To access the Agenda and Backup Materials electronically, go to www.gjcity.org

PLANNING COMMISSION AGENDA
IN-PERSON/VIRTUAL HYBRID MEETING
CITY HALL AUDITORIUM, 250 N 5th STREET

TUESDAY, JUNE 8, 2021 @ 5:30 PM

This meeting will be held as an in-person/virtual hybrid meeting. Join the meeting virtually by registering using the link below:

https://attendee.gotowebinar.com/register/2959392036361924620

After registering, you will receive a confirmation email containing information about joining the webinar.

Call to Order - 5:30 PM

Consent Agenda

1. Minutes of Previous Meeting(s) from May 25, 2021.

Regular Agenda

1. Consider a request by the City of Grand Junction to vacate a portion of a Road Petitioned Right-Of-Way which crosses several parcels in Orchard Mesa. | Staff Presentation | Phone-in comments dial **7807**.

2. Consider a request by the City of Grand Junction to adopt the Patterson Road Access Control Plan (ACP), as Volume III, Title 38 of the Municipal Code. | Staff Presentation | Phone-in comments dial **6910**.

Other Business

Adjournment

GRAND JUNCTION PLANNING COMMISSION
May 25, 2021 MINUTES
5:30 p.m.

The meeting of the Planning Commission was called to order at 5:30 p.m. by Chair Andrew Teske.

Those present were Planning Commissioners; Chair Andrew Teske, Ken Scissors, Andrea Haitz, Sandra Weckerly, and Shanon Secrest.

Also present were Jamie Beard (Assistant City Attorney), Tamra Allen (Community Development Director), and Dave Thornton (Principal Planner).

There were 0 members of the public in attendance.

CONSENT AGENDA

Commissioner Scissors moved to adopt Consent Agenda Item #1. Commissioner Secrest seconded the motion. The motion carried 5-0.

1. **Approval of Minutes**

Minutes of Previous Meeting(s) from May 11, 2021.

REGULAR AGENDA

1. **Blue Mesa Estates Annexation** **File # ANX-2021-157**

Consider a request by Prodigy Homes & Development LLC to zone approximately 13.33-acres from County RSF-R (Residential Single Family – Rural – 5 acre lot sizes) to a City R-8 (Residential – 8 du/ac) for the Blue Mesa Estates Annexation, located at 3085 D ½ Road.

Staff Presentation

Dave Thornton, Principal Planner, introduced exhibits into the record and provided a presentation regarding the request.

Questions for Staff

Chair Teske asked for clarification regarding the annexation criteria.

Applicant Presentation

Kim Kerk, Kerk Land Consulting and Development, representing the client, gave a brief presentation regarding the request.

Questions for Applicant
None.

Public Hearing
The public hearing was opened at 5 p.m. on Tuesday, May 18, 2021 via www.GJSpeaks.org.

None.

The public hearing was closed at 5:51 p.m. on May 25, 2021.

Questions for Applicant or Staff
None.

Discussion

Motion and Vote
Commissioner Haitz made the following motion, "Mr. Chairman, on the Zone of Annexation for the Blue Mesa Estates Annexation to R-8 (Residential – 8 du/ac) zone district, file number ANX-2021-157, I move that the Planning Commission forward a recommendation of approval to City Council with the findings of fact listed in the staff report"

Commissioner Scissors seconded the motion. The motion carried 5-0.

2. Reed Annexation File # ANX-2021-153

Consider a request by Jesse Reed to zone approximately 0.73-acres from County RSF-4 (Residential Single Family – 4 du/ac) to a City R-8 (Residential – 8 du/ac) for the Reed Annexation, located at 2733 B ¼ Road.

Staff Presentation
Dave Thornton, Principal Planner, introduced exhibits into the record and provided a presentation regarding the request.

Questions for Staff
Chair Teske asked a question regarding the impact of the proposed lot line adjustment.

Applicant Presentation
The Applicant, Jesse Reed, was present and gave a statement regarding the request.

Questions for Applicant
None.

Public Hearing
The public hearing was opened at 5 p.m. on Tuesday, May 18, 2021 via www.GJSpeaks.org.

None.

The public hearing was closed at 6:04 p.m. on May 25, 2021.

Questions for Applicant or Staff
None.

Discussion
None.

Motion and Vote
Commissioner Haitz made the following motion, "Mr. Chairman, on the Zone of Annexation for the Reed Annexation to R-8 (Residential – 8 du/ac) zone district, file number ANX-2021-153, I move that the Planning Commission forward a recommendation of approval to City Council with the findings of fact listed in the staff report."

Commissioner Weckerly seconded the motion. The motion carried 5-0.

3. Other Business

None.

4. Adjournment

Commissioner Scissors moved to adjourn the meeting. Commissioner Weckerly seconded the motion. The vote to adjourn was 5-0. The meeting adjourned at 6:06 p.m.

Grand Junction Planning Commission

Regular Session

Item #1.

Meeting Date: June 8, 2021

Presented By: Senta Costello, Planner

Department: Community Development

Submitted By: Senta Costello, Associate Planner

Information

SUBJECT:

Consider a request by the City of Grand Junction to vacate a portion of a Road Petitioned Right-Of-Way which crosses several parcels in Orchard Mesa. | Staff Presentation | Phone-in comments dial **7807**.

RECOMMENDATION:

Staff recommends approval of the request.

EXECUTIVE SUMMARY:

The Applicant, City of Grand Junction, Community Development, is requesting the vacation of two sections of roadway included within the petition recorded in the Mesa County Road Book 1 at Page 34 (Petition) which lie within the Carson Subdivision, Lookout Point Subdivision, Red Tail Ridge Subdivision, and Red Tail Ridge II Subdivision Filing 1 all within Orchard Mesa, in the City of Grand Junction ("City"), County of Mesa ("County"). The request is limited only to any claim that the City may have from the Petition. The request does not include vacating any right-of-way/ roadway that the City may have an interest in due to other claims, such as dedications made upon the plats in the subdivisions referenced.

BACKGROUND OR DETAILED INFORMATION:

BACKGROUND

These portions of road rights-of-way were included in the Petition recorded in Road Book 1 at Page 34 of the records of Mesa County with a copy of a map of the alleged roads recorded by the County in 2007. The rights-of-way cross lots located in Carson Subdivision, Red Tail Ridge Subdivision, Red Tail Ridge II Subdivision Filing 1 and

Lookout Point Subdivision. Per the City's records, no roads were built in accordance with the Petition in the locations requested to be vacated herein. None of the rights-of-way are located in alignment with existing, developed streets, proposed streets or streets shown on the Grand Valley Circulation Plan and are not needed to provide future streets and/or connectivity.

In August 2009, the County also vacated the road right-of-way included in the Petition that remained outside the City limits.

NOTIFICATION REQUIREMENTS

A Neighborhood Meeting regarding the proposed vacation request was held virtually on May 3, 2021, in accordance with Section 21.02.080 (e) of the Zoning and Development Code. There were no neighbors in attendance at the meeting.

Notice was completed consistent with the provisions in Section 21.02.080 (g) of the Zoning and Development Code. Mailed notice of the public hearings before Planning Commission and City Council in the form of notification cards was sent to surrounding property owners within 500 feet of the subject right-of-way areas, as well as neighborhood associations within 1000 feet, on May 28, 2021. The notice of this public hearing was published on June 1, 2021 in the Grand Junction Daily Sentinel.

ANALYSIS

The vacation of the right-of-way or easement shall conform to the following:

(1) The Comprehensive Plan, Grand Junction Circulation Plan and other adopted plans and policies of the City;

The vacations are in conformance with the 2020 Comprehensive Plan, Grand Valley Circulation Plan and all other policies of the City. The vacations help by removing rights-of-way that are not necessary and do not further a safe, balanced and well-connected transportation system.

(2) No parcel shall be landlocked as a result of the vacation;

The rights-of-way proposed for vacation are not constructed and are not located where construction is feasible; many cross existing developed lots and structures. No parcels will be landlocked as a result of the vacation.

(3) Access to any parcel shall not be restricted to the point where access is unreasonable, economically prohibitive, or reduces or devalues any property affected by the proposed vacation;

Access to properties shall remain the same and the vacations will not restrict the

potential for future access should they be needed.

(4) There shall be no adverse impacts on the health, safety, and/or welfare of the general community, and the quality of public facilities and services provided to any parcel of land shall not be reduced (e.g., police/fire protection and utility services);

As the rights-of-way as petitioned have never been utilized nor are they needed for any planned traffic circulation or utilities, the health, safety and welfare of the community will not be compromised, nor will the quality of public facilities and services be reduced. Development of other rights-of-way and private properties in the area has made the construction of roads in the subject rights-of-way as described very unlikely.

(5) The provision of adequate public facilities and services shall not be inhibited to any property as required in Chapter 21.06 GJMC; and

Public facilities and services will not be affected by the proposed vacation for the reasons stated above.

(6) The proposal shall provide benefits to the City such as reduced maintenance requirements, improved traffic circulation, etc.

The proposal will provide benefits to the City by eliminating the potential for confusion and or expectations of a road or access where one is not intended to be located.

RECOMMENDATION AND FINDINGS OF FACT

After reviewing the City of Grand Junction, Community Development right-of-way vacation request, VAC-2021-126, the following findings of fact have been made:

1. The request conforms with Section 21.02.100 of the Zoning and Development Code.

Therefore, Staff recommends approval of the request.

SUGGESTED MOTION:

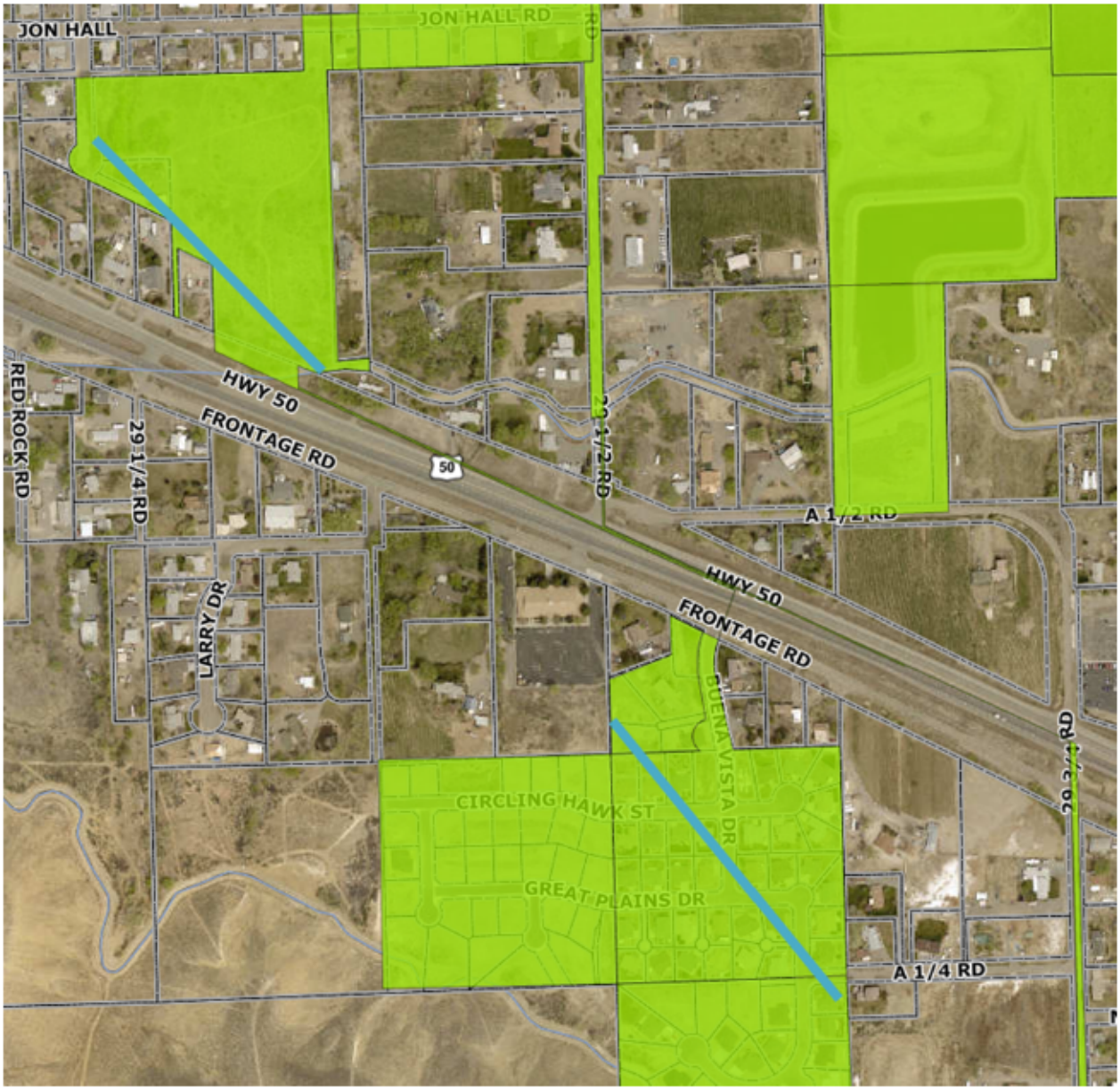
Mr. Chairman, on the right-of-way vacation request, City file number VAC-2021-126, I move that the Planning Commission forward a recommendation of approval to City Council with the findings of fact as listed in the staff report.

Attachments

1. Exhibit 1 - Location Map
2. Ordinance

EXHIBIT A

Location Map



CITY OF GRAND JUNCTION

Ordinance No.

VACATING PETITIONED ROAD RIGHT-OF-WAY

RECITALS:

A vacation of right-of-way has been requested by the City of Grand Junction as it involves right-of-way included in a petition to Mesa County which may be found in Mesa County's Road Book 1 at page 34 ("Petition"). The road was not built in the areas where requested it be vacated or has not been used for such time that there is no indication of the road having been built in the lands now known as Carson Subdivision, Lookout Point Subdivision, Red Tail Ridge Subdivision and Red Tail Ridge II Filing 1 Subdivision. The vacation request is limited only to the claim the City may have due to the Petition. The request does not include any interest the City may have from other means such as dedications on the referenced plats for streets and roadways.

The City Council finds that the request is consistent with the 2020 Comprehensive Plan, the Grand Valley Circulation Plan and Section 21.02.100 of the Zoning and Development Code.

The Planning Commission, having heard and considered the request, found the criteria of the Code to have been met, and recommends that the vacation be approved.

NOW, THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION THAT:

The following described petitioned right-of-way is hereby vacated:

That portion of road right-of-way granted by the Road Petition recorded in Road Book 1 at Page 34 of the records of Mesa County where it lies within the following subdivisions located in Section 32, Township 1 South, Range 1 East of the Ute Meridian, City of Grand Junction, Mesa County, Colorado:

CARSON SUBDIVISION, as same is recorded at Reception Number 2512364,
RED TAIL RIDGE SUBDIVISION, as same is recorded at Reception Number 2206023,
RED TAIL RIDGE II SUBDIVISION, FILING ONE as same is recorded at Reception Number 2569802, and
LOOKOUT POINT SUBDIVISION, as same is recorded at Reception Number 2505798.

Introduced for first reading on this ___ day of _____, 2021

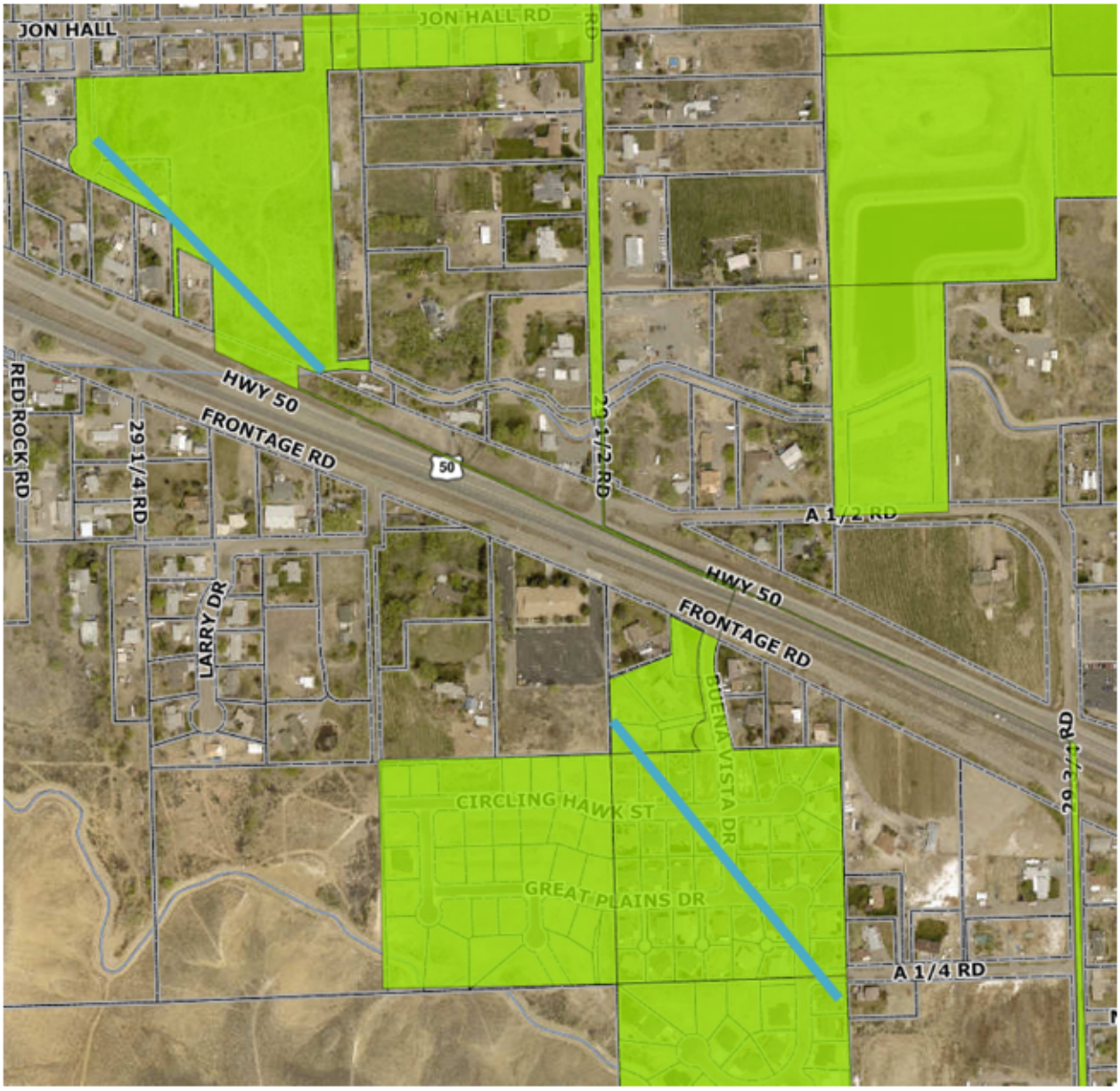
PASSED and ADOPTED this _____ day of _____ , 2021.

ATTEST:

_____
President of City Council

_____
City Clerk

EXHIBIT A
Location Map



Grand Junction Planning Commission

Regular Session

Meeting Date: June 8, 2021

Presented By: Trent Prall, Public Works Director, Michelle Hansen, David Thornton, Principal Planner

Department: Community Development

Submitted By: David Thornton, Principal Planner

Information

SUBJECT:

Consider a request by the City of Grand Junction to adopt the Patterson Road Access Control Plan (ACP), as Volume III, Title 38 of the Municipal Code. | Staff Presentation | Phone-in comments dial **6910**.

RECOMMENDATION:

Staff recommends approval of the request.

EXECUTIVE SUMMARY:

In 2020, the City engaged Stolfus and Associates to study and prepare an Access Control Plan (ACP) for the 7.0-mile Patterson Road corridor within the City limits.

The goal of access management is to optimize the performance of the corridor, improve the level of safety, reduce traffic congestion, and improve the overall functionality. The ACP works to plan, coordinate, regulate, and design access to and from adjacent property including future development.

Throughout 2020, Stolfus' work inventoried access points, counted traffic, determined existing and future traffic demands, performed a safety analysis for Patterson Road and prepared a draft Plan in January 2021 for public review. In-person and virtual public open houses were held in October 2020 and January 2021. The draft Plan document was publicly reviewed through GJSpeaks. One-on-one meetings, follow-up phone calls and emails, and neighborhood meetings were done to engage with the public and seek their input on the access control plan. The proposed January 2021 draft Plan was updated to become the April 2021 draft Plan to reflect the public input

received. Additional outreach continues to utilize GJSpeaks.com.

Upon adoption, the Patterson Road Access Control Plan (ACP) becomes a new Plan to Volume III of the Municipal Code and will become Title 38. The 2020 One Grand Junction Comprehensive Plan and all other adopted Plans by the City are elements of Volume III titled "Comprehensive Plan" and thus codified in Volume III. The proposed final Patterson Road ACP will be presented for adoption.

On February 23, 2021 the Planning Commission heard the Patterson Access Control Plan in a virtual hearing. The hearing was continued after public input was received. Direction was given to staff to conduct additional public outreach. Staff has conducted this additional public outreach. Based on public input, the map exhibits have changed accesses at various locations to provide more access than previously shown.

BACKGROUND OR DETAILED INFORMATION:

Study Area

The study area consists of approximately seven miles of Patterson Road (F Road) between I-70B (23.75 Road) and Lodgepole Street (30.75 Road) within the City limits. The segment on the east end that extends beyond City limits is controlled by Mesa County and not included in this plan. In general, land use within the city limits is suburban in nature with residential and commercial uses. There are currently 284 access points on Patterson Road within the study area. A majority of access points are full movement. The access points are classified as follows:

- 15 Signalized public road intersections (29 access points)
- 54 Unsignalized public road intersections (62 access points)
- 2 unsignalized private road intersections (2 access points)
- 81 business access points
- 93 residential access points
- 17 maintenance or field access points

Since its construction in 1984, Patterson Road has served as a critical part of Grand Junction's transportation system. It serves as a major east-west arterial corridor and is an important public resource. Effective access management is essential in order to optimize the performance of the road to improve the level of safety, reduce traffic congestion and improve the quality of the corridor.

Background

The City engaged, in January of 2020, the consulting firm Stolfus and Associates to prepare an Access Control Plan (ACP) for Patterson Road. The purpose of the ACP is to provide effective access to properties and public street connections to Patterson Road.

The ACP works to coordinate planning, regulation, and design of access to Patterson

Road from adjacent property including future development. The plan involves the systematic control of the location, spacing, design, and operation of driveways, median openings, and street connections. The ACP defines existing and future access locations and configurations (movements allowed), with consideration for circulation and alternative access opportunities. It is a long-range planning document that identifies access conditions that will be implemented as roadway corridor and land-use characteristics change. Similar studies have been developed by CDOT throughout the state and it has been demonstrated that access-managed corridors not only preserve the transportation functions of roadways, but also help preserve property values and the economic viability of abutting developments.

Public Outreach and Engagement

One key component to a successful ACP is ensuring that the general public, business owners, and property owners have had opportunities to offer their input. Stolfus and Associates worked over the last year to inventory access points, determine existing and future traffic demands, and perform a safety analysis for the Patterson Road corridor. In July 2020, they prepared a draft plan that included overall project goals.

While the project team ensured that the draft ACP was sound from a transportation engineering perspective, public input is critical to making sure the ACP considers property owner concerns, to the extent feasible. To facilitate this, the first public open house was held on October 1st. Over 800 bilingual (English and Spanish) postcards were mailed to property owners and residents/ business owners abutting and near the corridor. Additionally, bilingual newspaper advertisements were placed, and the City's social media accounts were utilized to distribute information. Even with the COVID-19 Pandemic, 30 people attended the October 1st in-person open house and numerous comment forms were received.

To accommodate those who were unable to attend this open house, all exhibits, and a supplemental video were made available on GJSpeaks.org. Bilingual comment forms and answers to frequently asked questions were also available on the website.

At the open house, attendees with more complicated issues were encouraged to sign up for one-on-one meetings with the project team. City staff simultaneously identified other properties where one-on-one meeting may be beneficial. The project team has contacted those property owners and met with them.

Based on these various stakeholder, one-on-one and open house comments, there were several revisions that were made to the ACP. Revisions to the ACP in January 2021 included those access points that may remain open with a raised median along Patterson Road, but be required to close if a property/site redevelops. This distinction is especially important on sites such as existing fuel stations where large trucks require two access points.

With a new revised draft ACP, a second public open house was held, this time virtually for a week between January 6th and 12th. Bilingual notice was mailed a second time to property owners and residents/business owners abutting and near the corridor. The new draft ACP was prepared and presented to the public for additional review and comment. The virtual open house utilized GJSpeaks.org as its platform where all plan documents were available to view, and comments could be submitted giving the public the entire week to participate.

Participants with more complicated issues were encouraged to sign up for 30-minute one-on-one meetings with the project team on January 13, 2021. There were ten people that signed up for these Zoom virtual meetings. Additionally, phone calls were made to other concerned property owners and with those the project team had already met with, to resolve questions and obtain feedback. All new comments received were reviewed and considered in the preparation of the January 2021 draft Plan.

At the February 1st City Council Workshop, staff was asked to increase their public outreach. This was done utilizing GJSpeaks, social media channels, providing information to the GJ and Latino Chambers of Commerce and meeting with the Grand Junction Chamber board.

The Planning Commission held a public hearing to consider a recommendation for adoption of the Plan on February 23, 2021. At the February 23rd hearing, Planning Commission asked that Staff do further public outreach. After closing public testimony, Planning Commission tabled the public hearing until March 23rd.

At the Planning Commission meeting on March 23rd Staff requested additional time for public outreach and asked to reschedule the public hearing with Planning Commission when the Access Control Plan is ready for adoption.

<u>Public Outreach since the February 23rd Planning Commission hearing.</u>
During March, April and early May, staff communicated with individual neighborhoods, concerned citizens and business owners. This communication included meeting with the Cris-Mar neighbors, Mantey Heights neighbors (twice) and those neighbors living in the Belair/Mira Vista Drive area (twice); as well as the owner of the Valley Fair shopping center and other business owners.

To increase public engagement the notification area was increased to include 2600 properties in proximity of Patterson Road, up from around 800 addresses initially notified of the planning process. Two mailings occurred, the first mailing in March directed community members to GJSpeaks.com to review the January draft ACP and provide comments. In addition to leaving a comment on GJSpeaks, many people responded through email and posted comments on social media. The GJSpeaks

website had nearly 1200 unique pageviews between January and March, 115 views of the video and hundreds of clicks within the website to learn more about the Patterson Road ACP and review the January 2021 draft Plan.

Social media proved to be another successful means to engage the public. From Facebook, through February 23rd there were 58 comments on 3 posts, 6,687 people saw these posts and 878 people engaged by liking, commenting, or sharing with friends. Instagram and NextDoor also saw people's attention to the ACP.

From the comments received through public testimony provided at the February 23rd Planning Commission hearing, as well as on GJSpeaks, social media, email and meetings with various neighborhoods and business owners, many changes were made to the January draft ACP, creating an April draft of the access control plan. The Patterson Road ACP is now ready for Planning Commission consideration.

To further engage the public and prepare for the public hearing process, a second mailing to the 2600 properties occurred the week of April 26th seeking public review of the April draft Plan and provide their comments utilizing GJSpeaks.com. Mailed notice of the public hearings before Planning Commission and City Council in the form of notification cards were sent to all 2600 properties on May 28th. The Notice of the Planning Commission hearing was published June 1, 2021 in the Grand Junction Daily Sentinel.

The final Patterson Road Access Control Plan (ACP) documents are attached to this staff report. Many changes were made from public input between the January draft and the April draft plan. These changes have been assembled in table format and provided with this staff report as an attachment. The table provides detail of the changes incorporated into the final ACP.

Access Management Benefits

The Street Plan Functional Classification Map within the Grand Junction Circulation Plan (GVCP) identifies the corridor as a Minor Arterial from I-70B (23.75 Road) to 25 Road and a Principal Arterial from 25 Road to Lodgepole Street (30.75 Road). Arterial roadways are considered higher order roadways that carry large volumes of traffic and have limited access. Implementing access management along Patterson Road will help the City by preserving and improving traffic operations along the corridor. By preserving the capacity of Patterson Road, more traffic can be carried throughout the corridor and delay the need for additional travel lanes.

Access management provides the means to balance good mobility along a roadway with local access needs of businesses and residents. Many long-term benefits to a corridor include:

• Limiting full movement access within a corridor favors through movements and

strategically identifies locations for vehicles to enter and exit the corridor.
• Congestion is reduced, lessening travel times and providing smoother traffic flow.
• Reduces or prolongs the need to add additional thru lanes as traffic increases.
• Reduced congestion results in less air pollution.
• It has tremendous safety benefits. Studies have shown a 30% to 60% reduction in crashes on roadways where access management techniques are implemented.
• Access management is also good for business, providing safe access to customers and retaining more of a community's original market area.

ACP Study Purpose and Goals

The purpose of this study is to coordinate development and growth anticipated in the area with the transportation needs for the local community and traveling public with the intention of improving safety and maximizing the life of the four-lane section along Patterson Rd. The goals for the project are as follows:
• Provide effective and efficient through travel for traffic on Patterson Road utilizing the existing right-of-way and identify where additional right-of-way is needed.
• Provide safe, effective, and efficient access to and from Patterson Road for businesses, residents, and guests to support the economic viability of the City.
• Maintain compatibility with existing and proposed street network connections that provide local circulation to support the transportation system.
• Support alternative modal choices, including transit, pedestrian, and bicycle routes.
• Provide a plan that can be implemented in phases.
• Maintain compatibility with previous local planning efforts. Such as, the Grand Junction Circulation Plan, Ballot 2A measure, and the 2020 One Grand Junction Comprehensive Plan.

Plan Development and Approach

The existing physical and operational characteristics of Patterson Road were investigated. Then, future physical and operational characteristics were projected for a 20-year planning period based on anticipated growth in the area. The ACP was created using input from City staff, private property owners, and the general public.

To achieve the project goals, various changes to the existing Patterson Road corridor are recommended, including:
• Restriction of numerous full movement access points resulting in right-in/right-out and ¾ movement (left-in, right-in/right-out) accesses.
• Limitation of full movement access to major signalized intersections.
• Reduction of access to one location per ownership and where feasible, shared between adjacent properties.
• For properties located adjacent to Patterson Road, access points may be relocated to lower order streets, where reasonable access can be preserved.
• Out of direction travel will be limited in general to a maximum distance of one mile (½ mile each direction). Out of direction travel is the distance needed to reach an access

that has been obstructed by a center median compared to the distance needed on an undivided street.

The recommended changes to Patterson Rd will result in the following benefits:
• a 60% reduction of vehicle conflict points, which correlates to a reduction in crashes.
• a 23% reduction in conflict points for pedestrians and cyclists traveling on Patterson Rd.
• improved travel time in both directions during morning and evening peak periods.
• the addition of auxiliary lanes at major intersections to safely separate turning movements and through movements and allow through movements to travel unimpeded.
• retention of business market area over time by reducing congestion.
• increased fuel efficiency the traveling public and improved air quality by providing smoother traffic flow.

In addition to the recommended changes, several new local streets are proposed. These alternative streets provide additional circulation opportunities that will reduce local dependence on Patterson Rd by providing alternatives for restricted left-turn movements and reducing traffic at high-demand intersections.

Corridor Improvement Priorities
A base level review of corridor traffic safety and operations was conducted to support the ACP. Using a 2045 horizon year, traffic demand on the corridor is generally expected to increase by 33% in the morning peak hour and 24% in the afternoon peak hour. Since there are no well-established methods of estimating future crashes, data from 2014 to 2018 was used to evaluate existing intersection safety.

Patterson Rd intersections with the highest traffic safety and operations improvement priorities are at 25 Rd and N 12th St. The Patterson Rd segment with the highest priority for implementation of the ACP with a raised median is from 24 ½ Rd to 25 Rd due to the elevated number of driveway crashes.

Other locations on the corridor that show a high potential for crash reduction include the Patterson Rd intersections with 24 Rd, Market St, 24 ½ Rd, 25 ½ Rd, N 1st St, N 15th St, 28 ¼ Rd, 29 Rd, 29 ½ Rd, and 30 Rd. Implementation of the ACP with a raised median between 25 Rd and 12th St has a high benefit due to the number of driveway crashes recorded. Thirteen intersections on the corridor meet requirements for additional right or left turn lanes.

Other findings and recommendations for the corridor include the following:
• Alternative intersection types were considered, but it is recommended that the intersection at 24 Rd remain a conventional signalized intersection, with an additional northbound thru and eastbound left turn lane constructed to help traffic operations.

• Elimination of the traffic signal at Market St was considered because of its close proximity to 24 Rd, but due to the resulting impacts and in consideration of the potential relief that a future extension of F 1/2 Rd as a principal arterial would provide, it is recommended that the Market St intersection remain signalized.
• Restricting the 15th St to ¾ access was considered, but since the signal serves pedestrian movements and as a relief valve to 12th St, it is recommended to remain as is.
• Retain full movement for the intersection at 26 ¾ Road unless future operational or safety issues occur.
• Conduct further analysis to identify mid-block crossing locations that support pedestrian accessibility and transit access.
• Adopt alternative road connections into the City of Grand Junction's Street Plan Functional Classification Map as part of the Grand Junction Circulation Plan.

Implementation Conditions
The improvements recommended in the ACP represent a long-range plan to implement over time as traffic and safety needs arise and as funding becomes available. Construction of the improvements recommended may be completed using public and/or private funding. The following scenarios will trigger construction.

1. A property redevelops or changes use, resulting in an increase in traffic to and from the site of 20% or more.
2. Planned publicly funded project by the City.
3. A safety or operational issue develops that can be mitigated through the implementation of access management techniques consistent with the ACP.

It is important to remember that implementation of improvements recommended in the ACP will only occur with one of the triggers listed above. Without one of these scenarios, the ACP does not compel a property owner to make access changes.

Conclusion
Traffic demand on the Patterson Rd is expected to increase by 24% to 33% over the next twenty years challenging the future functionality of the corridor. Access management has been proven both nationally and statewide to effectively preserve the transportation function of arterial roadways by optimizing the performance of the road to improve the level of safety, reduce traffic congestion and preserve property values without constructing major arterial improvements. The findings of this study indicate that applying access management techniques along Patterson Rd, including the implementation of a raised median, addition of auxiliary lanes, and the consolidation of driveways, will significantly reduce conflict points for vehicles, pedestrians, and cyclists, which correlates to reduced crashes and improved safety. In addition, smoother traffic flow and improved travel times will extend the life of the existing four-lane section on Patterson Rd. Prolonging the need for additional through lanes along Patterson Rd will

result in taxpayer savings and reduced impacts to adjacent properties and businesses.

The proposed ACP and associated alternative routes provide the City with a corridor-wide vision for how to coordinate development and growth with the transportation needs on Patterson Rd. The ACP will provide clear expectations for access for both City staff and property owners/developers as land-use changes are proposed and public projects are developed. To provide for commitment to the access modifications and circulation routes recommended by this study, it is recommended that City adopt the ACP for Patterson Rd, as well as the proposed alternative routes. The ACP identifies access locations and levels of access by reference point for Patterson Rd within City limits. The ACP Table, which provides detailed conditions and requirements for each access point, is included in Appendix F. In recognition of the plan's long-range nature and the potential for conditions to change over time, the City should view this plan as a living document that can be amended to best meet future conditions and priorities for the City.

The Patterson Road Access Control Plan will become Title 38, Volume III, of the Municipal Code. It is a standalone plan in Volume III that houses the various land-use related adopted planning documents of the City.

The Plan is attached to this staff report and is proposed to be adopted by Ordinance in its entirety.

NOTIFICATION REQUIREMENTS

Published Notice was completed consistent to the provisions in Section 21.02.080 (g) of the City's Zoning and Development Code. A notice of the public hearing was published June 1, 2021 in the Grand Junction Sentinel. Mailed notice and posting are not required for Comprehensive Plan Amendments, however, a notice card was sent to the 2600 properties the City directly engaged with in the planning process. Also, GJSpeaks and the City's social media accounts were used to get the word out to the community with a large response through those means.

ANALYSIS

The Patterson Road Access Control Plan will become Title 38 in Volume III, of the Municipal Code and one of many planning documents that support and implement the City's Comprehensive Plan. Pursuant to Section 21.02.130(c)(2) of the Grand Junction Zoning and Development Code, the City may adopt Plans consistent with the vision, goals and policies of the Comprehensive Plan and the following criteria for Plan Amendments are met:

21.02.130(c) Criteria

(1) The City may amend the Comprehensive Plan, neighborhood plans, corridor plans and area plans if the proposed change is consistent with the vision (intent), goals and policies of the Comprehensive Plan and:

Upon adoption, the Patterson Road ACP becomes a new Plan to Volume III of the Municipal Code and will become Title 38. The One Grand Junction Comprehensive Plan and all other adopted Plans by the City are elements of Volume III titled "Comprehensive Plan" and thus codified in Volume III.

This ACP is the first access control plan for Patterson Road and its need continues to grow as traffic increases with new development occurring along and in proximity of the corridor. Many Grand Junction residents and visitors use the corridor for their transportation needs. The ACP is supported by the recently adopted 2020 One Grand Junction Comprehensive Plan, in particular Strategy f under Goal 2 of Plan Principal 6 Efficient and Connected Transportation, which strategy states, "Access Management. - Plan, implement, and support the development of Access Control Plans (e.g. Patterson Road and North Avenue)". The Patterson Road Access Control Plan Study is ready for adoption as a planning document implementing the City's Comprehensive Plan adopted December 16, 2020.

Additionally, the proposed ACP implements the 2020 One Grand Junction Comprehensive Plan in the following ways.

It furthers the planning that is needed to help support a resilient and diverse economy and plan for future key infrastructure projects. It helps plan for infrastructure including center medians that support urban development. It further plans for creating a safe, balanced, and well-connected transportation system complete with center medians, shared accesses and turn lanes to help capacity and safety. These are supported specifically by the Plan Principals, Goals and Strategies from the 2020 One Grand Junction Comprehensive Plan listed below.

Plan Principle 2: Resilient and Diverse Economy
Goal 6. Invest in key infrastructure that supports business.
Strategy: Continue to strategically invest in transportation and utility infrastructure to serve business and implement the Grand Junction Circulation Plan…."

The adoption of the Patterson Road ACP furthers the planning that is needed to help support a resilient and diverse economy and plan for key infrastructure projects.

Plan Principal 3: Responsible and Managed Growth
Goal 4. Maintain and build infrastructure that supports urban development.

The ACP helps plan future infrastructure including center medians that support urban development.

Plan Principal; 6: Efficient and Connected Transportation
Goal 1. Continue to develop a safe, balanced, and well-connected transportation system that enhances mobility for all modes - Strategy f Complete Streets - subsection vi. Constructing center medians, shared accesses and turn lanes to enhance roadway capacity and safety.
Goal 2 Actively manage transportation systems and infrastructure to improve reliability, efficiency, and safety - Strategy f Access Management. Plan, implement, and support the development of Access Control Plans (e.g. Patterson Road and North Avenue).

Staff finds that the ACP is consistent with the vision, goals, principles and policies of the One Grand Junction Comprehensive Plan and other Plans adopted under Volume III. This criterion has been met.

