September 2018 | Response to Comments

CHINO HIGH SCHOOL RECONSTRUCTION

Chino Valley Unified School District

Prepared for:

Chino Valley Unified School District
Contact: Greg Stachura, Assistant Superintendent
Facilities, Planning, and Operations
5130 Riverside Drive
Chino, California 91710
909.628.1201

Prepared by:

PlaceWorks
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1. Introduction

1.1 INTRODUCTION

This document includes a compilation of the public comments received on the Chino High School Reconstruction Mitigated Negative Declaration and supporting Initial Study (collectively, "MND"; State Clearinghouse No. 2018081057) and Chino Valley Unified School District's (District) responses to the comments.

Under the California Environmental Quality Act (CEQA), a lead agency has no affirmative duty to prepare formal responses to comments on an MND. The lead agency, however, should have adequate information on the record explaining why the comments do not affect the conclusion of the MND that there are no potentially significant environmental effects. In the spirit of public disclosure and engagement, the District—as the lead agency of the proposed project—has responded to all written comments submitted during the 30-day MND public review period, which began August 22, 2018 and closed on September 21, 2018.

1.2 DOCUMENT FORMAT

This document is organized as follows:

Section 1, *Introduction.* This section describes CEQA requirements and content of this document.

Section 2, *Response to Comments.* This section provides a list of agencies and interested persons commenting on the MND, copies of comment letters received during the public review period, and individual responses to written comments.

1.3 CEQA REQUIREMENTS REGARDING COMMENTS AND RESPONSES

CEQA Guidelines Section 15204 (b) outlines parameters for submitting comments on negative declarations, and reminds persons and public agencies that the focus of review and comment of MNDs should be:

> on the proposed findings that the project will not have a significant effect on the environment. If the commenter believes that the project may have a significant effect, it should:
> (1) Identify the specific effect,
> (2) Explain why they believe the effect would occur, and
> (3) Explain why they believe the effect would be significant.

Section 15204 (a) explains that:

> Comments are most helpful when they suggest additional specific mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy...is determined in terms of what is reasonably feasible. …CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made.

CEQA Guidelines Section 15204 (c) further advises:

> Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence.

Section 15204 (d) states, "Each responsible agency and trustee agency shall focus its comments on environmental information germane to that agency's statutory responsibility." Section 15204 (e) states, "This section shall not be used to restrict the ability of reviewers to comment on the general adequacy of a document or of the lead agency to reject comments not focused as recommended by this section."

2. Response to Comments

This section provides all written comments received on the circulated MND and the District's response to each comment.

To facilitate review of the responses, each comment letter has been reproduced and assigned a number. Individual comments have been numbered for each letter, and the letter is followed by responses with references to the corresponding comment number.

Number Reference	Commenting Person/Agency	Date of Comment	Page No.
A	Gabrieleno Band of Mission Indians-Kizh Nation	09/19/18	5
B	Prime Healthcare	09/21/18	9
C	City of Chino	09/21/18	13

2. Response to Comments

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LETTER A – Gabrieleno Band of Mission Indians-Kizh Nation. (1 page)

GABRIELENO BAND OF MISSION INDIANS - KIZH NATION
Historically known as The San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

Notice of Intent to Adopt An Initial Study/ Mitigated Negative Declaration

September 19, 2018

Greg Stachura
City of Chino
5130 Riverside Drive,
Chino, CA 91710

Good afternoon Greg Stachura,

We have received your Notice of Intent to adopt a Negative Declaration for this project the Chino High School Reconstruction in the location of the county of San Bernardino. Our Tribal Government would like to be consulted if any ground disturbance will be conducted for this project. A-1

Sincerely Lexie
Gabrieleno Band of Mission Indians/Kizh Nation
(1844) 390-0787 Office

2. Response to Comments

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2. Response to Comments

A. Response to Comments from Gabrieleno Band of Mission Indians-Kizh Nation., dated September 19, 2018.

A-1 As discussed in the Initial Study, Chapter 5, Section 5.17, pages 135 and 136, to date the District has not received any official AB 52 tribal requests to be notified about projects. However, the District sent notification letters to six tribes. Contact information was provided by the Native American Heritage Commission (see Appendix B of this Initial Study). The tribes were notified on January 12, 2018.

Mr. Andrew Salas, Chairman of Gabrieleno Band of Mission Indians – Kizh Nation, responded on January 17, 2018. The District initiated consultation on January 23, 2018, by contacting the tribe to arrange a meeting. No response was forthcoming. There is no substantial evidence that tribal cultural resources are present on the existing school campus. Additionally, the entire campus was heavily disturbed between 1950 and 1992 during various construction projects.

The Chino Valley Unified School District Board of Education will consider all comments prior to making a decision on the project.

2. Response to Comments

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LETTER B – Prime Healthcare (2 pages)

Prime Healthcare
Saving hospitals. Saving jobs. Saving lives.

September 21, 2018

Chino Valley Unified School District
Board of Education
5130 Riverside Drive
Chino, CA 91710

Re: Proposed Adoption of a Mitigated Negative Declaration on the Chino High School Reconstruction Project

Esteemed Members of the Board,

I am writing on behalf of Prime Healthcare, an award-winning national hospital system and parent company of Chino Valley Medical Center, in regards to the Board's intent to adopt a Mitigated Negative Declaration on the proposed Chino High School Reconstruction Project, located a half mile from the Chino Valley Medical Center campus.

Prime Healthcare and Chino Valley Medical Center understand and support the urgent need to reconstruct the academic core of the Chino High School campus, and the invaluable contribution such a project would make toward improving and expanding educational opportunities for our community's youth. Prime Healthcare and its founder, Dr. Prem Reddy, has always supported educational programs and academic endeavors, donating millions of dollars toward college scholarships and facility construction from the high school to college level, including at Chino High School. B-1

That said, we would like to raise some concerns about the impact that this project might have on Chino Valley Medical Center and its ability to continue to provide timely, vital and award-winning healthcare to the people of Chino and surrounding communities.

Among our primary concerns are the impact that the proposed project would have through increased traffic flow along Jefferson Avenue and in front of our Emergency Department, particularly during construction and after completion during peak times while school is in session; the potential reduction in Chino Valley employee and patient parking along Jefferson Avenue; and the potential elimination of our hospital's ability to use the existing sports fields for helicopter evacuations. B-2

Therefore, we respectfully ask to confer with school district officials to explore ways to mitigate these concerns, including exploring the possibility of utilizing district property for parking as

15 TOP HEALTH SYSTEMS

Prime Healthcare | 3300 E. Guasti Road | Ontario, CA 91761 | www.primehealthcare.com
Tel (909) 235-4400 | Fax (909) 235-4401

2. Response to Comments

Prime Healthcare
Saving hospitals. Saving jobs. Saving lives.

well as ambulance use. In addition, we would also ask that the district's facilities director share detailed plans and the district's traffic flow study, so we can further assess and understand the potential impacts this project might have on Chino Valley Medical Center's purveyance of quality, life-saving care for the community and determine the best way to balance the healthcare and educational needs of the entire Chino Valley.

B-2
Cont'd

We look forward to an ongoing and open dialogue. Please contact Chino Valley Medical Center's CEO, Timothy Moran, at 909.464.8604 if you have any questions.

Sincerely,

Fred Ortega
Senior Director of Government Relations

CC: Superintendent Norm Enfield, Ed.D.

15 TOP HEALTH SYSTEMS

Prime Healthcare | 3300 E. Guasti Road | Ontario, CA 91761 | www.primehealthcare.com
Tel (909) 235-4400 | Fax (909) 235-4401

B. Response to Comments from Fred Ortega, Prime Healthcare, dated September 21, 2018

B-1 Comment acknowledged.

B-2 Traffic impacts are fully analyzed in a Traffic Impact Analysis (Appendix F of the Initial Study) and summarized in the Initial Study, Chapter 5, Section 5.16. As shown on Table 23, page 129, none of the surrounding intersections would be significantly impacted by the reconstruction of Chino High School. The student parking lot would stay in the same location and would not affect traffic flow on surrounding streets. The new on-campus staff parking lot along Jefferson Avenue would have 168 spaces and may reduce the number of cars parked in the angled spaces. Based on comments from the City, most of the angled parking spaces on Jefferson Avenue would remain.

Large construction equipment and vehicles would be located on the campus and would not be traveling the surrounding streets.

The District discussed, via telephone, with hospital administrators at the Chino Valley Medical Center the helicopter landing areas. Although there is no written agreement or requirement, the hospital and school district have a mutual verbal agreement that when an emergency medical helicopter needs to land they can use the athletic fields at Chino High School. At that time either the Chino Police Department or Fire Department opens the school gate along Jefferson Avenue. Patients are then transported to/from the helicopter from/to the hospital by ambulance. The distance from the current landing areas to the Jefferson Avenue gate is about the same and should not significantly increase travel time to/from the emergency room.

No changes to the existing procedures would occur, and the new locations would not significantly impact the route, distance, or time for transport of patients. An aerial photograph with the existing and future locations is attached as Appendix A. The District is available to further discuss the proposed project.

2. Response to Comments

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LETTER C – City of Chino (15 pages)

September 21, 2018

Greg Stachura, Assistant Superintendent
Chino Valley Unified School District
Facilities, Planning, and Operations Division
5130 Riverside Drive
Chino, CA 91710

RE: Response to Notice of Intent to adopt a Mitigated Negative Declaration (MND)for the Chino High School Reconstruction project

Dear Mr. Stachura:

Thank you for providing the City of Chino an opportunity to comment on the potential environmental issues related to the proposed Chino High School reconstruction project. The City has reviewed the project's draft Mitigated Negative Declaration (MND) and has identified a number of potential concerns primarily related to offsite traffic, parking, and accessibility impacts the project would place on adjacent properties and within the vicinity of Chino High School. As a result, the items identified below should be analyzed and included in the revised MND being prepared for the project. The City has previously requested studies and reports to address many of these concerns, but to date has not received any of the documents. See attached Traffic Study Requirements memo dated April 11, 2018 and Preliminary Review Comments dated December 6, 2017. The City appreciates that our request to move driveways to affect safety and traffic flow concerns from previous discussions have been addressed. C-1

The following comments identify potential concerns the City has with the proposed reconstruction project:

General

1. The 138 angled parking spaces that currently exist along Jefferson Avenue are proposed to be removed as part of the project due to concerns with visibility. In previous discussions with the project's development team, it was indicated to City staff that not all of the angled parking spaces would need to be removed as part of the project. This is an important issue because some of the existing angled parking spaces are currently being utilized by the Chino Valley Medical Center and other businesses to the north of the high school. With this in mind, it is the City's preference to keep as much parking in the area as possible. It is also understood that removing C-2

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2. Response to Comments

some of these existing spaces to help provide adequate line of sight for vehicles exiting new driveways, is warranted. A parking analysis should be completed to determine how many parking spaces are needed to remain on the south side of Jefferson Avenue as part of the project. C-2 Cont'd

2. The Chino Valley Medical Center has stated that the high school fields located directly adjacent to Jefferson Avenue, are at times used as an emergency heliport for the hospital. Provide information in the MND if this emergency use will continue, and if so, where the new heliport will be located as part of the school's reconstruction, including how access will be provided from the heliport to the hospital. C-3

3. Provide a detailed analysis on how roadway and pedestrian access to the Chino Valley Medical Center may be impacted, specifically how the Emergency Room access may be impacted as a result of the school reconstruction project. C-4

4. Provide information on how access to the City's Police Department off of Walnut Ave. and 10th Street may be impacted as a result of the school reconstruction project. C-5

5. In the Aesthetics section of the MND, please confirm that all buildings will be consistent with the City's Zoning Code in relation to building height and screening of mechanical equipment. C-6

Traffic

6. The following comments provided are based on the attached Traffic Study Requirements memo that were neither addressed or provided to the City: C-7

   a. Trip Distribution – The traffic study does not appear to address redistribution of project generation trips caused by moving the core of the campus to the northwest corner of the school.
   b. Level of Service Analysis – the count data or the analysis worksheets were not provided, only the results were displayed.
   c. A long range condition was not included in the analysis, nor was it mentioned in the MND to better understand the reasons to not include it. The long range condition is for the year 2040.
   d. The accumulative effects of items a, b and c will likely change the outcome of the LOS analysis and the warrant studies requested in item e.
   e. Traffic signal/ Stop sign warrants – no analysis sheets were provided or information provided in the MND for all analysis conditions (Existing, Opening Year (2024) and Long Range (2040). These need to be reviewed, since the traffic pattern/circulation will be different. Chino Police Department is particularly interested in studies for Tenth St/Jefferson Ave and Benson Ave/Jefferson Ave intersections.
   f. Truck turning templates, primarily bus vehicles, were not presented in the report or as a separate submittal. The City routinely reviews these for new developments to avoid conflicts between inbound and outbound vehicle movements at driveways and at intersections.
   g. There is a safety concern at the signalized intersection of Benson Ave / Park Pl.

2. Response to Comments

The northbound phase will need to be a changed from a permissive-protected left turn to a dedicated left turn phase. This comment is not mentioned in the attached traffic memo. C-7 Cont'd

Pedestrian Safety and Disabled Access

7. Section 5.8 (Pedestrian Projects-Safe Routes to School) of the City of Chino Bicycle and Pedestrian Master Plan states that there are several intersections directly adjacent to and in the vicinity of Chino High School that are lacking curb ramps and/or require the installation of enhanced crosswalks. These recommended improvements are listed as number two in prioritization for the City to improve Safe Routes to School and accessibility. Review the attached document and provide comments on how these intersections will be improved in compliance with the Bicycle and Pedestrian Master Plan. Additionally, it is the City's policy to have sidewalks, curb ramps, crosswalks, pedestrian call push buttons at traffic signals and related facilities replaced, should they not comply with current accessibility standards for when development occurs. Many of the existing pedestrian facilities around the perimeter of the school are not compliant with current standards. One example is there are parked vehicles in the diagonal spaces along Jefferson Avenue where the front of the vehicles overlaps with the existing sidewalk. Please comment on how these concerns will be addressed by the Project. C-8

8. The City requested a pedestrian route plan in the Traffic Study Requirements memo. There is a Circulation Design section within the traffic study that discusses certain pedestrian improvements surrounding the school, but this is not a comprehensive approach we requested and there is no clarity on what the proposed routes for pedestrians are. A comprehensive approach would be to provide a plan view of the campus and vicinity, showing accessible paths and indicating the following: new curb ramp construction, curb ramp replacement, existing crosswalks, proposed crosswalks, and cross sections showing dimensions for the public sidewalk, parkway and landscaping. In addition, the City has the following concerns regarding circulation:

   a. As a result of the proposed Project, the primary traffic that is currently on Park Pl will be shifted to Jefferson Avenue. There are no existing crosswalks at the intersection of Benson Ave & Jefferson Ave to allow legal crossings east-west.
   b. The existing sidewalks along the perimeter of the campus are typically 5 feet wide. At other District Campus' the District has expressed a desire to provide wider sidewalks near the schools as students tend to walk in side-by-side clusters, often with some students walking on the street. The City agrees that wider sidewalks in the vicinity of schools will lessen conflicts between pedestrians and vehicles. C-9
   c. There are no curb ramps on the east side of Benson Ave at the Benson Ave / Jefferson Ave and Benson Ave / Park Pl intersections.
   d. There are no curb ramps on the west side of Tenth Street at the Tenth St / Jefferson and Tenth St / Park Pl intersections.
   e. Some of the other intersections between the four corners of the campus has haphazard patterns of curb ramps.
   f. We often find that old sidewalks do not meet current standards for accessible routes. Items include: cross slope standards, running slope standards and inadequate overhead clearance. With new development and / or redevelopment projects, accessibility issues are required to be addressed within the vicinity of

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the Project. After identifying pedestrian routes in the vicinity of the school and identifying crosswalks and proposed sidewalks, any sidewalks that are not ADA compliant should be addressed and corrections should be made where warranted.

C-9 Cont'd

Other Items

9. Other technical documents the City requested but have not been provided and the following comments were not addressed:
    a. Preliminary WQMP – This report has not been provided to the City. The Environmental Analysis in the MND states that LID stormwater management would be incorporated into the project design. However, providing LID design is only one component for meeting stormwater quality. A Preliminary WQMP is required to assess the percentage of the campus that would be disturbed and upon this evaluation, a determination will be made regarding the extent of the property would be subject to stormwater treatment and the type of treatment.
    b. Conceptual Utility plan – the City needs to understand the location of existing and proposed utilities that would connect to City facilities, as the adequacy of existing utilities to serve the Project needs to be evaluated.
    c. A Hydrology report was not submitted that would entail any drainage improvements requirements, both onsite and offsite. Again, the adequacy of the storm drain system in the vicinity of the school needs to be evaluated.
    d. There is no mentioning of any undergrounding of overhead utilities that would be required per City Municipal Code, triggered by the improvements of this project.
    e. A revised site plan was submitted by the developer's architect- WLC Architects Inc., on July 23, 2018. The City reviewed the revised site plan and determined that the proposed driveway locations requested in the Traffic Study Requirements memo were addressed, However, there are still some missing information concerning the following:
        i. Accessibility improvements within the public ROW. Improvements should include, but not limited to, sidewalk improvements, curb ramps and crosswalks. Refer to comment #8, above.
        ii. There is no information on the lane configuration for Jefferson Avenue, specifically the intended removal of the existing diagonal parking on the south side and the addition of a two-way left turn lane in the center of the road. This information is critical because there will need to be coordination between Chino High School and Chino Medical Center across the street; amongst other facilities that may also be using this parking.
    f. ROW dedication may be required for Benson Avenue, per the City's General Plan (12.04.10). There are existing school facilities within the dedication area. The general plan also indicates a future widening of Benson Avenue.
    g. Depending on the outcome of the pedestrian route plan, additional dedication for right of way or sidewalk/public access easements may be requested.

C-10

Thank you again for the opportunity to review and comment on the proposed Chino High School Reconstruction project Notice of Intent to adopt a MND. I would like to be included on your list of contacts and given notice on any meetings and/or events in the future regarding the proposed project. Should you need further clarification or have any questions regarding my comments, please feel free to contact me at (909) 334-3332.

2. Response to Comments

Sincerely,

Warren Morelion, AICP
City Planner

cc. Development Services Department
Public Works Department

Attachments:
1. Pedestrian Safe Routes to School Information
2. Traffic Study Requirements memo dated April 11, 2018 08
3. Preliminary Review Comments dated December 6, 2017

2. Response to Comments

5.7 Pedestrian Recommendations - Safe Routes to School

Pedestrian Infrastructure Near Schools

Defining Safe Routes to School Zones and Generating Bicycle and Pedestrian Projects

Safer routes to school is the primary organizing principle for the pedestrian elements of this plan. A GIS-based methodology was devised to create Safe Routes to School (SRTS) Zones, areas around schools where walking and biking improvements would be prioritized. In the case of pedestrian improvements, these SRTS Zones were the primary method for prioritizing pedestrian improvements.

In the case of bicycle improvements, SRTS Zones were used both to ensure that recommendations of the highest level (lowest stress) were made within school zones, and as a determining factor where right-of-way constraints made the recommendation of dual facilities (on-street and off-street) infeasible. Within SRTS Zones, in cases of insufficient right-of-way, separated bikeways or urban trails were prioritized. Beyond SRTS Zones, in cases of insufficient right-of-way, bicycle lanes were prioritized. Further information on the SRTS Zone methodology follows. Each phase is accompanied by a sample map graphic illustrating how the walkshed changed with each analysis refinement described in the text.

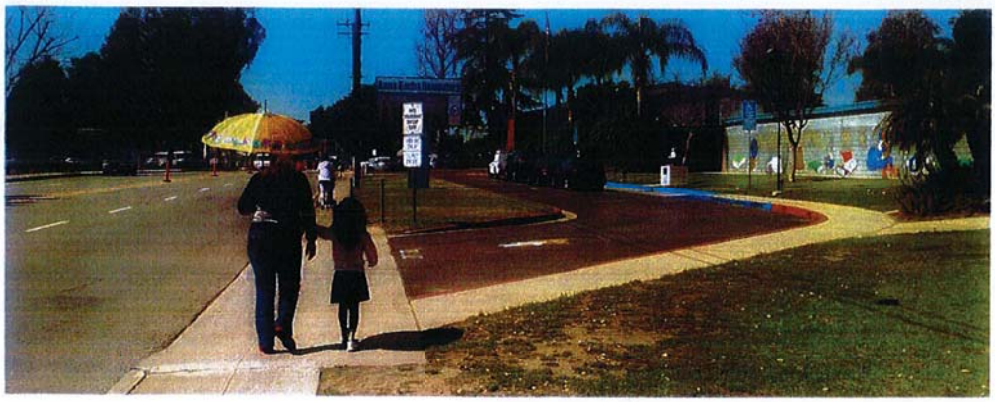
Radial Buffer

Traditionally, bicycle and pedestrian access was determined by creating a radial buffer, based on a 10 minute or half mile walk time, around a given destination. While this method offered an idea of the general area where walking and biking connections could be made, it did so without regard for actual streets or any multi-use paths available for walking and biking.

