume-to-Capacity Ratio ( X )	0.475	1.095		0.666	0.802		0.286	0.393	0.084	0.155	0.531	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	72.3	744.6		68.6	359.6		82.2	190.9	27.7	44.1	264.8	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.9	29.8		2.7	14.4		3.3	7.6	1.1	1.8	10.6	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	41.8	32.3		45.0	29.9		17.2	8.7	7.0	12.7	9.8	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.9	68.0		15.6	8.1		1.6	1.0	0.2	0.6	1.8	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	42.6	100.3		60.6	38.0		18.9	9.7	7.1	13.3	11.6	
Level of Service ( LOS )	D	F		E	D		B	A	A	B	B	
Approach Delay, s/veh / LOS	93.8	F		40.6	D		11.1	B		11.8	B	
Intersection Delay, s/veh / LOS	38.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.55	B	1.27	A	1.59	B	1.64	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #6	File Name	06AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB				
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R		
Demand ( v ), veh/h	55	1084	206				999	117	408	182	4	61	131	44

Signal Information				Signal Phases										
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On											
Force Mode	Float	Simult. Gap N/S	On											
		Green	41.3	14.7	20.5	0.0	0.0	0.0						
		Yellow	3.5	3.5	3.5	0.0	0.0	0.0						
		Red	1.0	1.0	1.0	0.0	0.0	0.0						

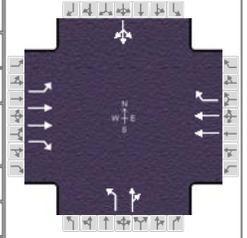
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		45.8		45.8		25.0		19.2
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						22.5		14.4
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.3
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.09

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	60	1178	224		1086	127	443	202			257	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	528	1809	1610		1809	1610	1810	1893			1816	
Queue Service Time ( g <sub>s</sub> ), s	8.9	23.5	7.9		20.9	4.2	20.5	8.3			12.4	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	29.8	23.5	7.9		20.9	4.2	20.5	8.3			12.4	
Green Ratio ( g/C )	0.46	0.46	0.46		0.46	0.46	0.23	0.23			0.16	
Capacity ( c ), veh/h	200	1661	739		1661	739	412	431			296	
Volume-to-Capacity Ratio ( X )	0.299	0.709	0.303		0.654	0.172	1.076	0.469			0.866	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	58.7	370.1	131.5		333.1	69.4	601.5	170.9			260.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.3	14.8	5.3		13.3	2.8	24.1	6.8			10.4	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	30.3	19.5	15.3		18.8	14.3	34.8	30.0			36.7	
Incremental Delay ( d <sub>2</sub> ), s/veh	3.8	2.6	1.1		2.0	0.5	66.1	0.3			10.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	
Control Delay ( d ), s/veh	34.1	22.1	16.3		20.8	14.8	100.9	30.3			46.9	
Level of Service ( LOS )	C	C	B		C	B	F	C			D	
Approach Delay, s/veh / LOS	21.7	C		20.2	C		78.8	E		46.9	D	
Intersection Delay, s/veh / LOS	33.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.68	B	2.31	B	2.44	B
Bicycle LOS Score / LOS	1.69	B	1.49	A	1.55	B	0.91	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2019	Analysis Period	1 > 16:45
Intersection	Intersection #6	File Name	06PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB					
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand ( v ), veh/h	32	1052	338				824	28		232	90	3	47	218	27

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	44.6	17.3	14.6	0.0	0.0	0.0	1		2		3		4	
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	1.0	0.0	0.0	0.0								

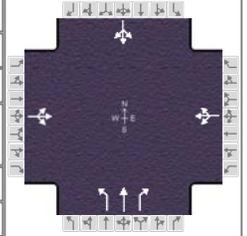
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		49.1		49.1		19.1		21.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						14.2		17.0
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.4		0.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.11		0.81

Movement Group Results	EB			WB			NB			SB			
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( v ), veh/h	35	1143	367		896	30	252	101			317		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	631	1809	1610		1809	1610	1810	1889			1854		
Queue Service Time ( g <sub>s</sub> ), s	3.5	21.0	13.4		14.9	0.9	12.2	4.3			15.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	18.5	21.0	13.4		14.9	0.9	12.2	4.3			15.0		
Green Ratio ( g/C )	0.50	0.50	0.50		0.50	0.50	0.16	0.16			0.19		
Capacity ( c ), veh/h	288	1793	798		1793	798	294	307			356		
Volume-to-Capacity Ratio ( X )	0.121	0.638	0.460		0.500	0.038	0.857	0.329			0.892		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	25.7	328.1	214.8		247	14.1	253.9	88.7			328.3		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.0	13.1	8.6		9.9	0.6	10.2	3.5			13.1		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	21.4	16.7	14.8		15.2	11.7	36.7	33.3			35.5		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.9	1.7	1.9		1.0	0.1	9.2	0.2			16.9		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0		
Control Delay ( d ), s/veh	22.3	18.5	16.7		16.2	11.8	45.9	33.6			52.3		
Level of Service ( LOS )	C	B	B		B	B	D	C			D		
Approach Delay, s/veh / LOS	18.2	B		16.1	B		42.3	D			52.3	D	
Intersection Delay, s/veh / LOS	23.7						C						

Multimodal Results	EB			WB			NB			SB			
Pedestrian LOS Score / LOS	1.90	B		1.67	B		2.31	B			2.45	B	
Bicycle LOS Score / LOS	1.76	B		1.25	A		1.07	A			1.01	A	

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #10	File Name	10AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	111	400	55	59	271	8	48	321	150	21	299	102

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	52.4	28.6	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

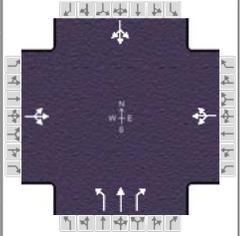
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		56.9		56.9		33.1		33.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						27.8		23.4
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.9		1.7
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.32

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	615			367			52	349	163	459		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1668			1625			968	1900	1610	1773		
Queue Service Time ( g <sub>s</sub> ), s	11.8			0.0			4.7	13.8	6.9	7.6		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	20.9			9.0			25.8	13.8	6.9	21.4		
Green Ratio ( g/C )	0.58			0.58			0.32	0.32	0.32	0.32		
Capacity ( c ), veh/h	1021			995			159	601	509	603		
Volume-to-Capacity Ratio ( X )	0.602			0.369			0.327	0.580	0.320	0.761		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	311.9			172			50.7	256.6	116.8	368		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	12.5			6.9			2.0	10.3	4.7	14.7		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	11.9			9.7			40.1	25.8	23.4	28.2		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.6			1.1			0.4	0.6	0.1	4.3		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	14.6			10.7			40.5	26.4	23.5	32.6		
Level of Service ( LOS )	B			B			D	C	C	C		
Approach Delay, s/veh / LOS	14.6	B		10.7	B		26.9	C		32.6	C	
Intersection Delay, s/veh / LOS	21.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.65	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.50	B	1.09	A	1.42	A	1.24	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2019	Analysis Period	1 > 16:00
Intersection	Intersection #10	File Name	10PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	68	390	71	93	345	10	61	274	112	10	367	99

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	50.5	30.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

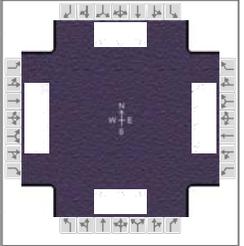
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		55.0		55.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						32.1		25.5
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		1.3
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.60

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	575			487			66	298	122	517		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1719			1570			907	1900	1610	1821		
Queue Service Time ( g <sub>s</sub> ), s	1.7			0.0			6.5	11.1	4.9	4.6		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	18.5			16.8			30.1	11.1	4.9	23.5		
Green Ratio ( g/C )	0.56			0.56			0.34	0.34	0.34	0.34		
Capacity ( c ), veh/h	1010			929			150	644	546	658		
Volume-to-Capacity Ratio ( X )	0.569			0.524			0.441	0.463	0.223	0.786		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	296.3			256.2			66.4	211.8	81.5	413.2		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	11.9			10.2			2.7	8.5	3.3	16.5		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	12.6			12.0			41.3	23.3	21.3	27.4		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.3			2.1			0.8	0.2	0.1	5.8		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	14.9			14.1			42.1	23.5	21.4	33.2		
Level of Service ( LOS )	B			B			D	C	C	C		
Approach Delay, s/veh / LOS	14.9	B		14.1	B		25.5	C		33.2	C	
Intersection Delay, s/veh / LOS	21.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.66	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.44	A	1.29	A	1.29	A	1.34	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park	Time Period	Future - AM	PHF	0.92
Urban Street	Salt Lake - California / F...	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersection #1	File Name	01AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	31	985	84	169	1111	161	172	470	292	107	233	74

Signal Information				Signal Phases											
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	3.4	1.6	29.7	7.3	1.2	24.3					
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	3.5	3.5	0.0	3.5					
Force Mode	Float	Simult. Gap N/S	On	Red	1.0	1.0	1.0	1.0	0.0	1.0					

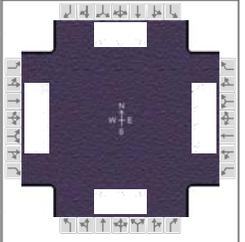
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	7.9	34.2	14.0	40.3	13.0	30.0	11.8	28.8
Change Period, ( $Y+R_c$ ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( $MAH$ ), s	3.1	0.0	3.1	0.0	3.1	3.2	3.3	3.2
Queue Clearance Time ( $g_s$ ), s	3.6		11.1		10.5	25.7	7.7	12.1
Green Extension Time ( $g_e$ ), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Phase Call Probability	0.57		0.99		0.99	1.00	0.95	1.00
Max Out Probability	0.01		1.00		1.00	1.00	1.00	0.06

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( $v$ ), veh/h	34	785	377	184	943	440	187	511	317	116	253	80
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1810	1900	1821	1810	1900	1773	1810	1900	1610	1810	1900	1610
Queue Service Time ( $g_s$ ), s	1.6	15.7	15.7	9.1	17.9	17.9	8.5	23.7	15.8	5.7	10.1	3.5
Cycle Queue Clearance Time ( $g_c$ ), s	1.6	15.7	15.7	9.1	17.9	17.9	8.5	23.7	15.8	5.7	10.1	3.5
Green Ratio ( $g/C$ )	0.04	0.33	0.33	0.11	0.40	0.40	0.09	0.28	0.28	0.08	0.27	0.27
Capacity ( $c$ ), veh/h	69	1255	601	191	1512	705	171	538	456	146	513	434
Volume-to-Capacity Ratio ( $X$ )	0.491	0.626	0.627	0.962	0.624	0.624	1.094	0.949	0.696	0.795	0.494	0.185
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	34.1	288.4	293.1	276.1	312.3	309.1	335	511.8	261.6	144.2	202.9	59.7
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	1.4	11.5	11.7	11.0	12.5	12.4	13.4	20.5	10.5	5.8	8.1	2.4
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( $d_1$ ), s/veh	42.4	25.4	25.5	40.1	21.7	21.7	40.8	31.6	28.8	40.6	27.7	25.3
Incremental Delay ( $d_2$ ), s/veh	2.0	2.4	4.9	53.6	1.9	4.1	96.2	26.3	3.9	16.7	0.3	0.1
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( $d$ ), s/veh	44.4	27.8	30.3	93.6	23.6	25.8	136.9	57.9	32.6	57.3	28.0	25.3
Level of Service (LOS)	D	C	C	F	C	C	F	E	C	E	C	C
Approach Delay, s/veh / LOS	29.1		C	32.5		C	64.6		E	35.1		D
Intersection Delay, s/veh / LOS	39.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.27	B	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.15	A	1.35	A	2.16	B	1.23	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park	Time Period	Future - PM	PHF	0.92
Urban Street	Salt Lake - California / F...	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersection #1	File Name	01PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	40	1111	159	186	858	92	136	262	230	127	418	75

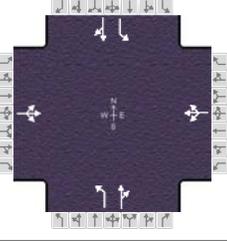
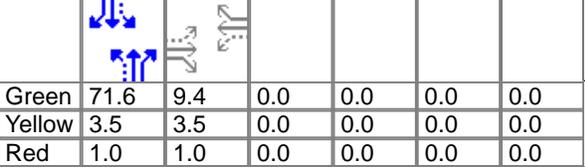
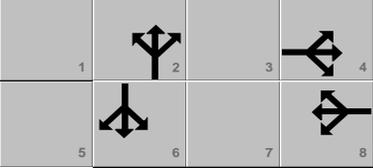
Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	4.0	1.0	30.3	8.5	23.7	0.0			
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	3.5	3.5	0.0			
				Red	1.0	1.0	1.0	1.0	1.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	8.5	34.8	14.0	40.3	13.0	28.2	13.0	28.2
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.2	3.3	3.2
Queue Clearance Time ( g <sub>s</sub> ), s	4.1		11.5		9.3	14.2	8.7	22.8
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.9
Phase Call Probability	0.66		0.99		0.98	1.00	0.97	1.00
Max Out Probability	0.02		1.00		1.00	0.08	1.00	1.00

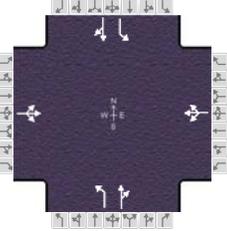
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	43	941	439	202	699	333	148	285	250	138	454	82
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1774	1810	1900	1803	1810	1900	1610	1810	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	2.1	19.6	19.7	9.5	12.2	12.3	7.3	11.7	12.2	6.7	20.8	3.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.1	19.6	19.7	9.5	12.2	12.3	7.3	11.7	12.2	6.7	20.8	3.5
Green Ratio ( g/C )	0.04	0.34	0.34	0.11	0.40	0.40	0.09	0.26	0.26	0.09	0.26	0.26
Capacity ( c ), veh/h	80	1279	597	191	1512	717	171	501	425	170	500	424
Volume-to-Capacity Ratio ( X )	0.544	0.736	0.736	1.058	0.462	0.464	0.865	0.568	0.589	0.812	0.908	0.192
Back of Queue ( Q ), ft/ln ( 95 th percentile)	43.8	351.3	353.7	337.2	227.7	227.2	206.5	224	204.5	183.7	437.9	61.2
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.8	14.1	14.1	13.5	9.1	9.1	8.3	9.0	8.2	7.3	17.5	2.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	42.1	26.3	26.3	40.3	20.0	20.0	40.2	28.7	28.9	40.0	32.1	25.7
Incremental Delay ( d <sub>2</sub> ), s/veh	2.1	3.8	7.9	81.4	1.0	2.2	32.9	0.6	1.0	23.2	17.7	0.1
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	44.3	30.1	34.2	121.7	21.0	22.2	73.1	29.3	29.9	63.2	49.8	25.8
Level of Service ( LOS )	D	C	C	F	C	C	E	C	C	E	D	C
Approach Delay, s/veh / LOS	31.8		C	37.8		D	39.0		D	49.7		D
Intersection Delay, s/veh / LOS	37.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.27	B	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.27	A	1.17	A	1.61	B	1.60	B

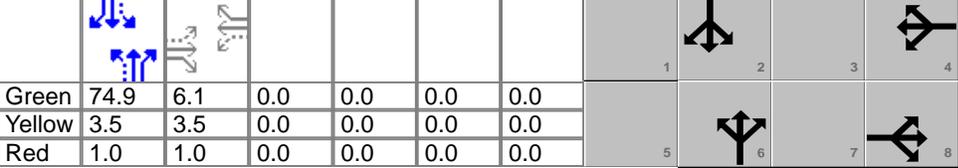
## HCS7 Signalized Intersection Results Summary

General Information						Intersection Information									
Agency	LLG Engineers					Duration, h	0.25								
Analyst	AS		Analysis Date	Dec 13, 2019		Area Type	Other								
Jurisdiction	City of Huntington Park		Time Period	Future - AM		PHF	0.92								
Urban Street	California / Hope		Analysis Year	2021		Analysis Period	1 > 7:00								
Intersection	Interesction #2		File Name	02AM - Future.xus											
Project Description	7801-7835 Otis Avenue Charter School														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h				52	41	27	19	31	38	28	662	9	17	426	36
Signal Information															
Cycle, s	90.0	Reference Phase	2	Green	71.6	9.4	0.0	0.0	0.0	0.0	0.0	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On												
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					4		8		2		6				
Case Number					8.0		8.0		6.0		6.0				
Phase Duration, s					13.9		13.9		76.1		76.1				
Change Period, ( Y+R <sub>c</sub> ), s					4.5		4.5		4.5		4.5				
Max Allow Headway ( MAH ), s					3.3		3.3		0.0		0.0				
Queue Clearance Time ( g <sub>s</sub> ), s					9.0		6.6								
Green Extension Time ( g <sub>e</sub> ), s					0.4		0.4		0.0		0.0				
Phase Call Probability					1.00		1.00								
Max Out Probability					0.00		0.00								
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h				130			96			30 729			18 502		
Adjusted Saturation Flow Rate ( s ), veh/h/ln				1613			1722			910 1895			738 1874		
Queue Service Time ( g <sub>s</sub> ), s				2.4			0.0			0.9 11.5			0.8 6.7		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s				7.0			4.6			7.6 11.5			12.3 6.7		
Green Ratio ( g/C )				0.10			0.10			0.80 0.80			0.80 0.80		
Capacity ( c ), veh/h				226			229			736 1508			572 1490		
Volume-to-Capacity Ratio ( X )				0.577			0.418			0.041 0.484			0.032 0.337		
Back of Queue ( Q ), ft/ln ( 95 th percentile)				128.2			91			6.4 128.6			5.2 73.6		
Back of Queue ( Q ), veh/ln ( 95 th percentile)				5.1			3.6			0.3 5.1			0.2 2.9		
Queue Storage Ratio ( RQ ) ( 95 th percentile)				0.00			0.00			0.00 0.00			0.00 0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh				39.1			38.2			3.6 3.1			5.1 2.6		
Incremental Delay ( d <sub>2</sub> ), s/veh				0.9			0.5			0.1 1.1			0.1 0.6		
Initial Queue Delay ( d <sub>3</sub> ), s/veh				0.0			0.0			0.0 0.0			0.0 0.0		
Control Delay ( d ), s/veh				40.0			38.6			3.7 4.2			5.2 3.2		
Level of Service ( LOS )				D			D			A A			A A		
Approach Delay, s/veh / LOS				40.0		D	38.6		D	4.2		A	3.3		A
Intersection Delay, s/veh / LOS				9.1						A					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				1.94 B			1.94 B			1.60 B			1.60 B		
Bicycle LOS Score / LOS				0.70 A			0.65 A			1.74 B			1.35 A		

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Huntington Park	Time Period	Future - PM	PHF	0.92	
Urban Street	California / Hope	Analysis Year	2021	Analysis Period	1 > 17:00	
Intersection	Interesction #2	File Name	02PM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	24	19	26	4	23	15	21	481	5	17	624	19

Signal Information												
Cycle, s	90.0	Reference Phase	2	Green	74.9	6.1	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On									

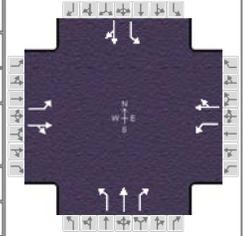
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		10.6		10.6		79.4		79.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		5.9		4.2				
Green Extension Time ( g <sub>e</sub> ), s		0.2		0.2		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	75			46			23	528		18	699	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1641			1772			759	1896		889	1890	
Queue Service Time ( g <sub>s</sub> ), s	1.8			0.0			0.7	5.8		0.4	8.9	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	3.9			2.2			9.7	5.8		6.3	8.9	
Green Ratio ( g/C )	0.07			0.07			0.83	0.83		0.83	0.83	
Capacity ( c ), veh/h	166			165			636	1577		761	1572	
Volume-to-Capacity Ratio ( X )	0.452			0.277			0.036	0.335		0.024	0.445	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	74.3			44.2			4.6	47.6		2.9	73	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.0			1.8			0.2	1.9		0.1	2.9	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00		0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	40.9			40.1			3.3	1.8		2.5	2.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.7			0.3			0.1	0.6		0.1	0.9	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0		0.0	0.0	
Control Delay ( d ), s/veh	41.6			40.4			3.4	2.3		2.6	2.9	
Level of Service ( LOS )	D			D			A	A		A	A	
Approach Delay, s/veh / LOS	41.6		D	40.4		D	2.4		A	2.9		A
Intersection Delay, s/veh / LOS	6.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.94	B	1.58	B	1.58	B
Bicycle LOS Score / LOS	0.61	A	0.56	A	1.40	A	1.67	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future - AM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersecion #3	File Name	03AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	47	380	60	59	360	61	119	526	73	69	414	51

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	55.5	25.5	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
				Red	1.0	1.0	0.0	0.0	0.0	0.0				

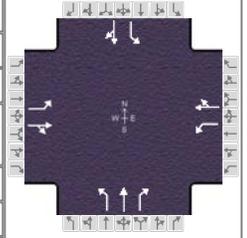
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	51	478		64	458		129	572	79	75	505	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	949	1854		931	1852		908	1900	1610	854	1863	
Queue Service Time ( g <sub>s</sub> ), s	4.3	22.4		3.1	21.2		7.9	14.9	1.8	4.8	12.8	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	22.4		25.5	21.2		20.7	14.9	1.8	19.6	12.8	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	126	525		112	525		510	1172	993	466	1149	
Volume-to-Capacity Ratio ( X )	0.407	0.910		0.573	0.872		0.253	0.488	0.080	0.161	0.440	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	52	458.6		70.1	417.7		75.8	242.5	26.3	43.5	212.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.1	18.3		2.8	16.7		3.0	9.7	1.1	1.7	8.5	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	43.1	31.1		44.2	30.7		14.5	9.5	7.0	14.8	9.1	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.8	19.5		4.5	14.3		1.2	1.5	0.2	0.7	1.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	43.9	50.7		48.8	45.0		15.7	10.9	7.1	15.6	10.3	
Level of Service ( LOS )	D	D		D	D		B	B	A	B	B	
Approach Delay, s/veh / LOS	50.0	D		45.5	D		11.3	B		11.0	B	
Intersection Delay, s/veh / LOS	27.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.36	A	1.35	A	1.78	B	1.45	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of Huntington Park / City of South Gate		Time Period	Future - PM	PHF	0.92
Urban Street	California / Santa Ana		Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersecion #3		File Name	03PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School					



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	68	432	105	53	338	59	116	436	81	80	517	62

Signal Information				Signal Timing (s)														
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	55.5	25.5	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

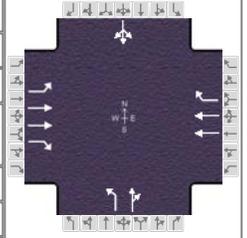
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	74	584		58	432		126	474	88	87	629	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	972	1835		844	1850		809	1900	1610	935	1864	
Queue Service Time ( g <sub>s</sub> ), s	5.9	25.5		0.0	19.6		9.6	11.5	2.0	4.7	17.6	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	25.5		25.5	19.6		27.2	11.5	2.0	16.2	17.6	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	144	520		80	524		421	1172	993	537	1150	
Volume-to-Capacity Ratio ( X )	0.515	1.122		0.720	0.823		0.300	0.404	0.089	0.162	0.547	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	76	798.8		80.9	374.9		85.8	196.7	29.3	46	274.8	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.0	32.0		3.2	15.0		3.4	7.9	1.2	1.8	11.0	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	42.5	32.3		45.0	30.1		17.9	8.8	7.0	12.9	10.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	1.4	77.6		23.6	9.6		1.8	1.0	0.2	0.6	1.9	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	43.9	109.9		68.6	39.7		19.7	9.8	7.2	13.6	11.9	
Level of Service ( LOS )	D	F		E	D		B	A	A	B	B	
Approach Delay, s/veh / LOS	102.4	F		43.2	D		11.3	B		12.1	B	
Intersection Delay, s/veh / LOS	41.1						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.57	B	1.29	A	1.62	B	1.67	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Future - AM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #6	File Name	06AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	56	1072	210		1042	122	369	170	4	64	116	45

Signal Information																						
Cycle, s	90.0	Reference Phase	2																			
Offset, s	0	Reference Point	End																			
Uncoordinated	No	Simult. Gap E/W	On	Green	41.9	14.1	20.5	0.0	0.0	0.0	1			2			3			4		
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5			6			7			8		
				Red	1.0	1.0	1.0	0.0	0.0	0.0												

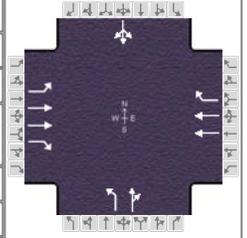
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		46.4		46.4		25.0		18.6
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						21.8		13.9
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.3
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.05

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	61	1165	228		1133	133	401	189			245	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	505	1809	1610		1809	1610	1810	1892			1809	
Queue Service Time ( g <sub>s</sub> ), s	9.6	22.9	8.0		21.9	4.3	19.8	7.7			11.9	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	31.6	22.9	8.0		21.9	4.3	19.8	7.7			11.9	
Green Ratio ( g/C )	0.47	0.47	0.47		0.47	0.47	0.23	0.23			0.16	
Capacity ( c ), veh/h	192	1683	749		1683	749	412	431			284	
Volume-to-Capacity Ratio ( X )	0.317	0.692	0.305		0.673	0.177	0.973	0.439			0.860	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	61.2	359.9	132.8		347.1	71.6	466.8	158.6			246.7	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.4	14.4	5.3		13.9	2.9	18.7	6.3			9.9	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	31.0	19.0	15.0		18.7	14.0	34.5	29.8			37.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	4.3	2.4	1.1		2.2	0.5	37.0	0.3			8.7	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	
Control Delay ( d ), s/veh	35.3	21.4	16.1		20.9	14.5	71.5	30.1			45.6	
Level of Service ( LOS )	D	C	B		C	B	E	C			D	
Approach Delay, s/veh / LOS	21.1	C		20.2	C		58.2	E		45.6	D	
Intersection Delay, s/veh / LOS	28.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.67	B	2.31	B	2.44	B
Bicycle LOS Score / LOS	1.69	B	1.53	B	1.46	A	0.89	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Future - PM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2021	Analysis Period	1 > 16:45
Intersection	Intersection #6	File Name	06PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB					
	L	T	R	L	T	R	L	T	R	L	T	R			
Approach Movement															
Demand ( v ), veh/h	33	1091	345				871	32		225	88	3	52	218	28

Signal Information																						
Cycle, s	90.0	Reference Phase	2																			
Offset, s	0	Reference Point	End																			
Uncoordinated	No	Simult. Gap E/W	On	Green	44.7	17.6	14.3	0.0	0.0	0.0	1			2			3			4		
Force Mode	Float	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5			6			7			8		
				Red	1.0	1.0	1.0	0.0	0.0	0.0												

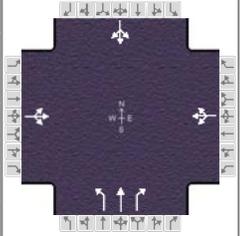
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		49.2		49.2		18.8		22.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						13.8		17.3
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.4		0.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.08		1.00

Movement Group Results	EB			WB			NB			SB			
	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( v ), veh/h	36	1186	375		947	35	245	99			324		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	602	1809	1610		1809	1610	1810	1889			1853		
Queue Service Time ( g <sub>s</sub> ), s	3.9	22.1	13.8		16.1	1.0	11.8	4.2			15.3		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	20.0	22.1	13.8		16.1	1.0	11.8	4.2			15.3		
Green Ratio ( g/C )	0.50	0.50	0.50		0.50	0.50	0.16	0.16			0.20		
Capacity ( c ), veh/h	271	1795	799		1795	799	287	299			362		
Volume-to-Capacity Ratio ( X )	0.132	0.661	0.469		0.527	0.044	0.853	0.330			0.895		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	27.4	343.1	219.2		262.6	16.2	245.3	87.2			336.3		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.1	13.7	8.8		10.5	0.6	9.8	3.5			13.5		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	22.3	17.0	14.9		15.5	11.7	36.8	33.6			35.3		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.0	1.9	2.0		1.1	0.1	8.2	0.2			17.7		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0		
Control Delay ( d ), s/veh	23.3	18.9	16.9		16.6	11.8	45.0	33.9			53.0		
Level of Service ( LOS )	C	B	B		B	B	D	C			D		
Approach Delay, s/veh / LOS	18.5	B		16.4	B		41.8	D			53.0	D	
Intersection Delay, s/veh / LOS	23.8						C						

Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	1.90	B	1.67	B	2.31	B	2.45
Bicycle LOS Score / LOS	1.80	B	1.30	A	1.05	A	1.02	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future - AM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #10	File Name	10AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	66	412	56	61	278	8	49	293	153	21	275	68

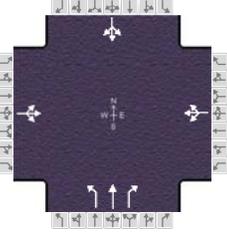
Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	55.3	25.7	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		59.8		59.8		30.2		30.2
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						24.6		21.1
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.4		1.7
Phase Call Probability						1.00		1.00
Max Out Probability						0.41		0.13

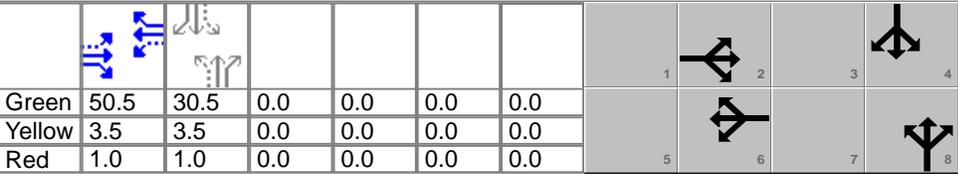
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	580			377			53	318	166	396		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1748			1639			1026	1900	1610	1743		
Queue Service Time ( g <sub>s</sub> ), s	2.0			0.0			4.5	13.0	7.4	6.4		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	15.8			8.6			22.6	13.0	7.4	19.1		
Green Ratio ( g/C )	0.61			0.61			0.29	0.29	0.29	0.29		
Capacity ( c ), veh/h	1125			1059			164	536	454	534		
Volume-to-Capacity Ratio ( X )	0.516			0.356			0.325	0.594	0.366	0.741		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	255.1			158.1			51.6	244.6	126.8	324.9		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	10.2			6.3			2.1	9.8	5.1	13.0		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	9.5			8.2			40.0	27.9	25.9	29.8		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.7			0.9			0.4	0.4	0.2	2.9		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	11.2			9.1			40.4	28.2	26.0	32.7		
Level of Service ( LOS )	B			A			D	C	C	C		
Approach Delay, s/veh / LOS	11.2	B		9.1	A		28.8	C		32.7	C	
Intersection Delay, s/veh / LOS	20.3						C					

Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	2.23	B	1.65	B	1.70	B	1.70
Bicycle LOS Score / LOS	1.45	A	1.11	A	1.38	A	1.14	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other		
Jurisdiction	City of Huntington Park / City of South Gate		Time Period	Future - PM	PHF		0.92
Urban Street	Otis / Santa Ana		Analysis Year	2021	Analysis Period		1 > 16:00
Intersection	Intersection #10		File Name	10PM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School						

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	59	409	72	96	354	10	62	280	115	10	376	101

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	50.5	30.5	0.0	0.0	0.0	0.0				
		Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

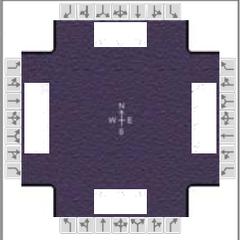
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		55.0		55.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						32.5		26.3
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.77

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	587			500			67	304	125	529		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1742			1555			897	1900	1610	1822		
Queue Service Time ( g <sub>s</sub> ), s	0.8			0.0			6.2	11.3	5.0	5.4		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	18.8			18.0			30.5	11.3	5.0	24.3		
Green Ratio ( g/C )	0.56			0.56			0.34	0.34	0.34	0.34		
Capacity ( c ), veh/h	1022			921			142	644	546	658		
Volume-to-Capacity Ratio ( X )	0.575			0.543			0.475	0.473	0.229	0.804		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	302.9			266.3			68.4	216	83.8	428.4		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	12.1			10.7			2.7	8.6	3.4	17.1		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	12.7			12.2			42.2	23.4	21.3	27.7		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.4			2.3			0.9	0.2	0.1	6.7		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	15.1			14.5			43.1	23.6	21.4	34.4		
Level of Service ( LOS )	B			B			D	C	C	C		
Approach Delay, s/veh / LOS	15.1	B		14.5	B		25.7	C		34.4	C	
Intersection Delay, s/veh / LOS	22.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.66	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.46	A	1.31	A	1.31	A	1.36	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park	Time Period	Future with Project- AM	PHF	0.92
Urban Street	Salt Lake - California / F...	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersection #1	File Name	01AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	31	1012	84	184	1135	167	172	470	309	114	233	74

Signal Information				Signal Timing (s)								Signal Phases			
Cycle, s	90.0	Reference Phase	2	Green	3.4	1.6	29.3	7.7	0.8	24.7	1	2	3	4	
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	3.5	0.0	3.5	5	6	7	8	
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	1.0	0.0	1.0					
Force Mode	Float	Simult. Gap N/S	On												

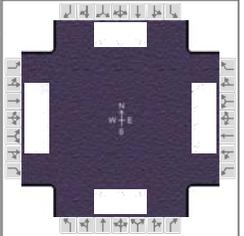
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	7.9	33.8	14.0	39.9	13.0	30.0	12.2	29.2
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.2	3.3	3.2
Queue Clearance Time ( g <sub>s</sub> ), s	3.6		11.5		10.5	25.7	8.1	12.0
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3
Phase Call Probability	0.57		0.99		0.99	1.00	0.95	1.00
Max Out Probability	0.01		1.00		1.00	1.00	1.00	0.06

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	34	805	387	200	965	450	187	511	336	124	253	80
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1823	1810	1900	1771	1810	1900	1610	1810	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	1.6	16.3	16.3	9.5	18.6	18.6	8.5	23.7	17.0	6.1	10.0	3.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	1.6	16.3	16.3	9.5	18.6	18.6	8.5	23.7	17.0	6.1	10.0	3.4
Green Ratio ( g/C )	0.04	0.33	0.33	0.11	0.39	0.39	0.09	0.28	0.28	0.09	0.27	0.27
Capacity ( c ), veh/h	69	1237	593	191	1494	697	171	538	456	155	521	442
Volume-to-Capacity Ratio ( X )	0.491	0.650	0.651	1.047	0.646	0.646	1.094	0.949	0.736	0.801	0.486	0.182
Back of Queue ( Q ), ft/ln ( 95 th percentile)	34.1	299	304.5	329.9	324.5	321.6	335	511.8	282.4	157.8	201.6	59.3
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.4	12.0	12.2	13.2	13.0	12.9	13.4	20.5	11.3	6.3	8.1	2.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	42.4	26.0	26.0	40.3	22.2	22.2	40.8	31.6	29.2	40.4	27.3	24.9
Incremental Delay ( d <sub>2</sub> ), s/veh	2.0	2.7	5.5	78.1	2.2	4.6	96.2	26.3	5.4	19.1	0.3	0.1
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	44.4	28.6	31.5	118.3	24.4	26.8	136.9	57.9	34.6	59.5	27.6	25.0
Level of Service ( LOS )	D	C	C	F	C	C	F	E	C	E	C	C
Approach Delay, s/veh / LOS	30.0	C		36.7	D		64.6	E		35.8	D	
Intersection Delay, s/veh / LOS	41.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.27	B	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.16	A	1.38	A	2.19	B	1.24	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Salt Lake - California / F...	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersection #1	File Name	01PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	40	1118	159	190	864	93	136	262	234	129	418	75

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Float	Simult. Gap N/S	On									
Green	4.0	1.0	30.3	8.5	23.7	0.0						
Yellow	3.5	3.5	3.5	3.5	3.5	0.0						
Red	1.0	1.0	1.0	1.0	1.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	8.5	34.8	14.0	40.3	13.0	28.2	13.0	28.2
Change Period, ( Y+R <sub>c</sub> ), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Allow Headway ( MAH ), s	3.1	0.0	3.1	0.0	3.1	3.2	3.3	3.2
Queue Clearance Time ( g <sub>s</sub> ), s	4.1		11.5		9.3	14.4	8.8	22.8
Green Extension Time ( g <sub>e</sub> ), s	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.9
Phase Call Probability	0.66		0.99		0.98	1.00	0.97	1.00
Max Out Probability	0.02		1.00		1.00	0.09	1.00	1.00

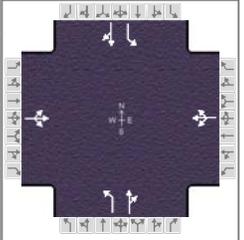
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	43	946	442	207	705	336	148	285	254	140	454	82
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1810	1900	1775	1810	1900	1802	1810	1900	1610	1810	1900	1610
Queue Service Time ( g <sub>s</sub> ), s	2.1	19.8	19.8	9.5	12.3	12.4	7.3	11.7	12.4	6.8	20.8	3.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	2.1	19.8	19.8	9.5	12.3	12.4	7.3	11.7	12.4	6.8	20.8	3.5
Green Ratio ( g/C )	0.04	0.34	0.34	0.11	0.40	0.40	0.09	0.26	0.26	0.09	0.26	0.26
Capacity ( c ), veh/h	80	1279	598	191	1512	717	171	500	424	171	500	424
Volume-to-Capacity Ratio ( X )	0.544	0.740	0.740	1.081	0.466	0.468	0.865	0.569	0.600	0.820	0.908	0.192
Back of Queue ( Q ), ft/ln ( 95 th percentile)	43.8	354	356.7	352.2	229.4	228.9	206.5	224	208.4	189.2	437.9	61.2
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.8	14.2	14.3	14.1	9.2	9.2	8.3	9.0	8.3	7.6	17.5	2.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	42.1	26.4	26.4	40.3	20.0	20.0	40.2	28.7	29.0	40.0	32.1	25.7
Incremental Delay ( d <sub>2</sub> ), s/veh	2.1	3.9	8.0	88.4	1.0	2.2	32.9	0.6	1.2	24.7	17.7	0.1
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay ( d ), s/veh	44.3	30.2	34.4	128.7	21.1	22.2	73.1	29.4	30.2	64.7	49.8	25.8
Level of Service ( LOS )	D	C	C	F	C	C	E	C	C	E	D	C
Approach Delay, s/veh / LOS	31.9	C		39.2	D		39.1	D		50.0	D	
Intersection Delay, s/veh / LOS	38.4						D					

Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	2.28	B	2.27	B	2.58	C	2.58
Bicycle LOS Score / LOS	1.27	A	1.17	A	1.62	B	1.60	B



## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park	Time Period	Future with Project - PM	PHF	0.92
Urban Street	California / Hope	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersecion #2	File Name	02PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	28	19	26	4	23	15	21	481	5	17	624	23

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	74.6	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

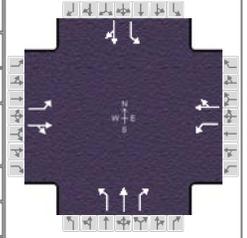
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		10.9		10.9		79.1		79.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		6.2		4.2				
Green Extension Time ( g <sub>e</sub> ), s		0.2		0.2		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		0.00		0.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	79			46			23	528		18	703	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1627			1773			756	1896		889	1888	
Queue Service Time ( g <sub>s</sub> ), s	2.0			0.0			0.8	6.0		0.5	9.2	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	4.2			2.2			9.9	6.0		6.4	9.2	
Green Ratio ( g/C )	0.07			0.07			0.83	0.83		0.83	0.83	
Capacity ( c ), veh/h	171			170			629	1572		758	1564	
Volume-to-Capacity Ratio ( X )	0.463			0.268			0.036	0.336		0.024	0.450	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	78.6			44			4.8	50.3		3	78.1	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.1			1.8			0.2	2.0		0.1	3.1	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00		0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	40.7			39.8			3.5	1.8		2.6	2.1	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.7			0.3			0.1	0.6		0.1	0.9	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0		0.0	0.0	
Control Delay ( d ), s/veh	41.4			40.1			3.6	2.4		2.7	3.0	
Level of Service ( LOS )	D			D			A	A		A	A	
Approach Delay, s/veh / LOS	41.4	D		40.1	D		2.5	A		3.0	A	
Intersection Delay, s/veh / LOS	6.2						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.94	B	1.58	B	1.58	B
Bicycle LOS Score / LOS	0.62	A	0.56	A	1.40	A	1.68	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future with Project - AM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersecion #3	File Name	03AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	47	401	60	68	378	61	119	526	83	69	414	51