(i) Subsequent events have invalidated the original premises and findings; and/or

The Patterson Road corridor continue to see increases in traffic and public safety concerns; however, this is not a subsequent event that invalidates an original premise of an existing Plan since this is the first Access Control Plan for Patterson Road.

Therefore, Staff finds that this criterion has not been met.

(ii) The character and/or conditions of the area has changed such that the amendment is consistent with the Plan; and/or

Similar to criterion (i), since this is the first access control plan for Patterson Road there is nothing that would support this criterion regarding changing character or conditions of the area.

Therefore, Staff finds that this criterion has not been met.

(iii) Public and community facilities are adequate to serve the type and scope of land use proposed; and/or

This criterion is not applicable since the adoption is of an Access Control Plan and not about specific land uses.

Therefore, Staff finds that this criterion has not been met.

(iv) An inadequate supply of suitably designated land is available in the community, as defined by the presiding body, to accommodate the proposed land use; and/or

This criterion is not applicable since the adoption is of an Access Control Plan and not a land use map amendment.

Therefore, Staff finds that this criterion has not been met.

(v) The community or area, as defined by the presiding body, will derive benefits from the proposed amendment;

The purpose of the Patterson Road Access Control Plan (ACP) is to coordinate development and growth anticipated in the area with the transportation needs for the local community and traveling public with the intention of improving safety and maximizing the life of the four-lane section along Patterson Rd. The goals for the project are as follows:
§ Provide effective and efficient through travel for traffic on Patterson Road utilizing the existing right-of-way and identify where additional right-of-way is needed.
§ Provide safe, effective, and efficient access to and from Patterson Road for businesses, residents, and guests to support the economic viability of the City.
§ Maintain compatibility with existing and proposed street network connections that provide local circulation to support the transportation system.
§ Support alternative modal choices, including transit, pedestrian, and bicycle routes.
§ Provide a plan that can be implemented in phases.
§ Maintain compatibility with previous local planning efforts. Such as, the Grand Junction Circulation Plan, Ballot 2A measure, and the 2020 One Grand Junction Comprehensive Plan.

Access Control Plans work to coordinate planning, regulation, and design of access to properties along a corridor. The Patterson Road ACP involves the systematic control of the location, spacing, design, and operations of driveways, median openings, and street connections and manages the road corridor to not only preserve the transportation functions of corridor, but also to help preserve property values and the economic viability of abutting developments. It optimizes the performance of the roadway to improve the level of safety, reduction of traffic congestion and is key in minimizing the need to add additional lanes of traffic (expansion from 2 lanes to 3 lanes each way) that would have a much greater impact to the corridor and adjacent properties.

Community benefits also include:
§ a 60% reduction of vehicle conflict points, which correlates to a reduction in crashes.
§ a 23% reduction in conflict points for pedestrians and cyclists traveling on Patterson Rd.
§ improved travel time in both directions during morning and evening peak periods.
§ the addition of auxiliary lanes at major intersections to safely separate turning

movements and through movements and allow through movements to travel unimpeded.
§ retention of business market area over time by reducing congestion.
§ increased fuel efficiency the traveling public and improved air quality by providing smoother traffic flow.

Staff finds that this criterion has been met.

The five criteria above only require one of them to be met to be satisfied. The proposed Patterson Road ACP is a new Plan to Volume III of the Municipal Code and is not an update or amendment to that Volume.

STAFF RECOMMENDATION AND FINDINGS OF FACT
After reviewing the Patterson Road Access Control Plan, CPA-2021-17, a request by the City of Grand Junction to adopt the Patterson Road Access Control Plan (ACP), as Volume III, Title 38 of the Municipal Code, the following findings of fact have been made:

1. The proposed Access Control Plan is consistent with the goals and policies of the Comprehensive Plan.

2. At least one of the review criteria in Section 21.02.130(c)(2) of the Grand Junction Municipal Code have been met.

Staff recommends approval of the request.

SUGGESTED MOTION:

Mr. Chairman, on the Patterson Road Access Control Plan, CPA-2021-17, I move that Planning Commission forward a recommendation of adoption of the Patterson Road ACP as an element of the Grand Junction Comprehensive Plan and implementing the Comprehensive Plan with the findings of fact as listed in the staff report.

Attachments

1. Patterson Rd Access Study
2. Patterson Rd Access Study- Appendices
3. GJSpeaks - Response to Public Comments
4. Public Comments on the April 2021 Patterson Road ACP draft
5. Public Comments on the January 2021 Patterson Road ACP draft
6. Public Notice - June 8th PC Hearing - Patterson Road ACP
7. Patterson Rd ACP Brochure - March 2021
8. Patterson Rd ACP Brochure - April 2021
9. FAQ

10. Planning Commission Minutes - 23 Feb 2021 - Patterson Road ACP
11. Proposed ordinance _ Pattterson Rd Access Control Plan

City of Grand Junction
Patterson Road
Access Study

US 6 / US 50 / I-70B to Lodgepole Street

June 2021

CITY OF Grand Junction COLORADO

Stolfus

CITY OF GRAND JUNCTION
PATTERSON ROAD
ACCESS STUDY

US 6/ US 50/ I-70B to Lodgepole Street

June 2021

Prepared for:

City of Grand Junction
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SAI Reference No. 4000.038.01

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EXECUTIVE SUMMARY

Project Background

Since its construction in 1984, Patterson Rd has served as a critical part of Grand Junction's transportation system. It serves as a major east-west arterial corridor and is an important public resource for the community. Sustained and successful economic development along the corridor is increasing travel demand and necessitating the need to improve safety, operations, and reliability. Effective access management is essential in order to optimize the performance of the road to improve the level of safety, reduce traffic congestion and improve the quality of this corridor without constructing major arterial improvements. In recognition of the benefits of access management and the need to proactively plan for the future, the City of Grand Junction identified an Access Control Plan (ACP) as a first step toward planning for both private development access and for public improvement projects along Patterson Rd. Similar studies have been developed both nationally and statewide and it has been demonstrated that access-managed corridors not only preserve the transportation functions of roadways, but also help preserve property values and the economic viability of abutting developments. ***The purpose of this study is to coordinate development and growth anticipated in the area with the transportation needs for the local community and traveling public with the intention of improving safety and maximizing the life of the four-lane section along Patterson Rd.***

The ACP coordinates planning, regulation, and design of access to Patterson Rd from adjacent property, including new land development. The plan incorporates the systematic control of the location, spacing, design, and operation of driveways, median openings, and street connections to the roadway. The ACP defines existing and future access locations and configurations (movements allowed), with consideration for circulation and alternative access opportunities. It is a long-range planning document that identifies access conditions that will be implemented as roadway corridor and land-use characteristics change. The ACP will provide clear expectations for access for both City staff and property owners/developers.

Study Area

The study area consists of approximately seven miles of Patterson Rd (F Rd) between I-70B (23.75 Rd) and Lodgepole St (30.75 Rd). The segment on the east end that extends beyond City limits is controlled by Mesa County and not included in this plan. In general, land use within the city limits is suburban in nature with residential and commercial uses. There are currently 284 access points on Patterson Rd within the study area. A majority of access points are full movement. The access points are classified as follows:

- 14 Signalized public road intersections (27 access points)
- 54 Unsignalized public road intersections (62 access points)
- 2 unsignalized private road intersections (2 access points)
- 82 business access points
- 95 residential access points
- 18 maintenance or field access points

Project Goals

The Street Plan Functional Classification Map within the Grand Valley Circulation Plan identifies the corridor as a Minor Arterial from I-70B (23.75 Rd) to 25 Rd and a Principal Arterial from 25 Rd to Lodgepole St (30.75 Rd). Arterial roadways are considered higher order roadways that carry large volumes of traffic and have limited access. Implementing access management along Patterson Rd will help the City by preserving and improving traffic operations along the corridor. By preserving the capacity of Patterson Rd, more traffic can be carried throughout the corridor without the construction of additional travel lanes.

Access management also has tremendous safety benefits. Of the reported crashes on Patterson Rd, 64.0% (759) were at or related to an intersection. Studies have shown a 30% to 60% reduction in crashes on roadways where access management techniques are implemented. The reduction in vehicle conflicts has the added benefit of improving traffic flow, reducing travel times, increasing public safety, reducing economic loss, increasing fuel efficiency and contributing less to air pollution. Access management is also good for business, providing safe access to customers and retaining more of a community's original market area by limiting congestion that may prevent some customers from making a trip.

With this in mind and recognizing the primary purpose of the ACP is to improve safety and the traveling experience along the corridor and coordinate anticipated growth in the area with the roadway network, the following project goals were established:

- Provide effective and efficient through travel for traffic on Patterson Rd utilizing the existing right-of-way and identify if additional right-of-way is needed.
- Provide safe, effective, and efficient access to and from Patterson Rd for businesses, residents, and guests to support the economic viability of the City of Grand Junction and Mesa County.
- Maintain compatibility with existing and proposed street network connections that provide local circulation to support the transportation system.
- Support alternative modal choices, including transit, pedestrian, and bicycle routes.
- Provide a plan that can be implemented in phases.
- Maintain compatibility with previous local planning efforts. Such as, the Grand Valley Circulation Plan, Ballot 2A measure, and the One Grand Junction Comprehensive Plan.

Plan Development and Approach

The existing physical and operational characteristics of Patterson Rd were investigated. Next, future physical and operational characteristics were projected for a 20-year planning period based on anticipated growth in the area. The ACP was created using input from City staff, private property owners, and the general public.

To achieve the project goals, various changes to the existing Patterson Rd corridor are recommended, including:

- Restriction of numerous full movement access points resulting in right-in/right-out and ¾ movement (left-in, right-in/right-out) accesses.
- Limitation of full movement access to major signalized intersections.
- Consolidation of access to one location per ownership and where feasible, shared between adjacent properties.
- For properties located adjacent to Patterson Rd, access points may be relocated to lower order streets where reasonable access can be provided.

- Out-of-direction travel will be limited in general to a maximum distance of one mile (½ mile each direction). Out-of-direction travel is the distance needed to reach an access that has been obstructed by a center median compared to the distance needed on an undivided street.

The recommended changes to Patterson Rd will result in the following benefits:

- a 60% reduction of vehicle conflict points, which correlates to a reduction in crashes
- a 45% reduction in conflict points for pedestrians and cyclists traveling on Patterson Rd
- improved travel time in both directions during morning and evening peak periods
- the addition of auxiliary lanes at major intersections to safely separate turning movements and through movements and allow through movements to travel unimpeded
- retention of business market area over time by reducing congestion
- increased fuel efficiency the traveling public and improved air quality by providing smoother traffic flow

In addition to the recommended changes, several new local streets are proposed. These alternative streets provide additional circulation opportunities that will reduce local dependence on Patterson Rd by providing alternatives for restricted left-turn movements and reducing traffic at high-demand intersections.

Public Involvement

Input from corridor stakeholders including property owners, occupants, partner agencies, and the general public was critical to the ACP development. In advance of the first open house, agency stakeholder meetings with Mesa County, Grand Junction Fire District, Clifton Fire District, Mesa County Valley School District 51, Grand Valley Transit and Mesa County Regional Transportation Planning Organization were held. In compliance with Mesa County Public Health requirements, a public open house was held at Faith Heights Church on October 1, 2020. Over 800 bilingual invitations were sent out and notice was posted on City social media feeds for the open house. Additionally, all exhibits were posted on the GJSpeaks website for those who did not attend in person.

Following the public open house, the project team met with key property owners and anyone who signed up for one-on-one meetings at the open house. The plan was then updated to reflect the public input received from the open house and subsequent meetings. While Mesa County Public Health restrictions prevented a second in-person open house, the updated ACP was presented as a "virtual open house" on GJSpeaks from January 6-12, 2021. Again, postcards were mailed to owners and occupants along Patterson Rd along with notices to the general public. This provided an additional opportunity to review the revised ACP and provide new comments. Also offered on GJSpeaks was a sign-up to meet with the project team on January 13th over Zoom to resolve any additional questions.

At the February 23rd Planning Commission meeting, it was determined that additional public involvement was required before the plan could proceed. Nearly 2,600 postcards were sent out to corridor stakeholders inviting them to view exhibits on GJSpeaks and meet with City staff. Staff proceeded to meet with Home Owners Associations, business complex representatives, emergency serves, transit agencies, the Chamber of Commerce, and the school district in addition to individual property owners. Through this additional process, several access points were changed in the plan.

Corridor Improvement Priorities

A base level review of corridor traffic safety and operations was conducted to support the ACP. Using a 2045 horizon year, traffic demand on the corridor is generally expected to increase by 33% in the morning peak hour and 24% in the afternoon peak hour. Since there are no well-established methods of estimating future crashes, data from 2014 to 2018 was used to evaluate existing intersection safety.

Patterson Rd intersections with the highest traffic safety and operations improvement priorities are at 25 Rd and N 12th St. The Patterson Rd segment with the highest priority for implementation of the ACP with a raised median is from 24 ½ Rd to 25 Rd due to the elevated number of driveway crashes.

Other locations on the corridor that show a high potential for crash reduction include the Patterson Rd intersections with 24 Rd, Market St, Home Depot access, 24 ½ Rd, 25 ½ Rd, N 1st St, N 7th St, N 15th St, 28 Rd, 28 ¼ Rd, 29 Rd, 29 ½ Rd, and 30 Rd. Implementation of the ACP with a raised median between 25 Rd and 12th St has a high benefit due to the number of driveway crashes recorded. Fourteen intersections on the corridor meet requirements for additional right or left turn lanes.

Other findings and recommendations for the corridor include the following:

- Alternative intersection types were considered, but it is recommended that the intersection at 24 Rd remain a conventional signalized intersection, with an additional northbound thru and eastbound left turn lane constructed to help traffic operations.
- Elimination of the traffic signal at Market St was considered because of its close proximity to 24 Rd, but due to the resulting impacts and in consideration of the potential relief that a future extension of F 1/2 Rd as a principal arterial would provide, it is recommended that the Market St intersection remain signalized.
- Restricting the 15th St to ¾ access was considered, but since the signal serves pedestrian movements and as a relief valve to 12th St, it is recommended to remain as is.
- Conduct further analysis to identify mid-block crossing locations that support pedestrian accessibility and transit access.
- Adopt alternative road connections into the City of Grand Junction's Street Plan Functional Classification Map as part of the Grand Junction Circulation Plan.

Implementation Conditions

The improvements recommended in the ACP represent a long-range plan to implement over time as traffic and safety needs arise and as funding becomes available. Construction of the improvements recommended may be completed using public and/or private funding. The following scenarios will trigger construction.

1. A property redevelops or changes use, resulting in an increase in traffic to and from the site of 20% or more.
2. Planned publicly funded project by the City.
3. A safety or operational issue develops that can be mitigated through the implementation of access management techniques consistent with the ACP.

Implementation of improvements recommended in the ACP will only occur with one of the triggers listed above. Without one of these scenarios, the ACP does not compel a property owner to make access changes.

1.0 INTRODUCTION

1.1 Project Background

Patterson Rd is a critical east-west arterial corridor for Grand Junction's large and growing community. Sustained and successful economic development along the corridor is increasing travel demand and necessitating the need to improve safety, operations, and reliability. Applying access management along arterial corridors such as Patterson Rd is a proven technique to help communities preserve the transportation function of existing corridors, thereby prolonging the need for major arterial improvements, such as the addition of through lanes. A raised median, consistent with the City's Principal Arterial section, is a key access management technique that reduces conflicts and improves traffic flow, which will extend the life of the four-lane section on Patterson Rd. However, in considering the implementation of medians, it is also important to consider access locations, turn lane requirements, and circulation on a corridor-wide basis. In recognition of the benefits of access management and the need to proactively plan for the future, the City of Grand Junction identified an Access Control Plan (ACP) as a first step toward planning for both private development access and for public improvement projects along Patterson Rd.

The purpose of this study is to coordinate development and growth anticipated in the area with the transportation needs for the local community and traveling public with the intention of improving safety and maximizing the life of the four-lane section along Patterson Rd. The goals for the project are as follows:

- Provide effective and efficient through travel for traffic on Patterson Rd utilizing the existing Right-of-Way and identify if additional Right-of-Way is needed
- Provide safe, effective, and efficient access to and from Patterson Rd for businesses, residents, and guests to support the economic viability of the City of Grand Junction and Mesa County
- Maintain compatibility with existing and proposed street network connections that provide local circulation to support the transportation system
- Provide a plan that can be implemented in phases
- Support alternative modal choices, including transit, pedestrian, and bicycle routes
- Maintain compatibility with previous local planning efforts

The western ACP limit begins at the co-located highways US 6, US 50 and I-70B. The ACP limits then extend 7.35 miles to just east of the City boundary at Lodgepole St. Mesa County was not involved in the development of the ACP so any recommendations for those areas outside City limits may only be implemented as part of an annexation. The limits of the Patterson Rd ACP are illustrated in Figure 1.

This report summarizes the study process, analyses, findings and recommendations for access modifications within the Patterson Rd corridor.

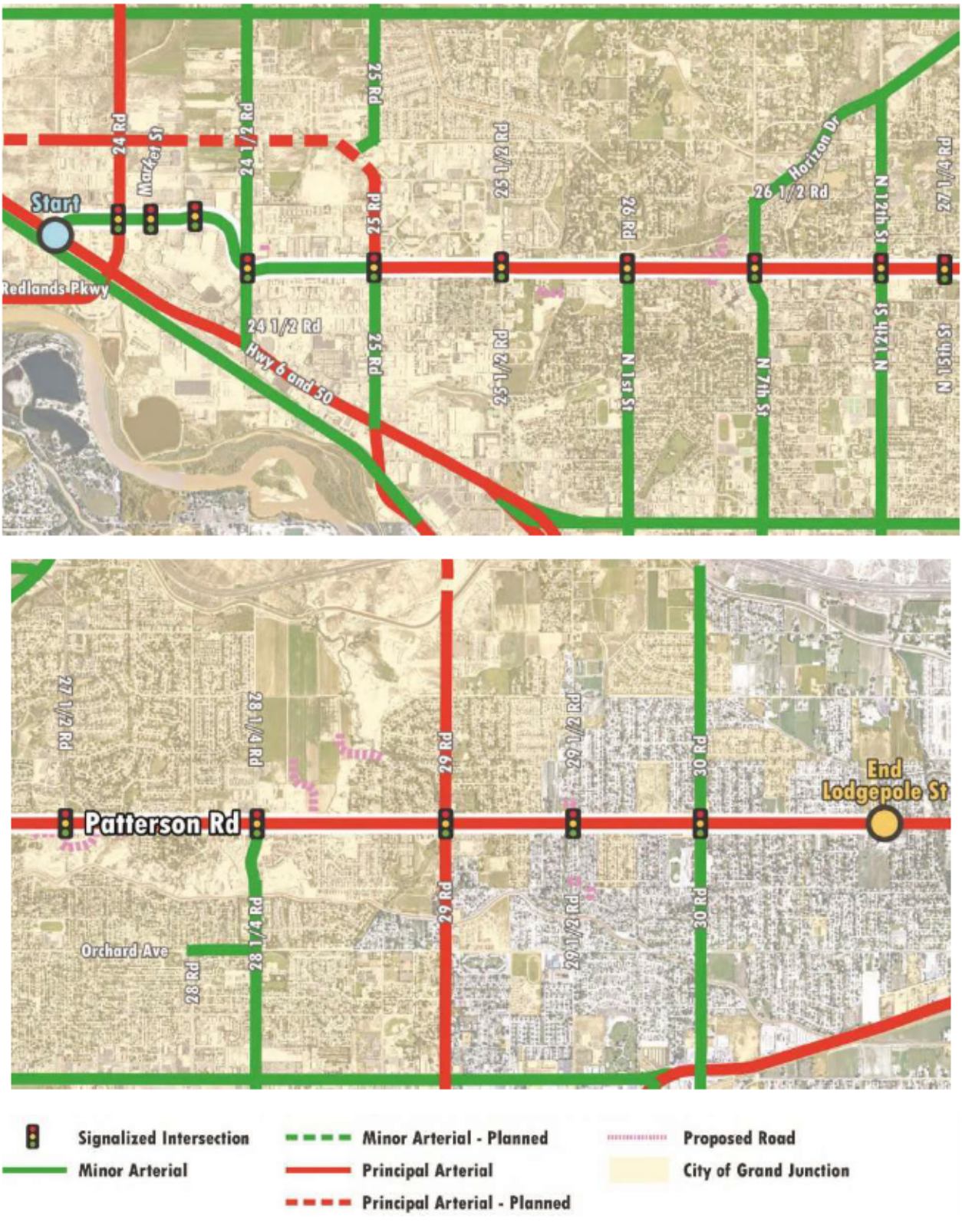


Figure 1. Study Area

1.2 Public Involvement

Input from corridor stakeholders, including property owners, tenants, and the general public, was a critical element of the project. Multiple techniques were used to engage stakeholders, including advertised public open houses, one-on-one meetings/phone calls with interested stakeholders, public presentations to the Grand Junction City Council, and project information posted on the GJSpeaks website.

An advertised project-specific public open house was held at Faith Heights Church on October 1, 2020 to present and discuss a draft ACP, review access management principles, and gather public input on the plan. Given Mesa County Public Health restrictions in place at the time, open house exhibits were also made available along with an introductory video on the GJSpeaks website. Corridor property owners, local government representatives, and other interested individuals who contacted the project team prior to the open houses were invited by first class mail and e-mail, when provided. Bilingual postcards were mailed to 841 property owners, businesses, and residential occupants on or adjacent to the corridor.

Due to additional Mesa County Public Health restrictions, public presentation of the revised ACP was conducted online only. Exhibits were available for public consumption beginning on January 6, 2021 and concluded with virtual one-on-one meetings with the project team on January 13th. Postcards were mailed to an updated list of 740 property owners, businesses, and residential occupants on or adjacent to the corridor. Invitations to both open houses were posted on City social media accounts and a legal public notice was posted in the Daily Sentinel.

Exhibits displayed at both open houses included:

- Project goals
- Access management principles and techniques
- Patterson Rd Access Control Plan Map
- Implementation
- Schedule

The same exhibits were also available for review on the GJSpeaks website. Representatives from the City and the consultant team were available for questions and discussion at the first open house where 30 people attended. At the second open house, which was available online for a one-week review period, ten people reserved one-on-one meetings with the project team and attended via Zoom on January 13th. One additional meeting was held with neighboring property owners over telephone later in the week.

Following the October public open house, the project team held a series of one-on-one meetings with corridor property owners. Five meetings were held over Zoom and six other property owners declined to meet or did not respond to multiple inquiries by the project team. The project was also discussed with several interested parties via telephone at various times during plan development.

Public comments were received at all public outreach events via email, regular mail, and from the online platform Survey Monkey. A list of one-on-one meeting participants, comment sheets, and open house sign-in sheets can be found in Appendix A. The project team updated City Council on project progress and development on several occasions. An in-person presentation was made to council and updates were provided via written memorandums from City staff. Final presentations to City Council for plan adoption will be held in a public hearing on March 3, 2021.

2.0 ACCESS MANAGEMENT – BENEFITS, PRINCIPLES AND TECHNIQUES

As defined by the *Access Management Manual, TRB, Second Edition 2014*, "Access management is the coordinated planning, regulation, and design of access between roadways and land development. It involves the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway." Developing an ACP provides local authorities with the opportunity to develop a single transportation plan that considers multiple access points along a segment of roadway as a network rather than as individual access points. Corridor specific issues such as intersection spacing, traffic movements, circulation, land use, topography, alternative access opportunities, and other local planning documents may be considered in developing an ACP. The Plan does not define capacity improvements, off-network improvements, or funding sources for access improvements, although municipalities often consider off-network improvements in conjunction with an ACP. The Plan is a long-range planning document that identifies access conditions that will be implemented as roadway and land-use characteristics change.

2.1 Access Management Benefits

Access management provides the means to balance good mobility along Patterson Rd with local access needs of businesses and residents. Implementation of access management principles and techniques on local transportation networks can provide the following long-term benefits for roadway users, the community, and businesses:

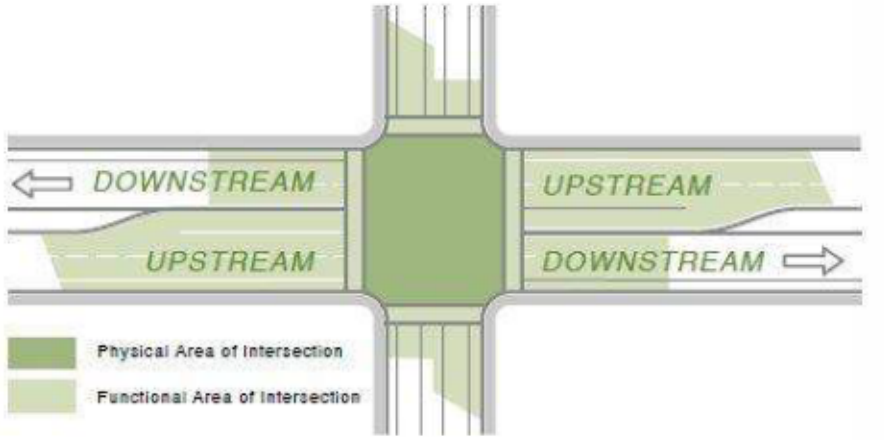
- Improves safety
  - Fewer decision points and less conflict potential for motorists, cyclists, and pedestrians result in a reduced number of crashes.
  - Safe access to businesses and residences is provided.
- Increases ability to accommodate traffic demands
  - Limiting full movement access within a corridor favors through movements and strategically identifies locations for vehicles to enter and exit the corridor.
  - Congestion is reduced, lessening travel times and providing smoother traffic flow.
  - Reduce or prolong the need to add additional thru lanes as traffic increases.
  - Improved operations on the roadway provides opportunities to reduce delay on the local street system.
  - Reduced congestion results in less air pollution.
- Preserves property values and the economic viability of abutting development
  - A more efficient roadway system captures a broader market area.
  - A more predictable and consistent development environment is created.
  - Well-defined driveways with suitable spacing make it easier for customers to enter and exit businesses safely, thereby encouraging customers to patronize corridor businesses.
- Encourages use and development of local streets within the periphery of the corridor
  - Allows traffic to access local amenities without using Patterson Rd, providing convenient local access and circulation and reduced volumes on Patterson Rd.

2.2 Guiding Principles

Access management centers around limiting and consolidating access along major roadways and focusing access for development on a supporting local street network and circulation system. The following guiding principles to access management were applied in the development of the Plan for Patterson Rd:

- Limit the number of direct access points to the corridor
- Locate major intersections (existing or potential future signals) to favor through movements and to accommodate infrastructure for turning movements
- Minimize the number of locations where vehicles merge, split, or cross
- Remove turning vehicles from through traffic lanes
- Provide a supporting local street network and circulation system

In addition, the functional intersection area was considered in evaluating the spacing between major intersections. The *American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets, 2011* and *Access Management Manual, TRB, Second Edition 2014* indicates that separation of access points should not be less than the functional area of the intersection. The functional intersection area extends upstream and downstream from the physical intersection as shown below.



Source: Federal Highway Administration (FHWA) Access Management in the Vicinity of Intersections Technical Summary

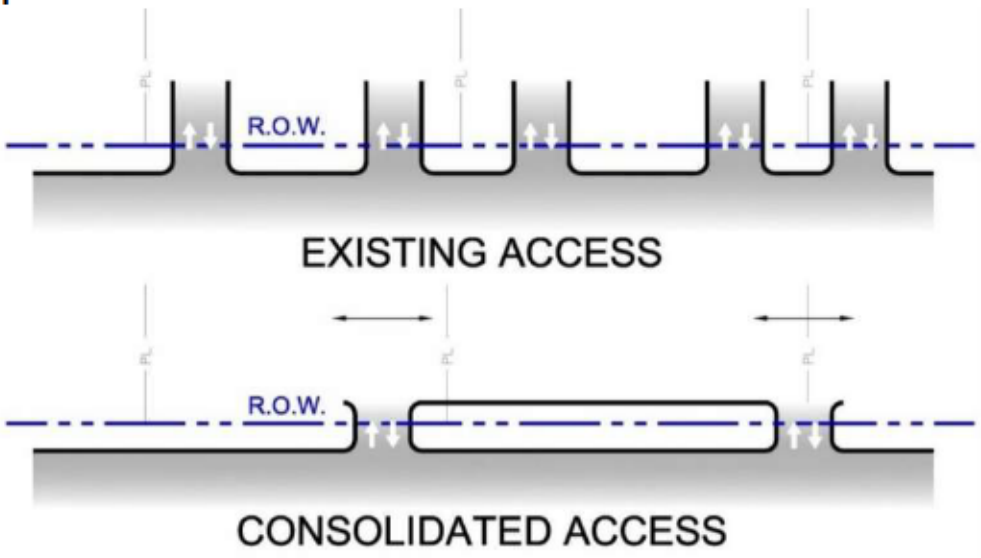
The upstream distance is a combination of the storage length, deceleration and taper length, and the perception-reaction distance required for the speed of the segment. The downstream distance is measured as either acceleration length or decision sight distance. Providing acceleration length allows vehicles to accelerate to normal speed without conflict. Providing decision sight distance allows drivers to pass through an intersection before considering potential conflicts at the next intersection. Acceleration length was identified as the controlling downstream functional intersection distance for this corridor due to the high speed (between 35 and 45 mph) and the existing use of acceleration lanes. The functional intersection area depends on the speed of the segment and the number of projected turning vehicles.

2.3 Techniques

Several access management techniques, illustrated on the following pages, may be used to achieve the principles outlined above and to realize the benefits of access management.

Principle: Limit the number of direct access points to the corridor

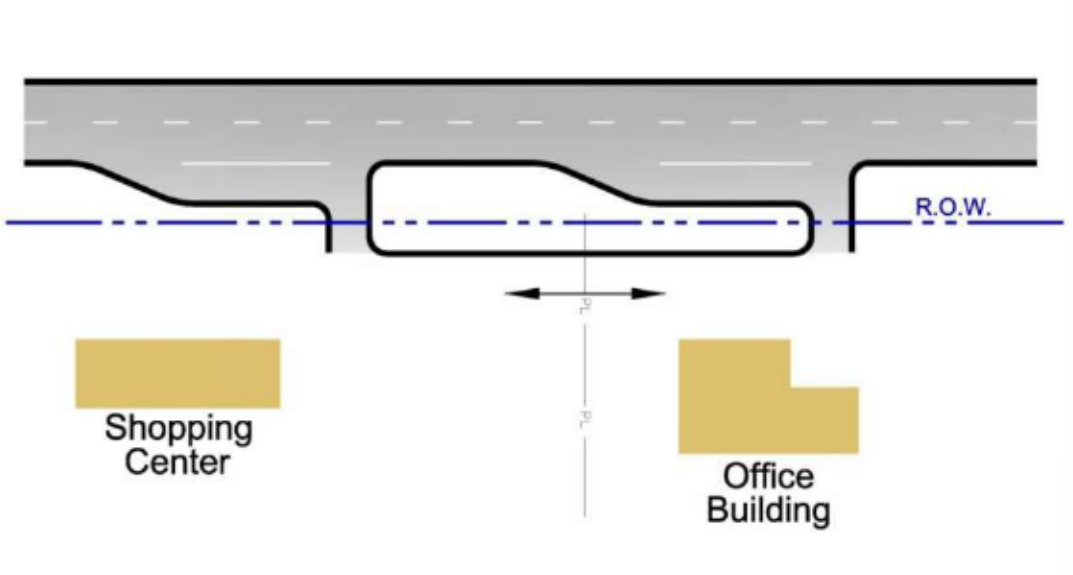
Technique: Consolidate Access



Consolidate access points by:

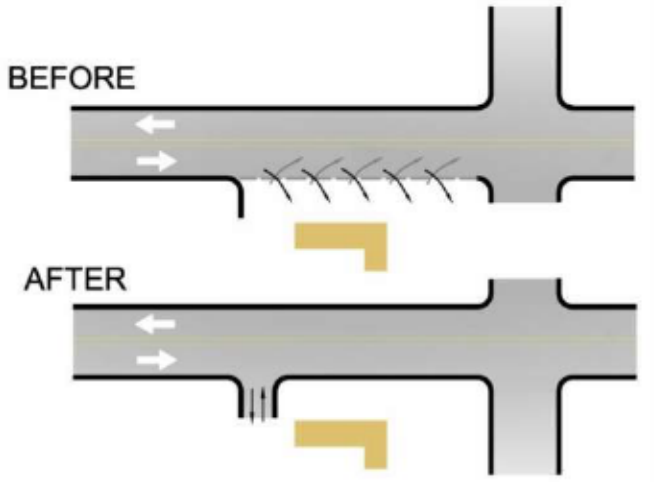
- *Reducing the number of access points that serve a single property/ownership*
- *Reducing the number of frontage road access points to the roadway*
- *Providing joint access for multiple properties at or near a property line*

Technique: Connect Adjacent Properties



Connect adjacent properties to provide circulation between properties and increase access opportunities for multiple properties.

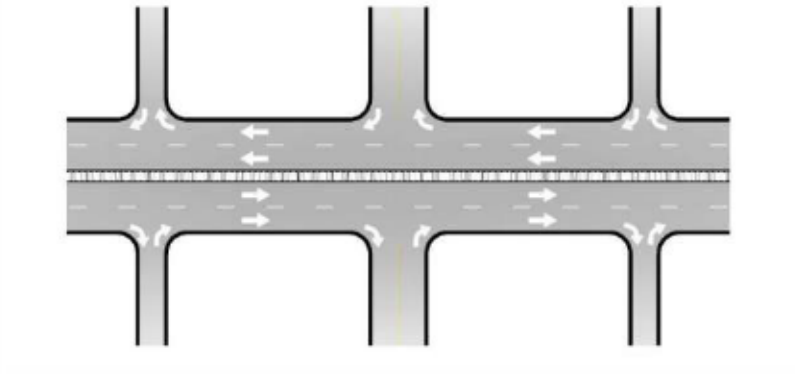
Technique: Define Driveways



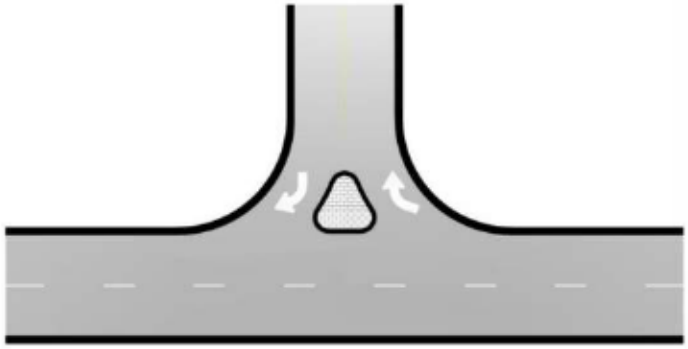
Define driveways to provide clear identification of entrance and exit locations.

Principle: Minimize the number of locations where vehicles merge, split, or cross

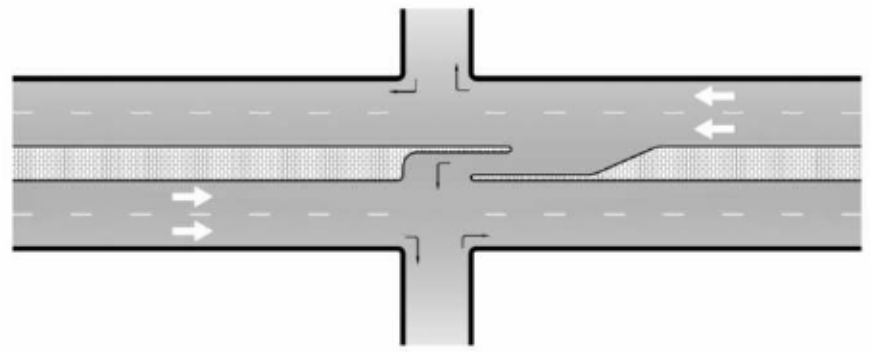
Technique: Install Medians and Islands



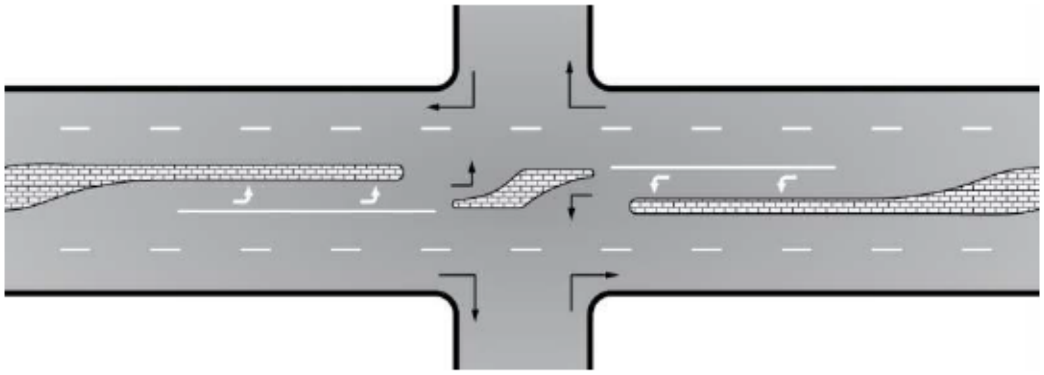
Right-in/right-out with raised median eliminates left turn movements between major intersections throughout a corridor. This is the preferred technique for Patterson Road.



Right-in/right-out with channelizing island eliminates left turn movements at specific locations. This technique is a potential interim solution where a median may be unreasonable to construct for a single property due to space constraints at time of development.



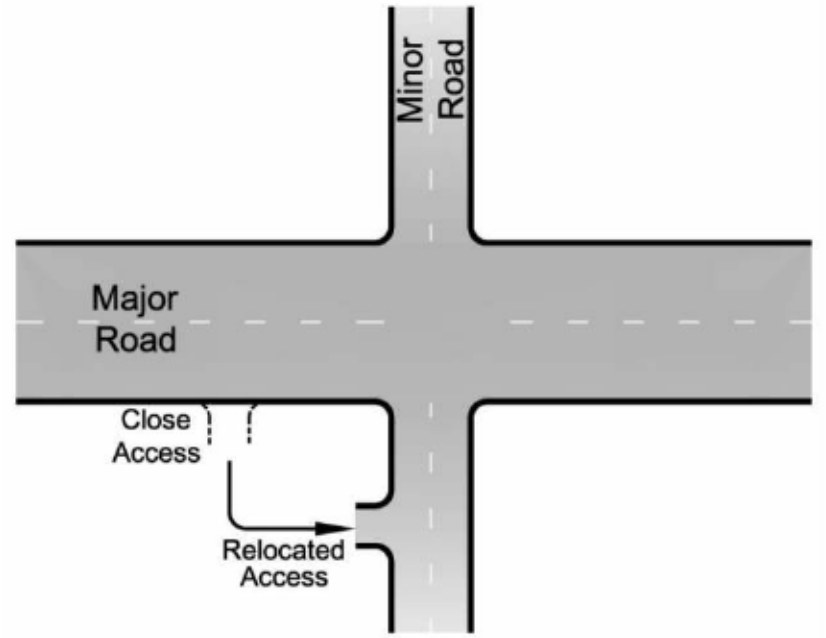
Directional median opening or a ¾ movement limits left turn movements to one direction at strategic locations where increased access is beneficial for safety or operational reasons.



A ¾ movement limits left turn movements where increased access is beneficial on both sides of the street.