Network-based Methodology

To address the inability of the buffering method alone to account for all existing roadways and multi-use paths, a GIS-based network analysis was devised. This method is similar to the previous method in that it starts from a given point and extends outward, for either 10 minute or a half mile times, to create a walkable or bikeable zone (walkshed or bikeshed, respectively). However, it differs in that it does not simply expand radially, but actually follows the existing streets and multi-use paths. This method is valuable because it provides a more realistic picture of the area's existing walkability and bikeability, but still fails to address the potential walkability and bikeability because it often does not catch small but important gap connections that could be made. It also fails to account for the potential expansion of networks provided by multi-use path connections that overcome significant barriers like open space and freeway and rail crossings.

Riverside Drive at Anna Borba Fundamental School
Chino, CA



82 Recommendations

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5.8 Pedestrian Projects - Safe Routes to School

This plan recommended pedestrian projects according to Safe Routes to School (SRTS) Zones. SRTS Zone projects were, in turn, ranked against one another according to a set of criteria.

The methodology used is similar to those for bicycle facility projects to provide consistency between the two project types. A detailed synopsis of the criteria can be found in Appendix B. The criteria used for prioritizing the pedestrian improvements are:

- Number of attractions/destinations
- Number of schools
- Walk to Work Population
- Under 14 Years Old Population
- Use of Public Transportation to Work
- Households Without Vehicles
- Reported Collisions
- Population Density
- Employment Density
- Freeway Crossings

Recommendations

To summarize, this plan recommends a total of 7.5 miles of pedestrian (sidewalk completion) projects,and 526 curb ramp improvements around schools. Many of the recommendations derived from public input, field investigations and a school principal survey. The following pages include an overall key map of the SRTS Zones and individual blow-ups of each. Project rankings are summarized in the following table with costs in Chapter 7.

Crosswalks were recommended to be enhanced from Standard striping to Continental or Ladder Crosswalks, particularly near schools. New crosswalks were also recommended particularly if they meet the necessary warrants for installation.

The Safe Routes to School projects may be funded through a combination of developer fees, Caltrans, Federal and Safe Routes to School-specific funding streams. As part of these grants, construction funding is available particularly as it related to Safe Routes to School. SRTS grants are also one of the primary funding sources for bicycle and pedestrian projects.

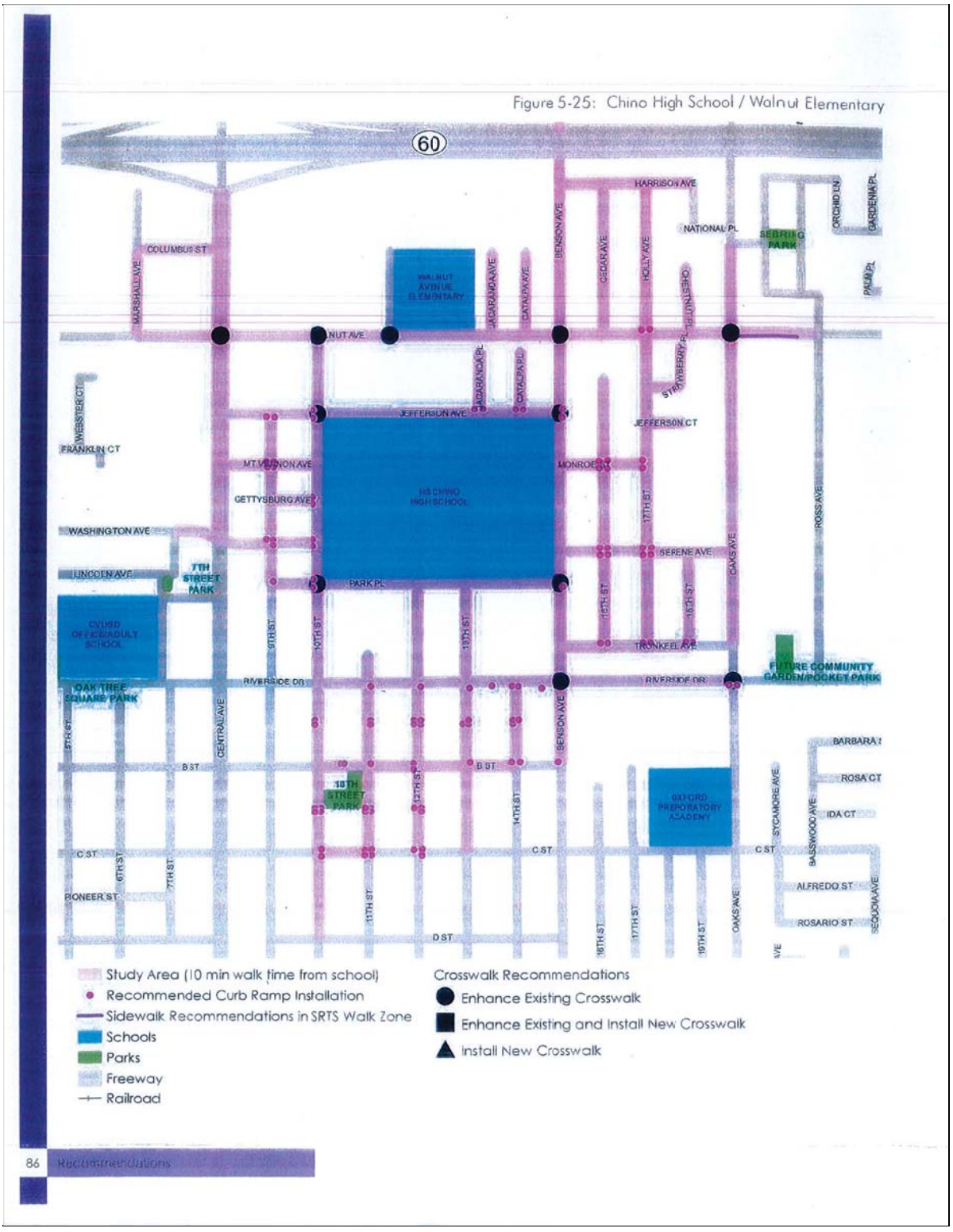
While the feasibility of constructing all these projects is difficult and costly, the City could leverage various funding sources to complete high priority improvements. As the City identifies areas of redevelopment or new development projects arise, the deficiencies can be conditioned into those projects. This enables the improvements to get built without City spending.

For prioritization purposes, Cal Aero Preserve Academy and Chaffey College Campus area were included, however recommendations will be dependent on their specific plans moving forward.

Table 5-20:Prioritized School Zones

Rank	School
1	Anna Borba Fundamental/Adult School
2	Chino High School/Walnut Ave Elementary
3	Ramona Junior High School
4	Oxford Preparatory Academy
5	Don Antonio Lugo High School
6	Newman Elementary
7	EJ Marshall Elementary
8	Magnolia Junior High School
9	Howard Cattle/Rhodes Elementary
10	Buena Vista High School
11	Cal Aero Preserve Academy
12	Alicia Cortez Elementary
13	Chaffey College Chino Campus

2. Response to Comments



CITY OF CHINO

MEMORANDUM

PUBLIC WORKS DEPARTMENT

DATE: April 11, 2018

TO: Jim DiCamillo, WLC Architects

FROM: DAVID HAMMER, CIVIL ENGINEERING MANAGER

SUBJECT: CHINO HIGH SCHOOL RECONSTRUCTION – TRAFFIC STUDY REQUIREMENTS

We have reviewed the site plan you provided on October 20, 2017. The review included Mario Flores and Karen Campbell, both from the Transportation Division of Public Works, and Scott Trosper and Jason Cloke from the Police Department. The following should be included in the project traffic study. Refer to the attached **Exhibit A** for the study intersections as well as the proposed driveway locations:

1. Driveways
   a. Per the discussion at the DRC Level 1 meeting December 6, 2017, eliminate the driveway off Tenth St. closest to the Tenth St & Jefferson Ave intersection. The driveway is too close to the intersection and would not be convenient for the southbound left turn traffic. Refer to Intersection #6 in Exhibit A for the new driveway location.

   b. Eliminate the driveway off Tenth St. closest to the Tenth St. & Park Pl. intersection. The driveway is too close to the intersection and could create circulation issues. Refer to Intersection #4 in Exhibit A for the new driveway location.

   c. Driveway #1 (Int #8) is proposed and intended to be for exiting only. Remove diagonal parking stripes on Jefferson Ave. west and east of the driveway to provide adequate sight distance in accordance with Chino Standard Drawing # 865. With this parking removal there will also need to be coordination with the hospital across the street to resolve and mitigate their parking concerns. Note: There are new City Standards & Specifications available in the City's website. The criteria for sight distance may have changed from last year.

   d. Driveway #2 (Int.#12) is currently an exit only onto Park Place. It shall remain exit only. (Note: Poor drainage with ponded water poses safety and ADA concerns.)

   e. Driveway #3 (Int.#9) is currently an entrance only driveway. It shall remain an entrance only driveway.

   f. Driveway #4 (Int.#4) is currently for exiting only. It is proposed to be both entrance and exit. Study queuing of southbound vehicles at the Tenth Street/Park Place intersection for conflicts with this driveway.

   g. Driveway #5 (Int.#3) is not existing. It is proposed to be located at the Tenth St.

2. Response to Comments

/Gettysburg Ave. intersection. It shall be used for entering and exiting vehicles including exiting buses.

h. Driveway #6 (Int.#2) is currently an existing driveway located at the Tenth Street/Mt. Vernon Ave. intersection that appears to be seldom used. It shall be used for entering and exiting vehicles.

i. Driveway #7 (Int.#6) is proposed and intended for inbound vehicles into the northwest parking lot. Locate the driveway sufficiently distant from Tenth Street and hospital driveways to avoid vehicle queuing conflicts. Alternately, align the driveway with a hospital driveway. Remove diagonal parking stripes on Jefferson Ave. west and east of the driveway to provide adequate sight distance in accordance with Chino Standard Drawing # 865. With the removal there will need to be coordination with the hospital across the street to resolve and mitigate their parking concerns.

2. Public Streets
   a. *Jefferson Ave* – A two-way left turn lane shall be implemented upon removal of the diagonal parking along the south side of the street. The full extent of this lane is from Tenth St to Benson Ave.

   b. *Park Place* – Post construction of the school, a speed study shall be done in order to implement the appropriate speed limit signs.

   c. *Benson Ave/Park Place* – Traffic signal modification may be required by removing the protected-permissive signal phasing for northbound traffic.

3. The school shall provide a **school route plan** in a form of an exhibit, as per MUTCD Chapter 7, Section 7A.01 (sample attached to this submittal), that shows the streets, school, existing traffic controls, school crossings, and expected pedestrian routes for students and guests entering the site for both typical school days and special events. Extend the study to approximately 100 feet outside the school property and through pedestrian gates for the school. In addition, show the propose locations for marked crosswalks and curb ramps in the public right of way. This exhibit will be used to asses ADA paths within the public right of way for compliance to federal and state codes/regulations.

4. Level of Service Analysis
   a. **Provide trip generation and distribution patterns for existing and post construction school traffic for City review and comments. Per the City General Plan, include intersections that are expected to experience more than 50 two-way peak hour trips. This study will be used to establish the list of intersections that will included in the Level of Service Analysis (LOS). The City can provide a cumulative project list for proposed developments in the City.**

   b. At a minimum, provide a Level of Service analysis for the following intersections. Refer to the site plan 'Exhibit A' showing the study intersections:

      i. Tenth St & Walnut Ave
      ii. Tenth St & Jefferson Ave
      iii. Tenth St & Mount Vernon Ave/Driveway #6
      iv. Tenth St & Gettysburg Ave/Driveway #5
      v. Tenth St & Washington Ave/Driveway #4
      vi. Tenth St & Park Pl
      vii. Tenth St & Riverside Dr.

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viii. Driveway #7 & Jefferson Ave
ix. 12th St & Park Pl
x. Driveway #1 & Jefferson Ave
xi. Driveway #3 & Park Pl
xii. 13th St & Park Pl
xiii. Jacaranda Ave & Jefferson Ave
xiv. Driveway #2 & Park Pl
xv. 14th St & Jefferson Ave
xvi. Benson Ave & Walnut Ave
xvii. Benson Ave & Jefferson Ave
xviii. Benson Ave & Monroe St
xix. Benson Ave & Serene Ave
xx. Benson Ave & Park Pl.
xxi. Benson Ave & Riverside Dr.

c. The LOS analysis should include the following scenarios:

i. Existing and existing plus Project
ii. Build Out (2023?) without Project and with Project
iii. Long Range (2040) without Project and with Project

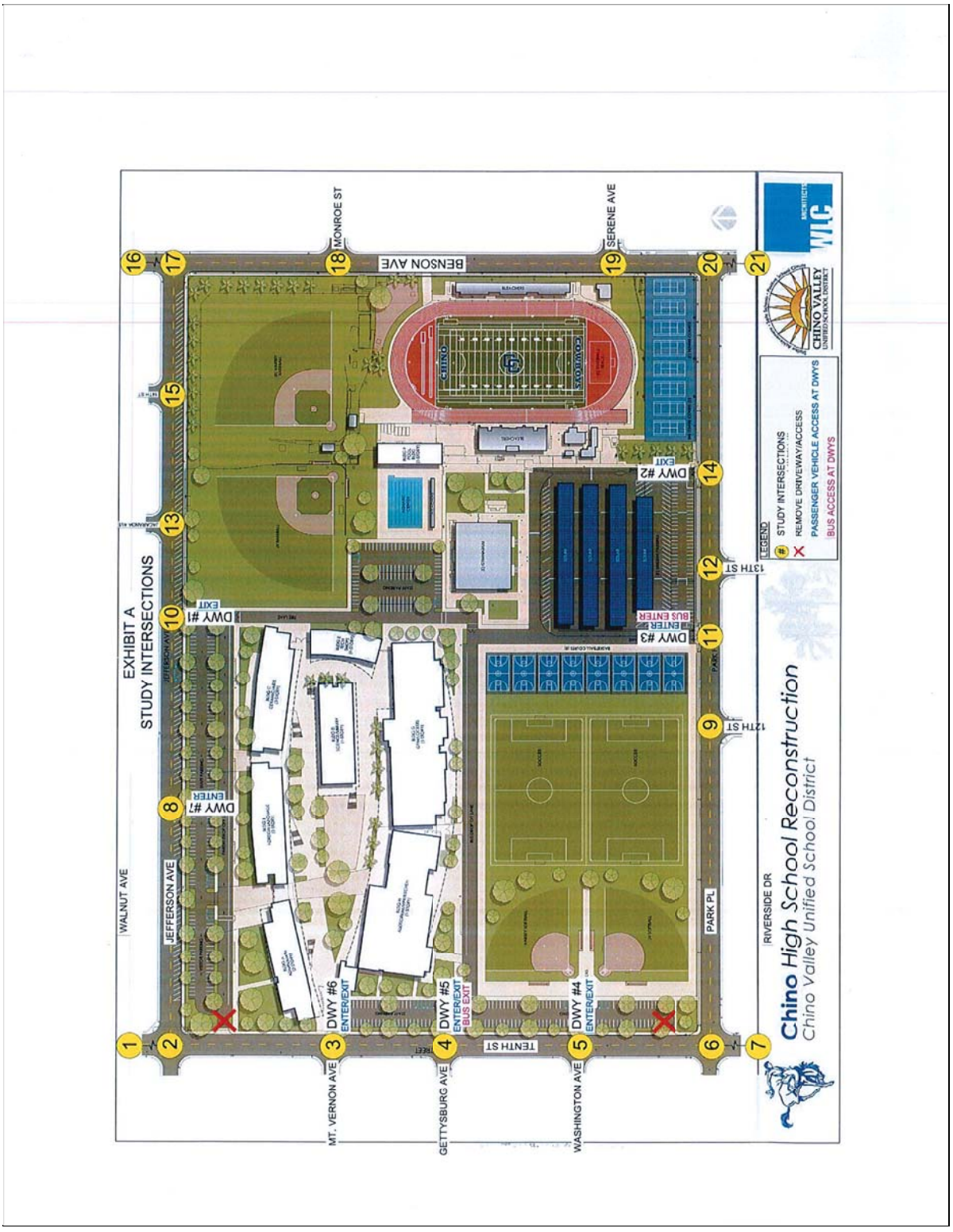
5. Provide traffic signal warrant analysis for the intersections at the corners of the site (intersections 1, 6, 14 and 17). Provide stop sign warrant analysis for the intersections between the corners (Intersections 3,4,5,7,10,11,13,15,16).

6. Provide a stacking and queuing analysis for each intersection at the four corners of the site (intersections 1, 6, 14 and 17). The analysis should be based on the Long Range (2040) traffic scenario.

7. Provide exhibits showing truck/bus turning templates for the intersections at the four corners of the site and at the existing and proposed driveways using the largest vehicle expected. For driveways that will have vehicles both entering and exiting the site, the templates should show that the movements can be done simultaneously. Also, show lane geometrics at Driveways 4-6 at the intersection to confirm proper flow through the intersection.

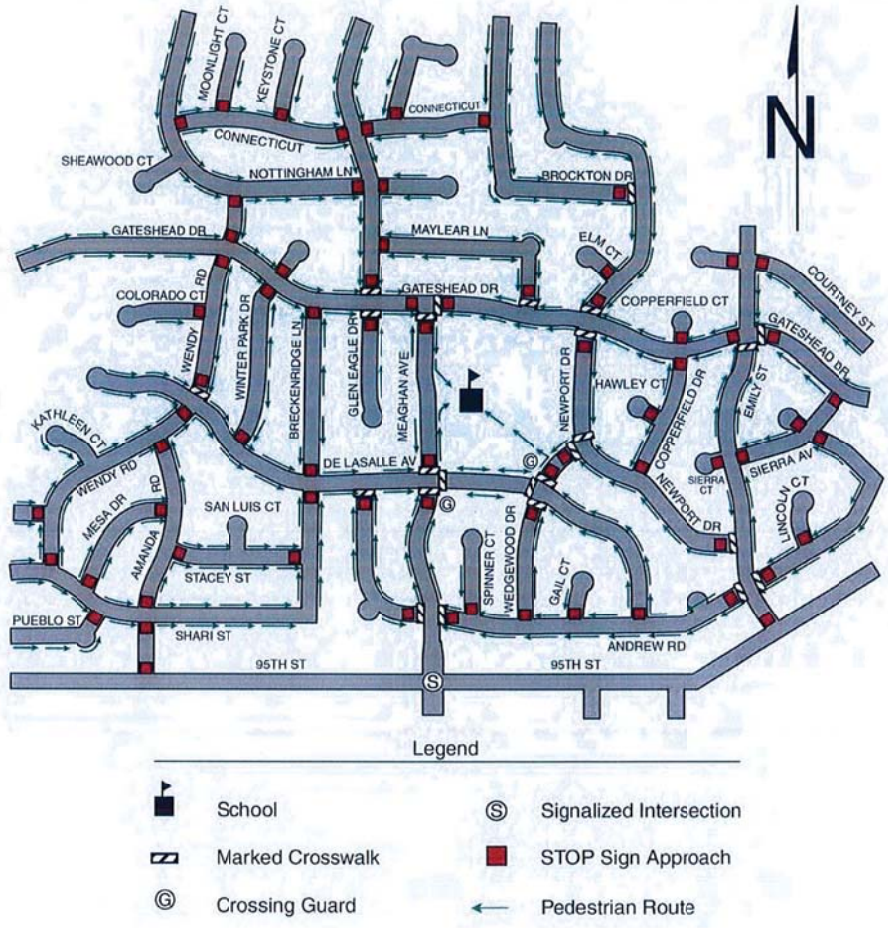
Attachments:
- Exhibit A
- Sample School Route Plan Map

2. Response to Comments



2. Response to Comments

Figure 7A-1. Example of School Route Plan Map



2. Response to Comments

PRELIMINARY REVIEW COMMENTS

CITY OF CHINO • PUBLIC WORKS DEPARTMENT
13220 Central Avenue, PO Box 667, Chino, California 91708-0667 • (909) 334-3265 FAX (909) 334-3724

MEETING DATE: December 6, 2017

COMMENTING DEPARTMENT/DIVISION OR AGENCY

☐ PLANNING	☒ ENGINEERING	☐ POLICE	☒ TRAFFIC
☐ BUILDING	☐ FIRE	☒ WATER/ENVIRONMENTAL	

COMMENTS BY: Isidro Abreo, Amanda Coker

PROJECT FILE NO.: PL 17-0113 – (Prelim Review)

PROJECT LOCATION: 5472 Park Place (Chino HS)

PROJECT DESCRIPTION: Reconstruction of school campus (parking lots, fields, buildings)

REVIEW COMMENTS:

The following are general and/or overall project-related comments that impact the project as a whole:

Engineering

1. An 11-foot right-of-way (ROW) dedication is required along property frontage on Benson Avenue (88-ft total ROW, 44-ft from centerline) to comply with the City's General Plan. Additional dedication may be required along all other fronting streets: Jefferson Avenue, Tenth Street and Park Place.