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On	Green	55.5	25.5	0.0	0.0	0.0	0.0	0.0	0.0
				Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
				Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0

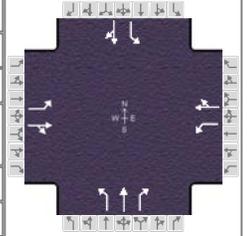
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	51	501		74	477		129	572	90	75	505	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	932	1857		911	1854		908	1900	1610	854	1863	
Queue Service Time ( g <sub>s</sub> ), s	3.1	23.8		1.7	22.4		7.9	14.9	2.0	4.8	12.8	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	23.8		25.5	22.4		20.7	14.9	2.0	19.6	12.8	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	113	526		97	525		510	1172	993	466	1149	
Volume-to-Capacity Ratio ( X )	0.454	0.953		0.764	0.909		0.253	0.488	0.091	0.161	0.440	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	52.3	513.3		106.3	456.3		75.8	242.5	30	43.5	212.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.1	20.5		4.3	18.3		3.0	9.7	1.2	1.7	8.5	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	44.0	31.7		44.8	31.1		14.5	9.5	7.0	14.8	9.1	
Incremental Delay ( d <sub>2</sub> ), s/veh	1.1	27.4		27.1	19.3		1.2	1.5	0.2	0.7	1.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	45.1	59.1		71.9	50.4		15.7	10.9	7.2	15.6	10.3	
Level of Service ( LOS )	D	E		E	D		B	B	A	B	B	
Approach Delay, s/veh / LOS	57.8	E		53.3	D		11.3	B		11.0	B	
Intersection Delay, s/veh / LOS	30.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.40	A	1.40	A	1.79	B	1.45	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future with Project - PM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersecion #3	File Name	03PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	68	437	105	55	342	59	116	436	84	80	517	62

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	55.5	25.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

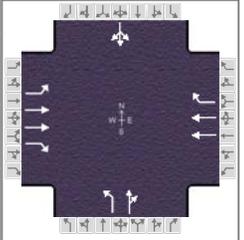
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	74	589		60	436		126	474	91	87	629	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	968	1836		840	1851		809	1900	1610	935	1864	
Queue Service Time ( g <sub>s</sub> ), s	5.6	25.5		0.0	19.9		9.6	11.5	2.1	4.7	17.6	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	25.5		25.5	19.9		27.2	11.5	2.1	16.2	17.6	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	141	520		80	524		421	1172	993	537	1150	
Volume-to-Capacity Ratio ( X )	0.526	1.132		0.747	0.831		0.300	0.404	0.092	0.162	0.547	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	76.6	819.9		87.9	381.4		85.8	196.7	30.5	46	274.8	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.1	32.8		3.5	15.3		3.4	7.9	1.2	1.8	11.0	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	42.7	32.3		45.0	30.2		17.9	8.8	7.0	12.9	10.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	1.8	81.3		28.5	10.3		1.8	1.0	0.2	0.6	1.9	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	44.5	113.6		73.5	40.5		19.7	9.8	7.2	13.6	11.9	
Level of Service ( LOS )	D	F		E	D		B	A	A	B	B	
Approach Delay, s/veh / LOS	105.9	F		44.5	D		11.3	B		12.1	B	
Intersection Delay, s/veh / LOS	42.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.58	B	1.31	A	1.63	B	1.67	B

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Future with Project - AM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #6	File Name	06AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB					
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand ( v ), veh/h	56	1123	210				1042	122		415	185	4	64	133	45

Signal Information				Signal Phases											
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On												
Force Mode	Float	Simult. Gap N/S	On												
		Green	41.0	15.0	20.5	0.0	0.0	0.0							
		Yellow	3.5	3.5	3.5	0.0	0.0	0.0							
		Red	1.0	1.0	1.0	0.0	0.0	0.0							

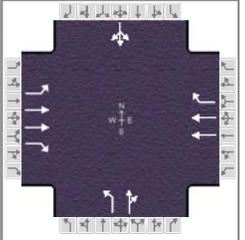
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		45.5		45.5		25.0		19.5
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						22.5		14.7
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.3
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.12

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	61	1221	228		1133	133	451	205			263	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	505	1809	1610		1809	1610	1810	1893			1815	
Queue Service Time ( g <sub>s</sub> ), s	9.8	24.9	8.1		22.3	4.4	20.5	8.5			12.7	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	32.1	24.9	8.1		22.3	4.4	20.5	8.5			12.7	
Green Ratio ( g/C )	0.46	0.46	0.46		0.46	0.46	0.23	0.23			0.17	
Capacity ( c ), veh/h	185	1648	734		1648	734	412	431			302	
Volume-to-Capacity Ratio ( X )	0.329	0.741	0.311		0.687	0.181	1.094	0.476			0.870	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	62.9	390.9	135.7		354.1	73.1	629	173.9			267.9	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.5	15.6	5.4		14.2	2.9	25.2	7.0			10.7	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	32.1	20.1	15.5		19.4	14.5	34.8	30.1			36.6	
Incremental Delay ( d <sub>2</sub> ), s/veh	4.7	3.0	1.1		2.4	0.5	72.3	0.3			11.1	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	
Control Delay ( d ), s/veh	36.9	23.2	16.6		21.8	15.1	107.0	30.4			47.6	
Level of Service ( LOS )	D	C	B		C	B	F	C			D	
Approach Delay, s/veh / LOS	22.7	C		21.1	C		83.0	F		47.6	D	
Intersection Delay, s/veh / LOS	34.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.68	B	2.31	B	2.44	B
Bicycle LOS Score / LOS	1.73	B	1.53	B	1.57	B	0.92	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Bell / City of Huntington Park	Time Period	Future with Project - PM	PHF	0.92
Urban Street	California - Salt Lake / F...	Analysis Year	2021	Analysis Period	1 > 16:45
Intersection	Intersection #6	File Name	06PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB					
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand ( v ), veh/h	33	1104	345				871	32		236	92	3	52	222	28

Signal Information				Signal Timing (s)								Signal Phases						
Cycle, s	90.0	Reference Phase	2	Green	43.9	17.8	14.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Float	Simult. Gap N/S	On															

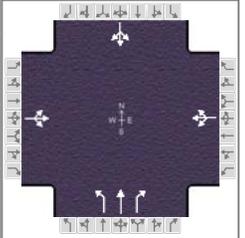
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		7.0		10.0		12.0
Phase Duration, s		48.4		48.4		19.3		22.3
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.2		3.2
Queue Clearance Time ( g <sub>s</sub> ), s						14.4		17.5
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.4		0.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.13		1.00

Movement Group Results	EB			WB			NB			SB			
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	5	2	12		6	16	3	8	18	7	4	14	
Adjusted Flow Rate ( v ), veh/h	36	1200	375		947	35	257	103			328		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	602	1809	1610		1809	1610	1810	1889			1853		
Queue Service Time ( g <sub>s</sub> ), s	4.0	22.9	14.0		16.3	1.0	12.4	4.3			15.5		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	20.3	22.9	14.0		16.3	1.0	12.4	4.3			15.5		
Green Ratio ( g/C )	0.49	0.49	0.49		0.49	0.49	0.16	0.16			0.20		
Capacity ( c ), veh/h	264	1764	785		1764	785	298	312			366		
Volume-to-Capacity Ratio ( X )	0.136	0.680	0.478		0.537	0.044	0.860	0.331			0.897		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	28	355.7	223.6		267.7	16.6	258.9	90.3			341.2		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	1.1	14.2	8.9		10.7	0.7	10.4	3.6			13.6		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00	0.00		0.00	0.00	0.00	0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	23.1	17.7	15.4		16.0	12.1	36.6	33.2			35.2		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.1	2.1	2.1		1.2	0.1	9.8	0.2			18.2		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0		
Control Delay ( d ), s/veh	24.1	19.8	17.5		17.2	12.2	46.3	33.4			53.4		
Level of Service ( LOS )	C	B	B		B	B	D	C			D		
Approach Delay, s/veh / LOS	19.4	B		17.0	B		42.6	D			53.4	D	
Intersection Delay, s/veh / LOS	24.6						C						

Multimodal Results	EB			WB			NB			SB			
Pedestrian LOS Score / LOS	1.90	B		1.67	B		2.31	B			2.45	B	
Bicycle LOS Score / LOS	1.82	B		1.30	A		1.08	A			1.03	A	

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #10	File Name	10AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	114	412	56	61	278	8	49	334	153	21	312	111

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	51.4	29.6	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

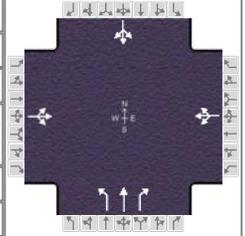
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		55.9		55.9		34.1		34.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						29.2		24.4
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.5		1.6
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.44

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	633			377			53	363	166	483		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1665			1602			947	1900	1610	1778		
Queue Service Time ( g <sub>s</sub> ), s	13.0			0.0			4.9	14.3	7.0	8.1		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	22.7			9.7			27.2	14.3	7.0	22.4		
Green Ratio ( g/C )	0.57			0.57			0.33	0.33	0.33	0.33		
Capacity ( c ), veh/h	999			963			157	624	529	626		
Volume-to-Capacity Ratio ( X )	0.633			0.392			0.339	0.581	0.314	0.771		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	336.3			185.1			51.9	263	116.8	385.7		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	13.5			7.4			2.1	10.5	4.7	15.4		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	12.9			10.3			40.2	25.1	22.6	27.7		
Incremental Delay ( d <sub>2</sub> ), s/veh	3.1			1.2			0.5	0.8	0.1	5.0		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	16.0			11.5			40.7	25.9	22.7	32.6		
Level of Service ( LOS )	B			B			D	C	C	C		
Approach Delay, s/veh / LOS	16.0	B		11.5	B		26.3	C		32.6	C	
Intersection Delay, s/veh / LOS	21.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.66	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.53	B	1.11	A	1.45	A	1.28	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2021	Analysis Period	1 > 16:00
Intersection	Intersection #10	File Name	10PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	71	409	72	96	354	10	62	290	115	10	385	111

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	50.5	30.5	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
				Red	1.0	1.0	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		55.0		55.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						32.5		27.7
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.9
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	600			500			67	315	125	550		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1717			1544			880	1900	1610	1818		
Queue Service Time ( g <sub>s</sub> ), s	1.6			0.0			4.8	11.8	5.0	6.9		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	19.9			18.3			30.5	11.8	5.0	25.7		
Green Ratio ( g/C )	0.56			0.56			0.34	0.34	0.34	0.34		
Capacity ( c ), veh/h	1009			915			126	644	546	657		
Volume-to-Capacity Ratio ( X )	0.595			0.547			0.533	0.490	0.229	0.837		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	314.6			267.5			70.5	223.1	83.7	458.5		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	12.6			10.7			2.8	8.9	3.3	18.3		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	12.9			12.2			43.4	23.6	21.3	28.1		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.6			2.3			2.3	0.2	0.1	8.8		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	15.5			14.6			45.6	23.8	21.4	37.0		
Level of Service ( LOS )	B			B			D	C	C	D		
Approach Delay, s/veh / LOS	15.5	B		14.6	B		26.1	C		37.0	D	
Intersection Delay, s/veh / LOS	23.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.66	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.48	A	1.31	A	1.33	A	1.40	A

## APPENDIX E

### HCM AND LEVELS OF SERVICE EXPLANATION HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS CITY OF SOUTH GATE

## LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, in the absence of geometric delay, in the absence of incidents, and when there are no other vehicles on the road. Only the portion of total delay attributed to the control facility is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for traffic signals are stated in terms of the average control delay per vehicle. Delay is a complex measure and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the  $v/c$  ratio for the lane group in question.

Level of Service Criteria for Signalized Intersections	
Level of Service	Control Delay (Sec/Veh)
A	$\leq 10$
B	$> 10$ and $\leq 20$
C	$> 20$ and $\leq 35$
D	$> 35$ and $\leq 55$
E	$> 55$ and $\leq 80$
F	$> 80$

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

**LOS A** describes operations with very low control delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay values.

**LOS B** describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

**LOS C** describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

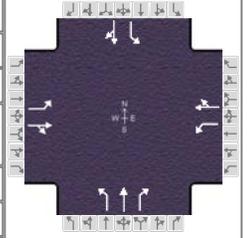
**LOS D** describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high  $v/c$  ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

**LOS E** describes operations with control delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high  $v/c$  ratios. Individual cycle failures are frequent occurrences.

**LOS F** describes operations with control delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the lane groups. It may also occur at high  $v/c$  ratios with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing - AM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersecion #3	File Name	03AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	45	371	59	55	347	60	117	514	70	68	403	50

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	55.5	25.5	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0			
				Red	1.0	1.0	0.0	0.0	0.0	0.0			

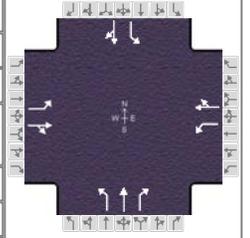
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		26.8		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	49	467		60	442		127	559	76	74	492	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	962	1854		940	1851		919	1900	1610	864	1863	
Queue Service Time ( g <sub>s</sub> ), s	4.5	21.7		3.8	20.3		7.5	14.4	1.7	4.6	12.4	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	24.8	21.7		25.5	20.3		19.9	14.4	1.7	18.9	12.4	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	136	525		119	524		520	1172	993	475	1149	
Volume-to-Capacity Ratio ( X )	0.360	0.890		0.501	0.844		0.245	0.477	0.077	0.156	0.429	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	48.9	435.8		61.3	391.6		73.1	236.2	25.1	42.2	206.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.0	17.4		2.5	15.7		2.9	9.4	1.0	1.7	8.2	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	42.0	30.9		43.8	30.4		14.2	9.4	6.9	14.5	9.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.6	16.5		1.2	11.4		1.1	1.4	0.2	0.7	1.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	42.6	47.4		45.0	41.7		15.3	10.8	7.1	15.2	10.2	
Level of Service ( LOS )	D	D		D	D		B	B	A	B	B	
Approach Delay, s/veh / LOS	47.0		D	42.1		D	11.1		B	10.8		B
Intersection Delay, s/veh / LOS	25.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.34	A	1.32	A	1.74	B	1.42	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing - PM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersecion #3	File Name	03PM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	66	416	103	47	325	58	114	424	74	78	502	60

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	55.5	25.5	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
				Red	1.0	1.0	0.0	0.0	0.0	0.0				

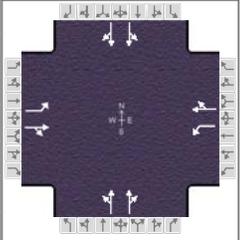
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	72	564		51	416		124	461	80	85	611	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	985	1834		860	1850		823	1900	1610	946	1864	
Queue Service Time ( g <sub>s</sub> ), s	6.5	25.5		0.0	18.7		9.1	11.0	1.8	4.5	16.8	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.3	25.5		25.5	18.7		25.9	11.0	1.8	15.5	16.8	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	154	520		80	524		434	1172	993	547	1150	
Volume-to-Capacity Ratio ( X )	0.466	1.085		0.639	0.794		0.286	0.393	0.081	0.155	0.531	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	72.1	724.9		63.1	353.8		82.2	191.3	26.7	44.1	266	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.9	29.0		2.5	14.2		3.3	7.7	1.1	1.8	10.6	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	41.5	32.2		45.0	29.8		17.2	8.7	7.0	12.7	9.8	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.8	64.6		12.4	7.6		1.6	1.0	0.2	0.6	1.8	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	42.3	96.8		57.4	37.4		18.9	9.7	7.1	13.3	11.6	
Level of Service ( LOS )	D	F		E	D		B	A	A	B	B	
Approach Delay, s/veh / LOS	90.7	F		39.6	D		11.1	B		11.8	B	
Intersection Delay, s/veh / LOS	37.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.54	B	1.26	A	1.59	B	1.64	B

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Existing - AM	PHF	0.92
Urban Street	California / Independence	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #4	File Name	04AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	26	151	72	69	157	37	109	593	27	22	554	18

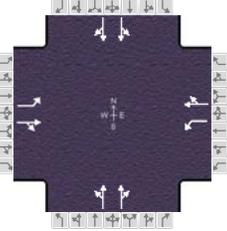
Signal Information				Signal Phases							
Cycle, s	90.0	Reference Phase	2	1	2	3	4	5	6	7	8
Offset, s	0	Reference Point	End	Green	35.3	22.5	18.7	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		4		8
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		39.8		39.8		27.0		23.2
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.0
Queue Clearance Time ( g <sub>s</sub> ), s						21.2		17.6
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.2		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.07		0.00

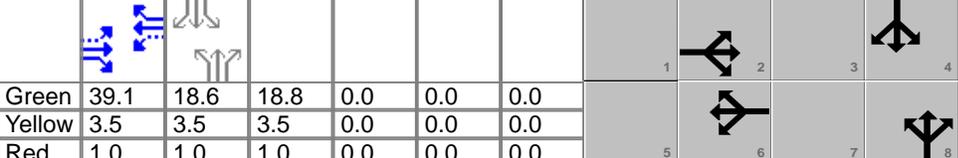
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	28	242		75	211		415		378	339		306
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1189	1796		1156	1837		1873		1874	1893		1878
Queue Service Time ( g <sub>s</sub> ), s	1.5	8.5		4.4	7.1		19.2		17.0	15.6		13.9
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	8.6	8.5		12.9	7.1		19.2		17.0	15.6		13.9
Green Ratio ( g/C )	0.39	0.39		0.39	0.39		0.25		0.25	0.21		0.21
Capacity ( c ), veh/h	453	705		424	721		467		467	394		391
Volume-to-Capacity Ratio ( X )	0.062	0.344		0.177	0.292		0.888		0.808	0.862		0.785
Back of Queue ( Q ), ft/ln ( 95 th percentile)	19.8	163.8		56.9	138.7		365.5		313.3	288		259
Back of Queue ( Q ), veh/ln ( 95 th percentile)	0.8	6.6		2.3	5.5		14.6		12.5	11.5		10.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	21.7	19.2		23.7	18.8		32.6		31.7	34.4		33.7
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3	1.3		0.9	1.0		9.3		3.9	2.2		1.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	22.0	20.5		24.6	19.8		41.9		35.7	36.6		35.1
Level of Service ( LOS )	C	C		C	B		D		D	D		D
Approach Delay, s/veh / LOS	20.7	C		21.1	C		38.9	D		35.9	D	
Intersection Delay, s/veh / LOS	32.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.93	B	1.95	B
Bicycle LOS Score / LOS	0.93	A	0.96	A	1.14	A	1.02	A

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General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other	
Jurisdiction	City of South Gate	Time Period	Existing - PM	PHF	0.92	
Urban Street	California / Independence	Analysis Year	2019	Analysis Period	1 > 17:00	
Intersection	Intersection #4	File Name	04PM - Existing.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	26	141	34	30	118	33	51	514	30	9	572	12

Signal Information														
Cycle, s	90.0	Reference Phase	2	Green	39.1	18.6	18.8	0.0	0.0	0.0	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

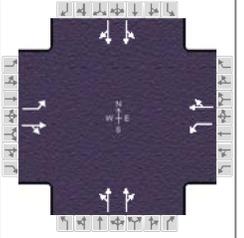
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		43.6		43.6		23.3		23.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.0
Queue Clearance Time ( g <sub>s</sub> ), s						17.7		17.5
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.2		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	28	190		33	164		340		307	338		306
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1241	1836		1212	1828		1885		1864	1897		1886
Queue Service Time ( g <sub>s</sub> ), s	1.3	5.9		1.6	5.0		15.7		14.0	15.5		13.9
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	6.3	5.9		7.5	5.0		15.7		14.0	15.5		13.9
Green Ratio ( g/C )	0.43	0.43		0.43	0.43		0.21		0.21	0.21		0.21
Capacity ( c ), veh/h	550	797		527	794		395		390	391		389
Volume-to-Capacity Ratio ( X )	0.051	0.239		0.062	0.207		0.862		0.785	0.865		0.787
Back of Queue ( Q ), ft/ln ( 95 th percentile)	17.4	112.6		20.6	95.5		288.6		259.1	292.5		259.2
Back of Queue ( Q ), veh/ln ( 95 th percentile)	0.7	4.5		0.8	3.8		11.5		10.4	11.7		10.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	17.8	16.1		18.4	15.8		34.3		33.7	34.5		33.8
Incremental Delay ( d <sub>2</sub> ), s/veh	0.2	0.7		0.2	0.6		2.2		1.3	3.6		1.4
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	18.0	16.8		18.6	16.4		36.5		35.0	38.1		35.2
Level of Service ( LOS )	B	B		B	B		D		C	D		D
Approach Delay, s/veh / LOS	16.9		B	16.8		B	35.8		D	36.7		D
Intersection Delay, s/veh / LOS	31.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	0.85	A	0.81	A	1.02	A	1.02	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Existing - AM	PHF	0.92
Urban Street	California / Ardmore	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersection #5	File Name	05AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	70	229	111	42	138	43	36	655	19	39	533	75

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	34.2	20.4	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

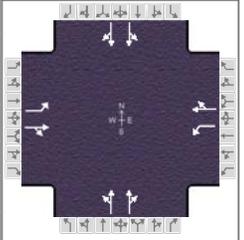
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		38.7		38.7		26.5		24.9
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.0		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						20.5		19.2
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.4		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.02

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	76	370		46	197		405		367	374		329
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1205	1795		1029	1822		1891		1881	1889		1819
Queue Service Time ( g <sub>s</sub> ), s	4.2	14.5		3.3	6.8		18.5		16.5	17.2		15.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	11.0	14.5		17.7	6.8		18.5		16.5	17.2		15.4
Green Ratio ( g/C )	0.38	0.38		0.38	0.38		0.24		0.24	0.23		0.23
Capacity ( c ), veh/h	447	681		305	692		461		459	428		412
Volume-to-Capacity Ratio ( X )	0.170	0.542		0.150	0.284		0.878		0.799	0.876		0.799
Back of Queue ( Q ), ft/ln ( 95 th percentile)	56.7	262.2		39.3	132.1		329.6		294.9	326.5		276.9
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.3	10.5		1.6	5.3		13.2		11.8	13.1		11.1
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	23.2	21.8		28.7	19.4		32.7		31.9	33.6		32.9
Incremental Delay ( d <sub>2</sub> ), s/veh	0.8	3.1		1.0	1.0		2.2		1.2	6.3		2.4
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	24.1	24.9		29.8	20.4		34.9		33.2	39.9		35.3
Level of Service ( LOS )	C	C		C	C		C		C	D		D
Approach Delay, s/veh / LOS	24.7	C		22.2	C		34.1	C		37.7	D	
Intersection Delay, s/veh / LOS	32.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	1.22	A	0.89	A	1.12	A	1.07	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 2, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Existing - PM	PHF	0.92
Urban Street	California / Ardmore	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersection #5	File Name	05PM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	29	206	91	15	98	20	22	552	33	46	555	34

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	37.5	19.9	19.1	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

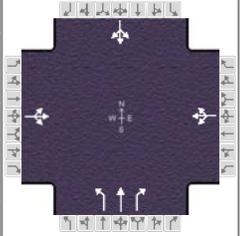
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		42.0		42.0		23.6		24.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.0		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						18.0		18.7
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.2		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	32	323		16	128		348		312	363		327
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1282	1801		1074	1844		1893		1861	1887		1862
Queue Service Time ( g <sub>s</sub> ), s	1.4	11.5		1.0	3.9		16.0		14.3	16.7		14.9
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.4	11.5		12.5	3.9		16.0		14.3	16.7		14.9
Green Ratio ( g/C )	0.42	0.42		0.42	0.42		0.21		0.21	0.22		0.22
Capacity ( c ), veh/h	558	750		390	768		403		396	417		411
Volume-to-Capacity Ratio ( X )	0.056	0.430		0.042	0.167		0.864		0.787	0.873		0.795
Back of Queue ( Q ), ft/ln ( 95 th percentile)	19.6	213.1		11.9	75.7		293.6		262.3	316.4		273.8
Back of Queue ( Q ), veh/ln ( 95 th percentile)	0.8	8.5		0.5	3.0		11.7		10.5	12.7		11.0
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	18.1	18.7		23.1	16.5		34.2		33.5	33.8		33.1
Incremental Delay ( d <sub>2</sub> ), s/veh	0.2	1.8		0.2	0.5		2.2		1.3	5.6		1.9
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	18.3	20.5		23.3	16.9		36.4		34.8	39.4		35.0
Level of Service ( LOS )	B	C		C	B		D		C	D		D
Approach Delay, s/veh / LOS	20.3	C		17.7	B		35.6	D		37.3	D	
Intersection Delay, s/veh / LOS	31.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	1.07	A	0.73	A	1.03	A	1.06	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Nov 22, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing - AM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #10	File Name	10AM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	63	400	55	59	271	8	48	280	150	21	262	59

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	56.7	24.3	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

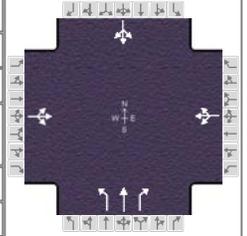
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		61.2		61.2		28.8		28.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						23.2		20.2
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.4		1.7
Phase Call Probability						1.00		1.00
Max Out Probability						0.24		0.08

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	563			367			52	304	163	372		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1751			1644			1048	1900	1610	1731		
Queue Service Time ( g <sub>s</sub> ), s	0.3			0.0			4.3	12.6	7.4	6.1		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	14.3			8.0			21.2	12.6	7.4	18.2		
Green Ratio ( g/C )	0.63			0.63			0.27	0.27	0.27	0.27		
Capacity ( c ), veh/h	1152			1087			164	508	431	506		
Volume-to-Capacity Ratio ( X )	0.489			0.338			0.318	0.599	0.378	0.735		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	235.6			145.1			50.5	238.9	127	308.4		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	9.4			5.8			2.0	9.6	5.1	12.3		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	8.7			7.5			40.1	28.7	26.9	30.6		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.5			0.8			0.4	0.4	0.2	2.4		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	10.2			8.4			40.5	29.2	27.1	32.9		
Level of Service ( LOS )	B			A			D	C	C	C		
Approach Delay, s/veh / LOS	10.2	B		8.4	A		29.6	C		32.9	C	
Intersection Delay, s/veh / LOS	20.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.23	B	1.65	B	1.70	B	1.70	B
Bicycle LOS Score / LOS	1.42	A	1.09	A	1.34	A	1.10	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Nov 22, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing - PM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2019	Analysis Period	1 > 16:00
Intersection	Intersection #10	File Name	10PM - Existing.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	56	390	71	93	345	10	61	264	112	10	358	89

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	50.5	30.5	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

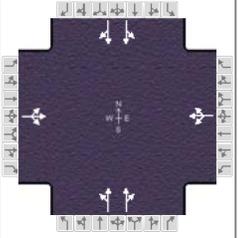
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		55.0		55.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						30.5		24.2
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		1.5
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.38

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	562			487			66	287	122	497		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1744			1579			924	1900	1610	1825		
Queue Service Time ( g <sub>s</sub> ), s	1.0			0.0			6.3	10.6	4.9	3.3		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	17.5			16.5			28.5	10.6	4.9	22.2		
Green Ratio ( g/C )	0.56			0.56			0.34	0.34	0.34	0.34		
Capacity ( c ), veh/h	1023			935			166	643	545	659		
Volume-to-Capacity Ratio ( X )	0.549			0.521			0.400	0.446	0.223	0.754		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	287.1			255.5			64.9	204.6	81.5	387.7		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	11.5			10.2			2.6	8.2	3.3	15.5		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	12.4			11.9			39.9	23.2	21.3	27.0		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.1			2.1			0.6	0.2	0.1	4.4		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	14.6			14.0			40.5	23.4	21.4	31.4		
Level of Service ( LOS )	B			B			D	C	C	C		
Approach Delay, s/veh / LOS	14.6	B		14.0	B		25.2	C		31.4	C	
Intersection Delay, s/veh / LOS	21.1						C					

Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	2.24	B	1.66	B	1.69	B	1.69
Bicycle LOS Score / LOS	1.41	A	1.29	A	1.27	A	1.31	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 22, 2019	Area Type	Other		
Jurisdiction	City of South Gate	Time Period	Existing - AM	PHF	0.92		
Urban Street	Otis / Independence	Analysis Year	2019	Analysis Period	1 > 7:15		
Intersection	Intersection #11	File Name	11AM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	32	102	111	33	28	9	107	513	84	40	445	31

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	37.6	16.6	22.3	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

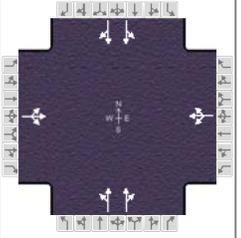
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		42.1		42.1		26.8		21.1
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( $g_s$ ), s						20.7		15.6
Green Extension Time ( $g_e$ ), s		0.0		0.0		1.5		1.0
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	266			76			406			295		
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1707			1449			1873			1886		
Queue Service Time ( $g_s$ ), s	0.0			0.0			18.7			13.6		
Cycle Queue Clearance Time ( $g_c$ ), s	9.4			2.2			18.7			13.6		
Green Ratio ( $g/C$ )	0.42			0.42			0.25			0.18		
Capacity ( $c$ ), veh/h	758			664			464			348		
Volume-to-Capacity Ratio ( $X$ )	0.351			0.115			0.876			0.774		
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	173.9			45.4			333			261.7		
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	7.0			1.8			13.3			10.5		
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( $d_1$ ), s/veh	18.0			15.9			32.5			35.5		
Incremental Delay ( $d_2$ ), s/veh	1.3			0.4			2.1			2.2		
Initial Queue Delay ( $d_3$ ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( $d$ ), s/veh	19.3			16.3			34.6			37.7		
Level of Service (LOS)	B			B			C			D		
Approach Delay, s/veh / LOS	19.3	B		16.3	B		33.9	C		37.1	D	
Intersection Delay, s/veh / LOS	31.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	0.93	A	0.61	A	1.12	A	0.95	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 22, 2019	Area Type	Other		
Jurisdiction	City of South Gate	Time Period	Existing - PM	PHF	0.92		
Urban Street	Otis / Independence	Analysis Year	2019	Analysis Period	1 > 16:45		
Intersection	Intersection #11	File Name	11PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	23	50	64	53	57	16	122	474	48	19	505	28

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	38.5	20.3	17.6	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

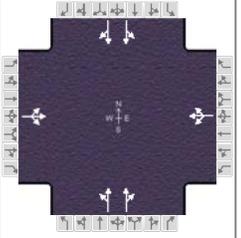
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		4		8
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		43.0		43.0		24.8		22.1
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( $g_s$ ), s						19.1		16.5
Green Extension Time ( $g_e$ ), s		0.0		0.0		1.2		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.02		0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( $v$ ), veh/h	149			137			368			316		
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1673			1577			1866			1894		
Queue Service Time ( $g_s$ ), s	0.0			0.0			17.1			15.3		
Cycle Queue Clearance Time ( $g_c$ ), s	4.8			4.4			17.1			15.3		
Green Ratio ( $g/C$ )	0.43			0.43			0.23			0.20		
Capacity ( $c$ ), veh/h	763			732			422			371		
Volume-to-Capacity Ratio ( $X$ )	0.195			0.187			0.873			0.795		
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	87.4			82.7			324.5			275.5		
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	3.5			3.3			13.0			11.0		
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( $d_1$ ), s/veh	16.1			15.9			33.6			32.9		
Incremental Delay ( $d_2$ ), s/veh	0.6			0.6			6.1			2.2		
Initial Queue Delay ( $d_3$ ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( $d$ ), s/veh	16.7			16.5			39.7			37.1		
Level of Service (LOS)	B			B			D			D		
Approach Delay, s/veh / LOS	16.7	B		16.5	B		37.5	D		36.4	D	
Intersection Delay, s/veh / LOS	33.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.71	B	1.73	B
Bicycle LOS Score / LOS	0.73	A	0.71	A	1.07	A	0.98	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 22, 2019	Area Type	Other		
Jurisdiction	City of South Gate	Time Period	Existing - AM	PHF	0.92		
Urban Street	Otis / Ardmore	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	Intersection #12	File Name	12AM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	91	5	275	3	2	1	80	608	5	2	529	53

Signal Information											
Cycle, s	90.0	Reference Phase	2	1	2	3	4	5	6	7	8
Offset, s	0	Reference Point	End	1	2	3	4	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	1	2	3	4	5	6	7	8
Force Mode	Fixed	Simult. Gap N/S	On	1	2	3	4	5	6	7	8
				1	2	3	4	5	6	7	8

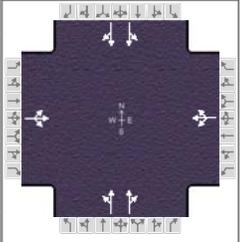
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		40.9		40.9		26.1		23.0
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( $g_s$ ), s						20.1		17.4
Green Extension Time ( $g_e$ ), s		0.0		0.0		1.5		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	403			7			393			298		
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1585			1214			1879			1895		
Queue Service Time ( $g_s$ ), s	12.0			0.0			18.1			13.8		
Cycle Queue Clearance Time ( $g_c$ ), s	18.0			0.2			18.1			13.8		
Green Ratio ( $g/C$ )	0.40			0.40			0.24			0.21		
Capacity ( $c$ ), veh/h	691			551			450			378		
Volume-to-Capacity Ratio ( $X$ )	0.584			0.012			0.873			0.787		
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	284			4			324.9			256.3		
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	11.4			0.2			13.0			10.3		
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( $d_1$ ), s/veh	21.2			16.0			32.9			33.9		
Incremental Delay ( $d_2$ ), s/veh	3.6			0.0			2.1			1.4		
Initial Queue Delay ( $d_3$ ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( $d$ ), s/veh	24.8			16.0			35.0			35.3		
Level of Service ( LOS )	C			B			D			D		
Approach Delay, s/veh / LOS	24.8	C		16.0	B		34.2	C		36.6	D	
Intersection Delay, s/veh / LOS	32.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	1.15	A	0.50	A	1.11	A	1.01	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Nov 22, 2019	Area Type	Other		
Jurisdiction	City of South Gate	Time Period	Existing - PM	PHF	0.92		
Urban Street	Otis / Ardmore	Analysis Year	2019	Analysis Period	1 > 16:30		
Intersection	Intersection #12	File Name	12PM - Existing.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	65	2	261	4	2	1	60	576	1	1	585	36

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	37.1	19.5	19.9	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0		
				Red	1.0	1.0	1.0	0.0	0.0	0.0		

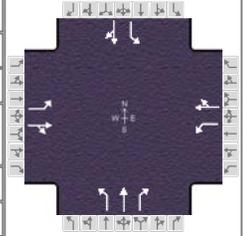
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		41.6		41.6		24.4		24.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						18.6		18.3
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.3		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	357			8			361			331		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1593			1203			1883			1899		
Queue Service Time ( g <sub>s</sub> ), s	7.0			0.0			16.6			14.8		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	14.9			0.2			16.6			14.8		
Green Ratio ( g/C )	0.41			0.41			0.22			0.22		
Capacity ( c ), veh/h	704			558			417			421		
Volume-to-Capacity Ratio ( X )	0.507			0.014			0.866			0.787		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	243.6			4.6			304.8			276.9		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	9.7			0.2			12.2			11.1		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	19.9			15.6			33.7			33.0		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.6			0.0			2.2			1.3		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	22.5			15.7			35.9			34.3		
Level of Service ( LOS )	C			B			D			C		
Approach Delay, s/veh / LOS	22.5	C		15.7	B		35.1	D		37.0	D	
Intersection Delay, s/veh / LOS	33.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	1.08	A	0.50	A	1.06	A	1.05	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersecion #3	File Name	03AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	45	392	59	64	365	60	117	514	80	68	403	50

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	55.5	25.5	0.0	0.0	0.0	0.0				
		Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

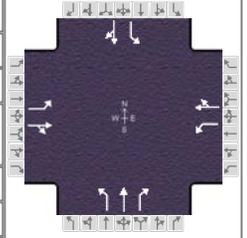
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	49	490		70	462		127	559	87	74	492	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	945	1856		921	1853		919	1900	1610	864	1863	
Queue Service Time ( g <sub>s</sub> ), s	4.1	23.1		2.4	21.4		7.5	14.4	2.0	4.6	12.4	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	23.1		25.5	21.4		19.9	14.4	2.0	18.9	12.4	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	123	526		104	525		520	1172	993	475	1149	
Volume-to-Capacity Ratio ( X )	0.398	0.932		0.668	0.880		0.245	0.477	0.088	0.156	0.429	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	49.8	485.5		85.4	425.4		73.1	236.2	28.9	42.2	206.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.0	19.4		3.4	17.0		2.9	9.4	1.2	1.7	8.2	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	43.2	31.4		44.6	30.8		14.2	9.4	7.0	14.5	9.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.8	23.3		12.5	15.3		1.1	1.4	0.2	0.7	1.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	44.0	54.7		57.1	46.1		15.3	10.8	7.2	15.2	10.2	
Level of Service ( LOS )	D	D		E	D		B	B	A	B	B	
Approach Delay, s/veh / LOS	53.7		D	47.5		D	11.1		B	10.8		B
Intersection Delay, s/veh / LOS	28.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.38	A	1.36	A	1.76	B	1.42	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersecion #3	File Name	03PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	66	421	103	49	329	58	114	424	77	78	502	60

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	55.5	25.5	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
				Red	1.0	1.0	0.0	0.0	0.0	0.0				

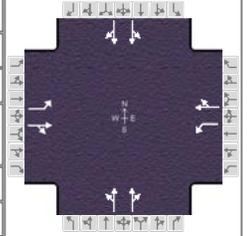
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	72	570		53	421		124	461	84	85	611	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	982	1835		856	1850		823	1900	1610	946	1864	
Queue Service Time ( g <sub>s</sub> ), s	6.5	25.5		0.0	19.0		9.1	11.0	1.9	4.5	16.8	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	25.5		25.5	19.0		25.9	11.0	1.9	15.5	16.8	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	151	520		80	524		434	1172	993	547	1150	
Volume-to-Capacity Ratio ( X )	0.475	1.095		0.666	0.802		0.286	0.393	0.084	0.155	0.531	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	72.3	744.6		68.6	359.6		82.2	190.9	27.7	44.1	264.8	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.9	29.8		2.7	14.4		3.3	7.6	1.1	1.8	10.6	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	41.8	32.3		45.0	29.9		17.2	8.7	7.0	12.7	9.8	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.9	68.0		15.6	8.1		1.6	1.0	0.2	0.6	1.8	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	42.6	100.3		60.6	38.0		18.9	9.7	7.1	13.3	11.6	
Level of Service ( LOS )	D	F		E	D		B	A	A	B	B	
Approach Delay, s/veh / LOS	93.8	F		40.6	D		11.1	B		11.8	B	
Intersection Delay, s/veh / LOS	38.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.55	B	1.27	A	1.59	B	1.64	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	California / Independence	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #4	File Name	04AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	26	158	72	69	163	37	109	603	27	22	563	18

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	34.8	22.7	19.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0				
				Red	1.0	1.0	1.0	0.0	0.0	0.0				

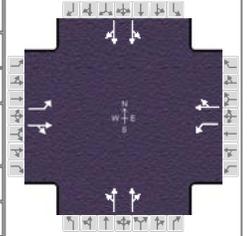
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		4		8
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		39.3		39.3		27.2		23.5
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.0
Queue Clearance Time ( g <sub>s</sub> ), s						21.5		17.8
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.2		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.08		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	28	250		75	217		421		383	344		311
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1182	1799		1148	1839		1874		1874	1893		1879
Queue Service Time ( g <sub>s</sub> ), s	1.5	8.9		4.5	7.4		19.5		17.3	15.8		14.1
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	8.9	8.9		13.4	7.4		19.5		17.3	15.8		14.1
Green Ratio ( g/C )	0.39	0.39		0.39	0.39		0.25		0.25	0.21		0.21
Capacity ( c ), veh/h	440	696		410	712		473		473	399		396
Volume-to-Capacity Ratio ( X )	0.064	0.359		0.183	0.306		0.889		0.809	0.863		0.786
Back of Queue ( Q ), ft/ln ( 95 th percentile)	20.1	172.2		58	145.2		370.8		316.9	291.5		261.8
Back of Queue ( Q ), veh/ln ( 95 th percentile)	0.8	6.9		2.3	5.8		14.8		12.7	11.7		10.5
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	22.3	19.6		24.4	19.2		32.4		31.6	34.3		33.6
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3	1.4		1.0	1.1		9.7		4.1	2.2		1.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	22.6	21.1		25.4	20.3		42.1		35.7	36.5		34.9
Level of Service ( LOS )	C	C		C	C		D		D	D		C
Approach Delay, s/veh / LOS	21.2	C		21.6	C		39.1		D	35.7		D
Intersection Delay, s/veh / LOS	33.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.93	B	1.95	B
Bicycle LOS Score / LOS	0.95	A	0.97	A	1.15	A	1.03	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	California / Independence	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersection #4	File Name	04PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	26	143	34	30	119	33	51	517	30	9	574	12