Principle: Provide a supporting local street network and circulation system

Technique: Provide Cross St Access



Relocate access to a side street to:

- *Reduce the number of direct access points to the major roadway.*
- *Provide safe and easy access to a minor roadway intersection with the major roadway.*
- *Provide opportunities to use an alternate local route, thereby avoiding use of the major roadway completely.*

3.0 EXISTING CONDITIONS

3.1 Land Use Characteristics

The study area encompasses just over seven miles within the Grand Junction city limits. The corridor features intense commercial land use at its western end extending two miles to 25 ½ Rd where more residential uses intermix with commercial development. East of 15th St (27 ¼ Rd), development along the corridor is largely residential. Major developments that directly access Patterson Rd include the Mesa Mall at 24 ½ Rd and St. Mary's Medical Center at 7th St (26 ½ Rd).

3.2 Roadway Characteristics

Traveling east, the posted speed limit on Patterson Rd is 35 mph at the west end of the corridor until it increases to 40 mph east of 24 ½ Rd. East of 1st St (26 Rd) it dips down to 35 mph, but increases back to 40 mph east of 15th St (27 ¼ Rd). East of 29 Rd, the speed limit increases to 45 mph, where it remains the rest of the study area.

Patterson Rd is generally a four-lane arterial with a Two-Way Left-Turn Ln (TWLTL). East of 1st St (26 Rd) there is no TWLTL for approximately ¼ mile and raised medians are in place adjacent to turn lanes at several signalized intersections. Bike lanes exist on both sides of the roadway between 28 ¼ Rd and the end of the study area at Lodgepole St. There are 15 signalized intersections within the study area, as shown in Figure 1.

3.3 Existing Access Inventory

There are currently 288 access points along Patterson Rd within the study area. Full movement access is provided at 261 locations, 34 of which are signalized. Access restricting left turns onto Patterson Rd (3/4 access) is provided at 15 locations. Right In-Right Out access is provided at 12 locations.

The following provides a description of the accesses by type:

Public Rd Unsignalized (PRU) – Full or partial movement, stop-controlled intersection providing direct access to a publicly owned roadway. There are 62 PRU access points to Patterson Rd in the study area.

Public Rd Signalized (PRS) – Full or partial movement, signal-controlled intersection providing direct access to a publicly owned roadway. There are 27 PRS access points to Patterson Rd in the study area.

Private Rd Unsignalized (PVRU) – Full or partial movement, stop-controlled intersection providing direct access to a private property. These roadways are maintained privately. There is 1 PVRU access point to Patterson Rd in the study area.

Residential Access (R) – Full movement private roadway access points used on a regular basis by limited traffic. These types of access points include single-family private driveways. There are 95 R access points to Patterson Rd in the study area.

Business Access (BA) – Full movement roadway access points serving businesses within the study area. These types of access points are typically used multiple times daily by a variety of traffic types. There are a total of 77 BA access points to Patterson Rd in the study area.

Field Access (FA) – Full or partial movement access points that provide direct access from the roadway to agricultural land. These types of access points are typically not well-defined and are used infrequently. There are 14 FA access points to Patterson Rd in the study area.

Maintenance Access (MA) – Full or partial movement access points that provide direct access from the roadway for vehicles that are maintaining a public or private utility, such as a drainage structure or an electric meter. There are 4 MA access points to Patterson Rd in the study area.

Pull Off (PO) – Informal full or partial movement access points where vehicles may pull off the roadway or park, typically for shorter durations. There are 2 PO access points to Patterson Rd in the study area.

For the purposes of identifying the location of access points for this plan, all access points are defined by the approximate reference point (RP) along Patterson Rd based on the distance from US 6/ US 50/ I-70B. All access points are located at the approximate centerline of the access (+/- 50 feet). A complete inventory of existing access points is included in Appendix B.

3.4 Crash History

Crash data for a five-year period from January 1, 2014 to December 31, 2018 was reviewed for this report. Within the study area, there were 1,186 crashes within this period including 241 crashes that resulted in at least one injury and three crashes that resulted in a fatality.

Of the reported crashes, 759 (64.0%) were at or related to an intersection. Crashes were reviewed at the following intersections with Patterson Rd:

- I-70B Business Route
- 24 Rd
- Mall Entrance 1
- Mall Entrance 2
- 24 1/2 Rd
- Commerce Blvd
- 25 Rd
- Foresight Cir
- Northgate Dr
- Burkey St
- 25 1/2 Rd
- Cider Mill Rd
- Park Dr
- Meander Dr
- 26 Rd/ N 1st St
- Park Dr
- Mira Vista Rd
- 26 1/2 Rd/ N 7th St
- 8th Ct
- Viewpoint Dr
- 26 3/4 Rd
- N 12th St
- 27 1/4 Rd / N 15th St
- 27 1/2 Rd
- Spring Valley Cir
- Beechwood St
- El Corona Dr
- Santa Fe Dr
- 28 Rd
- Park Ave
- Rio Grande Dr
- 28 1/4 Rd
- Grand Cascade Way
- 28 3/4 Rd
- Legends Way
- Belhaven Way
- E Indian Creek Dr
- 29 Rd
- Partee Dr
- Chris-Mar St
- Colanwood St
- 29 1/2 Rd
- Greenfield Cir E
- Pioneer Rd
- Broken Spoke Rd
- Darby Dr
- Hudson Bay Dr
- 30 Rd
- Agana Dr
- Seranade St
- McMullin Dr
- Mesa Valley Dr
- Cottege Meadows Ct

The evaluated crash data provided some general observations about the crash patterns. Rear end (front to rear) crashes were the most prevalent crash type, accounting for approximately 42% of all crashes, followed by broadside (front to side) crashes at approximately 32%.

Level of Service of Safety (LOSS) was calculated for each intersection. The LOSS reflects how the intersection performs in regard to its expected crash frequency at a specific level of ADT (major and minor) when compared to intersections in Colorado with similar characteristics. LOSS can also indicate the potential for which crash reduction might be made if improvements were implemented and is graded as follows:

LOSS I – Below 20th Percentile (*Indicates a low potential for crash reduction)*

LOSS II – 20th Percentile to Mean (*Indicates a low to moderate potential for crash reduction)*

LOSS III – Mean to 80th Percentile (*Indicates a moderate to high potential for crash reduction)*

LOSS IV – Above 80th Percentile (*Indicates a high potential for crash reductions)*

Table 1 shows crash frequency for the five-year year period, LOSS considering all crash severities, and LOSS considering only injury or fatal crashes for each intersection. Several intersections indicate a high potential for crash reduction.

Table 1. Intersection Level of Service of Safety

Patterson Rd Intersection	Number of Crashes				LOSS All	LOSS Severe
	Property Damage Only	Injury	Fatal	Total		
I-70B Business Route	2	0	0	2	II	II
24 Rd	38	7	0	45	IV	IV
Market St	24	10	0	34	IV	IV
Home Depot Access	12	3	0	15	IV	III
24 1/2 Rd	52	8	0	60	IV	IV
Commerce Blvd	1	0	0	1	I	II
25 Rd	47	14	0	61	IV	IV
Foresight Cir	3	0	0	3	II	II
Northgate Dr	2	0	0	2	II	II
Burkey St	3	3	0	6	II	III
25 1/2 Rd	21	11	0	32	IV	IV
Cider Mill Rd	1	0	0	1	I	II
Park Dr	1	1	0	2	II	II
Meander Dr	5	3	0	8	III	III
26 Rd/ N 1st St	47	13	0	60	IV	IV
Park Dr	2	0	0	2	II	II
Mira Vista Rd	3	0	0	3	II	II
26 1/2 Rd/ N 7th St	46	4	0	50	IV	III
8th Ct	1	0	0	1	I	II

Table 1. Intersection Level of Service of Safety

Patterson Rd Intersection	Number of Crashes				LOSS All	LOSS Severe
	Property Damage Only	Injury	Fatal	Total		
Viewpoint Dr	2	0	0	2	II	II
26 3/4 Rd	0	2	0	2	II	III
N 12th St	63	15	1	79	IV	IV
27 1/4 Rd / N 15th St	29	7	0	36	IV	IV
27 1/2 Rd	26	6	0	32	III	III
Spring Valley Cir	4	2	0	6	II	II
Beechwood St	4	1	0	5	II	II
El Corona Dr	4	0	0	4	II	II
Santa Fe Dr	1	0	0	1	I	II
28 Rd	8	10	0	18	III	IV
Park Ave	0	1	0	1	I	II
Rio Grande Dr	4	1	0	5	II	II
28 1/4 Rd	21	7	0	28	IV	IV
Grand Cascade Way	1	1	0	2	I	II
28 3/4 Rd	1	0	0	1	I	II
Legends Way	2	0	0	2	I	II
Belhaven Way	3	0	0	3	II	II
E Indian Creek Dr	3	0	0	3	I	I
29 Rd	50	9	0	59	IV	IV
Partee Dr	0	1	0	1	I	II
Chris-Mar St	1	0	0	1	I	II
Colanwood St	1	0	0	1	I	II
29 1/2 Rd	17	6	1	24	IV	IV
Greenfield Cir E	1	0	0	1	I	II
Pioneer Rd	2	0	0	2	I	II
Broken Spoke Rd	2	1	0	3	II	II
Darby Dr	1	1	0	2	I	II
Hudson Bay Dr	1	0	0	1	I	II
30 Rd	30	10	0	40	IV	IV
Agana Dr	1	0	0	1	I	II
Serenade St	1	1	0	2	I	II
McMullin Dr	0	1	0	1	II	II
Mesa Valley Dr	1	0	0	1	II	II
Cottage Meadows Ct	0	1	0	1	II	II

Of the reported crashes, 74 crashes (6.2%) were at or related to a driveway on Patterson Rd. Figure 2 shows the locations of driveway crashes occurring on Patterson Rd segment by segment. The segments from 24 1/2 Rd to 12th St display the greatest number of driveway related crashes. More specifically, almost one quarter of all driveway related crashes on Patterson Rd occurred between 24 1/2 Rd to 25 Rd.

Figure 2. Patterson Rd Driveway Crashes

Overall, implementing access management techniques will reduce the number of conflict points in the study area. According to the Highway Safety manual, the reduction of access points along a roadway segment is expected to result in a reduction of crashes. A summary of the crash history is included in Appendix D.

4.0 ACCESS PLAN DEVELOPMENT AND EVALUATION

Using the traffic volume forecasts, input from the City, input from other project stakeholders and the public outreach program, previous planning efforts and guidance from the Grand Junction TEDS Manual, an Access Control Plan (ACP) was developed for the project. This Plan considers access points in logical groupings, as well as circulation opportunities via the existing and potential future local street system.

4.1 Process

The ACP was developed using a 4-step process:

Step One - Methodology and Compatibility Index

A traffic methodology and ACP methodology were established at the beginning of the project to define the purpose, approach, and assumptions used to develop the Plan. In addition, a compatibility index was developed to provide a logical means for determining whether the ACP meets the established project goals. The index identified a set of evaluation criteria that correspond with each project objective, as listed in Section 1.1. A simple rating system that identifies the plan as favorable, neutral or unfavorable with respect to each criterion was defined. Each of the three ratings under each criterion was then defined to assist in the evaluation. The traffic methodology memo can be found in Appendix D. The ACP methodology memo and compatibility index can be found in Appendix E.

Step Two – Development of the Access Control Plan

The existing inventory of access points was reviewed with existing parcel and ownership information. This review determined which parcels adjacent to Patterson Rd lacked access to Patterson Rd, which parcels had multiple accesses to consider for consolidation, and which parcels had access or potential access to an existing or proposed lower classification roadway. It also helped identify parcels that currently have shared access or could have shared access in the future. Access solutions were developed by applying access management principles and techniques discussed in Section 2.0. Major full movement intersections have generally already been identified and signalized, but were confirmed based on traffic projections, City planning documents, and anticipated growth patterns. Access for each parcel in between major intersections was either limited (right-in/right-out or ¾ movement) or provided via a lower classification roadway. In cases where multiple access points served a single ownership, access was reduced to one per ownership. Shared access between parcels was developed wherever feasible.

Step Three – Refine the Access Control Plan

A draft ACP was presented to an internal City review team. Based on comments received from the team, the draft plan was refined and presented to the City Council, Planning Commission, and the public using both virtual and in-person methods. Public comment was reviewed, and the Plan was modified at several points throughout the project, as appropriate. Improvements considered cost prohibitive, with unmanageable physical constraints, with significant traffic operational deficiencies, inconsistent with overall community expectations, or not appearing to provide a reasonable level of access, were revised. In some cases, access conditions were defined to allow phased implementation of long-term solutions. In particular, several conditional

right-in/right-out access points were identified to clearly identify access points where redevelopment would trigger closure of the access point rather than a public project.

Step Four – Evaluation

Following the public outreach process, the refined ACP was evaluated using the compatibility index described in Step One to determine whether project objectives were met.

4.2 Evaluation Results

The results of the evaluation by objective are listed in Table 2. Overall, the ACP rates favorably and is compatible with project goals. Plan adoption by the City is recommended. Details of the Plan evaluation can be found in Appendix E. A graphical representation of the ACP is presented in Figure 3 (A-P).

Table 2. Compatibility Evaluation Summary

Project Goal	Evaluation Criteria	Rating
Provide effective and efficient through travel for traffic on Patterson Rd utilizing the existing right-of-way and identify if additional right-of-way is needed.	Corridor Travel Speeds/Time	Favorable
	Functional Intersection Area	Neutral
	Number of Conflict Points	Favorable
	Right-of-way	Neutral
Provide safe, effective, and efficient access to and from Patterson Rd for businesses, residents, and guests to support the economic viability of the City of Grand Junction and Mesa County.	Intersection Sight Distance	Favorable
	Intersection LOS or Critical Movements	Neutral
	Conformance with Grand Junction TEDS Manual	Favorable
	Out-of-direction Travel Distance	Unfavorable
	Intersection Crash Risk	Favorable
	Business Market Area	Favorable

Project Goal	Evaluation Criteria	Rating
Maintain compatibility with existing and proposed street network connections that provide local circulation to support the transportation system.	Local Route Circulation	Favorable
	Serviceability of Local Routes to Developments and Properties within the Study Area	Favorable
Support alternative modal choices, including transit, pedestrian, and bicycle routes.	Pedestrian/Bicycle Parallel Access	Favorable
	Pedestrian/Bicycle Crossing Opportunities	Neutral
	Transit Opportunities	Neutral
Provide a plan that can be implemented in phases.	Public Support	Neutral
	Phasing Opportunities	Favorable
	Physical Constraints	Neutral
	Funding Opportunities	Favorable
Maintain compatibility with previous local planning efforts, such as, the GVCP Plan, Ballot 2A measure, and the One Grand Junction Comprehensive Plan.	Compatibility with Local Planning	Favorable

5.0 PLAN RECOMMENDATIONS

This section presents details of the recommended Access Control Plan (ACP) for Patterson Rd. The Plan has been developed with considerable participation from the City of Grand Junction, project stakeholders such as emergency services, Mesa County, Grand Valley MPO, Grand Valley Transit, and the public. After evaluating both existing and future conditions, the Plan defines how each access will function in the future. In general, the ACP limits full movement access to major signalized intersections. Functional intersection area was considered in evaluating the spacing between major intersections and ¾ movement intersections. Intersection-specific calculations of the functional intersection area are included at the end of Appendix E. While it is ideal to provide the full functional intersection area between full movement intersections, other site-specific considerations were considered in determining intersection spacing. At a minimum, the physical length needed to accommodate auxiliary lane lengths as defined by the TEDS Manual is provided between intersections unless otherwise noted. Most access points are intended to remain open as a right-in/right-out for the long-term. However, there are some public road access points that are located within the functional intersection area of a major intersection and they have alternate traffic circulation options. These access points have the potential to close if safety or operational issues develop. The ACP designates these as a conditional safety right-in/right-out to identify the potential risk.

In addition, access is reduced to one location per ownership and where feasible, shared between adjacent properties. Where reasonable access can be provided to an alternate lower classification cross street, access points are relocated to the cross street. Access for parcels between major intersections is limited. To maximize local circulation options, minor public road intersections and private access that serves multiple properties are identified as ¾ movement. This was done where providing the left-turn movement improves operations and/or circulation and where there is adequate space to develop left turn auxiliary lanes.

Out-of-direction travel was generally limited to a maximum distance of one mile (½ mile each way). Out-of-direction travel was limited by providing full movement and ¾ movement intersections at necessary intervals. Accommodation for U-turns at major intersections is recommended to provide alternatives for restricted left-turn movements. In addition, the Grand Junction Circulation Plan, in conjunction with proposed alternate routes from this study, will provide key alternatives for restricted left-turn movements.

Traffic control measures that may be used to achieve proposed conditions include raised or depressed medians, driveway channelizing islands at limited access points, directional median openings at 3/4 movement access points, and signage and striping. To avoid turn movement violations and potential enforcement issues, eventual installation of a raised median is recommended. Based on the existing cross-section with a two-way-left turn lane on Patterson Rd, installation of a raised median can likely be achieved with little to no widening through most of the corridor. Within the section between Park Dr and Mira Vista Rd, where the cross-section of the roadway only includes two through lanes in each direction, a narrow raised median or barrier is recommended to restrict turning movements if safety or operational issues develop. Widening to the south is recommended where there is currently a tiered wall. The bottom wall will need to be reconstructed and right-of-way acquisition is likely. Prior to the implementation of a median, further evaluation of the off-Patterson street network and additional public outreach will be required.

The narratives in this section are intended to serve as a summary of the key features of the ACP. The figures are intended to provide a graphical representation of the ACP. A detailed explanation of each access in the study area, by reference point, is presented in the ACP Table in Appendix F. Reference the ACP Table for specific access configurations and conditions. Recognizing that this plan is a long-term planning document and not a detailed engineering design, reference point designations are intended to be approximate. As more detailed information is available, these designations may be modified (generally within 0.05 miles of the specified reference point designation).

5.1 Access Control Plan

Key features of the ACP are summarized by major intersections on the following pages and illustrated in Figure 3. The ACP will reduce the number of access points from 284 to 220 as the corridor and land use along the corridor changes. This reduction in access includes the following:

- 68 access closures/consolidations
- 86 conditional access points that will close upon redevelopment
- 13 conditional safety right-in/right-out access points that will close if safety or operational issues develop

In addition, there are 210 access points with restricted movements including right-in/right-out access, right-in or right-out only, ¾ movement access points that will result in a reduction in conflict points through the corridor. Between the consolidation of access points and the application of restricted movement access points, the number of conflict points throughout the corridor is reduced from 2,900 to 1,100, a total reduction in conflict points of 63%.

There are 15 signalized full movement intersections in the plan. Full movement signalized intersections have been confirmed as part of the ACP; however, this does not restrict the City from considering other types of traffic control deemed appropriate in the future, including roundabouts and continuous flow intersections (CFI's).

Auxiliary lanes shall be provided at access points in accordance with the TEDS Manual. Auxiliary lane improvements will improve safety and congestion by removing slower turning vehicles from the through lanes. This eliminates the speed differential between through movements and turning movements that commonly cause crashes, as well as eliminating queuing of turning vehicles that block the clear passage of through movements. The following fourteen intersections on the corridor are anticipated to meet requirements for additional right or left turn lanes on Patterson Rd in the 20-year planning period: 24 Rd, Market St, Home Depot access, 24 ½ Rd, 25 Rd, 25 ½ Rd, 1st St, 7th St, 12th St, 15th St, 28 ¼ Rd, 29 ½ Rd, and 30 Rd. A detailed summary of anticipated auxiliary lanes can be found in Appendix D. Some level of ROW impacts, typical to a public project, are anticipated to occur in order to accommodate the additional auxiliary lanes. In addition, the following intersection improvements are recommended consistent with previous planning efforts:

- 24 Rd intersection - two northbound thru lanes and two eastbound left turn lanes
- 12th St intersection - dual lefts for each approach
- 29 Rd intersection - dual northbound left turn lanes

The City's 2019 Ballot Measure 2A will fund auxiliary lane improvements at 25 Rd, 12th St, 28 ¼ Rd, and 29 Rd, as well as widening of 24 Rd north of Patterson. Other intersection improvements identified will be implemented in the future as funding becomes available.

I-70B to Market St (Figure 3A)

1) While I-70B is not identified as an access point in the ACP, this T-intersection is anticipated to remain full movement with the potential for signalization, if warranted and permitted by CDOT.

2) 24 Rd and Market St will also remain full movement signalized intersections. Refer to Appendix D for more information about the alternative investigations for 24 Rd and Market St.

3) Access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible. Utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system. Refer to the ACP Table for conditions of implementation.

4) Access 2 is identified as a ¾ movement and is intended to serve multiple properties along the south side of Patterson Rd through cross access easements.

5) Access 3 is identified as conditional full movement that will be restricted to Right In/Right Out access with redevelopment of the property.

6) Access 5 is a conditional right-in/right-out movement and will close when a connection to Access 2 is available.

7) Due to the proximity to 24 Rd, Access 6 and 7, Rae Lynn St, are identified as conditional safety right-in/right-outs and may close if safety or operational issues develop and the conditions in the ACP Table are met. Refer to the ACP Table for conditions of implementation.

Market St to Home Depot/Mesa Mall Access (15/16) (Figure 3A-B)

1) Market St. and the Home Depot/Mesa Mall Access (Access 15 and 16) will remain full movement signalized intersections. Refer to Appendix D for more information about the alternative investigations for Market St.

2) Access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system. Refer to the ACP Table for conditions of implementation.

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3A

Home Depot/Mesa Mall Access (15/16) to 24 ½ Rd (Figure 3B)

1) The Home Depot/Mesa Mall Access (Access 15 and 16) and 24 ½ Rd will remain full movement signalized intersections.

2) Access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

3) Access 17 is identified as a conditional safety right-in only. Alternate full movement access is available at the signal at Access 15. A right-in only will remain long-term unless safety or operational issues develop, which will trigger closure of the access.

4) Access 20 was limited to a right-in only due to sight distance concerns. Alternate access is also available via 24 ½ Rd to the affected properties. Refer to the ACP Table for conditions of implementation.

24 ½ Rd to 25 Rd (Figure 3B–C)

1) 24 ½ Rd and 25 Rd will remain full movement signalized intersections. ¾ movement intersections are proposed at Access 26, 27, and 29 to serve multiple properties on the north and Commerce Blvd on the south.

2) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

3) Access 23 will close once an alternative connection to Flatop Ln is in place. Due to the proximity to 24 ½ Rd, Access 24 is identified as a conditional safety right-in/right-out and may close if safety or operational issues develop and the conditions in the ACP Table are met. Alternate access to 24 ½ Rd and Commerce Blvd is available.

4) A right-in only is located at Access 25. Several access points are identified as conditional right-in/right-out and will close upon redevelopment. Refer to the ACP Table for conditions of implementation.

5) A public connection through the Grand Valley Transit Park-n-ride between the properties adjacent to Patterson Rd and F 1/8 Rd is proposed to replace restricted movements on Patterson Rd.

PATTERSON ROAD ACP EXHIBIT

PATTERSON RD
MESA MALL ACCESS
FLATOP LN
24 1/2 RD
MATCHLINE A
MATCHLINE B
SPEED LIMIT 35
FAMILY ENTERTAINMENT HOLDINGS LLC
2945-043-15-001
637 24 1/2 RD
CANYONVIEW MARKETPLACE LLC
2945-043-22-002
632 MARKET ST
HD DEVELOPMENT OF MARYLAND INC
2945-043-55-001
2436 PATTERSON RD
HD OP LLC
2945-043-55-002
2430 PATTERSON RD
CAMPBELL PROPERTIES LIMITED PARTNERSHIP
2945-043-13-002
2428 PATTERSON RD
ALPINE BANK
2945-043-13-001
2424 PATTERSON RD
SM MESA MALL LLC
2945-043-00-001
2422 PATTERSON RD
SM MESA MALL LLC
2945-043-04-001
2434 HIGHWAY 6 AND 50 #320
SM MESA MALL LLC
2945-043-06-003
2424 HIGHWAY 6 AND 50 WB
DAYTON-HUDSON CORPORATION (TARGET T1093)
2945-043-03-008
2427 HIGHWAY 6 AND 50 #C
LIQUOR BARN REALTY CO
2945-043-29-003
2436 PATTERSON RD
SOUTHWEST COLORADO CREDIT UNION
2945-043-29-004
2430 PATTERSON RD
O'REILLY AUTOMOTIVE STORES INC
2945-043-44-002
2442 PATTERSON RD
SUPERIOR DRIVE LLC
2945-043-44-012
2444 PATTERSON RD
BAG BILL
2945-043-44-013
2446 PATTERSON RD
WESTSTAR BANK
2945-043-01-011
2448 PATTERSON RD
HILLTOP HEALTH SERVICES CORPORATION
2945-044-44-123
2945-044-44-122
2945-044-44-124
2945-044-44-121
2945-044-44-120
2945-044-44-119
2945-044-44-118
2945-044-44-117
2945-044-44-116
2945-044-44-115
2945-044-44-114
2945-044-44-113
2945-044-44-112
2945-044-44-111
2945-044-44-110
2945-044-44-109
2945-044-44-108
2945-044-44-107
2945-044-44-106
2945-044-44-105
2945-044-44-104
2945-044-44-103
2945-044-44-102
2945-044-44-101
2945-044-44-100
2945-044-44-099
2945-044-44-098
2945-044-44-097
2945-044-44-096
2945-044-44-095
2945-044-44-094
2945-044-44-093
2945-044-44-092
2945-044-44-091
2945-044-44-090
2945-044-44-089
2945-044-44-088
2945-044-44-087
2945-044-44-086
2945-044-44-085
2945-044-44-084
2945-044-44-083
2945-044-44-082

25 Rd to 25 ½ Rd (Figure 3C–E)

1) 25 Rd and 25 ½ Rd will remain full movement signalized intersections.

2) Access for this section shall be limited to right-in/right-out between major intersections, except for ¾ movement at the intersections with Foresight Cir, Northgate Dr, and Burkey St (Access 40, 41, and 44).

3) Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

4) Access 38 will be relocated outside the functional intersection area of 25 Rd to Access 38a upon redevelopment. Several access points are identified as conditional right-in/right-out and will close upon redevelopment. Refer to the ACP Table for conditions of implementation.

25 ½ Rd to 26 Rd/1st St (Figure 3E–F)

1) 25½ Rd and 26 Rd/1st St will remain full movement signalized intersections.

2) Conditional ¾ movement intersections are proposed at Access 61, 62 and 64. Access 61 may be a ¾ movement provided that the site developer can demonstrate that TEDS left turn lane requirements are met. Accesses 62 and 64 serve public streets, 25 ¾ Rd and Meander Dr, respectively. Left-turn access into both public streets is desired, however the distance between these two intersections does not allow for the full length of auxiliary lanes required based on the current speed limit. A design variance or speed reduction must be justified and approved by the City to allow both ¾ movements when either redevelopment occurs or a public project is funded to build a median. If further study does not support ¾ movements at both locations, one access will be a right-in/right-out, as determined by the City.

3) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

4) A right-out only is located at Access 50. Several access points are identified as conditional right-in/right-out and will close upon redevelopment. Refer to the ACP Table for conditions of implementation. In addition, a connection between Cider Mill Rd and the extension of 25 ¾ Rd is proposed to provide circulation within the local street system to replace restricted left turn movements on Patterson Rd.

PATTERSON ROAD ACP EXHIBIT

PATTERSON RD
COMMERCE BLVD
25 RD
MATCHLINE B
MATCHLINE C
INDUSTRIAL CT
25
26
27
28
29
30
31
32
33
34
35
36
37
24
SPEED LIMIT 40
SPEED LIMIT 35
WILLIAMS FLAMING GORGE MARKET INC
2460 PATTERSON RD #6
HILLTOP HEALTH SERVICES CORPORATION
2945-044-46-002
GRAND JUNCTION ORTHOPAEDIC REAL ESTATE LLC
2945-044-29-008
2472 PATTERSON RD #8
L & G PROPERTIES LLC
2945-044-17-007
2478 PATTERSON RD #7
HIGH WEST REAL ESTATE HOLDINGS LLC
2945-044-17-019
2478 PATTERSON RD #18
MILLER HOLDING COMPANY LLC
2945-044-17-018
2478 PATTERSON RD #17
LPD ASSET SOLUTIONS LLC
2945-044-17-013
2478 PATTERSON RD #14
LCAT INVESTMENTS LLC
2945-044-17-012
2478 PATTERSON RD #11
HUMAN TOUCH HOME HEALTH CARE AGENCY INC
2945-044-17-011
2478 PATTERSON RD #10
ANDERSON INSURANCE AGENCY INC
2486 PATTERSON RD
ASPEN PARK INVESTMENT COMPANY LLC
2945-044-05-013
2488 PATTERSON RD
ASPEN PARK INVESTMENT COMPANY LLC
2945-044-05-018
2486 PATTERSON RD #13
MESA COUNTY VALLEY SCHOOL
2945-044-14-004
685 25 RD
JOSHNIK LLLP
2945 044 05 002
2498 PATTERSON RD
2945-044-05-000
2490 PATTERSON RD #3
2945-044-36-011
2490 PATTERSON RD #7
2945-044-36-000
2945-044-18-000
2945-044-14-001
813 25 RD
COLORADO MONUMENT PROPERTIES LLC
2945-033-07-042
610 25 RD
DRK I INVESTING LLC
2945 033 07 027
604 25 RD
FORESIGHT WELLNESS LLC
2945-033-07-044
2505 FORESIGHT CIR
C AND W VENTURES LLC
2945-033-07-043
2505 FORESIGHT CIR
GLOVEYA LLC
2945-044-14-003
2490 PATTERSON RD #201
ELLIS PROPERTIES LLC
2945-044-14-002
2490 PATTERSON RD #200
R&B CONNECTIONS LLC
2945-044-05-010
2490 PATTERSON RD #6
TEAGUES LLC
2945-044-05-011
2490 PATTERSON RD #5
TRAMBLEY DEREK H
2945-044-05-009
2490 PATTERSON RD #4
PARADISE ROSE LLC
2945-044-05-006
2490 PATTERSON RD #3
2945-044-05-000
2490 PATTERSON RD #2
2945-044-05-012
2490 PATTERSON RD #1
2945-044-05-013
2488 PATTERSON RD
ALLEY REALTY LLC
2945-044-14-002
811 25 RD
J KOO PROPERTIES LLC
2945-044-14-001
813 25 RD
2945-044-18-000
2945-044-36-000
2945-044-36-011
2945-044-05-000
2945-044-05-002
2498 PATTERSON RD
2945-044-05-013
2488 PATTERSON RD
2945-044-05-012
2486 PATTERSON RD
2945-044-05-018
2486 PATTERSON RD #13
2945-044-05-009
2486 PATTERSON RD #12
2945-044-05-006
2486 PATTERSON RD #11
2945-044-05-010
2486 PATTERSON RD #9
2945-044-05-011
2486 PATTERSON RD #8
2945-044-05-000
2490 PATTERSON RD #3

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3D

PATTERSON ROAD ACP EXHIBIT

NOTE:
A DESIGN VARIANCE OR SPEED REDUCTION MUST BE JUSTIFIED AND APPROVED BY THE CITY TO ALLOW 3/4 MOVEMENT AT BOTH ACCESS 62 AND 64. OTHERWISE, RI-RO WILL BE APPLIED TO ONE LOCATION AS DETERMINED BY THE CITY.

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- **G** GATED ACCESS POINT
- **C** CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- **S** CONDITIONAL SAFETY ACCESS POINT

FIG. 3E

26 Rd/1st St to 26 ½ Rd/7th St (Figure 3F–G)

1) 26 Rd/1st St and 26 ½ Rd/7th St will remain full movement signalized intersections.

2) ¾ movement intersections are proposed at Access 74. A public road connection between Access 74 to Horizon Place is proposed to support circulation for future redevelopment in the area.

3) Conditional ¾ movement access is proposed at Access 86 and Access 93. Both access may be restricted to Right In/Right Out if safety or operational issues develop.

4) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

5) Due to the proximity to 26 Rd/1st St, Park Dr (Access 69) is identified as a conditional safety right-in/right-out and may close if safety or operational issues develop and the conditions in the ACP Table are met. Alternate access to 1st St is available.

6) Several access points in this section are identified as conditional right-in/right-out and will close upon redevelopment. In particular, the properties on the north side of Patterson Rd should be connected through cross-access easements and access should be consolidated and shared as much as possible with redevelopment. Refer to the ACP Table for conditions of implementation.

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3F

26 ½ Rd/7th St to 12th St (Figure 3G–H)

1) 26 ½ Rd/7th St and 12th St will remain full movement signalized intersections.

2) A conditional full movement intersection is proposed at 26 ¾ Rd (Access 106). Movements at the access may be restricted when safety or operational issues occur.

3) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system. Several access points in this section are identified as conditional right-in/right-out or right-out only and will close upon redevelopment. Refer to the ACP Table for conditions of implementation.

4) Access 114 is conditional ¾ movement, dependent on the property owner providing cross access. If cross access is not provided, Access 114 shall be restricted to Right-In/Right-Out with construction of a median or redevelopment. Access 116 shall be closed once cross access to Access 114 is provided.

12th St to 15th St (Figure 3H)

1) 12th St and 15th St will remain full movement signalized intersections.

2) While Access 123 is located within the functional intersection area of 12th St, traffic operational analysis indicates that adding more left turn movements to 12th St will overload the intersection. Therefore, a ¾ movement is proposed at Access 123.

3) Access 129 is conditional ¾ movement and may be restricted to Right In/Right Out if safety or operational issues develop.

4) Investigation into modifying 15th St to a ¾ movement and providing signalized crossings for bicycles and pedestrians was conducted. Ultimately, the City decided to keep 15th as a full movement intersection based on traffic patterns, circulation, and public support. Refer to Appendix D for more information about the alternative investigations for 15th St.

5) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

6) Access 126 and 127 shall be consolidated to one shared access. Access 130 will be a right-out only for circulation to the subdivision. Refer to the ACP Table for conditions of implementation.

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3G

PATTERSON ROAD ACP EXHIBIT

NOTE:
A SINGLE SHARED RI-RO FOR THESE PROPERTIES WILL BE PROVIDED.

LOWELL CT
LOWELL LN
PATTERSON RD
N 12TH ST
N 15TH ST
27 1/4 RD
MATCHLINE G
MATCHLINE H
SPEED LIMIT 35
SPEED LIMIT 40
SPEED LIMIT 30
108 111 112 115 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 110 113 114 116 117
N
0 200 400 800 Feet

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3H

15th St to 27 ½ Rd (Figure 3H-I)

1) 15th St and 27 ½ Rd will remain full movement signalized intersections. Investigation into modifying 15th St to a ¾ movement and providing signalized crossings for bicycles and pedestrians was conducted. Ultimately, the City decided to keep 15th as a full movement intersection based on traffic patterns, circulation, and public support. Refer to Appendix D for more information about the alternative investigations for 15th St.

2) If desired upon redevelopment, the 4th leg of 27 ½ Rd may be installed on the south side of Patterson Rd. Utility relocations will be required and must be coordinated with the utility owner. If Access 145a is implemented, Access 146 must close and Access 148 must be restricted to right-in/right-out.

3) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

4) Access 136 and 137 shall be consolidated to one shared access at Access 136a. Similarly, Access 142 and 143 shall consolidate to one shared access at Access 142a and Access 141 shall be relocated to Access 141a. Several access points in this section are identified as conditional right-in/right-out and will close upon redevelopment. Refer to the ACP Table for conditions of implementation.

5) Public road connections on the south side of Patterson Rd that connect Patterson Rd properties to Wellington Ave are recommended upon redevelopment to create more circulation to the full movement intersection at 15th St.

PATTERSON ROAD ACP EXHIBIT

NOTE:
SOUTH LEG OF 27 1/2 ROAD MAY BE IMPLEMENTED WITH REDEVELOPMENT AND UTILITY RELOCATION IF DESIRED.

0 200 400 800 Feet

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 31

27 ½ Rd to 28 ¼ Rd (Figure 3I-K)

1) 27 ½ Rd and 28 ¼ Rd will remain full movement signalized intersections. If desired upon redevelopment, the 4th leg of 27 ½ Rd may be installed on the south side of Patterson Rd. Utility relocations will be required and must be coordinated with the utility owner.

2) If Access 145a is implemented, Access 146 must close and Access 148 must be restricted to right-in/right-out. ¾ movement intersections are proposed at Access 148, 150, 159, and 161.

3) Residents in the area were concerned about restricting 28 Rd (Access 159) to ¾ movement and were interested in the potential for signalization. However, due to the proximity of 28 Rd and 28 ¼ Rd, signalization is not recommended. The future connection of Hawthorne Ave to 28 ¼ Rd will provide the area with alternative options to a signalized intersection for left-out movements.

4) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

5) Either Mountain View Dr or Mantey Heights Dr (Access 156 or 157) may be a conditional unsignalized full movement access with the other as Right In/Right Out. Access 157 may require intersection sight distance improvements to safely implement the full movement access.

6) Access 162 is identified as conditional right-in/right-out and will close upon redevelopment. Refer to the ACP Table for conditions of implementation.

7) Public road connections on the south side of Patterson Rd that connect Patterson Rd properties to Wellington Ave are recommended upon redevelopment to create more circulation to the full movement intersection at 15th St.

28 ¼ Rd to 29 Rd (Figure 3K-L)

1) 28 ¼ Rd and 29 Rd will remain full movement signalized intersections. Access to Matchet Park (Access 176), Legends Way, and both sides of W Indian Creek Dr are proposed as ¾ movements. West Indian Creek Dr connects to Presley Ave and Presley will connect to 29 Rd in the future.

2) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

3) Due to the proximity to 29 Rd, E Indian Creek Dr (Access 196) is identified as a conditional safety right-in/right-out and may close if safety or operational issues develop and the conditions in the ACP Table are met. Alternate access to W Indian Creek Dr is

available. Access 180 is identified as conditional right-in/right-out and will close upon redevelopment. Refer to the ACP Table for conditions of implementation.

4) Belhaven Way should be widened to full public street standards to provide access to the current Church of Christ property to the east.

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3J

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3K

29 Rd to 29 ½ Rd (Figure 3L-M)

1) 29 Rd and 29 ½ Rd will remain full movement signalized intersections. Access 205 to Safeway, Broken Spoke Rd, and the north side of 29 3/8 Rd are proposed as ¾ movements.

2) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

3) Due to the proximity to 29 ½ Rd, Colanwood St (Access 227) is identified as a conditional safety right-in/right-out and may close if safety or operational issues develop and the conditions in the ACP Table are met. Alternate access via Wellington Ave or Parkway Dr is available.

4) Several access points in this section are identified as conditional right-in/right-out and will close upon redevelopment. In particular, the properties on the north side of Patterson Rd from Access 202-206 should be connected through cross-access easements and access should be consolidated and shared as much as possible with redevelopment.

5) Cris-Mar St and Redwing Ln (Accesses 211 and 212) are conditional full-movement access without the potential for signalization. Movements may be restricted if safety or operational issues develop.

6) Penny Ln should also be constructed to provide properties currently served by Access 224 and 226 alternate access to 29 ½ Rd. 224 also has alternate access to Bonito Ave and 226 has alternate access to Mount Julian Dr and cross access will be required upon development. Refer to the ACP Table for conditions of implementation.