2. Per the City's General Plan, Benson Avenue is intended to have a total curb-to-curb distance of 64 feet (32 feet from centerline) to provide 2 travel lanes in each direction. Note that it is 20-ft from centerline to curb face existing. Along the eastern portion of the existing school site, there are a couple sports fields including bleachers and other facilities that may be within the ultimate ROW for which the new school's site plan, including the property line may need to be revised. An In-lieu fee will need to be paid for these future improvements where the costs developed are based on half-section of Benson Avenue along their frontage.

3. Public improvements which includes, but not limited to, sidewalks, curb ramps, curb & gutter, driveways, parkways, street lights and street paving may be required to comply with ADA requirements. Both existing and new sidewalk may need to be relocated and/or modified around obstructions that do not meet the 4' min. clearance. Those obstructions include, but are not limited to, fire hydrants, street lights, power poles, street signs, and storm drain facilities. This shall be done per City standards.

4. Chino High School currently has curb only on Jefferson Ave, Tenth St and Park Pl; no gutter for drainage is provided. The school will need to provide the necessary facilities for drainage

T:\PW\Abreo Isidro\DRC\PL 17-0113 Chino High School (Prelim Review)\PL 17-0113 Chino High School Prelim Review DRC Comments.doc

5. There's no existing gutter along the following public streets within the school's frontage: Tenth Street, Park Place and Jefferson Avenue. Addition of gutter will enhance the course of drainage and may be required to be implemented with new sidewalk.

6. All ROW improvements must be ADA compliant. The existing catch basin decks may currently not meet the maximum slope requirements and may require reconstruction.

7. Construction of proposed driveway approaches shall be per City Std. No. 250. A City Std. No. 255, in addition to ADA compliance.

8. Provide turning templates for both passenger vehicles and buses at the school driveways and interior for the largest truck accessing the site (buses) and passenger vehicles for both onsite and driveway locations, as discussed at the DRC meeting. Ingress/egress movements of the driveway approach shall be made without any conflicts. Show the existing and/or proposed striping at Jefferson Avenue, Park Place and Tenth Street.

9. Applicable fees, including but not limited to Development Impact Fees (DIF), Sewage Facilities Development Fees (SFDF), inspection fees, permit fees, plan check/review fees, and water meter connection fees shall be assessed based on final building and site design.

10. Underground all overhead utility lines adjoining and interior to the project, including power lines of 34.5 kV or less, back to the nearest power pole offsite on Tenth Street, Benson Avenue and Park Place, in accordance with the Chino Municipal Code 13.32.

11. Provide a conceptual Grading plan.

12. Provide a preliminary Hydrology report for review.

13. Provide a Conceptual Utility Plan (e.g. storm drain, water, sewer, gas, etc.).

14. Provide a comprehensive traffic study identifying trip generation, traffic re-distribution, and impacts to the existing and General Plan build-out conditions. The City is currently coordinating with the school's traffic engineer on the scoping letter.

15. All technical studies need to be approved prior to the issuance of Conditions of Approval. In addition, other improvements may be required because of these studies.

Traffic

Refer to the Traffic Study Requirements Documents.

Water/Environmental

1. Submit a Preliminary WQMP (to be based on the new 2013 Template and Technical Guidance Document). For Preliminary WQMP submittal requirements please coordinate with the Water and Environmental Engineering Department (909) 334-3423.

2. Incorporate LID Preventative Measures into the project design and provide detail on project plans where appropriate. Examples of LID preventative measures may include but are not limited to pervious pavement (e.g. permeable/interlocking pavers in walkways and parking stalls), landscape areas that promote infiltration, and impervious area drainage into landscape areas.

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2. Response to Comments

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C. Response to Comments from Warren Morelion, City of Chino, dated September 21, 2018

C-1 The Chino Valley Unified School District has not finalized all planning documents. To date the District has provided documents and has met in person with the City of Chino. The District has met with the City of Chino on three separate occasions to discuss the proposed Chino High School Reconstruction project: November 1, 2017, December 6, 2017, and a meeting with the project architect in June 2018.

Based on City comments the proposed reconstruction project incorporated City changes and site plan was revised. The District will continue to coordinate with the City on off-campus improvements.

C-2 The parking spaces along Jefferson are within the public right-of-way and are available for everyone. The Chino Valley Medical Center, the Lutheran Church, residential development, and the high school are adjacent to these parking spaces, and medical patients and staff; visitors and staff at the church; residents; and school visitors, students, and staff most likely all use these spaces. Because this is public parking, there are no spaces designated for specific businesses, and an accurate parking analysis would not identify parking needs for all uses along Jefferson Avenue.

Based on the City comments during the June meeting the District's understanding of the City-requested project revisions was the removal of all diagonal parking spaces along Jefferson and to convert these spaces to standard parallel parking. This revision was made.

This comment requests that the angled parking be retained. The District will revise the project so that the only angled parking spaces proposed to be removed would be within 50 feet of the new driveways to provide required line-of-sight for approaching bicycle and vehicle traffic. This is anticipated to be a loss of approximately 10 spaces at each driveway for a total of 20 spaces.

Based on the City of Chino Comment C-2, the MND has been revised to retain diagonal parking along most of the Jefferson Avenue south curb.

MND Initial Study, Chapter 5, page 134, Mitigation Measure T-3, is hereby modified as follows:

T-3 ~~**Convert**~~ **Remove** **Angled Street Parking.** To reduce visibility constraints along Jefferson Avenue and new school driveways, prior to the first day of classes in the new classroom buildings, the District shall ensure that the angled parking spaces on the south side of Jefferson Avenue within 50 feet of the new driveways are free of obstacles including parked cars ~~between 10th Street and Benson Avenue are converted to conventional parallel parking spaces~~ by removing the angled striping~~; new pavement markings are not required for conventional parallel parking~~. The District shall also paint a red curb on the south side of Jefferson Avenue for a length of 50 feet on each side of the two new driveways. All measures are subject to review and approval by the City of Chino.

2. Response to Comments

C-3 The District has talked to the Chino Valley Medical Center administrators to discuss the proposed reconstruction project. Although there is no written agreement or requirement, the hospital and school district have a mutual verbal agreement that when an emergency medical helicopter needs to land they can use the athletic fields at Chino High School. At that time either the Chino Police Department or Fire Department opens the school gate along Jefferson Avenue. Patients are then transported to/from the helicopter from/to the hospital by ambulance. The distance from the current landing areas to the Jefferson Avenue gate is about the same and should not significantly increase travel time to/from the emergency room. No changes to the existing procedures would occur, and the new locations would not significantly impact the route, distance, or time for transport of patients. An aerial photograph with the existing and future location is attached as Appendix A.

C-4 Traffic impacts are fully analyzed in a Traffic Impact Analysis (Appendix F of the Initial Study) and summarized in the Initial Study, Chapter 5, Section 5.16. As shown on Table 23, page 129, none of the surrounding intersections would be significantly impacted by the reconstruction of Chino High School. The emergency room access on 10th Street north of Jefferson Avenue would not be significantly impacted by the proposed project. The Walnut Avenue / 10th Street intersection is anticipated to have a 0.6 second increase in delay, and the Jefferson Avenue / 10th Street intersection is anticipated to have a 8.0 second delay. Based on the City of Chino traffic criteria these are not considered a significant impact.

The student parking lot would stay in the same location; therefore, student drivers would not change traffic flow on surrounding streets. The new on-campus staff parking lot along Jefferson Avenue would have 168 spaces, which would increase traffic; however, providing on-campus parking may reduce the number of cars parked in the angled spaces. Based on comments from the City, most of the angled parking spaces on Jefferson Avenue would remain.

C-5 Traffic impacts are fully analyzed in a Traffic Impact Analysis (Appendix F of the Initial Study) and summarized in the Initial Study, Chapter 5, Section 5.16. As shown on Table 23, page 129, none of the surrounding intersections would be significantly impacted by the reconstruction of Chino High School. The Police Department at 5450 Walnut Avenue would not be significantly impacted by the proposed project. The Walnut Avenue / 10th Street intersection would see a 0.6 second increase in delay. Based on the City of Chino traffic criteria this is not considered a significant impact.

C-6 The project site is on the Chino High School campus on a site zoned PS (public school). The PS zone does not have a height limit; however, the two-story campus buildings would be compatible with the two-story medical center to the north and the one- and two-story residential development to the east, south and west. Rooftop mechanical equipment such as HVAC units would be screened from public view.

C-7 a. Traffic impacts are fully analyzed in a Traffic Impact Analysis (Appendix F of the Initial Study) and summarized in the Initial Study, Chapter 5, Section 5.16. The Traffic Impact Analysis analyzed the redistribution of traffic associated with the re-designed campus. Figure 5, *Redistribution of Existing School Traffic* shows the anticipated volumes of peak hour traffic that would be shifted to the north side of the high school as a result of the new layout. The figure shows, for example, that during the AM peak hour 280 vehicles that currently arrive at the

school via Park Place from Benson Avenue, 10th Street, 12th Street, and 13th Street would be redistributed to the Jefferson Avenue driveway and to the three driveways along 10th Street. Also, Figure 4, *Project Generated Traffic – Expanded School* shows that most of the student increase is assigned to the northwest corner of the school site via Jefferson Avenue instead of the southern area of the school. It should be noted that the student parking lot would not be relocated and would remain on the south side of the campus adjacent to Park Place, so most of the student-related traffic and some of the drop-offs/pick-ups would continue to occur off Park Place.

b. The traffic calculation worksheets are included as Attachment B to this response to comment document.

c. The traffic analysis addressed existing conditions and the projected year 2024 traffic conditions for the scenarios with and without the project. The long-range future conditions for the year 2040 were not addressed because baseline traffic volume forecasts were not available for that year. The District's traffic engineer contacted the City of Chino and San Bernardino County to request future traffic forecasts, but no such data existed for the streets and intersections that were evaluated in the traffic study. The scenarios that were addressed in the analysis satisfy the CEQA requirements as a long-range future analysis is not required.

d. Items Comments a, b, and c above have been addressed and will not change the outcome of the LOS analysis and warrant studies.

e. A traffic signal warrant analysis was conducted for the three intersections at the corners of the school site that are not currently signalized: 10th Street/Jefferson Avenue, 10th Street/Park Place, and Benson Avenue/Jefferson Avenue. The analysis was based on the projected traffic volumes for the year 2024. As shown on the Traffic Calculation Worksheets (Attachment B), the peak hour traffic volumes are below the threshold levels that would justify the installation of a traffic signal. As the existing traffic volumes are lower than the projected 2024 traffic volumes, it was unnecessary to also conduct an analysis for the existing scenario. As traffic forecasts are not available for the year 2040 (see response to Comment c above), an analysis of that scenario was not conducted.

   A stop sign warrant analysis was conducted for 11 intersections to determine if additional stop signs should be installed to create multi-way stops; i.e., 3-way stops at "T" intersections or 4-way stops at four-leg intersections. As detailed in the Traffic Impact Analysis (Appendix F of the Initial Study), the projected 2024 traffic volumes at each intersection are below the threshold levels that would justify the installation of multi-way stop signs.

   The project includes Mitigation Measure T-1 that requires a 4-way stop at 10th Street / Jefferson Avenue intersection to mitigate the safety concerns associated with the increased levels of vehicles, pedestrians, and bicycles.

f. The school district site plans have been designed to accommodate the current number of buses and will comply with bus turning requirements, similar to other schools in the District.

g. The traffic signal at the Benson Avenue/Park Place intersection is currently equipped with a protected-permissive left-turn phase for the northbound-to-westbound traffic movement.

2. Response to Comments

With this design, the signal displays a left-turn arrow (protected phase) followed by a regular green light that allows motorists to turn left if there is a gap in the opposing southbound traffic (permissive phase). This type of operation increases the capacity of the intersection by allowing a greater number of vehicles to turn left during each signal cycle, but it also increases the number of conflicts involving left-turning traffic. Because the proposed project would result in a decrease in the number of vehicles turning left at this location, project-related traffic would not adversely impact the safety conditions involving left-turning traffic. A modification of the traffic signal to convert the protected-permissive phasing to a protected-only phase would not be required as a component of or a mitigation measure for the school project.

C-8 The District's first priority is the safety of students and staff; therefore, the District will consult with the City to improve existing deficiencies in the City's infrastructure. However, the high school is an existing use, and students currently use the existing curbs, sidewalks, crosswalks, and push button signals. At project completion, the land use would still be a high school.

CEQA requires an analysis of the physical impacts on the environment as a result of a proposed project. There is no requirement under CEQA to mitigate for existing deficiencies. CEQA requires the lead agency to evaluate project impacts compared to the existing baseline conditions and to incorporate mitigation measures to reduce project-related impacts. This analysis has been conducted in the MND, and no project-related infrastructure impacts were identified. The Chino Valley Unified School District Board of Education will consider all comments prior to making a decision on the project

C-9 Please see response to Comment C-8 regarding requested infrastructure improvements.

a. Similar to existing conditions, some students and staff/faculty would walk or bike to and from the school. The streets in the school vicinity have sidewalks along both sides, and the signalized intersections are equipped with painted crosswalks, pedestrian push buttons, and signals. The unsignalized intersections have painted crosswalks across the critical roadway approaches.

Benson Avenue/Jefferson Avenue is a T-intersection. There is a yellow crosswalk across Jefferson. The City is requesting two more crosswalks across Benson Avenue. Similar to the midblock crossing at the T-intersection of Mt. Vernon Avenue and 10th Street a midblock crosswalk on Benson Avenue may not be advisable. The Benson Avenue/Jefferson Avenue was evaluated to determine if a traffic signal or 3-way stop signs would be warranted and the study concluded that the projected traffic volumes are below the thresholds that would justify the installation of these additional traffic control devices (see Attachment C for Traffic Signal Warrant Analysis Worksheets). It is not anticipated that a substantial number of pedestrians would be crossing Benson Avenue at this intersection because there is no direct link into the residential area to the east. For purposes of the CEQA analysis, no mitigation measures have therefore been identified for this intersection. The District will, however, work cooperatively with the City to determine if it would be advantageous to install stop signs and/or crosswalk markings at this intersection.

b. to f. Please see response to Comment C-8 regarding infrastructure, curb ramps, and sidewalks.

C-10 a. Although the WQMP was not specifically identified in the document, it is understood that the District would comply with all required regulations. Specifically, the District would utilize the Technical Guidance Document for Water Quality Management Plans to prepare the required stormwater treatment facilities.

b. The project utility needs were analyzed in Chapter 5.18 of the Initial Study. Reconstruction of the existing high school would not require construction of new or expanded utility facilities (water, wastewater, drainage, landfill). The high school currently serves students living in the region, and the reconstructed school would not increase long-term regional utility demands.

c. Drainage was analyzed in Chapter 5.18 of the Initial Study. The existing high school is discharging stormwater into the surrounding drainage system. The project would not require the construction of expanded off-campus storm drains. In fact the project would improve stormwater drainage from the school by reducing the flow and treating stormwater before it exits the campus in compliance with LID and WQMP.

d. The District will work with the City and will comply with all required regulations.

e. i. See response to Comment C-8.

ii. This comment contradicts Comment C-1, which states that most of the angled parking should remain. Changes to the existing lane configuration would not be required because of the angled parking.

f. Please see response to Comment C-7g regarding Benson Avenue widening dedication area.

g. The project site is an existing high school where students are already walking and biking to the site. The proposed project would not change the land use or significantly increase the number or location of students. Please see response to Comment C-8.

2. Response to Comments

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Attachments

Attachment A.
Emergency Helicopter Landing Area

Attachments

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Chino HS Helicopter Landing Area

Legend

Hospital

Emergency Room Entrance

Gate

Gate

Gate

Current Landing Zones

New / Optional Landing Zones

CHINO

500 ft

N

Google Earth

Attachments

Attachment B.
Traffic Calculation Worksheets

Attachments

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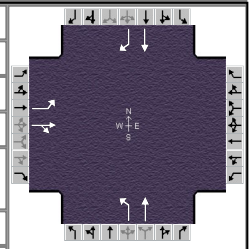
LEVEL OF SERVICE ANALYSIS

CALCULATION/OUTPUT SHEETS

SIGNALIZED INTERSECTIONS

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino Valley USD			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Park Place	Analysis Year	2018 Existing No Project	Analysis Period	1> 7:00
File Name	Benson Park 2018 Existing No Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	80	0	120				260	330			300	180

Signal Information			
Cycle, s	92.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	12.3	30.0	19.9	0.0	0.0	0.0	5	6	7	8
Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
Red	1.0	1.0	1.0	0.0	0.0	0.0				

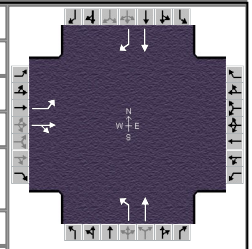
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		10.0			1.0	4.0		7.3
Phase Duration, s		24.9			17.3	52.3		35.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.5			3.1	3.1		3.1
Queue Clearance Time *(g_s)*, s		9.4			11.7	12.7		15.2
Green Extension Time *(g_e)*, s		0.5			0.5	1.7		1.7
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.00			0.00	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				5	2			6	16
Adjusted Flow Rate *(v)*, veh/h	84	126					274	347			316	189
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1357					1619	1800			1800	1516
Queue Service Time *(g_s)*, s	4.0	7.4					9.7	10.7			13.2	8.9
Cycle Queue Clearance Time *(g_c)*, s	4.0	7.4					9.7	10.7			13.2	8.9
Capacity *(c)*, veh/h	350	293					490	923			586	493
Volume-to-Capacity Ratio *(X)*	0.241	0.431					0.559	0.376			0.539	0.384
Available Capacity *(c_a)*, veh/h	878	736					977	1953			1953	1645
Back of Queue *(Q)*, veh/ln (50th percentile)	1.5	2.4					3.4	4.1			5.5	3.1
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	29.9	31.2					16.7	13.6			25.4	24.0
Incremental Delay *(d_2)*, s/veh	0.1	0.4					0.4	0.1			0.3	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	30.0	31.6					17.0	13.7			25.7	24.1
Level of Service (LOS)	C	C					B	B			C	C
Approach Delay, s/veh / LOS	31.0	C		0.0			15.1	B		25.1	C	
Intersection Delay, s/veh / LOS	21.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	1.9	A	2.3	B
Bicycle LOS Score / LOS	0.8	A			1.5	A	1.3	A

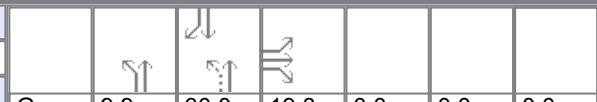
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino Valley USD			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Park Place	Analysis Year	2018 Existing Plus Project	Analysis Period	1> 7:00
File Name	Benson Park 2018 Existing w Proj.xus				
Project Description	Chino High School Modernization				

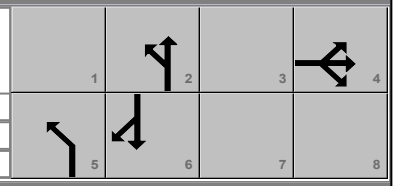


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	64	0	106				183	389			394	99

Signal Information			
Cycle, s	89.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.9	30.0	19.8	0.0	0.0	0.0						
Yellow	4.0	4.0	4.0	0.0	0.0	0.0						
Red	1.0	1.0	1.0	0.0	0.0	0.0						