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On											
Force Mode	Fixed	Simult. Gap N/S	On											
				Green	38.9	18.6	18.9	0.0	0.0	0.0				
				Yellow	3.5	3.5	3.5	0.0	0.0	0.0				
				Red	1.0	1.0	1.0	0.0	0.0	0.0				

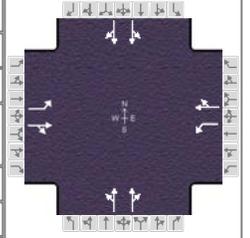
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		43.4		43.4		23.4		23.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.0
Queue Clearance Time ( g <sub>s</sub> ), s						17.7		17.6
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.2		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	28	192		33	165		342		308	339		307
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1240	1837		1210	1829		1885		1864	1897		1886
Queue Service Time ( g <sub>s</sub> ), s	1.3	6.0		1.6	5.1		15.7		14.1	15.6		13.9
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	6.4	6.0		7.6	5.1		15.7		14.1	15.6		13.9
Green Ratio ( g/C )	0.43	0.43		0.43	0.43		0.21		0.21	0.21		0.21
Capacity ( c ), veh/h	547	795		523	791		396		392	393		390
Volume-to-Capacity Ratio ( X )	0.052	0.242		0.062	0.209		0.862		0.786	0.865		0.788
Back of Queue ( Q ), ft/ln ( 95 th percentile)	17.5	114.2		20.7	96.4		289.5		259.8	293.6		259.8
Back of Queue ( Q ), veh/ln ( 95 th percentile)	0.7	4.6		0.8	3.9		11.6		10.4	11.7		10.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	17.9	16.2		18.6	15.9		34.3		33.6	34.5		33.8
Incremental Delay ( d <sub>2</sub> ), s/veh	0.2	0.7		0.2	0.6		2.2		1.3	3.7		1.4
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	18.1	16.9		18.8	16.5		36.5		34.9	38.1		35.2
Level of Service ( LOS )	B	B		B	B		D		C	D		D
Approach Delay, s/veh / LOS	17.0	B		16.9	B		35.8		D	36.7		D
Intersection Delay, s/veh / LOS	31.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	0.85	A	0.81	A	1.02	A	1.02	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	California / Ardmore	Analysis Year	2019	Analysis Period	1 > 7:15
Intersection	Intersection #5	File Name	05AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	70	236	111	51	144	43	36	665	29	39	542	75

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green	33.3	20.6	22.6	0.0	0.0	0.0					
		Yellow	3.5	3.5	3.5	0.0	0.0	0.0					
		Red	1.0	1.0	1.0	0.0	0.0	0.0					

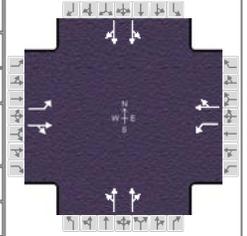
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		37.8		37.8		27.1		25.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.0		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						21.1		19.4
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.5		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	76	377		55	203		417		376	380		334
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1198	1797		1022	1824		1891		1872	1889		1820
Queue Service Time ( g <sub>s</sub> ), s	4.3	15.1		4.1	7.1		19.1		17.0	17.4		15.6
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	11.4	15.1		19.2	7.1		19.1		17.0	17.4		15.6
Green Ratio ( g/C )	0.37	0.37		0.37	0.37		0.25		0.25	0.23		0.23
Capacity ( c ), veh/h	429	665		287	676		474		469	433		417
Volume-to-Capacity Ratio ( X )	0.177	0.567		0.193	0.301		0.880		0.801	0.877		0.800
Back of Queue ( Q ), ft/ln ( 95 th percentile)	58.2	272.6		49.7	139.7		337		300.2	331.2		280.1
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.3	10.9		2.0	5.6		13.5		12.0	13.2		11.2
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	24.1	22.6		30.2	20.1		32.4		31.6	33.5		32.7
Incremental Delay ( d <sub>2</sub> ), s/veh	0.9	3.5		1.5	1.1		2.2		1.2	6.6		2.6
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	25.0	26.1		31.7	21.2		34.6		32.8	40.1		35.4
Level of Service ( LOS )	C	C		C	C		C		C	D		D
Approach Delay, s/veh / LOS	25.9	C		23.5	C		33.8		C	37.9		D
Intersection Delay, s/veh / LOS	32.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	1.24	A	0.91	A	1.14	A	1.08	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	California / Ardmore	Analysis Year	2019	Analysis Period	1 > 17:00
Intersection	Intersection #5	File Name	05PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	29	208	91	17	99	20	22	555	36	46	557	34

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green	37.2	19.9	19.3	0.0	0.0	0.0					
		Yellow	3.5	3.5	3.5	0.0	0.0	0.0					
		Red	1.0	1.0	1.0	0.0	0.0	0.0					

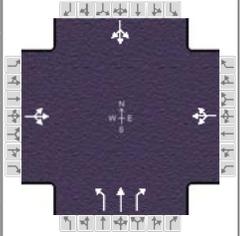
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		41.7		41.7		23.8		24.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						18.1		18.8
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.2		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	32	325		18	129		352		315	365		328
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1281	1801		1072	1844		1894		1858	1887		1862
Queue Service Time ( g <sub>s</sub> ), s	1.4	11.6		1.1	4.0		16.1		14.4	16.8		15.0
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.4	11.6		12.7	4.0		16.1		14.4	16.8		15.0
Green Ratio ( g/C )	0.41	0.41		0.41	0.41		0.21		0.21	0.22		0.22
Capacity ( c ), veh/h	553	746		385	763		407		399	418		412
Volume-to-Capacity Ratio ( X )	0.057	0.436		0.048	0.169		0.865		0.788	0.873		0.795
Back of Queue ( Q ), ft/ln ( 95 th percentile)	19.8	215.3		13.6	76.9		295.8		263.9	317.5		274.3
Back of Queue ( Q ), veh/ln ( 95 th percentile)	0.8	8.6		0.5	3.1		11.8		10.6	12.7		11.0
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	18.3	18.9		23.4	16.6		34.1		33.4	33.8		33.1
Incremental Delay ( d <sub>2</sub> ), s/veh	0.2	1.9		0.2	0.5		2.2		1.3	5.6		1.9
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	18.5	20.7		23.7	17.1		36.3		34.7	39.5		35.0
Level of Service ( LOS )	B	C		C	B		D		C	D		D
Approach Delay, s/veh / LOS	20.5	C		17.9	B		35.5	D		37.4	D	
Intersection Delay, s/veh / LOS	31.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	1.08	A	0.73	A	1.04	A	1.06	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #10	File Name	10AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	111	400	55	59	271	8	48	321	150	21	299	102

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	52.4	28.6	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

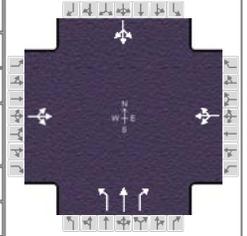
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		56.9		56.9		33.1		33.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						27.8		23.4
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.9		1.7
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.32

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	615			367			52	349	163	459		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1668			1625			968	1900	1610	1773		
Queue Service Time ( g <sub>s</sub> ), s	11.8			0.0			4.7	13.8	6.9	7.6		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	20.9			9.0			25.8	13.8	6.9	21.4		
Green Ratio ( g/C )	0.58			0.58			0.32	0.32	0.32	0.32		
Capacity ( c ), veh/h	1021			995			159	601	509	603		
Volume-to-Capacity Ratio ( X )	0.602			0.369			0.327	0.580	0.320	0.761		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	311.9			172			50.7	256.6	116.8	368		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	12.5			6.9			2.0	10.3	4.7	14.7		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	11.9			9.7			40.1	25.8	23.4	28.2		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.6			1.1			0.4	0.6	0.1	4.3		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	14.6			10.7			40.5	26.4	23.5	32.6		
Level of Service ( LOS )	B			B			D	C	C	C		
Approach Delay, s/veh / LOS	14.6	B		10.7	B		26.9	C		32.6	C	
Intersection Delay, s/veh / LOS	21.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.65	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.50	B	1.09	A	1.42	A	1.24	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2019	Analysis Period	1 > 16:00
Intersection	Intersection #10	File Name	10PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	68	390	71	93	345	10	61	274	112	10	367	99

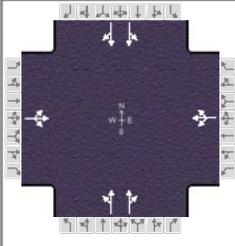
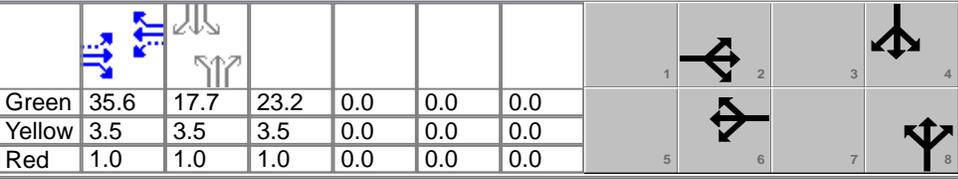
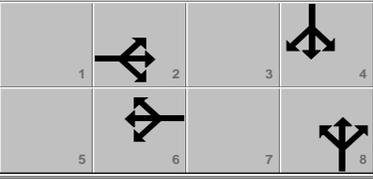
Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	50.5	30.5	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		55.0		55.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						32.1		25.5
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		1.3
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.60

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	575			487			66	298	122	517		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1719			1570			907	1900	1610	1821		
Queue Service Time ( g <sub>s</sub> ), s	1.7			0.0			6.5	11.1	4.9	4.6		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	18.5			16.8			30.1	11.1	4.9	23.5		
Green Ratio ( g/C )	0.56			0.56			0.34	0.34	0.34	0.34		
Capacity ( c ), veh/h	1010			929			150	644	546	658		
Volume-to-Capacity Ratio ( X )	0.569			0.524			0.441	0.463	0.223	0.786		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	296.3			256.2			66.4	211.8	81.5	413.2		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	11.9			10.2			2.7	8.5	3.3	16.5		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	12.6			12.0			41.3	23.3	21.3	27.4		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.3			2.1			0.8	0.2	0.1	5.8		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	14.9			14.1			42.1	23.5	21.4	33.2		
Level of Service ( LOS )	B			B			D	C	C	C		
Approach Delay, s/veh / LOS	14.9	B		14.1	B		25.5	C		33.2	C	
Intersection Delay, s/veh / LOS	21.8						C					

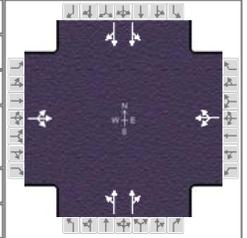
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.66	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.44	A	1.29	A	1.29	A	1.34	A

## HCS7 Signalized Intersection Results Summary

General Information					Intersection Information											
Agency	LLG Engineers				Duration, h	0.25										
Analyst	AS	Analysis Date	Dec 4, 2019		Area Type	Other										
Jurisdiction	City of South Gate	Time Period	Existing with Project - AM		PHF	0.92										
Urban Street	Otis / Independence	Analysis Year	2019		Analysis Period	1 > 7:15										
Intersection	Intersection #11	File Name	11AM - Existing with Project.xus													
Project Description	7801-7835 Otis Avenue Charter School															
Demand Information					EB			WB			NB			SB		
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h					39	102	111	33	28	9	107	547	84	40	476	37
Signal Information																
Cycle, s	90.0	Reference Phase	2													
Offset, s	0	Reference Point	End													
Uncoordinated	No	Simult. Gap E/W	On													
Force Mode	Fixed	Simult. Gap N/S	On													
Green	35.6	17.7	23.2	0.0	0.0	0.0										
Yellow	3.5	3.5	3.5	0.0	0.0	0.0										
Red	1.0	1.0	1.0	0.0	0.0	0.0										
Timer Results					EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase						2		6		8		4				
Case Number						8.0		8.0		12.0		12.0				
Phase Duration, s						40.1		40.1		27.7		22.2				
Change Period, ( Y+R <sub>c</sub> ), s						4.5		4.5		4.5		4.5				
Max Allow Headway ( MAH ), s						0.0		0.0		3.1		3.1				
Queue Clearance Time ( g <sub>s</sub> ), s										21.6		16.6				
Green Extension Time ( g <sub>e</sub> ), s						0.0		0.0		1.6		1.1				
Phase Call Probability										1.00		1.00				
Max Out Probability										0.00		0.00				
Movement Group Results					EB			WB			NB			SB		
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement					5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h					274			76			426			317		
Adjusted Saturation Flow Rate ( s ), veh/h/ln					1698			1437			1874			1821		
Queue Service Time ( g <sub>s</sub> ), s					0.0			0.0			19.6			17.4		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s					10.0			2.4			19.6			17.4		
Green Ratio ( g/C )					0.40			0.40			0.26			0.26		
Capacity ( c ), veh/h					718			627			484			470		
Volume-to-Capacity Ratio ( X )					0.382			0.121			0.880			0.801		
Back of Queue ( Q ), ft/ln ( 95 th percentile)					188.8			47.5			344.9			302.9		
Back of Queue ( Q ), veh/ln ( 95 th percentile)					7.6			1.9			13.8			12.1		
Queue Storage Ratio ( RQ ) ( 95 th percentile)					0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh					19.5			17.1			32.0			31.2		
Incremental Delay ( d <sub>2</sub> ), s/veh					1.5			0.4			2.1			1.2		
Initial Queue Delay ( d <sub>3</sub> ), s/veh					0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh					21.0			17.5			34.1			32.4		
Level of Service ( LOS )					C			B			C			C		
Approach Delay, s/veh / LOS					21.0	C		17.5	B		33.3	C		36.5	D	
Intersection Delay, s/veh / LOS					31.8						C					
Multimodal Results					EB			WB			NB			SB		
Pedestrian LOS Score / LOS					2.10	B		2.10	B		1.73	B		1.70	B	
Bicycle LOS Score / LOS					0.94	A		0.61	A		1.15	A		0.98	A	

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Existing with Project - PM	PHF	0.92
Urban Street	Otis / Independence	Analysis Year	2019	Analysis Period	1 > 16:45
Intersection	Intersection #11	File Name	11PM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	25	50	64	53	57	16	122	482	48	19	512	29

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	38.1	20.5	17.9	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0		
				Red	1.0	1.0	1.0	0.0	0.0	0.0		

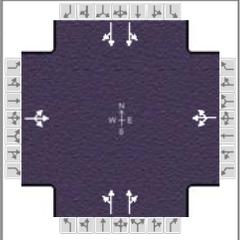
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		4		8
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		42.6		42.6		25.0		22.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						19.3		16.7
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.2		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.02		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	151			137			373			288		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1667			1577			1867			1894		
Queue Service Time ( g <sub>s</sub> ), s	0.0			0.0			17.3			14.7		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	4.9			4.4			17.3			14.7		
Green Ratio ( g/C )	0.42			0.42			0.23			0.20		
Capacity ( c ), veh/h	753			724			426			376		
Volume-to-Capacity Ratio ( X )	0.201			0.189			0.875			0.778		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	89.9			83.8			328.9			278.8		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.6			3.4			13.2			10.0		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	16.4			16.2			33.5			34.2		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.6			0.6			6.5			2.2		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	17.0			16.8			39.9			35.5		
Level of Service ( LOS )	B			B			D			D		
Approach Delay, s/veh / LOS	17.0	B		16.8	B		37.7	D		36.3	D	
Intersection Delay, s/veh / LOS	33.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.71	B	1.73	B
Bicycle LOS Score / LOS	0.74	A	0.71	A	1.07	A	0.99	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Existing with Project - AM	PHF	0.92
Urban Street	Otis / Ardmore	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	Intersection #12	File Name	12AM - Existing with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	108	5	275	3	2	1	80	625	5	2	544	68

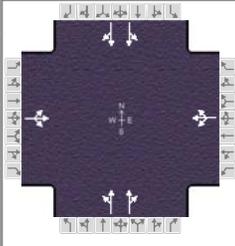
Signal Information				Signal Timing (s)								Signal Phases							
Cycle, s	90.0	Reference Phase	2	Green	35.1	19.4	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On																

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		39.6		39.6		26.5		23.9
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						20.5		18.3
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.5		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

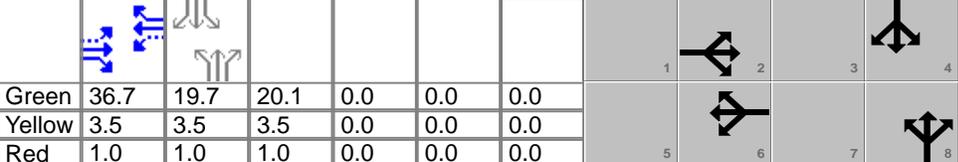
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	422			7			403			356		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1576			1192			1880			1895		
Queue Service Time ( g <sub>s</sub> ), s	15.4			0.0			18.5			16.3		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	19.9			0.2			18.5			16.3		
Green Ratio ( g/C )	0.39			0.39			0.24			0.22		
Capacity ( c ), veh/h	665			524			460			410		
Volume-to-Capacity Ratio ( X )	0.634			0.012			0.875			0.868		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	309.9			4.1			330.7			311		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	12.4			0.2			13.2			12.4		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	22.7			16.8			32.7			34.0		
Incremental Delay ( d <sub>2</sub> ), s/veh	4.6			0.0			2.1			4.7		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	27.3			16.9			34.8			38.8		
Level of Service ( LOS )	C			B			C			D		
Approach Delay, s/veh / LOS	27.3	C		16.9	B		34.0	C		37.0	D	
Intersection Delay, s/veh / LOS	33.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	1.18	A	0.50	A	1.12	A	1.04	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 4, 2019	Area Type	Other	
Jurisdiction	City of South Gate	Time Period	Existing with Project - PM	PHF	0.92	
Urban Street	Otis / Ardmore	Analysis Year	2019	Analysis Period	1 > 16:30	
Intersection	Intersection #12	File Name	12PM - Existing with Project.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	69	2	261	4	2	1	60	580	1	1	589	40

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green	36.7	19.7	20.1	0.0	0.0	0.0					
		Yellow	3.5	3.5	3.5	0.0	0.0	0.0					
		Red	1.0	1.0	1.0	0.0	0.0	0.0					

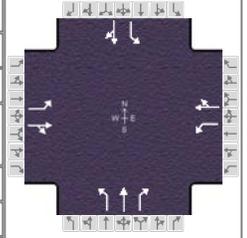
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		41.2		41.2		24.6		24.2
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						18.7		18.6
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.3		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	361			8			363			323		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1591			1197			1883			1899		
Queue Service Time ( g <sub>s</sub> ), s	7.8			0.0			16.7			14.9		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	15.3			0.2			16.7			14.9		
Green Ratio ( g/C )	0.41			0.41			0.22			0.22		
Capacity ( c ), veh/h	697			551			420			417		
Volume-to-Capacity Ratio ( X )	0.518			0.014			0.866			0.870		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	248.5			4.6			306.3			277.9		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	9.9			0.2			12.3			11.1		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	20.2			15.8			33.7			33.0		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.7			0.0			2.2			1.2		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	23.0			15.9			35.8			34.2		
Level of Service ( LOS )	C			B			D			C		
Approach Delay, s/veh / LOS	23.0	C		15.9	B		35.1	D		37.1	D	
Intersection Delay, s/veh / LOS	33.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	1.08	A	0.50	A	1.06	A	1.05	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future - AM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersecion #3	File Name	03AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	47	380	60	59	360	61	119	526	73	69	414	51

Signal Information				Signal Phases								
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	55.5	25.5	0.0	0.0	0.0	0.0				
		Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

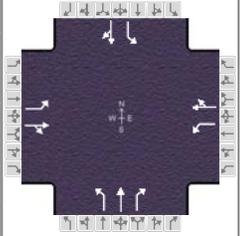
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	51	478		64	458		129	572	79	75	505	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	949	1854		931	1852		908	1900	1610	854	1863	
Queue Service Time ( g <sub>s</sub> ), s	4.3	22.4		3.1	21.2		7.9	14.9	1.8	4.8	12.8	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	22.4		25.5	21.2		20.7	14.9	1.8	19.6	12.8	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	126	525		112	525		510	1172	993	466	1149	
Volume-to-Capacity Ratio ( X )	0.407	0.910		0.573	0.872		0.253	0.488	0.080	0.161	0.440	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	52	458.6		70.1	417.7		75.8	242.5	26.3	43.5	212.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.1	18.3		2.8	16.7		3.0	9.7	1.1	1.7	8.5	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	43.1	31.1		44.2	30.7		14.5	9.5	7.0	14.8	9.1	
Incremental Delay ( d <sub>2</sub> ), s/veh	0.8	19.5		4.5	14.3		1.2	1.5	0.2	0.7	1.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	43.9	50.7		48.8	45.0		15.7	10.9	7.1	15.6	10.3	
Level of Service ( LOS )	D	D		D	D		B	B	A	B	B	
Approach Delay, s/veh / LOS	50.0	D		45.5	D		11.3	B		11.0	B	
Intersection Delay, s/veh / LOS	27.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.36	A	1.35	A	1.78	B	1.45	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future - PM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersecion #3	File Name	03PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	68	432	105	53	338	59	116	436	81	80	517	62

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	55.5	25.5	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
				Red	1.0	1.0	0.0	0.0	0.0	0.0				

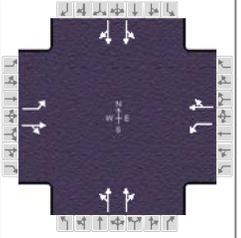
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	74	584		58	432		126	474	88	87	629	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	972	1835		844	1850		809	1900	1610	935	1864	
Queue Service Time ( g <sub>s</sub> ), s	5.9	25.5		0.0	19.6		9.6	11.5	2.0	4.7	17.6	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	25.5		25.5	19.6		27.2	11.5	2.0	16.2	17.6	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	144	520		80	524		421	1172	993	537	1150	
Volume-to-Capacity Ratio ( X )	0.515	1.122		0.720	0.823		0.300	0.404	0.089	0.162	0.547	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	76	798.8		80.9	374.9		85.8	196.7	29.3	46	274.8	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.0	32.0		3.2	15.0		3.4	7.9	1.2	1.8	11.0	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	42.5	32.3		45.0	30.1		17.9	8.8	7.0	12.9	10.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	1.4	77.6		23.6	9.6		1.8	1.0	0.2	0.6	1.9	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	43.9	109.9		68.6	39.7		19.7	9.8	7.2	13.6	11.9	
Level of Service ( LOS )	D	F		E	D		B	A	A	B	B	
Approach Delay, s/veh / LOS	102.4	F		43.2	D		11.3	B		12.1	B	
Intersection Delay, s/veh / LOS	41.1						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.57	B	1.29	A	1.62	B	1.67	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Future - AM	PHF	0.92
Urban Street	California / Independence	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #4	File Name	04AM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	28	155	73	70	161	38	111	608	28	22	570	19

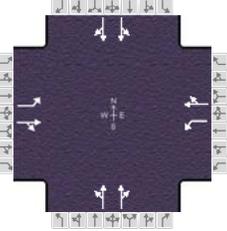
Signal Information				Phase Diagram							
Cycle, s	90.0	Reference Phase	2	1	2	3	4	5	6	7	8
Offset, s	0	Reference Point	End	Green	34.4	22.9	19.2	0.0	0.0	0.0	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		4		8
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		38.9		38.9		27.4		23.7
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		0.0		0.0		3.1		3.0
Queue Clearance Time ( $g_s$ ), s						21.7		18.0
Green Extension Time ( $g_e$ ), s		0.0		0.0		1.2		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.09		0.00

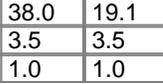
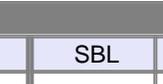
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( $v$ ), veh/h	30	248		76	216		425		387	349		315
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1183	1796		1150	1837		1873		1873	1894		1878
Queue Service Time ( $g_s$ ), s	1.7	8.9		4.6	7.4		19.7		17.5	16.0		14.3
Cycle Queue Clearance Time ( $g_c$ ), s	9.1	8.9		13.5	7.4		19.7		17.5	16.0		14.3
Green Ratio ( $g/C$ )	0.38	0.38		0.38	0.38		0.25		0.25	0.21		0.21
Capacity ( $c$ ), veh/h	434	686		406	702		477		477	404		400
Volume-to-Capacity Ratio ( $X$ )	0.070	0.361		0.188	0.308		0.890		0.810	0.865		0.787
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	21.9	172.5		59.5	146.3		375.3		320.4	294.3		264.5
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	0.9	6.9		2.4	5.9		15.0		12.8	11.8		10.6
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( $d_1$ ), s/veh	22.7	19.9		24.8	19.5		32.3		31.5	34.2		33.5
Incremental Delay ( $d_2$ ), s/veh	0.3	1.5		1.0	1.1		10.0		4.3	2.2		1.3
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( $d$ ), s/veh	23.0	21.4		25.8	20.6		42.3		35.8	36.4		34.8
Level of Service ( LOS )	C	C		C	C		D		D	D		C
Approach Delay, s/veh / LOS	21.6	C		22.0	C		39.2	D		35.6	D	
Intersection Delay, s/veh / LOS	33.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.93	B	1.95	B
Bicycle LOS Score / LOS	0.95	A	0.97	A	1.16	A	1.04	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of South Gate	Time Period	Future - PM	PHF	0.92	
Urban Street	California / Independence	Analysis Year	2021	Analysis Period	1 > 17:00	
Intersection	Intersection #4	File Name	04PM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	29	144	35	31	121	34	52	531	31	9	591	14

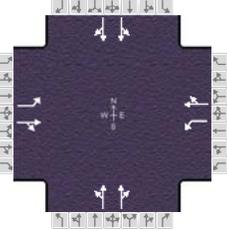
Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	38.0	19.1	19.4	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0		
				Red	1.0	1.0	1.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		42.5		42.5		23.9		23.6
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		0.0		0.0		3.1		3.0
Queue Clearance Time ( $g_s$ ), s						18.2		18.1
Green Extension Time ( $g_e$ ), s		0.0		0.0		1.2		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

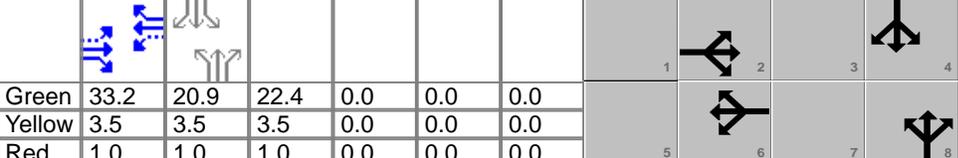
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	32	195		34	168		351		316	351		317
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1236	1835		1207	1828		1885		1864	1897		1884
Queue Service Time ( $g_s$ ), s	1.5	6.2		1.7	5.3		16.2		14.4	16.1		14.3
Cycle Queue Clearance Time ( $g_c$ ), s	6.8	6.2		7.8	5.3		16.2		14.4	16.1		14.3
Green Ratio ( $g/C$ )	0.42	0.42		0.42	0.42		0.22		0.22	0.21		0.21
Capacity ( $c$ ), veh/h	529	774		506	771		406		402	404		401
Volume-to-Capacity Ratio ( $X$ )	0.060	0.251		0.067	0.218		0.865		0.788	0.868		0.791
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	20.1	118.7		22	101		295.8		265	303.9		265.7
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	0.8	4.7		0.9	4.0		11.8		10.6	12.2		10.6
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( $d_1$ ), s/veh	18.7	16.8		19.4	16.6		34.0		33.4	34.2		33.5
Incremental Delay ( $d_2$ ), s/veh	0.2	0.8		0.3	0.7		2.2		1.3	4.5		1.3
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( $d$ ), s/veh	18.9	17.6		19.6	17.2		36.2		34.7	38.7		34.9
Level of Service (LOS)	B	B		B	B		D		C	D		C
Approach Delay, s/veh / LOS	17.8		B	17.6		B	35.5		D	36.9		D
Intersection Delay, s/veh / LOS	31.7						C					

Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93
Bicycle LOS Score / LOS	0.86	A	0.82	A	1.04	A	1.04	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of South Gate	Time Period	Future - AM	PHF	0.92	
Urban Street	California / Ardmore	Analysis Year	2021	Analysis Period	1 > 7:15	
Intersection	Intersection #5	File Name	05AM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	71	236	113	43	143	44	37	671	19	40	549	77

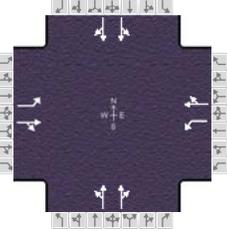
Signal Information														
Cycle, s	90.0	Reference Phase	2	Green	33.2	20.9	22.4	0.0	0.0	0.0				
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	0.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		37.7		37.7		26.9		25.4
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.0		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						21.0		19.7
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.4		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.03

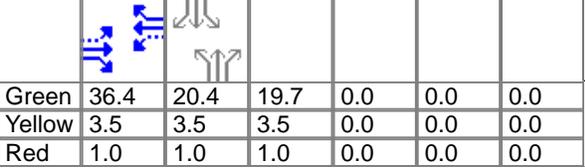
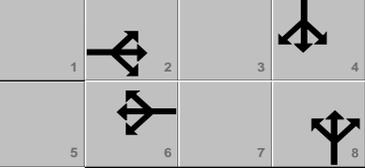
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	77	379		47	203		415		376	385		338
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1198	1795		1019	1823		1891		1881	1889		1819
Queue Service Time ( g <sub>s</sub> ), s	4.4	15.2		3.5	7.1		19.0		16.9	17.7		15.8
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	11.5	15.2		18.7	7.1		19.0		16.9	17.7		15.8
Green Ratio ( g/C )	0.37	0.37		0.37	0.37		0.25		0.25	0.23		0.23
Capacity ( c ), veh/h	427	662		283	672		471		469	439		422
Volume-to-Capacity Ratio ( X )	0.181	0.573		0.165	0.303		0.880		0.801	0.879		0.801
Back of Queue ( Q ), ft/ln ( 95 th percentile)	59.4	275.6		41.7	140.3		335.2		299.9	336.9		284.4
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.4	11.0		1.7	5.6		13.4		12.0	13.5		11.4
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	24.3	22.7		30.2	20.2		32.5		31.7	33.3		32.6
Incremental Delay ( d <sub>2</sub> ), s/veh	0.9	3.6		1.3	1.2		2.2		1.2	7.0		2.8
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	25.2	26.3		31.5	21.3		34.7		32.9	40.4		35.4
Level of Service ( LOS )	C	C		C	C		C		C	D		D
Approach Delay, s/veh / LOS	26.1	C		23.2	C		33.8	C		38.1	D	
Intersection Delay, s/veh / LOS	32.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	1.24	A	0.90	A	1.14	A	1.08	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of South Gate	Time Period	Future - PM	PHF	0.92	
Urban Street	California / Ardmore	Analysis Year	2021	Analysis Period	1 > 17:00	
Intersection	Intersection #5	File Name	05PM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( $v$ ), veh/h	30	211	93	15	102	20	22	570	34	47	574	35

Signal Information															
Cycle, s	90.0	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	36.4	20.4	19.7	0.0	0.0	0.0					
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0					

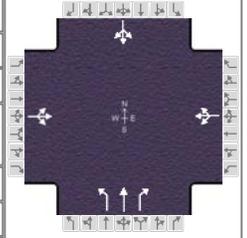
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		40.9		40.9		24.2		24.9
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		0.0		0.0		3.0		3.1
Queue Clearance Time ( $g_s$ ), s						18.4		19.3
Green Extension Time ( $g_e$ ), s		0.0		0.0		1.2		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	33	330		16	133		359		322	376		338
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1277	1801		1066	1846		1894		1861	1887		1862
Queue Service Time ( $g_s$ ), s	1.5	12.1		1.0	4.2		16.4		14.7	17.3		15.4
Cycle Queue Clearance Time ( $g_c$ ), s	5.7	12.1		13.1	4.2		16.4		14.7	17.3		15.4
Green Ratio ( $g/C$ )	0.40	0.40		0.40	0.40		0.22		0.22	0.23		0.23
Capacity ( $c$ ), veh/h	537	728		368	746		414		407	429		423
Volume-to-Capacity Ratio ( $X$ )	0.061	0.454		0.044	0.178		0.867		0.790	0.876		0.798
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	20.9	223		12.3	80.6		300.7		268.2	327.8		282.3
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	0.8	8.9		0.5	3.2		12.0		10.7	13.1		11.3
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( $d_1$ ), s/veh	19.0	19.6		24.3	17.2		33.9		33.2	33.6		32.8
Incremental Delay ( $d_2$ ), s/veh	0.2	2.0		0.2	0.5		2.2		1.3	6.4		2.4
Initial Queue Delay ( $d_3$ ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( $d$ ), s/veh	19.2	21.6		24.6	17.7		36.1		34.5	40.0		35.2
Level of Service (LOS)	B	C		C	B		D		C	D		D
Approach Delay, s/veh / LOS	21.4	C		18.5	B		35.3	D		37.7	D	
Intersection Delay, s/veh / LOS	32.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	1.09	A	0.73	A	1.05	A	1.08	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate		Time Period	Future - AM	PHF
Urban Street	Otis / Santa Ana		Analysis Year	2021	Analysis Period
Intersection	Intersection #10		File Name	10AM - Future.xus	
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	66	412	56	61	278	8	49	293	153	21	275	68

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	55.3	25.7	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
				Red	1.0	1.0	0.0	0.0	0.0	0.0				

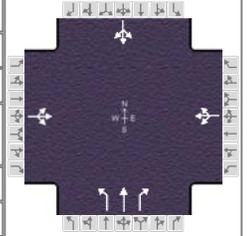
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		59.8		59.8		30.2		30.2
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						24.6		21.1
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.4		1.7
Phase Call Probability						1.00		1.00
Max Out Probability						0.41		0.13

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	580			377			53	318	166	396		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1748			1639			1026	1900	1610	1743		
Queue Service Time ( g <sub>s</sub> ), s	2.0			0.0			4.5	13.0	7.4	6.4		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	15.8			8.6			22.6	13.0	7.4	19.1		
Green Ratio ( g/C )	0.61			0.61			0.29	0.29	0.29	0.29		
Capacity ( c ), veh/h	1125			1059			164	536	454	534		
Volume-to-Capacity Ratio ( X )	0.516			0.356			0.325	0.594	0.366	0.741		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	255.1			158.1			51.6	244.6	126.8	324.9		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	10.2			6.3			2.1	9.8	5.1	13.0		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	9.5			8.2			40.0	27.9	25.9	29.8		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.7			0.9			0.4	0.4	0.2	2.9		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	11.2			9.1			40.4	28.2	26.0	32.7		
Level of Service ( LOS )	B			A			D	C	C	C		
Approach Delay, s/veh / LOS	11.2	B		9.1	A		28.8	C		32.7	C	
Intersection Delay, s/veh / LOS	20.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.23	B	1.65	B	1.70	B	1.70	B
Bicycle LOS Score / LOS	1.45	A	1.11	A	1.38	A	1.14	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future - PM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2021	Analysis Period	1 > 16:00
Intersection	Intersection #10	File Name	10PM - Future.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	59	409	72	96	354	10	62	280	115	10	376	101

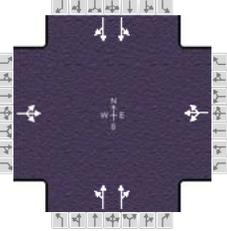
Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	50.5	30.5	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		55.0		55.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						32.5		26.3
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.77

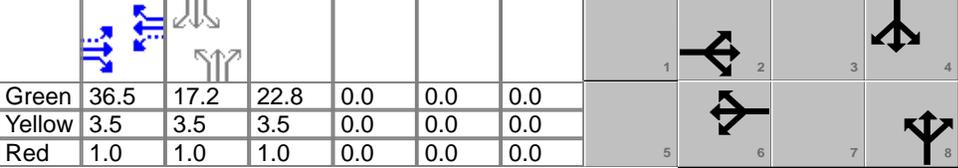
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	587			500			67	304	125	529		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1742			1555			897	1900	1610	1822		
Queue Service Time ( g <sub>s</sub> ), s	0.8			0.0			6.2	11.3	5.0	5.4		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	18.8			18.0			30.5	11.3	5.0	24.3		
Green Ratio ( g/C )	0.56			0.56			0.34	0.34	0.34	0.34		
Capacity ( c ), veh/h	1022			921			142	644	546	658		
Volume-to-Capacity Ratio ( X )	0.575			0.543			0.475	0.473	0.229	0.804		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	302.9			266.3			68.4	216	83.8	428.4		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	12.1			10.7			2.7	8.6	3.4	17.1		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	12.7			12.2			42.2	23.4	21.3	27.7		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.4			2.3			0.9	0.2	0.1	6.7		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	15.1			14.5			43.1	23.6	21.4	34.4		
Level of Service ( LOS )	B			B			D	C	C	C		
Approach Delay, s/veh / LOS	15.1	B		14.5	B		25.7	C		34.4	C	
Intersection Delay, s/veh / LOS	22.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.66	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.46	A	1.31	A	1.31	A	1.36	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of South Gate	Time Period	Future - AM	PHF	0.92	
Urban Street	Otis / Independence	Analysis Year	2021	Analysis Period	1 > 7:15	
Intersection	Intersection #11	File Name	11AM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( $v$ ), veh/h	34	104	113	34	29	9	109	528	86	41	463	33

Signal Information														
Cycle, s	90.0	Reference Phase	2	Green	36.5	17.2	22.8	0.0	0.0	0.0				
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	0.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

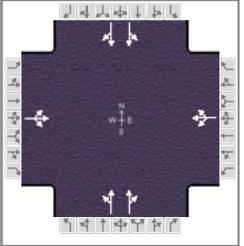
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		41.0		41.0		27.3		21.7
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( $g_s$ ), s						21.2		16.2
Green Extension Time ( $g_e$ ), s		0.0		0.0		1.6		1.0
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	273			78			417			369		
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1705			1436			1873			1817		
Queue Service Time ( $g_s$ ), s	0.0			0.0			19.2			17.1		
Cycle Queue Clearance Time ( $g_c$ ), s	9.8			2.4			19.2			17.1		
Green Ratio ( $g/C$ )	0.41			0.41			0.25			0.25		
Capacity ( $c$ ), veh/h	736			641			475			461		
Volume-to-Capacity Ratio ( $X$ )	0.371			0.122			0.878			0.800		
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	184			48			339.7			298.1		
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	7.4			1.9			13.6			11.9		
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( $d_1$ ), s/veh	18.8			16.6			32.2			31.4		
Incremental Delay ( $d_2$ ), s/veh	1.4			0.4			2.1			1.2		
Initial Queue Delay ( $d_3$ ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( $d$ ), s/veh	20.3			17.0			34.4			32.7		
Level of Service (LOS)	C			B			C			C		
Approach Delay, s/veh / LOS	20.3	C		17.0	B		33.6	C		36.7	D	
Intersection Delay, s/veh / LOS	31.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	0.94	A	0.62	A	1.14	A	0.97	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LLG Engineers			Duration, h	0.25		
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other		
Jurisdiction	City of South Gate	Time Period	Future - PM	PHF	0.92		
Urban Street	Otis / Independence	Analysis Year	2021	Analysis Period	1 > 16:45		
Intersection	Intersection #11	File Name	11PM - Future.xus				
Project Description	7801-7835 Otis Avenue Charter School						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	23	51	65	54	58	16	124	495	49	19	526	30

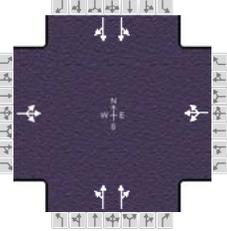
Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End	Green	37.2	21.0	18.3	0.0	0.0	0.0		1	2	3
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0		4		
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0		5	6	7

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		4		8
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		41.7		41.7		25.5		22.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						19.7		17.1
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.2		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.03		0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	151			139			382			296		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1675			1576			1867			1894		
Queue Service Time ( g <sub>s</sub> ), s	0.0			0.0			17.7			15.1		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.0			4.6			17.7			15.1		
Green Ratio ( g/C )	0.41			0.41			0.23			0.20		
Capacity ( c ), veh/h	739			709			435			385		
Volume-to-Capacity Ratio ( X )	0.204			0.196			0.877			0.856		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	91.7			86.9			337.6			284.5		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.7			3.5			13.5			11.4		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	16.9			16.8			33.3			34.6		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.6			0.6			7.1			2.2		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	17.6			17.4			40.3			36.8		
Level of Service ( LOS )	B			B			D			D		
Approach Delay, s/veh / LOS	17.6	B		17.4	B		37.9	D		36.1	D	
Intersection Delay, s/veh / LOS	33.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.71	B	1.73	B
Bicycle LOS Score / LOS	0.74	A	0.72	A	1.09	A	1.00	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of South Gate	Time Period	Future - AM	PHF	0.92	
Urban Street	Otis / Ardmore	Analysis Year	2021	Analysis Period	1 > 7:00	
Intersection	Intersection #12	File Name	12AM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	95	5	281	3	2	1	82	624	5	2	547	56