29 ½ Rd to 30 Rd (Figure 3M-O)

1) 29 ½ Rd and 30 Rd will remain full movement signalized intersections. A ¾ movement is proposed on both sides of the road at Placer St (Access 240 and 241).

2) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

3) Due to the proximity to 29 ½ Rd, Greenfield Cir E (Access 233) and Pioneer Rd (Access 234) are identified as a conditional safety right-in/right-out and may close if safety or operational issues develop and the conditions in the ACP Table are met. Alternate access via Bookcliff Ave and Bonito Ln respectively is available.

4) Hudson Bay Dr (Access 244) is also identified as conditional safety right-in/right-out due to proximity to 30 Rd. Alternate access to F ¼ Rd is available.

5) Several access points in this section are identified as conditional right-in/right-out and will close upon redevelopment. Refer to the ACP Table for conditions of implementation.

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3L

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- **G** GATED ACCESS POINT
- **C** CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- **S** CONDITIONAL SAFETY ACCESS POINT

FIG. 3M

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3N

30 Rd to Lodgepole St (Figure 3O-P)

1) 30 Rd will remain a full movement signalized intersection. As the City boundary is crossed into Mesa County, the access points are identified as unsignalized full movement intersections. This includes Lodgepole St and the two access points to the Museum of Western Colorado (Access 284 and 286. If the museum changes use or expands in a way that significantly increases traffic, Access 284 should close and Access 286 should be realigned with Lodgepole St to create a 4-legged intersection. The north leg of Serenade St, Roundtable Rd, Grand Valley Dr, and Cottage Meadow Ct are proposed as ¾ movements.

2) All other access for this section shall be limited to right-in/right-out between major intersections. Access points shall be reduced to one location per ownership, relocated to cross streets, and/or shared, where feasible, utilizing cross-access easements as properties redevelop to ensure that all properties are provided access to the public street system.

3) Due to the proximity to 30 Rd, Ronlin Dr (Access 250) is identified as a conditional safety right-in/right-out and may close if safety or operational issues develop and the conditions in the ACP Table are met. Alternate access via E Vista Dr and Agana Dr is available.

4) Several access points in this section are identified as conditional right-in/right-out and will close upon redevelopment. Refer to the ACP Table for conditions of implementation.

5) Connections to Wellington Ave and/or Kirby Ln should also be constructed to provide properties currently served by Access 269, 271 and 272. Refer to the ACP Table for conditions of implementation.

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 30

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3P

5.2 Alternative Local Routes

In addition to recommended access modifications, this study has resulted in recommendations for development of several alternative local routes. These alternative routes provide additional local connections and internal circulation opportunities that will benefit operations on Patterson Rd. The alternative routes would reduce local dependence on Patterson, provide alternatives that support restricted turning movements on Patterson, and reduce demand at intersections that are already experiencing high demand. The routes illustrated in the plan are conceptual in nature and will require detailed engineering to establish exact alignments at the time of implementation. Some access improvements require development of alternative routes prior to implementation.

The following is a list of the alternative routes or additional connections identified and illustrated in Figure 4:

- North-south route through GVT Park-n-Ride between the properties adjacent to Patterson Rd and F 1/8 Rd
- East-west connection between Cider Mill Rd and the extension of 25 ¾ Rd
- North-south route from Access 74 to connect with access to 26 ½ Rd in the future
- Connections between Access 138 and 148 to Wellington Ave
- North-south connection through Matchett Park at Access 176 with an east-west connection from Navajo way to provide opportunities for the neighborhood to access the signal at 28 ¼ Rd
- Widening of Belhaven Way to a full public street width
- Development of Penny Ln between 29 ½ Rd and the properties currently served by Access 224 and 226
- Connection to Wellington Ave and/or Kirby Ln for the properties currently served by Access 269, 271 and 272.

The adoption of these additional road connections into the City of Grand Junction's Street Plan Functional Classification Map as part of the Grand Junction Circulation Plan is recommended. It is anticipated that the majority of these routes would be accomplished in phases when development or redevelopment occurs.

In support of alternate modes, the ACP also considered pedestrian, bicycle and transit access throughout the corridor. Overall, reducing access points reduces potential conflict points for pedestrians, cyclists and buses traveling Patterson Rd. Grand Valley Transit (GVT) provides fixed route transit service throughout Mesa County and the City of Grand Junction. Currently, there are four routes that travel from the GVT Park-n-ride on 24 ½ Rd. Three routes travel on Patterson for some distance. Left turn restrictions shown in the ACP will not affect existing GVT routes and no new access points conflict with existing GVT stops.

The ACP also supports the accommodation of pedestrian and bicycle crossings at full movement signalized intersections. As intersections are improved and sidewalk is added throughout the corridor, pedestrian crossings should be implemented and upgraded to current ADA standards. Further traffic and safety analysis of future opportunities for mid-block crossings to support pedestrian accessibility and transit access is recommended.

PATTERSON ROAD ACP ALTERNATIVE ROUTES

LEGEND

- PRINCIPAL ARTERIAL
- PRINCIPAL ARTERIAL - PROPOSED
- MINOR ARTERIAL
- MINOR ARTERIAL - PROPOSED
- MAJOR COLLECTOR
- MAJOR COLLECTOR - PROPOSED
- MINOR COLLECTOR
- MINOR COLLECTOR - PROPOSED
- LOCAL ROAD
- LOCAL ROAD - PROPOSED
- UNCLASSIFIED
- ACP ALTERNATIVE STREETS - PROPOSED

FIG. 4A

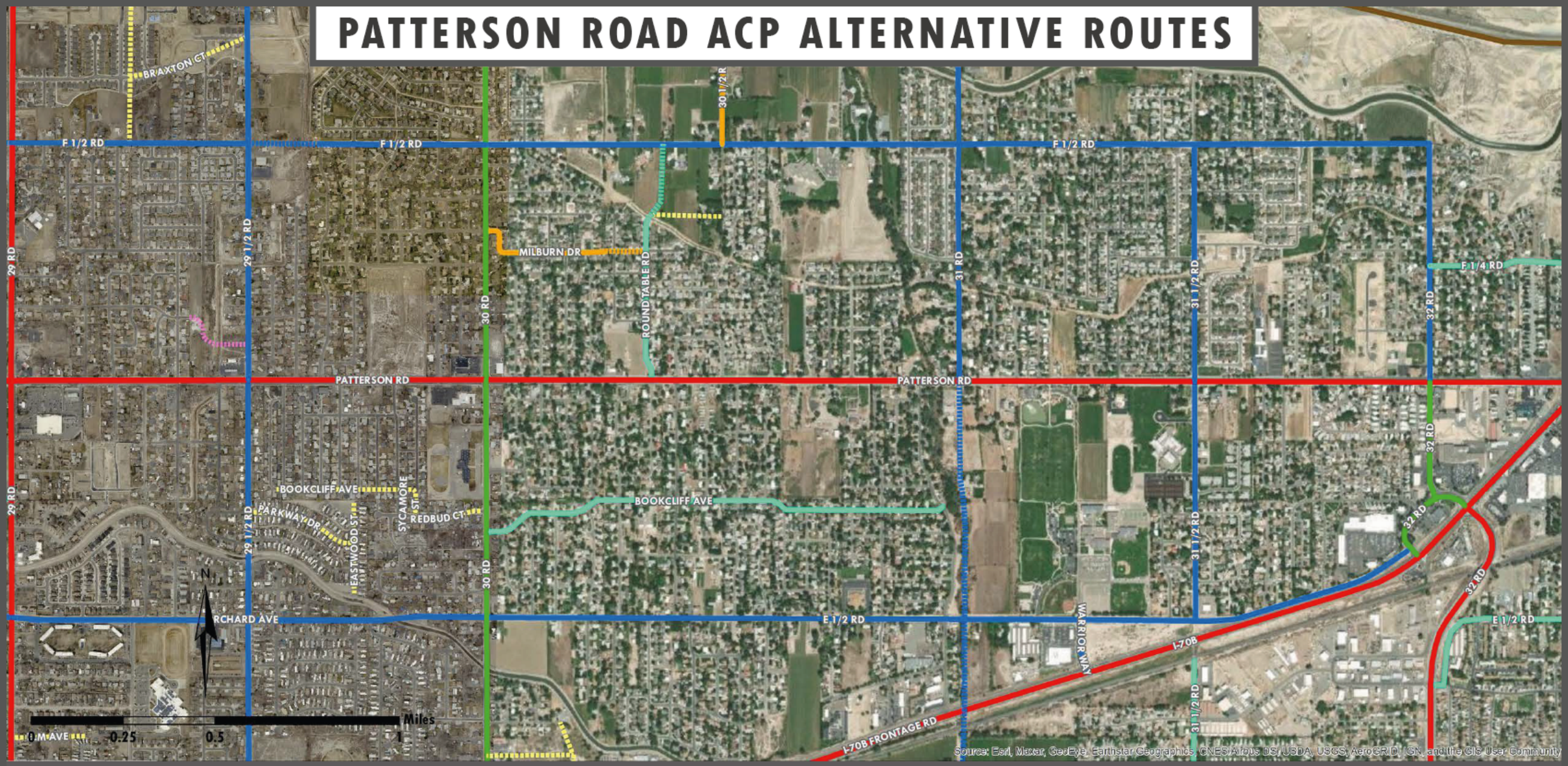
PATTERSON ROAD ACP ALTERNATIVE ROUTES

LEGEND

- PRINCIPAL ARTERIAL
- PRINCIPAL ARTERIAL - PROPOSED
- MINOR ARTERIAL
- MINOR ARTERIAL - PROPOSED
- MAJOR COLLECTOR
- MAJOR COLLECTOR - PROPOSED
- MINOR COLLECTOR
- MINOR COLLECTOR - PROPOSED
- LOCAL ROAD
- LOCAL ROAD - PROPOSED
- UNCLASSIFIED
- ACP ALTERNATIVE STREETS - PROPOSED

FIG. 4B

PATTERSON ROAD ACP ALTERNATIVE ROUTES



LEGEND

- PRINCIPAL ARTERIAL
- PRINCIPAL ARTERIAL - PROPOSED
- MINOR ARTERIAL
- MINOR ARTERIAL - PROPOSED
- MAJOR COLLECTOR
- MAJOR COLLECTOR - PROPOSED
- MINOR COLLECTOR
- MINOR COLLECTOR - PROPOSED
- LOCAL ROAD
- LOCAL ROAD - PROPOSED
- UNCLASSIFIED
- ACP ALTERNATIVE STREETS - PROPOSED

FIG. 4C

6.0 ACCESS PLAN IMPLEMENTATION CONDITIONS

The improvements recommended in the Plan represent a long-range plan to implement over time as traffic and safety needs arise and as funding becomes available. Construction of the improvements recommended may be completed using public and/or private funding. The following cases will trigger construction.

1. A property redevelops or changes use, resulting in an increase in traffic to and from the site of 20% or more. In this case, limited improvements at the specific access point may be required. As part of the development review process, additional transportation improvements may also be necessary to address specific traffic-related impacts created by the development. These improvements will be compatible with the ACP. In addition, upon redevelopment, property owners will provide legally defined cross-access easements for shared access points, as defined by the Plan. If a property does not redevelop, the property owner will not be required to construct access modifications. (Private Funding).

2. The City obtains funding to complete improvements to a segment of the corridor or a local route. (Public Funding)

3. A safety or operational issue develops that can be mitigated through the implementation of access management techniques consistent with the Access Plan. Depending on the extent and type of safety or operational issue, improvements may address a segment of the corridor or a local route, or may be limited to an isolated location or access point. (Public or Private Funding)

4. Any combination of 1, 2, or 3.

Detailed engineering drawings of exact roadway alignments and access improvements will be required as project funding is identified. Details related to storm drainage, utilities, landscaping, environmental issues, pedestrian/bicycle facilities, roadway sections, and other topographic features will be considered during this design process. Environmental evaluations appropriate to the size, type, and funding of the project will be completed as part of the design phase.

7.0 CONCLUSION

Traffic demand on the Patterson Rd is expected to increase by 24% to 33% over the next twenty years challenging the future functionality of the corridor. Access management has been proven both nationally and statewide to effectively preserve the transportation function of arterial roadways by optimizing the performance of the road to improve the level of safety, reduce traffic congestion and preserve property values without constructing major arterial improvements. The findings of this study indicate that applying access management techniques along Patterson Rd, including the implementation of a raised median, addition of auxiliary lanes, and the consolidation of driveways, will significantly reduce conflict points for vehicles, pedestrians, and cyclists, which correlates to reduced crashes and improved safety. In addition, smoother traffic flow and improved travel times will extend the life of the existing four-lane section on Patterson Rd. Prolonging the need for additional through lanes along Patterson Rd will result in taxpayer savings and reduced impacts to adjacent properties and businesses.

The proposed ACP and associated alternative routes provide the City with a corridor-wide vision for how to coordinate development and growth with the transportation needs on Patterson Rd. The ACP will provide clear expectations for access for both City staff and property owners/developers as land-use changes are proposed and public projects are developed. To provide for commitment to the access modifications and circulation routes recommended by this study, it is recommended that City adopt the ACP for Patterson Rd, as well as the proposed alternative routes. The ACP identifies access locations and levels of access by reference point for Patterson Rd within City limits. The ACP Table, which provides detailed conditions and requirements for each access point, is included in Appendix F. In recognition of the plan's long-range nature and the potential for conditions to change over time, the City should view this plan as a living document that can be amended to best meet future conditions and priorities for the City.

8.0 LIST OF ACRONYMS

AASHTO = American Association of State Highway and Transportation Officials

ACP = Access Control Plan

ADA = Americans with Disabilities Act

ADT = Average Daily Traffic

ATS = Average Travel Speed

BA = Business Access

CDOT = Colorado Department of Transportation

CFI = Continuous Flow Intersection

FA = Field Access

FHWA = Federal Highway Administration

GVCP = Grand Valley Comprehensive Plan

GVT = Grand Valley Transit

HCM = Highway Capacity Manual, 6th Edition

HCS = Highway Capacity Software

LOSS = Level of Service of Safety

MA = Maintenance Access

MP = Milepost

MPO = Metropolitan Planning Organization

mph = Miles Per Hour

MUTCD = Manual on Uniform Traffic Control Devices

NCHRP = National Cooperative Highway Research Program

PRU = Public Rd Unsignalized

PRS = Public Rd Signalized

PTSF = Percent Time Spent Following

PVRU = Private Rd Unsignalized

R = Residential Access

R-A = Regional Highway

RP = Reference Point

ROW = Right-of-Way

TEDS = Transportation Engineering Design Standards

TMC = Turning Movement Count

TRB = Transportation Research Board

vph = vehicles per hour

9.0 GLOSSARY

Access – Any driveway or other point of entry and/or exit such as a street, road or highway that connects to the general street system

Access Category – means one of eight categories described in Section Three of the State Highway Access Code, and determines the degree to which access to a state highway is controlled

Access Plan, Access Control Plan – A plan which designates access locations and levels of access for the purpose of bringing those portions of roadway included in the planning area into conformance with the highway functional classification to the extent feasible

Access Management – Systematic control of the location, spacing, design, and operation of driveways, median openings, and street connections to a roadway

Access Permit – Means by which access improvements are reviewed, approved and constructed in accordance with the State Highway Access Code

Average Travel Speed (ATS) – The highway segment length divided by the average travel time taken by vehicles to traverse it during a designated time interval

Driveway – An access that is not a public street, road, or highway

Full Movement Access – An access without turn restrictions

Functional Intersection Area – Area upstream and downstream of an intersection where intersection operation and conflicts influence driver behavior, vehicle operations, or traffic conditions.

Level-of-Service (LOS) – An indication of the quality of traffic flow as measured by vehicle delays or travel speeds. Level-of-service grades range from LOS A (ideal traffic flow) to LOS F (heavily congested conditions). LOS D is typically considered an acceptable traffic condition during peak demand periods in urbanized locations.

Percent Time Spent Following (PTSF) – The average percentage of time that vehicles must travel in platoons behind slower vehicles due to the inability to pass.

Right-of-way (ROW) – The entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel

Turning Movement Count (TMC) – A tally of the number of vehicles turning left, right, or traveling through an intersection

Volume-to-Capacity Ratio (v/c) – The sufficiency of an intersection to accommodate vehicular demand. A v/c over 1.00 means the traffic demand exceeds the capacity.

City of Grand Junction
Patterson Road
Access Study Appendices

US 6 / US 50 / I-70B to Lodgepole Street

June 2021

CITY OF Grand Junction COLORADO

Stolfus

Appendix A - Public Outreach

PATTERSON ROAD ACCESS CONTROL PLAN
ANSWERS TO FREQUENTLY ASKED QUESTIONS

What is an Access?

An access, as related to roadways, is a location where vehicles, bicycles, or pedestrians may enter and/or exit a roadway. Access may be public, such as a street, or private, such as a driveway to a business or residence. Every property owner has the right of reasonable access to the general street system.

Why is access management beneficial?

Access management benefits communities by preserving and improving traffic operations along the most critical roadways. Efficiently managing existing roadways so that they are operating to their fullest capacity costs less than investing in new roadways. Applying access management techniques can increase roadway capacity by 20% to 40%. Access management also has tremendous safety benefits. Studies have shown a 30% to 60% reduction in crashes on roadways where access management techniques are implemented.

The reduction in vehicle conflicts has the added benefit of improving traffic flow, reducing travel times, increasing fuel efficiency and contributing less to air pollution. Access management is also good for business, providing safe access to customers and retaining more of a community's original market area.

What is an Access Control Plan?

An Access Control Plan (ACP) provides a unified vision of the future access needs for a particular roadway corridor. The goals are to define safe, effective, and efficient access to support the economic viability of the corridor, utilize existing right of way, allow for smooth passage of through traffic on the roadway, maintain compatibility with local planning efforts and the existing and proposed street network connections and circulations, provide a plan that can be implemented in phases, and support alternative modal choices.

An ACP defines existing and future access locations with consideration for spacing, traffic movements, circulation, and alternative access opportunities. The ACP does not define specific roadway improvements or funding sources. It is a long-range planning document that identifies access conditions that will be implemented as roadway and land-use characteristics change.

Why is adopting an ACP beneficial?

An ACP allows Grand Junction to make decisions about access that are more consistent with the local vision, land use, and the local transportation system as a whole. In addition, the ACP addresses access on a corridor-wide basis rather than an individual, first-come, first-serve basis. An ACP considers how adjacent access points impact each other and provides property owners with security in the planned access for their property. Recommendations of the ACP consider adjacent land use, corridor specific conditions and local plans for future improvements. Closer access spacing and increased level of access may also be recommended where technical analyses can demonstrate adequate traffic safety and operations.

How is the ACP implemented?

The ACP will be implemented in phases as changes and growth occur around the City. Portions of the plan will be implemented based on the following triggers:

1. Redevelopment that increases traffic
2. Planned publicly funded project
3. Safety or operational issue

What area does the ACP include?

The ACP study area covers approximately 7.1 miles of Patterson Road from US 6/US 50 to Lodgepole Street.

How long will it take to complete the Access Plan?

The ACP project began in January 2020 and is expected to be completed in April 2021.

How can I get more information about the project?

Please contact one of the project team representatives:

Rick Dorris
Development Engineer
City of Grand Junction
Ph. (970) 256-4034
rickdo@gjcity.org

Andrew Amend
Consultant Project Manager
Stolfus & Associates, Inc.
Ph. (303) 221-2330
andrew@stolfusandassociates.com

PLAN DE CONTROL DE ACCESO DE LA CALLE PATTERSON
RESPUESTAS A PREGUNTAS FRECUENTES

¿Qué significa el acceso?
El acceso, relacionado con carreteras, es una ubicación donde los vehículos, bicicletas o peatones pueden entrar y/o salir de una carretera. El acceso puede ser publico como una calle o privada, como una entrada de carros o un negocio o residencia. Cada dueño de propiedad tiene el derecho de tener acceso razonable al sistema de calles general.

¿Porque el manejo del acceso es bueno?
El manejo del acceso beneficia a las comunidades al preservar y mejorar las operaciones de trafico a lo largo de las carreteras más críticas. El manejo del acceso de manera eficiente en las carreteras actuales sirve para que las carreteras funcionen a su máxima capacidad y cuesta menos que invertir en nuevas carreteras. La aplicación de técnicas de manejo de acceso puede incrementar la capacidad de las carreteras entre un 20-40%. El manejo del acceso también tiene un tremendo beneficio en la seguridad. Los estudios han demostrado una reducción de un 30-60% de los choques en las carreteras donde las técnicas de manejo del acceso son implementadas.

La reducción de conflictos en vehículos tiene el beneficio adicional de mejorar el flujo de tráfico, reducción del tiempo de manejo, incremento en la eficiencia del uso de combustible y contribuye a menos contaminación. El manejo del acceso es también Bueno para negocios, les da un acceso seguro a los clientes y retiene a las áreas en la comunidad que originalmente son áreas comerciales.

¿Qué es un Plan de Control de Acceso?
Un Plan de Control de Acceso (Siglas en Ingles ACP) provee una visión unificada de las necesidades del futuro acceso de una carretera en particular. La meta es definir un acceso seguro, efectivo y eficiente para apoyar la viabilidad económica de una carretera, utilizar las salidas con derecho de paso, permitir el pase tranquilo hacia el trafico que viene de una carretera, mantener la compatibilidad con los esfuerzos de planificación y las conexiones y circulaciones de las propuestas de redes de calles y de las calles actuales, compartir un plan que sea implementado en fases y apoye los modelos opcionales alternativos.

Un ACP (siglas en ingles para Plan de Control de Acceso), define las ubicaciones de accesos futuros considerando el espacio, el movimiento del tráfico, la circulación y las oportunidades de acceso alternativo. El ACP no define las mejoras en carreteras especificas o las fuentes de financiamiento. Es un documento de un plan a largo plazo que identifica las condiciones de acceso que se implementarán a medida que cambien las características de las carreteras y el uso del suelo.

¿En qué beneficia el adoptar un ACP?
Un ACP permite que la Ciudad de Grand Junction tome decisiones acerca del acceso que es mas consistente con la visión local, el uso del suelo y el sistema de transporte en general. Adicionalmente, el ACP dirige el acceso en toda la carretera en lugar de un individuo, por orden de llegada. Un ACP considera como los puntos de acceso adjuntos impactan a cada individuo y proveen a los dueños de propiedad seguridad en el plan de acceso para su propiedad. Las recomendaciones sobre el ACP consideran el uso del suelo adjunto, las condiciones de las carreteras, y los planes locales para futuras mejoras. El espacio del acceso cercano y el incrementar el nivel de acceso puede también ser recomendado donde el análisis técnico puede demostrar la seguridad adecuada en el tráfico y las operaciones.

¿Cómo se implementa un ACP?
El ACP se implementa en fases, así como los cambios y el crecimiento ocurre en la ciudad. Las porciones del plan se implementarán basadas en los siguientes factores:

1. La reurbanización que incrementa el trafico
2. El proyecto planificado financiado por fondos públicos
3. La seguridad o problemas de operación.

¿Cuál es el área que está incluida en el ACP?
El estudio del área del ACP cubre aproximadamente 7.1 millas de la calle Patterson desde US 6/US 50 hasta la calle Lodgepole.

¿Cuánto se tardarán en terminar el Plan de Acceso?
El Proyecto del ACP comenzó en enero del 2020 y se espera que termine en abril 2021.

¿Cómo puedo obtener más información acerca del Proyecto?
Por favor contacte al representante del equipo del Proyecto.

Rick Dorris
Development Engineer
City of Grand Junction
Ph. (970) 256-4034
rickdo@gjcity.org

Andrew Amend
Consultant Project Manager
Stolfus & Associates, Inc.
Ph. (303) 221-2330
andrew@stolfusandassociates.com

Open House 1

October 1, 2020

PATTERSON ROAD ACCESS CONTROL PLAN

CITY OF GRAND JUNCTION
INVITES YOU TO THE

OPEN HOUSE

FOR THE

PATTERSON ROAD ACCESS CONTROL PLAN

FROM HIGHWAY 6 TO LODGEPOLE STREET

THURSDAY
OCTOBER 1, 2020
JUEVES
1 DE OCTUBRE DEL 2020

4:00 - 7:00 PM
(NO FORMAL PRESENTATION - COME ANYTIME)
(NO HABRA UNA PRESENTACIÓN FORMAL, PUEDE LLEGAR A CUALQUIER HORA)

FAITH HEIGHTS CHURCH
600 28 1/4 RD
GRAND JUNCTION, CO 81506

Grand Junction
Stolfus

PLAN DE CONTROL DE ACCESO DE LA CALLE PATTERSON

LA CIUDAD DE GRAND JUNCTION
LO INVITA
UNA EXCHIBIÓN ABIERTA AL PUBLICO
SOBRE

EL PLAN DE CONTROL DE ACCESO DE LA CALLE PATTERSON

DESDE HIGHWAY (CARRETERA) 6
HASTA LA CALLE LODGEPOLE

THIS OPEN HOUSE WILL PROVIDE THE COMMUNITY WITH AN OPPORTUNITY TO:

- DISCUSS FUTURE ACCESS TO PATTERSON RD WITH PROJECT REPRESENTATIVES
- PROVIDE COMMENTS ON THE DRAFT ACCESS CONTROL PLAN

THANK YOU FOR YOUR PARTICIPATION!
FOR ONLINE PRESENTATION, MAPS, AND COMMENTS, PLEASE SEE GJSPEAKS.ORG.

LA EXHIBICIÓN ABIERTA AL PUBLICO PROVEE LA OPORTUNIDAD PARA QUE LA COMUNIDAD:

- HABLE CON LOS REPRESENTANTES DEL PROYECTO SOBRE EL FUTURO ACCESO A LA CALLE PATTERSON
- PROPORCIONE SUS COMENTARIOS SOBRE LOS PLANES INICIALES DEL CONTROL DE ACCESO

¡GRACIAS POR SU PARTICIPACIÓN!
PARA VER LA PRESENTACIÓN POR INTERNET, MAPAS, Y COMENTARIOS, POR FAVOR VISITE LA PÁGINA GJSPEAKS.ORG.

FOR MORE INFORMATION, PLEASE CONTACT:
PARA PEDIR MÁS INFORMACIÓN, POR FAVOR CONTACTE A:

ANDREW AMEND
STOLFUS & ASSOCIATES, INC.
(303)221-2330
ANDREW@STOLFUSANDASSOCIATES.COM

STOLFUS & ASSOCIATES, INC.
5690 DTC BLVD. STE. 330W
GREENWOOD VILLAGE, CO 80111

Grand Junction
CITY OF COLORADO

Stolfus

PATTERSON ROAD ACCESS CONTROL PLAN

CITY OF GRAND JUNCTION
INVITES YOU TO THE

OPEN HOUSE

FOR THE

PATTERSON ROAD ACCESS CONTROL PLAN

FROM HIGHWAY 6 & 50 TO
LODGEPOLE STREET

THURSDAY
OCTOBER 1, 2020

4:00 - 7:00 PM
(NO FORMAL PRESENTATION -
COME ANYTIME)

FAITH HEIGHTS CHURCH
600 28 1/4 RD
GRAND JUNCTION, CO

FOR MORE INFORMATION, CONTACT:
ANDREW AMEND
STOLFUS & ASSOCIATES, INC.
(303)221-2330
ANDREW@STOLFUSANDASSOCIATES.COM

FOR ONLINE PRESENTATION, MAPS, AND
COMMENTS, PLEASE SEE GJSPEAKS.ORG

SI HABLA ESPAÑOL, FAVOR VISITE
GJSPEAKS.ORG O ASISTA A NUESTRA
EXHIBICIÓN ABIERTA AL PUBLICO

PATTERSON ROAD ACCESS CONTROL PLAN
COMMENT SHEET - PUBLIC OPEN HOUSE
October 1, 2020

Name: Roger Titmus Representing: Stinker Stores

Address: 2498 Patterson Road City: Grand Junction State: CO Zip: 81505

Phone: 208 337 2830 Email: rtitmus@stinker.com

* This survey (English only) can also be completed online at: https://www.surveymonkey.com/r/8WQF26Y
* For Spanish clients, please print this form, complete, and email or mail to the contact at the bottom of the page.

1. Are you a (check all that apply):
   - [x] Property Owner on Patterson Road
   - [ ] Renter/Lessee on Patterson Road
   - [x] Business Owner on Patterson Road
   - [ ] Commuter through corridor
   - [ ] Other _____

2. Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.
   - [x] Safety
   - [x] Mobility through the corridor
   - [x] Driveway Access
   - [ ] Pedestrian Access
   - [ ] Bicycle Access
   - [ ] Property Impacts
   - [ ] Local Street Intersections
   - [ ] Bus Service

3. What are some of your concerns regarding the proposed Access Control Plan? (check all that apply)
   - [ ] Sharing access with my neighbor
   - [ ] Accessing my property/business from a roadway other than Patterson Road
   - [ ] Modification of circulation on my property
   - [x] Reducing the number of access points to my property
   - [x] Restricting the turning movements to/from my property
   - [ ] Relocation of access point on my property
   - [ ] Other _____

4. What statement best reflects how you feel about the Access Control Plan?
   - [ ] I support the Access Control Plan
   - [ ] I support the Access Control Plan, but have concerns about access at particular locations. Please note those areas:

     _____

     _____
   - [x] I do **not** support the Access Control Plan

5. Do you have any other comments, questions, or concerns?

If the goal is to improve traffic flow on Patterson, restricting access to retail will not help achieve the goal. Restricting access causes drivers to stack up at bottleneck points, wait for opposing traffic, make u-turns, and backtrack to their destination. There are several east/west roads in Grand Junction that give drivers a lot of options. The best option to avoid hitting the brakes is to take I70, but there are few direct routes to the interstate. Providing better access to the interstate will improve traffic flow. Better north/south connectivity solves the problem. Restricting driveway access does not.

Please leave this with us, mail, or email by **October 15th** to:
Andrew Amend Stolfus & Associates, Inc.
5690 DTC Boulevard, Suite 330W, Greenwood Village, CO 80111
303.221.2330 (Phone) andrew@stolfusandassociates.com

Grand Junction Speaks
Published Comments for October 1, 2020 Patterson Access Control Meeting
Patterson Access Control Open House

As the Resident of 3030 Patterson Road, I do not find it beneficial to remove the only access point(Drive way) to my property. This is a privately owned property that is still zoned as Agricultural and thus should have its own entrance for equipment. By implementing the above changes to Patterson from 30 to Grand Valley drive you are not only creating a hazard for the business but also causing more traffic issues by introducing large Agriculture equipment into a small immobile space (between the building and fence line). These changes would cause more issues than they would prevent and should be stricken from the building plan.

09/23/2020 10:42 am

Brian Arms
3030 Patterson Road
Grand Junction, 81504

How will anyone that lives in Mantey Heights head west? Are you encouraging u-turns?

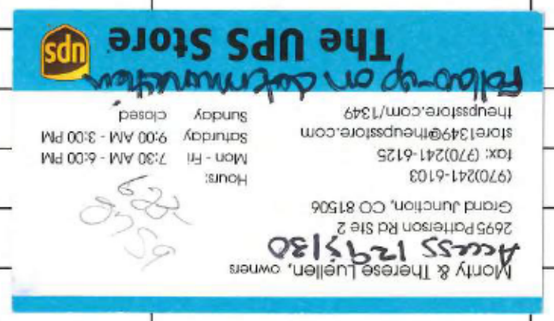
09/28/2020 9:21 am

Cheryl Fiegel
562 Grand Valley Dr
Grand Junction, 81504

One-on-One Meetings

Patterson Road Access Control Plan
One-on-One Meeting Sign Up

Name	Representing	Access Point Numbers	Phone Number	Email
PENNY WAGNER	GRAND VIEW HOA	28 ROAD	628-1858	pennywagnergvhoa@gmail.com
GARY CROUR	COMET CLEANERS	25 + PATTERSON / COMET	970 201-2225	gccrone@gmail.com
Michael Shafer	Resident	2745 Patterson	970-250-5739	mikegjco@gmail.com
Pam Hambright	Bookcliff Liquors	3026 Patterson	970-250-8378	gjnana@hotmail.com
Matt Darling	Cross Orchards Museum	278 - 286	970 242 0971 X2-221	mdarling@westcomuseum.org
	↳ try to get County & neighbor to attend Mark Showburg			
Monty Luellen		129 & 130 - concerned about single access - doesn't need one on one just		
		follow up on access determination	623-0759	or UPS Store



Patterson Road Access Control Plan
One-on-One Meeting Sign Up

Name	Representing	Address	Notes
Penny Wagner	Grand View HOA	28 Road	Called and left voice messages multiple time and reached out via email, but never received a response.
Gary Crone	Comet	25 Rd & Patterson	Met with owner to discuss his dry cleaning business access to Patterson. Agreed to allow RIRO access instead of closing it, as proposed in the original plan.
Michael Shafer	Resident	2745 Patterson	Contacted resident and he stated there was no need for a meeting. He had spoken with other community members and they are not concerned about the ACP at this time.
Pam Hambright	Bookchief Liquors	3026 Patterson	Met with owner and agreed to revise the ACP so that trucks could continue to circulate through her business.
Matt Darling	Cross Orchards Museum	3073 F Rd	Met with representatives and agreed that no modifications to the ACP were needed at the property.
Monty Luellen			Contacted owner and he stated there was no need for a meeting, but that he would like to be informed of the final access determination for his properties two Patterson access points.
Dr. Bill Merkel	W & D MERKEL FAMILY	2626 Patterson	The property was recently sold, but Dr. Merkel did provide the contact information for the real estate agent who arranged the transaction. The real estate agent has not replied to requests for information about the new owner.
Gara Ross, Executive Assistant to Michelle Shiao and Dan Prinster	SCL Health St Mary's Medicine Center	2686 Patterson	Met with representatives and agreed to modify the modify the ACP to better serve the hospital's needs. We also made small access modifications to their property at 12th Street
Pastor Seth Thomas	Northeast Christian Church	2751 Patterson	Met with representatives to discuss future development plans and the Xcel gas facilities preventing extension of 27 1/2 Road to the south. Agreed that we should rethink access in this area, which will be shown in the Revised ACP.
Bill Wade	CHURCH OF CHRIST OF GRAND JUNCTION	2893 Patterson	Contacted the church office and was referred to the head of their planning committee. Called a left voice messages, but have not received a response.
Trent Spendrup	Hope Plaza	2482 Patterson	The representative initiated contact with us to be kept informed of the ACP status, but has not responded to our follow-up meeting requests.

Open House 2

January 6-12, 2021

PATTERSON ROAD ACCESS CONTROL PLAN

FROM HIGHWAY 6 TO LODGEPOLE STREET

THE CITY OF GRAND JUNCTION INVITES YOU TO THE

VIRTUAL OPEN HOUSE

PLAN DE CONTROL DE ACCESSO DE LA CALLE PATTERSON

DESDE HIGHWAY (CARRETERA) 6 HASTA LA CALLE LODGEPOLE

LA CIUDAD DE GRAND JUNCTION LE INVITA A

UNA CASA VIRTUAL ABIERTA AL PUBLICO

JANUARY 6-12,2021

DEL 6 AL 12 DE ENERO DEL 2021

GJSPEAKS.ORG

Grand Junction COLORADO

Stolfus

THIS VIRTUAL OPEN HOUSE WILL PROVIDE THE COMMUNITY WITH AN OPPORTUNITY TO:

- **WATCH AN INTRODUCTORY VIDEO**
- **VIEW THE REVISED ACCESS PLAN**
- **LEAVE COMMENTS**

PLEASE VISIT GJSPEAKS.ORG

ESTA CASA VIRUTAL ABIERTA DARÁ A LA COMUNIDAD UNA OPORTUNIDAD DE:

- **MIRAR UN VIDEO DE INTRODUCCIÓN**
- **VER EL PLAN DE ACCESO REVISADO**
- **DEJAR COMENTARIOS**

VISITE GJSPEAKS.ORG

FOR MORE INFORMATION, PLEASE CONTACT:
PARA MÁS INFORMACIÓN, CONTACTAR A:

DAVID THORNTON, AICP
PRINCIPAL PLANNER
CITY OF GRAND JUNCTION
970-244-1450
DAVIDTH@GJCITY.ORG

STOLFUS & ASSOCIATES, INC.
5690 DTC BLVD. STE. 330W
GREENWOOD VILLAGE, CO 80111

PATTERSON ROAD ACCESS CONTROL PLAN

FROM HIGHWAY 6 & 50 TO LODGEPOLE STREET

THE CITY OF GRAND JUNCTION INVITES YOU TO THE

VIRTUAL OPEN HOUSE

JANUARY 6-12, 2021

VISIT GJSPEAKS.ORG

SI HABLA ESPAÑOL POR FAVOR VISITE GJSPEAKS.ORG O ASISTA A NUESTRA EXHIBICIÓN ABIERTA AL PÚBLICO

FOR MORE INFORMATION, PLEASE CONTACT:
DAVID THORNTON, AICP
PRINCIPAL PLANNER
CITY OF GRAND JUNCTION
970-244-1450
DAVIDTH@GJCITY.ORG

Virtual Meetings

January 13, 2021

Patterson Rd Meeting Sign-Ups				
First Name	Last Name	Email	Sign Up Items	Reference ACP Sheet
Matt	Clark	mattclarkcreations@gmail.com	01/13/2021 4:00PM-4:30PM - MST Meeting Time - Pyramid Building	Access 42
Myron	Klesner	myron@northeastchristian.org	01/13/2021 4:00PM-4:30PM - MST Meeting Time (2) - Northeast Christian Church	15th Street to Beechwood Street - Access 146
Brandon	Akins	brandshellyakins@gmail.com	01/13/2021 4:30PM-5:00PM - MST Meeting Time - Heritage Church	29 Road
Mark	Shoberg	hoa@brayandco.com	01/13/2021 4:30PM-5:00PM - MST Meeting Time - Bray HOA	Access 40
Michelle	Fisher	burkemichelle648@yahoo.com	01/13/2021 5:00PM-5:30PM - MST Meeting Time	24 1/2 Road to 25 Road - Access 29
Vicki	Konn	vickik@netpolarity.com	01/13/2021 5:00PM-5:30PM - MST Meeting Time - netPolarity	24 1/2 Road to 25 Road - Access 29
Lorena	Thompson	lorena@gjangelos.com	01/13/2021 5:30PM-6:00PM - MST Meeting Time (2) - Angelo's Pottery	24 1/2 Road to 25 Road - Access 29
Wendi	Wells	digwells@aol.com	01/13/2021 5:30PM-6:00PM - MST Meeting Time - Farmers Insurance	24 1/2 Road to 25 Road - Access 29
Bryan	Muhr	Bmurr1960@gmail.com	01/13/2021 6:00PM-6:30PM - MST Meeting Time	Access 76 and 78
monty	luellen	luellen0399@msn.com	01/13/2021 6:30PM-7:00PM - MST Meeting Time - patterson gardens hoa	Access 130, 116, 117

From: Michelle Hansen
To: jeff.p.tipton@gmail.com; bmurr1960@gmail.com
Cc: Andrew Amend; David Thornton; Rick Dorris; Trenton Prall
Subject: Patterson Access Control Plan
Date: Wednesday, January 20, 2021 13:47:04
Attachments: 74c8b419-1438-4a22-8684-34033ad9fcc5.png
Patterson ACP_Figure 2F.pdf
Patterson - What is Access Management.pdf
Patterson Driveway Crashes.pdf

Jeff, Brenda, and Bryan,

Thank you for meeting with me this past Monday regarding the Patterson Access Control Plan. As discussed, I've attached the updated plan in your area reflecting the changes at Access 75 and 76 to provide conditional right-in/right-out access points at these locations. The conditional element specifies that these access points will remain open until your property redevelops. Upon redevelopment, these access points will be closed.