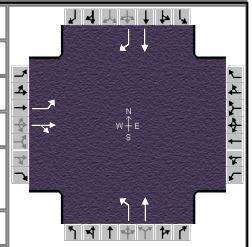
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		10.0			1.0	4.0		7.3
Phase Duration, s		24.8			14.9	49.9		35.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.5			3.1	3.1		3.1
Queue Clearance Time *(g_s)*, s		8.2			8.5	15.2		19.9
Green Extension Time *(g_e)*, s		0.4			0.3	1.8		1.8
Phase Call Probability		0.99			0.99	1.00		1.00
Max Out Probability		0.00			0.00	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				5	2			6	16
Adjusted Flow Rate *(v)*, veh/h	67	112					193	409			415	104
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1361					1619	1800			1800	1516
Queue Service Time *(g_s)*, s	3.0	6.2					6.5	13.2			17.9	4.4
Cycle Queue Clearance Time *(g_c)*, s	3.0	6.2					6.5	13.2			17.9	4.4
Capacity *(c)*, veh/h	357	300					393	901			602	507
Volume-to-Capacity Ratio *(X)*	0.189	0.372					0.490	0.454			0.689	0.205
Available Capacity *(c_a)*, veh/h	902	759					936	2007			2007	1690
Back of Queue *(Q)*, veh/ln (50th percentile)	1.2	2.0					2.2	5.0			7.3	1.5
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	28.4	29.7					17.2	14.5			25.8	21.3
Incremental Delay *(d_2)*, s/veh	0.1	0.3					0.4	0.1			0.5	0.1
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	28.5	30.0					17.5	14.6			26.3	21.4
Level of Service (LOS)	C	C					B	B			C	C
Approach Delay, s/veh / LOS	29.4	C		0.0			15.5	B		25.3	C	
Intersection Delay, s/veh / LOS	21.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	1.9	A	2.3	B
Bicycle LOS Score / LOS	0.8	A			1.5	A	1.3	A

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino Valley USD			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Park Place	Analysis Year	2024 Without Project	Analysis Period	1> 7:00
File Name	Benson Park 2024 No Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	82	0	122				263	337			311	184

Signal Information			
Cycle, s	92.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	12.4	30.0	19.9	0.0	0.0	0.0	5	6	7	8
Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
Red	1.0	1.0	1.0	0.0	0.0	0.0				

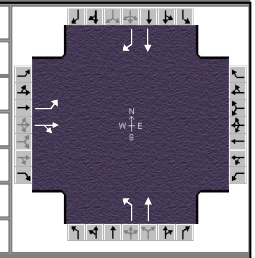
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		10.0			1.0	4.0		7.3
Phase Duration, s		24.9			17.4	52.4		35.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.5			3.1	3.1		3.1
Queue Clearance Time *(g_s)*, s		9.6			11.9	13.0		15.9
Green Extension Time *(g_e)*, s		0.5			0.5	1.7		1.7
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.00			0.00	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				5	2			6	16
Adjusted Flow Rate *(v)*, veh/h	86	128					277	355			327	194
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1356					1619	1800			1800	1516
Queue Service Time *(g_s)*, s	4.1	7.6					9.9	11.0			13.9	9.1
Cycle Queue Clearance Time *(g_c)*, s	4.1	7.6					9.9	11.0			13.9	9.1
Capacity *(c)*, veh/h	349	293					482	924			585	493
Volume-to-Capacity Ratio *(X)*	0.247	0.439					0.574	0.384			0.560	0.393
Available Capacity *(c_a)*, veh/h	877	735					966	1949			1949	1642
Back of Queue *(Q)*, veh/ln (50th percentile)	1.6	2.4					3.4	4.2			5.7	3.2
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	30.0	31.4					16.8	13.6			25.7	24.1
Incremental Delay *(d_2)*, s/veh	0.1	0.4					0.4	0.1			0.3	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	30.1	31.7					17.2	13.7			26.0	24.3
Level of Service (LOS)	C	C					B	B			C	C
Approach Delay, s/veh / LOS	31.1	C		0.0			15.3	B		25.4	C	
Intersection Delay, s/veh / LOS	21.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	1.9	A	2.3	B
Bicycle LOS Score / LOS	0.8	A			1.5	A	1.3	A

HCS 2010 Signalized Intersection Results Summary

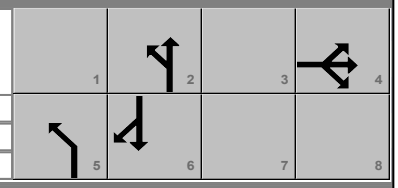
General Information				Intersection Information	
Agency	Chino Valley USD			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Park Place	Analysis Year	2024 With Project	Analysis Period	1> 7:00
File Name	Benson Park 2024 w Proj.xus				
Project Description	Chino High School Modernization				



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	0	108				186	396			405	103

Signal Information			
Cycle, s	89.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.9	30.0	19.8	0.0	0.0	0.0	
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	
Red	1.0	1.0	1.0	0.0	0.0	0.0	



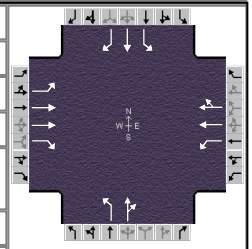
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		10.0			1.0	4.0		7.3
Phase Duration, s		24.8			14.9	49.9		35.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.5			3.1	3.1		3.1
Queue Clearance Time *(g_s)*, s		8.4			8.6	15.5		20.5
Green Extension Time *(g_e)*, s		0.4			0.4	1.9		1.9
Phase Call Probability		0.99			0.99	1.00		1.00
Max Out Probability		0.00			0.00	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				5	2			6	16
Adjusted Flow Rate *(v)*, veh/h	69	114					196	417			426	108
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1361					1619	1800			1800	1516
Queue Service Time *(g_s)*, s	3.1	6.4					6.6	13.5			18.5	4.6
Cycle Queue Clearance Time *(g_c)*, s	3.1	6.4					6.6	13.5			18.5	4.6
Capacity *(c)*, veh/h	357	300					384	901			602	507
Volume-to-Capacity Ratio *(X)*	0.195	0.379					0.510	0.462			0.708	0.214
Available Capacity *(c_a)*, veh/h	902	759					927	2006			2006	1690
Back of Queue *(Q)*, veh/ln (95th percentile)	2.2	3.7					4.1	8.8			12.2	2.9
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (95th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	28.5	29.7					17.4	14.6			26.0	21.4
Incremental Delay *(d_2)*, s/veh	0.1	0.3					0.4	0.1			0.6	0.1
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	28.6	30.0					17.8	14.7			26.6	21.5
Level of Service (LOS)	C	C					B	B			C	C
Approach Delay, s/veh / LOS	29.5	C		0.0			15.7	B		25.6	C	
Intersection Delay, s/veh / LOS	21.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.3	B	1.9	A	2.3	B
Bicycle LOS Score / LOS	0.8	A			1.5	A	1.4	A

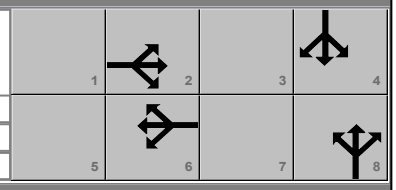
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Riverside D	Analysis Year	2018 Existing Without Project	Analysis Period	1> 7:00
File Name	Benson Riverside 2018 Exist No Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	50	440	40	80	880	300	100	200	50	160	190	90

Signal Information					EB		WB		NB		SB	
Cycle, s	70.9	Reference Phase	2	Green	35.9	25.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	Yes	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									



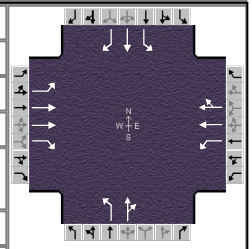
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		6.0		5.0
Phase Duration, s		40.9		40.9		30.0		30.0
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.3		3.3		3.3		3.3
Queue Clearance Time *(g_s)*, s		30.3		22.3		12.6		19.6
Green Extension Time *(g_e)*, s		5.8		5.8		1.8		1.8
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		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	53	463	42	84	655	587	105	263		168	200	95
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	453	1714	1480	930	1800	1600	1162	1720		1106	1800	1452
Queue Service Time *(g_s)*, s	7.4	5.5	1.0	4.1	20.0	20.3	5.1	8.2		9.6	5.7	3.2
Cycle Queue Clearance Time *(g_c)*, s	28.3	5.5	1.0	10.2	20.0	20.3	10.6	8.2		17.6	5.7	3.2
Capacity *(c)*, veh/h	196	1728	746	491	908	807	423	609		369	638	514
Volume-to-Capacity Ratio *(X)*	0.269	0.268	0.056	0.172	0.722	0.728	0.249	0.432		0.456	0.314	0.184
Available Capacity *(c_a)*, veh/h	608	4854	2096	1339	2549	2266	1657	2437		1544	2549	2056
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8	1.8	0.3	0.8	6.9	6.3	1.3	3.0		2.3	2.1	1.0
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	25.1	10.0	8.9	13.2	13.6	13.7	20.3	17.4		24.0	16.6	15.8
Incremental Delay *(d_2)*, s/veh	0.3	0.0	0.0	0.1	0.4	0.5	0.1	0.2		0.3	0.1	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	25.4	10.1	8.9	13.2	14.1	14.2	20.4	17.6		24.3	16.7	15.8
Level of Service (LOS)	C	B	A	B	B	B	C	B		C	B	B
Approach Delay, s/veh / LOS	11.4	B		14.1	B		18.4	B		19.3	B	
Intersection Delay, s/veh / LOS	15.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.2	B	2.4	B	2.8	C	2.9	C
Bicycle LOS Score / LOS	0.9	A	1.6	A	1.1	A	1.3	A

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Riverside I	Analysis Year	2018 Existing With Project	Analysis Period	1> 7:00
File Name	Benson Riverside 2018 Exist w Proj.xus				
Project Description	Chino High School Modernization				



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	440	40	80	910	294	120	194	50	211	217	92

Signal Information					EB		WB				NB				SB			
Cycle, s	71.6	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	Yes	Simult. Gap E/W	On	Green	36.0	25.6	0.0	0.0	0.0	0.0								
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0								
				Red	1.0	1.0	0.0	0.0	0.0	0.0								

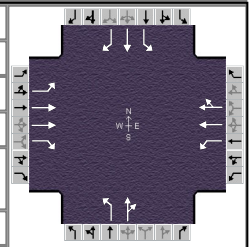
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		6.0		5.0
Phase Duration, s		41.0		41.0		30.6		30.6
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.3		3.3		3.3		3.3
Queue Clearance Time *(g_s)*, s		29.7		23.1		15.2		23.6
Green Extension Time *(g_e)*, s		5.8		5.8		2.1		2.1
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		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	46	463	42	84	666	601	126	257		222	228	97
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	442	1714	1480	930	1800	1608	1134	1719		1112	1800	1452
Queue Service Time *(g_s)*, s	6.6	5.5	1.0	4.0	20.8	21.1	6.6	8.2		13.6	6.8	3.3
Cycle Queue Clearance Time *(g_c)*, s	27.7	5.5	1.0	9.3	20.8	21.1	13.2	8.2		21.6	6.8	3.3
Capacity *(c)*, veh/h	195	1739	751	505	913	816	398	607		370	636	513
Volume-to-Capacity Ratio *(X)*	0.238	0.266	0.056	0.167	0.730	0.737	0.318	0.423		0.601	0.359	0.189
Available Capacity *(c_a)*, veh/h	585	4767	2059	1327	2504	2236	1575	2391		1524	2504	2019
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7	1.8	0.3	0.8	7.2	6.6	1.7	3.0		3.3	2.5	1.0
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	24.8	10.1	9.0	12.6	13.8	13.9	22.0	17.7		25.8	17.2	16.1
Incremental Delay *(d_2)*, s/veh	0.2	0.0	0.0	0.1	0.4	0.5	0.2	0.2		0.6	0.1	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	25.1	10.1	9.0	12.7	14.3	14.4	22.2	17.8		26.4	17.3	16.2
Level of Service (LOS)	C	B	A	B	B	B	C	B		C	B	B
Approach Delay, s/veh / LOS	11.3	B		14.2	B		19.3	B		20.8	C	
Intersection Delay, s/veh / LOS	15.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.2	B	2.4	B	2.8	C	2.9	C
Bicycle LOS Score / LOS	0.9	A	1.6	A	1.1	A	1.4	A

HCS 2010 Signalized Intersection Results Summary

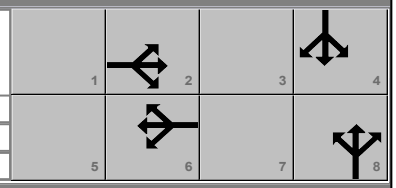
General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Riverside I	Analysis Year	2024 Without Project	Analysis Period	1> 7:00
File Name	Benson Riverside 2024 No Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	51	460	41	99	1107	372	101	206	51	162	197	91

Signal Information			
Cycle, s	110.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	65.9	34.6	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



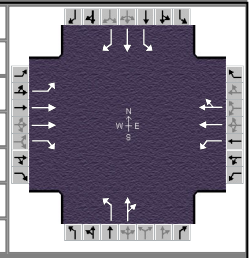
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		6.0		5.0
Phase Duration, s		70.9		70.9		39.6		39.6
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.3		3.3		3.3		3.3
Queue Clearance Time *(g_s)*, s		56.6		40.6		20.7		33.0
Green Extension Time *(g_e)*, s		8.1		8.2		1.9		1.9
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.03		0.01		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	54	484	43	104	806	750	106	271		171	207	96
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	336	1714	1487	915	1800	1612	1150	1718		1097	1800	1441
Queue Service Time *(g_s)*, s	15.8	7.3	1.3	6.6	36.0	38.6	8.8	14.4		16.8	10.0	5.5
Cycle Queue Clearance Time *(g_c)*, s	54.6	7.3	1.3	13.6	36.0	38.6	18.7	14.4		31.0	10.0	5.5
Capacity *(c)*, veh/h	150	2063	895	558	1084	970	318	530		262	555	444
Volume-to-Capacity Ratio *(X)*	0.358	0.235	0.048	0.187	0.744	0.773	0.335	0.511		0.650	0.374	0.216
Available Capacity *(c_a)*, veh/h	249	3078	1336	828	1617	1448	996	1543		909	1617	1294
Back of Queue *(Q)*, veh/ln (50th percentile)	1.3	2.6	0.4	1.3	13.6	13.1	2.5	5.9		4.5	4.3	1.9
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	36.9	10.3	9.1	13.4	16.0	16.5	37.3	31.6		44.3	30.1	28.5
Incremental Delay *(d_2)*, s/veh	0.5	0.0	0.0	0.1	0.4	0.7	0.2	0.3		1.0	0.2	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	37.4	10.3	9.1	13.4	16.4	17.2	37.6	31.9		45.3	30.3	28.6
Level of Service (LOS)	D	B	A	B	B	B	D	C		D	C	C
Approach Delay, s/veh / LOS	12.7	B		16.6	B		33.5	C		35.4	D	
Intersection Delay, s/veh / LOS	20.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.2	B	2.4	B	2.8	C	3.0	C
Bicycle LOS Score / LOS	1.0	A	1.9	A	1.1	A	1.3	A

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Riverside I	Analysis Year	2024 With Project	Analysis Period	1> 7:00
File Name	Benson Riverside 2024 w Proj.xus				
Project Description	Chino High School Modernization				



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	460	41	99	1137	366	121	200	51	213	224	93

Signal Information													
Cycle, s	138.4	Reference Phase	2										
Offset, s	0	Reference Point	End							1	2	3	4
Uncoordinated	Yes	Simult. Gap E/W	On	Green	80.6	47.8	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0			
				Red	1.0	1.0	0.0	0.0	0.0	0.0	5	6	7	8

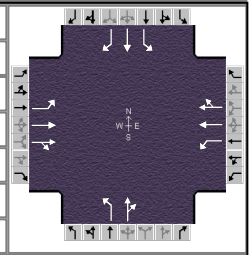
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		6.0		6.0		5.0
Phase Duration, s		85.6		85.6		52.8		52.8
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.3		3.3		3.3		3.3
Queue Clearance Time *(g_s)*, s		72.2		53.5		29.0		45.9
Green Extension Time *(g_e)*, s		7.7		8.2		2.2		2.2
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.12		0.02		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	47	484	43	104	817	765	127	264		224	236	98
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	328	1714	1486	914	1800	1617	1126	1719		1105	1800	1449
Queue Service Time *(g_s)*, s	18.5	9.4	1.7	8.6	47.8	51.5	13.4	16.6		27.4	13.8	6.6
Cycle Queue Clearance Time *(g_c)*, s	70.2	9.4	1.7	18.1	47.8	51.5	27.0	16.6		43.9	13.8	6.6
Capacity *(c)*, veh/h	122	2008	871	525	1055	947	326	588		298	616	496
Volume-to-Capacity Ratio *(X)*	0.389	0.241	0.050	0.198	0.775	0.807	0.390	0.450		0.751	0.383	0.198
Available Capacity *(c_a)*, veh/h	166	2471	1072	649	1298	1166	753	1239		717	1298	1045
Back of Queue *(Q)*, veh/ln (50th percentile)	1.5	3.6	0.6	1.8	19.8	19.4	3.8	7.0		7.6	6.0	2.3
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	50.2	13.8	12.2	18.2	21.8	22.6	44.8	35.5		52.5	34.6	32.2
Incremental Delay *(d_2)*, s/veh	0.8	0.0	0.0	0.1	1.9	2.9	0.3	0.2		1.5	0.1	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	51.0	13.9	12.3	18.3	23.6	25.5	45.0	35.7		54.0	34.7	32.3
Level of Service (LOS)	D	B	B	B	C	C	D	D		D	C	C
Approach Delay, s/veh / LOS	16.8	B		24.1	C		38.7	D		42.0	D	
Intersection Delay, s/veh / LOS	27.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.8	C	3.0	C
Bicycle LOS Score / LOS	1.0	A	1.9	A	1.1	A	1.4	A

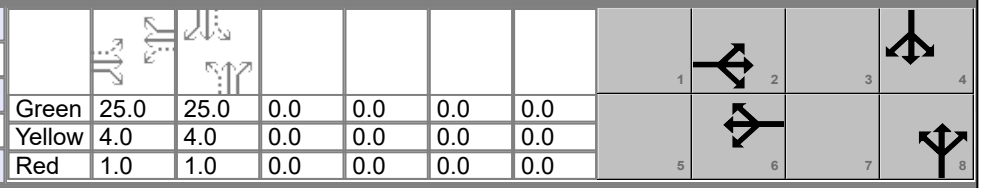
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Walnut Ave	Analysis Year	2018 Existing	Analysis Period	1> 7:00
File Name	Benson Walnut 2018 Exist No Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	80	300	80	100	320	100	160	220	90	90	270	90

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



	EB		WB			
Green	25.0	25.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	0.0	0.0	0.0	0.0
Red	1.0	1.0	0.0	0.0	0.0	0.0

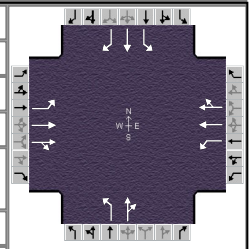
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		6.0		5.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.3		3.3		3.3		3.3
Queue Clearance Time *(g_s)*, s		11.2		11.4		16.0		14.6
Green Extension Time *(g_e)*, s		2.4		2.4		2.2		2.2
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		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	84	206	194	105	229	213	168	326		95	284	95
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	949	1800	1638	980	1800	1627	1102	1699		1058	1800	1500
Queue Service Time *(g_s)*, s	3.9	4.5	4.7	4.8	5.1	5.3	7.5	8.3		4.3	6.6	2.4
Cycle Queue Clearance Time *(g_c)*, s	9.2	4.5	4.7	9.4	5.1	5.3	14.0	8.3		12.6	6.6	2.4
Capacity *(c)*, veh/h	432	750	683	452	750	678	459	708		415	750	625
Volume-to-Capacity Ratio *(X)*	0.195	0.275	0.284	0.233	0.305	0.314	0.367	0.461		0.228	0.379	0.152
Available Capacity *(c_a)*, veh/h	1618	2999	2730	1677	2999	2711	1836	2831		1737	2999	2500
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8	1.6	1.5	0.9	1.8	1.6	1.7	2.7		0.9	2.2	0.7
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	14.8	11.5	11.6	14.7	11.7	11.7	17.0	12.6		17.2	12.1	10.9
Incremental Delay *(d_2)*, s/veh	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2		0.1	0.1	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	14.9	11.6	11.7	14.8	11.8	11.8	17.2	12.8		17.3	12.2	10.9
Level of Service (LOS)	B	B	B	B	B	B	B	B		B	B	B
Approach Delay, s/veh / LOS	12.2	B		12.4	B		14.3	B		13.0	B	
Intersection Delay, s/veh / LOS	13.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	0.9	A	1.3	A	1.3	A