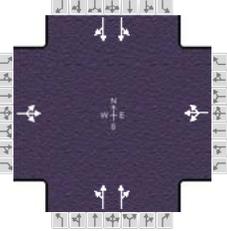
Signal Information																				
Cycle, s	90.0	Reference Phase	2																	
Offset, s	0	Reference Point	End	Green	35.3	19.1	22.1	0.0	0.0	0.0										
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0										
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	1.0	1.0	0.0	0.0	0.0										

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		39.8		39.8		26.6		23.6
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						20.6		18.0
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.5		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

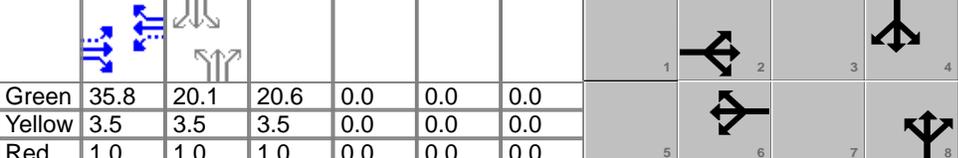
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	414			7			403			370		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1583			1186			1879			1895		
Queue Service Time ( g <sub>s</sub> ), s	13.7			0.0			18.6			16.5		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	19.1			0.2			18.6			16.5		
Green Ratio ( g/C )	0.39			0.39			0.25			0.25		
Capacity ( c ), veh/h	671			526			460			464		
Volume-to-Capacity Ratio ( X )	0.617			0.012			0.875			0.796		
Back of Queue ( Q ), ft/ln ( 95 th percentile )	300.7			4.1			331.4			299.7		
Back of Queue ( Q ), veh/ln ( 95 th percentile )	12.0			0.2			13.3			12.0		
Queue Storage Ratio ( RQ ) ( 95 th percentile )	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	22.3			16.7			32.7			31.9		
Incremental Delay ( d <sub>2</sub> ), s/veh	4.2			0.0			2.1			1.2		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	26.5			16.7			34.8			33.1		
Level of Service ( LOS )	C			B			C			C		
Approach Delay, s/veh / LOS	26.5	C		16.7	B		34.0	C		36.8	D	
Intersection Delay, s/veh / LOS	33.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	1.17	A	0.50	A	1.13	A	1.03	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of South Gate	Time Period	Future - PM	PHF	0.92	
Urban Street	Otis / Ardmore	Analysis Year	2021	Analysis Period	1 > 16:30	
Intersection	Intersection #12	File Name	12PM - Future.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( $v$ ), veh/h	67	2	266	4	2	1	61	597	1	1	605	39

Signal Information														
Cycle, s	90.0	Reference Phase	2	Green	35.8	20.1	20.6	0.0	0.0	0.0	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

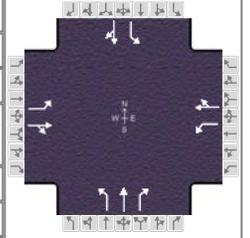
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		40.3		40.3		25.1		24.6
Change Period, ( $Y+R_c$ ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( $MAH$ ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( $g_s$ ), s						19.2		18.9
Green Extension Time ( $g_e$ ), s		0.0		0.0		1.4		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( $v$ ), veh/h	364			8			374			343		
Adjusted Saturation Flow Rate ( $s$ ), veh/h/ln	1593			1178			1883			1899		
Queue Service Time ( $g_s$ ), s	7.9			0.0			17.2			15.3		
Cycle Queue Clearance Time ( $g_c$ ), s	15.7			0.2			17.2			15.3		
Green Ratio ( $g/C$ )	0.40			0.40			0.23			0.23		
Capacity ( $c$ ), veh/h	682			531			430			434		
Volume-to-Capacity Ratio ( $X$ )	0.534			0.014			0.869			0.790		
Back of Queue ( $Q$ ), ft/ln ( 95 th percentile)	255.7			4.7			312.9			283.9		
Back of Queue ( $Q$ ), veh/ln ( 95 th percentile)	10.2			0.2			12.5			11.4		
Queue Storage Ratio ( $RQ$ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( $d_1$ ), s/veh	21.0			16.4			33.4			32.7		
Incremental Delay ( $d_2$ ), s/veh	3.0			0.0			2.1			1.2		
Initial Queue Delay ( $d_3$ ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( $d$ ), s/veh	24.0			16.4			35.6			33.9		
Level of Service ( LOS )	C			B			D			C		
Approach Delay, s/veh / LOS	24.0	C		16.4	B		34.8	C		37.4	D	
Intersection Delay, s/veh / LOS	33.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	1.09	A	0.50	A	1.08	A	1.07	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future with Project - AM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersecion #3	File Name	03AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	47	401	60	68	378	61	119	526	83	69	414	51

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	55.5	25.5	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

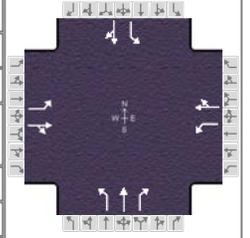
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate ( v ), veh/h	51	501		74	477		129	572	90	75	505	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	932	1857		911	1854		908	1900	1610	854	1863	
Queue Service Time ( g <sub>s</sub> ), s	3.1	23.8		1.7	22.4		7.9	14.9	2.0	4.8	12.8	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	23.8		25.5	22.4		20.7	14.9	2.0	19.6	12.8	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	113	526		97	525		510	1172	993	466	1149	
Volume-to-Capacity Ratio ( X )	0.454	0.953		0.764	0.909		0.253	0.488	0.091	0.161	0.440	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	52.3	513.3		106.3	456.3		75.8	242.5	30	43.5	212.2	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.1	20.5		4.3	18.3		3.0	9.7	1.2	1.7	8.5	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	44.0	31.7		44.8	31.1		14.5	9.5	7.0	14.8	9.1	
Incremental Delay ( d <sub>2</sub> ), s/veh	1.1	27.4		27.1	19.3		1.2	1.5	0.2	0.7	1.2	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	45.1	59.1		71.9	50.4		15.7	10.9	7.2	15.6	10.3	
Level of Service ( LOS )	D	E		E	D		B	B	A	B	B	
Approach Delay, s/veh / LOS	57.8	E		53.3	D		11.3	B		11.0	B	
Intersection Delay, s/veh / LOS	30.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.40	A	1.40	A	1.79	B	1.45	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future with Project - PM	PHF	0.92
Urban Street	California / Santa Ana	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersecion #3	File Name	03PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	68	437	105	55	342	59	116	436	84	80	517	62

Signal Information												
Cycle, s	90.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	55.5	25.5	0.0	0.0	0.0	0.0				
		Yellow	3.5	3.5	0.0	0.0	0.0	0.0				
		Red	1.0	1.0	0.0	0.0	0.0	0.0				

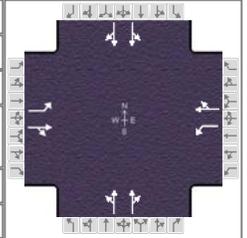
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		6.0		6.0		5.0		6.0
Phase Duration, s		30.0		30.0		60.0		60.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		3.3		3.3		0.0		0.0
Queue Clearance Time ( g <sub>s</sub> ), s		27.5		27.5				
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.0
Phase Call Probability		1.00		1.00				
Max Out Probability		1.00		1.00				

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate ( v ), veh/h	74	589		60	436		126	474	91	87	629	
Adjusted Saturation Flow Rate ( s ), veh/h/ln	968	1836		840	1851		809	1900	1610	935	1864	
Queue Service Time ( g <sub>s</sub> ), s	5.6	25.5		0.0	19.9		9.6	11.5	2.1	4.7	17.6	
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	25.5	25.5		25.5	19.9		27.2	11.5	2.1	16.2	17.6	
Green Ratio ( g/C )	0.28	0.28		0.28	0.28		0.62	0.62	0.62	0.62	0.62	
Capacity ( c ), veh/h	141	520		80	524		421	1172	993	537	1150	
Volume-to-Capacity Ratio ( X )	0.526	1.132		0.747	0.831		0.300	0.404	0.092	0.162	0.547	
Back of Queue ( Q ), ft/ln ( 95 th percentile)	76.6	819.9		87.9	381.4		85.8	196.7	30.5	46	274.8	
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.1	32.8		3.5	15.3		3.4	7.9	1.2	1.8	11.0	
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	
Uniform Delay ( d <sub>1</sub> ), s/veh	42.7	32.3		45.0	30.2		17.9	8.8	7.0	12.9	10.0	
Incremental Delay ( d <sub>2</sub> ), s/veh	1.8	81.3		28.5	10.3		1.8	1.0	0.2	0.6	1.9	
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Control Delay ( d ), s/veh	44.5	113.6		73.5	40.5		19.7	9.8	7.2	13.6	11.9	
Level of Service ( LOS )	D	F		E	D		B	A	A	B	B	
Approach Delay, s/veh / LOS	105.9	F		44.5	D		11.3	B		12.1	B	
Intersection Delay, s/veh / LOS	42.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	1.92	B	1.87	B	1.87	B
Bicycle LOS Score / LOS	1.58	B	1.31	A	1.63	B	1.67	B

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Future with Project - AM	PHF	0.92
Urban Street	California / Independence	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #4	File Name	04AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	28	162	73	70	167	38	111	618	28	22	579	19

Signal Information														
Cycle, s	90.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	33.9	23.2	19.4	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0				
				Red	1.0	1.0	1.0	0.0	0.0	0.0				

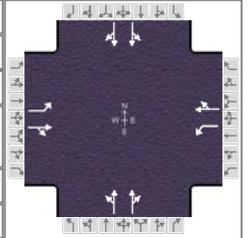
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		4		8
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		38.4		38.4		27.7		23.9
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.0
Queue Clearance Time ( g <sub>s</sub> ), s						21.9		18.2
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.3		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.10		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	30	255		76	223		431		392	354		320
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1176	1799		1142	1839		1874		1874	1894		1878
Queue Service Time ( g <sub>s</sub> ), s	1.7	9.3		4.7	7.7		19.9		17.7	16.2		14.5
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	9.4	9.3		14.0	7.7		19.9		17.7	16.2		14.5
Green Ratio ( g/C )	0.38	0.38		0.38	0.38		0.26		0.26	0.22		0.22
Capacity ( c ), veh/h	421	677		392	692		483		483	409		406
Volume-to-Capacity Ratio ( X )	0.072	0.377		0.194	0.322		0.892		0.812	0.866		0.789
Back of Queue ( Q ), ft/ln ( 95 th percentile)	22.3	180.9		60.7	153.3		381		324.7	297.5		267
Back of Queue ( Q ), veh/ln ( 95 th percentile)	0.9	7.2		2.4	6.1		15.2		13.0	11.9		10.7
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	23.3	20.4		25.5	19.9		32.2		31.4	34.0		33.3
Incremental Delay ( d <sub>2</sub> ), s/veh	0.3	1.6		1.1	1.2		10.4		4.5	2.2		1.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	23.6	22.0		26.6	21.1		42.6		35.9	36.2		34.7
Level of Service ( LOS )	C	C		C	C		D		D	D		C
Approach Delay, s/veh / LOS	22.2	C		22.5	C		39.4		D	35.5		D
Intersection Delay, s/veh / LOS	33.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.93	B	1.95	B
Bicycle LOS Score / LOS	0.96	A	0.98	A	1.17	A	1.04	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Future with Project - PM	PHF	0.92
Urban Street	California / Independence	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersection #4	File Name	04PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	29	146	35	31	122	34	52	534	31	9	593	14

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	37.8	19.2	19.5	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

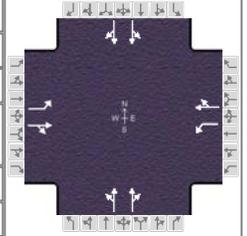
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		42.3		42.3		24.0		23.7
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.0
Queue Clearance Time ( g <sub>s</sub> ), s						18.2		18.1
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.2		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	32	197		34	170		353		318	352		318
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1235	1836		1205	1828		1885		1864	1897		1884
Queue Service Time ( g <sub>s</sub> ), s	1.5	6.3		1.7	5.3		16.2		14.5	16.1		14.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	6.8	6.3		7.9	5.3		16.2		14.5	16.1		14.4
Green Ratio ( g/C )	0.42	0.42		0.42	0.42		0.22		0.22	0.21		0.21
Capacity ( c ), veh/h	526	772		503	769		408		403	405		402
Volume-to-Capacity Ratio ( X )	0.060	0.255		0.067	0.221		0.865		0.788	0.869		0.791
Back of Queue ( Q ), ft/ln ( 95 th percentile)	20.2	120.6		22.1	102		296.6		266	304.7		266.4
Back of Queue ( Q ), veh/ln ( 95 th percentile)	0.8	4.8		0.9	4.1		11.9		10.6	12.2		10.7
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	18.9	16.9		19.5	16.7		34.0		33.3	34.2		33.5
Incremental Delay ( d <sub>2</sub> ), s/veh	0.2	0.8		0.3	0.7		2.2		1.3	4.5		1.3
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	19.1	17.7		19.8	17.3		36.2		34.6	38.7		34.8
Level of Service ( LOS )	B	B		B	B		D		C	D		C
Approach Delay, s/veh / LOS	17.9	B		17.7	B		35.5		D	36.9		D
Intersection Delay, s/veh / LOS	31.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	0.86	A	0.82	A	1.04	A	1.04	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Future with Project - AM	PHF	0.92
Urban Street	California / Ardmore	Analysis Year	2021	Analysis Period	1 > 7:15
Intersection	Intersection #5	File Name	05AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	71	243	113	52	149	44	37	681	29	40	558	77

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	32.3	21.1	23.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

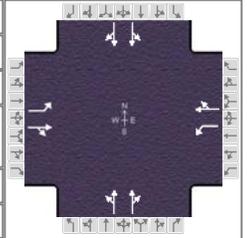
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		36.8		36.8		27.5		25.6
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.0		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						21.5		19.9
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.5		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.03

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	77	387		57	210		427		385	391		343
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1190	1797		1012	1825		1891		1872	1889		1820
Queue Service Time ( g <sub>s</sub> ), s	4.5	15.8		4.3	7.5		19.5		17.3	17.9		16.0
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	12.0	15.8		20.2	7.5		19.5		17.3	17.9		16.0
Green Ratio ( g/C )	0.36	0.36		0.36	0.36		0.26		0.26	0.23		0.23
Capacity ( c ), veh/h	409	646		266	656		484		479	444		428
Volume-to-Capacity Ratio ( X )	0.189	0.599		0.213	0.320		0.883		0.803	0.880		0.803
Back of Queue ( Q ), ft/ln ( 95 th percentile)	60.9	286.6		52.6	148.2		344.6		305.2	341.6		288
Back of Queue ( Q ), veh/ln ( 95 th percentile)	2.4	11.5		2.1	5.9		13.8		12.2	13.7		11.5
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	25.2	23.5		31.8	20.9		32.2		31.4	33.2		32.5
Incremental Delay ( d <sub>2</sub> ), s/veh	1.0	4.1		1.8	1.3		2.6		1.2	7.4		3.0
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	26.2	27.6		33.6	22.2		34.8		32.6	40.6		35.5
Level of Service ( LOS )	C	C		C	C		C		C	D		D
Approach Delay, s/veh / LOS	27.4	C		24.6	C		33.8		C	38.2		D
Intersection Delay, s/veh / LOS	32.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	2.11	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	1.25	A	0.93	A	1.16	A	1.09	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Future with Project - PM	PHF	0.92
Urban Street	California / Ardmore	Analysis Year	2021	Analysis Period	1 > 17:00
Intersection	Intersection #5	File Name	05PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	30	213	93	17	103	20	22	573	37	47	576	35

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	36.1	20.5	19.9	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	1.0	0.0	0.0	0.0								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		12.0		12.0
Phase Duration, s		40.6		40.6		24.4		25.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						18.6		19.3
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.3		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	33	333		18	134		363		324	377		339
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1276	1801		1064	1846		1894		1859	1887		1862
Queue Service Time ( g <sub>s</sub> ), s	1.5	12.2		1.2	4.2		16.6		14.8	17.3		15.4
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.7	12.2		13.4	4.2		16.6		14.8	17.3		15.4
Green Ratio ( g/C )	0.40	0.40		0.40	0.40		0.22		0.22	0.23		0.23
Capacity ( c ), veh/h	533	723		363	741		418		410	430		424
Volume-to-Capacity Ratio ( X )	0.061	0.460		0.051	0.180		0.868		0.791	0.876		0.798
Back of Queue ( Q ), ft/ln ( 95 th percentile)	21.1	225.3		14.1	81.8		302.9		269.8	328.9		283.1
Back of Queue ( Q ), veh/ln ( 95 th percentile)	0.8	9.0		0.6	3.3		12.1		10.8	13.2		11.3
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00	0.00		0.00
Uniform Delay ( d <sub>1</sub> ), s/veh	19.2	19.8		24.7	17.4		33.8		33.1	33.5		32.8
Incremental Delay ( d <sub>2</sub> ), s/veh	0.2	2.1		0.3	0.5		2.2		1.3	6.5		2.4
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Control Delay ( d ), s/veh	19.4	21.9		24.9	17.9		36.0		34.4	40.0		35.2
Level of Service ( LOS )	B	C		C	B		D		C	D		D
Approach Delay, s/veh / LOS	21.6	C		18.8	B		35.2	D		37.7	D	
Intersection Delay, s/veh / LOS	32.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.95	B	1.93	B
Bicycle LOS Score / LOS	1.09	A	0.74	A	1.05	A	1.08	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #10	File Name	10AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	114	412	56	61	278	8	49	334	153	21	312	111

Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	51.4	29.6	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

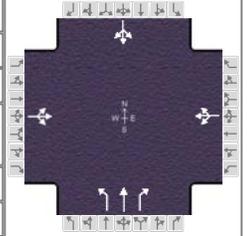
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		55.9		55.9		34.1		34.1
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						29.2		24.4
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.5		1.6
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.44

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	633			377			53	363	166	483		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1665			1602			947	1900	1610	1778		
Queue Service Time ( g <sub>s</sub> ), s	13.0			0.0			4.9	14.3	7.0	8.1		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	22.7			9.7			27.2	14.3	7.0	22.4		
Green Ratio ( g/C )	0.57			0.57			0.33	0.33	0.33	0.33		
Capacity ( c ), veh/h	999			963			157	624	529	626		
Volume-to-Capacity Ratio ( X )	0.633			0.392			0.339	0.581	0.314	0.771		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	336.3			185.1			51.9	263	116.8	385.7		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	13.5			7.4			2.1	10.5	4.7	15.4		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	12.9			10.3			40.2	25.1	22.6	27.7		
Incremental Delay ( d <sub>2</sub> ), s/veh	3.1			1.2			0.5	0.8	0.1	5.0		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	16.0			11.5			40.7	25.9	22.7	32.6		
Level of Service ( LOS )	B			B			D	C	C	C		
Approach Delay, s/veh / LOS	16.0	B		11.5	B		26.3	C		32.6	C	
Intersection Delay, s/veh / LOS	21.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.66	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.53	B	1.11	A	1.45	A	1.28	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of Huntington Park / City of South Gate	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Otis / Santa Ana	Analysis Year	2021	Analysis Period	1 > 16:00
Intersection	Intersection #10	File Name	10PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	71	409	72	96	354	10	62	290	115	10	385	111

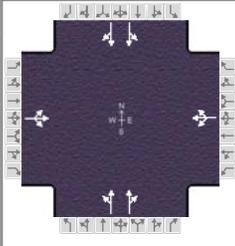
Signal Information																		
Cycle, s	90.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On	Green	50.5	30.5	0.0	0.0	0.0	0.0	1		2		3		4	
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	0.0	0.0	0.0	0.0	5		6		7		8	
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		5.0		8.0
Phase Duration, s		55.0		55.0		35.0		35.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.3		3.3
Queue Clearance Time ( g <sub>s</sub> ), s						32.5		27.7
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		0.0		0.9
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		1.00

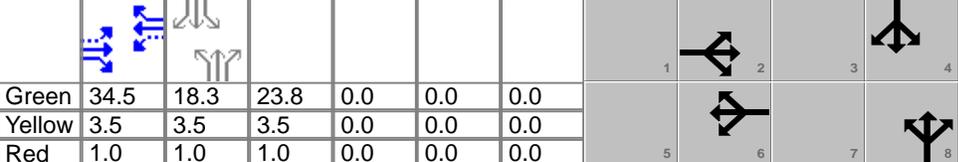
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	600			500			67	315	125	550		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1717			1544			880	1900	1610	1818		
Queue Service Time ( g <sub>s</sub> ), s	1.6			0.0			4.8	11.8	5.0	6.9		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	19.9			18.3			30.5	11.8	5.0	25.7		
Green Ratio ( g/C )	0.56			0.56			0.34	0.34	0.34	0.34		
Capacity ( c ), veh/h	1009			915			126	644	546	657		
Volume-to-Capacity Ratio ( X )	0.595			0.547			0.533	0.490	0.229	0.837		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	314.6			267.5			70.5	223.1	83.7	458.5		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	12.6			10.7			2.8	8.9	3.3	18.3		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00	0.00	0.00	0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	12.9			12.2			43.4	23.6	21.3	28.1		
Incremental Delay ( d <sub>2</sub> ), s/veh	2.6			2.3			2.3	0.2	0.1	8.8		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0	0.0	0.0	0.0		
Control Delay ( d ), s/veh	15.5			14.6			45.6	23.8	21.4	37.0		
Level of Service ( LOS )	B			B			D	C	C	D		
Approach Delay, s/veh / LOS	15.5	B		14.6	B		26.1	C		37.0	D	
Intersection Delay, s/veh / LOS	23.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.66	B	1.69	B	1.69	B
Bicycle LOS Score / LOS	1.48	A	1.31	A	1.33	A	1.40	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	LLG Engineers			Duration, h	0.25	
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other	
Jurisdiction	City of South Gate	Time Period	Future with Project - AM	PHF	0.92	
Urban Street	Otis / Independence	Analysis Year	2021	Analysis Period	1 > 7:15	
Intersection	Intersection #11	File Name	11AM - Future with Project.xus			
Project Description	7801-7835 Otis Avenue Charter School					

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	41	104	113	34	29	9	109	562	86	41	494	39

Signal Information													
Cycle, s	90.0	Reference Phase	2	Green	34.5	18.3	23.8	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On										

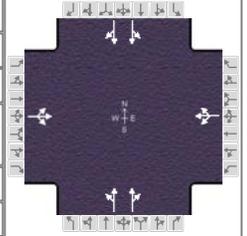
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		39.0		39.0		28.3		22.8
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						22.1		17.2
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.7		1.1
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	280			78			437			329		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1697			1422			1875			1887		
Queue Service Time ( g <sub>s</sub> ), s	0.5			0.0			20.1			15.2		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	10.5			2.5			20.1			15.2		
Green Ratio ( g/C )	0.38			0.38			0.26			0.20		
Capacity ( c ), veh/h	696			604			495			383		
Volume-to-Capacity Ratio ( X )	0.403			0.130			0.882			0.860		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	197.7			50.3			351.8			287.1		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	7.9			2.0			14.1			11.5		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	20.4			17.9			31.8			34.6		
Incremental Delay ( d <sub>2</sub> ), s/veh	1.7			0.4			2.1			3.0		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	22.1			18.3			33.9			37.6		
Level of Service ( LOS )	C			B			C			D		
Approach Delay, s/veh / LOS	22.1	C		18.3	B		33.1	C		36.6	D	
Intersection Delay, s/veh / LOS	31.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	0.95	A	0.62	A	1.17	A	1.00	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Otis / Independence	Analysis Year	2021	Analysis Period	1 > 16:45
Intersection	Intersection #11	File Name	11PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand ( v ), veh/h	25	51	65	54	58	16	124	503	49	19	533	31

Signal Information				Signal Phases									
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green		36.8	21.2	18.5	0.0	0.0	0.0				
		Yellow		3.5	3.5	3.5	0.0	0.0	0.0				
		Red		1.0	1.0	1.0	0.0	0.0	0.0				

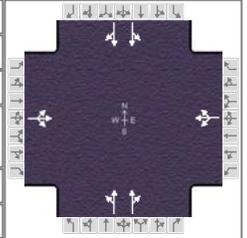
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6		2		4		8
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		41.3		41.3		25.7		23.0
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						20.0		17.3
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.2		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.04		0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate ( v ), veh/h	153			139			386			300		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1669			1576			1867			1894		
Queue Service Time ( g <sub>s</sub> ), s	0.0			0.0			18.0			15.3		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	5.1			4.6			18.0			15.3		
Green Ratio ( g/C )	0.41			0.41			0.24			0.21		
Capacity ( c ), veh/h	729			701			440			383		
Volume-to-Capacity Ratio ( X )	0.210			0.198			0.878			0.858		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	94.3			87.8			342.1			287.1		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	3.8			3.5			13.7			11.5		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	17.2			17.0			33.2			34.5		
Incremental Delay ( d <sub>2</sub> ), s/veh	0.7			0.6			7.4			2.2		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	17.9			17.7			40.5			36.6		
Level of Service ( LOS )	B			B			D			D		
Approach Delay, s/veh / LOS	17.9	B		17.7	B		38.1	D		35.9	D	
Intersection Delay, s/veh / LOS	33.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.71	B	1.73	B
Bicycle LOS Score / LOS	0.74	A	0.72	A	1.09	A	1.01	A

## HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Future with Project - AM	PHF	0.92
Urban Street	Otis / Ardmore	Analysis Year	2021	Analysis Period	1 > 7:00
Intersection	Intersection #12	File Name	12AM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	112	5	281	3	2	1	82	641	5	2	562	71

Signal Information													
Cycle, s	90.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	34.0	20.0	22.5	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	3.5	3.5	0.0	0.0	0.0			
				Red	1.0	1.0	1.0	0.0	0.0	0.0			

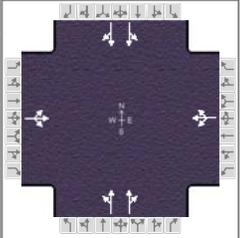
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		38.5		38.5		27.0		24.5
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						21.0		18.8
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.5		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	433			7			413			322		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1575			1164			1880			1821		
Queue Service Time ( g <sub>s</sub> ), s	17.0			0.0			19.0			15.0		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	21.1			0.2			19.0			15.0		
Green Ratio ( g/C )	0.38			0.38			0.25			0.22		
Capacity ( c ), veh/h	646			499			470			405		
Volume-to-Capacity Ratio ( X )	0.670			0.013			0.878			0.796		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	328.2			4.2			337.1			274		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	13.1			0.2			13.5			11.0		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	23.9			17.5			32.4			33.1		
Incremental Delay ( d <sub>2</sub> ), s/veh	5.5			0.0			2.1			2.0		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	29.3			17.6			34.5			35.1		
Level of Service ( LOS )	C			B			C			D		
Approach Delay, s/veh / LOS	29.3	C		17.6	B		33.7	C		37.4	D	
Intersection Delay, s/veh / LOS	34.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	1.20	A	0.50	A	1.14	A	1.06	A

# HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LLG Engineers			Duration, h	0.25
Analyst	AS	Analysis Date	Dec 13, 2019	Area Type	Other
Jurisdiction	City of South Gate	Time Period	Future with Project - PM	PHF	0.92
Urban Street	Otis / Ardmore	Analysis Year	2021	Analysis Period	1 > 16:30
Intersection	Intersection #12	File Name	12PM - Future with Project.xus		
Project Description	7801-7835 Otis Avenue Charter School				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand ( v ), veh/h	71	2	266	4	2	1	61	601	1	1	609	43

Signal Information				Signal Timing (s)						Signal Phases				
Cycle, s	90.0	Reference Phase	2	Green	35.5	20.4	20.7	0.0	0.0	0.0	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	3.5	3.5	3.5	0.0	0.0	0.0	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	1.0	1.0	1.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On											

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		8.0		8.0		12.0		12.0
Phase Duration, s		40.0		40.0		25.2		24.9
Change Period, ( Y+R <sub>c</sub> ), s		4.5		4.5		4.5		4.5
Max Allow Headway ( MAH ), s		0.0		0.0		3.1		3.1
Queue Clearance Time ( g <sub>s</sub> ), s						19.3		19.2
Green Extension Time ( g <sub>e</sub> ), s		0.0		0.0		1.4		1.2
Phase Call Probability						1.00		1.00
Max Out Probability						0.00		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate ( v ), veh/h	368			8			376			345		
Adjusted Saturation Flow Rate ( s ), veh/h/ln	1591			1171			1883			1899		
Queue Service Time ( g <sub>s</sub> ), s	8.7			0.0			17.3			15.4		
Cycle Queue Clearance Time ( g <sub>c</sub> ), s	16.1			0.2			17.3			15.4		
Green Ratio ( g/C )	0.39			0.39			0.23			0.23		
Capacity ( c ), veh/h	675			524			432			436		
Volume-to-Capacity Ratio ( X )	0.546			0.015			0.869			0.874		
Back of Queue ( Q ), ft/ln ( 95 th percentile)	261.5			4.8			314.5			284.9		
Back of Queue ( Q ), veh/ln ( 95 th percentile)	10.5			0.2			12.6			11.4		
Queue Storage Ratio ( RQ ) ( 95 th percentile)	0.00			0.00			0.00			0.00		
Uniform Delay ( d <sub>1</sub> ), s/veh	21.3			16.6			33.4			32.6		
Incremental Delay ( d <sub>2</sub> ), s/veh	3.2			0.1			2.1			1.2		
Initial Queue Delay ( d <sub>3</sub> ), s/veh	0.0			0.0			0.0			0.0		
Control Delay ( d ), s/veh	24.5			16.6			35.5			33.9		
Level of Service ( LOS )	C			B			D			C		
Approach Delay, s/veh / LOS	24.5	C		16.6	B		34.7	C		37.5	D	
Intersection Delay, s/veh / LOS	33.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	1.73	B	1.70	B
Bicycle LOS Score / LOS	1.10	A	0.50	A	1.08	A	1.07	A

# ATTACHMENT G

Resolution No. 20-XX

**RESOLUTION NO. 20-15**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CUDAHY REVERSING THE PLANNING COMMISSION'S DECISION TO DENY DEVELOPMENT REVIEW PERMIT NO. 41-532 TO ALLOW THE CONSTRUCTION OF A CHARTER SCHOOL LOCATED AT 7801-7835 OTIS AVENUE. APPLICANT: ETMNY CORNEJO.**

**WHEREAS:** The applicant, Etmny Cornejo, requests approval of a Development Review Permit to allow the design, site layout, and the construction of a charter school;

**WHEREAS:** The subject property is located at 7801-7835 Otis Avenue in an area that is designated by the Cudahy General Plan and by the Cudahy Zoning Map as Low Density Residential; and

**WHEREAS:** The subject property is approximately 95,832 square feet in area, and the LDR zone allows public elementary and secondary schools as a permitted use; and

**WHEREAS:** This matter was duly posted and set for a special public hearing by the Planning Commission on February 24, 2020 at 6:30pm consistent with the City of Cudahy's Zoning Ordinance procedures for Development Review Permits. At that meeting, the Planning Commission denied the applicant's request; and

**WHEREAS:** The applicant submitted a letter of appeal to the City Clerk's Office on March 4, 2020 and a subsequent appeal letter on May 21, 2020 appealing the Planning Commission's decision to deny the project and outlining the grounds of their appeal; and

**WHEREAS:** This matter was duly posted and set for a special public hearing by the City Council on June 2, 2020 at 6:30pm consistent with the City of Cudahy's Zoning Ordinance procedures for Development Review Permits and appeals to the City Council.

**NOW THEREFORE,** the City Council of the City of Cudahy hereby resolves:

**SECTION 1.** In accordance with the provisions of the California Environmental Quality Act (CEQA), an environmental analysis has been completed for this case. As a result of that analysis, it has been determined that this case is exempt from the requirements of CEQA and no further environmental documentation will be required, pursuant to Article 18, Statutory Exemptions Section 15268, *Ministerial Projects*, of the California Environmental Quality Act.

**SECTION 2.** After considering the proposal on the basis for approval or denial of Development Review Permit 41.532 stated in Chapter 20 of the Cudahy Municipal Code, the City Council finds as follows:

**DEVELOPMENT REVIEW PERMIT 41.532**

- A. The project is compatible with the City of Cudahy's General Plan because it proposes a coherent, incidental use to residential development in the Low-Density Residential General Plan designation and the Low-Density Residential zone.

- B. The height, bulk, and other design features of the Project's structures are in proportion to the building site, and external features are balanced and unified so as to present a harmonious appearance. The proposed development's structure is one story in height, similar to or lower than other structures within the immediate neighborhood. There is sufficient area in the 20-foot front setback for ample and dense landscaping, presenting a harmonious appearance with nearby residences that also face the street. Accordingly, the project is consistent with the height, bulk, and other design features required by the City Zoning design guidelines and provides a unified and uniform appearance.
- C. The project design contributes to the physical character of the community, relates harmoniously to existing and anticipated development in the vicinity, and is not monotonously repetitive in and of itself or in conjunction with neighboring uses and does not contribute to excessive variety among neighboring uses. The existing surrounding properties include single story and two-story single-family and multi-family residences as well as a city park. The proposed development includes one single-story charter school with associated recreational areas, landscaping, and parking, consistent with the height, bulk, and other design features found in the surrounding area. The proposed surface articulations, including trimmed windows, pop-out terraces etc., avoid monotonous repetition.
- D. The site layout and the orientation and location of structures and their relationship to one another and to open spaces, parking areas, pedestrian walks, signs, illumination, and landscaping achieve safe, efficient, and harmonious development. The proposed site layout presents a balanced plan that relates to other structures along surrounding streets more so than the previous industrial land uses on the site. The development's orientation beyond the deep setback and the driveway helps to screen the building's mass from the public right of way and adjacent properties. There are areas available for visitor parking, landscaping, including the front setback, the rear setback, the private open space and common areas. The driveway permits good visibility along the length of the project interior and will have security lighting for safety.
- E. The grading and site development show due regard for the qualities of the natural terrain and landscape and do not call for the indiscriminate destruction of trees, shrubs, and other natural features. The proposed development requires minor grading and removal of some existing shrubs. Previous structures on the site have already been demolished. Half of the lot is currently dirt and does not contain any trees. However, the rest of the site is urbanized, flat and there is little evidence of "natural" terrain. There are no "natural" features on the site. Moreover, the project would add new landscaping, including trees and shrubs, which would replace those that would be removed.
- F. The design, lighting, and placement of signs are appropriately related to the structure and grounds and are in harmony with the general development of the site. The project will not have illuminated signage, with the exception for possible illuminated identifying address signs on the front elevation. That sign must meet CMC standards for property identification signs and the conditions of approval for the project, and thus would be in harmony with the general development of the site.
- G. Mechanical equipment, machinery, trash, and other exterior service areas are screened or treated in a manner that is in harmony with the design of the structures and grounds. There are no proposed exterior mechanical equipment, machinery, or service areas except for the trash enclosures which are located behind decorative view obscuring doors

to prevent stormwater runoff and to provide further screening and meets zoning code requirements for multi-family developments. Other mechanical equipment must comply with CMC design guidelines and Building Code standards, which require that all mechanical equipment, machinery, trash, and other exterior service areas be screened from public view.

- H. The project shows proper consideration for adjacent residentially zoned or occupied property and does not adversely affect the character or value of such property. The proposed project would re-develop a former industrial site that lies between occupied single and multiple-family residences and a park. By introducing new, up-to-date construction with new landscaping, the project would improve the character of the adjacent properties and maintain or improve property value. The design is consistent with the City's General Plan and zoning designation, meets all development standards within the provisions of the Development Review Permit for the project, is compatible with the surrounding residential use, and will not adversely affect the value or quality of the neighborhood.

**SECTION 3.** Based upon the findings contained in this Resolution and on all other written and oral evidence in the record, the City Council hereby approves Development Review Permit No. 41-532, subject to the conditions of approval set forth below:

1. The applicant, its successors in interest, and assignees, shall indemnify, protect, defend (with legal counsel reasonably acceptable to the City), and hold harmless, the City, and any agency or instrumentality thereof, and its elected and appointed officials, officers, employees, and agents from and against all liabilities, claims, actions, causes of action, proceedings, suits, damages, judgments, liens, levies, and disbursements (collectively, "Claims") arising out of or in any way relating to this project, any discretionary approval granted by the City related to the development of the project, or the environmental review conducted under the California Environmental Quality Act, Public Resources Code section 21000 *et seq.*, ("CEQA") for the project. If the City Attorney is required to enforce any conditions of approval, the applicant shall pay for all costs of enforcement, including attorney's fees.
2. Subcontractors hired to improve the physical structures of the building shall obtain a contractor's business license from the City Business License Department and submit proof of workers' compensation insurance to the City Building Department, before the issuance of any permits.
3. All conditions shall be binding upon the applicants, their successors and assigns, shall run with the land, shall limit and control the issuance and validity of certificate of occupancy, and shall restrict and limit the construction, location, and use and maintenance of all land and structures within the development.
4. The site shall be kept in a neat manner at all times and any landscaping shall be continuously maintained in a healthy and thriving condition.
5. Any changes in building textures, materials, and colors on the exterior walls are subject to planning approval. A developer is required to submit samples of all exterior materials for approval prior to the issuance of building permits.
6. Construction shall conform to the site plan on file with the Community Development Department and as approved by the Planning Commission.

7. The Developer shall verify in writing that there is sufficient water service for the proposed development. Also, the developer agrees to install any equipment, lines or other necessary improvement to ensure that there will be sufficient water service for the proposed development.
8. A complete set of plans including the sewer, drainage, grading, and erosion control plans, which accurately depict the location of the proposed structures, driveways, and all other elements of the development, shall be submitted as part of the plan check submittal.
9. The applicant shall comply with all conditions set forth by the Los Angeles County Fire Department for this application.
10. Anti-graffiti substances shall be used on both sides of the perimeter walls of the subject property.
11. Applicant shall remove graffiti within 24 hours of application. In the event graffiti is not removed within 24 hours, the applicant grants access and indemnifies the City to enter the property to abate graffiti according to CMC Sections 15.20.150 and 15.20.
12. Utility equipment including and not limited to electricity, cable, or telephone equipment must be placed underground. Each unit shall have separate sewer and water lines.
13. Pursuant to the National Pollutant Discharge Elimination System (NPDES) Permit requirements, and City of Cudahy Municipal Code Section 11-2: Storm Water and Urban Runoff Pollution Control all construction projects of less than 1 acre are required to meet a minimum of water quality protection (i.e., Owner's Certification of Compliance with Minimum Requirements Form and/or Wet Weather Control Plan).
14. As part of the plan check submittal, written verification from the local water authority that there is sufficient water service for the additional dwelling units, as well as fire suppression being provided without interruption to residences.
15. A Lighting Plan shall be submitted with construction drawings to Building & Safety for plan check.
16. Landscaping and irrigation plans, which provide for adequate landscaping shall be submitted to the Community Development Department for approval as part of plan check submittal. All types of plants selected, and required watering systems for such landscaping, shall, to the extent possible, conserve water and shall be consistent with any water conservation ordinance enacted by the City.
17. All roof-mounted equipment shall be adequately and decoratively screened and shall not be visible from the street.
18. The locations of air-conditioning condensers shall be shown on the site plan and shall not be visible from the street.
19. All building materials and plants selected shall be comparable to the proposed development.