Also attached is some information regarding safety and crashes through the corridor. The What is Access Management document provides the information we discussed about the percentage of crashes related to left turns as opposed to right turns at access points. The Patterson Driveway Crashes document provides the information about the number of access related crashes that have occurred through different segments of the corridor between 2014 and 2018.

I have debriefed the City staff on our conversation. Jeff, someone will be contacting you before the end of this week to further discuss your concerns and answer any additional questions. Please contact me if you have any additional questions. Thank you for participating in the project.

Michelle

We moved! Please note our new Suite Number, Suite 330W
Michelle R. Hansen, PE| Senior Transportation Engineer
Stolfus
www.stolfusandassociates.com
Stolfus & Associates, Inc. | 5690 DTC Boulevard, Suite 330W | Greenwood Village, CO 80111
P: 303 221 2330 | C: 720 771 3056 | michelle@stolfusandassociates.com

From:	Andrew Amend
To:	hoa@brayandco.com
Cc:	Rick Dorris; David Thornton; Michelle Hansen; mattclarkcreations@gmail.com
Subject:	Patterson Road ACP Follow Up
Date:	Tuesday, January 19, 2021 20:19:41
Attachments:	49ae0dd3-dc72-4fe1-a533-684f76858e4f.png Patterson ACP Figure 2D.pdf

Dear Mr. Shoberg,

As discussed at our Zoom meeting last Wednesday, our project team has performed an engineering investigation into your request to provide ¾ (Left-In and Right-In) access to Foresight Circle. In development of this plan, our team applied the concept of Functional Intersection Area (FIA), as defined in the TRB's Access Management Manual. While accounting for the 216-foot peak queue length projected in 2045 at 25 Road, we have concluded that Foresight Circle is outside the FIA. Because Foresight Circle is a public street and outside the FIA for 25 Road, the plan has been revised to provide ¾ access at #40, as shown in the attached exhibit. We have also redesignated access to Northgate Drive to ¾ in order to provide greater access to the south side of Patterson Road and to provide a u-turn opportunity for traffic coming from the east.

Thank you for your interest in the project,

Andrew Amend, PE, PTOE | Transportation Engineer

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Stolfus & Associates, Inc. | 5690 DTC Boulevard, Suite 330W | Greenwood Village, CO 80111

Main: 303 221 2330 | **andrew@stolfusandassociates.com**

From:	Andrew Amend
To:	vickik@netpolarity.com; diqwells@aol.com
Cc:	Rick Dorris; David Thornton; Michelle Hansen
Subject:	Patterson Road ACP
Date:	Tuesday, January 19, 2021 19:47:15
Attachments:	bda004cd-bc34-4119-90b8-d09844f1fc12.png Patterson ACP Figure 2C.pdf

Dear Ms. Wells and Ms. Konn,
As discussed at our Zoom meeting last Wednesday, our project team has performed an engineering investigation into your request to provide ¾ (Left-In, Right-In, Right-Out only) access to 2478 Patterson Road. We have concluded that this change is consistent with the access control plan methodology and have moved the ¾ access from #30 to #29, as shown in the attached plan. Please note that when a raised median is implemented on the segment of Patterson Road between 24 ½ Road and 25 Road, ¾ access at #29 is conditioned upon the owner of 2478 Patterson Road establishing legal cross access to the adjacent properties at 2474 Patterson Road and 2482 Patterson Road. Establishment of legal cross access does not imply an obligation for any of the property owners to physically construct the improvements.

Thank you for your interest in the project,

Andrew Amend, PE, PTOE | Transportation Engineer
Stolfus
www.stolfusandassociates.com
Stolfus & Associates, Inc. | 5690 DTC Boulevard, Suite 330W | Greenwood Village, CO 80111
Main: 303 221 2330 | **andrew@stolfusandassociates.com**

From:	Andrew Amend
To:	lorena@gjangelos.com
Cc:	Rick Dorris; David Thornton; Michelle Hansen
Subject:	Patterson Road ACP Follow Up
Date:	Tuesday, January 19, 2021 19:42:36
Attachments:	29703b32-05e1-4447-beae-d4948f24ac8d.png Patterson ACP Figure 2C.pdf

Dear Ms. Thompson,
As discussed at our Zoom meeting last Wednesday, our project team has performed an engineering investigation into your request to provide ¾ (Left-In, Right-In, Right-Out only) access to 2478 Patterson Road. We have concluded that this change is consistent with the access control plan methodology and have moved the ¾ access from #30 to #29, as shown in the attached plan. Please note that when a raised median is implemented on the segment of Patterson Road between 24 ½ Road and 25 Road, ¾ access at #29 is conditioned upon the owner of 2478 Patterson Road establishing legal cross access to the adjacent properties at 2474 Patterson Road and 2482 Patterson Road. Establishment of legal cross access does not imply an obligation for any of the property owners to physically construct the improvements.

Also on our Zoom meeting, you mentioned that you had mailed us a letter last fall. We were unable to find any record of receiving your letter and so I deeply apologize for our lack of responsiveness. We would still appreciate your thoughts on the project, so if you want to reply to this message with a copy, we would be happy to take it into consideration.

Thank you for your interest in the project,

Andrew Amend, PE, PTOE | Transportation Engineer
Stolfus
www.stolfusandassociates.com
Stolfus & Associates, Inc. | 5690 DTC Boulevard, Suite 330W | Greenwood Village, CO 80111
Main: 303 221 2330 | **andrew@stolfusandassociates.com**

Survey Monkey Results

Open House 1 and Open House 2

#1

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Friday, October 02, 2020 1:49:56 PM
Last Modified:	Friday, October 02, 2020 1:52:28 PM
Time Spent:	00:02:31
IP Address:	69.146.117.38

Page 1

Q1

Please provide your contact information.

Name	**Matt Darling**
Address	**3073 Patterson Rd**
City	**GRAND JUNCTION**
State	**CO**
Zip	**81504**
Phone Number	**9702617839**
Email	**mdarling@westcomuseum.org**

Q2

Are you a (check all that apply):

Business Owner on Patterson Road,

Commuter through corridor

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Property Impacts

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Modification of circulation on my property

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

Q6

Do you have any other comments, questions, or concerns?

No.

#2

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, October 05, 2020 7:10:19 AM
Last Modified:	Monday, October 05, 2020 8:26:21 AM
Time Spent:	01:16:02
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Roger Titmus representing Stinker Stores**
Address	**2498 Patterson Road**
City	**Grand Junction**
State	**CO**
Zip	**81505**
Phone Number	**209-337-2830**
Email	**rtitmus@stinker.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,

Business Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Mobility through the corridor,

Driveway Access

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Restricting the turning movements to/from my property,

Other:
reducing the number of access points to my property

Q5

What statement best reflects how you feel about the Access Control Plan?

I do not support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

If the goal is to improve traffic flow on Patterson, restricting access to retail will not help achieve the goal. Restricting access causes drivers to stack up at bottleneck points, wait for opposing traffic, make u-turns, and backtrack to their destination. There are several east/west roads in Grand Junction that give drivers a lot of options. The best option to avoid hitting the brakes is to take I70, but there are few direct routes to the interstate. Providing better access to the interstate will improve the brakes is to take I70, but there are few direct routes to the interstate. Providing better access to the interstate will improve traffic flow. Better north/south connectivity solves the problem. Restricting driveway access does not.

#3

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, October 05, 2020 1:07:20 PM
Last Modified:	Monday, October 05, 2020 1:10:38 PM
Time Spent:	00:03:18
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Michael Shater**
Address	**2745 Patterson**
City	**Grand Junction**
State	**CO**
Zip	**81506**
Phone Number	**9702505739**
Email	**mikegjco@gmail.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Driveway Access

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Relocation of access point on my property,
Other:
also reducing and restricting (4&5)

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
undecided

Q6

Do you have any other comments, questions, or concerns?

not at this time

#4

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, October 05, 2020 1:10:43 PM
Last Modified:	Monday, October 05, 2020 1:12:02 PM
Time Spent:	00:01:19
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Ryan Frieling representing Feather Petro - Stop n Save**
Address	**621 2Y Road**
City	**Grand Junction**
State	**CO**
Zip	**81505**
Email	**rfrieling@featherpetro.com**

Q2

Are you a (check all that apply):

Business Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Mobility through the corridor,

Driveway Access

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Accessing my property/business from a roadway other than Patterson Road

,
Other:
also modification and restriction (3&5)

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
Patterson W of 2Y road

Q6

Do you have any other comments, questions, or concerns?

none

#5

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, October 05, 2020 1:12:06 PM
Last Modified:	Monday, October 05, 2020 1:21:45 PM
Time Spent:	00:09:39
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Mike Fisher**
Address	**2918 Patterson Road**
City	**GRand Junction**
State	**CO**
Zip	**81504**
Phone Number	**970-640-9010**
Email	**mikefisher542@gmail.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Driveway Access,

Property Impacts

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Relocation of access point on my property,
Other:
also reducing and restricting (4&5) AND closing access to our garage - de-valuing our property

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
Our driveway access and the amount of traffic already using our street as a U-turn because of Safeway

Q6

Do you have any other comments, questions, or concerns?

Please contact us directly if the plan continues to close our driveway as we will lose considerable amount of money when we sell our house because the garage would no longer be functional as a two- car garage

#6

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, October 05, 2020 1:22:09 PM
Last Modified:	Monday, October 05, 2020 1:27:45 PM
Time Spent:	00:05:35
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Kaia Michaelis representing Museums of Western Co.**
Address	**3073 F. Road**
City	**Grand Junction**
State	**CO**
Zip	**81505**
Phone Number	**970-242-0971 x204**
Email	**kmichaelis@westerncomuseum.org**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,

Business Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Mobility through the corridor,

Local Street Intersections

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Reducing the number of access points to my property

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
We need to maintain a secondary access point at Cross Orchards for traffic flow at large events.

Q6

Do you have any other comments, questions, or concerns?

none

#7

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, October 05, 2020 1:35:45 PM
Last Modified:	Monday, October 05, 2020 1:42:36 PM
Time Spent:	00:06:51
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Robert Garrison Jr.**
Address	**2778 Patterson**
City	**Grand Junction**
State	**co**
Zip	**81506**
Phone Number	**241-6565**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,

Renter/Lessee on Patterson Road,

Commuter through corridor

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Driveway Access,

Property Impacts

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Restricting the turning movements to/from my property,
Other:
and relocation - future access

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
reduce speed to encourage alternate routes

Q6

Do you have any other comments, questions, or concerns?

none

#8

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, October 05, 2020 1:28:09 PM
Last Modified:	Monday, October 05, 2020 1:43:01 PM
Time Spent:	00:14:51
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Steve Scodggins representing Museum of West Slope**
Address	**3513 G. Road**
City	**Palisade**
State	**CO**
Zip	**81526**
Email	**sscodggins@coloradoe2.org**

Q2

Are you a (check all that apply):

Business Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Mobility through the corridor,

Local Street Intersections

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Modification of circulation on my property,
Other:
also restriction and relocation

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan.,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
Thanks for developing a plan - having time for feedback and a thoughtful process are important.

Q6

Do you have any other comments, questions, or concerns?

none

#9

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, October 05, 2020 1:43:02 PM
Last Modified:	Monday, October 05, 2020 1:46:34 PM
Time Spent:	00:03:31
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Jim Forsythe**
Address	**2887 Streamside**
City	**Grand Junction**
State	**CO**
Zip	**81505**
Phone Number	**970-765-5532**
Email	**JLFK15@outlook.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Mobility through the corridor,

Local Street Intersections

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Accessing my property/business from a roadway other than Patterson Road

,
Other:
and reducing (#4)

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

Excellent and knowledgeable staff on hand

#10

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, October 05, 2020 1:46:42 PM
Last Modified:	Monday, October 05, 2020 1:52:02 PM
Time Spent:	00:05:20
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Carl Zimmerman**
Address	**666 Turtledove Drive**
City	**Grand Junction**
State	**CO**
Zip	**81506**
Phone Number	**970-4244526**

Q2

Are you a (check all that apply):

Commuter through corridor,

Other (please specify):

Grandview subdivision

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Accessing my property/business from a roadway other than Patterson Road

,

Other:

Hawthorne Ave to 28 1/4 road - I support that

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

Hawthorne needs to go through to 28 1/4 road

#11

COMPLETE

Collector: Patterson Road...al Open House (Web Link)
Started: Monday, October 05, 2020 1:53:29 PM
Last Modified: Monday, October 05, 2020 1:56:02 PM
Time Spent: 00:02:33
IP Address: 50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Burlena Price**
Address	**2887 1/2 Cascade Ave.**
City	**Grandf Junction**
State	**CO**
Zip	**81501**
Phone Number	**970-314-9817**
Email	**bprice7372@yahoo.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,

Other (please specify):
property owner off of patterson rd

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Sharing access with my neighbor,
Other:
keeping it from property

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

Can't be done soon enough Thank you for your plan!

#12

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, October 05, 2020 1:56:06 PM
Last Modified:	Monday, October 05, 2020 2:00:11 PM
Time Spent:	00:04:05
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Janice Breagan**
Address	**2885 1/2 Cascade**
City	**Grand Junction**
State	**CO**
Zip	**81501**
Phone Number	**970-245-4193**

Q2

Are you a (check all that apply):

Commuter through corridor

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Pedestrian Access,

Bicycle Access

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Sharing access with my neighbor,
Other:
none - but it makes you check something

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

Can't be done soon enough! Thank you!

#13

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Wednesday, October 07, 2020 6:52:17 AM
Last Modified:	Wednesday, October 07, 2020 6:56:07 AM
Time Spent:	00:03:49
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Brian Arms**
Address	**3030 PAtterson Road**
City	**Grand Junction**
State	**co**
Zip	**81504**

Q2

Are you a (check all that apply):

Renter/Lessee on Patterson Road,

Other (please specify):

Resident From 30 to Grand Valley Drive

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Restricting the turning movements to/from my property

Q5

What statement best reflects how you feel about the Access Control Plan?

I do not support the Access Control Plan.,

If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::

As the Resident of 3030 Patterson Road, I do not find it beneficial to remove the only access point(Drive way) to my property. This is a privately owned property that is still zoned as Agricultural and thus should have its own entrance for equipment. By implementing the above changes to Patterson from 30 to Grand Valley drive you are not only creating a hazard for the business but also causing more traffic issues by introducing large Agriculture equipment into a small immobile space (between the building and fence line). These changes would cause more issues than they would prevent and should be stricken from the building plan.

Q6

Do you have any other comments, questions, or concerns?

none

#14

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Wednesday, October 07, 2020 6:56:11 AM
Last Modified:	Wednesday, October 07, 2020 7:00:09 AM
Time Spent:	00:03:57
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Cheryl Fiegel**
Address	**562 Grand VAlley Dr.**
City	**Grand Junction**
State	**CO**
Zip	**81504**

Q2

Are you a (check all that apply):

Commuter through corridor

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Restricting the turning movements to/from my property

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
How will anyone that lives in Mantey Heights head west? Are you encouraging u-turns?09/28/2020 9:21 am

Q6

Do you have any other comments, questions, or concerns?

none

#15

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Tuesday, October 13, 2020 8:39:38 PM
Last Modified:	Tuesday, October 13, 2020 8:44:21 PM
Time Spent:	00:04:43
IP Address:	184.166.12.231

Page 1

Q1

Please provide your contact information.

Name	**Lorena Thompson -- LCAT Investments**
Address	**2478 F Road #11, 2478**
City	**Grand Junction**
State	**CO**
Zip	**81505**
Phone Number	**9702502106**
Email	**lorena@gjangelos.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,

Renter/Lessee on Patterson Road,

Business Owner on Patterson Road,

Commuter through corridor

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Mobility through the corridor,

Driveway Access,

Property Impacts

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Restricting the turning movements to/from my property,
Other:
See the attached statement.

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

Q6

Do you have any other comments, questions, or concerns?

We own LCAT in the entry marked 29 on your project map. This plaza holds 29 active business, many of which are medical with some retail. You have chosen to take the ¾ access in at Hope Plaza (#30) next door where there is no real way to connect a drive to our plaza without knocking down a business or turning their parking lot into a thorofare. I cannot imagine that, that will be okay with them. That plaza – the only one with a ¾ access hosts only 4 businesses. This makes no sense at all. You are cutting off access to 29 businesses to give access to 4. The city's attitude seems to be that you are going to put in the median and the business along that route can just figure it out. This will – without any doubt—hurt our business.` With COVID challenging our very existence, this just adds mayhem to misery.
Could you reconsider where the ¾ access occurs and attempt to damage the least number of businesses with this decision?

#16

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Wednesday, October 14, 2020 12:02:05 PM
Last Modified:	Wednesday, October 14, 2020 12:06:38 PM
Time Spent:	00:04:32
IP Address:	50.211.228.253

Page 1

Q1

Please provide your contact information.

Name	**Monty Luellen Representing Patterson Gardens HOA**
Address	**2721 Patterson**
City	**Grand Junction**
State	**CO**
Zip	**81506**
Phone Number	**970-623-2759**
Email	**Luellen0399@msn.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,

Business Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Driveway Access,

Property Impacts

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Modification of circulation on my property,
Other:
also reducing and restricting (4&5)

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
#129, #130, #159

Q6

Do you have any other comments, questions, or concerns?

not at this time

#17

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Thursday, October 15, 2020 8:16:29 AM
Last Modified:	Thursday, October 15, 2020 8:29:21 AM
Time Spent:	00:12:52
IP Address:	47.47.138.82

Page 1

Q1

Please provide your contact information.

Name	**Lori Carlston-Thompson**
Address	**2478 Patterson Rd., #15**
City	**Grand Junction**
State	**co**
Zip	**81505**
Phone Number	**9702454567**
Email	**loricarlston@allstate.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,

Renter/Lessee on Patterson Road,

Business Owner on Patterson Road,

Commuter through corridor

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Mobility through the corridor,

Driveway Access

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Restricting the turning movements to/from my property,
Other:
No access other than Patterson, neighbor not willing to do pass through, and if he was it would cause speeding problems in parking lot. So don't really blame him.

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
Would like to see a left turn into the 2478 Patterson complex as there are so many businesses in this complex and we already have left in, left out access - it is not an accident hazard.

Q6

Do you have any other comments, questions, or concerns?

If the plan comes to fruition which extends the Riverside Parkway up 25 Rd to F 1/2 Rd, it will cause a lot of traffic to bypass the section of Patterson we're on, between 24 1/2 Rd and 25 Rd. There is already less traffic on this part of Patterson than there is near 7th to 12th St - so perhaps the building of medians and restricting of traffic on this section of Patterson will never need to be completed, and we can save the city and taxpayers money. The bottleneck of Patterson between 1st and 7th streets may require the city to find alternate traffic routes as the city grows.

#18

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Thursday, October 15, 2020 11:47:06 AM
Last Modified:	Thursday, October 15, 2020 11:51:45 AM
Time Spent:	00:04:38
IP Address:	69.146.252.115

Page 1

Q1

Please provide your contact information.

Name	**Lynn Thompson**
Address	**2478 Patterson**
City	**Grand Junction**
State	**Colorado**
Zip	**81505**
Phone Number	**970250-0815**
Email	**lynn@gjangelos.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,
Business Owner on Patterson Road,
Commuter through corridor

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Mobility through the corridor,
Driveway Access,
Property Impacts

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Restricting the turning movements to/from my property

Q5

What statement best reflects how you feel about the Access Control Plan?

I do not support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

Having a "right only in and right only out" access to my property will make it more difficult for our customers to access my business, resulting in loss of income. Also, if it were even possible to connect access with adjoining properties, it will make my parking lot a street, resulting in safety issues for my employees and customers.

#19

COMPLETE

Collector: Patterson Road...al Open House (Web Link)
Started: Tuesday, January 05, 2021 4:45:16 PM
Last Modified: Tuesday, January 05, 2021 4:49:23 PM
Time Spent: 00:04:07
IP Address: 98.234.51.223

Page 1

Q1

Please provide your contact information.

Name	**Haixia Zhang**
Address	**2478 Patterson Rd**
City	**GJ**
State	**CO**
Zip	**81505**
Phone Number	**4156376343**
Email	**hzhang@netpolarity.com**

Q2

Are you a (check all that apply):

Renter/Lessee on Patterson Road,

Business Owner on Patterson Road,

Other (please specify):

Blockage to Patterson Road centerline will prevent all of our employees to be able to leave our office from our parking lot. We would have to turn left out of the complex to go home. We have close to 10 employees in the office and everyone is very dissatisfied with the suggested change.

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Mobility through the corridor,

Driveway Access,

Property Impacts

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Relocation of access point on my property

Q5

What statement best reflects how you feel about the Access Control Plan?

I do not support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

do not block the road, we will leave Patterson Road if you do

#20

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Wednesday, January 06, 2021 8:48:55 AM
Last Modified:	Wednesday, January 06, 2021 8:54:39 AM
Time Spent:	00:05:43
IP Address:	35.133.61.90

Page 1

Q1

Please provide your contact information.

Name	**robert garrison**
Address	**2778 patterson road**
City	**grand junction**
State	**CO**
Zip	**81506**
Phone Number	**18017255620**
Email	**robrlgjr@outlook.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,

Commuter through corridor

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Driveway Access,

Property Impacts,

Bus Service

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Restricting the turning movements to/from my property,
Other:
median design, sound reduction

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan.,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
median design, will it be like north avenue? can zeroscape be incorporated for sound reduction? traffic noise

Q6

Do you have any other comments, questions, or concerns?

getting to my home while traveling east for 12th street

#21

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Wednesday, January 06, 2021 12:38:25 PM
Last Modified:	Wednesday, January 06, 2021 1:12:49 PM
Time Spent:	00:34:23
IP Address:	69.145.234.89

Page 1

Q1

Please provide your contact information.

Name	**Renee Williams**
Address	**2515 Foresight Circle**
City	**Grand Junction**
State	**CO**
Zip	**81505**
Phone Number	**970 3734**
Email	**synergisticwellnessatforesight@gmail.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,

Business Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Mobility through the corridor,

Local Street Intersections

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Restricting the turning movements to/from my property

Q5

What statement best reflects how you feel about the Access Control Plan?

I do not support the Access Control Plan.,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
Access to existing Foresight Circle Industrial Park right of ways and other public right of ways should not be restricted as these have been established for decades. Restricting access to existing public streets along Patterson appears to be a result of supporting private development interests at the expense of access to existing public streets.

Q6

Do you have any other comments, questions, or concerns?

no

#22

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Wednesday, January 06, 2021 9:58:26 AM
Last Modified:	Wednesday, January 06, 2021 2:35:03 PM
Time Spent:	04:36:36
IP Address:	184.166.14.14

Page 1

Q1

Please provide your contact information.

Name	**Craig Robillard**
Address	**848 Summer Sage Court**
City	**Grand Junction**
State	**CO**
Zip	**81506**
Phone Number	**9704337141**
Email	**c42skipper@gmail.com**

Q2

Are you a (check all that apply):

Commuter through corridor,

Other (please specify):

Frequentl bicycle rider in the neighborhood

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Bicycle Access

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Relocation of access point on my property,

Other:

Not a property owner but I had to check a box for the survey to be accepted.

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

Any thoughts about improving bicycle path system along Patterson?

#23

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Wednesday, January 06, 2021 3:41:08 PM
Last Modified:	Wednesday, January 06, 2021 3:45:54 PM
Time Spent:	00:04:45
IP Address:	97.118.29.44

Page 1

Q1

Please provide your contact information.

Name	**Bennett Boeschenstein**
Address	**1255 Ouray Ave**
City	**Grand Junction**
State	**CO**
Zip	**81501**
Phone Number	**19706408153**
Email	**boeschenstein.bennett0@gmail.com**

Q2

Are you a (check all that apply):

Commuter through corridor,

Other (please specify):

Board member museums of Western Colorado (Cross Orchards)

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Mobility through the corridor,

Pedestrian Access,

Bicycle Access,

Property Impacts,

Local Street Intersections,

Bus Service

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Relocation of access point on my property

Q5

I support the Access Control Plan.

What statement best reflects how you feel about the Access Control Plan?

Q6

Do you have any other comments, questions, or concerns?

Cross Orchards should have at least two good access points with accel-decel lanes

#24

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Wednesday, January 06, 2021 6:01:48 PM
Last Modified:	Wednesday, January 06, 2021 6:05:52 PM
Time Spent:	00:04:03
IP Address:	71.218.32.179

Page 1

Q1

Please provide your contact information.

Name	**Andrew Amend**
Address	**5690 DTC Blvd**
City	**Greenwood Village**
State	**CO**
Zip	**80111**
Phone Number	**3032212330**
Email	**andrew@stolfusandassociates.com**

Q2

Are you a (check all that apply):

Commuter through corridor,

Other (please specify):
Project Engineer

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Mobility through the corridor,

Local Street Intersections

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Accessing my property/business from a roadway other than Patterson Road

,
Other:
making sure SurveyMonkey works

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

Just checking to make sure SurveyMonkey is working properly

#25

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Thursday, January 07, 2021 3:19:25 PM
Last Modified:	Thursday, January 07, 2021 3:25:15 PM
Time Spent:	00:05:49
IP Address:	63.233.204.194

Page 1

Q1

Please provide your contact information.

Name	**Roger Titmus**
Address	**3184 Elder St**
City	**Boise**
State	**Idaho**
Zip	**83705**
Phone Number	**2083750942**
Email	**rtitmus@stinker.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,

Business Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Driveway Access,

Property Impacts

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Other:
All of the above

Q5

What statement best reflects how you feel about the Access Control Plan?

I do not support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

Reducing access to retail will discourage redevelopment and cause neighborhood blight.

#26

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Friday, January 08, 2021 2:26:20 PM
Last Modified:	Friday, January 08, 2021 2:29:13 PM
Time Spent:	00:02:52
IP Address:	184.166.174.17

Page 1

Q1

Please provide your contact information.

Name	**Marilyn Swanson**
Address	**2610 Springside Ct**
City	**Grand Junction**
State	**Colorado**
Zip	**81506**
Phone Number	**3036380742**
Email	**southsidere@gmail.com**

Q2

Are you a (check all that apply):

Other (please specify):

Springside Ct is very close to Patterson Rd. A stop light is needed badly at 28 Rd and Patterson.

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Safety,

Mobility through the corridor,

Local Street Intersections

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Respondent skipped this question

Q5

What statement best reflects how you feel about the Access Control Plan?

I support the Access Control Plan, but have concerns about access at particular locations.

,
If you chose "I support the Access Control Plan, but have concerns about access at particular locations.", please note those areas::
Signal at 28 Rd is badly needed.

Q6

Do you have any other comments, questions, or concerns?

Respondent skipped this question

#27

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Monday, January 11, 2021 8:53:19 PM
Last Modified:	Monday, January 11, 2021 8:59:10 PM
Time Spent:	00:05:51
IP Address:	98.127.108.244

Page 1

Q1

Please provide your contact information.

Name	**Nicholas A Sechrist**
Address	**2530 Falls View Cir**
City	**Grand Junction**
State	**CO**
Zip	**81505**
Phone Number	**9702706485**
Email	**ns2chiro@msn.com**

Q2

Are you a (check all that apply):

Business Owner on Patterson Road

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Mobility through the corridor,

Driveway Access,

Property Impacts

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Restricting the turning movements to/from my property

Q5

What statement best reflects how you feel about the Access Control Plan?

I do not support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

The main issue is two gas stations, both with two entrances that are caddy-corner at 25 Rd and Patterson. The greater advantage for flow and safety would be widening 25 Rd. There are multiple business inside of Foresight Circle and limiting access is only going to jam up larger intersections, namely 25 Rd and Patterson.

#28

COMPLETE

Collector:	Patterson Road...al Open House (Web Link)
Started:	Tuesday, January 12, 2021 9:55:49 PM
Last Modified:	Tuesday, January 12, 2021 9:59:01 PM
Time Spent:	00:03:12
IP Address:	184.166.12.214

Page 1

Q1

Please provide your contact information.

Name	**Nathan Williams**
Address	**1915 Monument Canyon Drive**
City	**Grand Junction**
State	**CO**
Zip	**81507**
Phone Number	**9702703733**
Email	**nathan.w.williams1@gmail.com**

Q2

Are you a (check all that apply):

Property Owner on Patterson Road,
Renter/Lessee on Patterson Road,
Business Owner on Patterson Road,
Commuter through corridor

Q3

Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

Mobility through the corridor,
Property Impacts,
Local Street Intersections

Q4

If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

Reducing the number of access points to my property

Q5

What statement best reflects how you feel about the Access Control Plan?

I do not support the Access Control Plan.

Q6

Do you have any other comments, questions, or concerns?

The access plan as written will have severe deleterious impacts to my business and the several businesses in the Foresight Park. We need to have same access we have now.

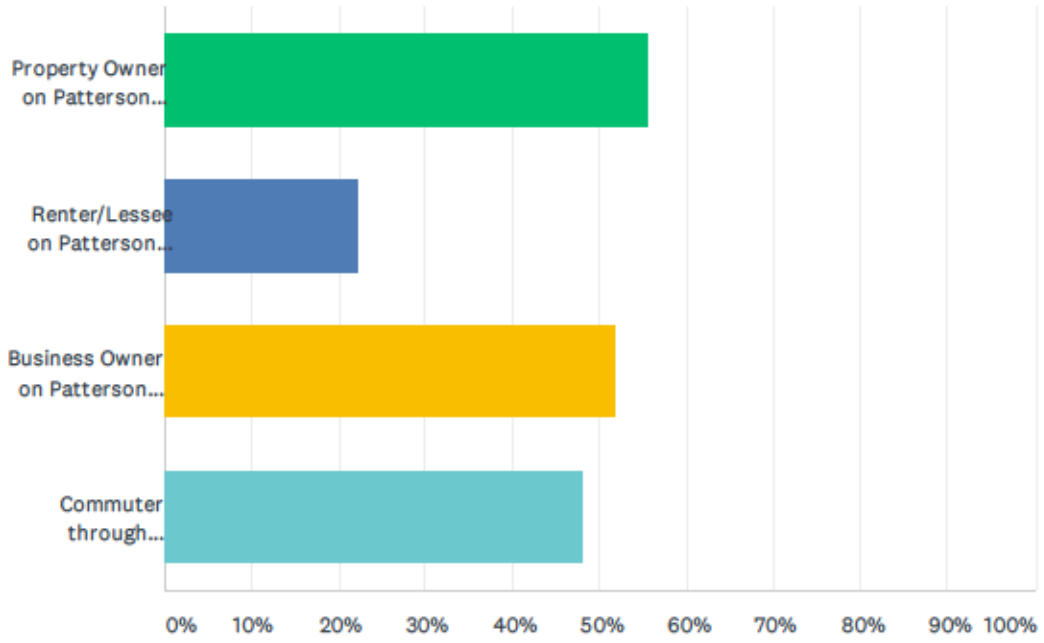
Q1 Please provide your contact information.

Answered: 28 Skipped: 0

ANSWER CHOICES	RESPONSES	
Name	100.00%	28
Address	100.00%	28
City	100.00%	28
State	100.00%	28
Zip	100.00%	28
Phone Number	85.71%	24
Email	82.14%	23

Q2 Are you a (check all that apply):

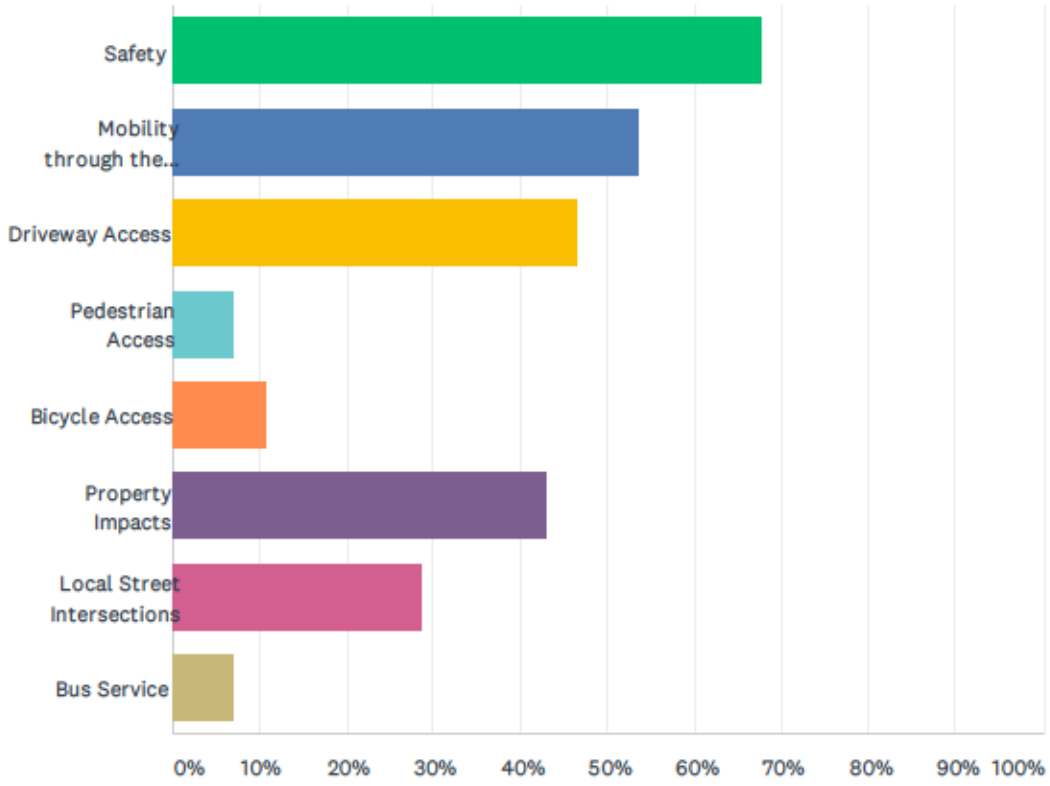
Answered: 27 Skipped: 1



ANSWER CHOICES	RESPONSES	
Property Owner on Patterson Road	55.56%	15
Renter/Lessee on Patterson Road	22.22%	6
Business Owner on Patterson Road	51.85%	14
Commuter through corridor	48.15%	13
Total Respondents: 27		

Q3 Of the following issues in the Patterson Road corridor, please mark up to three that are most important to you.

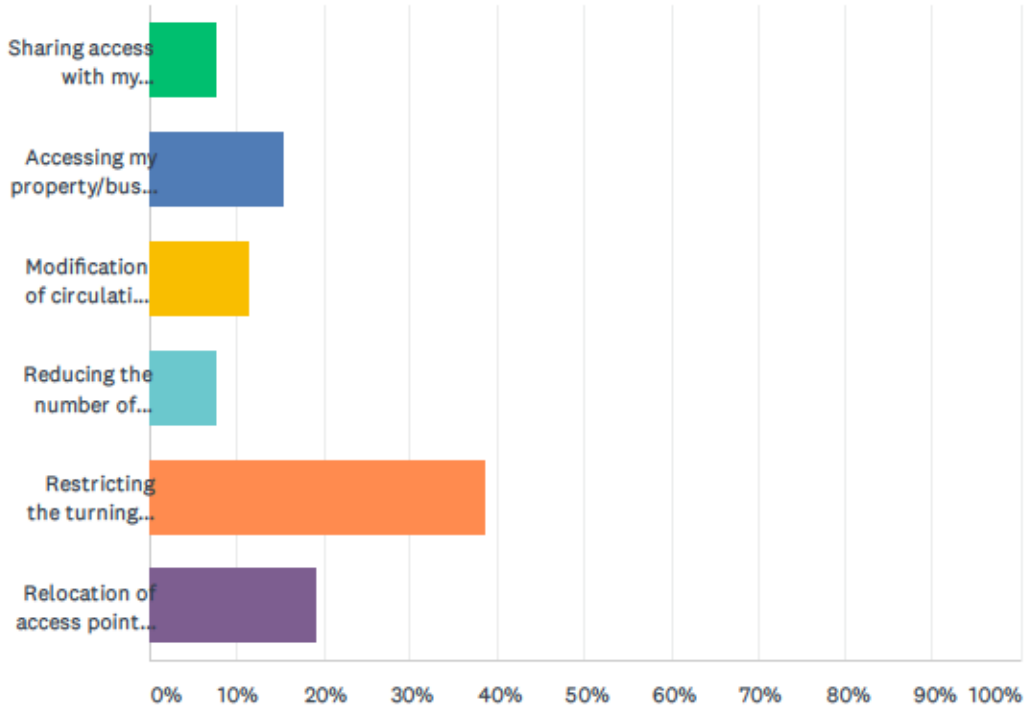
Answered: 28 Skipped: 0



ANSWER CHOICES	RESPONSES	
Safety	67.86%	19
Mobility through the corridor	53.57%	15
Driveway Access	46.43%	13
Pedestrian Access	7.14%	2
Bicycle Access	10.71%	3
Property Impacts	42.86%	12
Local Street Intersections	28.57%	8
Bus Service	7.14%	2
Total Respondents: 28		

Q4 If you own property, a business, or live along Patterson Road, what are your concerns regarding the Access Control Plan?

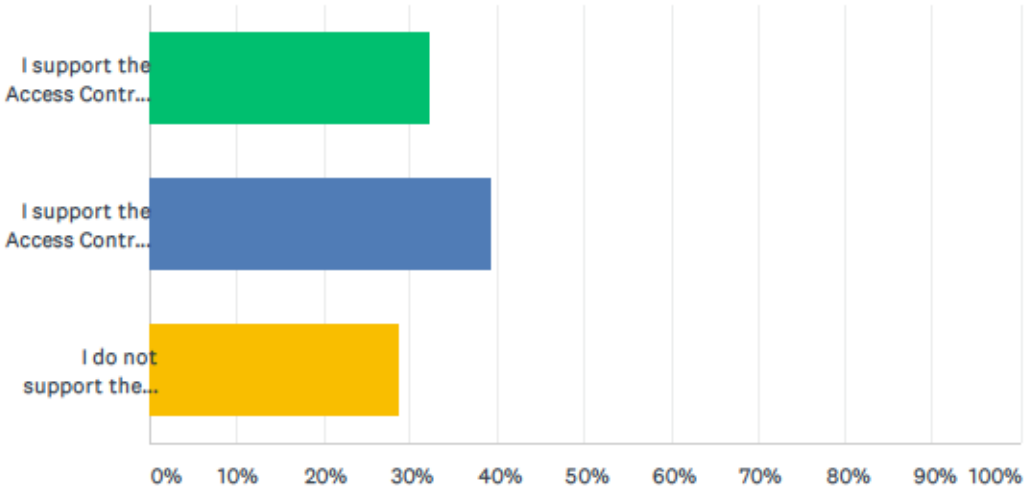
Answered: 26 Skipped: 2



ANSWER CHOICES	RESPONSES	
Sharing access with my neighbor	7.69%	2
Accessing my property/business from a roadway other than Patterson Road	15.38%	4
Modification of circulation on my property	11.54%	3
Reducing the number of access points to my property	7.69%	2
Restricting the turning movements to/from my property	38.46%	10
Relocation of access point on my property	19.23%	5
TOTAL		26

Q5 What statement best reflects how you feel about the Access Control Plan?