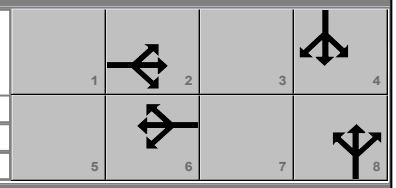
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Walnut Ave	Analysis Year	2018 Existing plus Project	Analysis Period	1> 7:00
File Name	Benson Walnut 2018 Exist w Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	80	300	80	114	320	100	160	230	102	90	279	90

Signal Information													
Cycle, s	60.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	25.0	25.0	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0			
				Red	1.0	1.0	0.0	0.0	0.0	0.0			



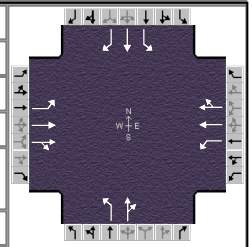
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		6.0		5.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.3		3.3		3.3		3.3
Queue Clearance Time *(g_s)*, s		11.2		12.2		16.4		15.5
Green Extension Time *(g_e)*, s		2.4		2.4		2.3		2.3
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		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	84	206	194	120	229	213	168	349		95	294	95
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	949	1800	1638	980	1800	1627	1092	1693		1037	1800	1500
Queue Service Time *(g_s)*, s	3.9	4.5	4.7	5.5	5.1	5.3	7.6	9.1		4.4	6.8	2.4
Cycle Queue Clearance Time *(g_c)*, s	9.2	4.5	4.7	10.2	5.1	5.3	14.4	9.1		13.5	6.8	2.4
Capacity *(c)*, veh/h	432	750	683	452	750	678	451	706		395	750	625
Volume-to-Capacity Ratio *(X)*	0.195	0.275	0.284	0.265	0.305	0.314	0.373	0.495		0.240	0.392	0.152
Available Capacity *(c_a)*, veh/h	1618	2999	2730	1677	2999	2711	1816	2822		1691	2999	2500
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8	1.6	1.5	1.1	1.8	1.6	1.7	3.0		0.9	2.3	0.7
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	14.8	11.5	11.6	14.9	11.7	11.7	17.2	12.9		17.8	12.2	10.9
Incremental Delay *(d_2)*, s/veh	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2		0.1	0.1	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	14.9	11.6	11.7	15.1	11.8	11.8	17.4	13.1		17.9	12.3	10.9
Level of Service (LOS)	B	B	B	B	B	B	B	B		B	B	B
Approach Delay, s/veh / LOS	12.2	B		12.5	B		14.5	B		13.2	B	
Intersection Delay, s/veh / LOS	13.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	1.0	A	1.3	A	1.3	A

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Walnut Ave	Analysis Year	2024 Without Project	Analysis Period	1> 7:00
File Name	Benson Walnut 2024 No Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	86	324	86	120	387	120	162	226	91	92	280	92

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

								1	2	3	4	
Green	25.0	25.0	0.0	0.0	0.0	0.0						
Yellow	4.0	4.0	0.0	0.0	0.0	0.0						
Red	1.0	1.0	0.0	0.0	0.0	0.0	5	6	7	8		

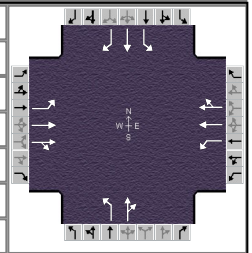
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		6.0		5.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, $(Y+R_c)$, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.4		3.4		3.3		3.3
Queue Clearance Time (g_s), s		13.3		13.2		16.6		14.9
Green Extension Time (g_e), s		2.8		2.8		2.3		2.3
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		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	91	223	209	126	278	256	171	334		97	295	97
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	874	1800	1639	953	1800	1627	1091	1700		1051	1800	1500
Queue Service Time (g_s), s	4.8	4.9	5.1	6.1	6.4	6.5	7.7	8.5		4.4	6.9	2.4
Cycle Queue Clearance Time (g_c), s	11.3	4.9	5.1	11.2	6.4	6.5	14.6	8.5		12.9	6.9	2.4
Capacity *(c)*, veh/h	389	750	683	436	750	678	451	708		409	750	625
Volume-to-Capacity Ratio *(X)*	0.233	0.297	0.306	0.289	0.370	0.378	0.378	0.471		0.237	0.393	0.155
Available Capacity (c_a), veh/h	1481	2999	2730	1628	2999	2712	1814	2833		1723	2999	2500
Back of Queue *(Q)*, veh/ln (50th percentile)	0.9	1.7	1.6	1.2	2.2	2.0	1.7	2.8		0.9	2.3	0.7
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	16.0	11.7	11.7	15.4	12.1	12.1	17.3	12.7		17.4	12.2	10.9
Incremental Delay (d_2), s/veh	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2		0.1	0.1	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	16.1	11.7	11.8	15.6	12.2	12.2	17.5	12.9		17.5	12.3	11.0
Level of Service (LOS)	B	B	B	B	B	B	B	B		B	B	B
Approach Delay, s/veh / LOS	12.5	B		12.9	B		14.4	B		13.1	B	
Intersection Delay, s/veh / LOS	13.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	1.0	A	1.3	A	1.3	A

HCS 2010 Signalized Intersection Results Summary

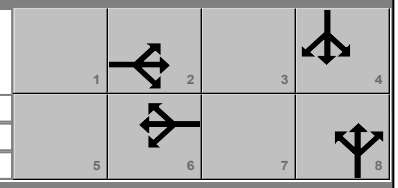
General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Benson Avenue/Walnut Ave	Analysis Year	2024 With Project	Analysis Period	1> 7:00
File Name	Benson Walnut 2024 w Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	86	324	86	134	387	120	162	236	103	92	289	92

Signal Information			
Cycle, s	60.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	25.0	25.0	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	1.0	1.0	0.0	0.0	0.0	0.0	



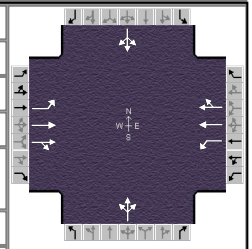
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		6.0		6.0		5.0
Phase Duration, s		30.0		30.0		30.0		30.0
Change Period, *(Y+Rc)*, s		5.0		5.0		5.0		5.0
Max Allow Headway *(MAH)*, s		3.4		3.4		3.3		3.3
Queue Clearance Time *(g_s)*, s		13.3		14.0		17.0		15.9
Green Extension Time *(g_e)*, s		2.9		2.9		2.4		2.4
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		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	91	223	209	141	278	256	171	357		97	304	97
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	874	1800	1639	953	1800	1627	1082	1694		1030	1800	1500
Queue Service Time *(g_s)*, s	4.8	4.9	5.1	7.0	6.4	6.5	7.9	9.3		4.6	7.1	2.4
Cycle Queue Clearance Time *(g_c)*, s	11.3	4.9	5.1	12.0	6.4	6.5	15.0	9.3		13.9	7.1	2.4
Capacity *(c)*, veh/h	389	750	683	436	750	678	443	706		389	750	625
Volume-to-Capacity Ratio *(X)*	0.233	0.297	0.306	0.323	0.370	0.378	0.385	0.505		0.249	0.406	0.155
Available Capacity *(c_a)*, veh/h	1481	2999	2730	1628	2999	2712	1795	2823		1676	2999	2500
Back of Queue *(Q)*, veh/ln (50th percentile)	0.9	1.7	1.6	1.3	2.2	2.0	1.8	3.0		1.0	2.4	0.7
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	16.0	11.7	11.7	15.7	12.1	12.1	17.5	12.9		18.1	12.3	10.9
Incremental Delay *(d_2)*, s/veh	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2		0.1	0.1	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	16.1	11.7	11.8	15.9	12.2	12.2	17.7	13.1		18.2	12.4	11.0
Level of Service (LOS)	B	B	B	B	B	B	B	B		B	B	B
Approach Delay, s/veh / LOS	12.5	B		13.0	B		14.6	B		13.3	B	
Intersection Delay, s/veh / LOS	13.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	1.0	A	1.4	A	1.3	A

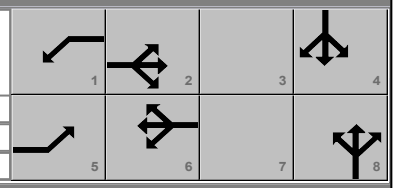
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Riverside Drive/10th Street	Analysis Year	2018 Existing Without Project	Analysis Period	1> 7:00
File Name	Riverside 10th 2018 Exist No Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	60	350	30	70	830	130	50	190	60	90	60	50

Signal Information												
Cycle, s	68.8	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	Yes	Simult. Gap E/W	On	Green	3.5	0.3	25.0	25.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	0.0	0.0		
				Red	1.0	0.0	1.0	1.0	0.0	0.0		



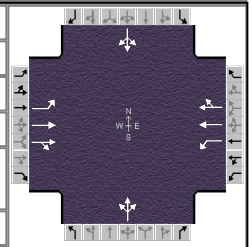
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		8.0		8.0
Phase Duration, s	8.5	30.0	8.8	30.3		30.0		30.0
Change Period, *(Y+Rc)*, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	3.1	3.1	3.1	3.1		3.4		3.4
Queue Clearance Time *(gs)*, s	3.6	7.6	3.9	19.7		11.8		11.9
Green Extension Time *(ge)*, s	0.1	3.0	0.1	3.0		1.2		1.2
Phase Call Probability	0.70	1.00	0.76	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		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	63	202	198	74	521	490		316			211	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1800	1739	1619	1800	1694		1516			1035	
Queue Service Time *(gs)*, s	1.6	5.5	5.6	1.9	17.7	17.7		0.0			0.2	
Cycle Queue Clearance Time *(gc)*, s	1.6	5.5	5.6	1.9	17.7	17.7		9.8			9.9	
Capacity *(c)*, veh/h	250	654	632	477	662	622		612			452	
Volume-to-Capacity Ratio *(X)*	0.253	0.309	0.313	0.155	0.787	0.787		0.516			0.466	
Available Capacity *(ca)*, veh/h	638	2616	2527	858	2616	2461		2107			1504	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.5	2.1	2.0	0.6	6.7	6.3		3.6			2.3	
Overflow Queue *(Q3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	
Uniform Delay *(d1)*, s/veh	14.7	15.7	15.7	12.3	19.4	19.4		17.1			16.6	
Incremental Delay *(d2)*, s/veh	0.2	0.1	0.1	0.1	0.8	0.9		0.3			0.3	
Initial Queue Delay *(d3)*, s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Control Delay *(d)*, s/veh	14.9	15.8	15.8	12.3	20.2	20.2		17.3			16.9	
Level of Service (LOS)	B	B	B	B	C	C		B			B	
Approach Delay, s/veh / LOS	15.7	B		19.7	B		17.3	B		16.9	B	
Intersection Delay, s/veh / LOS	18.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	1.4	A	1.0	A	0.8	A

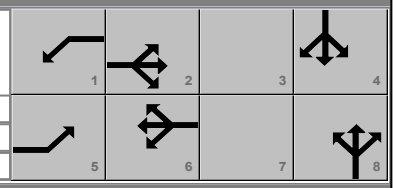
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Riverside Drive/10th Street	Analysis Year	2018 Existing With Project	Analysis Period	1> 7:00
File Name	Riverside 10th 2018 Exist w Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	73	342	30	71	831	180	50	233	62	90	71	61

Signal Information												
Cycle, s	68.9	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	Yes	Simult. Gap E/W	On	Green	3.8	25.1	25.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0		
				Red	1.0	1.0	1.0	0.0	0.0	0.0		



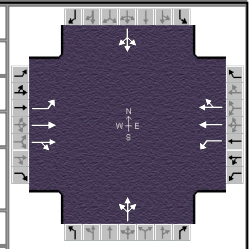
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		8.0		8.0
Phase Duration, s	8.9	30.1	8.8	30.0		30.0		30.0
Change Period, *(Y+Rc)*, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	3.1	3.1	3.1	3.1		3.4		3.4
Queue Clearance Time *(g_s)*, s	4.0	7.5	3.9	21.5		13.8		14.1
Green Extension Time *(g_e)*, s	0.1	3.1	0.1	3.1		1.4		1.4
Phase Call Probability	0.77	1.00	0.76	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		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	77	198	194	75	553	511		363			234	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1800	1738	1619	1800	1661		1558			1035	
Queue Service Time *(g_s)*, s	2.0	5.4	5.5	1.9	19.5	19.5		0.0			0.1	
Cycle Queue Clearance Time *(g_c)*, s	2.0	5.4	5.5	1.9	19.5	19.5		11.8			12.1	
Capacity *(c)*, veh/h	240	655	633	484	654	604		625			449	
Volume-to-Capacity Ratio *(X)*	0.321	0.302	0.306	0.154	0.846	0.846		0.581			0.521	
Available Capacity *(c_a)*, veh/h	618	2611	2520	864	2611	2409		2157			1522	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7	2.0	2.0	0.6	7.5	6.9		4.2			2.6	
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	
Uniform Delay *(d_1)*, s/veh	15.4	15.7	15.7	12.4	20.2	20.2		17.7			17.2	
Incremental Delay *(d_2)*, s/veh	0.3	0.1	0.1	0.1	1.2	1.3		0.3			0.3	
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	15.6	15.8	15.8	12.5	21.4	21.5		18.0			17.5	
Level of Service (LOS)	B	B	B	B	C	C		B			B	
Approach Delay, s/veh / LOS	15.7	B		20.8	C		18.0	B		17.5	B	
Intersection Delay, s/veh / LOS	18.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	1.4	A	1.1	A	0.9	A

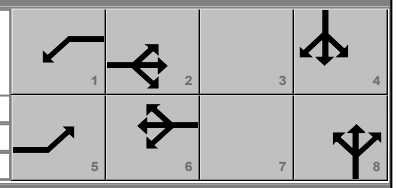
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Riverside Drive/10th Street	Analysis Year	2024 Without Project	Analysis Period	1> 7:00
File Name	Riverside 10th 2024 No Proj.xus				
Project Description	Chino High School Modernization				



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	370	31	91	1095	169	57	215	68	96	64	54

Signal Information					EB			WB			NB			SB		
Cycle, s	77.2	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	3.8	0.6		32.8	25.0	0.0	0.0					
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.0	0.0		4.0	4.0	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					



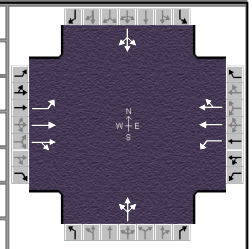
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		8.0		8.0
Phase Duration, s	8.8	37.8	9.4	38.4		30.0		30.0
Change Period, *(Y+Rc)*, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	3.1	3.1	3.1	3.1		3.4		3.4
Queue Clearance Time *(gs)*, s	3.7	8.1	4.5	29.1		17.0		19.4
Green Extension Time *(ge)*, s	0.1	4.1	0.1	4.1		1.4		1.4
Phase Call Probability	0.75	1.00	0.87	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		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	64	213	209	96	682	648		358			225	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1800	1742	1619	1800	1698		1527			918	
Queue Service Time *(gs)*, s	1.7	6.0	6.1	2.5	26.8	27.1		0.0			2.2	
Cycle Queue Clearance Time *(gc)*, s	1.7	6.0	6.1	2.5	26.8	27.1		15.0			17.4	
Capacity *(c)*, veh/h	209	766	742	534	781	737		549			365	
Volume-to-Capacity Ratio *(X)*	0.307	0.278	0.281	0.180	0.874	0.880		0.652			0.618	
Available Capacity *(ca)*, veh/h	548	2324	2249	860	2324	2193		1870			1283	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.6	2.3	2.2	0.8	10.2	9.8		5.3			3.4	
Overflow Queue *(Q3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	
Uniform Delay *(d1)*, s/veh	16.4	14.5	14.5	10.9	20.0	20.1		22.6			22.8	
Incremental Delay *(d2)*, s/veh	0.3	0.1	0.1	0.1	1.3	1.4		0.5			0.6	
Initial Queue Delay *(d3)*, s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Control Delay *(d)*, s/veh	16.7	14.6	14.6	11.0	21.3	21.5		23.1			23.4	
Level of Service (LOS)	B	B	B	B	C	C		C			C	
Approach Delay, s/veh / LOS	14.8	B		20.7	C		23.1	C		23.4	C	
Intersection Delay, s/veh / LOS	20.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	1.7	A	1.1	A	0.9	A

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Riverside Drive/10th Street	Analysis Year	2024 With Project	Analysis Period	1> 7:00
File Name	Riverside 10th 2024 w Proj.xus				
Project Description	Chino High School Modernization				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	74	362	31	92	1096	219	57	258	70	96	75	65

Signal Information			
Cycle, s	91.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	4.4	0.4	41.3	30.9	0.0	0.0	5	6	7	8
Yellow	4.0	0.0	4.0	4.0	0.0	0.0				
Red	1.0	0.0	1.0	1.0	0.0	0.0				

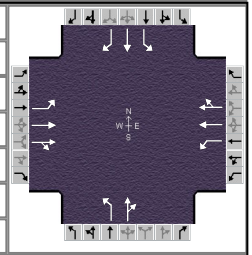
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		8.0		8.0
Phase Duration, s	9.4	46.3	9.8	46.6		35.9		35.9
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0		5.0		5.0
Max Allow Headway *(MAH)*, s	3.1	3.1	3.1	3.1		3.4		3.4
Queue Clearance Time (g_s), s	4.4	8.9	5.0	36.3		23.5		28.3
Green Extension Time (g_e), s	0.1	4.3	0.1	4.3		1.6		1.6
Phase Call Probability	0.87	1.00	0.92	1.00		1.00		1.00
Max Out Probability	0.00	0.00	0.00	0.00		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	78	209	205	97	713	672		405			248	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1800	1741	1619	1800	1676		1531			858	
Queue Service Time (g_s), s	2.4	6.8	6.9	3.0	33.6	34.3		0.0			5.1	
Cycle Queue Clearance Time (g_c), s	2.4	6.8	6.9	3.0	33.6	34.3		21.5			26.3	
Capacity *(c)*, veh/h	186	809	783	543	818	761		563			344	
Volume-to-Capacity Ratio *(X)*	0.418	0.259	0.261	0.178	0.871	0.882		0.720			0.721	
Available Capacity (c_a), veh/h	455	1917	1854	804	1917	1784		1578			1048	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8	2.7	2.6	1.0	13.4	12.8		7.8			5.1	
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	
Uniform Delay (d_1), s/veh	20.3	16.1	16.1	12.4	23.1	23.3		27.3			28.4	
Incremental Delay (d_2), s/veh	0.6	0.1	0.1	0.1	1.2	1.4		0.7			1.1	
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	20.9	16.2	16.2	12.5	24.3	24.8		27.9			29.5	
Level of Service (LOS)	C	B	B	B	C	C		C			C	
Approach Delay, s/veh / LOS	16.9	B		23.8	C		27.9	C		29.5	C	
Intersection Delay, s/veh / LOS	23.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	1.7	A	1.2	A	0.9	A

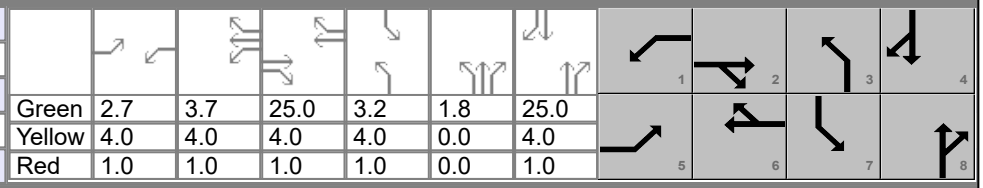
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Walnut Avenue/10th Street	Analysis Year	2018 Existing	Analysis Period	1> 7:00
File Name	Walnut 10th 2018 Exist No Proj.xus				
Project Description	Chino High School Modernization				



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	310	60	170	350	80	70	60	150	40	50	20

Signal Information			
Cycle, s	86.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	2.7	3.7	25.0	3.2	1.8	25.0	
Yellow	4.0	4.0	4.0	4.0	0.0	4.0	
Red	1.0	1.0	1.0	1.0	0.0	1.0	