20. The developer shall obtain necessary permits to repair or improve any curb, gutter or sidewalk damaged due to the construction process.
21. The electrical transformer shall be adequately and decoratively screened from view. Dense landscaping shall be used as screening materials. The applicant shall provide the details with the set of building plans to illustrate this requirement.
22. The applicant shall include all general notes on the plans submitted for plan check as required. The floor plans and elevation drawings shall reflect the same information. The developer is required to check said plans for accuracy and make sure plans are drawn to scale and corrections are made as necessary prior to the issuance of permits.
23. The developer shall not deviate from any of the approved plans without prior approval from the Director of Community Development or the Planning Commission.
24. The developer shall submit a complete listing of all subcontractors used for the project. Each subcontractor shall obtain a contractor's business license from the City's Business License Department and submit proof of workers' compensation insurance to the City of Cudahy Building Department, before the issuance of any permits.
25. Contractors hired for the project must guarantee that safe and convenient school pedestrian routes are maintained. This would pertain to the arrival and dismissal times of each school day. Traffic controls (signs) shall be installed as needed to ensure safe routes to school. Construction vehicle trips scheduling shall be sequenced to minimize conflicts with pedestrians, school buses and cars.
26. The applicant shall comply with all conditions set forth by the Los Angeles Unified School District for this application.
27. Increased noise levels will be mitigated by the limitation of construction activities to not earlier than 7:00 A.M. and not later than 6:00 P.M. To reduce temporary construction noise contractors hired for the project shall implement BMPs such as providing advance notification of construction to surrounding land uses, ensuring that equipment is properly muffled, placement of noise sources away from residences, implementing noise attenuation measures, and generally conduct construction in compliance with City of Cudahy Municipal Code Article 23: Environmental Performance Standards.
28. All City Fees, i.e., plan check, building permit fees, school fees, Quimby fees, CC&R review, etc., shall be paid by the applicant prior to the submittal of the plans to the Building and Safety Department".
29. The applicant shall adhere to all requested mitigation measures provided by the Los Angeles Unified School District.
30. The applicant shall adhere to all requested mitigation measures provided by the Traffic Impact Study.
31. If new connections or (upgrades) to the sewer system are needed, developer to coordinate directly with Los Angeles County. If so, encroachment and excavation permit is required

by the City of Cudahy. Contact Engineering Department for submittal requirements. Public Works Permits are issued only once a week (Tuesdays from 1 pm to 3 pm).

32. If new connections or (upgrades) to the water system are needed, developer to coordinate directly with private Mutual Water Company providing service in the project area. If so, encroachment and excavation permit is required by the City of Cudahy.
33. If driveways and/or sidewalks are to be modified, encroachment and excavation permit is required by the City of Cudahy, please contact Engineering Department for submittal requirements.
34. Improvements and/or reconstruction work within the public right of way (street, sidewalks, driveways, ADA ramps, etc.) must be per the Standard Plans & Specs for Public Works Construction, City of Cudahy Street Repair Guidelines, Caltrans, MUTCD and/or other applicable code.
35. Reconstruction of sidewalk/driveway project frontage shall be required for code compliance and/or construction activity. This shall include slurry seal application and traffic striping restoration.
36. Development improvements and improvements within the public right of way shall follow and implement NPDES/MS4 requirements as applicable.
37. Developer/ Contractor to implement Best Management Practices during construction phase. Developer to submit BMPs plan for City's approval.
38. Development improvements and improvements within the public right of way shall follow and implement the City's LID Policy and Resolution as applicable.
39. Improvements within the public right of way shall follow and implement the City's Greens Streets Policy and Resolution as applicable.
40. Improvements within the Public right of Way shall follow and implement the City's Complete Streets Policy and Resolution as applicable.
41. The applicant shall sign and notarize an Affidavit of Acceptance of Conditions, which acknowledges all of the conditions imposed herein and the applicant's acceptance of this Permit subject to those conditions.
42. The rights granted under DRP No. 41-532 may be modified or revoked by the Planning Commission should it be determined that the proposed uses or conditions under which the project is being operated or maintained is detrimental to the public health, welfare or materially harmful to property or improvements in the vicinity, if the property is operated or maintained to constitute a public nuisance or is a contributor to blight, or if the uses on the property are changed from the uses expressly approved herein.
43. The rights granted under DRP No. 41-532 shall expire within one (1) year of the date of approval by the Planning Commission unless proper building permits have been obtained or the applicant(s) applies for and is granted an extension of time. No extension of time will be considered unless the application for an extension is filed at least 30 days prior to

the expiration. An extension will not be granted if conditions have changed in that the requisite findings for approval can no longer be made.

44. Prior to any occupancy permit being granted, or commencement of the approved use, these conditions shall be completed to the satisfaction of the City.

**PASSED, APPROVED, AND ADOPTED** by the City Council of the City of Cudahy at its regular meeting on this 2<sup>nd</sup> day of June 2020.

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Elizabeth Alcantar  
Mayor

ATTEST:

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Richard Iglesias  
Assistant City Clerk

**CERTIFICATION**

STATE OF CALIFORNIA            )  
COUNTY OF LOS ANGELES    ) SS:  
CITY OF CUDAHY                )

I, Richard Iglesias, Assistant City Clerk of the City of Cudahy, do hereby certify that the foregoing Resolution No. 20-15 was introduced and adopted at a regular meeting of the City Council of the City of Cudahy held on the 2<sup>nd</sup> day of June 2020.

AYES:

NOES:

ABSENT:

ABSTAIN:

\_\_\_\_\_  
Richard Iglesias  
Assistant City Clerk

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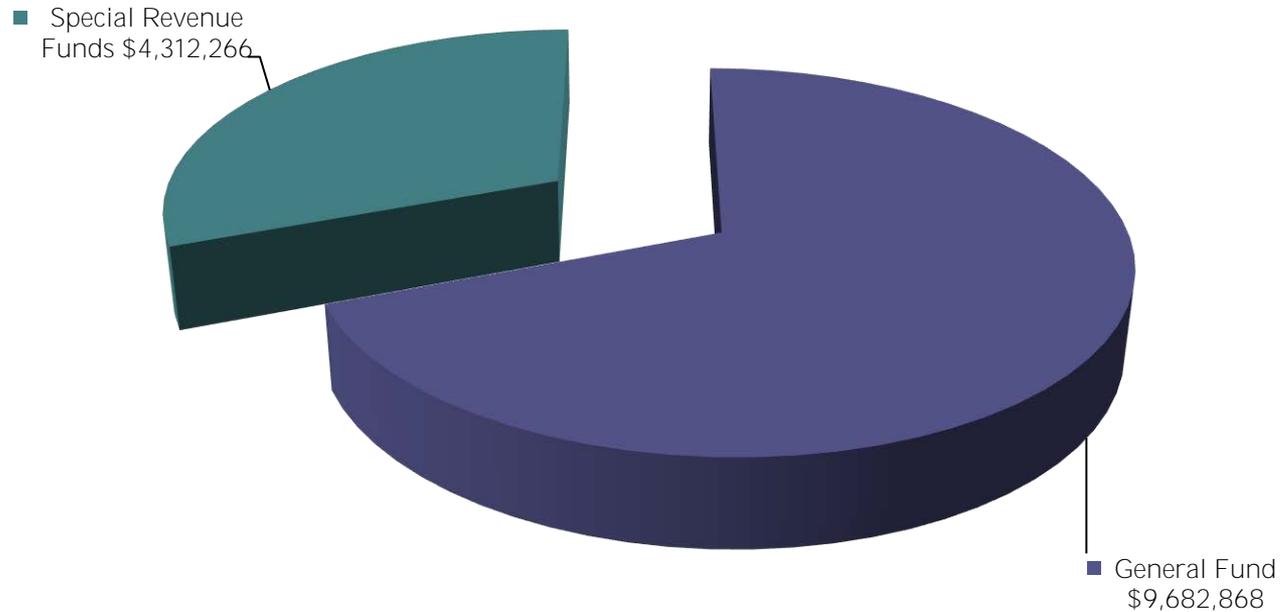
# Proposed FY 2020-21 City Budget

City Council Meeting  
June 02, 2020



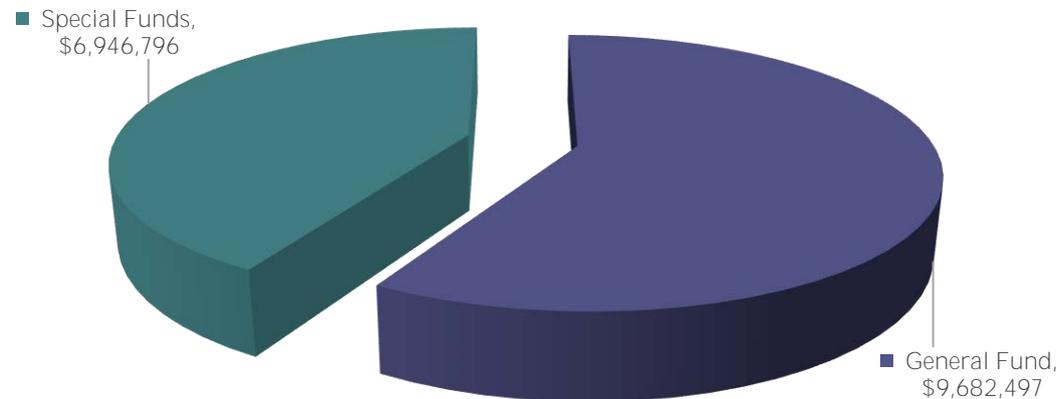
# General & Special Revenue Funds

Total Estimated Revenues = \$13,995,134



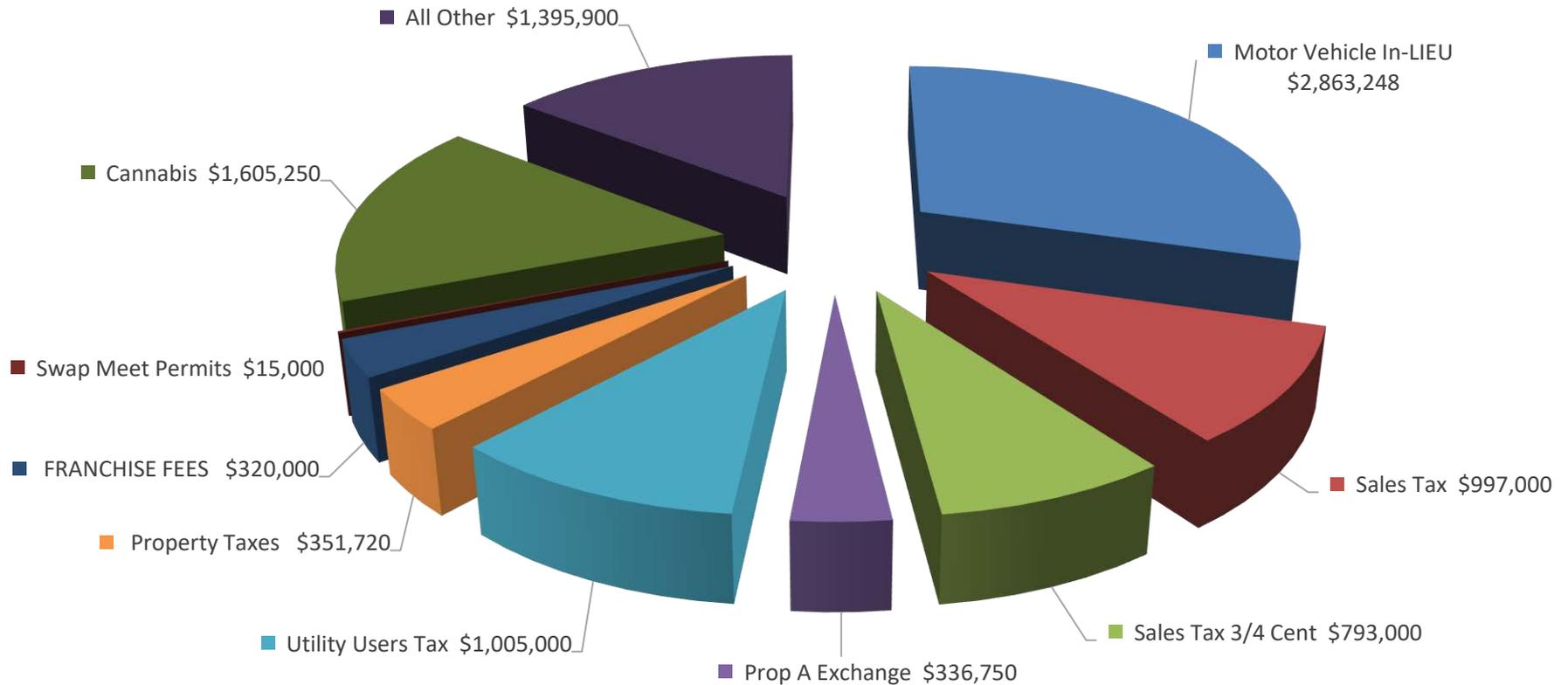
# General & Special Expenditure Funds

Total Estimated Expenditures = \$16,629,293



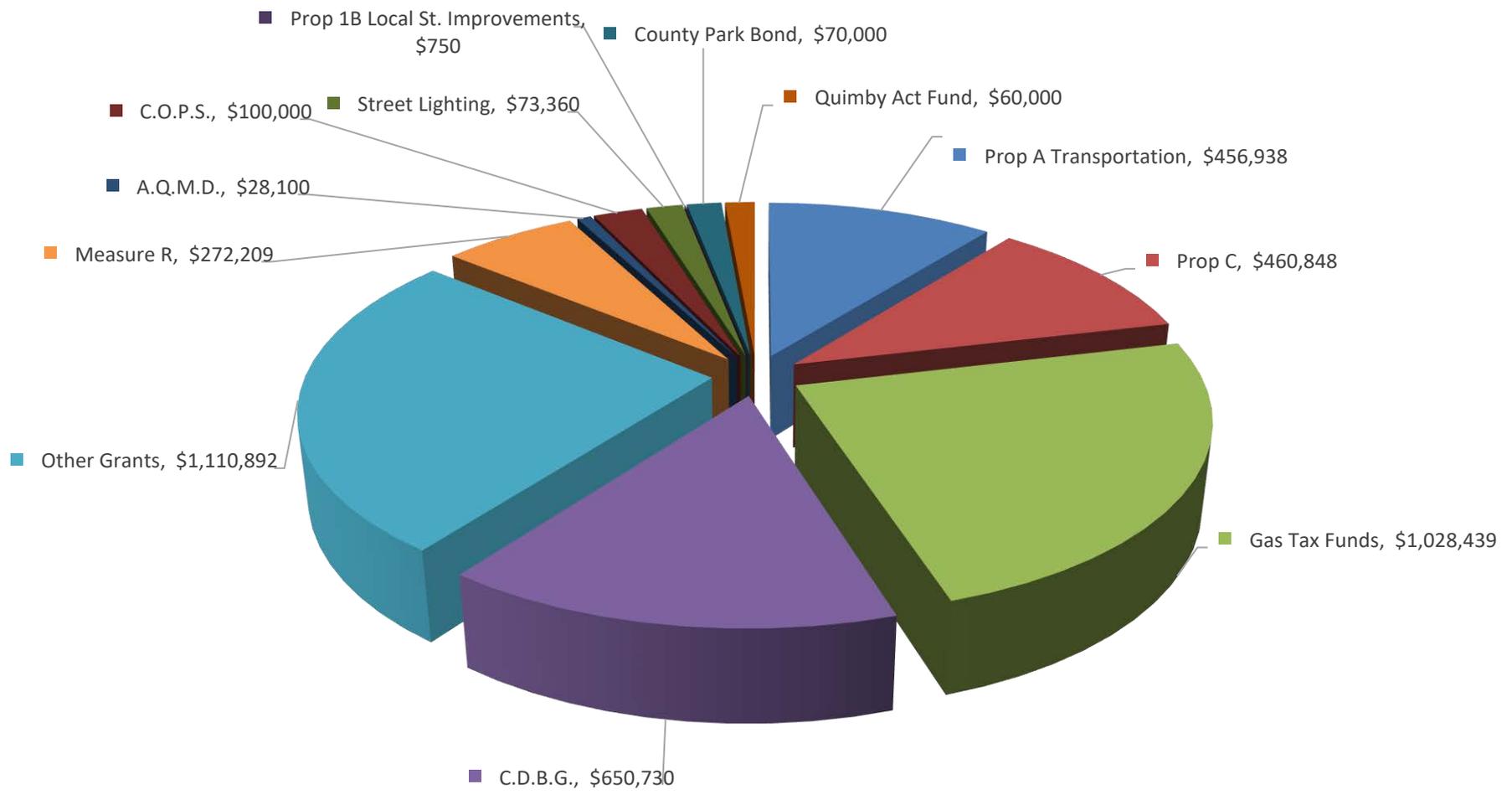
# PROPOSED GENERAL FUND REVENUES

Total Revenue = \$9,682,868



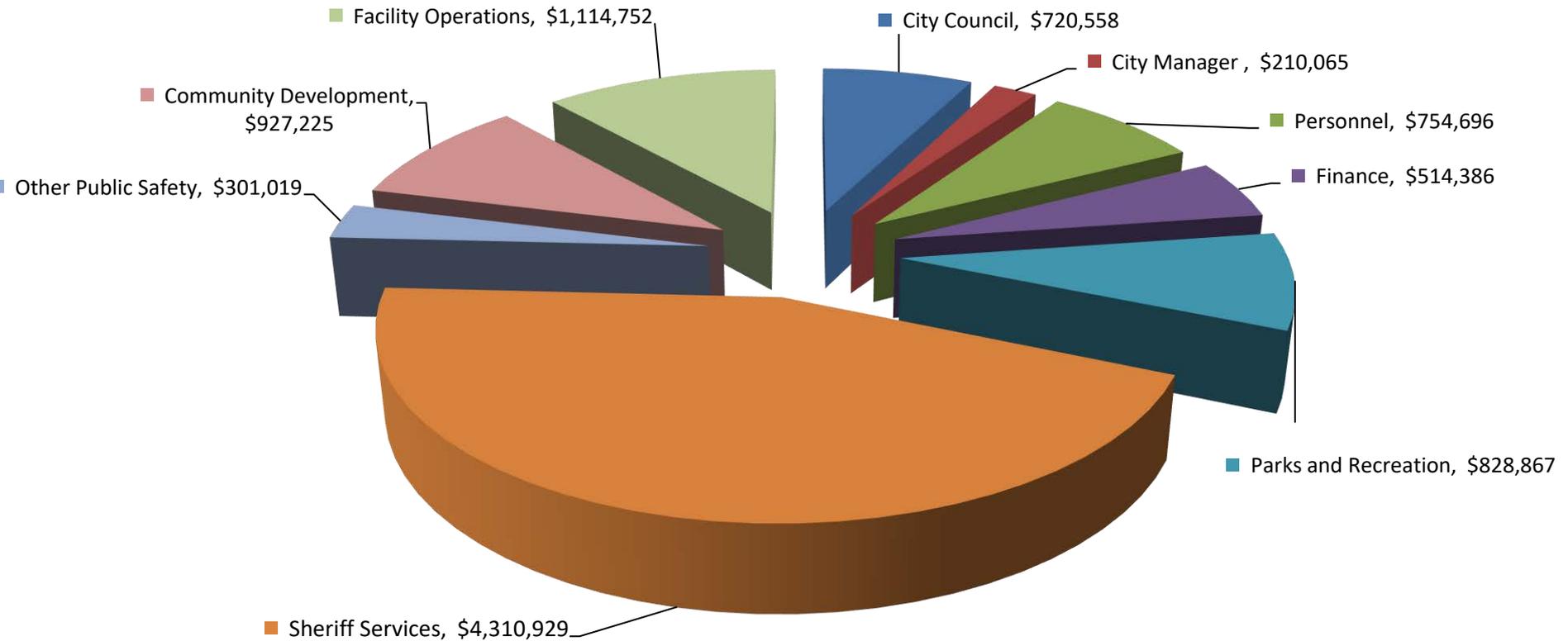
# Proposed Special Funds

Revenues = \$4,312,266



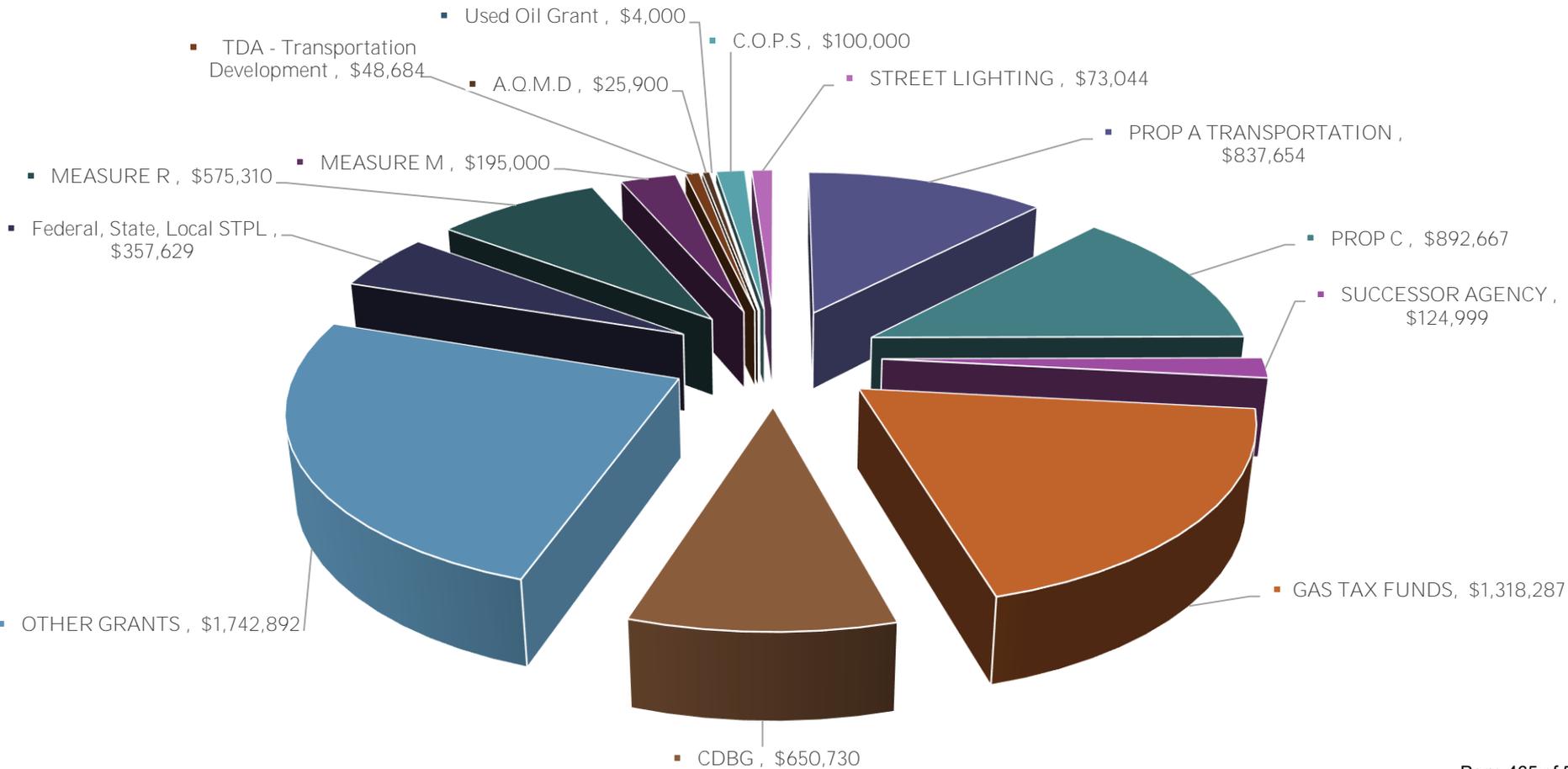
# General Fund Proposed Expenditures FY 2020-21

Total General Fund Expenditures = \$9,682,497



# Proposed Special Funds

Expenditures = \$6,946,796



END OF PRESENTATION

**CITY OF CUDAHY  
PROPOSED BUDGET  
FY 2020-2021**

**ESTIMATED REVENUE FUNDS - BY SOURCE**

	ACTUAL 2017-18	ACTUAL 2018-19	Original Budget	Amended 2019-20	Proposed 2020-21
<b><u>GENERAL FUND</u></b>					
<b>TAXES</b>					
Sales Tax	1,231,354	1,801,800	1,801,800	1,801,800	1,790,000
001-0000-4110.000					
AB 1186 Revenue	61	100	100	100	100
001-0000-4112.000					
Property Transfer Tax	25,048	25,000	25,000	25,000	10,000
001-0000-4115.000					
Subsidy for No Property Tax Cities	166,263	240,000	240,000	240,000	240,000
001-0000-4118.000					
001-0000-4133.000	577	619	320	320	620
001-0000-4139.000	33,086	64,221	14,000	40,000	65,000
001-0000-4140.000	24,199	26,748	5,900	24,900	5,900
001-0000-4141.000					
001-0000-4142.000	74,851	109,043	30,200	30,200	30,200
Transient Occupancy Tax	68,474	70,992	60,000	60,000	50,000
001-0000-4120.000					
Utility Users tax	969,696	956,874	1,005,000	1,005,000	1,005,000
001-0000-4175.000					
	<u>2,593,609</u>	<u>3,295,397</u>	<u>3,182,320</u>	<u>3,227,320</u>	<u>3,196,820</u>
FRANCHISE FEES	<u>315,217</u>	<u>350,883</u>	<u>300,000</u>	<u>300,000</u>	<u>320,000</u>
001-0000-4170.000					
<b>INTERGOVERNMENTAL REVENUES:</b>					
Motor-Vehicle in-Lieu	2,629,638	2,703,820	2,690,136	2,825,136	2,863,248
001-0000-4610.000					
Prop A Exchange	600,000	336,750	336,750	336,750	336,750
001-0000-4890.000					
State Mandated Cost Reimbursement	4,449	10,557	7,000	7,000	11,000
001-0000-4922.000					
	<u>3,234,087</u>	<u>3,051,127</u>	<u>3,033,886</u>	<u>3,168,886</u>	<u>3,210,998</u>
<b>FINES &amp; FORFEITURES:</b>					
Court Fines General	5,089	3,429	11,000	11,000	6,000
001-0000-4210.000					
On Street Parking Fines	123,835	102,266	120,000	60,000	80,000
001-0000-4225.000					
Vehicle Impound Fees	9,400	4,800	14,000	14,000	8,000
001-0000-4250.000					
	<u>138,324</u>	<u>110,495</u>	<u>145,000</u>	<u>85,000</u>	<u>94,000</u>
<b>BUILDING &amp; SAFETY:</b>					
Building Permits	88,235	86,786	90,000	90,000	200,000
001-0000-4180.000					
Electrical Permits	5,730	34,048	10,000	25,000	30,000
001-0000-4185.000					
Temporary Use Permit	900	2,250	3,000	3,000	3,000
001-0000-4186.000					
Plumbing Permits	14,516	15,063	7,000	22,000	15,000
001-0000-4187.000					
Heating Permits	5,848	14,541	5,000	13,000	10,000
001-0000-4188.000					
Street Excavation Permits	126,447	106,070	110,000	110,000	110,000
001-0000-4190.000					
Pre-sale Inspection Fee	7,650	5,508	10,000	5,000	10,000
001-0000-4191.000					
Other License and Permits	-	-	-	-	-
001-0000-4192.000					
Occupancy Transfer Fee	-	-	-	-	-
001-0000-4193.000					
	<u>249,326</u>	<u>264,266</u>	<u>235,000</u>	<u>268,000</u>	<u>378,000</u>
<b>USE OF MONEY/PROPERTY:</b>					
Facility Rental	42,180	54,791	35,000	35,000	15,000
001-0000-4903.000					
Interest Income	20,265	29,197	6,000	6,000	6,000
001-0000-4908.000					

**CITY OF CUDAHY  
PROPOSED BUDGET  
FY 2020-2021**

**ESTIMATED REVENUE FUNDS - BY SOURCE**

	ACTUAL 2017-18	ACTUAL 2018-19	Original Budget	Amended 2019-20	Proposed 2020-21
Property Rental Income 001-0000-4960.000	32,238	32,156	30,000	30,000	30,000
Cell Towers 001-0000-4965.000	83,887	86,063	80,000	80,000	80,000
Sale of Vehicle 001-0000-4973.000	10,225	4,400	-	-	-
Sale of Property 001-0000-4974.000	-	940,000	-	-	-
Yard Sales 001-0000-4975.000	3,120	2,870	3,500	3,500	1,500
	<u>191,915</u>	<u>1,149,477</u>	<u>154,500</u>	<u>154,500</u>	<u>132,500</u>
<b>CHGS FOR SVCS-PLANNING/ENGINEER</b>					
CUP/ Variance Fee 001-0000-4812.000	5,320	26,875	10,000	15,000	25,000
Development Review 001-0000-4814.000	3,325	44,035	7,000	47,000	60,000
Sign Review Fee 001-0000-4815.000	810	2,295	1,000	1,000	1,000
Enviromental Review Fee 001-0000-4818.000	-	75	-	-	-
Preliminary Project Review 001-0000-4819.000	5,670	1,140	3,000	3,000	3,000
Subdivision / Tentative Map 001-0000-4820.000	-	-	-	-	-
Variance / Zoning Appeal Fees 001-0000-4828.000	-	-	-	-	-
Plan Check 001-0000-4830.000	119,924	196,860	50,000	120,000	150,000
	<u>135,049</u>	<u>271,280</u>	<u>71,000</u>	<u>186,000</u>	<u>239,000</u>
<b>CHARGES FOR SERVICES (MISC)</b>					
Swap Meet Permits 001-0000-4904.000	57,296	37,090	58,000	32,000	15,000
Field Rental 001-0000-4153.000	54,784	47,796	50,000	42,600	15,000
Fitness Membership Fee 001-0000-4940.000	12,199	13,977	-	4,400	-
Youth Sports Registration 001-0000-4990.000	-	-	-	-	-
Adult Recreation Classes 001-0000-4995.000	4,419	21,244	10,000	10,000	10,000
	<u>128,698</u>	<u>120,107</u>	<u>118,000</u>	<u>89,000</u>	<u>40,000</u>
<b>LICENSES &amp; PERMITS</b>					
Business Licenses 001-0000-4151.000	221,947	254,788	250,000	250,000	250,000
Business Licenses - Cell Towers - Delinquent 001-0000-4151.001	-	-	-	-	-
Urban Farming Development Agreement / DRP 001-0000-4116.000	751,370	109,412	120,000	120,000	150,000
Urban Farming Operating Fees 001-0000-4117.000	-	123,508	735,250	735,250	735,250
Community Benefit Program 001-0000-4119.000	-	435,741	720,000	502,000	720,000
Adult Boxing 001-0000-4152.000	-	-	-	-	-
Rental Property License/Permit 001-0000-4155.000	68,829	68,560	57,000	82,000	69,000
Rental Property License/Permit - Delinquent 01-860-37-3704	-	-	-	-	-
	<u>1,042,146</u>	<u>992,009</u>	<u>1,882,250</u>	<u>1,689,250</u>	<u>1,924,250</u>
<b>OTHER</b>					
Excursion Fees 001-0000-4901.000	185	4,000	500	500	500
Miscellaneous 001-0000-4910.000	3,182	376	4,000	4,000	4,000
Parking Permits 001-0000-4912.000	183,004	161,827	150,000	125,000	100,000

**CITY OF CUDAHY  
PROPOSED BUDGET  
FY 2020-2021**

**ESTIMATED REVENUE FUNDS - BY SOURCE**

	ACTUAL 2017-18	ACTUAL 2018-19	Original Budget	Amended 2019-20	Proposed 2020-21
Industrial Waste Fee 001-0000-4918.000	5,945	5,950	5,000	5,000	5,000
Election Filing Fee 001-0000-4919.000	-	3,777	2,500	2,500	4,800
Reimbursed Expenses 001-0000-4920.000	74,252	47,653	7,000	39,000	30,000
001-0000-4442.000	-	-	-	-	-
001-0000-4970.000	-	-	-	-	-
001-0000-4999.000	-	-	-	-	-
Reimbursed Dial-A-ride 001-0000-4920.010	165	240	-	-	-
Contributions 001-0000-4916.000	5,670	4,500	3,000	3,000	3,000
Litigation 001-0000-4980.000	6,000	-	-	-	-
	<u>278,403</u>	<u>228,323</u>	<u>172,000</u>	<u>179,000</u>	<u>147,300</u>
<b>TOTAL GENERAL FUND REVENUE</b>	<b><u>8,306,774</u></b>	<b><u>9,833,364</u></b>	<b><u>9,293,956</u></b>	<b><u>9,346,956</u></b>	<b><u>9,682,868</u></b>
<b>SPECIAL REVENUE FUNDS</b>					
Fund: 201 - Gas Tax Fund					
Gas Tax 2105 201-0000-4310.000	139,836	133,561	140,541	140,541	123,873
Gas Tax 2106 201-0000-4311.000	76,992	84,449	86,258	86,258	77,604
Gas Tax 2107 201-0000-4312.000	172,402	167,967	174,369	174,369	154,722
Gas Tax 2107.5 201-0000-4313.000	5,000	5,000	5,000	5,000	5,000
Gas Tax 2103 201-0000-4314.000	95,062	81,324	187,150	187,150	178,527
State Loan repayment 201-0000-4317.000	27,751	27,452	27,751	27,751	27,278
Road Maint. and Rehab Account (RMRA) 201-0000-4318.000	91,299	418,475	405,370	405,370	404,137
Interest Income 201-0000-4908.000	3,194	3,003	2,000	2,000	2,000
SUB-TOTAL	<u>611,536</u>	<u>921,231</u>	<u>1,028,439</u>	<u>1,028,439</u>	<u>973,141</u>
Fund: 235 - Other Grants					
State Reimbursement HSIP 235-0000-4456.000	11,883	21,099	690,000	690,000	690,000
State Reimbursement ATP 235-0000-4457.000	1,150,463	5,529	143,000	143,000	143,000
State Reimbursement SPG 235-0000-4458.000	18,908	-	-	-	-
Mobile Source Air Pollution Reduction 235-0000-4459.000	-	62,480	-	-	-
So. Cal. Association of Governments 235-0000-4461.000	-	-	-	-	-
Call for Projects 235-0000-4462.000	-	-	163,892	163,892	163,892
SSARP Grant 235-0000-446x.000	-	-	-	-	114,000
Regional Park Grant 235-0000-4452.000	-	-	-	-	-
SUB-TOTAL	<u>1,181,254</u>	<u>89,108</u>	<u>996,892</u>	<u>996,892</u>	<u>1,110,892</u>
Fund: 240 - Prop 1B Local St. Improvements					
Prop 1B Local St & Road F 240-0000-4580.000	-	-	-	-	0
Interest Income 240-0000-4908.000	947	1,642	750	750	750
SUB-TOTAL	<u>947</u>	<u>1,642</u>	<u>750</u>	<u>750</u>	<u>750</u>
Fund: 251 - Proposition C					
Sales Tax 251-0000-4110.000	379,059	406,506	435,498	435,498	435,498
Interest Income 251-0000-4908.000	3,468	7,956	350	350	350
Bus Fare Revenues 251-0000-4915.000	30,205	26,598	25,000	25,000	25,000

**CITY OF CUDAHY  
PROPOSED BUDGET  
FY 2020-2021**

**ESTIMATED REVENUE FUNDS - BY SOURCE**

	ACTUAL 2017-18	ACTUAL 2018-19	Original Budget	Amended 2019-20	Proposed 2020-21
SUB-TOTAL	412,732	441,060	460,848	460,848	460,848
Fund: 252 - Proposition A					
Sales Tax	458,908	490,078	435,938	435,938	435,938
252-0000-4110.000					
Interest Income	10,985	13,241	1,000	1,000	1,000
252-0000-4908.000					
Incentive Program	28,377	26,146	20,000	20,000	20,000
252-0000-4911.000					
Sale of Vehicle	-	-	-	-	-
252-0000-4973.000					
SUB-TOTAL	498,270	529,465	456,938	456,938	456,938
Fund: 253 - Measure R					
MEASURE R	285,104	304,967	271,209	271,209	271,209
253-0000-4370.000					
Interest Income	10,639	23,914	1,000	1,000	1,000
253-0000-4908.000					
SUB-TOTAL	295,743	328,881	272,209	272,209	272,209
Fund: 255 - TDA-Transportation Development					
TDA Allocation	-	-	-	-	-
255-0000-4380.000					
Interest Income	-	-	-	-	-
255-0000-4908.000					
SUB-TOTAL	-	-	-	-	-
Fund: 257 - A.Q.M.D.					
AQMD AB2766 Allocation	31,179	23,389	28,000	28,000	28,000
257-0000-4350.000					
Interest Income	1,105	1,328	100	100	100
257-0000-4908.000					
SUB-TOTAL	32,284	24,717	28,100	28,100	28,100
Fund: 260 - Used Oil Grant					
Used Oil Grant	-	-	-	-	-
260-0000-4390.000					
Interest Income	15	-	-	-	-
260-0000-4908.000					
SUB-TOTAL	15	-	-	-	-
Fund: 261/262 - Recycling Beverage Container					
California Beverage Container	(2,212)	(2,716)	-	-	-
261-0000-4392.000					
Interest Income	15	-	-	-	-
260-0000-4908.000					
SUB-TOTAL	(2,197)	(2,716)	-	-	-
Fund: 270 - C.O.P.S					
COPS Grant	139,416	148,747	100,000	100,000	100,000
270-0000-4460.000					
Interest Income	1,645	2,113	-	-	-
270-0000-4908.000					
SUB-TOTAL	141,061	150,860	100,000	100,000	100,000
Fund: 280 - County Park Bond					
2016 County Park Bonds	-	-	-	-	70,000
County Proposition A - Lugo Park	-	-	-	-	-
County Proposition A - Cudahy Baseball Grant	-	-	-	-	-
Other	-	-	-	-	-
SUB-TOTAL	-	-	-	-	70,000
Fund: 390 - Quimby Act Fund					
Quimby Act Fee	-	-	60,000	60,000	60,000
390-0000-4840.000					
SUB-TOTAL	-	-	60,000	60,000	60,000
Fund: 300 - Cal Home					
CDBG - Program Income	-	-	-	-	-
300-0000-4550.000					
Cal Home Rehab Loan Repa	10,000	-	-	-	-
300-0000-4551.000					

**CITY OF CUDAHY  
PROPOSED BUDGET  
FY 2020-2021**

**ESTIMATED REVENUE FUNDS - BY SOURCE**

	ACTUAL 2017-18	ACTUAL 2018-19	Original Budget	Amended 2019-20	Proposed 2020-21
Interest Income 300-0000-4908.000	1,056	1,950	-	-	-
<b>SUB-TOTAL</b>	<u>11,056</u>	<u>1,950</u>	<u>-</u>	<u>-</u>	<u>-</u>
<b>Fund: 350 - Street Lighting Fund</b>					
Street Lighting Assessment 350-0000-4955.000	82,866	84,519	73,280	73,280	73,280
Interest Income 350-0000-4908.000	17	-	80	80	80
<b>SUB-TOTAL</b>	<u>82,883</u>	<u>84,519</u>	<u>73,360</u>	<u>73,360</u>	<u>73,360</u>
<b>Fund: 510 - Community Dev. Block Grant</b>					
CDBG - Code Enforcement 510-0000-4512.000	67,340	38,565	150,000	150,000	150,000
Housing Rehabilitation -S 510-0000-4515.000	102,271	37,701	86,357	86,357	86,357
Multi-family Rehab 510-0000-4516.000	-	-	-	-	-
Food Distribution Program 510-0000-4518.000	28,000	33,781	33,781	33,781	33,781
Business Assistance 510-0000-4524.000	43,403	34,906	43,403	43,403	43,403
Seniors Services 510-0000-4521.000	6,660	15,601	20,000	20,000	20,000
Family & Individual Counseling 510-0000-4525.000	-	-	-	-	-
ADA Upgrades 510-0000-4xxx.000	-	-	-	-	-
Park Restroom 510-0000-4526.000	-	-	317,189	317,189	317,189
Lugo Park Renovation 510-0000-4530.000	-	-	-	-	-
<b>SUB-TOTAL</b>	<u>247,674</u>	<u>160,554</u>	<u>650,730</u>	<u>650,730</u>	<u>650,730</u>
<b>Fund: 515 - Federal STPL</b>					
Federal STPL 280-0000-4450.000	53,427	-	70,000	70,000	-
<b>SUB-TOTAL</b>	<u>53,427</u>	<u>-</u>	<u>70,000</u>	<u>70,000</u>	<u>-</u>
<b>TOTAL SPECIAL REVENUE</b>	<u><b>3,568,882</b></u>	<u><b>2,733,987</b></u>	<u><b>4,198,266</b></u>	<u><b>4,198,266</b></u>	<u><b>4,256,968</b></u>
<b>TOTAL ALL FUNDS</b>	<u><b>11,875,656</b></u>	<u><b>12,567,351</b></u>	<u><b>13,492,222</b></u>	<u><b>13,545,222</b></u>	<u><b>13,939,836</b></u>