Answered: 28 Skipped: 0



ANSWER CHOICES	RESPONSES	
I support the Access Control Plan.	32.14%	9
I support the Access Control Plan, but have concerns about access at particular locations.	39.29%	11
I do not support the Access Control Plan.	28.57%	8
TOTAL		28

Area/Location of Concern	Contact or Meeting with Staff	Access Point(s)	Draft Condition (January 2021)	Changes Made to ACP	Follow Up
Cris-Mar - previously summarized. Requesting a note be added that the access control measures would not be added until the Bonito/Penny Lane connection to 29 1/2 Road is added. Improvements needed to Bonito for two blocks east of 29 Road to accommodate additional traffic.	Contacted by Trent Prall	211/212	211-RIRO, 212-3/4 movement	Add connection between Penny Lane and Bonito on the alt routes map. Make Cris Mar and Redwing conditional unsignalized full movement. Cris Mar goes to RIRO and Redwing goes to 3/4 upon connection to 29 1/2 Road.	None
Mantey Heights - Approximately 25 people attended the meeting at 4:00 on Thursday 3/18. Speeding is big concern. They are concerned about emergency access, tight streets due to vegetation, sight distance. I would like to look into the possibility of a left out accel lane at access 157. We have received 3 letters (attached): Gloria Deschamp (124 Mount View Drive); Beth McKee (135 Carlitos Ave), and Marc Burdick and Colin Carman (114 Camino Del Rey Dr). Gary Lucero is the primary contact at 245-6333.	Contacted by Trent Prall	156/157/158	156-RIRO, 157 - RIRO, 158-Closed	Add connection between Camino Del Rey and Rio Grande. Make 156 conditional full movement to be restricted to 3/4 if safety/operational issues occur. Make 158 a safety RIRO - conditions note closure only if safety or operational issues develop. Keep 157 as RIRO.	For 40 mph, full decel is 275' and P-R is 90'. Assuming the minimum 25' storage at 28 Rd, the minimum allowable distance to a 3/4 Mantey Heights Dr is 390'. Measured distance is 370', so the 3/4 is recommended at Mt View Dr #156. #158 changed to safety conditional RIRO.
Mira Vista/Belair/Mayfair - 23 people attended the meeting at 5:00 on Thursday 3/18. They are adamant about not sharing anything access/road/etc. with St. Mary's. Their CC&R's restrict their neighborhood to only residential uses therefore they argue that St. Mary's Hospital will not be able to expand to the west even if they do own all of it. They want the lefts out of Patterson at access 93 (St. Mary's) to be eliminated and then they will be fine. At peak hours the neighborhood already uses access 86 as a 3/4. Would like for it to be at least 3/4. One individual asked we consider just restricting full motion access for certain hours of the day. We received one letter from Bill Crawford (2551 Mayfair Dr). Danielle Schuster is the primary contact at 970-749-8468 or dnbschuster@gmailcom.	Contacted by Trent Prall	86/86a/93	86 - Conditional RIRO, 86a - Conditional 3/4, 93 - Conditional RIRO	Eliminate 86a. Make 86 and 93 conditional 3/4 with conditions to restrict to RIRO if safety or operational issues develop.	None
Patterson Gardens - Barbara Sundermeier (sp?) 256-0093 is concerned about no 3/4 access at 129. She states that it is unrealistic to think that someone can make a U-turn at the access #123 City Market 3/4 access. Rick and Andrew have already weighed in via email stating 3/4 access is possible and not get into the functional intersection area of Patterson and 15th.	Contacted by Trent Prall	129	129-RIRO	Change Access 129 to conditional 3/4 with conditions to restrict to RIRO if safety or operational issues develop.	None
ACCESS #3 - self-storage company - Concern that large truck traffic entering and exiting the storage unit facility with only a right in right out option will find it difficult to make U-turns further west on Patterson Road near the I-70 B intersection to go east.	Contacted by Trent Prall	1/3	1-closed, 3-RIRO	I-70 B to 24 Rd provides alternate access to get back to Patterson going east or to enter from the west. Change Access 3 to unsignalized full movement (conditional) with condition to restrict movements only when left turn improvements are implemented at I-70B. Change Access 1 to conditional RIRO with condition to close upon redevelopment only.	None

ACCESS #29 and other north access around Patterson Village Square between 24 1/2 and 25 Road - Impact these changes will have on intersections at 24 1/2 and 25 Road is a concern. Often it takes more than one light cycle now to make a left. By making everyone on my block go to these intersections to make left turns makes the situation worse. Are there plans to increase turn lanes or make changes to improve traffic flow at these intersections.		29	29-Conditional 3/4 - no change proposed	Not all left turns will need to be accommodated at 24 1/2 Rd/25 Rd. Multiple options for eastbound movements are provided including left turns at Commerce, U-turns along Patterson, access to Flat Top. The traffic study for the ACP identified some auxiliary lane improvements at 24 1/2 Rd and 25 Rd along Patterson, but did not identify the need for improvements on these roads. The City will continue to monitor how traffic reroutes and traffic volumes increase at public road intersections to identify the need for additional improvements at signalized intersections in the future.	None
ACCESS #44 - Need to retain full movement at Burkey Street (Post Office Annex access). ACCESS #106 and #108 - Concerned with limiting turning movements into the Northern Way neighborhood.		44/106/108	44-3/4 movement (no change) 106- 3/4 movement, 108- RIRO(no change)	Burkey Street has a 3/4 movement allowing left turns in. Blichman Avenue to the north provides access back to 25 Rd for left turns out. Access 106 is changed to conditional full movement to be restricted to 3/4 only with safety or operational issues. Either U-turns at 7th Street or re-routing via 7th to Bookcliff or 7th to Horizon will achieve movements to the east for vehicles not comfortable making left turns at 106. Left turn movements can be made at Access 106 - no change proposed for Access 108.	None
ACCESS #69 - E Park Avenue - Extra traffic would not be good using Park Avenue		69	69- Safety RIRO (no change)	Park Avenue will be restricted to RIRO when a median is constructed on Patterson. It has the potential to close if safety or operational issues ever occurred at that location due to its proximity to 1st St. Alternate access to 1st Street already exists. The access restrictions are not expected to increase traffic to the neighborhood.	None
ACCESS #86 - Mira Vista Rd - Don't limit this intersection to RI / RO only.		86/86a/93	86 - Conditional RIRO, 86a - Conditional 3/4, 93 - Conditional RIRO	Eliminate 86a. Make 86 and 93 conditional 3/4 with conditions to restrict to RIRO if safety or operational issues develop.	None
ACCESS # 116 and #117 - Wants 3/4 Movement for west bound Patterson Traffic in to Village Fair Shopping Center @ 12th and Patterson	Rick and Dave met Mr. Gibbs onsite - 3/25	114/116/117	114-conditional RIRO, 116- RIRO, 117- closed	Change Access 117 to RIRO. Change Access 116 to conditional RIRO - cannot close until truck circulation can be accommodated on site. 3/4 movement at 116 was evaluated and determined to be too close to 12th St. Change access 114 to conditional 3/4 - conditioned upon providing access to parcels both east/west.	For 35 mph, full decel is 215' and P-R is 75'. Distance from #114 to 12th St is 560' so conditional 3/4 has been added to 114.
ACCESS #129 and #130 - Concerned with safety issues and access to Patterson Gardens Townhomes between 12th and 15th Streets		129/130	129-RIRO, 130- right-out only (no change)	Change Access 129 to conditional 3/4 with conditions to restrict to RIRO if safety or operational issues develop.	None

ACCESS #156 - Mt View Drive - Mantey Heights - I have had no problems navigating the entering and existing onto Patterson Road, no to any closures.		156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. Make 156 conditional full movement to be restricted to 3/4 if safety/operational issues occur. Access 157 to remain RIRO. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.	None
ACCESS # 156-158 and #160-163 - Mantey Heights - Access from the east		156/157/158/161/163	156-RIRO, 157 - RIRO, 158-Closed, 161-3/4 movement (no change), 163 - RIRO)(no change)	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. Make 156 conditional full movement to be restricted to 3/4 if safety/operational issues occur. Access 157 to remain RIRO. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.	For 40 mph, full decel is 275' and P-R is 90'. Assuming the minimum 25' storage at 28 Rd, the minimum allowable distance to a 3/4 Mantey Heights Dr is 390'. Measured distance is 370', so the 3/4 is recommended at Mt View Dr #156. #158 changed to safety conditional RIRO.
Access #157 and #158 - Don't close #158, easier to see from #158 than #157 (Santa Fe Drive, Mantey Heights)		156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. Make 156 conditional full movement to be restricted to 3/4 if safety/operational issues occur. Access 157 to remain RIRO. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.	For 40 mph, full decel is 275' and P-R is 90'. Assuming the minimum 25' storage at 28 Rd, the minimum allowable distance to a 3/4 Mantey Heights Dr is 390'. Measured distance is 370', so the 3/4 is recommended at Mt View Dr #156. #158 changed to safety conditional RIRO.

Access #157 and #158 - Don't close #158, easier to see from #158 than #157 (Santa Fe Drive, Mantey Heights) Santa Fe Drive, Mantey Heights		156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. Make 156 conditional full movement to be restricted to 3/4 if safety/operational issues occur. Access 157 to remain RIRO. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.	For 40 mph, full decel is 275' and P-R is 90'. Assuming the minimum 25' storage at 28 Rd, the minimum allowable distance to a 3/4 Mantey Heights Dr is 390'. Measured distance is 370', so the 3/4 is recommended at Mt View Dr #156. #158 changed to safety conditional RIRO.
Access #157 and #158 - Don't close #158, easier to see from #158 than #157 (Santa Fe Drive, Mantey Heights)		156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. Make 156 conditional full movement to be restricted to 3/4 if safety/operational issues occur. Access 157 to remain RIRO. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.	For 40 mph, full decel is 275' and P-R is 90'. Assuming the minimum 25' storage at 28 Rd, the minimum allowable distance to a 3/4 Mantey Heights Dr is 390'. Measured distance is 370', so the 3/4 is recommended at Mt View Dr #156. #158 changed to conditional RIRO.
Access #157 and #158 - Don't close #158, easier to see from #158 than #157 (Santa Fe Drive, Mantey Heights)		156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. Make 156 conditional full movement to be restricted to 3/4 if safety/operational issues occur. Access 157 to remain RIRO. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.	For 40 mph, full decel is 275' and P-R is 90'. Assuming the minimum 25' storage at 28 Rd, the minimum allowable distance to a 3/4 Mantey Heights Dr is 390'. Measured distance is 370', so the 3/4 is recommended at Mt View Dr #156. #158 changed to safety conditional RIRO.

Access #158 - Don't close #158 (Santa Fe Drive, Mantey Heights)		156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. Make 156 conditional full movement to be restricted to 3/4 if safety/operational issues occur. Access 157 to remain RIRO. Access 161 (E Park Awe) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.	For 40 mph, full decel is 275' and P-R is 90'. Assuming the minimum 25' storage at 28 Rd, the minimum allowable distance to a 3/4 Mantey Heights Dr is 390'. Measured distance is 370', so the 3/4 is recommended at Mt View Dr #156. #158 changed to safety conditional RIRO.
ACCESS 159 - difficult to turn left. Need a connector road between 28 Road and 28 1/4 Road to allow neighborhood to access the 28 1/4 Road traffic light.		159	159-3/4 movement (no change)	City is currently connecting Hawthorne to 28 1/4 Rd to address left-turn out need. This connection was previously identified in the City's Street plan before the ACP.	None
ACCESS #168 - Don't connect 28 1/4 Road with Hawthorne Drive. Going to 29 Road as an alternate route to go west on Patterson Road adds additional time to commute.		168	168 signalized full movement (no change)	The Hawthorne connection was already planned prior to the ACP and is currently moving forward. You will still be able to use 28 Rd to go west on Patterson. You will just need to reroute to go east on Patterson.	None
ACCESS # 184 - 28 3/4 Road - Don't connect Matchett Park with Navajo Way. Against making 28 3/4 Road a RI / RO.		184	184-RIRO (no change)	The plan attempts to balance 3/4 movements to the north and south of Patterson and to provide 3/4 movements where the most vehicles/properties can be served. 28 3/4 is too close to Legends Way to provide a 3/4 movement. The connection between Navajo and Matchett Park is meant to provide alternate routes for the neighborhoods on the north to reach a traffic signal for left turn movements.	None
ACCESS #168 - Don't connect 28 1/4 Road with Hawthorne Drive and Matchett Park and with Indian Creek Subdivision, instead provide a connection from Indian Creek to 29 Road. **ACCESS #184** - 28 3/4 Road - Don't like limiting 28 3/4 Road to right in and right out only.		168/184	168 signalized full movement (no change), 184-RIRO(no change)	City is currently connecting Hawthorne to 28 1/4 Rd to address need. This connection was previously identified in the City's Street plan before the ACP. While a connection from Indian Creek to 29 Road would be beneficial, the availability of land to make that connection without impacting homes in Indian Creek is not available. Crossing of a major drainageway would also be required to connect to 29 Rd.	None

ACCESS #216 - 29 1/4 Road - Concerned with limiting 29 1/4 Road to right only. To go westbound on Patterson Road will add 3 to 5 minutes to my commute as I will have to go south and make my way over to 29 Road, then sit at a stoplight that backs up in the left turn lane now at Patterson.		216	216-RIRO (no change)	Implementation of this plan will occur over time as needed. A median will be added in this section when safety and operations on Patterson calls for it. In the future, it is anticipated that making left turns from 29 1/4 will become more difficult and finding an alternate route will actually be faster and safer than waiting for a gap in traffic on Patterson Rd. Currently there are no plans to implement a median in this segment.	None
ACCESS #233 - E Greenfield Cir - no access to 29 1/2 Road, 30 Road too far away for circulation		233	233-Safety RIRO(no change)	Access 233 is too close to 29 1/2 Rd to provide left-turns in. When a median is implemented at 29 1/2 Rd, Greenfield will be restricted to RIRO. It will only be closed if safety or operational issues develop. Alternate left-turn in access is available at Placer St. In addition, u-turns are available at either Placer or 30 Rd for left-turn movements out. Out of direction travel to u-turn at Placer St is less than 1/2 mile total.	None
ACCESS #235 and #244 - Oxbow and Trading Post subdivisions - One full access to these subdivision would be helpful instead of access required to go to 30 Road.		235/244	235-RIRO, 244-Safety RIRO(no change)	Change 235 to 3/4. 241 is also 3/4 and will provide access to neighborhoods. The plan looks to identify key locations with appropriate spacing for traffic signals for ideal operations on Patterson Rd for full movement intersections, which is basically already in place at 1/2 mile spacing. The plan has identified additional 3/4 movement access between signals where operations are improved and multiple properties/businesses can be served. Access 244 is too close to 30 Rd to provide anything more than RIRO. Alternate access via F 1/4 Rd is available and if safety or operational issues develop at 244, the access will close.	None
ACCESS #266 - Grand Valley Drive - Concern this will make Grand Valley Drive a throughfare. Don't eliminate the center lane, need for turn movements and emergency vehicles.		262/266	262-3/4 movement, 266-RIRO	Change 3/4 movement to Access 266 and change Access 262 to RIRO. Access 266 provides more connectivity and better circulation for the City overall and the location doesn't create overlapping left issues on Patterson. May increase traffic and speeds on Grand Valley, but probably a similar amount of traffic at Gerken with the 3/4 at 262. The plan has considered emergency services and alternate circulation routes for emergency services and the general public.	None

ACCESS #266 - Grand Valley Drive - The better choice for a south bound road would be Grand Valley Drive, it is a straight road all the way to E 1/2 Road. The plan for Patterson Road between 30 and 31 Roads needs work.		262/266	262-3/4 movement, 266-RIRO	Change 3/4 movement to Access 266 and change Access 262 to RIRO. We agree that 266 provides more connectivity and better circulation for the City overall and the location doesn't create overlapping left issues on Patterson. May increase traffic and speeds on Grand Valley, but probably a similar amount of traffic at Gerken with the 3/4 at 262.	None
GENERAL COMMENT - Between 1st and 7th St - Concerned with traffic, increasing side street traffic, and traffic speeds		N/A	N/A	A traffic analysis was conducted with this study and the plan provides solutions to respond to corridor operations and safety if traffic volumes increase. If traffic volumes do not increase, the need for the median and access modifications will not be required. This plan is just one part of the City's transportation system. The City will continue to monitor how traffic reroutes and traffic volumes increase at public road intersections to identify the need for additional improvements.	None
GENERAL COMMENTS - Enforce traffic laws		N/A	N/A	This plan supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.	None
GENERAL COMMENTS - Enforce Traffic Laws. Suggest flashing yellow arrows in intersection turn lanes.		N/A	N/A	This plan supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce. The City is considering implementing flashing yellow arrows as funding is available and signals are upgraded.	None
GENERAL COMMENTS - All this project will do is direct more traffic onto Patterson Road and 29 Road.		N/A	N/A	This project is meant to allow Patterson to operate to accommodate traffic for it's classification, which is a major arterial. Patterson is a key east-west arterial for the City. If improvements to Patterson are not made, congestion will occur and traffic will look for alternate routes either north or south of Patterson to meet the demand.	None
GENERAL COMMENTS - Supports controlling turn movements		N/A	N/A	Thank you for your input.	None

GENERAL COMMENTS - Don't push traffic into neighborhoods, reduce speed limits and enforce traffic laws		N/A	N/A	This project is meant to allow Patterson to operate to accommodate traffic for it's classification, which is a major arterial. Major arterials prioritize through movements and higher speeds. Patterson is a key east-west arterial for the City. If improvements to Patterson are not made, congestion will occur and traffic will look for alternate routes either north or south of Patterson to meet the demand. This plan also supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.	None
GENERAL COMMENTS - Reduce speed limits and enforce traffic laws		N/A	N/A	This project is meant to allow Patterson to operate to accommodate traffic for it's classification, which is a major arterial. Major arterials prioritize through movements and higher speeds. Patterson is a key east-west arterial for the City. If improvements to Patterson are not made, congestion will occur and traffic will look for alternate routes either north or south of Patterson to meet the demand. This plan also supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.	None
GENERAL COMMENTS - Enforce traffic laws		N/A	N/A	This plan supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.	None
GENERAL COMMENTS - Concerned about the additional traffic in neighborhoods due to the need to access their homes through neighborhood streets that tie into north/south streets such as 30 Road and 31 Road.		N/A	N/A	The plan does result in additional circulation by neighborhood traffic. The volumes anticipated are very low and neighborhood traffic may already be choosing to take these routes during peak hours. We do not believe we have created any cut-through routes that would increase traffic from outside the neighborhood.	None

GENERAL COMMENTS - Don't approve any new subdivisions that have to access Patterson Rd. Not fair homeowner has to build a new driveway to existing garage when existing driveway is closed to garage.		N/A	N/A	All new subdivisions will be subject to this ACP in the future. Any homes that have access to a garage today have conditions on their access closure to only occur if redevelopment occurs. Otherwise access to the garage remains.	None
GENERAL COMMENTS - Enforce traffic laws.		N/A	N/A	This plan supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.	None
My comments don't exactly pertain to the changes proposed on Patterson rd but rather an observation as a newcomer to GJ. I moved my from my Denver home of forty years and a growing recreational manufacturing business here almost three years ago hoping to grow my business and find a slower paced life on the western slope. I live barely 100 yards from Patterson Rd where I get to witness an amazingly huge amount of idiot drivers either "rolling coal" in their oversized noisy air polluting trucks or any number of crotch rockets and noisy little souped up cars intending to see how fast and loud they can get from 28 Rd to 29 Rd! If there ever were a reason to pack up both my home and business this would be it! If it weren't for the fact that we love our house and aren't ones to move as a knee jerk reaction because we live near what friend that's lived here a long time has started the road "Neanderthal Blvd". It makes me incredibly tense every time I venture out onto Patterson (aka Neanderthal). We Don't need to make the road faster! We need to make it a more evenly paced road with ways to slow the stretches down so as to not make it appealing the the "rolling coal trucks and drag racers". I don't have any great suggestions but I think some smarter engineers ought to be able to come up with some solutions. Maybe there needs to be ways to break up the speedways while creating a more even flow.		N/A	N/A		
I live barely 100 yards from Patterson Rd where I get to witness an amazingly huge amount of idiot drivers either "rolling coal" in their oversized noisy air polluting trucks or any number of crotch rockets and noisy little souped up cars intending to see how fast and loud they can get from 28 Rd to 29 Rd!		N/A	N/A	This project is meant to allow Patterson to operate to accommodate traffic for it's classification, which is a major arterial. Major arterials prioritize through movements and higher speeds. Patterson is a key east-west arterial for the City. If improvements to Patterson are not made, congestion will occur and traffic will look for alternate routes either north or south of Patterson to meet the demand. This plan also supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.	None
If there ever were a reason to pack up both my home and business this would be it! If it weren't for the fact that we love our house and aren't ones to move as a knee jerk reaction because we live near what friend that's lived here a long time has started the road "Neanderthal Blvd".		35/36/27	35/36-signalized full movement(no change), 27-3/4 movement (no change)	Commerce Blvd will likely be restricted to 3/4 movement with a public project.	None

It makes me incredibly tense every time I venture out onto Patterson (aka Neanderthal). We Don't need to make the road faster! We need to make it a more evenly paced road with ways to slow the stretches down so as to not make it appealing the the " rolling coal trucks and drag racers".		233	233-Safety RIRO(no change)	Conditional safety access point means if a safety or operational issue develops at this intersection, it will be closed. These are the only conditions that a closure could occur. Alternate access to other streets has been confirmed at all locations with a Conditional Safety designation. Specifically at Greenfield, a circulation via BookCliff Ave is available to multiple other access points.	None
I don't have any great suggestions but I think some smarter engineers ought to be able to come up with some solutions. Maybe there needs to be ways to break up the speedways while creating a more even flow.		86/86a/93	86 - Conditional RIRO, 86a - Conditional 3/4, 93 - Conditional RIRO	Based on additional public feedback, the plan has been changed as follows: Eliminate 86a. Make 86 and 93 conditional 3/4 with conditions to restrict to RIRO if safety or operational issues develop.	None
Property owner at Access 70 and 71.	Contacted by Dave Thornton	70/71	70-closed (no change), 71-conditional RIRO(no change)	Add cross access between 71 and 72. Access 71 will close upon redevelopment.	None
Potential buyer for Access 70 and 71. Interested in maintaining one access to Patterson in addition to the Lost Lane access currently proposed by the plan.	Contacted by Rick Dorris	70/71	70-closed (no change), 71-conditional RIRO(no change)	Add cross access between 71 and 72. Access 71 will close upon redevelopment.	None
Developer interested in RIRO at Access 246	Contacted by Rick Dorris	246	246- Conditional RIRO (conditions changed)	Change conditions for 246 conditional RIRO to property owner constructing right turn lane when redevelopment occurs.	None
GENERAL COMMENTS: My name is James Schultz and I worked for 30 years as a real estate consultant with Monument Realty, RE\MAX 4000, and RE\MAX Two Rivers from 1981 through 2011. I also have my Accredited Land Consultant designation through the Realty Land Institute, Rocky Mountain Region. I worked on developing land in the county and in the city and created several parcels that were built on, from home sites, recreation sites, and commercial/residential (Multi-Use) along 24 Rd. through Kathy Portner.I have traveled a lot of Europe and of course, a lot of the USA, and I cannot believe you would build (and have built) such atrocities in this county as double round-a-bouts, reverse lane changes (22 Rd Overpass), 1st street from Orchard to Patterson with speed bumps(thanks to Pat Gormley), and others. Now, you are contemplating destroying Patterson Road for 7 miles? Kathy Portner called it "calming traffic". Why don't you force all of the traffic control people to move out along Patterson and see how they like trying to negotiate their travel under those conditions? Watch what happens to emergency vehicles such as fire engines and rescue squads trying to hurry to their destinations. How many people will suffer from that? I'll bet they avoid 1st Street past Pat Gormley's house. Most businesses will be hurt by this plan along Patterson as well. Why not study the means that other growing cities use to make traffic flow smoother and easier. That would be the best thing for all parties, rather than "calming traffic" and making everybody suffer for it. Perhaps a few patrolmen, especially at night, with radar guns would solve the problem spoken of, and raise some money for the City of Grand Junction. Think about the suffering....		N/A	N/A	Access Management is a proven technique both in the US and Europe used to make traffic flow smoother and easier and extend the life of arterial corridors. It is not a traffic calming technique, but is meant to improve safety and congestion on the most critical connections and highest volume streets in cities. The plan has been reviewed with emergency services, alternate routes for circulation have been identified, and improved operations will improve the time to get to the hospital on Patterson. This plan supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.	None
Developer interested in potential for 3/4 movement at both Access 53 and 61.	Contacted by Rick Dorris	53/61	53-conditional 3/4 movement, 61-conditional 3/4 movement (conditions changed)	Conditions were removed from Access 53 and it will be a 3/4 movement. Access 61 is a conditional 3/4 movement and is conditional upon the developer demonstrating the left turn movements meet TEDS requirements based on projected traffic volumes. Access 61 will be restricted to RIRO if safety or operational issues develop.	None

Q6 Do you have any other comments, questions, or concerns?

Answered: 27 Skipped: 1

Appendix B - Existing Access Inventory

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate CDOT reference point (milepost) (in hundredths of a mile) based on CDOT Highway Data Explorer.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections shall accommodate U-turns for design vehicle
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6 .Implement with development, redevelopment or use change
7. If City, Town, County or CDOT improves SH 402 or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the highway or local street system is provided.
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.

Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
1	0.060	LT	2384 Patterson Rd	BA	Concrete	Y	Unsig. Full Movement
2	0.133	RT	2381, 2385, 2387 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
3	0.149	LT	2384 Patterson Rd	BA	Concrete	N	Unsig. Full Movement
4	0.157	LT	2388 Patterson Rd	FA	Dirt	N	Unsig. Full Movement
5	0.167	RT	2386 Hwy 6 & 50	BA	Asphalt	N	Unsig. Full Movement
6	0.222	RT	Rae Lynn St	PRU	Asphalt		Unsig. Full Movement
7	0.226	LT	Rae Lynn St	PRU	Asphalt		Unsig. Full Movement
8	0.292	RT	24 Rd	PRS	Asphalt		Sig. Full Movement
9	0.292	LT	24 Rd	PRS	Asphalt		Sig. Full Movement
10	0.421	RT	Market St (South side is commercial access for Mesa Mall)	PRS	Asphalt		Sig. Full Movement
11	0.421	LT	Market St (South side is commercial access for Mesa Mall)	PRS	Asphalt		Sig. Full Movement
12	0.498	LT	2412 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
13	0.505	LT	2422 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
14	0.534	LT	2424 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
15	0.600	LT	2424, 2428, 2430, 2436 Patterson Rd North, and Mesa Mall South	BA	Asphalt	N	Sig. Full Movement
16	0.600	RT	2424, 2428, 2430, 2436 Patterson Rd North, and Mesa Mall South	BA	Asphalt	N	Sig. Full Movement
17	0.675	LT	2430, 2436 Patterson Rd	BA	Asphalt	N	Unsig. 3/4 Movement
18	0.734	LT	2436, 3438, 2440 Patterson Rd and 625 24 1/2 Rd	BA	Asphalt	N	Unsig. Full Movement
19	0.814	LT	2442, 2444 Patterson Rd	BA		N	Unsig. Full Movement
20	0.855	LT	2446, 2448 Patterson Rd	BA	Asphalt	N	Unsig. 3/4 Movement
21	0.944	LT	24 1/2 Rd	PRS	Asphalt		Sig. Full Movement
22	0.944	RT	24 1/2 Rd	PRS	Asphalt		Sig. Full Movement
23	1.009	LT	2452, 2454 Patterson Rd	BA	Asphalt	N	Unsig. 3/4 Movement
24	1.031	RT	2451, 2463, 2465 Patterson Rd and 590 24 1/2 Rd	BA	Asphalt	N	Unsig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate CDOT reference point (milepost) (in hundredths of a mile) based on CDOT Highway Data Explorer.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections shall accommodate U-turns for design vehicle
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6 .Implement with development, redevelopment or use change
7. If City, Town, County or CDOT improves SH 402 or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the highway or local street system is provided.
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.

Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
25	1.071	LT	2460, 2464 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
26	1.113	LT	2470, 2472, 2474 Patterson Rd North	BA	Asphalt	N	Unsig. Full Movement
27	1.113	RT	Commerce Blvd South	PRU	Asphalt		Unsig. Full Movement
28	1.176	LT	2470, 2472, 2474 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
29	1.235	LT	2478 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
30	1.308	LT	2482 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
31	1.325	RT	2488 Commerce Blvd	BA	Asphalt	N	Unsig. Full Movement
32	1.358	LT	2486, 2490 2494 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
33	1.404	RT	599 25 Rd	BA	Asphalt	N	Right In-Right Out
34	1.424	LT	2498 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
35	1.459	LT	25 Rd	PRS	Asphalt		Sig. Full Movement
36	1.459	RT	25 Rd	PRS	Asphalt		Sig. Full Movement
37	1.492	RT	596 25 Rd	BA	Asphalt	N	Unsig. Full Movement
38	1.538	RT	2515 Patterson Rd	BA	Asphalt	N	Unsig. 3/4 Movement
39	1.600	LT	Foresight Cir	PRU	Asphalt		Unsig. Full Movement
40	1.619	LT	Foresight Cir	PRU	Asphalt		Unsig. Full Movement
41	1.648	RT	Northgate Dr	PRU	Asphalt		Unsig. Full Movement
42	1.715	LT	2526, 2527 Patterson Rd	BA	Asphalt	N	Right In-Right Out
43	1.768	LT	2532 Patterson Rd	BA	Asphalt	N	Unsig. 3/4 Movement
44	1.861	LT	Burkey St	PRU	Asphalt		Unsig. Full Movement
45	1.932	RT	Drain	MA	Concrete	N	Unsig. Full Movement
46	1.954	RT	Drain	MA	Concrete	N	Unsig. Full Movement
47	1.975	LT	25 1/2 Rd	PRS	Asphalt		Sig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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1. Oriented from direction of reference point (W-E)
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3. Full movement intersections shall accommodate U-turns for design vehicle
4. Unless otherwise specified, conditions listed refer to proposed configuration.
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6 .Implement with development, redevelopment or use change
7. If City, Town, County or CDOT improves SH 402 or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the highway or local street system is provided.
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Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
48	1.975	RT	25 1/2 Rd	PRS	Asphalt		Sig. Full Movement
49	2.040	LT	2554, 2555, 2556, 2558, 2560 Patterson Rd	BA/R	Asphalt	N	Unsig. Full Movement
50	2.092	LT	2562 Patterson Rd	R	Gravel	N	Unsig. Full Movement
51	2.104	LT	2566 Patterson Rd	R	Asphalt/Gravel	N	Unsig. Full Movement
52	2.124	LT	2570 Patterson Rd	R	Gravel	N	Unsig. Full Movement
53	2.146	LT	2570 Patterson Rd	R	Gravel	N	Unsig. Full Movement
54	2.138	RT	Cider Mill Rd	PRU	Asphalt		Unsig. Full Movement
55	2.165	LT	2566 Patterson Rd	R	Gravel	N	Unsig. Full Movement
56	2.181	LT	2572 Patterson Rd	R	Gravel	N	Unsig. Full Movement
57	2.204	LT	2574 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
58	2.209	LT	2576 Patterson Rd	BA/R	Asphalt/Gravel	N	Unsig. Full Movement
59	2.229	LT	2580 Patterson Rd	BA/R	Asphalt/Gravel	N	Unsig. Full Movement
60	2.231	RT	2945-101-00-167	R	Asphalt		Unsig. Full Movement
61	2.233	LT	2580 Patterson Rd	BA/R	Asphalt/Gravel	N	Unsig. Full Movement
62	2.237	RT	25 3/4 Rd	PRU	Asphalt		Unsig. Full Movement
63	2.268	LT	2582, 2584 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
64	2.353	LT	Meander Dr	PRU	Asphalt		Unsig. Full Movement
65	2.353	RT	Meander Dr	PRU	Asphalt		Unsig. 3/4 Movement
66	2.430	LT	2594, 2596 Patterson Rd	BA	Asphalt	N	Right In-Right Out
67	2.487	LT	26 Rd	PRS	Asphalt		Sig. Full Movement
68	2.487	RT	N 1st St	PRS	Asphalt		Sig. Full Movement
69	2.561	RT	Park Dr	PRU	Asphalt		Right In-Right Out
70	2.651	RT	2615 Patterson Rd	R	Gravel	N	Unsig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
71	2.674	RT	2615 Patterson Rd	R	Asphalt/Gravel	N	Unsig. Full Movement
72	2.706	RT	2621 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
73	2.714	RT	2623 Patterson Rd	R	Gravel	N	Unsig. Full Movement
74	2.718	LT	2626 Patterson Rd	R	Asphalt/Gravel	N	Unsig. Full Movement
75	2.722	RT	2623 Patterson Rd	R	Gravel	N	Unsig. Full Movement
76	2.732	RT	2625 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
77	2.740	LT	2626 Patterson Rd	R	Gravel	N	Unsig. Full Movement
78	2.746	RT	2625 Patterson Rd	R	Gravel	N	Unsig. Full Movement
79	2.749	LT	2628 Patterson Rd	R	Concrete	N	Unsig. Full Movement
80	2.756	RT	326 Belaire Dr	R	Gravel	Y	Unsig. Full Movement
81	2.761	LT	2628 Patterson Rd	R	Concrete	N	Unsig. Full Movement
82	2.765	RT	336 Belaire Dr	R	Concrete	N	Unsig. Full Movement
83	2.768	LT	2630 Patterson Rd	R	Concrete	N	Unsig. Full Movement
84	2.779	LT	2630 Patterson Rd	R	Concrete	N	Unsig. Full Movement
85	2.785	LT	2632 Patterson Rd	R	Concrete	N	Unsig. Full Movement
86	2.794	RT	Mira Vista Rd	PRU	Asphalt		Unsig. Full Movement
87	2.807	LT	2634 Patterson Rd	R	Concrete/Asphalt	N	Unsig. Full Movement
88	2.818	LT	2634 Patterson Rd	R	Concrete/Asphalt	N	Unsig. Full Movement
89	2.829	LT	2636, 2638 Patterson Rd	BA/R	Concrete	N	Unsig. Full Movement
90	2.848	LT	2640 Patterson Rd	BA	Asphalt	N	Right Out-Left Out
91	2.859	LT	2640 Patterson Rd	BA	Asphalt	N	Right In-Left In
92	2.867	LT	2642 Patterson Rd	BA	Asphalt	N	Right Out-Left Out
93	2.867	RT	2635 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
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Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
94	2.878	LT	2642 Patterson Rd	BA	Asphalt	N	Right In-Left In
95	2.894	LT	2644 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
96	2.910	LT	2646 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
97	2.943	LT	2646, 2648 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
98	2.960	LT	2648 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
99	3.000	LT	26 1/2 Rd/N 7th St	PRS	Asphalt		Sig. Full Movement
100	3.000	RT	26 1/2 Rd/N 7th St	PRS	Asphalt		Sig. Full Movement
101	3.072	LT	N 8th Ct	PRU	Asphalt		Unsig. Full Movement
102	3.136	RT	2661 Patterson Rd, 750 Wellington Ave	BA	Asphalt	N	Unsig. 3/4 Movement
103	3.164	LT	2666 Patterson Rd	R	Gravel	N	Unsig. Full Movement
104	3.190	LT	View Point Dr	PRU	Asphalt		Unsig. Full Movement
105	3.216	LT	2674 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
106	3.262	LT	26 3/4 Rd	PRU	Asphalt	N	Unsig. Full Movement
107	3.308	LT	2416 Patterson Rd, 935, 959 Northern Way	R	Asphalt	N	Unsig. Full Movement
108	3.333	LT	Northern Way	PRU	Asphalt	N	Unsig. Full Movement
109	3.333	RT	Private road, 2683 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
110	3.353	RT	2683 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
111	3.358	LT	960 Northern Way	R	Asphalt	N	Unsig. Full Movement
112	3.368	LT	2686 Patterson Rd	BA	Asphalt/Concrete	N	Unsig. Full Movement
113	3.376	RT	2683 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
114	3.391	RT	2687 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
115	3.395	LT	2686 Patterson Rd	BA	Asphalt/Concrete	N	Unsig. Full Movement
116	3.426	RT	2691, 2695, 2699 Patterson Rd, 2531, 2511 N 12th St	BA	Asphalt/Concrete	N	Unsig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
117	3.447	RT	2691, 2695, 2699 Patterson Rd, 2531, 2511 N 12th St	BA	Asphalt/Concrete	N	Unsig. Full Movement
118	3.456	LT	2686 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
119	3.515	LT	N 12th St	PRS	Asphalt		Sig. Full Movement
120	3.515	RT	N 12th St	PRS	Asphalt		Sig. Full Movement
121	3.560	LT	2702 Patterson Rd	BA	Asphalt	N	Right In-Right Out
122	3.574	LT	2708 Patterson Rd	BA	Asphalt	N	Right In-Right Out
123	3.585	RT	2600 N 12th St	BA	Concrete	N	Unsig. 3/4 Movement
124	3.592	LT	2708 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
125	3.611	RT	2712 Patters	PO	Concrete	N	Right In-Right Out
125	3.619	LT	2710 Patterson Rd	BA	Concrete	N	Right In-Right Out
126	3.639	LT	2714 Patterson Rd	R	Concrete/Gravel	N	Right In-Right Out
127	3.643	LT	2718 Patterson Rd	R	Concrete	N	Right In-Right Out
128	3.659	LT	2718 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
129	3.664	RT	2721 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
130	3.744	RT	2721 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
131	3.773	RT	N 15th St	PRS	Asphalt		Sig. Full Movement
132	3.773	LT	N 15th St	PRS	Asphalt		Sig. Full Movement
133	3.805	LT	2726 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
134	3.811	LT	2728 Patterson Rd	R	Gravel	N	Unsig. Full Movement
135	3.837	RT	2680 N 15th St	BA	Asphalt	N	Unsig. Full Movement
136	3.853	LT	2734 Patterson Rd	R	Gravel	Y	Unsig. Full Movement
137	3.872	LT	2736 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
138	3.875	RT	2737, 2741, 2745 Patterson Rd	R	Gravel	N	Unsig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
139	3.887	RT	2737 Patterson Rd	FA	Gravel	N	Unsig. Full Movement
140	3.902	LT	2738 Patterson Rd	R	Gravel	N	Unsig. Full Movement
141	3.934	RT	2737, 2741, 2745 Patterson Rd	R	Gravel	N	Unsig. Full Movement
142	3.942	LT	2742 Patterson Rd	R	Gravel	N	Unsig. Full Movement
143	3.967	LT	Empty lot	FA	Asphalt	N	Sig. Full Movement
144	4.015	LT	Empty lot	FA	Asphalt	N	Sig. Full Movement
145	4.030	LT	27 1/2 Rd	PRS	Asphalt	N	Sig. Full Movement
146	4.061	RT	2751, 2765 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
147	4.121	LT	Spring Valley Cir	PRU	Asphalt		Unsig. 3/4 Movement
148	4.121	RT	2751, 2765 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
149	4.250	RT	2771, 2773, 2775 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
150	4.258	LT	Beechwood St	PRU	Asphalt		Unsig. Full Movement
152	4.292	RT	2777 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
153	4.323	LT	2778 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
154	4.356	LT	Pheasant Trail Ct	PRU	Asphalt	N	Unsig. Full Movement
155	4.356	RT	El Corona Dr	PRU	Asphalt	N	Unsig. Full Movement
156	4.384	RT	Mount View Dr	PRU	Asphalt		Unsig. Full Movement
157	4.457	RT	Mantey Heights Dr	PRU	Asphalt		Unsig. Full Movement
158	4.504	RT	Santa Fe Dr	PRU	Asphalt		Unsig. Full Movement
159	4.546	LT	28 Rd	PRU	Asphalt		Unsig. Full Movement
160	4.558	RT	2801 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
161	4.584	RT	E Park Ave	PRU	Asphalt		Unsig. Full Movement
162	4.620	RT	2811 Patterson Rd	R	Gravel	N	Unsig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
163	4.677	RT	Rio Grande Dr	PRU	Asphalt		Unsig. Full Movement
164	4.677	LT	2814 Patterson Rd, 615 28 1/4 Rd	R/PVRU	Asphalt		Unsig. 3/4 Movement
165	4.739	RT	2813, 2815, 2825 Patterson Rd	BA	Gravel	N	Unsig. Full Movement
166	4.776	RT	2813, 2815, 2825 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
167	4.828	RT	28 1/4 Rd	PRS	Asphalt		Sig. Full Movement
168	4.828	LT	28 1/4 Rd	PRS	Asphalt		Sig. Full Movement
169	4.866	RT	2827 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
170	4.916	RT	2835 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
171	4.930	LT	2844 Patterson Rd	PVRU	Concrete/Gravel	N	Unsig. Full Movement
172	4.946	RT	Grand Cascade Way	PRU	Asphalt		Unsig. Full Movement
173	4.972	LT	2844 Patterson Rd	R	Concrete/Gravel	Y	Unsig. Full Movement
174	4.980	LT	2844 Patterson Rd	R	Concrete/Gravel	Y	Unsig. Full Movement
175	5.000	LT	2844 Patterson Rd	R	Concrete/Gravel	Y	Unsig. Full Movement
176	5.037	LT	2844 Patterson Rd	FA	Concrete/Gravel	N	Unsig. Full Movement
177	5.048	LT	2844 Patterson Rd	FA	Concrete/Gravel	N	Unsig. Full Movement
178	5.082	LT	2854 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
179	5.111	LT	2856 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
180	5.153	LT	2844 Patterson Rd	FA	Concrete/Gravel	N	Unsig. Full Movement
181	5.165	RT	Legends Way	PRU	Asphalt		Unsig. Full Movement
182	5.189	LT	2872 Patterson Rd	FA	Concrete/Gravel	N	Unsig. Full Movement
183	5.229	LT	2872 Patterson Rd	FA	Concrete/Gravel	N	Unsig. Full Movement
184	5.248	LT	28 3/4 Rd	PRU	Asphalt		Unsig. Full Movement
185	5.264	RT	598 Sinatra Way	R	Concrete/Gravel	N	Unsig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
186	5.277	LT	604 28 3/4 Rd	BA	Concrete/Gravel	N	Unsig. Full Movement
187	5.280	RT	598 Sinatra Way	R	Concrete/Gravel	N	Unsig. Full Movement
188	5.288	LT	2876 Patterson Rd	R	Concrete	N	Unsig. Full Movement
189	5.302	LT	2876 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
190	5.303	RT	598 Sinatra Way	R	Concrete/Gravel	N	Unsig. Full Movement
191	5.326	RT	2879 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
192	5.360	RT	W Indian Creek Dr	PRU	Asphalt		Unsig. Full Movement
193	5.360	LT	W Indian Creek Dr	PRU	Asphalt		Unsig. Full Movement
194	5.438	RT	Belhavan Way	PRU	Asphalt		Unsig. Full Movement
195	5.447	RT	2893 Patterson Rd	BA	Concrete/Gravel	N	Unsig. Full Movement
196	5.488	LT	E Indian Creek Dr	PRU	Asphalt		Unsig. Full Movement
197	5.488	RT	2893 Patterson Rd	BA	Concrete/Gravel	N	Unsig. Full Movement
198	5.527	RT	2893 Patterson Rd	BA	Concrete/Gravel	N	Right In-Right Out
199	5.572	RT	29 Rd	PRS	Asphalt		Sig. Full Movement
200	5.572	LT	29 Rd	PRS	Asphalt		Sig. Full Movement
199	5.603	RT	Pull off	PO	Concrete	N	Unsig. Full Movement
201	5.610	LT	2902, 2904, 2906 Patterson Rd, 606, 608 29 Rd	BA	Concrete	N	Right In-Right Out
202	5.645	LT	2908 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
203	5.662	LT	2910 Patterson Rd	R	Concrete	N	Unsig. Full Movement
204	5.679	LT	2912 Patterson Rd	R	Concrete/Dirt	N	Unsig. Full Movement
205	5.679	RT	2901, 2903, 2905, 2913, 2915 Patterson Rd	BA	Asphalt	N	Unsig. 3/4 Movement
206	5.696	LT	2914 Patterson Rd	R	Concrete	Y	Unsig. Full Movement
207	5.719	RT	2901, 2903, 2905, 2913, 2915 Patterson Rd	BA	Asphalt	N	Right In-Right Out

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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3. Full movement intersections shall accommodate U-turns for design vehicle
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6 .Implement with development, redevelopment or use change
7. If City, Town, County or CDOT improves SH 402 or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the highway or local street system is provided.
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.

Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
208	5.732	LT	Partee Dr	PRU	Asphalt		Unsig. Full Movement
209	5.750	RT	2917 Patterson Rd	R	Asphalt/Concrete	N	Unsig. Full Movement
210	5.758	LT	2918 Patterson Rd	R	Asphalt/Concrete	Y	Unsig. Full Movement
211	5.792	LT	Cris-Mar St	PRU	Asphalt		Unsig. Full Movement
212	5.795	RT	Redwing Ln	PRU	Asphalt		Unsig. Full Movement
213	5.823	LT	2943-053-40-000	R	Concrete	Y	Unsig. Full Movement
214	5.836	LT	2926 Patterson Rd	R	Concrete/Asphalt	N	Unsig. Full Movement
215	5.858	LT	2926 Patterson Rd	R	Concrete/Asphalt	N	Unsig. Full Movement
216	5.858	RT	29 1/4 Rd	PRU	Asphalt		Unsig. Full Movement
217	5.880	LT	2934 Patterson Rd	R	Concrete/Dirt	N	Unsig. Full Movement
218	5.891	LT	2934 Patterson Rd	R	Concrete/Dirt	N	Unsig. Full Movement
219	5.897	LT	2938 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
220	5.905	LT	2938 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
221	5.931	LT	29 3/8 Rd	PRU	Asphalt		Unsig. Full Movement
222	5.931	RT	29 3/8 Rd	PRU	Asphalt		Unsig. Full Movement
223	5.951	LT	2940 Patterson Rd	R	Concrete	N	Unsig. Full Movement
224	5.969	LT	2942 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
225	5.974	RT	2939 Patterson Rd	R	Concrete	Y	Unsig. Full Movement
226	6.000	LT	2944 Patterson Rd	R	Concrete/Dirt	N	Unsig. Full Movement
227	6.020	RT	Colanwood St	PRU	Asphalt		Unsig. Full Movement
228	6.025	LT	2948 Patterson Rd	BA	Asphalt	N	Unsig. 3/4 Movement
229	6.041	RT	2945 Patterson Rd	R	Concrete/Asphalt	N	Unsig. Full Movement
230	6.057	RT	599 29 1/2 Rd	BA	Concrete/Asphalt	N	Unsig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate CDOT reference point (milepost) (in hundredths of a mile) based on CDOT Highway Data Explorer.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections shall accommodate U-turns for design vehicle
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6 .Implement with development, redevelopment or use change
7. If City, Town, County or CDOT improves SH 402 or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the highway or local street system is provided.
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Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
231	6.087	RT	29 1/2 Rd	PRS	Asphalt		Sig. Full Movement
232	6.087	LT	29 1/2 Rd	PRS	Asphalt		Sig. Full Movement
233	6.160	RT	E Greenfield Cir	PRU	Asphalt		Unsig. Full Movement
234	6.188	LT	Pioneer Rd	PRU	Asphalt		Unsig. Full Movement
235	6.243	LT	Broken Spoke Rd	PRU	Asphalt		Unsig. Full Movement
236	6.282	RT	Darby Dr	PRU	Asphalt		Unsig. Full Movement
237	6.345	LT	Maintenance access	MA	Gravel		Unsig. Full Movement
238	6.352	RT	2977 Patterson Rd	R	Concrete/Dirt	N	Unsig. Full Movement
239	6.390	LT	2980 Patterson Rd	FA	Concrete	N	Sig. Full Movement
240	6.400	RT	Placer St	PRU	Asphalt		Unsig. Full Movement
241	6.400	LT	2982 Patterson Rd	FA	Concrete	N	Sig. Full Movement
242	6.400	LT	2982 Patterson Rd	FA	Concrete	N	Sig. Full Movement
243	6.474	RT	Maintenance access	MA	Concrete	Y	Unsig. Full Movement
244	6.497	LT	Hudson Bay Dr	PRU	Asphalt		Unsig. Full Movement
245	6.497	RT	599 30 Rd	BA	Asphalt	N	Unsig. Full Movement
246	6.528	LT	2992 Patterson Rd	BA	Asphalt	N	Unsig. 3/4 Movement
247	6.532	RT	599 30 Rd	BA	Asphalt	N	Unsig. Full Movement
248	6.600	RT	30 Rd	PRS	Asphalt		Sig. Full Movement
249	6.600	LT	30 Rd	PRS	Asphalt		Sig. Full Movement
250	6.667	LT	Ronlin Dr	PRU	Asphalt		Unsig. Full Movement
251	6.721	LT	Agana Dr	PRU	Asphalt		Unsig. Full Movement
252	6.721	RT	Agana Dr	PRU	Asphalt		Unsig. Full Movement
253	6.776	LT	Starlight Dr	PRU	Asphalt		Unsig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
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Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
254	6.831	LT	Serenade St	PRU	Asphalt		Unsig. Full Movement
255	6.831	RT	Serenade St	PRU	Asphalt		Unsig. Full Movement
256	6.863	RT	3027 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
257	6.863	LT	3026 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
258	6.882	LT	3026 Patterson Rd	BA	Asphalt	N	Unsig. Full Movement
259	6.897	LT	3028 Patterson Rd	R	Concrete/Dirt	N	Unsig. Full Movement
260	6.911	LT	3030 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
261	6.913	RT	McMullin Dr	PRU	Asphalt		Unsig. Full Movement
262	6.962	RT	Gerken Rd	PRU	Asphalt		Unsig. Full Movement
263	6.962	LT	Round Table Rd	PRU	Asphalt		Unsig. Full Movement
264	6.991	RT	599 Grand Valley Dr	R	Concrete/Gravel	N	Unsig. Full Movement
265	7.002	RT	599 Grand Valley Dr	R	Concrete/Gravel	N	Unsig. Full Movement
266	7.016	RT	Grand Valley Dr	PRU	Asphalt		Unsig. Full Movement
267	7.016	LT	Grand Valley Dr	PRU	Asphalt		Unsig. Full Movement
268	7.039	RT	598 Grand Valley Dr	FA	Dirt	N	Unsig. Full Movement
269	7.053	RT	3047 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
270	7.060	LT	3044 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
271	7.082	RT	3047 Patterson Rd	R	Asphalt	N	Unsig. Full Movement
272	7.111	RT	3049 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
273	7.120	LT	Mesa Valley Dr	PRU	Asphalt		Unsig. Full Movement
274	7.147	LT	3054 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
275	7.147	RT	Shoshone St	PRU	Asphalt		Unsig. Full Movement
276	7.168	LT	3054 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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Access ID No.	Mile Post **	Side	Description	Type	Surface Material	Gate* (Y/N)	Existing Configuration
277	7.221	LT	Cottage Meadows Ct	PRU	Asphalt		Unsig. Full Movement
278	7.243	RT	3065 Patterson Rd	BA	Concrete/Gravel	Y	Unsig. Full Movement
279	7.256	LT	3064 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
280	7.264	LT	3066 Patterson Rd	R	Concrete/Dirt	Y	Unsig. Full Movement
281	7.276	LT	3068 Patterson Rd	R	Concrete	N	Unsig. Full Movement
282	7.279	RT	3067 Patterson Rd	R	Concrete/Gravel	N	Unsig. Full Movement
283	7.290	LT	3068 Patterson Rd	R	Concrete	N	Unsig. Full Movement
284	7.295	RT	3073 Patterson Rd	BA	Concrete/Gravel	Y	Unsig. Full Movement
285	7.319	RT	3073 Patterson Rd	FA	Concrete/Dirt	Y	Unsig. Full Movement
286	7.341	RT	3073 Patterson Rd	BA	Concrete/Asphalt	Y	Unsig. Full Movement
287	7.349	LT	Lodgepole St	PRU	Asphalt		Unsig. Full Movement

Legend	
Access Type	Abbreviation
Business/Commercial Access	BA
Field Access	FA
Maintenance Access	MA
Residential Access	R
Pull Off	PO
Public Road Signalized	PRS
Public Road Unsignalized	PRU
Private Road Unsignalized	PVRU

Appendix C - Crash History

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
1	PATTERSON RD & NORTH GATE DR	1/6/2014	11:35:00 AM	PDO	0		At Intersection	Front to Rear	S	Backing	Stop in Traff
2	PATTERSON RD & 1ST ST	1/7/2014	10:01:00 AM	PDO	0		At Intersection	Front to Rear	E	Going Straight	Stop in Traff
3	PATTERSON RD & 7TH ST	1/7/2014	10:23:00 AM	PDO	0		At Intersection	Front to Side	N	Left Turn	Going Straight
4	PATTERSON RD & 12TH ST	1/8/2014	10:19:00 AM	PDO	0		At Intersection	Front to Side	N	Right Turn	Going Straight
5	25 RD & PATTERSON RD	1/9/2014	12:30:00 PM	PDO	50	South	Non-Int	Front to Rear	N	Going Straight	Stop in Traff
6	24 1/2 RD & PATTERSON RD	1/10/2014	2:46:00 PM	PDO	30	South	Intersection Related	Front to Rear	N	Going Straight	Stop in Traff
7	1ST ST & PATTERSON RD	1/17/2014	8:31:00 AM	PDO	25	North	Non-Int	Front to Rear	S	Going Straight	Stop in Traff
8	PATTERSON RD & 29 RD	1/19/2014	12:42:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Going Straight
9	PATTERSON RD & 24 RD	1/22/2014	2:42:00 PM	PDO	0		Intersection Related	Front to Rear	E	Going Straight	Stop in Traff
10	24 1/2 RD & PATTERSON RD	1/24/2014	9:43:00 PM	PDO	62	South	Non-Int	Same Dir Side Side	S	Going Straight	Going Straight
11	W. INDIAN CREEK DR & PATTERSON RD	1/24/2014	3:17:00 PM	PDO	50	West	Non-Int	Front to Rear	E	Going Straight	Stop in Traff
12	PATTERSON RD & 12TH ST	1/27/2014	11:09:00 AM	INJ	0		At Intersection	Front to Front	W	Left Turn	Going Straight
13	PATTERSON RD & 25 RD	1/28/2014	12:14:00 PM	PDO	0		At Intersection	Front to Front	W	Left Turn	Going Straight
14	PATTERSON RD & MIRA VISTA RD	1/30/2014	6:21:00 PM	PDO	200	West	Non-Int	Front to Rear	E	Going Straight	Slowing
15	12TH ST & PATTERSON RD	1/31/2014	1:04:00 PM	PDO	100	South	Non-Int	Front to Rear	N	Going Straight	Stop in Traff
16	PATTERSON RD & 1ST ST	2/1/2014	9:44:00 AM	PDO	20	East	At Intersection	Same Dir Side Side	W	Changing Lanes	Going Straight
17	PATTERSON RD & 30 RD	2/3/2014	5:39:00 PM	PDO	0		At Intersection	Front to Side	N	Right Turn	Going Straight
18	PATTERSON RD & 27 1/2 RD	2/4/2014	6:30:00 AM	PDO	0		At Intersection	Front to Side	W	Going Straight	Left Turn
19	PATTERSON RD & 29 RD	2/4/2014	7:30:00 AM	PDO	0		Intersection Related	Front to Rear	S	Slowing	Stop in Traff
20	PATTERSON RD & PARTEE DR	2/6/2014	10:25:00 AM	PDO	30	West	Non-Int	Same Dir Side Side	W	Changing Lanes	Going Straight
21	PATTERSON RD & 24 1/2 RD	2/7/2014	11:49:00 AM	PDO	0		At Intersection	Front to Side	E	Left Turn	Going Straight
22	PATTERSON RD & 30 RD	2/8/2014	6:47:00 PM	PDO	350	West	Drive Acc Relat	Front to Side	E	Left Turn	Going Straight
23	PATTERSON RD & 8TH CT	2/10/2014	3:34:00 PM	PDO	0		Non-Int	Front to Rear	E	Going Straight	Stop in Traff
24	PATTERSON RD & SERANADE ST	2/13/2014	6:54:00 PM	PDO	50	West	Drive Acc Relat	Opp Dir Side Side	S	Left Turn	Going Straight
25	PATTERSON RD & GREENFIELD CIR EAST	2/14/2014	7:05:00 PM	PDO	0		At Intersection	Light/Util Pole	E	Right Turn	UNK
26	PATTERSON RD & 28 3/4 RD	2/19/2014	3:12:00 PM	PDO	80	East	Intersection Related	Front to Rear	W	Slowing	Slowing
27	25 RD & PATTERSON RD	2/19/2014	3:31:00 PM	PDO	150	North	Drive Acc Relat	Front to Side	N	Left Turn	Going Straight
28	PATTERSON RD & 12TH ST	2/22/2014	3:20:00 PM	PDO	200	West	Drive Acc Relat	Front to Side	N	Right Turn	Going Straight
29	24 1/2 RD & PATTERSON RD	2/24/2014	12:29:00 PM	PDO	500	South	Drive Acc Relat	Front to Side	E	Left Turn	Going Straight
30	PATTERSON RD & 24 1/2 RD	2/27/2014	4:35:00 PM	PDO	25	West	Intersection Related	Front to Rear	E	Changing Lanes	Stop in Traff
31	PATTERSON RD & 7TH ST	2/28/2014	1:58:00 PM	PDO	100	West	Non-Int	Front to Rear	W	Going Straight	Going Straight
32	25 RD & PATTERSON RD	3/3/2014	2:06:00 PM	PDO	175	North	Drive Acc Relat	Front to Side	N	Left Turn	Going Straight
33	PATTERSON RD & 24 1/2 RD	3/4/2014	11:23:00 AM	PDO	0		At Intersection	Same Dir Side Side	E	Right Turn	Stop in Traff
34	7TH ST & PATTERSON RD	3/5/2014	1:57:00 PM	INJ	417	North	Drive Acc Relat	Overturning	S	Going Straight	Left Turn
35	PATTERSON RD & 27 1/2 RD	3/7/2014	7:50:00 PM	PDO	1320	East	Non-Int	Same Dir Side Side	E	Changing Lanes	Going Straight
36	PATTERSON RD & 1ST ST	3/8/2014	3:24:00 PM	PDO	100	East	Non-Int	Front to Rear	W	Going Straight	Stop in Traff
37	I-70B & PATTERSON RD	3/9/2014	3:15:00 PM	INJ	1266	West	Non-Int	Front to Rear	W	Going Straight	Going Straight
38	PATTERSON RD & 7TH ST	3/11/2014	10:00:00 AM	PDO	20	East	Intersection Related	Front to Rear	W	Going Straight	Slowing
39	PATTERSON RD & 1ST ST	3/11/2014	12:48:00 PM	PDO	300	East	Non-Int	Front to Rear	W	Going Straight	Stop in Traff
40	PATTERSON RD & MARKET STREET	3/15/2014	9:37:00 PM	PDO	0		At Intersection	Front to Side	W	Going Straight	Going Straight
41	PATTERSON RD & 7TH ST	3/16/2014	11:31:00 AM	PDO	0		Intersection Related	Front to Rear	E	Going Straight	Stop in Traff
42	PATTERSON RD & 7TH ST	3/18/2014	2:01:00 PM	PDO	0		At Intersection	Front to Side	W	Going Straight	Left Turn
43	24 RD & PATTERSON RD	3/19/2014	4:29:00 PM	PDO	80	South	Non-Int	Front to Rear	S	Changing Lanes	Going Straight
44	PATTERSON RD & 24 RD	3/19/2014	2:37:00 PM	PDO	0		Non-Int	Front to Rear	W	Going Straight	Stop in Traff
45	PATTERSON RD & 12TH ST	3/20/2014	4:42:00 PM	PDO	778	West	Non-Int	Front to Rear	E	Going Straight	Stop in Traff
46	PATTERSON RD & 7TH ST	3/23/2014	7:36:00 AM	PDO	0		At Intersection	Front to Side	E	Going Straight	Going Straight
47	PATTERSON RD & BEECHWOOD ST	3/24/2014	4:01:00 PM	PDO	0		At Intersection	Front to Side	S	Right Turn	Going Straight
48	PATTERSON RD & 26 1/4 RD	3/24/2014	4:35:00 PM	PDO	0		Non-Int	Front to Rear	W	Going Straight	Slowing
49	PATTERSON RD & 12TH ST	3/26/2014	11:54:00 AM	INJ	0		At Intersection	Front to Rear	W	Going Straight	Stop in Traff
50	PATTERSON RD & 7TH ST	3/26/2014	4:15:00 PM	PDO	0		At Intersection	Front to Rear	N	Left Turn	Left Turn
51	PATTERSON RD & 12TH ST	3/26/2014	8:20:00 PM	PDO	0		At Intersection	Front to Side	E	Right Turn	Stop in Traff
52	24 1/2 RD & PATTERSON RD	3/30/2014	11:00:00 AM	PDO	500	South	Drive Acc Relat	Front to Side	E	Left Turn	Going Straight
53	PATTERSON RD & 27 1/2 RD	3/31/2014	8:00:00 AM	PDO	0		At Intersection	Front to Front	W	Going Straight	Stop in Traff
54	25 RD & PATTERSON RD	4/1/2014	11:00:00 AM	PDO	150	North	Drive Acc Relat	Front to Side	E	Left Turn	Going Straight
55	PATTERSON RD & HOME DEPOT	4/3/2014	4:34:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Going Straight
56	24 1/2 RD & PATTERSON RD	4/3/2014	3:39:00 PM	PDO	500	South	Drive Acc Relat	Front to Side	E	Left Turn	Going Straight
57	PATTERSON RD & 12TH ST	4/3/2014	1:47:00 PM	PDO	100	East	Non-Int	Front to Rear	W	Going Straight	Stop in Traff
58	PATTERSON RD & GRAND CASCADE WAY	4/4/2014	9:17:00 AM	PDO	0		Intersection Related	Front to Rear	N	Going Straight	Stop in Traff
59	24 1/2 RD & PATTERSON RD	4/4/2014	12:09:00 PM	PDO	500	South	Drive Acc Relat	Front to Side	E	Left Turn	Going Straight
60	PATTERSON RD & HOME DEPOT	4/5/2014	11:58:00 AM	PDO	0		Intersection Related	Front to Rear	W	Going Straight	Stop in Traff
61	PATTERSON RD & 29 1/2 RD	4/8/2014	2:09:00 PM	PDO	100	East	Intersection Related	Front to Rear	W	Slowing	Stop in Traff
62	PATTERSON RD & 24 RD	4/8/2014	2:57:00 PM	INJ	0		At Intersection	Front to Side	N	Left Turn	Going Straight
63	PATTERSON RD & 29 RD	4/10/2014	9:31:00 PM	PDO	0		Intersection Related	Front to Front	E	Right Turn	Left Turn
64	PATTERSON RD & 27 1/2 RD	4/11/2014	7:40:00 AM	PDO	0		At Intersection	Front to Side	W	Going Straight	Left Turn
65	PATTERSON RD & 24 RD	4/12/2014	9:04:00 AM	PDO	0		At Intersection	Front to Rear	W	Going Straight	Going Straight
66	25 RD & PATTERSON RD	4/16/2014	4:39:00 PM	PDO	241	South	Intersection Related	Front to Rear	N	Going Straight	Stop in Traff
67	PATTERSON RD & 7TH ST	4/17/2014	2:11:00 PM	PDO	0		At Intersection	Front to Front	E	Right Turn	Left Turn
68	PATTERSON RD & MEANDER DR	4/18/2014	3:44:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Going Straight
69	7TH ST & PATTERSON RD	4/18/2014	2:09:00 PM	PDO	30	South	Non-Int	Front to Rear	N	Going Straight	Stop in Traff
70	PATTERSON RD & 30 RD	4/21/2014	2:37:00 PM	PDO	0		At Intersection	Front to Side	E	Left Turn	Left Turn
71	RIO GRANDE DR & PATTERSON RD	4/21/2014	4:42:00 PM	PDO	40	East	Non-Int	Front to Rear	E	Going Straight	Stop in Traff
72	1ST ST & PATTERSON RD	4/22/2014	5:00:00 PM	PDO	20	South	Intersection Related	Front to Rear	N	Going Straight	Stop in Traff
73	SERANADE ST & PATTERSON RD	4/23/2014	7:16:00 AM	INJ	0		At Intersection	Park Motor Veh	W	Other	Parked
74	24 RD & PATTERSON RD	4/25/2014	10:53:00 AM	PDO	50	North	Intersection Related	Front to Rear	S	Backing	Stop in Traff
75	PATTERSON RD & MARKET STREET	4/25/2014	12:28:00 PM	PDO	0		At Intersection	Front to Side	E	Left Turn	Going Straight
76	PATTERSON RD & 7TH ST	4/27/2014	3:11:00 PM	PDO	0		At Intersection	Front to Rear	N	Right Turn	Going Straight
77	PATTERSON RD & 27 1/2 RD	4/28/2014	5:22:00 PM	PDO	500	West	Non-Int	Front to Rear	E	Going Straight	Slowing
78	PATTERSON RD & 28 1/4 RD	4/30/2014	8:09:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Going Straight
79	PATTERSON RD & 15TH ST	5/1/2014	8:18:00 AM	PDO	300	West	Drive Acc Relat	Front to Rear	W	Going Straight	Stop in Traff
80	PATTERSON RD & 28 RD	5/2/2014	5:45:00 PM	INJ	0		At Intersection	Front to Front	S	Left Turn	Going Straight
81	PATTERSON RD & 12TH ST	5/4/2014	7:24:00 AM	PDO	0		At Intersection	Front to Side	N	Going Straight	Going Straight
82	PATTERSON RD & 24 RD	5/5/2014	4:11:00 PM	PDO	0		At Intersection	Front to Side	N	Going Straight	Going Straight
83	PATTERSON RD & 7TH ST	5/5/2014	1:11:00 PM	PDO	530	West	Non-Int	Front to Rear	W	Going Straight	Stop in Traff
84	PATTERSON RD & 24 RD	5/8/2014	3:44:00 PM	PDO	0		At Intersection	Front to Rear	W	Going Straight	Going Straight
85	PATTERSON RD & 28 1/4 RD	5/8/2014	7:08:00 AM	PDO	0		At Intersection	Front to Side	E	Going Straight	Left Turn
86	PATTERSON RD & GRAND CASCADE WAY	5/8/2014	8:00:00 AM	PDO	400	East	Non-Int	Same Dir Side Side	W	U-Turn	Going Straight
87	PATTERSON RD & 1ST ST	5/9/2014	10:13:00 AM	PDO	100	West	Non-Int	Same Dir Side Side	E	Changing Lanes	Going Straight
88	PATTERSON RD & RIO GRANDE DR	5/13/2014	5:09:00 PM	PDO	10	East	Non-Int	Front to Rear	E	Going Straight	Stop in Traff
89	PATTERSON RD & PARTEE DR	5/14/2014	7:52:00 AM	PDO	200	East	Non-Int	Front to Rear	W	Going Straight	Slowing
90	PATTERSON RD & 15TH ST	5/21/2014	8:30:00 AM	PDO	0		At Intersection	Front to Side	W	Going Straight	Left Turn
91	PATTERSON RD & 7TH ST	5/28/2014	9:32:00 PM	PDO	0		At Intersection	Front to Side	E	Going Straight	Left Turn
92	PATTERSON RD & MCMULLIN DR	5/30/2014	2:02:00 PM	PDO	90	West	Drive Acc Relat	Front to Rear	W	Going Straight	Slowing
93	PATTERSON RD & 1ST ST	6/2/2014	3:14:00 PM	PDO	0		At Intersection	Front to Side	N	Right Turn	Going Straight
94	PATTERSON RD & 12TH ST	6/4/2014	10:52:00 AM	PDO	275	East	Intersection Related	Same Dir Side Side	W	Changing Lanes	Changing Lanes
95	PATTERSON RD & 29 RD	6/4/2014	6:29:00 PM	PDO	25	East	Intersection Related	Same Dir Side Side	W	Right Turn	Going Straight
96	PATTERSON RD & MARKET STREET	6/4/2014	3:18:00 PM	PDO	30	East	Intersection Related	Front to Rear	W	Slowing	Stop in Traff
97	PATTERSON RD & 29 1/2 RD	6/6/2014	9:58:00 AM	PDO	0		At Intersection	Front to Side	S	Left Turn	Going Straight
98	PATTERSON RD & 29 RD	6/7/2014	10:51:00 PM	PDO	0		At Intersection	Front to Front	E	Left Turn	Going Straight
99	PATTERSON RD & 27 1/2 RD	6/9/2014	5:24:00 PM	PDO	1320	West	Intersection Related	Front to Rear	E	Going Straight	Slowing
100	LEGENDS WAY & PATTERSON RD	6/13/2014	3:14:00 PM	PDO	20	South	Intersection Related	Front to Rear	N	Going Straight	Stop in Traff
101	PATTERSON RD & 28 RD	6/14/2014	9:44:00 AM	INJ	0		At Intersection	Front to Side	S	Left Turn	Going Straight
102	PATTERSON RD & 30 RD	6/15/2014	3:06:00 PM	PDO	50	East	Intersection Related	Front to Rear	W	Going Straight	Stop in Traff
103	29 RD & PATTERSON RD	6/18/2014	7:47:00 PM	PDO			Intersection Related	Opp Dir Side Side	W	Left Turn	Stop in Traff
104	PATTERSON RD & 29 1/2 RD	6/18/2014	1:57:00 PM	PDO	100	East	Non-Int	Front to Rear	W	Going Straight	Slowing
105	PATTERSON RD & 12TH ST	6/20/2014	8:27:00 AM	PDO	0		At Intersection	Front to Side	W	Left Turn	Going Straight
106	PATTERSON RD & 28 1/4 RD	6/21/2014	3:38:00 PM	PDO	0		At Intersection	Tree	E	Going Straight	Going Straight
107	PATTERSON RD & 25 1/2 RD	6/21/2014	1:24:00 PM	PDO	250	East	Non-Int	Front to Rear	W	Going Straight	Stop in Traff
108	PATTERSON RD & 25 3/4 RD	6/26/2014	8:42:00 PM	PDO	139	East	Non-Int	Wild Animal	W	Going Straight	UNK
109	PATTERSON RD & 12TH ST	6/27/2014	9:57:00 AM	PDO	0		At Intersection	Same Dir Side Side	N	Right Turn	Going Straight
110	PATTERSON RD & SPRING VALLEY CIR	6/27/2014	9:37:00 AM	PDO	0		Non-Int	Front to Rear	W	Going Straight	Slowing
111	PATTERSON RD & 27 1/2 RD	6/28/2014	8:44:00 AM	PDO	0		At Intersection	Front to Side	S	Right Turn	Going Straight
112	PATTERSON RD & SANTA FE DR	7/1/2014	5:21:00 PM	INJ	0		Non-Int	Front to Rear	E	Going Straight	Stop in Traff
113	PATTERSON RD & COMMERCE BLVD	7/1/2014	12:31:00 PM	PDO	200	East	Drive Acc Relat	Front to Side	N	Left Turn	Going Straight
114	25 3/4 RD & PATTERSON RD	7/2/2014	5:48:00 PM	INJ	0		At Intersection	Front to Side	N	Left Turn	Going Straight
115	25 RD & PATTERSON RD	7/8/2014	3:23:00 PM	PDO	10	South	Intersection Related	Front to Rear	N	Going Straight	Stop in Traff
116	PATTERSON RD & 28 RD	7/10/2014	3:43:00 PM	PDO	0		At Intersection	Front to Side	S	Left Turn	Going Straight
117	PATTERSON RD & 1ST ST	7/14/2014	1:44:00 PM	PDO	100	East	Intersection Related	Front to Rear	W	Going Straight	Stop in Traff
118	PATTERSON RD & BELLHAVEN WAY	7/16/2014	1:21:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Going Straight