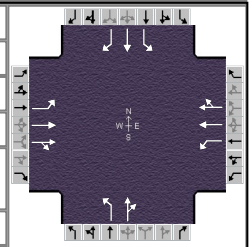
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	3.0
Phase Duration, s	7.7	30.0	16.4	38.7	9.9	31.8	8.2	30.0
Change Period, *(Y+Rc)*, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.1	3.1	3.1	3.1	3.1	3.3	3.1	3.3
Queue Clearance Time *(g_s)*, s	3.7	9.9	11.3	10.0	5.9	11.8	4.2	3.8
Green Extension Time *(g_e)*, s	0.0	1.6	0.2	1.6	0.1	0.6	0.0	0.6
Phase Call Probability	0.53	1.00	0.99	1.00	0.83	1.00	0.64	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	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	32	200	190	179	233	220	74	221		42	53	21
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1800	1662	1619	1800	1662	1619	1561		1619	1800	1489
Queue Service Time *(g_s)*, s	1.7	7.7	7.9	9.3	7.8	8.0	3.9	9.8		2.2	1.8	0.9
Cycle Queue Clearance Time *(g_c)*, s	1.7	7.7	7.9	9.3	7.8	8.0	3.9	9.8		2.2	1.8	0.9
Capacity *(c)*, veh/h	50	521	481	213	703	649	93	484		60	521	431
Volume-to-Capacity Ratio *(X)*	0.632	0.383	0.394	0.838	0.331	0.339	0.793	0.457		0.705	0.101	0.049
Available Capacity *(c_a)*, veh/h	375	2085	1925	375	2085	1924	375	1808		375	2085	1725
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7	3.2	3.0	3.8	3.1	2.9	1.7	3.5		0.9	0.7	0.3
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	41.4	24.5	24.6	36.6	18.4	18.5	40.2	23.9		41.1	22.4	22.1
Incremental Delay *(d_2)*, s/veh	4.9	0.2	0.2	3.5	0.1	0.1	5.8	0.3		5.7	0.0	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	46.3	24.7	24.8	40.0	18.5	18.6	46.0	24.2		46.8	22.5	22.1
Level of Service (LOS)	D	C	C	D	B	B	D	C		D	C	C
Approach Delay, s/veh / LOS	26.3	C		24.6	C		29.7	C		31.3	C	
Intersection Delay, s/veh / LOS	26.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.8	A	1.0	A	1.0	A	0.7	A

HCS 2010 Signalized Intersection Results Summary

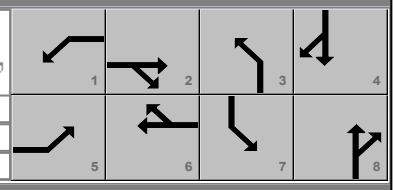
General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Walnut Avenue/10th Street	Analysis Year	2018 Existing plus Project	Analysis Period	1> 7:00
File Name	Walnut 10th 2018 Exist w Proj.xus				
Project Description	Chino High School Modernization				



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	310	80	170	350	80	80	60	150	40	51	20

Signal Information			
Cycle, s	87.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.7	3.8	25.0	3.2	2.5	25.0
Yellow	4.0	4.0	4.0	4.0	0.0	4.0
Red	1.0	1.0	1.0	1.0	0.0	1.0



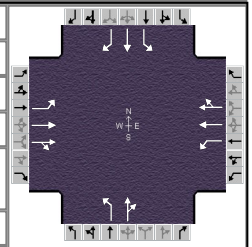
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	3.0
Phase Duration, s	7.7	30.0	16.5	38.8	10.7	32.5	8.2	30.0
Change Period, *(Y+Rc)*, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.1	3.1	3.1	3.1	3.1	3.3	3.1	3.3
Queue Clearance Time *(g_s)*, s	3.7	10.6	11.4	10.1	6.5	11.8	4.2	3.9
Green Extension Time *(g_e)*, s	0.0	1.7	0.2	1.7	0.1	0.6	0.0	0.6
Phase Call Probability	0.53	1.00	0.99	1.00	0.87	1.00	0.64	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	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	32	212	198	179	233	220	84	221		42	54	21
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1800	1627	1619	1800	1661	1619	1562		1619	1800	1489
Queue Service Time *(g_s)*, s	1.7	8.3	8.6	9.4	7.9	8.1	4.5	9.8		2.2	1.9	0.9
Cycle Queue Clearance Time *(g_c)*, s	1.7	8.3	8.6	9.4	7.9	8.1	4.5	9.8		2.2	1.9	0.9
Capacity *(c)*, veh/h	50	516	467	213	698	644	106	493		60	516	427
Volume-to-Capacity Ratio *(X)*	0.634	0.411	0.425	0.839	0.334	0.341	0.792	0.449		0.708	0.104	0.049
Available Capacity *(c_a)*, veh/h	371	2064	1866	371	2064	1905	371	1791		371	2064	1707
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7	3.4	3.2	3.8	3.2	3.0	1.9	3.5		1.0	0.8	0.3
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	41.8	25.2	25.3	37.0	18.8	18.8	40.2	23.8		41.5	22.9	22.5
Incremental Delay *(d_2)*, s/veh	5.0	0.2	0.2	3.5	0.1	0.1	5.1	0.2		5.8	0.0	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	46.8	25.3	25.5	40.5	18.9	19.0	45.3	24.0		47.3	22.9	22.5
Level of Service (LOS)	D	C	C	D	B	B	D	C		D	C	C
Approach Delay, s/veh / LOS	26.9	C		25.0	C		29.9	C		31.6	C	
Intersection Delay, s/veh / LOS	27.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	1.0	A	1.0	A	0.7	A

HCS 2010 Signalized Intersection Results Summary

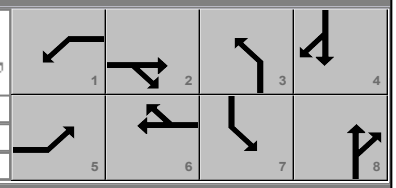
General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Walnut Avenue/10th Street	Analysis Year	2024 Without Project	Analysis Period	1> 7:00
File Name	Walnut 10th 2024 No Proj.xus				
Project Description	Chino High School Modernization				



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	335	64	204	423	96	79	68	170	43	54	21

Signal Information			
Cycle, s	89.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.8	5.9	25.0	3.4	2.4	25.0	
Yellow	4.0	4.0	4.0	4.0	0.0	4.0	
Red	1.0	1.0	1.0	1.0	0.0	1.0	



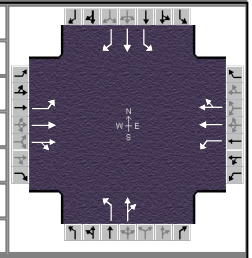
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	4.0	2.0	4.0	2.0	4.0	2.0	3.0
Phase Duration, s	7.8	30.0	18.8	40.9	10.8	32.4	8.4	30.0
Change Period, $(Y+R_c)$, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.1	3.1	3.1	3.1	3.1	3.3	3.1	3.3
Queue Clearance Time (g_s), s	3.8	11.0	13.6	12.1	6.5	13.9	4.5	4.1
Green Extension Time (g_e), s	0.0	1.9	0.2	1.9	0.1	0.7	0.0	0.7
Phase Call Probability	0.57	1.00	1.00	1.00	0.87	1.00	0.68	1.00
Max Out Probability	0.00	0.00	0.04	0.00	0.00	0.00	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	34	216	204	215	282	264	83	251		45	57	22
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1800	1662	1619	1800	1662	1619	1561		1619	1800	1488
Queue Service Time (g_s), s	1.8	8.8	9.0	11.6	10.0	10.1	4.5	11.9		2.5	2.1	1.0
Cycle Queue Clearance Time (g_c), s	1.8	8.8	9.0	11.6	10.0	10.1	4.5	11.9		2.5	2.1	1.0
Capacity *(c)*, veh/h	51	502	464	249	722	667	105	478		61	502	415
Volume-to-Capacity Ratio *(X)*	0.655	0.429	0.440	0.863	0.391	0.396	0.792	0.524		0.739	0.113	0.053
Available Capacity (c_a), veh/h	361	2009	1855	361	2009	1856	361	1742		361	2009	1661
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8	3.7	3.5	5.2	4.0	3.7	1.9	4.3		1.1	0.9	0.3
Overflow Queue (Q_3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	42.9	26.4	26.5	37.0	19.1	19.1	41.3	25.7		42.7	24.0	23.6
Incremental Delay (d_2), s/veh	5.3	0.2	0.2	11.0	0.1	0.1	5.2	0.3		6.6	0.0	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	48.2	26.7	26.8	48.0	19.2	19.2	46.5	26.0		49.3	24.1	23.6
Level of Service (LOS)	D	C	C	D	B	B	D	C		D	C	C
Approach Delay, s/veh / LOS	28.3	C		27.3	C		31.1	C		33.2	C	
Intersection Delay, s/veh / LOS	28.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	1.1	A	1.0	A	0.7	A

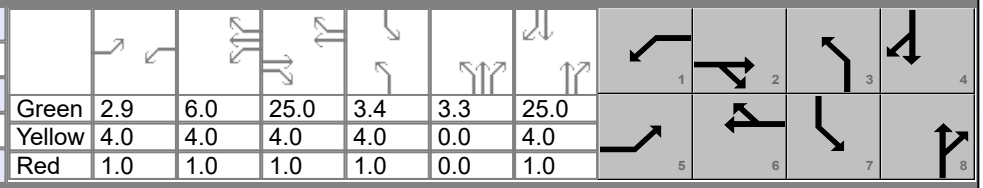
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Chino			Duration, h	0.95
Analyst	R Garland	Analysis Date	Mar 9, 2018	Area Type	Other
Jurisdiction	City of Chino	Time Period	AM Peak Hour	PHF	0.95
Intersection	Walnut Avenue/10th Street	Analysis Year	2024 With Project	Analysis Period	1> 7:00
File Name	Walnut 10th 2024 w Proj.xus				
Project Description	Chino High School Modernization				



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	335	84	204	423	96	91	69	170	43	55	21

Signal Information			
Cycle, s	90.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	2.9	6.0	25.0	3.4	3.3	25.0	
Yellow	4.0	4.0	4.0	4.0	0.0	4.0	
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	4.0	2.0	3.0
Phase Duration, s	7.9	30.0	18.9	41.0	11.7	33.3	8.4	30.0
Change Period, *(Y+Rc)*, s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s	3.1	3.1	3.1	3.1	3.1	3.3	3.1	3.3
Queue Clearance Time *(g_s)*, s	3.9	11.9	13.7	12.3	7.3	14.0	4.5	4.2
Green Extension Time *(g_e)*, s	0.0	1.9	0.2	1.9	0.1	0.7	0.0	0.7
Phase Call Probability	0.57	1.00	1.00	1.00	0.91	1.00	0.68	1.00
Max Out Probability	0.00	0.00	0.05	0.00	0.00	0.00	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	34	228	213	215	282	264	96	252		45	58	22
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1800	1629	1619	1800	1662	1619	1562		1619	1800	1487
Queue Service Time *(g_s)*, s	1.9	9.5	9.9	11.7	10.1	10.3	5.3	12.0		2.5	2.2	1.0
Cycle Queue Clearance Time *(g_c)*, s	1.9	9.5	9.9	11.7	10.1	10.3	5.3	12.0		2.5	2.2	1.0
Capacity *(c)*, veh/h	51	496	449	248	716	661	120	488		61	496	410
Volume-to-Capacity Ratio *(X)*	0.658	0.460	0.473	0.864	0.394	0.400	0.796	0.515		0.743	0.117	0.054
Available Capacity *(c_a)*, veh/h	357	1985	1797	357	1985	1833	357	1723		357	1985	1640
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8	4.0	3.7	5.3	4.1	3.8	2.2	4.3		1.1	0.9	0.3
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th 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	43.4	27.2	27.3	37.5	19.5	19.6	41.3	25.5		43.2	24.6	24.1
Incremental Delay *(d_2)*, s/veh	5.4	0.2	0.3	11.7	0.1	0.1	4.6	0.3		6.8	0.0	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	48.8	27.5	27.6	49.2	19.6	19.7	45.9	25.8		50.0	24.6	24.2
Level of Service (LOS)	D	C	C	D	B	B	D	C		D	C	C
Approach Delay, s/veh / LOS	29.1	C		28.0	C		31.4	C		33.7	C	
Intersection Delay, s/veh / LOS	29.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.8	C	2.8	C
Bicycle LOS Score / LOS	0.9	A	1.1	A	1.1	A	0.7	A

LEVEL OF SERVICE ANALYSIS

CALCULATION/OUTPUT SHEETS

UNSIGNALIZED INTERSECTIONS

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Jefferson Ave*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*20*	*430*			*460*	*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*21*	*452*	*0*	*0*	*484*	*10*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*20*		*40*			
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*21*	*0*	*42*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*21*						*63*	
C (m) (veh/h)	*1080*						*423*	
v/c	*0.02*						*0.15*	
95% queue length	*0.06*						*0.52*	
Control Delay (s/veh)	*8.4*						*15.0*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--				*15.0*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Jefferson Ave*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*81*	*414*			*379*	*114*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*85*	*435*	*0*	*0*	*398*	*120*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*58*		*134*			
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*61*	*0*	*141*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*85*						*202*	
C (m) (veh/h)	*1058*						*405*	
v/c	*0.08*						*0.50*	
95% queue length	*0.26*						*2.70*	
Control Delay (s/veh)	*8.7*						*22.4*	
LOS	*A*						*C*	
Approach Delay (s/veh)	--	--				*22.4*		
Approach LOS	--	--				*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Jefferson Ave*
Jurisdiction	*City of Chino*
Analysis Year	*2024 Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*21*	*438*			*474*	*11*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*22*	*461*	*0*	*0*	*498*	*11*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*21*		*41*			
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*22*	*0*	*43*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*22*						*65*	
C (m) (veh/h)	*1066*						*409*	
v/c	*0.02*						*0.16*	
95% queue length	*0.06*						*0.56*	
Control Delay (s/veh)	*8.4*						*15.5*	
LOS	*A*						*C*	
Approach Delay (s/veh)	--	--					*15.5*	
Approach LOS	--	--					*C*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Jefferson Ave*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*82*	*422*			*393*	*115*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*1.00*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*86*	*444*	*0*	*0*	*413*	*121*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*59*		*135*			
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*1.00*	*1.00*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*62*	*0*	*142*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*86*						*204*	
C (m) (veh/h)	*1044*						*392*	
v/c	*0.08*						*0.52*	
95% queue length	*0.27*						*2.90*	
Control Delay (s/veh)	*8.8*						*23.7*	
LOS	*A*						*C*	
Approach Delay (s/veh)	--	--					*23.7*	
Approach LOS	--	--					*C*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Monroe Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Monroe Street* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*420*	*5*	*20*	*470*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*442*	*5*	*21*	*494*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*		*20*
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*21*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*21*		*31*				
C (m) (veh/h)		*1124*		*440*				
v/c		*0.02*		*0.07*				
95% queue length		*0.06*		*0.23*				
Control Delay (s/veh)		*8.3*		*13.8*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*13.8*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Monroe Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Plus Project*

Project Description *Chino High School Modernization*

East/West Street: *Monroe Street* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*464*	*5*	*20*	*483*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*488*	*5*	*21*	*508*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*		*21*
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*22*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*21*		*32*				
C (m) (veh/h)		*1081*		*413*				
v/c		*0.02*		*0.08*				
95% queue length		*0.06*		*0.25*				
Control Delay (s/veh)		*8.4*		*14.4*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*14.4*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Monroe Street*
Jurisdiction	*City of Chino*
Analysis Year	*2024 Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Monroe Street* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*428*	*5*	*20*	*484*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*450*	*5*	*21*	*509*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*12*		*24*
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*12*	*0*	*25*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*21*		*37*				
C (m) (veh/h)		*1116*		*430*				
v/c		*0.02*		*0.09*				
95% queue length		*0.06*		*0.28*				
Control Delay (s/veh)		*8.3*		*14.2*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*14.2*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Monroe Street*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Monroe Street* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*472*	*5*	*20*	*497*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*496*	*5*	*21*	*523*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*12*		*25*
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*12*	*0*	*26*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*21*		*38*				
C (m) (veh/h)		*1074*		*403*				
v/c		*0.02*		*0.09*				
95% queue length		*0.06*		*0.31*				
Control Delay (s/veh)		*8.4*		*14.9*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*14.9*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Serene Avenue*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Serene Avenue* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*400*	*10*	*10*	*480*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*421*	*10*	*10*	*505*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*		*20*
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*21*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*10*		*31*				
C (m) (veh/h)		*1139*		*457*				
v/c		*0.01*		*0.07*				
95% queue length		*0.03*		*0.22*				
Control Delay (s/veh)		*8.2*		*13.4*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*13.4*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Serene Avenue*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Plus Project*

Project Description *Chino High School Modernization*

East/West Street: *Serene Avenue* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*443*	*10*	*10*	*493*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*466*	*10*	*10*	*518*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*		*21*
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*22*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*10*		*32*				
C (m) (veh/h)		*1097*		*431*				
v/c		*0.01*		*0.07*				
95% queue length		*0.03*		*0.24*				
Control Delay (s/veh)		*8.3*		*14.0*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*14.0*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Serene Avenue*
Jurisdiction	*City of Chino*
Analysis Year	*2024 Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Serene Avenue* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*408*	*10*	*10*	*495*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*429*	*10*	*10*	*521*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*12*		*24*
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*12*	*0*	*25*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*10*		*37*				
C (m) (veh/h)		*1132*		*446*				
v/c		*0.01*		*0.08*				
95% queue length		*0.03*		*0.27*				
Control Delay (s/veh)		*8.2*		*13.8*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*13.8*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Benson Ave/Serene Avenue*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Serene Avenue* | North/South Street: *Benson Avenue*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*451*	*10*	*10*	*508*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*474*	*10*	*10*	*534*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration			*TR*	*LT*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*12*		*25*
Peak-Hour Factor, PHF	*0.95*	*1.00*	*0.95*	*0.95*	*1.00*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*12*	*0*	*26*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LR*				
v (veh/h)		*10*		*38*				
C (m) (veh/h)		*1089*		*420*				
v/c		*0.01*		*0.09*				
95% queue length		*0.03*		*0.30*				
Control Delay (s/veh)		*8.3*		*14.4*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*14.4*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Gettysburg Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Gettysburg Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*20*	*430*			*210*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*21*	*452*	*0*	*0*	*221*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*5*		*5*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*5*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*21*						*10*	
C (m) (veh/h)	*1354*						*531*	
v/c	*0.02*						*0.02*	
95% queue length	*0.05*						*0.06*	
Control Delay (s/veh)	*7.7*						*11.9*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--				*11.9*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Gettysburg Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing With Project*