**CITY OF CUDAHY  
PROPOSED BUDGET  
FY 2020-2021**

**EXPENDITURE APPROPRIATIONS  
BY FUNDING SOURCE**

PROGRAM	ACTUAL 2017-18	ACTUAL 2018-19	ORIGINAL 2019-20	AMENDED 2019-20	PROPOSED 2020-21
<b><u>GENERAL FUND</u></b>					
4155 Accounting	78,220	79,012	178,286	178,686	190,074
4510 Animal Regulation	74,636	93,343	70,000	104,000	90,000
4212 Building Regulation	176,706	146,234	76,000	76,000	258,500
4160 Business License	37,430	43,821	53,854	55,154	63,498
4005 City Attorney	409,995	350,519	185,000	335,000	185,000
4008 City Clerk	123,217	127,076	183,780	180,680	204,751
4001 City Council	126,857	151,798	284,007	284,007	272,007
4011 City Manager	345,471	133,765	222,112	416,312	210,065
4210 Community Development Dept.	1,447	10,913	12,000	12,000	-
4230 Community Preservation	83,560	83,560	28,769	68,169	35,697
4520 Crossing Guards	38,078	38,078	49,000	49,000	49,724
6740 Elections	-	7,970	300	300	58,800
4216 Engineering	244,863	233,909	278,134	288,334	285,375
4020 Facilities Operations	913,587	1,051,919	1,239,179	1,239,179	1,114,752
4151 Finance Administration	39,903	36,777	272,663	316,663	212,722
4530 Municipal Enforcement	68,726	23,747	50,803	36,803	58,145
4410 Parks Maintenance	249,320	110,874	194,541	194,841	271,788
4015 Personnel	350,727	520,799	734,998	833,998	754,696
4215 Planning	214,445	230,469	333,350	458,350	383,350
4501 Police Services	3,673,570	3,817,845	4,291,676	4,070,876	4,310,929
4018 Purchasing	29,621	12,272	23,828	36,128	48,092
4350 Recreation	670,157	455,655	481,438	531,288	557,079
Street Lighting District			51,250	51,250	67,453
Total General Fund Expenditures	<u>\$ 7,950,536</u>	<u>7,760,355</u>	<u>9,294,967</u>	<u>9,817,017</u>	<u>9,682,497</u>
<b><u>PROP A TRANSPORTATION</u></b>					
City Manager	\$ 7,985	7,985	8,434	8,434	7,499
Finance Administration	2,997	2,997	5,712	5,712	4,607
Accounting	2,500	2,500	7,454	7,454	7,454
Purchasing	-	-	-	-	-
Engineering	6,500	6,500	15,094	15,094	15,094
Prop A Exchange	-	-	449,000	449,000	449,000
Excursions	4,535	4,535	10,000	10,000	10,000
Orange Line Rail Transit	8,674	8,674	9,000	9,000	9,000
Transportation Marketing	26,834	26,834	30,000	30,000	-
Dial-A-Ride	50,617	50,617	85,000	85,000	85,000
ADA Improvements along fixed route	-	-	150,000	150,000	150,000
Citywide Bus Stop Improvement Project			100,000	100,000	100,000
	<u>110,642</u>	<u>110,642</u>	<u>869,694</u>	<u>869,694</u>	<u>837,654</u>
<b><u>PROP C</u></b>					
City Manager	16,567	16,567	16,868	16,868	14,998

**CITY OF CUDAHY  
PROPOSED BUDGET  
FY 2020-2021**

EXPENDITURE APPROPRIATIONS  
BY FUNDING SOURCE

PROGRAM	ACTUAL 2017-18	ACTUAL 2018-19	ORIGINAL 2019-20	AMENDED 2019-20	PROPOSED 2020-21
Finance Administration	5,610	5,610	8,603	8,603	5,606
Accounting	7,612	7,612	11,515	11,515	11,515
Purchasing	-	-	-	-	-
Engineering	12,500	12,500	26,248	26,248	26,248
Bus Passes	54,018	54,018	55,000	55,000	55,000
City Membership - Gateway Cities	21,500	21,500	14,000	14,000	16,300
Freeway 710 Study	10,000	10,000	11,000	11,000	10,000
Transportation Marketing	26,834	26,834	30,000	30,000	-
Atlantic Improvement Phase II	3,150	3,150	160,000	160,000	250,000
Excursions	2,280	2,280	5,000	5,000	5,000
PCAM	176,099	176,099	178,000	178,000	178,000
Pavement Mangement System	-	-	-	-	20,000
Patata Street Improvement Project	-	-	250,000	250,000	300,000
	336,170	336,170	766,234	766,234	892,667
<u>SUCCESSOR AGENCY</u>					
City Manager	48,948	48,948	47,333	47,333	42,851
Finance Administration	61,724	61,724	60,109	60,109	60,048
Accounting	23,130	23,130	22,100	22,100	22,100
	133,802	133,802	129,542	129,542	124,999
<u>HOUSING SUCCESSOR AGENCY</u>					
City Manager	12,920	12,920	-	-	-
Contractual	-	-	50,000	50,000	-
Land Purchase	-	-	720,000	720,000	-
	12,920	12,920	770,000	770,000	-
<u>GAS TAX FUNDS</u>					
City Manager	-	-	60,241	60,241	-
Personnel - UAL (50% in 2020-21)	-	-	-	-	48,750
Finance Administration	8,510	8,510	25,829	25,829	2,159
Accounting	21,580	21,580	33,382	33,382	-
Purchasing	5,757	5,757	-	-	-
Crossing Guards	-	-	-	-	-
Community Preservation	-	-	4,681	4,681	0
Facility Operations - WC Insurance	-	-	10,500	10,500	-
Engineering	-	-	33,845	33,845	-
Parks Maintenance	-	-	-	-	-
Street Maintenance (see Dept 4425)	585,701	585,701	619,301	619,301	550,378
Road Maint. And Rehab Account (RMRA)	-	-	405,370	405,370	700,000
Electricity - Non Street Lighting District	-	-	17,000	17,000	17,000
Traffic signal maintenance	-	-	22,500	22,500	-
City-wide Traffic Signs	-	-	-	-	-
	621,548	621,548	1,232,649	1,232,649	1,318,287
<u>CDBG</u>					
Business Assistance (Personnel)	6,636	6,636	-	-	-
4640 Business Assistance (Business License)	16,767	16,767	43,403	43,403	43,403
4620 Housing Rehab SFD	41,644	41,644	86,952	86,952	86,357
4230 Community Preservation	75,000	75,000	150,000	150,000	150,000
4642 Food Distribution	42,105	42,105	28,954	28,954	33,781
NEW Clara Street Park Senior Activities	-	-	20,000	20,000	20,000
JADE	-	-	-	-	-
Clara /Cudahy Park Restroom Rehabilitation	-	-	189,339	189,339	317,189
Lugo Park Restroom Rehabilitation	118,423	118,423	-	-	-
Lugo Park Soccer Field	712,398	712,398	-	-	-
	1,012,973	1,012,973	518,648	518,648	650,730

**CITY OF CUDAHY  
PROPOSED BUDGET  
FY 2020-2021**

EXPENDITURE APPROPRIATIONS  
BY FUNDING SOURCE

PROGRAM	ACTUAL 2017-18	ACTUAL 2018-19	ORIGINAL 2019-20	AMENDED 2019-20	PROPOSED 2020-21
<u>DRUG ASSET SEIZURE FUND</u>	-	11,409	16,000	16,000	-
<u>OTHER GRANTS</u>					
Federal Reimbursement HSIP 6	-	14,638	350,000	350,000	30,000
Federal Reimbursement HSIP 7	-	21,345	340,000	340,000	340,000
State Reimbursement ATP 1	-	-	50,607	50,607	-
Federal/State Reimbursement ATP 2	-	2,345	143,000	143,000	1,074,000
State Reimbursement SPG	-	-	60,500	60,500	-
MSRC	-	-	73,500	73,500	-
SCAG	-	-	73,500	73,500	-
Other / Call For projects 2015	-	-	163,892	163,892	163,892
Federal Reimbursement ATP 3	-	-	-	-	-
SSARP Grant	-	-	135,000	135,000	135,000
Regional Park Grant	3,546	-	-	-	-
	<u>3,546</u>	<u>38,328</u>	<u>1,389,999</u>	<u>1,389,999</u>	<u>1,742,892</u>
<u>PROP 1B LOCAL ST. IMPROVEMENTS</u>					
Fostoria/River/Cecelia/Crafton	51,376	51,376	-	-	-
	<u>51,376</u>	<u>51,376</u>	<u>-</u>	<u>-</u>	<u>-</u>
<u>Federal, State, Local STPL</u>					
Clara Bridge Improvement Project - Phase I	-	-	357,629	357,629	357,629
Clara Bridge Improvement Project - Phase II	-	-	-	-	-
	<u>-</u>	<u>-</u>	<u>357,629</u>	<u>357,629</u>	<u>357,629</u>

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**CITY OF CUDAHY  
PROPOSED BUDGET  
FY 2020-2021**

EXPENDITURE APPROPRIATIONS  
BY FUNDING SOURCE

PROGRAM	ACTUAL 2017-18	ACTUAL 2018-19	ORIGINAL 2019-20	AMENDED 2019-20	PROPOSED 2020-21
<b>MEASURE R</b>					
City Manager			12,048	12,048	10,713
Finance Administration			13,006	13,006	4,110
Accounting			5,018	5,018	5,018
Engineering	95,757	95,757	13,900	13,900	13,900
Transportation Marketing	-	-	30,000	30,000	-
HSIP 6 Matching Fund	-	-	40,000	40,000	10,000
ATP-2 Matching Fund	-	-	-	-	27,000
Cecilia Street Imporvement Project			225,000	225,000	225,000
Matching Funds for SSARP			15,000	15,000	15,000
Ardine Street Improvements			140,000	140,000	140,000
2015 Call For Projects Matching Fund	-	-	88,249	88,249	88,249
HSIP 7 Matching Fund	-	-	36,320	36,320	36,320
	<u>95,757</u>	<u>95,757</u>	<u>618,541</u>	<u>618,541</u>	<u>575,310</u>
<b>MEASURE R</b>					
Cudahy Cuitywide Traffic Striping & Signage Projec	-	-	-	-	120,000
Traffic Signal Repairs & Maintenance	-	-	-	-	75,000
	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>195,000</u>
TDA-Transportation Development	<u>-</u>	<u>21,297</u>	<u>-</u>	<u>-</u>	<u>48,684</u>
<u>A.Q.M.D</u>	<u>16,619</u>	<u>16,619</u>	<u>25,900</u>	<u>25,900</u>	<u>25,900</u>
<u>Used Old Grant</u>	<u>-</u>	<u>-</u>	<u>4,000</u>	<u>4,000</u>	<u>4,000</u>
<u>Recycling Beverage Container</u>	<u>-</u>	<u>-</u>	<u>19,133</u>	<u>19,133</u>	<u>-</u>
<u>C.O.P.S</u>	<u>106,030</u>	<u>106,030</u>	<u>100,000</u>	<u>100,000</u>	<u>100,000</u>
<b>COUNTY PARK BOND</b>					
Outdoor Fitness Court	-	-	70,000	70,000	-
Clara Street Park	1,920,186	1,920,186	-	-	-
Clara Street Park Phase III	-	-	-	-	-
Playground	-	-	-	-	-
	<u>1,920,186</u>	<u>1,920,186</u>	<u>70,000</u>	<u>70,000</u>	<u>-</u>
<b>STREET LIGHTING</b>					
Street Lighting	<u>128,000</u>	<u>88,525</u>	<u>73,360</u>	<u>73,360</u>	<u>73,044</u>
<b>SB821</b>					
<b>LPDM GRANT</b>					
Facility Operations	<u>5,000</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Special Revenue Expenditure	<u>4,554,569</u>	<u>4,577,582</u>	<u>6,961,329</u>	<u>6,961,329</u>	<u>6,946,796</u>
TOTAL PROGRAM EXPENDITURES	<u>12,505,105</u>	<u>12,337,937</u>	<u>16,256,296</u>	<u>16,778,346</u>	<u>16,629,293</u>

CITY OF CUDAHY BUDGET WORKSHEET FY 2020-21		
ACCT. NO.	DEPT. 4001	CITY COUNCIL
DESCRIPTION		
<b>SALARIES AND BENEFITS</b>		
5100	Council Members (\$483.60/mo. x 5 members x 12 mos.)	29,016
5120	Retirement	1,970
5125	Medicare Tax	420
5130	Medical Insurance	52,885
5133	Dental Insurance	2,044
5137	Vision Insurance	637
		<b>TOTAL 86,972</b>
<b>MAINTENANCE AND OPERATIONS</b>		
5118	<b>Auto Allowance</b> \$375 per Council Member each month	22,500
		<b>TOTAL 22,500</b>
6085	<b>Plaques and Badges</b> Badges (\$20 each x 5 Council Members) 100 Plaques (\$60 each x 5 Council Members) 300 Names Plates and Holders 200 Photos/Frames 200 Business Cards 500	
		<b>TOTAL 1,300</b>
6312	<b>Memberships</b> Council Memberships NALEO (\$100 Each x 5 Council Members) 500 Sister City 500 Contract Cities 3,150 League of Cities 8,700 League of Cities - Local Division 951 Southern California Association of Governments 2,434	
		<b>TOTAL 16,235</b>
6391	<b>Travel and Meeting</b> 5 Council Members receive up to \$5,000 each for conferences.	25,000
		<b>TOTAL 25,000</b>
6720	<b>Consultants</b> Outreach - Strategic Plan 120,000 Communications 83,000 Printing of Newsletters (Flyers) 11,200 Art in Public Places 18,000 Website 7,800 <i>(Create a communication analysis and help implement a new communication strategy. May also include coordinating Census Outreach with other organizations.)</i>	
		<b>TOTAL 120,000</b>
		<b>TOTAL 120,000</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DEPT. 4005	DESCRIPTION	CITY ATTORNEY
		<b>MAINTENANCE AND OPERATIONS</b>	
6720	<b>Contractual</b>		
	Contracted legal services	185,000	
	Special legal services - As Needed	-	
			<b>TOTAL 185,000</b>



**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	
<b>DEPT. 4008-6740</b>	<b>ELECTION SERVICES</b>	
	<b>MAINTENANCE AND OPERATIONS</b>	
6740	<b>Election Services</b>	
	Los Angeles County Consolidated	53,500
	Candidate Statements - (\$600 x 8)	4,800
	Ballot Measures (Sales and Parcel)	-
	English translation only; approximately \$300, and additional \$300 for Spanish translation	
	Initiative	-
	Advertising/Public Posting/Materials	500
	<b>TOTAL</b>	<b>58,800</b>

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CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21

ACCT. NO.	DESCRIPTION	
	<b>DEPT. 4011</b>	<b>CITY MANAGER</b>
	<b>SALARIES AND BENEFITS</b>	
5100	City Manager (CM)	195,000
5110	Administrative Analyst (100% General Fund)	49,968
5120	Retirement	10,170
5121	PARS/APPLE Retirement	-
5125	Medicare Tax	3,552
5130	Medical Insurance	16,265
5133	Dental Insurance	930
5134	Disability Insurance	540
5137	Vision Insurance	223
5138	Life Insurance	378
	The City Manager Salaries and Benefits are charged to multiple funding sources. Of the Salaries and Benefits, is charged to the General Fund. The City Manager Retirement, Medical, Dental, Disability, Vision, and Life Insurance are at 40% or 5 months)	
	<b>TOTAL</b>	<b>277,026</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
5116	<b>Auto Allowance</b>	
	Contractual Auto Allowance	
	CM (\$400/mo. x 5 mos.)	2,000
	<i>Subtotal:</i>	<b>2,000</b>
	<b>TOTAL</b>	<b>2,000</b>
6080	<b>Office Supplies</b>	
	Books and Office Supplies	500
	<i>Subtotal:</i>	<b>500</b>
	<b>TOTAL</b>	<b>500</b>
6312	<b>Professional Memberships</b>	
	Municipal Management Association of Southern California	
	<i>Membership</i>	75
	<i>Conference</i>	300
	Misc. Subscriptions	100
	<i>Subtotal:</i>	<b>475</b>
	<b>TOTAL</b>	<b>475</b>
6391	<b>Travel and Meeting Expense</b>	
	Annual City Manager Council	3,000
	Staff meetings, seminars and workshops	125
	<b>TOTAL</b>	<b>3,125</b>
6392	<b>Training and Education</b>	
	Allotment for training, hotel, meals and transportation	
	<b>TOTAL</b>	<b>3,000</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	Personnel
	<b>Dept. 4015</b>	
	<b>SALARIES AND BENEFITS</b>	
5100	Human Resources Manager	106,453
5120	Retirement	14,033
5121	PARS/APPLE Retirement	-
5125	Medicare Tax	1,544
5127	EDD Unemployment Benefits	-
5130	Medical Insurance	-
5133	Dental Insurance	1,008
5134	Disability Insurance	601
5136	Vacation Buy Back	-
5137	Vision Insurance	283
5138	Life Insurance	180
5141	Retirement and Other Post Employment	455,034
	Unfunded Actuarial Liability (UAL) - Retirement	225,034
	Other Post Employment Benefit (OPEB)	100,000
	Retirement - PERS	100,000
5109	Merit Pay (5% bonus pay for FT) employees who exceed expectations	-
	<b>TOTAL</b>	<b>579,136</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
5116	<b>Auto Allowance</b>	
	Contractual Auto Allowance (\$350/mo. x 12 mos.)	4,200
	<b>Subtotal:</b>	<b>4,200</b>
	<b>TOTAL</b>	<b>4,200</b>
6080	<b>Office Supplies</b>	
	General Supplies	1,000
	<b>TOTAL</b>	<b>1,000</b>
6310	<b>Advertising</b>	
	MMASC, The Wave, JobTrak, LA Times, Jobs Available, ICMA, Wester City, etc.	
	<b>TOTAL</b>	<b>-</b>
6312	<b>Professional Membership</b>	
	Gateway Public Employment Consortium (Liebert Cassidy Whitmore)	
	Cost is offset by savings in City Attorney Fees	
	<b>TOTAL</b>	<b>4,500</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	Personnel
	<b>Dept. 4015</b>	
6320	<b>Employee Physical</b> Physical Exams, fingerprinting, etc. (Live Scan included)	
		6320 TOTAL 2,500
6322	<b>Employee Recognition</b> Employee Quarterly Luncheons	1,000
		TOTAL 1,000
6391	<b>Travel and Meeting</b> IPMA - HR International Training Conference and Expo	-
		TOTAL -
6392	<b>Training and Education</b> Education/Tuition Reimbursement Program	35,000
		TOTAL 35,000
6450	<b>Retirees Insurance / Benefits</b> Insurance for former Elected Official and City Employees who have retired from the City. including Replacement Benefit Fund charges retirement charges in excess of IRS limits.	
		TOTAL 123,000
6720	<b>Contractual</b> Libert Cassidy (Labor Negotiation / Human Resources) NeoGov Annual License Fee Government Jobs.com (Annual Subscription)	40,000 13,110 -
		TOTAL 53,110

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	FINANCE ADMINISTRATION
	<b>DEPT. 4151</b>	
	<b>SALARIES AND BENEFITS</b>	
5100	Finance Director (FD)	125,004
5116	Auto Allowance (\$350 times 12 months)	4,200
5120	Retirement	8,732
5125	Medicare Tax	1,813
5130	Medical Insurance	18,807
5133	Dental Insurance	578
5134	Disability Insurance	437
5137	Vision Insurance	283
5138	Life Insurance	180
	<b>TOTAL</b>	<b>160,034</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
6080	<b>Office Supplies</b> General Supplies	500
	<b>TOTAL</b>	<b>500</b>
6376	<b>Taxes and License (FD)</b> Certified Public Accountant <i>Bi-Annual \$200</i>	200
	<b>TOTAL</b>	<b>200</b>
6386	<b>Professional Membership(FD)</b> California Society of Municipal Finance Officers (CSMFO) American Institute of Certified Public Accountants California Society of Certified Public Accountants	110 225 500
	<b>TOTAL</b>	<b>1,060</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	FINANCE ADMINISTRATION
	<b>DEPT. 4151</b>	
6391	<b>Travel and Meeting</b>	
	Government and Tax Update (2 x \$395) (FD & Senior Accountant [SA])	790
	GASB Update (2 x \$60) (FD & SA)	10
	Mileage for PERS Training (SA & Accountant Technician [AT])	55
	CSMFO Bi-Monthly Lunches (6 x \$40) (FD, SA, AT)	240
	<b>TOTAL</b>	<b>1,095</b>
6392	<b>Training and Education</b>	
	Cal Society Foundation Fall Series (FD)	425
	Seminars/workshops for CSMFO (FD), Payroll Certification (AT) and other trainings for (FD, SA, AT)	1,850
	<b>TOTAL</b>	<b>2,275</b>
6710	<b>Audit</b>	
	Annual Audit/Financial Statements (\$50,000 General Fund)	61,505
	Other Post Employment Benefits Actuarial (OPEB) Update (Bartel Associates)	2,500
	State Reports Financial Transaction Report and Streets Report	5,233
	Enrolled Agent - Quarterly and Annual Report representation	1,500
	<b>TOTAL</b>	<b>70,738</b>
6720	<b>Contractual</b>	
	Sales Tax Service (HdL)	4,600
	Sales Audit Tax Service (HdL) [15% of recovered amounts. Revenue equals]	12,000
	Property Tax (HdL)	5,000
	Pension reports (Prepared by Public Employees Retirement System)	1,950
	Tyler Technologies - Accounting Software Maintenance Contract	9,800
	Franchise Fee (R-3)	20,000
	<b>TOTAL</b>	<b>53,350</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	ACCOUNTING
	<b>DEPT. 4155</b>	
	<b>SALARIES AND BENEFITS</b>	
5100	Senior Accountant (SA)	76,452
5100	Accountant Technician (AT)	76,068
5105	Overtime	-
5115	Part Time	-
5120	Retirement	16,574
5121	PARS/APPLE Retirement	-
5125	Medicare Tax	2,212
5130	Medical Insurance	61,210
5133	Dental Insurance	2,044
5134	Disability Insurance	675
5136	Vacation Buy Back	-
5137	Vision Insurance	566
5138	Life Insurance	360
<b>TOTAL</b>		<b>236,161</b>

*\*Operating Costs have been included under Finance Administration section*

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DEPT. 4160	DESCRIPTION	BUSINESS LICENSE
		<b>SALARIES AND BENEFITS</b>	
5100		Account Technician	74,160
5120		Retirement	9,776
5125		Medicare Tax	1,075
5130		Medical Insurance	19,516
5133		Dental Insurance	688
5134		Disability Insurance	308
5137		Vision Insurance	198
5138		Life Insurance	180
		<b>TOTAL</b>	<b>105,901</b>

*\*Operating Costs have been included under Finance Administration section*

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	PURCHASING
	<b>DEPT. 4018</b>	
	<b>SALARIES AND BENEFITS</b>	
5100	Purchasing Agent	-
5110	Hourly	45,240
	Account Clerks (2) at 24 hrs. / week each	45,240
5120	Retirement	-
5121	Hourly Retirement (3.75% City Share)	1,696
5125	Medicare Tax	656
5130	Medical Insurance	-
5133	Dental Insurance	-
5134	Disability Insurance	-
5137	Vision Insurance	-
5138	Life Insurance	-
	<b>TOTAL</b>	<b>47,592</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
9-20: Program Fin		
6080	<b>Office Supplies</b>	
		500
	<b>TOTAL</b>	<b>500</b>
6386	<b>Professional Membership</b>	
	American Purchasing Society	-
	Institute for Supply Management (ISM)	-
	<b>TOTAL</b>	<b>-</b>
6392	<b>Training and Education</b>	
	Excel Courses	-
	ISM Seminar	-
	Registration	-
	Hotel	-
	Flight	-
	<b>TOTAL</b>	<b>-</b>

\*Telephone expenses have been included collectively under Facilities Operations

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	RECREATION
	<b>DEPT. 4350</b>	
	<b>SALARIES AND BENEFITS</b>	
5100	Recreation Program Coordinator	68,112
5100	Recreation Assit Program Coordinator	52,068
	Coordinator/Asst Coordinator - On Call (312 Hours annually)	-
5110	Hourly - 17,267 Hours	236,556
	Recreation Leaders (\$14.69 hr for 2,900 hours)	42,601
	Recreation Aides (\$13.5 hr for 14,367 hours + minumum wage adjustment 1/1/2020)	193,955
5120	Retirement	8,395
5121	PARS/APPLE Retirement	8,871
5125	Medicare Tax	5,173
5130	Medical Insurance	41,458
5133	Dental Insurance	2,044
5134	Disability Insurance	565
5136	Vacation Buy Back	-
5137	Vision Insurance	567
5138	Life Insurance	360
	<b>* \$42,000 Paid with CDBG Funds</b>	
	<b>TOTAL</b>	<b>424,169</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
6210	<b>Contract</b>	
	Classes	10,000
	<b>Expense is covered by class fees</b>	
	<b>TOTAL</b>	<b>10,000</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	RECREATION
	<b>DEPT. 4350</b>	
6386	<b>Professional Membership</b> SCMAF	120
	<b>TOTAL</b>	<b>120</b>
6392	<b>Training and Education</b> Trainings (Two Trainings) Staff, Parks and Recreation Commissioners up to \$2,000, and Senior Commissioners up to \$2,000	1,000  4,000
	<b>TOTAL</b>	<b>5,000</b>
6510	<b>Excursions</b>	
	<i>Funded by Propositon C and Propositon A</i>	
	<b>TOTAL</b>	<b>15,000</b>
6580	<b>Senior Programs</b> Annual Events	7,150
	<i>July</i>	300
	<i>August</i>	700
	<i>September</i>	900
	<i>October</i>	250
	<i>November</i>	300
	<i>December</i>	1,500
	<i>January</i>	700
	<i>February</i>	250
	<i>March</i>	250
	<i>April</i>	600
	<i>May</i>	1,000
	<i>June</i>	400
	<i>HSA - Case Manger for Seniors - CDBG Funded - No General Fund Share</i>	-
	<b>TOTAL</b>	<b>7,150</b>
		-

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	RECREATION
	<b>DEPT. 4350</b>	
6585	<b>Special Events</b>	
	<u>Easter</u>	5,000
	<i>DJ</i>	350
	<i>Decorations</i>	300
	<i>Entertainment</i>	2,500
	<i>Candy</i>	600
	<i>Easter Baskets</i>	500
	<i>Easter Eggs</i>	350
	<i>Insurance</i>	400
	<u>National Night Out</u>	2,900
	<i>Food</i>	500
	<i>Jumpers</i>	1,000
	<i>Entertainment</i>	500
	<i>Promotions/Giveaways</i>	500
	<i>Insurance</i>	400
	<u>Independence Day</u>	27,000
	<i>Fireworks</i>	13,500
	<i>Port-a-Potties</i>	800
	<i>Insurance</i>	1,000
	<i>Entertainment</i>	6,200
	<i>Rental of Generators/Stage</i>	2,000
	<i>Rental of Carnival</i>	3,500
	<u>Halloween Carnival</u>	8,400
	<i>Entertainment</i>	4,000
	<i>Candy</i>	1,000
	<i>Prizes</i>	1,000
	<i>Game Booths</i>	2,000
	<i>Insurance</i>	400
	<u>Holiday Event</u>	24,000
	<i>Carnival</i>	15,000
	<i>Decorations</i>	4,000
	<i>5K Run</i>	5,000
	<b>TOTAL</b>	<b>67,300</b>
6715	<b>Commissioner</b>	
	Parks and Recreation Commission	2,970
	(1 Chairperson @\$55 and 4 Commissioners @\$45)	
	Aging and Senior Citizen Commission	2,370
	(1 Chairperson @\$40 and 4 Commissioners @\$35)	

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DEPT. 4350	DESCRIPTION	RECREATION
		<b>TOTAL</b>	<b>5,340</b>
6720		<b>Contractual Services</b> Partnerships with Non-Profits from Community Benefit Program Sports / Recreation Programs YMCA Scholarships /Rehabilitation programs/Other programs and activities (TBD. YMCA has verbally requested funding for other programs. A contract amendment would be required. When a formal request is recieved it will be evaluated.)	38,000  42,000
		<b>TOTAL</b>	<b>80,000</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	PARKS MAINTENANCE
	<b>SALARIES AND BENEFITS</b>	
5100	Community Services Director (Vacant)	-
5100	Community Services Manager (Vacant)	-
5100	Maintenance Superintendent (Vacant)	-
5100	Maintenance Worker (Proposed)	42,888
5105	Overtime	-
5110	Hourly	104,476
	Maintenance Aide (4) for 6,942 hours	104,476
5120	Retirement	2,996
5121	PARS/APPLE Retirement	3,917
5125	Medicare Tax	1,866
5130	Medical Insurance	20,729
5133	Dental Insurance	996
5134	Disability Insurance	249
5136	Vacation Buy Back	283
5137	Vision Insurance	180
5138	Life Insurance	-
	<b>Dept. 4425 budget reflects additional cost to General Fund of \$23,500.</b>	
	<b>TOTAL</b>	<b>178,580</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	PARKS MAINTENANCE
	<b>DEPT. 4410</b>	
	<b>MAINTENANCE AND OPERATIONS</b>	
6389	<b>Special Projects</b>	
	<i>Park Repairs (including playground equipment and repairs)</i>	25,000
	<i>Wood chips for playgrounds</i>	4,200
	<i>Purchase small equipment</i>	2,500
	<i>Maintenance</i>	8,125
	<i>Water irrigation system maintenance and repair</i>	1,200
	<i>General Plumbing and electrical repairs with purchase of snake</i>	1,125
	<i>Backflow testing</i>	1,000
	<i>Landscape materials - Plants and Trees</i>	4,000
	<i>General Repairs</i>	800
	<i>ADA Accessibility Improvements</i>	10,000
	<i>Remodeling Outside Restroom (Clara Park &amp; Cudahy Park) - CDBG Funded</i>	-
	<b>TOTAL</b>	<b>49,825</b>
6040	<b>Gasoline</b>	
		1,500
	<b>TOTAL</b>	<b>1,500</b>
6394	<b>Vehicle Maintenance</b>	
	<i>Tires, Brakes, general maintenance</i>	3,700
	<b>TOTAL</b>	<b>3,700</b>
6250	<b>Uniforms</b>	
	<i>Maintenance Worker (1)</i>	500
	<i>Maintenance Aide (4)</i>	2,000
	<b>TOTAL</b>	<b>2,500</b>
6392	<b>Training and Education</b>	
	<i>Training workshops, seminars, conferences and related reference materials</i>	1,000
	<i>Training for Class B Driver's License</i>	-
	<b>TOTAL</b>	<b>1,000</b>
6720	<b>Contractual</b>	
	<i>Yearly expense covers the administration costs of the Land Use Covenant/Agreement with the State of California</i>	900
	<b>TOTAL</b>	<b>900</b>
6770	<b>Service Equipment Maintenance</b>	
	<i>Annual AQMD permit fee required for Generator (Lugo) operation</i>	120
	<i>Maintenance and Repairs to Lawnmowers, edgers, and other power material</i>	4,000
	<i>Riding Mower Service</i>	2,000
	<b>TOTAL</b>	<b>6,120</b>



**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	
	<b>DEPT. 4501</b>	<b>POLICE SERVICES</b>
	<b>SALARIES AND BENEFITS</b>	
5100	Public Safety & Services Manager	-
5120	Retirement	-
5121	PARS/APPLE Retirement	-
5125	Medicare Tax	-
5130	Medical Insurance	-
5133	Dental Insurance	-
5134	Disability Insurance	-
5136	Vacation Buy Back	-
5137	Vision Insurance	-
5138	Life Insurance	-
	<b>TOTAL</b>	-
	<b>MAINTENANCE AND OPERATIONS</b>	
6763	<b>Police Services</b> amount 4,310,929 8/56 Hour Service Units - 5.57% COLA increase 1 Growth Deputy - 5.52% COLA increase 1 Service Area Sergeant [No Separate Charge]	4,310,929 \$223,000 Increase
	<b>Police Services - Supplemental</b> COPS (Grant Funded) - Begins October 2019 Park/Property Patrols will be from October to June due to funding availability	100,000
	<b>TOTAL</b>	<b>4,410,929</b>

\*Telephone costs are included under *Facilities Operations*

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	
	<b>DEPT. 4230</b>	<b>COMMUNITY PRESERVATION</b>
	<b>SALARIES AND BENEFITS</b>	
5100	Community Preservation Officer	68,171
5110	Salaries, Hourly (20 hours/week)	
5120	Retirement	8,986
5121	PARS/APPLE Retirement	-
5125	Medicare Tax	988
5130	Medical Insurance	20,729
5133	Dental Insurance	1,022
5134	Disability Insurance	192
5137	Vision Insurance	283
5138	Life Insurance	180
	<b>TOTAL</b>	<b>100,551</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
6080	<b>Office Supplies</b>	
	Compliance notices and citation forms	-
	Nexle Notification Services	5,364 <b>General Fund</b>
	<i>Additional supplies (pepper spray, envelopes, etc.)</i>	400 <b>CDBG Budget</b>
	<i>Printer Toner</i>	500 <b>CDBG Budget</b>
	Code Enforcement Software (33% Share Cost)	
	<b>TOTAL</b>	<b>6,264</b>
6250	<b>Uniforms</b>	
		<b>CDBG Budget</b>
	<b>TOTAL</b>	<b>500</b>
6386	<b>Professional Membership</b>	
	California Association of Code Enforcement Officers (Staff & Director)	<b>CDBG Budget</b>
	<b>TOTAL</b>	<b>750</b>
6392	<b>Training and Education</b>	
	Training for community preservation personnel (workshops, seminars and conferences)	<b>CDBG Budget</b>
	<b>TOTAL</b>	<b>2,302</b>
6394	<b>Vehicle Maintenance</b>	
	Fuel and scheduled preventive maintenance (Unit #32, #36)	<b>CDBG Budget</b>
	<b>TOTAL</b>	<b>1,000</b>
6755	<b>Legal Services</b>	
	City Prosecutor	
	Prosecution	34,224 <b>CDBG Budget</b>
	<i>Muni Code Update</i>	25,000 <b>CDBG Budget</b>
	<i>Omnibus Muni Code</i>	- <b>General Fund</b>
	<b>TOTAL</b>	<b>59,224</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION
	<p align="center"><b>DEPT. 4520</b> <span style="float: right;"><b>CROSSING GUARDS</b></span></p> <p align="center"><b>MAINTENANCE AND OPERATIONS</b></p>
6730	<p><b>Crossing Guards Services</b></p> <p>(N. 1st St. to Clara St./S. 1st St.)</p>
	<p align="right"><b>TOTAL</b> <span style="float: right;"><b>49,724</b></span></p>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	
	<b>DEPT. 4510</b>	<b>ANIMAL REGULATION</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
6703	<b>Animal Control</b>	
	Los Angeles County Animal Control Services	110,000
	Less Fees Collected	(20,000)
	<b>TOTAL</b>	<b>90,000</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	
	<b>DEPT. 4530</b>	<b>MUNICIPAL ENFORCEMENT</b>
	<b>SALARIES AND BENEFITS</b>	
5100	Senior Municipal Enforcement Officer (Vacant)	-
5110	Hourly, Salaries	35,599
	Municipal Officers (2 to 4) 40-50 hours a week for all officers	35,599
5120	Retirement	-
5121	PARS/APPLE Retirement	1,335
5125	Medicare Tax	516
5130	Medical Insurance	-
5133	Dental Insurance	-
5134	Disability Insurance	-
5136	Vacation Buy Back	-
5137	Vision Insurance	-
5138	Life Insurance	-
	<b>TOTAL</b>	<b>37,450</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
6040	<b>Gasoline</b>	<b>2,500</b>
6080	<b>Office Supplies</b>	
	Parking permit supplies	5,000
	Business Cards, Flash Lights, Clipboards, Batteries	250
	<b>TOTAL</b>	<b>5,250</b>
6250	<b>Uniforms</b> <b>(4 hourly officers)</b> <i>Shirts / Pants / Armor Vest (2)</i>	<b>3,680</b>
6392	<b>Training and Education</b> Training classes and seminars for commissioners/staff <i>(\$2,000 x 2 Commissioners)</i>	<b>5,000</b>
6394	<b>Vehicle Maintenance</b>	<b>1,000</b>
6715	<b>Commissioner</b> Public Safety Commission (1 Chairperson @\$60 and 4 Commissioners @\$50)	3,265
	<b>TOTAL</b>	<b>3,265</b>
6993	<b>Other Equipment</b> Vehicle lease and MDC Software	-
	<b>TOTAL</b>	<b>-</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	
	<b>DEPT. 4425</b>	<b>STREET MAINTENANCE</b>
	<b>SALARIES AND BENEFITS</b>	
5100	Community Services Director (25%)	-
5100	Public Safety & Services Manager	-
5100	Maintenance Superintendent (1)	67,808
5100	Maintenance Leader (1)	54,563
5100	Maintenance Workers (3)	113,550
5105	Overtime	-
5110	Salaries, Hourly	-
5120	Retirement	21,341
5121	PARS/ APPLE Retirement	-
5125	Medicare Tax	3,420
5130	Medical Insurance	60,883
5133	Dental Insurance	4,160
5134	Disability Insurance	1,128
5136	Vacation Buy Back	-
5137	Vision Insurance	1,190
5138	Life Insurance	755
<b>Includes \$23,358 (6%) charged to General Fund for non-street activities (Council Meetings/Parks)</b>		<b>TOTAL 328,798</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION		
	<b>DEPT. 4425</b>		<b>STREET MAINTENANCE</b>
	<b>MAINTENANCE AND OPERATIONS</b>		
6040	<b>Gasoline</b>		
		<b>TOTAL</b>	<b>10,000</b>
6150	<b>Street Maintenance Supplies</b>		
	Uniforms	2,500	
	Vehicle Maintenance	2,000	
	Other Materials	15,000	
	(Silica Sand, small equipment, cones grinding teeth for grinder, other replacement parts)		
		<b>TOTAL</b>	<b>19,500</b>
6387	<b>Signs</b>		
	Regulatory signs and hardware	15,000	
	Street Decorations/Banners/Storage	5,000	
		<b>TOTAL</b>	<b>20,000</b>
6392	<b>Training and Education</b>		
	Allotment for training, hotel, meals and transportation	10,000	
	(Safety training and other educational training)		

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	
	DEPT. 4425	STREET MAINTENANCE
		TOTAL 10,000
6393	Vehicle Lease Maintenance Trucks	TOTAL 34,083

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION		
	<b>DEPT. 4425</b>		<b>STREET MAINTENANCE</b>
6395	<b>Water</b>		
		<b>TOTAL</b>	<b>5,660</b>
6770	<b>Street Maintenance</b>		
	Striping/Pavement (Premark Street Marking) <i>Schedule striping and pavement marking including select system school zones, curb painting, new pavement, and pavement reflector replacement (estimated)</i>	10,000	
	Curb Addressing <i>Needs to be performed in 2020</i>		
	Bus Shelter Maintenance <i>Clean and Repair Bus Shelters Structure repair, painting, etc. Atlantic Trash Cans (30 GAL. Metal Trash Cans Model - MF3051)</i>	5,000	
	Graffiti Removal Street Maintenance	15,000	

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	STREET MAINTENANCE
	DEPT. 4425	
	<i>Pot Hole Repair</i>	-
	Median Maintenance	-
	<i>Re-Landscape Atlantic Blvd. Median</i>	
	<b>TOTAL</b>	<b>30,000</b>
6778	<b>Street Sweeping (2 times per week)</b> Nationwide Environmental Services - Street sweeping contract services Street sweeping (2 times per week)	
	<b>TOTAL</b>	<b>90,000</b>
6785	<b>Tree Trimming</b> Scheduled Citywide tree maintenance - 2-3 trim cycle (East of Otis to Riverbed/City Limit)	15,000
	<b>TOTAL</b>	<b>15,000</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DEPT. 4430	DESCRIPTION	STREET LIGHTING
		<b>MAINTENANCE AND OPERATIONS</b>	
6318		<b>Electricity</b> Street Lighting General Fund subsidy is \$32,641	<b>TOTAL 105,685</b>
6775		<b>Street Lighting Maintenance Service</b> Contract Maintenance Service General Fund subsidy is \$34,812	<b>TOTAL 34,812</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	COMMUNITY DEVELOPMENT ADMINISTRATION
	<b>DEPT. 4210</b>	
	<b>SALARIES AND BENEFITS</b>	
5100	Community Development Manager (Vacant)	-
5116	Auto Allowance (\$350 times 12 months)	-
5120	Retirement	-
5125	Medicare Tax	-
5130	Medical Insurance	-
5133	Dental Insurance	-
5134	Disability Insurance	-
5137	Vision Insurance	-
5138	Life Insurance	-
	<b>TOTAL</b>	-
	<b>MAINTENANCE AND OPERATIONS</b>	
6080	<b>Office Supplies</b> General Supplies	-
	<b>TOTAL</b>	-
6386	<b>Professional Membership(CDM)</b> Annual Membership in the American Planning Association (APA)	-
	<b>TOTAL</b>	-