Project Description *Chino High School Modernization*

East/West Street: *Gettysburg Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*20*	*533*	*11*	*6*	*219*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*21*	*561*	*11*	*6*	*230*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*5*	*0*	*5*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*5*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*21*	*6*		*0*			*10*	
C (m) (veh/h)	*1344*	*1011*					*411*	
v/c	*0.02*	*0.01*					*0.02*	
95% queue length	*0.05*	*0.02*					*0.07*	
Control Delay (s/veh)	*7.7*	*8.6*					*14.0*	
LOS	*A*	*A*					*B*	
Approach Delay (s/veh)	--	--					*14.0*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Gettysburg Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2024 Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Gettysburg Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*23*	*486*			*225*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*24*	*511*	*0*	*0*	*236*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*5*		*5*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*5*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*24*						*10*	
C (m) (veh/h)	*1337*						*490*	
v/c	*0.02*						*0.02*	
95% queue length	*0.05*						*0.06*	
Control Delay (s/veh)	*7.7*						*12.5*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*12.5*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Gettysburg Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Gettysburg Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*23*	*589*	*11*	*6*	*234*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*24*	*620*	*11*	*6*	*246*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*5*	*0*	*5*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*5*	*0*	*5*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*24*	*6*		*0*			*10*	
C (m) (veh/h)	*1326*	*961*					*370*	
v/c	*0.02*	*0.01*					*0.03*	
95% queue length	*0.06*	*0.02*					*0.08*	
Control Delay (s/veh)	*7.8*	*8.8*					*15.0*	
LOS	*A*	*A*					*B*	
Approach Delay (s/veh)	--	--				*15.0*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* North/South Street: *10th Street*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*30*	*340*	*50*	*20*	*180*	*40*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*31*	*357*	*52*	*21*	*189*	*42*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LTR*			*LT*		*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*	*10*	*20*	*10*	*20*	*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*10*	*21*	*10*	*21*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LT*		*LTR*			*LTR*	
v (veh/h)	*31*	*21*		*41*			*41*	
C (m) (veh/h)	*1349*	*1161*		*379*			*489*	
v/c	*0.02*	*0.02*		*0.11*			*0.08*	
95% queue length	*0.07*	*0.06*		*0.36*			*0.27*	
Control Delay (s/veh)	*7.7*	*8.2*		*15.6*			*13.0*	
LOS	*A*	*A*		*C*			*B*	
Approach Delay (s/veh)	--	--	*15.6*			*13.0*		
Approach LOS	--	--	*C*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*30*	*340*	*142*	*53*	*168*	*40*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*31*	*357*	*149*	*55*	*176*	*42*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LTR*			*LT*		*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*	*22*	*10*	*53*	*31*	*23*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*23*	*10*	*55*	*32*	*24*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LT*		*LTR*			*LTR*	
v (veh/h)	*31*	*55*		*111*			*43*	
C (m) (veh/h)	*1364*	*1069*		*303*			*315*	
v/c	*0.02*	*0.05*		*0.37*			*0.14*	
95% queue length	*0.07*	*0.16*		*1.62*			*0.47*	
Control Delay (s/veh)	*7.7*	*8.6*		*23.6*			*18.2*	
LOS	*A*	*A*		*C*			*C*	
Approach Delay (s/veh)	--	--	*23.6*			*18.2*		
Approach LOS	--	--	*C*			*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Jefferson Ave/10th Street*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2024 Without Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*34*	*384*	*57*	*21*	*193*	*43*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*35*	*404*	*60*	*22*	*203*	*45*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LTR*			*LT*		*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*11*	*11*	*21*	*12*	*24*	*12*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*11*	*11*	*22*	*12*	*25*	*12*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LT*		*LTR*			*LTR*	
v (veh/h)	*35*	*22*		*49*			*44*	
C (m) (veh/h)	*1330*	*1108*		*339*			*437*	
v/c	*0.03*	*0.02*		*0.14*			*0.10*	
95% queue length	*0.08*	*0.06*		*0.50*			*0.33*	
Control Delay (s/veh)	*7.8*	*8.3*		*17.4*			*14.2*	
LOS	*A*	*A*		*C*			*B*	
Approach Delay (s/veh)	--	--	*17.4*			*14.2*		
Approach LOS	--	--	*C*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Jefferson Ave/10th Street*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2024 With Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*34*	*384*	*149*	*54*	*181*	*43*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*35*	*404*	*156*	*56*	*190*	*45*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*1*
Configuration	*LTR*			*LT*		*R*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*11*	*23*	*11*	*55*	*35*	*25*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*11*	*24*	*11*	*57*	*36*	*26*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LT*		*LTR*			*LTR*	
v (veh/h)	*35*	*56*		*119*			*46*	
C (m) (veh/h)	*1344*	*1021*		*269*			*281*	
v/c	*0.03*	*0.05*		*0.44*			*0.16*	
95% queue length	*0.08*	*0.17*		*2.14*			*0.58*	
Control Delay (s/veh)	*7.8*	*8.7*		*28.6*			*20.3*	
LOS	*A*	*A*		*D*			*C*	
Approach Delay (s/veh)	--	--	*28.6*			*20.3*		
Approach LOS	--	--	*D*			*C*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Catalpa Place*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Catalpa Place*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*5*	*60*			*30*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*5*	*63*	*0*	*0*	*31*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*5*		*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*5*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*5*						*15*	
C (m) (veh/h)	*1588*						*988*	
v/c	*0.00*						*0.02*	
95% queue length	*0.01*						*0.05*	
Control Delay (s/veh)	*7.3*						*8.7*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*8.7*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Catalpa Place*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Catalpa Place*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*5*	*192*			*195*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*5*	*202*	*0*	*0*	*205*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*5*		*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*5*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*5*						*15*	
C (m) (veh/h)	*1373*						*736*	
v/c	*0.00*						*0.02*	
95% queue length	*0.01*						*0.06*	
Control Delay (s/veh)	*7.6*						*10.0*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--				*10.0*		
Approach LOS	--	--				*A*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Catalpa Place*
Jurisdiction	*City of Chino*
Analysis Year	*2024 Withour Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Catalpa Place*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*5*	*61*			*37*	*6*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*5*	*64*	*0*	*0*	*38*	*6*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*5*		*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*5*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*5*						*15*	
C (m) (veh/h)	*1577*						*979*	
v/c	*0.00*						*0.02*	
95% queue length	*0.01*						*0.05*	
Control Delay (s/veh)	*7.3*						*8.7*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*8.7*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Catalpa Place*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Catalpa Place*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*5*	*193*			*202*	*6*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*5*	*203*	*0*	*0*	*212*	*6*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*5*		*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*5*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*5*						*15*	
C (m) (veh/h)	*1364*						*729*	
v/c	*0.00*						*0.02*	
95% queue length	*0.01*						*0.06*	
Control Delay (s/veh)	*7.6*						*10.0*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--					*10.0*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Lot Entrance*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Parking Lot Entrance*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*70*	*137*	*165*	*117*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*73*	*144*	*173*	*123*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*						
v (veh/h)		*173*						
C (m) (veh/h)		*1365*						
v/c		*0.13*						
95% queue length		*0.43*						
Control Delay (s/veh)		*8.0*						
LOS		*A*						
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Lot Entrance*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Parking Lot Entrance*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*71*	*137*	*165*	*126*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*74*	*144*	*173*	*132*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*						
v (veh/h)		*173*						
C (m) (veh/h)		*1364*						
v/c		*0.13*						
95% queue length		*0.43*						
Control Delay (s/veh)		*8.0*						
LOS		*A*						
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Lot Exit*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Parking Lot Exit*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*70*			*215*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*73*	*0*	*0*	*226*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*67*		*132*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*70*	*0*	*138*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration			*L*		*R*			
v (veh/h)			*70*		*138*			
C (m) (veh/h)			*697*		*995*			
v/c			*0.10*		*0.14*			
95% queue length			*0.33*		*0.48*			
Control Delay (s/veh)			*10.7*		*9.2*			
LOS			*B*		*A*			
Approach Delay (s/veh)	--	--	*9.7*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Lot Exit*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Parking Lot Exit*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*71*			*224*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*74*	*0*	*0*	*235*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*67*		*132*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*70*	*0*	*138*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*1*	*0*	*1*	*0*	*0*	*0*
Configuration	*L*		*R*			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration			*L*		*R*			
v (veh/h)			*70*		*138*			
C (m) (veh/h)			*687*		*993*			
v/c			*0.10*		*0.14*			
95% queue length			*0.34*		*0.48*			
Control Delay (s/veh)			*10.8*		*9.2*			
LOS			*B*		*A*			
Approach Delay (s/veh)	--	--	*9.8*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Jacaranda Place*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Jacaranda Place*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*20*	*50*			*40*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*21*	*52*	*0*	*0*	*42*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*		*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*21*						*20*	
C (m) (veh/h)	*1573*						*932*	
v/c	*0.01*						*0.02*	
95% queue length	*0.04*						*0.07*	
Control Delay (s/veh)	*7.3*						*8.9*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*8.9*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Jacaranda Place*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Jacaranda Place*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*20*	*182*			*205*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*21*	*191*	*0*	*0*	*215*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*		*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*21*						*20*	
C (m) (veh/h)	*1361*						*669*	
v/c	*0.02*						*0.03*	
95% queue length	*0.05*						*0.09*	
Control Delay (s/veh)	*7.7*						*10.5*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--				*10.5*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Jacaranda Place*
Jurisdiction	*City of Chino*
Analysis Year	*2024 Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Jacaranda Place*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*20*	*51*			*49*	*6*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*21*	*53*	*0*	*0*	*51*	*6*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*		*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*21*						*20*	
C (m) (veh/h)	*1560*						*919*	
v/c	*0.01*						*0.02*	
95% queue length	*0.04*						*0.07*	
Control Delay (s/veh)	*7.3*						*9.0*	
LOS	*A*						*A*	
Approach Delay (s/veh)	--	--					*9.0*	
Approach LOS	--	--					*A*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Jefferson Ave/Jacaranda Place*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Jefferson Avenue* | North/South Street: *Jacaranda Place*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*20*	*183*			*214*	*6*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*21*	*192*	*0*	*0*	*225*	*6*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*10*		*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*10*	*0*	*10*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration					*LR*	

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*21*						*20*	
C (m) (veh/h)	*1349*						*659*	
v/c	*0.02*						*0.03*	
95% queue length	*0.05*						*0.09*	
Control Delay (s/veh)	*7.7*						*10.6*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--				*10.6*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Mt. Vernon Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Mt. Vernon Avenue* North/South Street: *10th Street*

Intersection Orientation: *North-South* Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*10*	*420*	*0*	*0*	*200*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*442*	*0*	*0*	*210*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*	*0*	*20*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*0*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*10*	*0*		*0*			*31*	
C (m) (veh/h)	*1367*	*1129*					*592*	
v/c	*0.01*	*0.00*					*0.05*	
95% queue length	*0.02*	*0.00*					*0.17*	
Control Delay (s/veh)	*7.7*	*8.2*					*11.4*	
LOS	*A*	*A*					*B*	
Approach Delay (s/veh)	--	--				*11.4*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Mt. Vernon Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Plus Project*

Project Description *Chino High School Modernization*

East/West Street: *Mt. Vernon Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*10*	*512*	*11*	*6*	*215*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*538*	*11*	*6*	*226*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*	*1*	*20*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*1*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*10*	*6*		*0*			*32*	
C (m) (veh/h)	*1349*	*1031*					*514*	
v/c	*0.01*	*0.01*					*0.06*	
95% queue length	*0.02*	*0.02*					*0.20*	
Control Delay (s/veh)	*7.7*	*8.5*					*12.5*	
LOS	*A*	*A*					*B*	
Approach Delay (s/veh)	--	--				*12.5*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Mt. Vernon Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2024 Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Mt. Vernon Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*11*	*475*	*0*	*0*	*214*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*11*	*500*	*0*	*0*	*225*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*	*0*	*20*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*0*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*11*	*0*		*0*			*31*	
C (m) (veh/h)	*1350*	*1075*					*550*	
v/c	*0.01*	*0.00*					*0.06*	
95% queue length	*0.02*	*0.00*					*0.18*	
Control Delay (s/veh)	*7.7*	*8.3*					*11.9*	
LOS	*A*	*A*					*B*	
Approach Delay (s/veh)	--	--				*11.9*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Mt. Vernon Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Mt. Vernon Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*11*	*567*	*11*	*6*	*229*	*5*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*11*	*596*	*11*	*6*	*241*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*	*1*	*20*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*1*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*11*	*6*		*0*			*32*	
C (m) (veh/h)	*1332*	*981*					*475*	
v/c	*0.01*	*0.01*					*0.07*	
95% queue length	*0.02*	*0.02*					*0.22*	
Control Delay (s/veh)	*7.7*	*8.7*					*13.1*	
LOS	*A*	*A*					*B*	
Approach Delay (s/veh)	--	--				*13.1*		
Approach LOS	--	--				*B*		

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Park Place/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project ID *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *10th Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*10*	*20*	*10*	*20*	*10*	*80*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*10*	*340*	*40*	*80*	*160*	*10*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*L*	*TR*	*LTR*		*LTR*	
PHF	*0.95*		*0.95*	*0.95*	*0.95*		*0.95*	
Flow Rate (veh/h)	*41*		*21*	*94*	*409*		*262*	
% Heavy Vehicles	*0*		*0*	*0*	*0*		*0*	
No. Lanes	*1*		*2*		*1*		*1*	
Geometry Group	*4a*		*5*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.2*		*1.0*	*0.0*	*0.0*		*0.3*	
Prop. Right-Turns	*0.2*		*0.0*	*0.9*	*0.1*		*0.0*	
Prop. Heavy Vehicle	*0.0*		*0.0*	*0.0*	*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.1*		*0.5*	*-0.6*	*-0.1*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*	*3.20*	*3.20*		*3.20*	
x, initial	*0.04*		*0.02*	*0.08*	*0.36*		*0.23*	
hd, final value (s)	*5.75*		*6.68*	*5.54*	*4.63*		*4.89*	
x, final value	*0.07*		*0.04*	*0.14*	*0.53*		*0.36*	
Move-up time, m (s)	*2.0*		*2.3*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.8*		*4.4*	*3.2*	*2.6*		*2.9*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*291*		*271*	*344*	*659*		*512*	
Delay (s/veh)	*9.15*		*9.65*	*9.17*	*12.65*		*10.57*	
LOS	*A*		*A*	*A*	*B*		*B*	
Approach: Delay (s/veh)	*9.15*		*9.26*		*12.65*		*10.57*	
LOS	*A*		*A*		*B*		*B*	
Intersection Delay (s/veh)	*11.35*							
Intersection LOS	*B*							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Park Place/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Plus Project*

Project ID *Chino High School Modernization*

East/West Street: *Park Place* North/South Street: *10th Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*20*	*11*	*10*	*21*	*11*	*80*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*10*	*454*	*32*	*41*	*181*	*10*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*L*	*TR*	*LTR*		*LTR*	
PHF	*0.95*		*0.95*	*0.95*	*0.95*		*0.95*	
Flow Rate (veh/h)	*42*		*22*	*95*	*520*		*243*	
% Heavy Vehicles	*0*		*0*	*0*	*0*		*0*	
No. Lanes	*1*		*2*		*1*		*1*	
Geometry Group	*4a*		*5*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.5*		*1.0*	*0.0*	*0.0*		*0.2*	
Prop. Right-Turns	*0.2*		*0.0*	*0.9*	*0.1*		*0.0*	
Prop. Heavy Vehicle	*0.0*		*0.0*	*0.0*	*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.0*		*0.5*	*-0.6*	*-0.0*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*	*3.20*	*3.20*		*3.20*	
x, initial	*0.04*		*0.02*	*0.08*	*0.46*		*0.22*	
hd, final value (s)	*6.07*		*6.92*	*5.79*	*4.67*		*5.04*	
x, final value	*0.07*		*0.04*	*0.15*	*0.67*		*0.34*	
Move-up time, m (s)	*2.0*		*2.3*		*2.0*		*2.0*	
Service Time, t_s (s)	*4.1*		*4.6*	*3.5*	*2.7*		*3.0*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*292*		*272*	*345*	*758*		*493*	
Delay (s/veh)	*9.53*		*9.93*	*9.53*	*16.78*		*10.61*	
LOS	*A*		*A*	*A*	*C*		*B*	
Approach: Delay (s/veh)	*9.53*		*9.60*		*16.78*		*10.61*	
LOS	*A*		*A*		*C*		*B*	
Intersection Delay (s/veh)	*13.92*							
Intersection LOS	*B*							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Park Place/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2024 Without Project*

Project ID *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *10th Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*11*	*21*	*11*	*24*	*12*	*98*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*11*	*384*	*45*	*86*	*171*	*11*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*L*	*TR*	*LTR*		*LTR*	
PHF	*0.95*		*0.95*	*0.95*	*0.95*		*0.95*	
Flow Rate (veh/h)	*44*		*25*	*115*	*462*		*281*	
% Heavy Vehicles	*0*		*0*	*0*	*0*		*0*	
No. Lanes	*1*		*2*		*1*		*1*	
Geometry Group	*4a*		*5*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.3*		*1.0*	*0.0*	*0.0*		*0.3*	
Prop. Right-Turns	*0.3*		*0.0*	*0.9*	*0.1*		*0.0*	
Prop. Heavy Vehicle	*0.0*		*0.0*	*0.0*	*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.1*		*0.5*	*-0.6*	*-0.1*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*	*3.20*	*3.20*		*3.20*	
x, initial	*0.04*		*0.02*	*0.10*	*0.41*		*0.25*	
hd, final value (s)	*6.05*		*6.91*	*5.77*	*4.78*		*5.09*	
x, final value	*0.07*		*0.05*	*0.18*	*0.61*		*0.40*	
Move-up time, m (s)	*2.0*		*2.3*		*2.0*		*2.0*	
Service Time, t_s (s)	*4.0*		*4.6*	*3.5*	*2.8*		*3.1*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*294*		*275*	*365*	*712*		*531*	
Delay (s/veh)	*9.53*		*9.96*	*9.76*	*15.06*		*11.40*	
LOS	*A*		*A*	*A*	*C*		*B*	
Approach: Delay (s/veh)	*9.53*		*9.80*		*15.06*		*11.40*	
LOS	*A*		*A*		*C*		*B*	
Intersection Delay (s/veh)	*12.90*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Park Place/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project ID *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *10th Street*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*21*	*12*	*11*	*25*	*13*	*98*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*11*	*498*	*37*	*47*	*192*	*11*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LTR*		*L*	*TR*	*LTR*		*LTR*	
PHF	*0.95*		*0.95*	*0.95*	*0.95*		*0.95*	
Flow Rate (veh/h)	*45*		*26*	*116*	*573*		*262*	
% Heavy Vehicles	*0*		*0*	*0*	*0*		*0*	
No. Lanes	*1*		*2*		*1*		*1*	
Geometry Group	*4a*		*5*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.5*		*1.0*	*0.0*	*0.0*		*0.2*	
Prop. Right-Turns	*0.2*		*0.0*	*0.9*	*0.1*		*0.0*	
Prop. Heavy Vehicle	*0.0*		*0.0*	*0.0*	*0.0*		*0.0*	
hLT-adj	*0.2*	*0.2*	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.6*	*-0.6*	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*-0.0*		*0.5*	*-0.6*	*-0.0*		*0.0*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*		*3.20*	*3.20*	*3.20*		*3.20*	
x, initial	*0.04*		*0.02*	*0.10*	*0.51*		*0.23*	
hd, final value (s)	*6.39*		*7.17*	*6.03*	*4.82*		*5.26*	
x, final value	*0.08*		*0.05*	*0.19*	*0.77*		*0.38*	
Move-up time, m (s)	*2.0*		*2.3*		*2.0*		*2.0*	
Service Time, t_s (s)	*4.4*		*4.9*	*3.7*	*2.8*		*3.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*295*		*276*	*366*	*737*		*512*	
Delay (s/veh)	*9.94*		*10.26*	*10.17*	*21.89*		*11.47*	
LOS	*A*		*B*	*B*	*C*		*B*	
Approach: Delay (s/veh)	*9.94*		*10.19*		*21.89*		*11.47*	
LOS	*A*		*B*		*C*		*B*	
Intersection Delay (s/veh)	*17.07*							
Intersection LOS	*C*							

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Park Place/12th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *12th Street*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*80*	*30*	*30*	*190*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*84*	*31*	*31*	*200*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*50*		*80*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*52*	*0*	*84*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*31*		*136*				
C (m) (veh/h)		*1487*		*799*				
v/c		*0.02*		*0.17*				
95% queue length		*0.06*		*0.61*				
Control Delay (s/veh)		*7.5*		*10.4*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--		*10.4*				
Approach LOS	--	--		*B*				

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Park Place/12th Street*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2018 Existing With Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *12th Street*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*83*	*30*	*29*	*42*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*87*	*31*	*30*	*44*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*30*		*78*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*31*	*0*	*82*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*30*		*113*				
C (m) (veh/h)		*1483*		*899*				
v/c		*0.02*		*0.13*				
95% queue length		*0.06*		*0.43*				
Control Delay (s/veh)		*7.5*		*9.6*				
LOS		*A*		*A*				
Approach Delay (s/veh)	--	--	*9.6*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Park Place/12th Street*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2024 Without Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *12th Street*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*82*	*31*	*31*	*194*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*86*	*32*	*32*	*204*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*51*		*81*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*53*	*0*	*85*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*32*		*138*				
C (m) (veh/h)		*1483*		*793*				
v/c		*0.02*		*0.17*				
95% queue length		*0.07*		*0.63*				
Control Delay (s/veh)		*7.5*		*10.5*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--		*10.5*				
Approach LOS	--	--		*B*				

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Park Place/12th Street*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2024 With Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *12th Street*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*85*	*31*	*30*	*46*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*89*	*32*	*31*	*48*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*31*		*79*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*32*	*0*	*83*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*31*		*115*				
C (m) (veh/h)		*1479*		*892*				
v/c		*0.02*		*0.13*				
95% queue length		*0.06*		*0.44*				
Control Delay (s/veh)		*7.5*		*9.6*				
LOS		*A*		*A*				
Approach Delay (s/veh)	--	--	*9.6*					
Approach LOS	--	--	*A*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Park Place/13th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *13th Street*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*100*	*10*	*20*	*460*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*105*	*10*	*21*	*484*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*40*		*20*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*42*	*0*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*21*		*63*				
C (m) (veh/h)		*1487*		*535*				
v/c		*0.01*		*0.12*				
95% queue length		*0.04*		*0.40*				
Control Delay (s/veh)		*7.5*		*12.6*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--		*12.6*				
Approach LOS	--	--		*B*				