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	COMMUNITY DEVELOPMENT ADMINISTRATION
	<b>DEPT. 4210</b>	
6391	<b>Travel and Meeting</b> League of Cities and APA Conferences	-
	<b>TOTAL</b>	-
6392	<b>Training and Education</b> League of Cities and APA Conferences	-
	<b>TOTAL</b>	-
6720	<b>Contractual</b> Project managaement <small>Avant Garde - \$250 a week CDBG administration</small>	-
	<b>TOTAL</b>	-

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	PLANNING
	<b>DEPT. 4215</b>	
	<b>SALARIES AND BENEFITS</b>	
5100	Community Development Manager (Vacant)	-
5100	Planning Assistant (Vacant)	-
5100	Comm. Dev. Secretary (33%) (Vacant)	-
5105	Overtime	-
5115	Hourly	-
5120	Retirement	-
5121	PARS/APPLE Retirement	-
5125	Medicare Tax	-
5130	Medical Insurance	-
5133	Dental Insurance	-
5134	Disability Insurance	-
5136	Vacation Buy Back	-
5137	Vision Insurance	-
5138	Life Insurance	-
	<b>TOTAL</b>	-
	<b>MAINTENANCE AND OPERATIONS</b>	
6065	<b>Maps</b> Zoning Maps	-
	<b>TOTAL</b>	<b>250</b>
6080	<b>Office Supplies</b> Property Data Profiles (First American Data Tree) @\$100 / month Printing Costs	1,200 300
	<b>TOTAL</b>	<b>1,500</b>
6386	<b>Professional Membership</b> <b>Annual Membership in the American Planning Association (APA)</b> Planning Commissioners Assistant Planner	- -
	<b>TOTAL</b>	-
6391	<b>Travel and Meetings</b> League of Cities and APA Conferences	-
	<b>TOTAL</b>	-

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	PLANNING
	<b>DEPT. 4215</b>	
6392	<b>Training and Education</b>  Planning Commissioners to attend conferences as approved by the City Manager (up to 2 - rotating)  Assistant Planner attendance of League of Cities and APA Conferences  Other relevant training	4,000  -  -  <b>TOTAL 4,000</b>
6715	<b>Commissioner</b>  Planning Commission (1 Chairperson @\$65 and 4 Commissioners @\$55 plus medicare tax and retirement)	3,600     <b>TOTAL 3,600</b>
6720	<b>Contractual</b>  Willdan Planning Services General Plan Update - Completed FY 2017-18 Developmental Code Water Infrastructure/Parks Plan	150,000  -  -  -  <b>TOTAL 150,000</b>
6760	<b>Contractual</b>  Development Agreements / Development Review Permits (emja / Glenn Ward Calsada) Accounting Services - Collection of CBP and Operating Fees Compliance Services - MGO (Site Compliance and Operating Fee Collections)	150,000  24,000 50,000   <b>TOTAL 224,000</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	ENGINEERING
	<b>DEPT. 4216</b>	
	<b>SALARIES AND BENEFITS</b>	
5100	Community Development Director (Vacant)	-
5100	Community Development Manager (25%) (Vacant)	-
5100	Assistant Engineer	110,304
5100	Community Development Secretary (33%) (Vacant)	-
5120	Retirement	9,445
5125	Medicare Tax	1,599
5130	Medical Insurance	7,439
5133	Dental Insurance	343
5134	Disability Insurance	493
5136	Vacation Buy Back	-
5137	Vision Insurance	110
5138	Life Insurance	279
	<b>TOTAL</b>	<b>130,012</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
6080	<b>Office Supplies</b>	
	General office supplies (BNI Public Works Green Book, Cost Book, Standard Plans, Engineering Codes, MUTCD, Traffic Manual) General office supplies (Drafting table, lamp, wire bin, roll fire, Blue Print Stand, Desk Chair.) PC, Monitor, Software	3,500
	Other funding used for \$3,000 of supplies	
	<b>TOTAL</b>	<b>3,500</b>
6386	<b>Professional Membership</b>	
	American Society of Civil Engineers	300
	American Public Works Association	170
	City and County Engineers Association	35
	<b>TOTAL</b>	<b>505</b>
6391	<b>Travel and Meetings</b>	
	Public Works Training/Conference for Engineer <i>Annual Public Works Conference (International Public Works Congress &amp; Expo)</i> ASCE Annual Conference (American Society of Civil Engineers)	1,000
	<b>TOTAL</b>	<b>1,000</b>
6392	<b>Training and Education</b>	
	Engineering Training & Seminars (Design Management, NPDESIMS4)	1,000
	<b>TOTAL</b>	<b>1,000</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	ENGINEERING
	<b>DEPT. 4216</b>	
6720	<p><b>Contractual</b></p> <p>LA County Public Works</p> <p>Annual catch basin cleaning, industrial waste inspection services, and special project assistance performed by the County, City portion of LAFCO costs</p> <p style="text-align: right;">17,500</p> <p>Sewer System Management Plan Recertification and 2019 Plan Audits</p> <p style="text-align: right;">5,000</p>	
	<b>TOTAL</b>	<b>22,500</b>
6745	<p><b>Engineering Services</b></p> <p>PUBLIC WORKS - Professional engineering services, inspection services, engineering services, and special project assistance for city projects (Wildan Engineering Services)</p> <p style="text-align: right;">55,000</p> <p>NPDES/MS4 Compliance (Mandated) (WMP Implementation)</p> <p>National Pollutant Discharge Elimination System (Environmental Engineering Services for NPDES Program Development and Implementation)</p> <p>NPDES Storm Drain Filming For Illegal Connections</p> <p>Administer TMDL (Total Maximum Daily Loads) mandated by California Regional Water Quality Control Board annual waste discharge (SRWCB) payment</p> <p>Increase Catch Basin Maintenance per MS4 Permit</p> <p>Municipal Separate Storm Sewer System (MS4) Development and Implementation</p> <p>City Share for Watershed Group (WMP) Regional Project (LAR-UR2) Prop 1</p> <p>CMIP Monitoring Cost</p> <p style="text-align: right;">120,000</p> <p>GWMA (Signal Hill) - Gateway Water Management Authority annual membership</p> <p style="text-align: right;">7,100</p> <p><i>The City applied for and received a 50% reduction in the annual membership.</i></p>	
	<b>TOTAL</b>	<b>182,100</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	
<b>DEPT. 4212</b>		<b>BUILDING REGULATION</b>
	<b>SALARIES AND BENEFITS</b>	
5100	Community Development Director (Vacant)	-
5100	Community Development Manager (25%) (Vacant)	-
5100	Building Inspector (Vacant)	-
5100	Comm. Dev. Secretary (33%) (Vacant)	-
5105	Overtime	-
5110	Hourly	-
	1 Building Inspector (\$45/hr x 35hrs/week) [Vacant]	-
5120	Retirement	-
5121	PARS/APPLE Retirement	-
5125	Medicare Tax	-
5130	Medical Insurance	-
5133	Dental Insurance	-
5134	Disability Insurance	-
5137	Vision Insurance	-
5138	Life Insurance	-
	<b>TOTAL</b>	<b>-</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
6080	<b>Office Supplies</b>	
	Permitting Software (33%)	-
	LA County Code Update	200
	General Supplies	-
	<b>TOTAL</b>	<b>200</b>
6386	<b>Professional Membership</b>	
	California Building Inspector	-
	<b>TOTAL</b>	<b>-</b>
6392	<b>Education and Training</b>	
	Certified Building Inspector	-
	Certified Plumbing Inspector	-
	Certified Electrical Inspector	-
	<b>TOTAL</b>	<b>-</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	
	<b>DEPT. 4212</b>	<b>BUILDING REGULATION</b>
6720	<b>Contractual</b>	
	Building Official Services (Willdan)	160,000
	Plan Check Services (TransTech)	97,500
	<i>65% of Plan Check Revenue estimated to be \$150,000</i>	
		<b>TOTAL</b>
		<b>257,500</b>
6752	<b>Industrial Waste</b>	
	<i>This category covers the cost of industrial waste licensing inspections.</i>	-
	<i>Mandatory County Fee (Not every year)</i>	
		<b>TOTAL</b>
		<b>-</b>
6779	<b>Strong Motion Fee</b>	
	<i>(\$200/quarter)</i>	800
		<b>TOTAL</b>
		<b>800</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	HOUSING REHAB SFD
	<b>DEPT. 4620</b>	
	<b>SALARIES AND BENEFITS</b>	
5110	Hourly Housing Rehabilitation Specialist	
5121	PARS/APPLE Retirement	
5125	Medicare Tax	
	<b>TOTAL</b>	<b>-</b>
	<b>MAINTENANCE AND OPERATIONS</b>	
6350	<b>Home Improvement Programs</b>	69,562
		-
	<b>TOTAL</b>	<b>69,562</b>
6767	<b>Housing Rehabilitation Consultant</b> 20% administration of program	17,390
	<b>TOTAL</b>	<b>17,390</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DEPT. 4020	DESCRIPTION	FACILITIES OPERATIONS
<b>SALARIES AND BENEFITS</b>			
5110	Salaries, Hourly		49,010
		Front Desk 25 hours/week * 2	49,010
5121	Apple Retirement		1,838
5125	Medicare Tax		711
<b>TOTAL</b>			<b>51,559</b>
<b>MAINTENANCE AND OPERATIONS</b>			
6010	<b>Building Materials</b>		
	Cudahy / Bedwell Hall Improvement Project Phase II		-
	Roof maintenance (Lugo / Clara facilities)		2,000
	Tables and Chairs		5,000
	Roof repairs will be part of Go Green proposal		
<b>TOTAL</b>			<b>7,000</b>
6014	<b>Copier Supplies</b>		
	Copier Supplies Servicing (Contract Konika)		4,960
	Copier Lease (Contract Xerox/Minolta 36 months)		18,000
	Paper		1,700
	Toner/Ink		3,500
<b>TOTAL</b>			<b>28,160</b>
6060	<b>Kitchen</b>		
	Servicing of kitchens at City facilities		5,000
	including but not limited to Fire Sprinkler Supression System (Inspection Included)		
<b>TOTAL</b>			<b>5,000</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	FACILITIES OPERATIONS
	<b>DEPT. 4020</b>	
6080	<b>Office Supplies</b>	
	Cleaning, sanitary supplies, trash liners, and paper goods	30,000
	Flags (Replace every other year)	1,000
	<b>TOTAL</b>	<b>31,000</b>
6312	<b>City Memberships</b>	
	California Cities for Self-Reliance JPA	30,000
	Area E Disaster Management	1,230
	Gateway Water Management Authority	14,000 <span style="color: red;">Other Funds</span>
	Sams Club Membership	130
	Request CA Self-Reliance JPA to make payment at mid-year	
	<b>TOTAL</b>	<b>45,360</b>
6318	<b>Electricity</b>	
	City Hall (Including Library)	50,000
	Other Facilities (Lugo Park, Clara Street Park, Bedwell Hall)	85,000
	Lighting (Atlantic/Patata Intersection)	900
	<b>TOTAL</b>	<b>135,900</b>
6370	<b>Equipment Maintenance</b>	
	Generator at Lugo Park (Bi-annual Service)	3,000
	General building repairs and facility maintenance (Estimated)	8,000
	Fitness Center (Closed)	-
	Annual Fire Extinguisher Service	600
	Locksmith	4,460
	Annual Audits (Playgrounds, Skate Park and Gym)	5,000
	Purchase of Floor Macarve to maintain tile floors	9,520
	<b>TOTAL</b>	<b>21,060</b>
6376	<b>Tax and License</b>	
	Health Department Fees	
	<b>TOTAL</b>	<b>500</b>
6380	<b>Natural Gas</b>	
	City Hall	450
	Clara Street Park	1,155
	Lugo Park	515
	<b>TOTAL</b>	<b>2,120</b>
6385	<b>Postage</b>	
	Postage Machine Lease, postage, etc.	5,600
	<b>TOTAL</b>	<b>5,600</b>
6390	<b>Telephone</b>	
	Ring Central	12,000
	AT&T Landline and cell phone	19,000
	<b>TOTAL</b>	<b>31,000</b>

6395	<b>Water</b>	
	City Hall / Library	450
	Other Facilities (Lugo Park, Clara Street Park)	46,000

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	FACILITIES OPERATIONS
	<b>DEPT. 4020</b>	
		<b>TOTAL 46,450</b>
6396	<b>Internet</b>	
	Time Warner Business Class Internet	5,700
	<b>Includes new service for Council Chambers live streaming</b>	<b>TOTAL 5,700</b>
6420	<b>Liability Insurance</b>	
	General Liability (Including property) - MIC	172,377
	Insurance Management Fees (Liability and Workers Compensation)	24,750
	Crime Insurance	6,038
	Cyber Liability	4,742
	Expected self-insurance loss	40,000
	CJPIA Retro (\$218,024)	35,000
		<b>TOTAL 282,907</b>
6490	<b>Workers Compensation Insurance</b>	
	Workers Compensation - MIC	83,355
	Insurance management fees	29,250
	Expected self-insurance loss	75,000
	CJPIA retro Installment due 7/1/2015. Additional amounts due 7/1/18/19/20/21 of \$130,500	30,300
		<b>TOTAL 217,905</b>
6515	<b>Food Distribution</b>	
	Food Distribution Program	37,854
	CDBG Funded	33,781
	Truck rental (November/December)	200
	General Fund Share of Costs	3,873
		<b>TOTAL 37,854</b>

**CITY OF CUDAHY  
BUDGET WORKSHEET  
FY 2020-21**

ACCT. NO.	DESCRIPTION	FACILITIES OPERATIONS
	<b>DEPT. 4020</b>	
6720	<b>Contractual</b> AAA Alarm Services 5,974 Information Technology - IT Systemhouse (\$3,200 x 12 months) 38,400 Grant writing services - Translation Services (Hilda Estrada) 30,000 State Mandated Cost Recovery 3,500 Pest Control (American City Pest and Termite) 6,000 Flag Poles, lights, etc. (Downey Sign and Lighting) non-Gas Tax 1,500 <b>TOTAL 85,374</b>	
6742	<b>Emergency Preparedness</b> LA County Satellite Network - <b>TOTAL -</b>	
6810	<b>Bank Charges</b> Wells Fargo (General Fees) <b>TOTAL 12,000</b>	
6910	<b>Computers</b> Virtual City Hall 47,700 Back Up Service 10,300 Replacement Server / Workstations (36 month lease) 15,600 Eset Antivirus 5,000 Web domain registration and service fees 1,000 Website SSL Certificates and other hosting Costs 500 Audio/Video Recording for Council Chamber 5,000 <b>TOTAL 85,100</b>	
6950	<b>Heating and Air Conditioning</b> A/C Servicing (\$2,500 quarterly) 10,000 A/C Repairs not covered by servicing 12,000 <b>TOTAL 22,000</b>	
6970	<b>Office Equipment</b> Business Cards (Got Printing) 2,000 Storage Bin (Haul-Away) 984 <b>TOTAL 2,984</b>	



# Item Number 12B

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## STAFF REPORT

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**Date:** June 2, 2020  
**To:** Honorable Mayor/Chair and City Council/Successor Agency Members  
**From:** Henry Garcia, Interim City Manager/Executive Director  
By: City Attorney's Office  
**Subject:** **Consideration and Adoption of an Urgency Ordinance Enacting a Temporary Moratorium on Evictions for Residential Tenants**

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### RECOMMENDATION

The City Council is recommended to adopt an Urgency Ordinance (Attachment A) enacting a temporary moratorium on evictions due to the nonpayment of rent for residential tenants where failure to pay rent results from income loss attributable to the novel Coronavirus (COVID-19).

### BACKGROUND/JUSTIFICATION OF RECOMMENDED ACTION:

Since Coronavirus was first reported in China in December 2019, it has quickly spread throughout the world to over 120 countries. As of May 27, 2020, over 5,792,200 cases of the virus have been reported worldwide with over 357,400 deaths. After the United States, the countries with the greatest number of cases are Brazil, Russia, and the United Kingdom. Coronavirus can take up to 14 days to show symptoms, is highly contagious (even before showing symptoms), and has no known vaccine. Extraordinary measures have been taken to contain the virus, including quarantining multiple provinces of China and the entire country of Italy. On March 11, 2020, the World Health Organization ("WHO") declared the virus outbreak a pandemic.

The first confirmed case of Coronavirus in the United States was made on January 21, 2020. Since then, there has been increased concerns of the virus spreading across the Country. As of April 30, 2020, there have been a total of 1,745,803 confirmed cases of the virus with 102,107

deaths.

On March 4, 2020, shortly after the State's first death was reported, Governor Gavin Newsom declared a State of Emergency for the entire state. On March 13, 2020, President Trump declared a National State of Emergency in response to the continued spread of the disease. On March 16, 2020, the County of Los Angeles issued an order prohibiting group events and gatherings, requiring social distancing measures, ordered the closure of all gyms and bars, and requiring all restaurants to provide take out or delivery services only. On March 28, 2020, Governor Newsom issued Executive Order N-37-20 which prevents evictions for a period of 60 days of "a tenant from a residence or dwelling unit for nonpayment of rent" who satisfies requirements set forth in said order, a copy of which is attached as Exhibit "A."

The potential for the virus to rapidly spread caused government officials and private businesses to respond at near unprecedented levels, this resulted in the closure of schools, non-essential businesses, cancellation of all sporting events, all with the hopes to contain the virus. The actions taken to contain the virus resulted in the unemployment of many residents of the City. Increasing unemployment rates results in residents being unable to pay their rent. At the moment, Executive Order N-37-20 is offering the City's residents a level of protection, the attached Urgency Ordinance contains a 120-grace period after the end of order N-37-20. The City wishes to protect its residents from additional undue hardship during this difficult time.

### **FISCAL IMPACT**

There is currently no fiscal impact on the City's budget.

### **RECOMMENDATION**

Accordingly, it is recommended that the City Council approve the attached Urgency Ordinance.

### **ATTACHMENTS**

- A. Urgency Ordinance No. 710
- B. Exhibit "A"

**URGENCY ORDINANCE NO. 710**

**AN UNCODIFIED URGENCY ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CUDAHY, CALIFORNIA ENACTING A TEMPORARY MORATORIUM ON EVICTIONS DUE TO THE NONPAYMENT OF RENT FOR RESIDENTIAL TENANTS WHERE THE FAILURE TO PAY RENT RESULTS FROM INCOME LOSS ATTRIBUTABLE TO THE NOVEL CORONAVIRUS (COVID-19)**

WHEREAS, in late December 2019, several cases of unusual pneumonia began to emerge in the Hubei province of China. On January 7, 2020, a novel coronavirus now known as COVID-19 was identified as the likely source of the illness; and

WHEREAS, on January 30, 2020, the World Health Organization (“WHO”) declared COVID-19 a Public Health Emergency of International Concern. On January 31, 2020, the United States Secretary of Health and Human Services declared a Public Health Emergency; and

WHEREAS, on March 4, 2020, California Governor Gavin Newsom declared a State of Emergency to make additional resources available, formalize emergency actions already underway across multiple state agencies and departments, and help the State prepare for a broader spread of COVID-19; and

WHEREAS, on March 11, 2020, WHO publicly characterized COVID-19 as a pandemic; and

WHEREAS, on March 16, 2020, Governor Newsom issued Executive Order N-28-20 which suspends “[a]ny provision of state law that would preempt or otherwise restrict a local government’s exercise of its police power to impose substantive limitations on residential or commercial evictions ... including, but not limited to, any such provision of Civil Code Sections 1940 et seq.” to the extent such provisions would otherwise restrict such exercise; and

WHEREAS, on March 16, 2020, the County of Los Angeles Department of Public Health ordered the closure of all gyms, bars, and ordered all restaurants to close their sit-in areas and offer take-out or delivery services only; and

WHEREAS, on March 19, 2020, the County of Los Angeles Department of Public Health issued a Mandatory Safer at Home Order, ordering the closure of all non-essential businesses until April 19, 2020. On April 10, 2020 this order was extended until May 15, 2020; and

WHEREAS, on March 27, 2020, Governor Newsom issued Executive Order N-37-20 (“Executive Order N-37-20”) which prevents evictions for a period of 60 days of “a tenant from a residence or dwelling unit for nonpayment of rent” who satisfies requirements set forth in said order; and

WHEREAS, on May 13, 2020 the County of Los Angeles Department of Public Health revised its Safer at Home Order moving the County into Stage 2 of Reopening and providing additional guidelines for reopening of “lower risk retail businesses”; and

WHEREAS, as of May 27, 2020, the Los Angeles Department of Public Health has identified 48,700 cases of COVID-19 in Los Angeles County, resulting in 2,195 deaths; and

WHEREAS, the COVID-19 pandemic resulted in the closure of many businesses, which led to hourly cutbacks and resulted in increased employee terminations; and

WHEREAS, this Urgency Ordinance enacts a temporary moratorium intended to promote stability and fairness within the residential rental market in the City of Cudahy (the “City”) during the COVID-19 pandemic outbreak, and to prevent avoidable homelessness thereby serving the public peace, health, safety, and public welfare and to enable tenants in the City whose income and ability to work is affected due to COVID-19 to remain in their homes; and

WHEREAS, displacement through eviction destabilizes the living situation of tenants and impacts the health of the City’s residents by uprooting children from schools, disrupting the social ties and networks that are integral to citizens’ welfare and the stability of communities within the City; and

WHEREAS, displacement through eviction creates undue hardship for tenants through additional relocation costs, stress, and anxiety, and the threat of homelessness due to the lack of alternative housing; and

WHEREAS, during the COVID-19 pandemic outbreak, affected tenants who have lost income due to the impact on the economy or their employment, may be at risk of homelessness if they are evicted for non-payment as they will have little or no income and thus be unable to secure other housing if evicted; and

WHEREAS, Government Code Sections 36934 and 36937(b) authorize the City to adopt an Urgency Ordinance for the immediate preservation of the public peace, health and safety, provided that such Urgency Ordinance is passed by a four-fifths vote of the City Council.

**NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF CUDAHY, CALIFORNIA DOES HEREBY ORDAIN AS FOLLOWS:**

**SECTION 1.** The recitals above are true and correct and incorporated herein by reference.

**SECTION 2. Title.** This Urgency Ordinance shall be known as the “COVID-19 Eviction Moratorium Ordinance.”

**SECTION 3. Urgency Findings.** The purpose of this Urgency Ordinance is to promote housing stability during the COVID-19 pandemic and prevent avoidable homelessness. This Urgency Ordinance is necessary for the immediate preservation of the public peace, health, and safety because the COVID-19 pandemic has the potential of destabilizing the residential rental market for all of the reasons described herein. This

Urgency Ordinance is intended to enable tenants in the City, whose employment and income have been affected by the COVID-19 pandemic, to be temporarily exempt from eviction for non-payment of rent and to reduce the risk that these events will lead to, such as anxiety, stress, and potential homelessness for the affected City residents and their communities, thereby serving the public peace, health, safety, and public welfare. The temporary moratorium on evictions for non-payment imposed by this Urgency Ordinance is created pursuant to the City's general police powers to protect the health, safety, and welfare of its residents and exists in addition to any rights and obligations under state and federal law.

#### **SECTION 4. Definitions**

- A. "Affected Tenant" means a Tenant who satisfies one or more of the criteria in paragraph A of Section 8, of this Urgency Ordinance below.
- B. "Health Department" means the County of Los Angeles Department of Public Health.
- C. "Landlord" means an owner, lessor, or sublessor who receives or is entitled to receive rent for the use and occupancy of any Rental Unit, Mobilehome or Mobilehome lot, and the agent, representative, or successor of any of the foregoing.
- D. "Mobilehome" means a structure transportable in one or more sections, designed and equipped to contain no more than one dwelling unit, to be used with or without a foundation system.
- E. "Mobilehome Park" means any area or tract of land where two or more mobilehome lots are rented or leased, or held out for rent or lease, to accommodate mobilehomes used for human habitation for permanent, as opposed to transient, occupancy.
- F. "Mobilehome Owner" means a person who owns a Mobilehome and rents or leases the Mobilehome Park lot on which the Mobilehome is located.
- G. "Mobilehome Resident" means a person who rents a mobilehome from a Mobilehome Owner.
- H. "Notice of Termination" shall mean the notice informing a Tenant Household or Mobilehome Resident of the termination of its tenancy in accordance with California Civil Code Section 1946.1 and California Code of Civil Procedure Section 1161, as amended.
- I. "Rental Unit" means: (i) a Mobilehome, building, structure or the part of a structure that is used as a home, residence, or sleeping structure by one person who maintains a household or by two or more persons who maintain a common household; (ii) a rented lot within a Mobilehome Park where a Mobilehome Owner's Mobilehome coach is located.
- J. "Tenant" means a residential tenant, subtenant, lessee, sublessee, or any other person entitled by written or oral rental agreement, or by sufferance, to use or

occupy a Rental Unit. The term “Tenant” is inclusive of the defined terms “Tenant Household”, “Mobilehome Resident” and “Mobilehome Owner.”

- K. “Tenant Household” means one or more Tenant(s) who occupy any individual Rental Unit, including each dependent of any Tenant whose primary residence is the Rental Unit.

**SECTION 5. Application.** This Urgency Ordinance applies to Affected Tenants in any Rental Unit and Landlords of Affected Tenants.

**SECTION 6. Moratorium on Eviction and Termination of Tenancies for Affected Tenants.**

- A. For the period commencing on the effective date of this Urgency Ordinance and ending (30) calendar days following the expiration date of Executive Order N-37-20 or any extension thereto, a Landlord may not terminate the tenancy of a Tenant who qualifies as an Affected Tenant for non-payment of rent. During the term of the moratorium established under this Urgency Ordinance, a Landlord shall not serve a notice pursuant to California Code of Civil Procedure Sections 1161 or 1162, file or prosecute an unlawful detainer action based on a three-day pay or quit notice, or otherwise endeavor to evict an Affected Tenant for nonpayment of rent.
- B. The moratorium established under this Urgency Ordinance is intended to have greater scope and longer duration than the moratorium established under Executive Order N-37-20.

**SECTION 7. Just Cause Termination.**

- A. The provisions of Section 8 of this Urgency Ordinance notwithstanding, a Landlord, subject to compliance with the requirements of this Urgency Ordinance may terminate the tenancy of a Tenant who otherwise qualifies as an Affected Tenant if a Landlord can show any of the following circumstances apply thereby rendering the termination a “Just Cause Termination”:
  - 1. Nuisance Behavior. The Affected Tenant, after written notice to cease, continues to be so disorderly or to cause such a nuisance as to destroy the peace, quiet, comfort, or safety of the Landlord or other Tenants of the structure or rental complex containing the Rental Unit. Such nuisance or disorderly conduct includes violations of state and federal criminal law that destroy the peace, quiet, comfort, or safety of the Landlord or other Tenants of the structure or rental complex containing the Rental Unit, and may be further defined in the regulations adopted by the City, including but not limited to regulations established by ordinance or resolution.
  - 2. Refusing Access to the Unit. The Affected Tenant, after written notice to cease and a reasonable time to cure, continues to refuse the Landlord reasonable access to the Rental Unit, so long as the Landlord is not abusing the right of access under California Civil Code Section 1954, as amended.

3. Unapproved Holdover Subtenant. The Affected Tenant holding over at the end of the term of the oral or written rental agreement is a subtenant who was not approved by the Landlord.
4. Ellis Act Removal. The Landlord seeks in good faith to recover possession of the Rental Unit to remove the building in which the Rental Unit is located permanently from the residential rental market under the Ellis Act and, having complied in full with the Ellis Act and any related ordinance of the City, including the provision of relocation assistance as may be required by applicable state law.
5. Owner Move-In. With respect to residential tenancies, the Landlord seeks in good faith, honest intent, and without ulterior motive to recover possession for: a) the Landlord's own use and occupancy as the Landlord's principal residence for a period of at least thirty-six (36) consecutive months commencing within three (3) months of vacancy; or (b) the principal residence of the Landlord's spouse, domestic partner, parent(s), child or children, brother(s), or sister(s) (each an "authorized family member") for a period of at least thirty-six (36) consecutive months and commencing within three (3) months of vacancy, so long as the Rental Unit for the Landlord's authorized family member is located in the same building as the Landlord's principal residence and no other Rental Unit in the building is vacant. It shall be a rebuttable presumption that the Landlord has acted in bad faith if the Landlord or the Landlord's qualified relative, for whom the Tenant was evicted, does not move into the Rental Unit within three (3) months from the date of the Tenant's surrender of possession of the premises or occupy said unit as his/her principal residence for a period of at least thirty-six (36) consecutive months. The Landlord shall have provided relocation assistance as may be required by the Cudahy Municipal Code or applicable state law.
6. Order to Vacate. The Landlord seeks in good faith to recover possession of the Rental Unit in order to comply with a court or governmental agency's order to vacate, order to comply, order to abate, or any other City enforcement action or order that necessitates the vacating of the building in which the Rental Unit is located as a result of a violation of the Cudahy Municipal Code or any other provision of law, and provides a notice of the right to reoccupy. The Landlord shall have provided relocation assistance as may be required by the Cudahy Municipal Code or applicable state law.
7. Vacation of Unpermitted Rental Unit. The Landlord seeks in good faith to recover possession of an unpermitted Rental Unit in order to end the unpermitted use. The Landlord shall have provided relocation assistance as may be required by the Cudahy Municipal Code or applicable state law.
8. Criminal Activity.
  - a. The Tenant Household, after receiving a written notice to cure (which notice shall include the return provisions listed in subsection d, below) by removing the Violating Tenant (as defined below) from the household, and, where necessary, amending the lease to remove the Violating

Tenant's name, fails to do so within a reasonable time, by one of the following methods as further described in the regulations:

- i. Filing a restraining order or providing evidence to the Landlord of similar steps being taken to remove the Violating Tenant from the household.
  - ii. Removing the Violating Tenant from the household and providing written notice to the Landlord that the Violating Tenant has been removed.
- b. For purposes of this subsection 8, a "Violating Tenant" shall mean an adult Tenant that is indicted by a grand jury or held to answer pursuant to Penal Code Section 872, as amended, for a serious felony as defined by Penal Code Section 1192.7(c), as amended, or a violent felony as defined by Penal Code Section 667.5(c), as amended, which occurred during the tenancy and within 1,000 feet of the premises on which the Rental Unit is located.
  - c. The past criminal history of a Tenant shall not be a factor in determining whether the Tenant is a Violating Tenant.
  - d. If a Violating Tenant, as defined above, is acquitted from the charges or the charges are dismissed or reduced, he or she may return to the Rental Unit as a Tenant, so long as: 1) the Tenant Household still resides in the Rental Unit; and 2) the Tenant Household consents to the Violating Tenant's return.

**B. Relocation Assistance and Deposits.**

1. Nothing in this ordinance shall operate to relieve a Landlord to pay relocation assistance to Affected Tenants where required by applicable state law.
2. Refund of Security Deposit. A Landlord shall refund to the Tenant Household any security deposit paid by the Tenant Household, provided however, that the Landlord may withhold any properly itemized deductions from the security deposit pursuant to California Civil Code Section 1950.5, as amended.

**SECTION 8. Affirmative Defense to Eviction; Penalties and Remedies.**

- A. Affirmative Defense. Each Landlord that seeks to terminate a tenancy of an Affected Tenant must comply with this Urgency Ordinance. Non-compliance with any applicable component of this Urgency Ordinance shall constitute an affirmative defense for an Affected Tenant against any unlawful detainer action under California Code of Civil Procedure Section 1161, as amended. To assert this defense and to establish Affected Tenant status, a Tenant shall have first notified the Landlord in writing before rent is due, or within a reasonable period of time afterwards not to exceed thirty (30) calendar days, that the Tenant needs to delay all or some payment of rent attributable to an inability to pay the

full amount due to reasons related to the novel coronavirus (COVID-19) pandemic, including but not limited to the following:

1. The Tenant was unable to work because the Affected Tenant was sick with COVID-19 and hospitalized or otherwise required to stay at home and self-quarantine by written order of the Health Department, or the Affected Tenant was caring for a household or family member who was/is sick with COVID-19; or
  2. The Tenant experienced a lay-off, work furlough, reduction in work hours or income reduction resulting from the COVID-19 pandemic and/or related emergency responses of governmental entities, including orders and/or declarations of the Governor of the State of California and the Health Department; or
  3. The Tenant needed to miss work to care for a minor child whose school was closed in response to the COVID-19 pandemic and the Tenant was either ineligible to receive paid leave; unable to make use of accrued but unused paid vacation time or exhausted all such leave or vacation time before the minor's school was re-opened
- B. Along with the notification referenced under paragraph A of this section, above, the Affected Tenant must also include true and correct copies of verifiable documentation that reasonably corroborate any or all of the permitted reasons for the non-payment of rent under paragraph A of this section, above. The following documentation shall create a rebuttable presumption that the Affected Tenant has satisfied one or more of the permitted reasons for non-payment of rent set forth under paragraph A of this section, above, but are not necessarily the exclusive form of documentation corroborating such reasons:
1. A written notice or like documentation from the Affected Tenant's employer citing COVID-19 as a reason for reduced work hours, work furlough, or termination; or
  2. Employer paycheck stubs, payroll checks, bank statements, or medical bills or signed letters or statements from the Affected Tenant's employer or supervisor explaining the Affected Tenant's changed financial circumstances; or
  3. Notification from a school declaring a school closure related to COVID-19
- C. Obligation of Affected Tenant to pay unpaid rent. Nothing in this Urgency Ordinance shall relieve an Affected Tenant of liability for any unpaid rent following the expiration of the moratorium established under this Urgency Ordinance. The foregoing notwithstanding and except as otherwise agreed to in writing by the Affected Tenant and the Landlord, the Affected Tenant shall be given a period of one hundred and twenty (120) calendar days to pay all unpaid back-rent. During the 120-day period, the protections against eviction found in this Urgency Ordinance shall apply for such Affected Tenants and provided the Affected Tenant pays all rent due by this deadline.

#### D. Civil Remedies

1. Any Landlord that fail(s) to comply with this Urgency Ordinance may be subject to civil proceedings for displacement of Affected Tenant(s) initiated by the City or the Affected Tenant Household for actual and exemplary damages.
2. Whoever is found to have violated this Urgency Ordinance shall be subject to appropriate injunctive relief and shall be liable for damages, costs and reasonable attorneys' fees.
3. Treble damages shall be awarded for a Landlord's willful failure to comply with the obligations established under this Urgency Ordinance.
4. Nothing herein shall be deemed to interfere with the right of a Landlord to file an action against a Tenant or non-Tenant third party for the damage done to said Landlord's property. Nothing herein is intended to limit the damages recoverable by any party through a private action.

**SECTION 9. Repayment by Affected Tenant Following Expiration of Moratorium.** Nothing in this Urgency Ordinance shall relieve a Residential Tenant of liability for any unpaid rent following the expiration of the moratorium established under this Urgency Ordinance. The foregoing notwithstanding and except as otherwise agreed to in writing by the Affected Tenant and the Landlord, the Affected Tenant shall be given a period of one hundred and twenty (120) calendar days to pay all rent sums that became due but were not paid by the Affected Tenant during the moratorium period established under the Urgency Ordinance or any extension thereto. During this 120-day period for the repayment of unpaid back-rent, an Affected Tenant shall continue to be afforded the protections set forth under the Urgency Ordinance specific to the payment of rent sums that became during the moratorium period, but which were unpaid. A Landlord shall not assess and the Affected Tenant shall not be liable for the payment of any late fees or penalties for the delay in payment of rent sums that became due but which were unpaid by the Affected Tenant during the period of the moratorium established under the Urgency Ordinance or any extension thereto.

**SECTION 10. Environmental.** This Urgency Ordinance is exempt from the requirements of the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines, as it is not a "project" and has no potential to result in a direct or reasonably foreseeable indirect physical change to the environment. (Cal. Code Regs., tit.14, § 15378, subd. (a).) Further, this Urgency Ordinance is exempt from CEQA as there is no possibility that it or its implementation would have a significant negative effect on the environment. (Cal. Code Regs., tit.14, § 15061, subd. (b)(3).)

**SECTION 11. Inconsistent Provisions.** Any provision of the Cudahy Municipal Code or appendices thereto inconsistent with the provisions of this Urgency Ordinance, to the extent of such inconsistencies and no further, is hereby repealed or modified to the extent necessary to implement the provisions of this Urgency Ordinance.

**SECTION 12. Severability.** If any section, subsection, subdivision, paragraph, sentence, clause or phrase of this Urgency Ordinance, or any part thereof, is for any reason held to be invalid or unconstitutional by a decision of any court of competent

jurisdiction, such decision shall not affect the validity of the remaining portions of this Urgency Ordinance or any part thereof. The City Council hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase thereof, irrespective of the fact that any one or more section, subsection, subdivision, paragraph, sentence, clause or phrase would be subsequently declared invalid or unconstitutional.

**SECTION 13. Construction.** The City Council intends this Urgency Ordinance to supplement, not to duplicate or contradict, applicable state and federal law and this Urgency Ordinance shall be construed in light of that intent. To the extent the provisions of the Cudahy Municipal Code as amended by this Urgency Ordinance are substantially the same as the provisions of that Code as it read prior to the adoption of this Urgency Ordinance, those amended provisions shall be construed as continuations of the earlier provisions and not as new enactments.

**SECTION 14. Publication and Effective Date.** This Urgency Ordinance is enacted pursuant to the authority conferred upon the City Council by Government Code Sections 36934 and 36937 and shall be in full force and effect upon its adoption by a four-fifths (4/5) vote of the City Council. The City Clerk shall cause this Urgency Ordinance to be published once in a newspaper of general circulation within fifteen (15) days after its adoption.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Cudahy at the regular meeting of this \_\_\_\_ day of \_\_\_\_\_, 2020.

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Elizabeth Alcantar  
Mayor

ATTEST:

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Richard Iglesias  
Assistant City Clerk

STATE OF CALIFORNIA                    )  
COUNTY OF LOS ANGELES            )  
CITY OF CUDAHY                        )        SS:

I, Richard Iglesias, Assistant City Clerk of the City of Cudahy, hereby certify that the foregoing Urgency Ordinance No.710 was passed and adopted by the City Council of the City of Cudahy, signed by the Mayor and attested by the City Clerk at a regular meeting of said Council held on the \_\_\_ day of \_\_\_\_\_, 2020 and that said Urgency Ordinance was adopted by the following vote, to-wit:

AYES:

NOES:

ABSTAIN:

ABSENT:

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Richard Iglesias  
Assistant City Clerk

# EXHIBIT A

EXECUTIVE DEPARTMENT  
STATE OF CALIFORNIA

EXECUTIVE ORDER N-37-20

**WHEREAS** on March 4, 2020, I proclaimed a State of Emergency to exist in California as a result of the threat of COVID-19; and

**WHEREAS** in a short period of time, COVID-19 has rapidly spread throughout California, necessitating stringent public health emergency orders as well as guidance from federal, state, and local public health officials; and

**WHEREAS** on March 16, 2020, I issued Executive Order N-28-20, suspending state law limitations on local jurisdictions that impose restrictions on evictions; and

**WHEREAS** on March 19, 2020, I issued Executive Order N-33-20, ordering all residents to immediately heed the Order of the State Public Health Officer for all residents, unless exempted, to stay home or at their place of residence; and

**WHEREAS** many Californians are experiencing or will experience substantial losses of income as a result of business closures, the loss of hours or wages, or layoffs related to COVID-19, hindering their ability to keep up with their rent, and leaving them vulnerable to eviction; and

**WHEREAS** minimizing evictions during this period is critical to reducing the spread of COVID-19 in vulnerable populations by allowing all residents to stay home or at their place of residence in compliance with Executive Order N-33-20; and

**WHEREAS** Chief Justice Tani Cantil-Sakauye issued advisory guidance on March 20, 2020 for superior courts to suspend most civil trials and hearings for at least 60 days, and on March 23, 2020, suspended all jury trials for a period of 60 days, and extended by 60 days the time period for the holding of a civil trial; and

**WHEREAS** on March 25, 2020 the Department of Business Oversight secured support from national banks, state banks and credit unions for temporary delays in mortgage payments and foreclosure sales and evictions for homeowners who have economic impacts from COVID-19 with the objective of maximizing consistency and minimizing hurdles potentially faced by borrowers.

**NOW, THEREFORE, I, GAVIN NEWSOM**, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes of the State of California, and in particular, Government Code sections 8567 and 8571, do hereby issue the following Order to become effective immediately:

**IT IS HEREBY ORDERED THAT:**

- 1) The deadline specified in Code of Civil Procedure section 1167 shall be extended for a period of 60 days for any tenant who is served, while

this Order is in effect, with a complaint that seeks to evict the tenant from a residence or dwelling unit for nonpayment of rent and who satisfies all of the following requirements:

- a. Prior to the date of this Order, the tenant paid rent due to the landlord pursuant to an agreement.
  - b. The tenant notifies the landlord in writing before the rent is due, or within a reasonable period of time afterwards not to exceed 7 days, that the tenant needs to delay all or some payment of rent because of an inability to pay the full amount due to reasons related to COVID-19, including but not limited to the following:
    - (i) The tenant was unavailable to work because the tenant was sick with a suspected or confirmed case of COVID-19 or caring for a household or family member who was sick with a suspected or confirmed case of COVID-19;
    - (ii) The tenant experienced a lay-off, loss of hours, or other income reduction resulting from COVID-19, the state of emergency, or related government response; or
    - (iii) The tenant needed to miss work to care for a child whose school was closed in response to COVID-19.
  - c. The tenant retains verifiable documentation, such as termination notices, payroll checks, pay stubs, bank statements, medical bills, or signed letters or statements from an employer or supervisor explaining the tenant's changed financial circumstances, to support the tenant's assertion of an inability to pay. This documentation may be provided to the landlord no later than the time upon payment of back-due rent.
- 2) No writ may be enforced while this Order is in effect to evict a tenant from a residence or dwelling unit for nonpayment of rent who satisfies the requirements of subparagraphs (a)-(c) of paragraph 1.
  - 3) The protections in paragraphs 1 and 2 shall be in effect through May 31, 2020.

Nothing in this Order shall prevent a tenant who is able to pay all or some of the rent due from paying that rent in a timely manner or relieve a tenant of liability for unpaid rent.

Nothing in this Order shall in any way restrict state or local governmental authority to order any quarantine, isolation, or other public health measure that may compel an individual to remain physically present in a particular residential property.

**IT IS FURTHER ORDERED** that this Order supersedes Executive Order N-28-20 to the extent that there is any conflict with that Order.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

**I FURTHER DIRECT** that as soon as hereafter possible, this proclamation be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Order.

**IN WITNESS WHEREOF** I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 27th day of March 2020.



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GAVIN NEWSOM  
Governor of California

**ATTEST:**

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ALEX PADILLA  
Secretary of State



# Item Number 12C

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## STAFF REPORT

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**Date:** June 2, 2020  
**To:** Honorable Mayor/Chair and City Council/Agency Members  
**From:** Henry Garcia, Interim City Manager/Executive Director  
By: Salvador Lopez Jr., Interim Community Development Manager  
**Subject:** Discussion of Cudahy's 2020 Firework Sales in light of COVID-19

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### **RECOMMENDATION**

The City Council is requested to provide direction to staff concerning the sale of fireworks for the 2020 4<sup>th</sup> of July celebrations.

### **BACKGROUND/ANALYSIS**

As part of the annual firework sales requirements, applicants are required to submit a temporary use permit application for review and consideration of firework sales in our community. Staff typically receives two temporary use applications from local non-profit organizations annual. In light of the current COVID19 pandemic, the Governor's "Stay at Home" order, and the recommendation to keep group gatherings at a maximum of 10 people, staff is bringing this request before the City Council to determine if the sale of fireworks is appropriate at this time.

Recently, staff received an update from the Los Angeles County Department of Public Health, issued May 13, 2020, outlining limited and measured steps to partially move the County into Stage 2 of its *Roadmap to Recovery: A phased Approach to Reopening Safely in Los Angeles County*, while keeping a low incident of person-to-person contact and ensuring continued Social (Physical) Distancing and adherence to other infection control protocols. This order allows lower-risk retail businesses to reopen for curbside, doorside, or other outdoor or outside pick-up, or via delivery only. As a precondition to reopening, these lower-risk retail businesses must implement the County's Reopening Protocol prior to reopening.

## **DISCUSSION**

Since the firework vendors here in Cudahy sell products through walk-up trailers stationed in parking lots, this practice falls within the allowable low-risk retail category as long as these retailers can conduct door-side pick-up and deliveries.

To date, the city has received one application for the sale of fireworks. In response to the current COVID19 situation, the applicant has provided the city with additional protocols (TNT COVID19 Plan) to meet these challenges and to ensure the operation and sales adhere to the County's requirements. In response, TNT Fireworks has redesigned all of their April/May /June "TNT Universities" – typically gatherings of their Non-Profit Groups who share a meal, instruction and fireworks show – and replaced them with virtual instruction beginning immediately after Memorial Day. Their area manager worked closely with City staff to navigate the application process and ensure their submittal was complete and on time.

The TNT COVID19 Plan, identified below, outlines the safe operation of each TNT fireworks stand during the sales period with focus on managing volunteers and retail customers:

## **TNT FIREWORKS STAND PHYSICAL DISTANCING PROTOCOL**

### **SIGNAGE**

- Inside, out in front and on the outside of the stand informing the stand volunteers and customers that they should: avoid shopping at the stand if they have a cough or fever; maintain a minimum six-foot distance from one another; do not shake hands or engage in any unnecessary contact; and where required or requested wear a face covering while shopping at the stand.
- Post TNT's Physical Distancing Protocol at a reasonable, safe distance in all directions, wherever possible.

### **MEASURES TO PROTECT VOLUNTEERS IN STANDS**

- All volunteers must be told they should not work in the stand if they are sick, have a cough or a fever.
- The volunteer in charge, at any given time, will be responsible for checking that volunteers are symptom free before starting their shift in the stand.
- All volunteers in the stand will attempt to maintain a six-foot separation.
- Disinfectants must be available for all volunteers at the beginning, during and at the conclusion of their shift.
- Hand sanitizer effective against COVID-19 is available to all volunteers and customers.

### **MEASURES TO PREVENT CROWD GATHERING**

- Post volunteers outside the stand, to make sure customers maintain their six-foot

separations, use the Express Order station outside the stand rather than perusing product in the stand, and are complying with all local health restrictions, like face coverings, etc.

- Set up an Express Order line, where possible, that allows expedited transactions by people who have already decided what they want to buy.

### **MEASURES TO KEEP PEOPLE AT LEAST SIX FEET APART**

- Placing signs outside the stand reminding people to be at least six feet apart, including when in line.
- Placing tape or other temporary markings or indicators at least six feet apart in each customer line area outside the stand with signs directing customers to use these to maintain distance.
- All volunteers have been instructed to maintain at least a six-foot distance from customers and each other, except volunteers may momentarily come closer when necessary to accept payment, order their fireworks, or as otherwise necessary.

### **MEASURES TO PREVENT UNNECESSARY CONTACT**

- Provide and encourage customers to use contactless payment methods, or, if not feasible, have the volunteers sanitize the payment system regularly.
- Provide a special purchase line for seniors, first responders and health care workers, where possible.
- Instruct volunteers to wear disposable plastic gloves while in the stand and to change them frequently.
- Encourage volunteers to wear face coverings that cover the nose and mouth when in the stand. Where required by local mandate, require all volunteers to wear face covering when in the stand. Provide such face coverings to volunteers if needed.
- Set up and man an Express Order area outside the stand and at a distance from customers making their purchases at the stand, that, using a phone app and preprinted order forms, will assist a customer to complete a list of items he/she desires to purchase so when they are at the stand their interaction with the stand volunteers is minimized.

### **MEASURES TO INCREASE SANITIZATION**

- Disinfecting wipes that are effective against COVID-19 are available in the stand.
- Hand sanitizer is available to the volunteers and the customers at the stand, at the Express Order area, and anywhere else inside the stand or immediately outside where people have direct interaction.
- Disinfecting all payment portals, pens, and styluses after each use.
- Disinfecting all high-contact surfaces frequently.
- Instruct volunteers to wear disposable plastic gloves while in the stand and to change them frequently.

The applicant believes that both state and local health officials have deemed the state-approved fireworks fundraising stands to qualify as Stage 2 nonessential retailers, particularly given the short duration they are open, the critical community programs they underwrite, that retail stands are the equivalent of "curbside delivery", and the rather detailed physical distancing program they have put in place. TNT Fireworks' physical distancing protocol is equal to or greater than those imposed on the retailers currently open and operating throughout the community.

### **CONCLUSION**

Based on the information detailed in this report, staff is requesting direction from the City Council.

### **ATTACHMENTS**

- A. LACDPH Memorandum dated May 12, 2020
- B. TNT COVID 19 Protocols

# **ATTACHMENT A**

**LACDPH Memorandum dated May 13, 2020**

**SAFER AT HOME ORDER FOR CONTROL OF COVID-19**  
**CONTINUATION OF SAFER AT HOME ORDER THAT BEGINS**  
**TO MOVE THE COUNTY OF LOS ANGELES INTO STAGE 2 OF**  
**COUNTY'S ROADMAP TO RECOVERY**  
Revised Order Issued: May 13, 2020

**Please read this Order carefully. Violation of or failure to comply with this Order is a crime punishable by fine, imprisonment, or both. (California Health and Safety Code §120295; Los Angeles County Code § 11.02.080.)**

**SUMMARY OF THE ORDER:** This County of Los Angeles Health Officer Order (Order) amends and supersedes all prior orders and addenda of the County of Los Angeles Health Officer (Health Officer) issued on March 16, 19, 21, 27, 31, April 10, May 3 and 8, 2020 (Prior Orders). This Order is issued to comply with State Executive Order N-33-20 issued by Governor Gavin Newsom, wherein the State Public Health Officer ordered all individuals living in the State of California to stay home or at their place of residence, except as needed to maintain continuity of operations of the federal critical infrastructure sectors, as well as subsequent State Executive Orders including but not limited to N-60-20.

Existing community transmission of the Novel Coronavirus Disease (COVID-19) in Los Angeles County (County) continues to present a substantial and significant risk of harm to residents' health. Evidence suggests that the restrictions and requirements imposed by the Health Officer's Prior Orders have slowed the rate of increase of COVID-19 community transmission and related hospitalizations by severely limiting person-to-person interactions. This Order is a limited and measured step to partially move the County of Los Angeles into Stage 2 of its *Roadmap To Recovery: A Phased Approach to Reopening Safely in Los Angeles County*, while keeping a low incidence of person-to-person contact and ensuring continued Social (Physical) Distancing and adherence to other infection control protocols.

This Order continues to require that specific higher-risk businesses remain closed. This Order allows Lower-Risk Retail Businesses to reopen for curbside, doorside, or other outdoor or outside pickup, or via delivery only. As a precondition to reopening, these Lower-Risk Retail Businesses must implement the County's Reopening Protocol for Retail Establishments prior to reopening. This Order, further, conditionally reopens the public beaches for certain types of active recreation, and conditionally reopens additional recreational opportunities.

This Order allows persons to engage in Essential Activities, as defined by the Order, but requires persons to at all times, practice Social (Physical) Distancing while out in public, to lower the risks of person-to-person contact for themselves and others.

This Order is effective within the County of Los Angeles Public Health Jurisdiction, defined as all unincorporated areas and cities within the County of Los Angeles with the exception of the cities of Long Beach and Pasadena. This Order is effective immediately and will continue until further notice.

**UNDER THE AUTHORITY OF CALIFORNIA HEALTH AND  
SAFETY CODE SECTIONS 101040, 101085, AND 120175,  
THE COUNTY OF LOS ANGELES HEALTH OFFICER ORDERS:**

1. This Order supersedes the Health Officer's Prior Orders. In light of the progress achieved in slowing the spread of COVID-19 in the County, this Order allows the conditional reopening of specific retail and other Lower-Risk Businesses. This limited and measured step is intended to move the County into Stage 2 of its *Roadmap To Recovery: A Phased Approach to Reopening Safely in Los Angeles County*, while keeping a low incidence of person-to-person contact and ensuring continued Social (Physical) Distancing and adherence to other infection control protocols as provided below. The Health Officer will assess the activities allowed by this Order on an ongoing basis and determine whether this Order needs to be modified if the public health risk associated with COVID-19 increases in the future.
2. Although this Order permits some activities and business operations to resume, physical distancing remains the best tool available for people to avoid being exposed to the virus. As such, this Order's intent is to continue to ensure that County residents remain in their residences as much as possible, to limit close contact with others outside their household in both indoor and outdoor spaces. All persons who can telework or work from home should continue to do so as much as possible during this pandemic. Sustained Social (Physical) Distancing and infection control measures will continue slowing the spread of COVID-19 and diminishing its impact on the delivery of critical healthcare services. All provisions of this Order must be interpreted to effectuate that intent. Failure to comply with any of the Order's provisions constitutes an imminent threat and menace to public health, and a public nuisance, and is punishable by fine, imprisonment or both.
3. All persons living within the County of Los Angeles Public Health Jurisdiction are to remain in their residences, except that they may leave for the following purposes: for Essential Activities, as defined in Paragraph 15; for Essential Government Functions, as defined in Paragraph 5; to work at, provide services to, or obtain treatment from Healthcare Operations, as defined in Paragraph 16; to work at or visit Essential Businesses, as defined in Paragraph 18; to work at or provide services to Essential Infrastructure, as defined in Paragraph 17; to work at or visit Lower-Risk Businesses, as defined in Paragraph 9; or to perform Minimum Basic Operations, as defined in Paragraph 21, for businesses whose on-site operations must remain temporarily closed. Persons experiencing homelessness are exempt from this requirement but are strongly urged to obtain shelter and abide by Social (Physical) Distancing requirements.
  - a) Nothing in this Order prohibits members of a single household or living unit from engaging in permitted activities together. But gatherings of people who are *not* part of a single household or living unit are prohibited within the County of Los Angeles Public Health Jurisdiction, except for the limited purposes expressly permitted by this Order.
  - b) People leaving their residences for the limited purposes allowed by this Order must strictly comply with the Social (Physical) Distancing requirements stated in

this Order or specified in guidance or protocols established by the County of Los Angeles Department of Public Health; this includes wearing a cloth face covering whenever there is or can be contact with others who are non-household members in both public and private places.

- c) In the event of a conflict between the Social (Physical) Distancing requirements stated in this Order and Department of Public Health guidance or protocols, the more specific requirements shall control.
4. All people residing within the County of Los Angeles Public Health Jurisdiction who are age 65 or older and all people of any age who have active or unstable pre-existing health conditions, should remain in their residences. People in these categories should leave their residences only when necessary to seek medical care or obtain food or other necessities. Public Health strongly recommends that employers offer telework or other accommodations to persons who are age 65 or older and all people of any age who have an active or unstable pre-existing health conditions.
  5. All government agencies working in the course and scope of their public service employment are Essential Government Functions.
    - a) All government employees are essential, including but not limited to, health care providers and emergency responders including employees who serve in the following areas: law enforcement; emergency services and management; first responder; fire; search and rescue; juvenile detention; corrections; healthcare services and operations; public health; laboratory or medical testing; mental health; community health; public works; executive management employees serving in these fields; all employees assigned to serve in or support the foregoing fields; and all employees whose services are otherwise needed to assist in a declared emergency.
    - b) While all government employees are essential, the employees identified here, and others called to serve in their Disaster Service Worker capacity, must be available to serve the public or assist in response or continuity of operations efforts during this health crisis to the maximum extent allowed under the law.
    - c) This Order does not, in any way, restrict (a) first responder access to the site(s) named in this Order during an emergency or (b) local, state or federal officers, investigators, or medical or law enforcement personnel from carrying out their lawful duties at the site(s) named in this Order.
    - d) All persons who perform Essential Governmental Functions are categorically exempt from this Order while performing such governmental functions or services. Each governmental entity shall identify and designate appropriate employees or contractors to continue providing and carrying out any Essential Governmental Functions. All Essential Governmental Functions should be performed in compliance with Social (Physical) Distancing, to the extent possible.
  6. This Order does not supersede any stricter limitation imposed by a local public entity within the County of Los Angeles Public Health Jurisdiction.

7. The Health Officer orders the continued closure of the following types of higher-risk businesses, recreational sites, commercial properties, and activities, where more frequent and prolonged person-to-person contacts are likely to occur:
- a) Bars and nightclubs that do not serve food and the portions of wineries, breweries and taprooms that provide tastings;
  - b) Gyms and fitness centers;
  - c) Movie theaters, drive-in theaters, live performance theaters, concert halls and venues, stadiums, arenas, gaming facilities, theme parks, and festivals;
  - d) Bowling alleys and arcades;
  - e) Public piers, public beach parking lots, and bicycle paths that traverse the sand;
  - f) Personal grooming establishments (barbers, hair salons, nail salons);
  - g) Massage or body art establishments;
  - h) Indoor and outdoor playgrounds for children, except those located within a childcare center;
  - i) Community centers, including public pools, and pools, hot tubs, and saunas that are in a multi-unit residence or part of a Homeowners' Association;
  - j) Indoor and outdoor flea markets and swap meets;
  - k) Indoor museums, indoor or outdoor children museums, gallery spaces, zoos, and libraries;
  - l) Indoor malls and indoor shopping centers, including all stores and vendors located therein, regardless of whether they are an Essential or a Lower-Risk Business. As an exception, Essential or Lower-Risk Retail Businesses that are part of an Indoor Mall or Shopping Center, but that are normally accessible by the public from the exterior of the Indoor Mall or Shopping Center may operate. For purposes of this Order, Indoor Mall or Shopping Center is defined as: A building with seven (7) or more sales or retail establishments with adjoining indoor space.
  - m) All events and gatherings, unless specifically allowed by this Order.
8. All Essential Businesses may remain open to the public and conduct normal business operations, provided that they implement and maintain the Social (Physical) Distancing Protocol defined in Paragraph 20 and attached to this Order as Appendix A. An Essential Business' owner, manager, or operator must prepare and post a Social (Physical) Distancing Protocol for each facility or office located within the County of Los Angeles Public Health Jurisdiction and must ensure that the Essential Business meets all other requirements of the Social (Physical) Distancing Protocol.

9. Lower-Risk Businesses are businesses not specified in Paragraph 7 of this Order, and not defined as an Essential Business in Paragraph 18 of this Order. In general, Lower-Risk Businesses may not reopen at this time. There are, however, two categories of Lower-Risk Businesses that may reopen under this Order: (1) retailers that are not located within an Indoor Mall or Shopping Center (“Lower-Risk Retail Businesses”), and (2) manufacturing and logistics sector businesses that supply Lower-Risk Retail Businesses. These two categories of Lower-Risk Businesses may reopen subject to the following conditions:
- a) All Lower-Risk Retail Businesses that sell goods and services to the public may only provide these goods and services to the public via curbside, doorside, or other outdoor or outside pickup, or via delivery. Members of the public are not permitted inside a retail Lower-Risk Retail Business.
  - b) For any Lower-Risk Retail Business that sells goods and services, the owner, manager, or operator must, prior to reopening, prepare, implement and post the required Los Angeles County Department of Public Health Reopening Protocol for Retail Establishments, attached to this Order as Appendix B.
  - c) For any non-retail Lower-Risk Business that is a manufacturing and logistics sector business that supplies Lower-Risk Retail Businesses, the owner, manager, or operator must, prior to reopening, prepare, implement and post the required Los Angeles County Department of Public Health Reopening Protocol, applicable to the business type or location, attached to this Order as Appendix C.

### **REASONS FOR THE ORDER**

10. This Order is based upon the following determinations: evidence of continued and significant community transmission of COVID-19 within the County; continued uncertainty regarding the degree of undetected asymptomatic transmission; scientific evidence and best practices regarding the most effective approaches to slow the transmission of communicable diseases generally and COVID-19 specifically; evidence that a significant portion of the County population is at risk for serious health complications, including hospitalizations and death from COVID-19, due to age or pre-existing health conditions; and further evidence that other County residents, including younger and otherwise healthy people, are also at risk for serious negative health outcomes and for transmitting the virus to others. The Order’s intent is to protect the public from the avoidable risk of serious illness and death resulting from the spread of COVID-19.
11. Existing community transmission of COVID-19 in Los Angeles County continues to present a substantial and significant risk of harm to residents’ health. There is still no vaccine available yet to protect against COVID-19, and no treatment for it. As of May 13, 2020, there have been at least 34,428 cases of COVID-19 and 1,654 deaths reported in Los Angeles County. There remains a strong likelihood of a significant and increasing number of cases of community transmission. Making the community transmission problem worse, some individuals who contract the virus causing COVID-19 have no symptoms or have only mild symptoms, and so are unaware that they carry the virus and are transmitting it to others. Further, evidence shows that the virus can survive for hours or even days on surfaces and can be indirectly transmitted

between individuals. Because even people without symptoms can transmit the virus, and because evidence shows the infection is easily spread, preventing, limiting, and placing conditions on various types of gatherings and other direct and indirect interpersonal interactions have been proven to reduce the risk of transmitting the virus.

12. Evidence suggests that the restrictions and requirements imposed by Prior Orders slowed the rate of increase in community transmission and hospitalizations by limiting interactions among people, consistent with the efficacy of similar measures in other parts of the country and world. Although the hospitals within the County are seeing increased numbers of COVID-19 patients, including patients with severe illness, the hospitals have not become overwhelmed or exceeded capacity. However, because there is not yet a vaccine or proven therapeutic drug, the public health emergency and attendant risks to the public's health by COVID-19 still predominate.
13. In line with the State Public Health Officer, the Health Officer is monitoring several key indicators (COVID-19 Indicators) within the County. Progress on some of these COVID-19 Indicators – specifically related to hospital utilization and capacity – makes it appropriate, at this time, to ease certain restrictions imposed by the Prior Orders. But the prevalence of the virus that causes COVID-19 requires other restrictions to continue. Activities and business operations that are permitted must be conducted in accordance with the required Social (Physical) Distancing, reopening protocols, and other infection control protocols ordered by the Health Officer.
14. The Health Officer will continue monitoring COVID-19 Indicators to determine when the County is ready to move to Stage Three of its Roadmap to Recovery. Those Indicators include, but are not limited to:
  - a) The trend of the number of new COVID-19 cases, hospitalization rates, and death rates.
  - b) The capacity of hospitals and the healthcare system in the County, including acute care beds, Intensive Care Unit beds, and ventilators to provide care for existing COVID-19 patients and other patients, and capacity to surge with an increase of COVID-19 cases.
  - c) The supply of personal protective equipment (PPE) available for hospital staff, nursing home staff and other healthcare providers and personnel who need PPE to safely respond to and treat COVID-19 patients and other patients.
  - d) The ability and capacity to quickly and accurately test persons to determine whether individuals are COVID-19 positive, especially those in vulnerable populations or high-risk settings or occupations, and to identify and assess outbreaks.
  - e) The ability to conduct case investigation and contact tracing for the volume of future cases and associated contacts, isolating confirmed cases and quarantining persons who have had contact with confirmed cases.

**DEFINITIONS AND EXEMPTIONS**

15. For purposes of this Order, individuals may leave their home residence to perform the following Essential Activities:
- a) To engage in activities or perform tasks important to their health and safety, or to the health and safety of their family or household members (including pets), such as, visiting a health or veterinary care professional or obtaining medical supplies or medication;
  - b) To obtain necessary services and supplies for their family or household members, or to deliver the same, such as, obtaining grocery items or necessary supplies from Essential Businesses for one's household or for delivery to others;
  - c) To perform work for, to access an Essential Business or Lower-Risk Business, or to carry out Minimum Basic Operations for businesses that are closed or operating remotely.
  - d) To obtain or access services from Essential Governmental Functions, such as, access to court, social and administrative services, or complying with an order of law enforcement or court;
  - e) To care for minors, the elderly, dependents, persons with disabilities, or other vulnerable persons;
  - f) To obtain in-person behavioral health or substance use disorder support in therapeutic small group meetings, such as Alcoholics Anonymous or Narcotics Anonymous, provided that the gathering is limited to 10 people or fewer and Social (Physical) Distancing is practiced.
  - g) Staff of organizations or associations, including faith-based organizations, may gather in a single space for the sole purpose of preparing and facilitating live-stream or other virtual communications with their members, including worship services, provided that the staff gathering is limited to 10 people or fewer and the Social (Physical) Distancing Protocol provide in Paragraph 20 and attached to this Order as Appendix A is observed.
  - h) Engaging in outdoor recreation activity, in compliance with Social (Physical) Distancing requirements and subject to the following limitations:
    - i. Outdoor recreation activity at parks, trails, and beaches, and other open spaces must comply with any access or use restrictions established by the Health Officer, government, or other entity that manages the area to reduce crowding and the risk of COVID-19 transmission.
    - ii. Use of shared outdoor facilities for recreational activities, including but not limited to golf courses, tennis and pickleball courts, shooting and archery ranges, equestrian centers, model airplane areas, community gardens, and bike parks, must comply with any access or use restrictions established by the Health Officer, government, or other entity that manages the area to reduce crowding and the risk of COVID-19 transmission.

- iii. Local public entities may elect to temporarily close certain streets or areas to automobile traffic, to allow for increased space for persons to engage in recreational activity permitted by and in compliance with Social (Physical) Distancing requirements specified in this Order.
16. Individuals may leave their residence to work for, volunteer at, or obtain services at Healthcare Operations: hospitals, clinics, laboratories, dentists, optometrists, pharmacies, physical therapists, rehabilitation and physical wellness programs, chiropractors, pharmaceutical and biotechnology companies, other licensed healthcare facilities, healthcare suppliers, home healthcare service providers, mental or behavioral health providers, alcohol and drug treatment providers, cannabis dispensaries with a medicinal cannabis license and all other required state and local licenses, medical or scientific research companies, or any related and/or ancillary healthcare services, manufacturers, distributors and servicers of medical devices, diagnostics, and equipment, veterinary care, and other animal healthcare. This exemption shall be construed to avoid any impact to the delivery of healthcare, broadly defined. Healthcare Operations does not include fitness and exercise gyms. In working for, volunteering at, or obtaining services from Healthcare Operations, individuals must comply with the specific Social (Physical) Distancing requirements and infection control guidance for that clinical or non-clinical setting.
17. Individuals may leave their residence to provide any service or perform any work necessary to the operation and maintenance of Essential Infrastructure, which is defined as, public health operations, public works construction, airport operations, port operations, food supply, water, sewer, gas, electrical, oil extraction and refining, roads and highways, public transportation, solid waste collection, removal and processing, flood control and watershed protection, cemeteries, mortuaries, crematoriums, and internet and telecommunications systems (including the provision of essential global, national, local infrastructure for computing services, business infrastructure, communications, and web-based services), and manufacturing and distribution companies deemed essential as part of the Essential Infrastructure supply chain, provided that they carry out those services or that work. In providing these services or performing this work, individuals must comply with Social (Physical) Distancing requirements to the extent practicable.
18. For purposes of this Order, Essential Businesses are:
- a) Grocery stores, certified farmers' markets, farm and produce stands, supermarkets, food banks, convenience stores, warehouse stores, and other establishments engaged in the retail sale of canned food, dry goods, fresh fruit and vegetables, pet supply, water, fresh meats, fish, and poultry, and any other household consumer products (such as cleaning or personal care products). This includes stores that sell groceries and other non-grocery products, such as products necessary to maintaining the safety, sanitation, and essential operation of residences. This does not include businesses that sell only prepackaged non-potentially hazardous food which is incidental to the primary retail business;
  - b) Food processors, confectioners, food packagers, food testing labs that are not open to the public, and food cultivation, including farming, livestock, and fishing;



- c) Organizations and businesses that provide food, shelter, social services, and other necessities of life for economically disadvantaged or otherwise needy individuals (including gang prevention and intervention, domestic violence, and homeless service agencies);
- d) Newspapers, television news, radio, magazine, podcast and journalism activities. This includes taped, digitally recorded or online-streamed content of any sort that is produced by a single individual or household in a residence without the physical presence of individuals other than the single individual or members of the household.
- e) Gas stations, auto-supply, mobile auto repair operations, auto repair shops (including, without limitation, auto repair shops adjacent to or otherwise in connection with a retail or used auto dealership), and bicycle repair shops and related facilities;
- f) Banks, credit unions, financial institutions and insurance companies;
- g) Hardware stores, nurseries; building supply stores;
- h) Plumbers, electricians, exterminators, custodial/janitorial workers, handyman services, funeral homes and morticians, moving services, HVAC installers, carpenters, vegetation services, tree maintenance, landscapers, gardeners, property managers, private security personnel and other service providers who provide services to maintain the safety, sanitation, and essential operation to properties and other Essential Businesses;
- i) Businesses providing mailing and shipping services, including post office boxes;
- j) Educational institutions (including public and private K-12 schools, colleges, and universities) for purposes of facilitating distance learning, providing meals for pick-up, or performing Minimum Basic Operations, provided that Social (Physical) Distancing is practiced;
- k) Laundromats, dry cleaners, and laundry service providers;
- l) Restaurants and other food facilities that prepare and serve food, but only for delivery, drive thru or carry out. Indoor and outdoor table dining is not permitted. Cafeterias, commissaries, and restaurants located within hospitals, nursing homes, or other licensed health care facilities may provide dine-in service, as long as Social (Physical) Distancing is practiced;
- m) Businesses that supply office or computer products needed by people who work from home;
- n) Businesses that supply other Essential Businesses with the support or supplies necessary to operate;
- o) Non-manufacturing, transportation or distribution businesses that ship, truck, transport, or provide logistical support to deliver groceries, food, goods or services directly to residences, Essential Businesses, Healthcare Operations, and Essential Infrastructure. This exemption shall not be used as a basis for engaging in sales to the general public from retail storefronts;

- p) Airlines, taxis, ride sharing services and other private transportation providers providing transportation services necessary for activities of daily living and other purposes expressly authorized in this Order;
- q) Businesses that manufacture parts and provide necessary service for Essential Infrastructure;
- r) Home-based care for seniors, adults, disabled persons, or children;
- s) Residential facilities and shelters for homeless residents, disabled persons, seniors, adults, children and animals;
- t) Professional services, such as legal, payroll or accounting services, when necessary to assist in compliance with legally mandated activities, and the permitting, inspection, construction, transfer and recording of ownership of housing, including residential and commercial real estate and anything incidental thereto, provided that appointments and other residential viewings must only occur virtually or, if a virtual viewing is not feasible, by appointment with no more than two visitors at a time residing within the same household or living unit and one individual showing the unit (except that in-person visits are not allowed when the occupant is still residing in the residence);
- u) Childcare facilities providing services that enable people to work as permitted in this Order. To the extent possible, childcare facilities must operate under the following conditions: (1) Childcare must be carried out in stable groups of 10 or fewer ("stable" means the same ten (10) or fewer children are in the same group each day); (2) Children shall not change from one group to another; (3) If more than one group of children is cared for at one facility, each group shall be in a separate room. Groups shall not mix with each other; (4) Childcare providers shall remain solely with one group of children;
- v) Hotels, motels, shared rental units and similar facilities;
- w) Construction, which includes the operation, inspection, and maintenance of construction sites and construction projects for construction of commercial, office and institutional buildings, residential and housing construction; and
- x) Manufacturers and retailers of fabric or cloth that is made into personal protective equipment, such as, face coverings.

19. For purposes of this Order, "Social (Physical) Distancing" means: (1) Maintaining at least six (6)-feet of physical distance from individuals who are not members of the same household; (2) Frequently washing hands with soap and water for at least 20 seconds, or using hand sanitizer that contains at least 60% alcohol; (3) Wearing a cloth face-covering when in contact with others who do not live in the same household or living unit; and (4) Avoiding all physical interaction outside the household when sick with a fever or cough, except for necessary medical care.

20. For purposes of this Order, the "Social (Physical) Distancing Protocol" that must be implemented and posted must demonstrate how the following infection control measures are being implemented and achieved, as applicable:
- a) Limiting the number of people who may enter into the facility at any one time to ensure that people in the facility can easily maintain a minimum six (6) foot physical distance from others, at all times, except as required to complete a business activity or transaction. Members of a single household or living unit may stand or move together but must be separated from others by a physical distance of at least six (6) feet.
  - b) Where lines may form at a facility, marking six (6) foot increments at a minimum, establishing where individuals should stand to maintain adequate Social (Physical) Distancing, whether inside or outside the facility.
  - c) Providing hand sanitizer, soap and water, or effective disinfectant at or near the entrance of the facility and in other appropriate areas for use by the public and employees, and in locations where there is high-frequency employee interaction with members of the public (e.g. cashiers). Restrooms normally open to the public shall remain open to the public.
  - d) Posting a sign in a conspicuous place at all public entries that instructs the public not to enter if they are experiencing symptoms of respiratory illness, including fever or cough, to wear face coverings, and to maintain Social (Physical) Distancing from one another.
  - e) Providing for the regular disinfection of high-touch surfaces, and disinfection of all payment portals, pens, and styluses after each use. All businesses are encouraged to also offer touchless payment mechanisms, if feasible.
  - f) Providing cloth-face coverings to employees and contracted workers whose duties require close contact (within 6 feet for 10 minutes or more) with other employees and/or the public.
  - g) Requiring that members of the public who enter the facility wear a face-covering during their time in the facility.
  - h) Adhering to communicable disease control protocols provided by the Los Angeles County Department of Public Health, including requirements for cleaning and disinfecting the site. See protocols posted at [www.publichealth.lacounty.gov/media/Coronavirus/](http://www.publichealth.lacounty.gov/media/Coronavirus/)

### **ADDITIONAL TERMS**

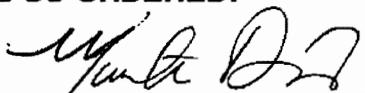
21. Operators of businesses that are required to cease in-person operations may travel to those businesses for purposes of Minimum Basic Operations, which means:
- a) The minimum necessary activities to maintain and protect the value of the business's inventory and facilities; ensure security, safety, and sanitation; and process payroll and employee benefits;
  - b) The minimum necessary activities to facilitate the business's owners, employees, and contractors being able to continue to work remotely from their residences, and to ensure that the business can deliver its services remotely.

22. The County shall promptly provide copies of this Order by: (a) posting it on the Los Angeles Department of Public Health's website ([www.publichealth.lacounty.gov](http://www.publichealth.lacounty.gov)), (b) posting it at the Kenneth Hahn Hall of Administration located at 500 West Temple Street, Los Angeles, CA 90012, (c) providing it to any member of the public requesting a copy, and (d) issuing a press release to publicize the Order throughout the County.
- a) The owner, manager, or operator of any facility that is likely to be impacted by this Order is strongly encouraged to post a copy of this Order onsite and to provide a copy to any member of the public requesting a copy.
  - b) Because guidance may change, the owner, manager, or operator of any facility that is subject to this Order is ordered to consult the Los Angeles County Department of Public Health's website ([www.publichealth.lacounty.gov](http://www.publichealth.lacounty.gov)) daily to identify any modifications to the Order and is required to comply with any updates until the Order is terminated.
23. If any subsection, sentence, clause, phrase, or word of this Order or any application of it to any person, structure, gathering, or circumstance is held to be invalid or unconstitutional by a decision of a court of competent jurisdiction, then such decision will not affect the validity of the remaining portions or applications of this Order.
24. This Order incorporates by reference, the March 4, 2020 Proclamation of a State of Emergency issued by Governor Gavin Newsom and the March 4, 2020 declarations of a local and public health emergency issued by the Los Angeles County Board of Supervisors and Los Angeles County Health Officer, respectively, and as they may be supplemented.
25. This Order is issued in light of the March 19, 2020 Order of the State Public Health Officer, (the "State Shelter Order") which set the baseline statewide restrictions on non-residential business activities, effective until further notice, as well as the Governor's March 19, 2020 Executive Order N-33-20 and the May 4, 2020 Executive Order N-60-20 directing California residents to follow the State Shelter Order. This Order adopts in certain respects more stringent restrictions addressing the particular facts and circumstances in the County of Los Angeles Public Health Jurisdiction, which are necessary to control the public health emergency as it is evolving. Without this tailored set of restrictions to further reduce the number of interactions between persons, scientific evidence indicates that the public health crisis will worsen to the point at which it may overtake available healthcare resources within the County and increase the death rate.



- 26. This Order is consistent with the provisions in the Governor's Executive Order N-60-20 and the State Public Health Officer's May 7, 2020 Order, that local health jurisdictions may implement or continue more restrictive public health measures in the jurisdiction if the Local Health Officer believes conditions in that jurisdiction warrant them. Where a conflict exists between this Order and any state public health order related to controlling the spread of COVID-19 during this pandemic, the most restrictive provision controls. Consistent with California Health and Safety Code section 131080, except where the State Health Officer may issue an order expressly directed at this Order or a provision of this Order and based upon a finding that a provision of this Order constitutes a menace to the public health, any more restrictive measures in this Order may continue to apply and control in the County of Los Angeles Public Health Jurisdiction.
  
- 27. Pursuant to Sections 26602 and 41601 of the California Government Code and Section 101029 of the California Health and Safety Code, the Health Officer requests that the Sheriff and all chiefs of police in all cities located in the Los Angeles County Public Health Jurisdiction ensure compliance with and enforcement of this Order. The violation of any provision of this Order constitutes an imminent threat and menace to public health, constitutes a public nuisance, and is punishable by fine, imprisonment or both.
  
- 28. This Order shall become effective immediately on May 13, 2020 and will continue to be until it is extended, rescinded, superseded, or amended in writing by the Health Officer.

**IT IS SO ORDERED:**

  
\_\_\_\_\_  
**Muntu Davis, M.D., M.P.H.**  
Health Officer,  
County of Los Angeles

*MAY 13, 2020*  
\_\_\_\_\_  
**Date**

# **ATTACHMENT B**

## **TNT COVID 19 Protocols**

## **TNT FIREWORKS STAND PHYSICAL DISTANCING PROTOCOL**

### **SIGNAGE**

- Inside, out in front and on the outside of the stand informing the stand volunteers and customers that they should: avoid shopping at the stand if they have a cough or fever; maintain a minimum six-foot distance from one another; do not shake hands or engage in any unnecessary contact; and where required or requested wear a face covering while shopping at the stand.
- Post TNT's Physical Distancing Protocol at a reasonable, safe distance in all directions, wherever possible.

### **MEASURES TO PROTECT VOLUNTEERS IN STANDS**

- All volunteers must be told they should not work in the stand if they are sick, have a cough or a fever.
- The volunteer in charge, at any given time, will be responsible for checking that volunteers are symptom free before starting their shift in the stand.
- All volunteers in the stand will attempt to maintain a six-foot separation.
- Disinfectants must be available for all volunteers at the beginning, during and at the conclusion of their shift.
- Hand sanitizer effective against COVID-19 is available to all volunteers and customers.

### **MEASURES TO PREVENT CROWD GATHERING**

- Post volunteers outside the stand to make sure customers maintain their six-foot separations, use the Express Order station outside the stand rather than perusing product in the stand, and are complying with all local health restrictions, like face coverings, etc.
- Set up an Express Order line, where possible, that allows expedited transactions by people who have already decided what they want to buy.

### **MEASURES TO KEEP PEOPLE AT LEAST SIX FEET APART**

- Placing signs outside the stand reminding people to be at least six feet apart, including when in line.
- Placing tape or other temporary markings or indicators at least six feet apart in each customer line area outside the stand with signs directing customers to use these to maintain distance.
- All volunteers have been instructed to maintain at least a six-foot distance from customers and each other, except volunteers may momentarily come closer when necessary to accept payment, order their fireworks, or as otherwise necessary.

### **MEASURES TO PREVENT UNNECESSARY CONTACT**

- Provide and encourage customers to use contactless payment methods, or, if not feasible, have the volunteers sanitize the payment system regularly.
- Provide a special purchase line for seniors, first responders and health care workers, where possible.
- Instruct volunteers to wear disposable plastic gloves while in the stand and to change them frequently.

- Encourage volunteers to wear face coverings that cover the nose and mouth when in the stand. Where required by local mandate, require all volunteers to wear face covering when in the stand. Provide such face coverings to volunteers if needed.
- Set up and man an Express Order area outside the stand and at a distance from customers making their purchases at the stand, that, using a phone app and preprinted order forms, will assist a customer to complete a list of items he/she desires to purchase so when they are at the stand their interaction with the stand volunteers is minimized.

**MEASURES TO INCREASE SANITIZATION**

- Disinfecting wipes that are effective against COVID-19 are available in the stand.
- Hand sanitizer is available to the volunteers and the customers at the stand, at the Express Order area, and anywhere else inside the stand or immediately outside where people have direct interaction.
- Disinfecting all payment portals, pens, and styluses after each use.
- Disinfecting all high-contact surfaces frequently.
- Instruct volunteers to wear disposable plastic gloves while in the stand and to change them frequently.

**You may contact the following person with any questions or comments about this Protocol:**

**CONTACT NAME:** TERESA WIIG

**CONTACT PHONE:** 714-715-1018

**EMAIL:** (wiigt@tntfireworks.com)