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Park Place/13th Street*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2018 Existing With Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *13th Street*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*100*	*10*	*16*	*293*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*105*	*10*	*16*	*308*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*32*		*20*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*33*	*0*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*16*		*54*				
C (m) (veh/h)		*1487*		*671*				
v/c		*0.01*		*0.08*				
95% queue length		*0.03*		*0.26*				
Control Delay (s/veh)		*7.4*		*10.8*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*10.8*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Park Place/13th Street*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2024 Without Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *13th Street*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*102*	*10*	*20*	*469*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*107*	*10*	*21*	*493*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*41*		*20*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*43*	*0*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*21*		*64*				
C (m) (veh/h)		*1484*		*527*				
v/c		*0.01*		*0.12*				
95% queue length		*0.04*		*0.41*				
Control Delay (s/veh)		*7.5*		*12.8*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*12.8*					
Approach LOS	--	--	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Park Place/13th Street*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2024 With Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *13th Street*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*102*	*10*	*16*	*302*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*1.00*
Hourly Flow Rate, HFR (veh/h)	*0*	*107*	*10*	*16*	*317*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*1*	*1*	*0*
Configuration			*TR*	*L*	*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*33*		*20*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*34*	*0*	*21*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*L*		*LR*				
v (veh/h)		*16*		*55*				
C (m) (veh/h)		*1484*		*660*				
v/c		*0.01*		*0.08*				
95% queue length		*0.03*		*0.27*				
Control Delay (s/veh)		*7.5*		*10.9*				
LOS		*A*		*B*				
Approach Delay (s/veh)	--	--	*10.9*					
Approach LOS	--	--	*B*					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Park Place/Lot Entrance*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *Lot Entrance*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*60*	*100*			*230*	*260*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*63*	*105*	*0*	*0*	*242*	*273*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*							
v (veh/h)	*63*							
C (m) (veh/h)	*1061*							
v/c	*0.06*							
95% queue length	*0.19*							
Control Delay (s/veh)	*8.6*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Park Place/Lot Entrance*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2018 Existing With Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *Lot Entrance*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*61*	*100*			*81*	*234*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*64*	*105*	*0*	*0*	*85*	*246*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*							
v (veh/h)	*64*							
C (m) (veh/h)	*1240*							
v/c	*0.05*							
95% queue length	*0.16*							
Control Delay (s/veh)	*8.1*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Park Place/Lot Entrance*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2024 Without Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *Lot Entrance*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*61*	*102*			*235*	*265*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*64*	*107*	*0*	*0*	*247*	*278*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*							
v (veh/h)	*64*							
C (m) (veh/h)	*1052*							
v/c	*0.06*							
95% queue length	*0.19*							
Control Delay (s/veh)	*8.6*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Park Place/Lot Entrance*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2024 With Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *Lot Entrance*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*62*	*102*			*86*	*239*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*65*	*107*	*0*	*0*	*90*	*251*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*1*	*0*	*0*	*1*	*0*
Configuration	*L*	*T*				*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*1.00*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration						

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*							
v (veh/h)	*65*							
C (m) (veh/h)	*1229*							
v/c	*0.05*							
95% queue length	*0.17*							
Control Delay (s/veh)	*8.1*							
LOS	*A*							
Approach Delay (s/veh)	--	--						
Approach LOS	--	--						

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Park Place/Lot Exit*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *Lot Exit*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*120*			*440*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*126*	*0*	*0*	*463*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*80*		*40*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*84*	*0*	*42*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration						*L*		*R*
v (veh/h)						*84*		*42*
C (m) (veh/h)						*474*		*603*
v/c						*0.18*		*0.07*
95% queue length						*0.64*		*0.22*
Control Delay (s/veh)						*14.2*		*11.4*
LOS						*B*		*B*
Approach Delay (s/veh)	--	--				*13.3*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Park Place/Lot Exit*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing With Project*

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *Lot Exit*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*120*			*282*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*126*	*0*	*0*	*296*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*50*		*27*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*52*	*0*	*28*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration						*L*		*R*
v (veh/h)						*52*		*28*
C (m) (veh/h)						*592*		*748*
v/c						*0.09*		*0.04*
95% queue length						*0.29*		*0.12*
Control Delay (s/veh)						*11.7*		*10.0*
LOS						*B*		*A*
Approach Delay (s/veh)	--	--				*11.1*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*R Garland*	Intersection	*Park Place/Lot Exit*
Agency/Co.	*Chino Valley USD*	Jurisdiction	*City of Chino*
Date Performed	*3/9/2018*	Analysis Year	*2024 Without Project*
Analysis Time Period	*AM Peak Hour*		

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *Lot Exit*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*122*			*449*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*128*	*0*	*0*	*472*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*82*		*41*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*86*	*0*	*43*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration						*L*		*R*
v (veh/h)						*86*		*43*
C (m) (veh/h)						*467*		*596*
v/c						*0.18*		*0.07*
95% queue length						*0.67*		*0.23*
Control Delay (s/veh)						*14.4*		*11.5*
LOS						*B*		*B*
Approach Delay (s/veh)	--	--				*13.5*		
Approach LOS	--	--				*B*		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Park Place/Lot Exit*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Park Place* | North/South Street: *Lot Exit*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*122*			*291*	
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*128*	*0*	*0*	*306*	*0*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*T*			*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				*52*		*28*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*0*	*54*	*0*	*29*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*1*	*0*	*1*
Configuration				*L*		*R*

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration						*L*		*R*
v (veh/h)						*54*		*29*
C (m) (veh/h)						*583*		*739*
v/c						*0.09*		*0.04*
95% queue length						*0.30*		*0.12*
Control Delay (s/veh)						*11.8*		*10.1*
LOS						*B*		*B*
Approach Delay (s/veh)	--	--				*11.2*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Washington Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*80*	*440*			*210*	*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*84*	*463*	*0*	*0*	*221*	*10*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*		*30*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*0*	*31*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*84*						*41*	
C (m) (veh/h)	*1349*						*584*	
v/c	*0.06*						*0.07*	
95% queue length	*0.20*						*0.23*	
Control Delay (s/veh)	*7.8*						*11.6*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--				*11.6*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2018 Existing Plus Project*

Project Description *Chino High School Modernization*

East/West Street: *Washington Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*20*	*553*	*11*	*6*	*211*	*12*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*21*	*582*	*11*	*6*	*222*	*12*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*11*	*1*	*11*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*11*	*1*	*11*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*21*	*6*		*0*			*23*	
C (m) (veh/h)	*1345*	*993*					*396*	
v/c	*0.02*	*0.01*					*0.06*	
95% queue length	*0.05*	*0.02*					*0.18*	
Control Delay (s/veh)	*7.7*	*8.6*					*14.7*	
LOS	*A*	*A*					*B*	
Approach Delay (s/veh)	--	--					*14.7*	
Approach LOS	--	--					*B*	

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2024 Without Project*

Project Description *Chino High School Modernization*

East/West Street: *Washington Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*90*	*497*			*225*	*10*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*94*	*523*	*0*	*0*	*236*	*10*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LT*					*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*10*		*31*			
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*0*	*32*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*0*
Configuration		*LR*				

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LT*						*LR*	
v (veh/h)	*94*						*42*	
C (m) (veh/h)	*1332*						*546*	
v/c	*0.07*						*0.08*	
95% queue length	*0.23*						*0.25*	
Control Delay (s/veh)	*7.9*						*12.1*	
LOS	*A*						*B*	
Approach Delay (s/veh)	--	--				*12.1*		
Approach LOS	--	--				*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*Chino Valley USD*
Date Performed	*3/9/2018*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*Washington Ave/10th Street*
Jurisdiction	*City of Chino*
Analysis Year	*2024 With Project*

Project Description *Chino High School Modernization*

East/West Street: *Washington Avenue* | North/South Street: *10th Street*

Intersection Orientation: *North-South* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*30*	*610*	*11*	*6*	*226*	*12*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*31*	*642*	*11*	*6*	*237*	*12*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration	*LTR*			*LTR*		
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*11*	*1*	*12*	*0*	*0*	*0*
Peak-Hour Factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*11*	*1*	*12*	*0*	*0*	*0*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*LTR*	*LTR*		*LTR*			*LTR*	
v (veh/h)	*31*	*6*		*0*			*24*	
C (m) (veh/h)	*1328*	*943*					*356*	
v/c	*0.02*	*0.01*					*0.07*	
95% queue length	*0.07*	*0.02*					*0.22*	
Control Delay (s/veh)	*7.8*	*8.8*					*15.8*	
LOS	*A*	*A*					*C*	
Approach Delay (s/veh)	--	--					*15.8*	
Approach LOS	--	--					*C*	

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Attachments

Attachment C.
Traffic Signal Warrant Analysis Worksheets

Attachments

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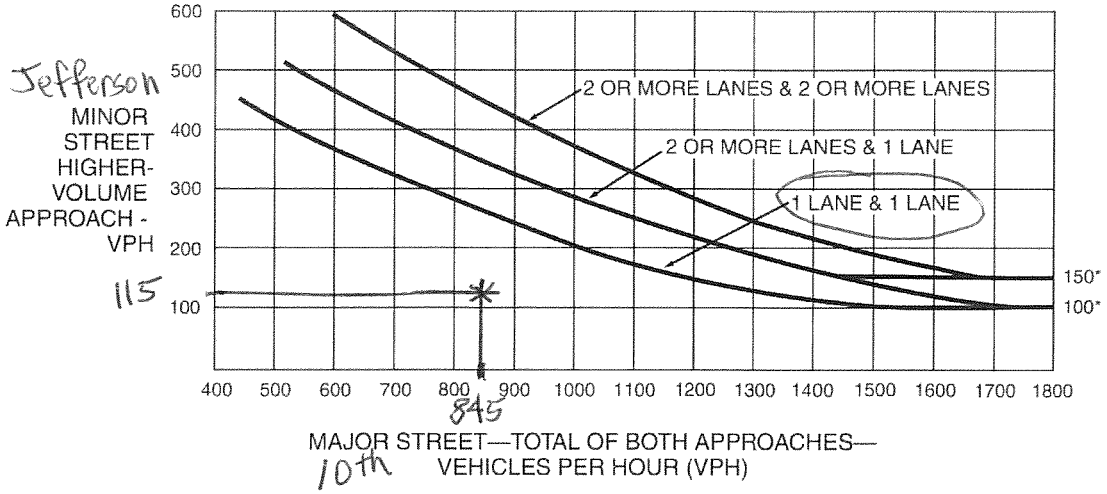
TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

Jefferson Ave/10th Street

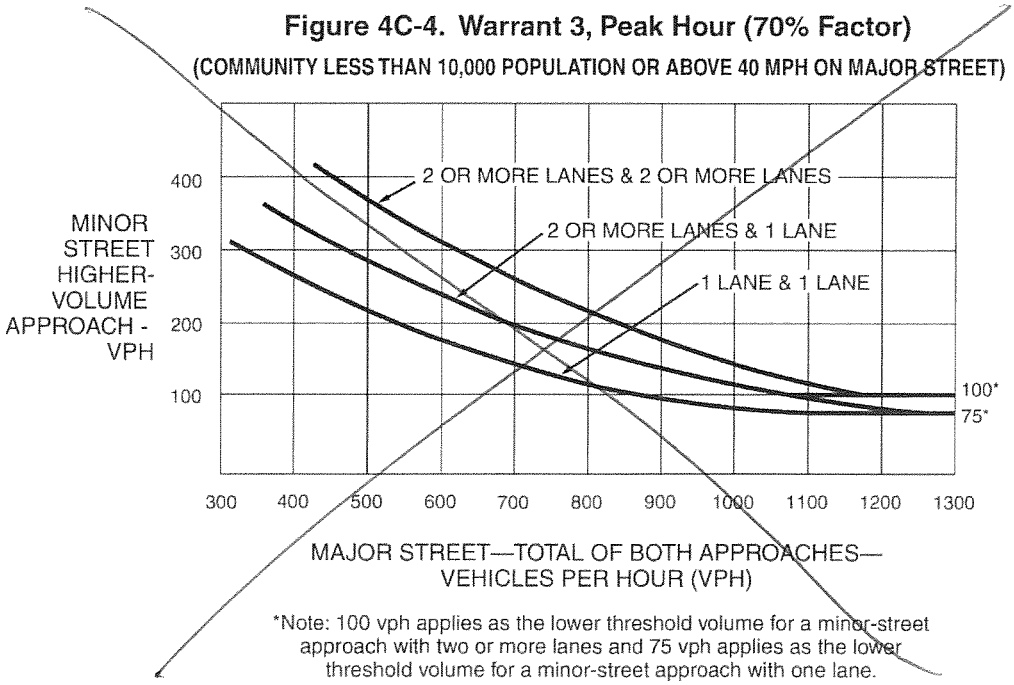
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

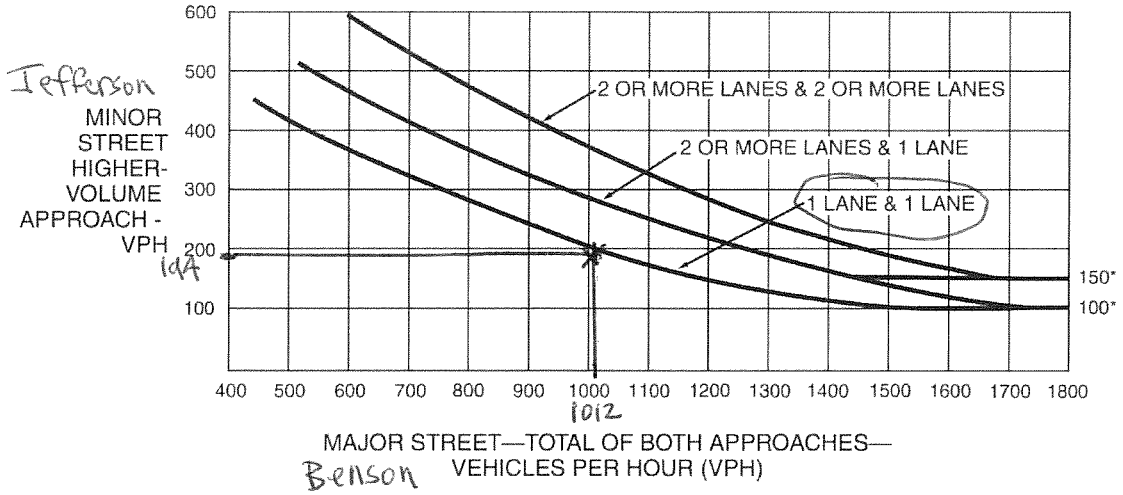
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Jefferson Ave/Benson Ave

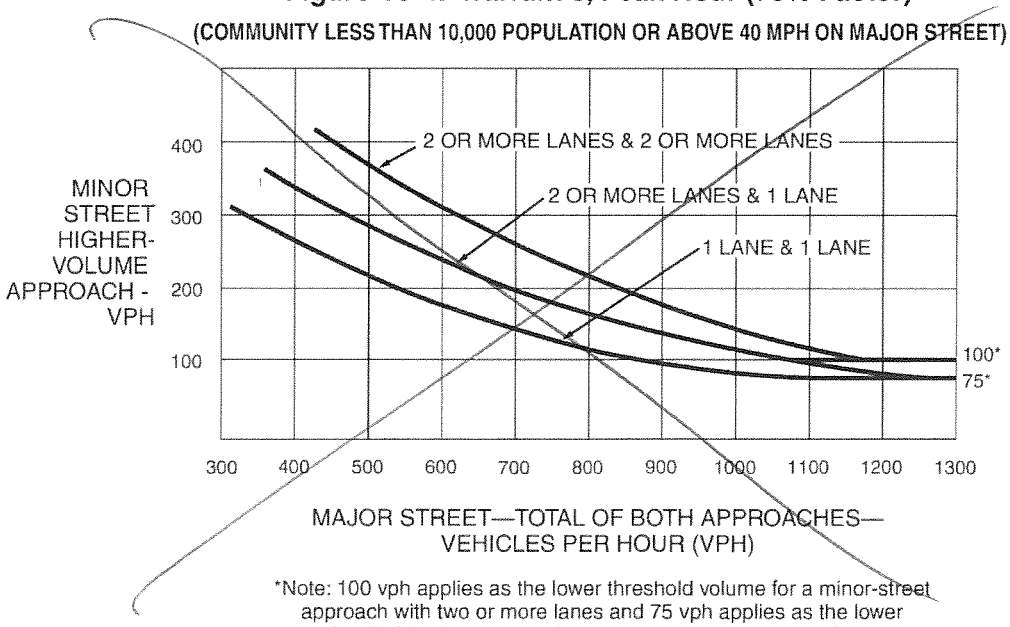
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

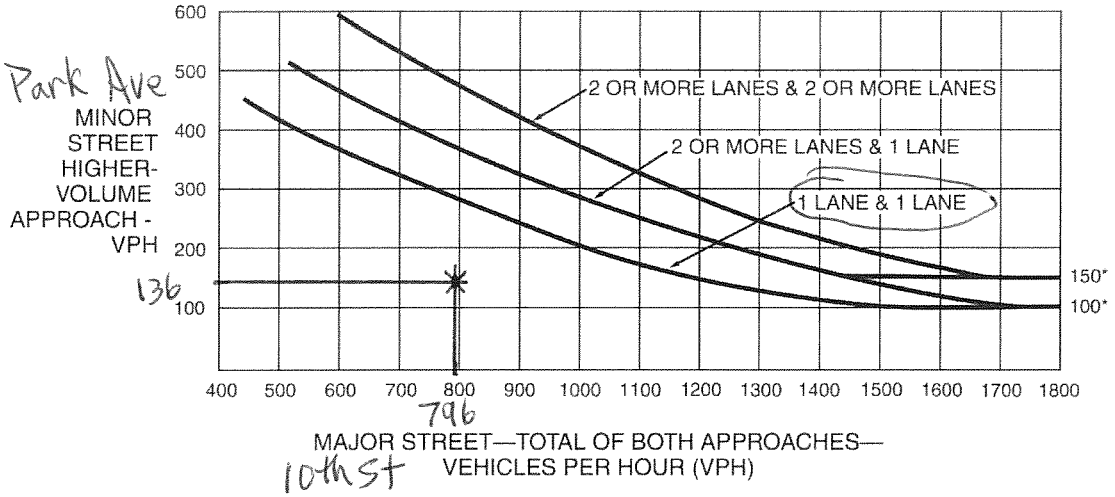
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Park Ave / 10th Street

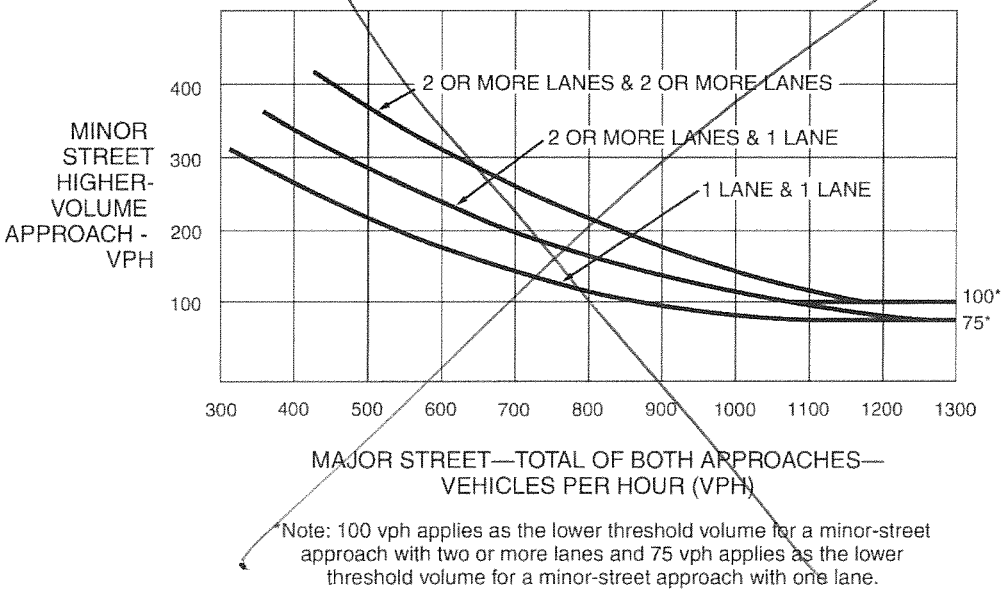
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.