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
119	PATTERSON RD & 28 RD	7/21/2014	1:03:00 PM	INJ	0		At Intersection	Front to Side	S	Left Turn	Going Straight
120	PATTERSON RD & 29 RD	7/22/2014	11:15:00 AM	PDO	0		At Intersection	Front to Front	N	Left Turn	Going Straight
121	28 1/4 RD & PATTERSON RD	7/25/2014	1:37:00 PM	PDO	50	South	At Intersection	Front to Rear	N	Going Straight	Stop in Traff
122	PATTERSON RD & MEANDER DR	7/30/2014	12:24:00 PM	PDO	0		At Intersection	Front to Side	N	Going Straight	Going Straight
123	PATTERSON RD & 29 RD	8/1/2014	6:05:00 PM	INJ	0		At Intersection	Rear to Rear	W	Left Turn	Going Straight
124	PATTERSON RD & 29 RD	8/1/2014	6:55:00 PM	INJ	1238	West	Non-Int	Front to Rear	E	Going Straight	Stop in Traff
125	PATTERSON RD & MARKET STREET	8/2/2014	4:29:00 PM	PDO	20	West	Non-Int	Front to Rear	E	Going Straight	Stop in Traff
126	PATTERSON RD & FORESIGHT CIR SOUTH	8/4/2014	3:06:00 PM	PDO	30	East	Non-Int	Front to Rear	W	Going Straight	Slowing
127	PATTERSON RD & MEANDER DR	8/4/2014	9:49:00 AM	PDO	0		At Intersection	Front to Side	S	Right Turn	Going Straight
128	PATTERSON RD & 24 1/2 RD	8/8/2014	4:09:00 PM	PDO	40	West	Intersection Related	Same Dir Side Side	E	Right Turn	Going Straight
129	PATTERSON RD & MARKET STREET	8/8/2014	12:19:00 PM	PDO	350	East	Drive Acc Relat	Front to Side	S	Left Turn	Going Straight
130	PATTERSON RD & 29 1/2 RD	8/11/2014	7:25:00 AM	PDO	200	East	Non-Int	Front to Rear	W	Going Straight	Stop in Traff
131	PATTERSON RD & 12TH ST	8/11/2014	9:24:00 AM	PDO	200	East	Non-Int	Front to Rear	W	Going Straight	Stop in Traff
132	PATTERSON RD & EAST INDIAN CREEK D	8/11/2014	5:42:00 PM	PDO	0		At Intersection	Front to Rear	E	Going Straight	Stop in Traff
133	PATTERSON RD & 27 1/2 RD	8/14/2014	10:44:00 AM	INJ	0		At Intersection	Front to Side	S	Right Turn	Going Straight
134	24 1/2 RD & PATTERSON RD	8/14/2014	1:23:00 PM	PDO	500	South	At Intersection	Front to Side	E	Left Turn	Going Straight
135	PATTERSON RD & 25 RD	8/15/2014	11:13:00 AM	PDO	0		Drive Acc Relat	Front to Rear	N	Going Straight	Going Straight
136	PATTERSON RD & 24 1/2 RD	8/15/2014	5:08:00 PM	PDO	0		At Intersection	Front to Rear	N	Going Straight	Stop in Traff
137	24 1/2 RD & PATTERSON RD	8/19/2014	10:19:00 AM	PDO	500	South	At Intersection	Front to Rear	W	Backing	Stop in Traff
138	24 RD & PATTERSON RD	8/19/2014	12:20:00 PM	PDO	0		At Intersection	Same Dir Side Side	SE	Left Turn	Left Turn
139	PATTERSON RD & MEANDER DR	8/20/2014	4:05:00 PM	INJ	15	East	At Intersection	Front to Rear	W	Going Straight	Stop in Traff
140	PATTERSON RD & 27 1/2 RD	8/20/2014	9:00:00 AM	PDO	250	West	Non-Int	Front to Rear	E	Going Straight	Stop in Traff
141	I-70B & PATTERSON RD	8/20/2014	1:57:00 PM	PDO	0		At Intersection	Sign	E	Left Turn	UNK
142	30 RD & PATTERSON RD	8/21/2014	4:40:00 PM	PDO	100	South	Non-Int	Same Dir Side Side	N	Changing Lanes	Going Straight
143	PATTERSON RD & 12TH ST	8/21/2014	7:29:00 AM	PDO	20	East	Intersection Related	Front to Rear	W	Going Straight	Right Turn
144	PATTERSON RD & RIO GRANDE DR	8/22/2014	5:29:00 PM	PDO	0		Intersection Related	Front to Rear	E	Slowing	Stop in Traff
145	PATTERSON RD & 28 1/4 RD	8/23/2014	9:00:00 AM	PDO	632	East	Drive Acc Relat	Front to Rear	W	Going Straight	Slowing
146	12TH ST & PATTERSON RD	8/23/2014	5:11:00 PM	PDO	150	South	Non-Int	Same Dir Side Side	N	Changing Lanes	Going Straight
147	PATTERSON RD & 7TH ST	8/25/2014	10:38:00 AM	PDO	100	West	Non-Int	Front to Rear	W	Going Straight	Slowing
148	PATTERSON RD & 27 1/2 RD	8/25/2014	4:48:00 PM	PDO	700	West	Non-Int	Front to Rear	E	Going Straight	Slowing
149	29 RD & PATTERSON RD	8/26/2014	12:19:00 PM	PDO	350	South	Drive Acc Relat	Same Dir Side Side	N	Right Turn	Right Turn
150	PATTERSON RD & 12TH ST	8/27/2014	8:53:00 AM	INJ	775	West	Intersection Related	Front to Rear	W	Going Straight	Stop in Traff
151	7TH ST & PATTERSON RD	8/27/2014	3:40:00 PM	INJ	30	South	Intersection Related	Front to Rear	N	Going Straight	Going Straight
152	PATTERSON RD & 1ST ST	8/27/2014	2:02:00 PM	PDO	30	West	Non-Int	Front to Rear	W	Going Straight	Slowing
153	PATTERSON RD & 7TH ST	8/27/2014	3:32:00 PM	PDO	200	West	Non-Int	Front to Rear	E	Going Straight	Going Straight
154	PATTERSON RD & MARKET STREET	8/28/2014	10:58:00 AM	PDO	0		At Intersection	Front to Side	E	Going Straight	Left Turn
155	PATTERSON RD & 29 RD	8/31/2014	3:17:00 PM	PDO	0		At Intersection	Overturning	N	Right Turn	Going Straight
156	PATTERSON RD & 7TH ST	9/1/2014	6:48:00 PM	PDO	0		Intersection Related	Front to Rear	W	Going Straight	Stop in Traff
157	PATTERSON RD & 29 RD	9/3/2014	4:22:00 PM	INJ	512	West	Non-Int	Front to Rear	E	Going Straight	Stop in Traff
158	PATTERSON RD & MIRA VISTA DR	9/3/2014	6:01:00 PM	PDO	377	West	Drive Acc Relat	Front to Side	N	Left Turn	Going Straight
159	PATTERSON RD & 24 1/2 RD	9/3/2014	10:33:00 AM	INJ	250	East	Drive Acc Relat	Front to Side	N	Right Turn	Going Straight
160	25 RD & PATTERSON RD	9/4/2014	3:18:00 PM	INJ	150	North	Drive Acc Relat	Front to Side	N	Left Turn	Going Straight
161	PATTERSON RD & 28 1/4 RD	9/5/2014	4:26:00 PM	PDO	250	East	Non-Int	Front to Rear	W	Changing Lanes	Going Straight
162	PATTERSON RD & 1ST ST	9/8/2014	7:42:00 PM	INJ	750	East	Non-Int	Front to Rear	W	Going Straight	Slowing
163	PATTERSON RD & 25 RD	9/8/2014	4:53:00 PM	PDO	0		At Intersection	Other Harm Obj	S	Backing	Stop in Traff
164	PATTERSON RD & 15TH ST	9/11/2014	7:39:00 AM	PDO	0		At Intersection	Front to Side	W	Going Straight	Left Turn
165	PATTERSON RD & 7TH ST	9/13/2014	9:25:00 PM	PDO	100	East	Non-Int	Same Dir Side Side	E	Changing Lanes	Going Straight
166	PATTERSON RD & 12TH ST	9/14/2014	9:30:00 PM	PDO	0		At Intersection	Overturning	E	Left Turn	Going Straight
167	PATTERSON RD & BURKEY ST	9/15/2014	9:36:00 AM	PDO	0		At Intersection	Front to Rear	W	Going Straight	Right Turn
168	28 RD & PATTERSON RD	9/15/2014	1:14:00 PM	PDO	30	North	Intersection Related	Front to Rear	N	Backing	Stop in Traff
169	PATTERSON RD & MESA VALLEY DR	9/17/2014	6:19:00 PM	PDO	0		Intersection Related	Front to Rear	W	Changing Lanes	Other
170	PATTERSON RD & 12TH ST	9/22/2014	11:18:00 AM	INJ	0		At Intersection	Front to Side	E	Left Turn	Going Straight
171	PATTERSON RD & CRIS-MAR ST	9/22/2014	2:54:00 PM	PDO	0		Non-Int	Same Dir Side Side	W	Changing Lanes	Going Straight
172	PATTERSON RD & BEECHWOOD ST	9/24/2014	8:03:00 AM	PDO	0		Intersection Related	Front to Rear	W	Going Straight	Slowing
173	PATTERSON RD & 24 RD	9/25/2014	1:49:00 PM	PDO	0		At Intersection	Same Dir Side Side	W	Left Turn	Left Turn
174	PATTERSON RD & 24 1/2 RD	9/25/2014	2:12:00 PM	PDO	0		At Intersection	Same Dir Side Side	E	Right Turn	Going Straight
175	25 RD & PATTERSON RD	9/29/2014	4:09:00 PM	INJ	150	North	Drive Acc Relat	Front to Side	E	Left Turn	Going Straight
176	PATTERSON RD & 12TH ST	9/29/2014	11:28:00 AM	PDO	100	East	Non-Int	Same Dir Side Side	E	Changing Lanes	Going Straight
177	PATTERSON RD & 24 1/2 RD	9/29/2014	7:22:00 PM	PDO	0		At Intersection	Front to Rear	N	Left Turn	Going Straight
178	PATTERSON RD & 25 1/2 RD	9/30/2014	1:39:00 PM	PDO	0		At Intersection	Front to Side	W	Going Straight	Going Straight
179	24 RD & PATTERSON RD	10/1/2014	5:48:00 PM	PDO	185	South	Intersection Related	Front to Rear	N	Going Straight	Slowing
180	PATTERSON RD & MARKET STREET	10/2/2014	1:53:00 PM	PDO	0		At Intersection	Front to Side	W	Going Straight	Left Turn
181	PATTERSON RD & 1ST ST	10/3/2014	12:31:00 PM	PDO	1150	East	Drive Acc Relat	Front to Rear	W	Going Straight	Stop in Traff
182	PATTERSON RD & 27 1/2 RD	10/6/2014	1:15:00 PM	PDO	0		Intersection Related	Front to Side	S	Left Turn	Left Turn
183	PATTERSON RD & HOME DEPOT	10/13/2014	2:36:00 PM	PDO	0		At Intersection	Front to Side	S	Right Turn	Going Straight
184	PATTERSON RD & 25 1/2 RD	10/14/2014	6:21:00 PM	PDO	600	West	Non-Int	Front to Side	E	U-Turn	Going Straight
185	24 1/2 RD & PATTERSON RD	10/15/2014	11:59:00 AM	PDO	500	South	Drive Acc Relat	Front to Side	E	Going Straight	Going Straight
186	PATTERSON RD & EL CORONA DR	10/15/2014	5:22:00 PM	PDO	150	West	Intersection Related	Front to Rear	E	Going Straight	Stop in Traff
187	PATTERSON RD & 28 3/4 RD	10/17/2014	4:33:00 PM	INJ	0		At Intersection	Curb	S	Left Turn	Going Straight
188	PATTERSON RD & 24 RD	10/17/2014	4:01:00 PM	PDO	0		At Intersection	Front to Side	S	Right Turn	Going Straight
189	PATTERSON RD & 29 RD	10/18/2014	1:41:00 PM	PDO	0		At Intersection	Front to Rear	W	Going Straight	Stop in Traff
190	PATTERSON RD & PHEASANT TRAIL CT	10/19/2014	2:33:00 PM	PDO	150	East	Non-Int	Same Dir Side Side	W	Other	Going Straight
191	PATTERSON RD & 28 RD	10/19/2014	12:32:00 PM	PDO	0		At Intersection	Front to Side	S	Left Turn	Going Straight
192	PATTERSON RD & PARK DR	10/19/2014	6:56:00 PM	PDO	0		At Intersection	Same Dir Side Side	E	Changing Lanes	Going Straight
193	PATTERSON RD & 7TH ST	10/21/2014	7:57:00 AM	INJ	0		At Intersection	Front to Rear	E	Going Straight	Stop in Traff
194	I-70B & PATTERSON RD	10/22/2014	3:46:00 PM	PDO	200	West	Intersection Related	Front to Rear	W	Going Straight	Slowing
195	PATTERSON RD & 28 RD	10/24/2014	9:24:00 PM	PDO	0		At Intersection	Front to Rear	W	Going Straight	Right Turn
196	PATTERSON RD & SPRING VALLEY CIR	11/4/2014	7:49:00 AM	PDO	0		Non-Int	Front to Rear	W	Going Straight	Going Straight
197	PATTERSON RD & 12TH ST	11/4/2014	1:29:00 PM	PDO	500	West	Non-Int	Front to Rear	W	Going Straight	Stop in Traff
198	PATTERSON RD & PIONEER RD	11/5/2014	11:54:00 AM	PDO	0		At Intersection	Bicycle Collision	S	Going Straight	Going Straight
199	PATTERSON RD & 25 RD	11/5/2014	9:04:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Going Straight
200	PATTERSON RD & VIEWPOINT DR	11/8/2014	11:48:00 AM	INJ	50	East	Non-Int	Front to Rear	W	Changing Lanes	Slowing
201	PATTERSON RD & HOME DEPOT	11/8/2014	6:08:00 PM	INJ	500	East	Non-Int	Front to Rear	W	Going Straight	Slowing
202	PATTERSON RD & 24 RD	11/11/2014	4:36:00 PM	PDO	300	East	Non-Int	Same Dir Side Side	W	Changing Lanes	Going Straight
203	PATTERSON RD & 7TH ST	11/11/2014	5:43:00 PM	PDO	0		At Intersection	Front to Side	W	Right Turn	Going Straight
204	PATTERSON RD & 28 3/4 RD	11/12/2014	5:39:00 PM	INJ	0		At Intersection	Front to Rear	E	Going Straight	Stop in Traff
205	PATTERSON RD & 15TH ST	11/14/2014	2:03:00 PM	PDO	0		At Intersection	Front to Side	N	Right Turn	Going Straight
206	PATTERSON RD & 27 1/2 RD	11/18/2014	4:05:00 PM	PDO	0		Non-Int	Front to Rear	E	Going Straight	Going Straight
207	PATTERSON RD & 29 1/2 RD	11/18/2014	5:40:00 PM	PDO	0		At Intersection	Front to Front	E	Going Straight	Left Turn
208	PATTERSON RD & 12TH ST	11/19/2014	8:50:00 AM	INJ	266	East	Non-Int	Front to Rear	W	Going Straight	Slowing
209	PATTERSON RD & 12TH ST	11/21/2014	12:45:00 PM	PDO	693	East	Non-Int	Front to Rear	W	Going Straight	Slowing
210	PATTERSON RD & 7TH ST	11/21/2014	11:23:00 AM	PDO	0		At Intersection	Front to Side	N	Left Turn	Going Straight
211	PATTERSON RD & 12TH ST	11/21/2014	5:23:00 PM	PDO	150	East	Intersection Related	Front to Rear	W	Going Straight	Slowing
212	PATTERSON RD & HOME DEPOT	11/24/2014	1:24:00 PM	INJ	0		At Intersection	Front to Side	W	Left Turn	Going Straight
213	PATTERSON RD & 28 RD	11/25/2014	11:06:00 AM	INJ	0		At Intersection	Front to Side	S	Left Turn	Going Straight
214	29 RD & PATTERSON RD	11/26/2014	7:22:00 PM	PDO	190	North	Drive Acc Relat	Front to Side	W	Left Turn	Going Straight
215	PATTERSON RD & BROKEN SPOKE RD	11/26/2014	6:57:00 AM	PDO	0		At Intersection	Front to Rear	S	Going Straight	Stop in Traff
216	MARKET STREET & PATTERSON RD	11/26/2014	2:01:00 PM	PDO	40	North	Non-Int	Same Dir Side Side	S	Changing Lanes	Going Straight
217	PATTERSON RD & HOME DEPOT	11/29/2014	12:57:00 PM	PDO	0		At Intersection	Front to Side	N	Right Turn	Going Straight
218	PATTERSON RD & VIEWPOINT DR	12/1/2014	7:40:00 AM	PDO	0		Non-Int	Wild Animal	W	Going Straight	UNK
219	PATTERSON RD & 12TH ST	12/3/2014	5:49:00 PM	PDO	0		Non-Int	Same Dir Side Side	N	Changing Lanes	Going Straight
220	PATTERSON RD & 27 1/2 RD	12/5/2014	1:24:00 PM	PDO	100	West	Intersection Related	Front to Rear	E	Going Straight	Slowing
221	PATTERSON RD & 1ST ST	12/5/2014	9:55:00 PM	PDO	0		At Intersection	Front to Front	W	Left Turn	Going Straight
222	PATTERSON RD & 12TH ST	12/6/2014	7:47:00 AM	INJ	100	East	Non-Int	Same Dir Side Side	W	Changing Lanes	Going Straight
223	25 1/2 RD & PATTERSON RD	12/6/2014	6:30:00 PM	PDO	158	North	Drive Acc Relat	Front to Side	E	Right Turn	Going Straight
224	MEANDER DR & PATTERSON RD	12/9/2014	5:18:00 PM	PDO	200	West	Non-Int	Front to Rear	E	Slowing	Stop in Traff
225	PATTERSON RD & 24 1/2 RD	12/9/2014	6:17:00 PM	PDO	0		At Intersection	Same Dir Side Side	E	Going Straight	Going Straight
226	PATTERSON RD & 15TH ST	12/12/2014	3:30:00 PM	PDO	300	East	Intersection Related	Front to Rear	W	Going Straight	Slowing
227	PATTERSON RD & 25 1/2 RD	12/12/2014	8:16:00 PM	PDO	0		At Intersection	Front to Rear	W	Going Straight	Stop in Traff
228	PATTERSON RD & 12TH ST	12/14/2014	10:44:00 PM	INJ	0		At Intersection	Front to Side	W	Left Turn	Going Straight
229	I-70B & PATTERSON RD	12/15/2014	5:24:00 PM	INJ	0		At Intersection	Front to Side	E	Left Turn	Going Straight
230	PATTERSON RD & 7TH ST	12/15/2014	5:23:00 PM	PDO	0		At Intersection	Front to Rear	N	Going Straight	Stop in Traff
231	PATTERSON RD & 25 1/2 RD	12/16/2014	5:50:00 PM	INJ	0		At Intersection	Opp Dir Side Side	W	Left Turn	Going Straight
232	PATTERSON RD & MIRA VISTA DR	12/22/2014	10:13:00 AM	PDO	0		Non-Int	Front to Front	W	Spun Out of Cntrl	Going Straight
233	PATTERSON RD & 28 1/4 RD	12/23/2014	2:26:00 PM	INJ	0		At Intersection	Front to Side	W	Left Turn	Going Straight
234	PATTERSON RD & 24 1/2 RD	12/23/2014	6:57:00 PM	PDO	0		At Intersection	Front to Side	N	Right Turn	Going Straight
235	24 1/2 RD & PATTERSON RD	12/27/2014	3:17:00 PM	PDO	500	South	Drive Acc Relat	Front to Side	E	Left Turn	Going Straight
236	PATTERSON RD & 1ST ST	12/27/2014	5:39:00 PM	PDO	0		Intersection Related	Front to Rear	E	Going Straight	Going Straight

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
237	PATTERSON RD & LEGENDS WAY	12/29/2014	11:10:00 AM	PDO	0		Non-Int	Sign	E	Right Turn	UNK
238	PATTERSON RD & 25 RD	1/1/2015	8:01:00 PM	INJ	120	E	Driveway Access Related	Front to Front	W	Left Turn	Straight
239	PATTERSON RD & 29 RD	1/5/2015	1:10:00 PM	PDO			Non-Intersection	Side to Side Same Dir	W	Changing Lanes	Straight
240	PATTERSON RD & 25 RD	1/6/2015	4:31:00 PM	PDO	1150	W	Intersection Related	Front to Front	E	Left Turn	Straight
241	25 RD & PATTERSON RD	1/7/2015	3:20:00 PM	PDO			At Intersection	Front to Rear	N	Slowing	Stopped
242	PATTERSON RD & W INDIAN CREEK DR	1/8/2015	5:38:00 PM	PDO			Non-Intersection	Front to Rear	E	Straight	Stopped
243	PATTERSON RD & E INDIAN CREEK DR	1/9/2015	10:27:00 AM	PDO			At Intersection	Front to Side	N	Left Turn	Straight/following road
244	PATTERSON RD & 27 1/2 RD	1/12/2015	5:05:00 PM	PDO			Non-Intersection	Front to Rear	E	Straight	Slowing
245	PATTERSON RD & 24 1/2 RD	1/17/2015	2:06:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
246	PATTERSON RD & N 12TH ST	1/18/2015	9:58:00 AM	PDO			At Intersection	Front to Rear	E	Left Turn	Straight
247	PATTERSON RD & 25 RD	1/23/2015	12:47:00 PM	INJ	607	W	Non-Intersection	Front to Rear	W	U-Turn	Straight
248	PATTERSON RD & MARKET ST	1/27/2015	10:00:00 AM	INJ			At Intersection	Front to Side	W	Straight	Straight
249	PATTERSON RD & 25 RD	1/30/2015	3:56:00 PM	INJ			At Intersection	Front to Rear	N	Straight	Stopped
250	PATTERSON RD & 25 RD	1/30/2015	2:36:00 PM	PDO			At Intersection	Sign	S	Straight	UNK
251	PATTERSON RD & 25 1/2 RD	2/2/2015	3:46:00 PM	PDO			At Intersection	Front to Rear	E	Straight	Straight
252	PATTERSON RD & MARKET ST	2/4/2015	7:39:00 PM	PDO	600	E	At Intersection	Front to Side	W	Left Turn	Straight
253	PATTERSON RD & N 7TH ST	2/10/2015	5:34:00 PM	INJ	300	W	Non-Intersection	Front to Rear	E	Straight	Stopped
254	PATTERSON RD & N 1ST ST	2/10/2015	11:32:00 AM	PDO	30	E	At Intersection	Front to Rear	W	Straight	Stopped
255	25 RD & PATTERSON RD	2/10/2015	3:18:00 PM	PDO	300	N	Non-Intersection	Front to Front	E	Left Turn	Straight
256	24 1/2 RD & PATTERSON RD	2/11/2015	6:48:00 PM	PDO	500	S	Intersection Related	Side to Side Same Dir	N	U-Turn	Straight
257	PATTERSON RD & N 1ST ST	2/16/2015	12:34:00 PM	PDO	50	E	Non-Intersection	Front to Rear	W	Straight	Stopped
258	PATTERSON RD & N 7TH ST	2/16/2015	4:28:00 PM	PDO	350	W	Non-Intersection	Front to Rear	E	Straight	Stopped
259	N 7TH ST & PATTERSON RD	2/19/2015	12:12:00 PM	PDO	50	S	Intersection Related	Front to Rear	N	Changing Lanes	Stopped
260	PATTERSON RD & 25 1/2 RD	2/21/2015	8:47:00 PM	PDO	300	E	Driveway Access Related	Front to Rear	W	Straight	Right Turn
261	N 12TH ST & PATTERSON RD	2/23/2015	12:44:00 PM	INJ	40	S	Intersection Related	Front to Rear	N	Straight	Stopped
262	25 RD & PATTERSON RD	2/24/2015	3:16:00 PM	PDO	100	N	Driveway Access Related	Front to Side	N	Slowing	Straight
263	30 RD & PATTERSON RD	2/24/2015	7:30:00 PM	PDO	20	S	Intersection Related	Front to Rear	N	Straight	Stopped
264	PATTERSON RD & 25 RD	2/27/2015	5:23:00 PM	PDO	100	E	Non-Intersection	Front to Rear	E	Straight	Stopped
265	PATTERSON RD & BEECHWOOD ST	2/27/2015	11:07:00 AM	PDO			At Intersection	Curb	E	Left Turn	Straight
266	24 1/2 RD & PATTERSON RD	2/28/2015	12:43:00 PM	PDO			At Intersection	Side to Side Same Dir	E	Right Turn	Straight
267	PATTERSON RD & 29 RD	2/28/2015	10:13:00 PM	PDO	100	W	Intersection Related	Front to Rear	E	Straight	Stopped
268	PATTERSON RD & MIRA VISTA RD	3/2/2015	5:37:00 PM	PDO	75	E	Non-Intersection	Side to Side Same Dir	E	Changing Lanes	Straight
269	PATTERSON RD & 25 1/2 RD	3/3/2015	12:41:00 PM	INJ	80	E	Intersection Related	Front to Rear	W	Slowing	Stopped
270	PATTERSON RD & N 15TH ST	3/5/2015	11:17:00 PM	PDO			Non-Intersection	Front to Rear	W	Straight	Stopped
271	24 RD & PATTERSON RD	3/6/2015	3:46:00 AM	PDO	728	N	Non-Intersection	Sign	S	Straight	UNK
272	PATTERSON RD & 29 RD	3/6/2015	8:46:00 AM	PDO			Intersection Related	Front to Rear	W	Straight	Slowing
273	N 12TH ST & PATTERSON RD	3/7/2015	8:45:00 PM	INJ	300	S	Non-Intersection	All Other Peds	S	Straight	UNK
274	25 RD & PATTERSON RD	3/8/2015	2:20:00 PM	PDO	150	N	Driveway Access Related	Front to Front	N	Left Turn	Straight
275	PATTERSON RD & N 15TH ST	3/10/2015	3:47:00 PM	PDO	900	E	Non-Intersection	Front to Rear	W	Straight	UNK
276	PATTERSON RD & 27 1/2 RD	3/11/2015	5:52:00 AM	PDO	300	W	Non-Intersection	Front to Rear	W	Straight	Stopped
277	PATTERSON RD & 30 3/4 RD	3/12/2015	11:10:00 AM	PDO			At Intersection	Front to Side	W	Straight	Straight
278	PATTERSON RD & 27 1/2 RD	3/13/2015	5:22:00 PM	PDO	200	W	Non-Intersection	Front to Rear	E	Straight	Straight
279	29 1/2 RD & PATTERSON RD	3/13/2015	12:33:00 PM	PDO	20	N	Intersection Related	Front to Rear	S	Straight	Straight
280	PATTERSON RD & N 12TH ST	3/16/2015	8:37:00 AM	INJ			At Intersection	Front to Side	W	Straight	Straight
281	PATTERSON RD & PATTERSON RD	3/18/2015	1:28:00 PM	PDO			At Intersection	Light Pole / Utility Pole	E	Left Turn	Straight
282	PATTERSON RD & 29 1/2 RD	3/19/2015	6:44:00 AM	PDO	300	W	Non-Intersection	Front to Rear	W	Straight	Stopped
283	PATTERSON RD & EL CORONA DR	3/19/2015	8:10:00 PM	PDO			At Intersection	Front to Rear	E	Straight	Straight
284	PATTERSON RD & 25 1/2 RD	3/20/2015	6:43:00 AM	INJ			At Intersection	Front to Front	S	Left Turn	Straight
285	PATTERSON RD & MEANDER DR	3/20/2015	1:53:00 PM	PDO			Driveway Access Related	Front to Front	W	Left Turn	Straight
286	PATTERSON RD & MARKET ST	3/20/2015	8:08:00 AM	PDO			At Intersection	Front to Side	E	Straight	Straight
287	24 1/2 RD & PATTERSON RD	3/21/2015	1:09:00 PM	PDO	500	S	Driveway Access Related	Front to Front	E	Left Turn	Straight
288	PATTERSON RD & 29 RD	3/23/2015	5:31:00 PM	PDO			At Intersection	Front to Rear	W	Straight	Stopped
289	PATTERSON RD & PARK DR	3/25/2015	1:45:00 PM	PDO	50	W	Non-Intersection	Guard Rail	W	Straight	UNK
290	PATTERSON RD & 29 RD	3/27/2015	4:38:00 PM	PDO	100	E	Driveway Access Related	Side to Side Same Dir	S	Right Turn	Straight
291	PATTERSON RD & BURKEY ST	3/30/2015	7:32:00 AM	PDO	50	E	Intersection Related	Front to Rear	W	Straight	Stopped
292	N 12TH ST & PATTERSON RD	3/30/2015	5:33:00 PM	PDO			At Intersection	Side to Side Same Dir	N	Right Turn	Straight
293	PATTERSON RD & N 1ST ST	4/1/2015	12:23:00 PM	PDO			At Intersection	Front to Rear	E	Straight	Stopped
294	PATTERSON RD & N 7TH ST	4/1/2015	6:01:00 PM	PDO			At Intersection	Front to Side	S	Straight	Straight
295	PATTERSON RD & 27 1/2 RD	4/2/2015	7:09:00 PM	INJ	50	W	Intersection Related	Front to Rear	E	Straight	Stopped
296	PATTERSON RD & 25 RD	4/2/2015	4:54:00 PM	INJ	100	E	Driveway Access Related	Other - Non Collision	N	Right Turn	Straight
297	PATTERSON RD & N 15TH ST	4/6/2015	5:29:00 PM	PDO	40	W	At Intersection	Front to Rear	E	Straight	Stopped
298	25 RD & PATTERSON RD	4/8/2015	3:47:00 PM	PDO	140	N	Driveway Access Related	Front to Side	E	Left Turn	Straight
299	PATTERSON RD & 25 1/2 RD	4/9/2015	11:27:00 AM	PDO	50	E	Intersection Related	Front to Rear	W	Straight	Stopped
300	PATTERSON RD & 24 RD	4/11/2015	2:38:00 PM	INJ			At Intersection	Front to Side	E	Left Turn	Straight
301	PATTERSON RD & 27 1/2 RD	4/11/2015	11:52:00 AM	INJ	20	W	Non-Intersection	Front to Rear	W	Straight	Stopped
302	24 1/2 RD & PATTERSON RD	4/11/2015	7:44:00 PM	PDO	492	S	Driveway Access Related	Front to Side	E	Left Turn	Straight
303	PATTERSON RD & PATTERSON RD	4/11/2015	12:38:00 PM	PDO			At Intersection	Front to Rear	W	Straight	Stopped
304	PATTERSON RD & 29 1/2 RD	4/12/2015	11:36:00 AM	INJ			At Intersection	Front to Front	S	Left Turn	Straight
305	PATTERSON RD & FORESIGHT CIR	4/13/2015	6:03:00 PM	PDO	380	E	Driveway Access Related	Front to Side	W	Changing Lanes	Straight
306	PATTERSON RD & PATTERSON RD	4/13/2015	8:17:00 AM	PDO			At Intersection	Traffic Signal Pole	W	Right Turn	UNK
307	PATTERSON RD & SPRING VALLEY CIR	4/13/2015	8:18:00 AM	PDO			At Intersection	Front to Side	S	Right Turn	Straight
308	PATTERSON RD & 28 RD	4/14/2015	5:15:00 PM	PDO	100	E	Non-Intersection	Front to Rear	E	Straight	Stopped
309	PATTERSON RD & 24 1/2 RD	4/15/2015	10:40:00 AM	PDO			At Intersection	Side to Side Same Dir	N	Right Turn	Left Turn
310	PATTERSON RD & N 12TH ST	4/15/2015	10:13:00 AM	PDO	600	W	Driveway Access Related	Front to Side	S	Left Turn	Straight
311	PATTERSON RD & N 15TH ST	4/18/2015	6:29:00 PM	INJ			At Intersection	Front to Side	E	Straight	Straight
312	PATTERSON RD & NORTHERN WAY	4/19/2015	3:17:00 AM	PDO			Non-Intersection	Guard Rail	W	Straight	UNK
313	PATTERSON RD & MARKET ST	4/20/2015	8:03:00 AM	INJ			At Intersection	Overturning	W	Left Turn	Straight
314	PATTERSON RD & N 15TH ST	4/20/2015	4:51:00 PM	INJ			At Intersection	Front to Rear	N	Slowing	Stopped
315	PATTERSON RD & SPRING VALLEY CIR	4/20/2015	8:25:00 AM	PDO	60	W	Non-Intersection	Front to Rear	W	Straight	Straight
316	PATTERSON RD & N 12TH ST	4/20/2015	7:46:00 AM	PDO	750	E	Intersection Related	Front to Rear	W	Straight	Stopped
317	24 RD & PATTERSON RD	4/22/2015	4:58:00 PM	PDO	100	S	Intersection Related	Front to Rear	N	Straight	Straight
318	PATTERSON RD & N 7TH ST	4/23/2015	7:54:00 PM	PDO			At Intersection	Front to Side	S	Straight	Straight
319	N 12TH ST & PATTERSON RD	4/24/2015	7:20:00 PM	PDO	260	S	Driveway Access Related	Front to Side	E	Right Turn	Straight
320	PATTERSON RD & 25 RD	4/25/2015	11:53:00 PM	INJ			Parking Lot	Front to Side	W	Right Turn	Parked
321	PATTERSON RD & N 1ST ST	4/25/2015	8:31:00 PM	PDO			At Intersection	Front to Side	W	Straight	Left Turn
322	PATTERSON RD & N 12TH ST	5/7/2015	9:44:00 AM	FAT			At Intersection	Front to Front	E	Left Turn	Straight
323	PATTERSON RD & MARKET ST	5/7/2015	5:28:00 PM	PDO			Intersection Related	Front to Rear	W	Straight	Stopped
324	PATTERSON RD & 25 RD	5/8/2015	11:57:00 AM	PDO			At Intersection	Front to Front	S	Left Turn	Straight
325	24 RD & PATTERSON RD	5/9/2015	12:38:00 PM	PDO	100	S	Non-Intersection	Side to Side Same Dir	N	Changing Lanes	Stopped
326	25 RD & PATTERSON RD	5/10/2015	1:29:00 PM	PDO			At Intersection	Front to Front	N	Left Turn	Left Turn
327	PATTERSON RD & 24 1/2 RD	5/11/2015	3:35:00 PM	INJ			At Intersection	Front to Front	E	Left Turn	Straight
328	PATTERSON RD & 27 1/2 RD	5/13/2015	8:00:00 AM	PDO			At Intersection	Front to Side	E	Left Turn	Straight
329	PATTERSON RD & 25 1/2 RD	5/14/2015	3:28:00 PM	INJ			At Intersection	Front to Front	W	Straight	Left Turn
330	PATTERSON RD & N 7TH ST	5/15/2015	9:45:00 PM	PDO			At Intersection	Front to Front	S	Straight	Straight
331	PATTERSON RD & 25 RD	5/16/2015	7:02:00 PM	PDO	50	W	At Intersection	Front to Rear	E	Slowing	Stopped
332	N 12TH ST & PATTERSON RD	5/17/2015	7:43:00 PM	PDO			At Intersection	Front to Side	E	Straight	Left Turn
333	PATTERSON RD & N 1ST ST	5/18/2015	3:59:00 PM	INJ	500	E	Driveway Access Related	Front to Rear	W	Straight	Stopped
334	PATTERSON RD & 25 RD	5/19/2015	1:02:00 PM	PDO			At Intersection	Front to Side	S	Left Turn	Stopped
335	29 1/2 RD & PATTERSON RD	5/22/2015	1:09:00 PM	PDO	84	S	Intersection Related	Front to Side	S	Left Turn	Straight
336	24 1/2 RD & PATTERSON RD	5/23/2015	5:37:00 PM	PDO	500	S	Driveway Access Related	Front to Front	E	Left Turn	Straight
337	24 1/2 RD & PATTERSON RD	5/23/2015	5:37:00 PM	PDO	500	S	Driveway Access Related	Front to Front	E	Left Turn	Straight
338	25 RD & PATTERSON RD	5/26/2015	7:57:00 AM	PDO	129	N	Driveway Access Related	Front to Side	E	Left Turn	Straight
339	PATTERSON RD & 28 1/4 RD	5/27/2015	11:32:00 AM	PDO	460	W	Non-Intersection	Front to Rear	E	Straight	Slowing
340	PATTERSON RD & N 12TH ST	5/27/2015	4:54:00 PM	PDO	200	E	Non-Intersection	Front to Rear	E	Straight	Slowing
341	PATTERSON RD & 29 1/2 RD	6/2/2015	2:08:00 PM	INJ	400	E	Intersection Related	Front to Rear	W	Straight	Stopped
342	24 1/2 RD & PATTERSON RD	6/5/2015	3:53:00 PM	PDO	500	S	Driveway Access Related	Front to Side	E	Left Turn	Straight
343	PATTERSON RD & 30 RD	6/10/2015	4:26:00 PM	PDO	100	W	Intersection Related	Front to Rear	E	Straight	Stopped
344	25 RD & PATTERSON RD	6/11/2015	12:08:00 PM	PDO	150	N	Driveway Access Related	Front to Side	E	Right Turn	Straight
345	PATTERSON RD & N 7TH ST	6/12/2015	1:02:00 PM	PDO			At Intersection	Front to Side	N	Right Turn	Straight
346	PATTERSON RD & PATTERSON RD	6/13/2015	1:28:00 PM	PDO			At Intersection	Front to Rear	W	Straight	Stopped
347	PATTERSON RD & DARBY DR	6/14/2015	1:00:00 PM	INJ			At Intersection	Mailbox	E	Straight	Right Turn
348	PATTERSON RD & N 12TH ST	6/15/2015	2:36:00 AM	INJ			At Intersection	Front to Side	N	Straight	Straight
349	PATTERSON RD & N 12TH ST	6/15/2015	7:20:00 PM	PDO			At Intersection	Side to Side Opp Dir	W	Left Turn	Straight
350	25 RD & PATTERSON RD	6/17/2015	3:01:00 PM	PDO	50	S	Driveway Access Related	Front to Side	W	Right Turn	Straight
351	PATTERSON RD & 27 1/2 RD	6/18/2015	10:56:00 PM	PDO			At Intersection	Front to Rear	W	Straight	Stopped
352	PATTERSON RD & FORESIGHT CIR	6/19/2015	11:20:00 AM	PDO			At Intersection	Front to Side	S	Left Turn	Straight
353	PATTERSON RD & N 12TH ST	6/19/2015	8:39:00 PM	PDO			At Intersection	Front to Side	S	Straight	Straight
354	PATTERSON RD & N 12TH ST	6/20/2015	4:49:00 PM	PDO			Intersection Related	Side to Side Same Dir	S	Left Turn	Right Turn

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
355	PATTERSON RD & 29 1/2 RD	6/22/2015	12:43:00 PM	PDO	288	E	Non-Intersection	Side to Side Same Dir	E	Changing Lanes	Straight
356	PATTERSON RD & 30 RD	6/26/2015	1:00:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
357	PATTERSON RD & 25 1/2 RD	6/30/2015	10:11:00 AM	PDO			At Intersection	Front to Rear	W	Changing Lanes	Slowing
358	PATTERSON RD & 30 RD	7/3/2015	11:26:00 AM	INJ			At Intersection	Front to Side	W	Straight	Straight
359	PATTERSON RD & COMMERCE BLVD	7/6/2015	12:34:00 PM	PDO	300	W	Alley Related	Side to Side Same Dir	E	Weaving	Straight
360	PATTERSON RD & 29 RD	7/6/2015	5:43:00 PM	PDO			Intersection Related	Front to Rear	E	Backing	Stopped
361	PATTERSON RD & E INDIAN CREEK DR	7/14/2015	5:11:00 PM	PDO			Non-Intersection	Front to Rear	E	Slowing	Slowing
362	PATTERSON RD & N 1ST ST	7/21/2015	10:05:00 AM	INJ			At Intersection	All Other Peds	W	Right Turn	UNK
363	PATTERSON RD & N 12TH ST	7/21/2015	3:59:00 PM	PDO	25	E	Non-Intersection	Front to Rear	E	Straight	Stopped
364	PATTERSON RD & RIO GRANDE DR DR	7/21/2015	11:18:00 AM	PDO			Intersection Related	Front to Rear	E	Straight	Straight
365	PATTERSON RD & 28 1/4 RD	7/23/2015	5:26:00 PM	INJ			At Intersection	Front to Rear	E	Straight	Stopped
366	PATTERSON RD & 27 1/2 RD	7/23/2015	11:56:00 PM	PDO	500	W	Non-Intersection	Front to Rear	W	Straight	Stopped
367	N 12TH ST & PATTERSON RD	7/24/2015	2:03:00 PM	PDO			At Intersection	Front to Rear	S	Straight	Right Turn
368	25 RD & PATTERSON RD	7/25/2015	5:58:00 PM	PDO			At Intersection	Front to Rear	N	Straight	Stopped
369	PATTERSON RD & 24 1/2 RD	7/25/2015	10:43:00 AM	PDO			At Intersection	Rear to Side	E	Left Turn	Straight
370	PATTERSON RD & N 12TH ST	7/26/2015	2:00:00 PM	PDO	300	W	Driveway Access Related	Side to Side Same Dir	E	Changing Lanes	Changing Lanes
371	24 1/2 RD & PATTERSON RD	7/26/2015	3:16:00 PM	PDO	500	S	Non-Intersection	Side to Side Same Dir	N	Changing Lanes	Straight
372	PATTERSON RD & 25 1/2 RD	7/29/2015	12:15:00 PM	INJ			At Intersection	Front to Front	W	Left Turn	Straight
373	N 12TH ST & PATTERSON RD	7/29/2015	2:32:00 PM	PDO	25	N	Intersection Related	Front to Rear	S	Straight	Stopped
374	PATTERSON RD & 25 RD	7/30/2015	2:26:00 PM	INJ			At Intersection	Front to Side	W	Left Turn	Straight
375	PATTERSON RD & 29 1/2 RD	7/30/2015	5:30:00 PM	PDO	150	W	Non-Intersection	Front to Rear	E	Straight	Stopped
376	PATTERSON RD & N 12TH ST	8/4/2015	9:06:00 PM	INJ			At Intersection	Front to Side	W	Left Turn	Straight
377	PATTERSON RD & 24 RD	8/5/2015	3:32:00 PM	PDO			Intersection Related	Front to Rear	E	Straight	Stopped
378	PATTERSON RD & 28 1/4 RD	8/6/2015	8:56:00 AM	INJ			At Intersection	All Other Peds	S	Right Turn	UNK
379	PATTERSON RD & 29 1/2 RD	8/8/2015	5:15:00 PM	PDO			At Intersection	Front to Rear	W	Straight	Stopped
380	PATTERSON RD & N 1ST ST	8/12/2015	5:29:00 PM	PDO	500	W	Non-Intersection	Front to Side	E	Changing Lanes	Straight
381	PATTERSON RD & N 12TH ST	8/13/2015	9:59:00 AM	PDO			At Intersection	Side to Side Same Dir	W	Straight	Right Turn
382	PATTERSON RD & 27 1/2 RD	8/14/2015	3:54:00 PM	PDO			Intersection Related	Front to Rear	S	Straight	Straight
383	PATTERSON RD & 29 1/2 RD	8/15/2015	7:17:00 PM	PDO			At Intersection	Front to Side	E	Left Turn	Straight
384	PATTERSON RD & MEANDER DR	8/20/2015	11:53:00 AM	PDO	203	E	Driveway Access Related	Side to Side Same Dir	E	Changing Lanes	Straight
385	PATTERSON RD & 30 RD	8/21/2015	2:45:00 PM	INJ			At Intersection	Front to Side	E	Straight	Straight
386	PATTERSON RD & 29 1/2 RD	8/21/2015	3:40:00 PM	INJ	133	E	Non-Intersection	Tree	W	Straight	Stopped
387	PATTERSON RD & 27 1/2 RD	8/22/2015	3:37:00 PM	PDO	50	W	At Intersection	Front to Rear	E	Straight	Stopped
388	PATTERSON RD & PARTEE DR	8/23/2015	9:58:00 PM	INJ			Intersection Related	Front to Side	E	Left Turn	Straight
389	PATTERSON RD & BURKEY ST	8/24/2015	3:45:00 PM	INJ			At Intersection	Front to Side	S	Left Turn	Straight
390	PATTERSON RD & BURKEY ST	8/25/2015	10:59:00 AM	INJ			At Intersection	All Other Peds	S	Right Turn	UNK
391	PATTERSON RD & BEECHWOOD ST	8/26/2015	7:51:00 AM	PDO			Non-Intersection	Front to Rear	W	Straight	Stopped
392	PATTERSON RD & N 15TH ST	8/27/2015	2:53:00 PM	PDO			Intersection Related	Front to Side	S	Right Turn	Straight
393	PATTERSON RD & N 15TH ST	8/27/2015	2:53:00 PM	PDO			Intersection Related	Front to Rear	S	Right Turn	Straight
394	PATTERSON RD & MARKET ST	8/28/2015	5:03:00 PM	INJ			At Intersection	Front to Side	W	Left Turn	Straight
395	PATTERSON RD & PATTERSON RD	8/28/2015	8:46:00 AM	PDO			Non-Intersection	Front to Rear	W	Slowing	Stopped
396	PATTERSON RD & 30 RD	8/29/2015	8:36:00 PM	PDO			At Intersection	Front to Rear	W	Slowing	Stopped
397	PATTERSON RD & GRAND CASCADE WAY	9/1/2015	7:40:00 AM	PDO	250	E	Non-Intersection	Front to Rear	W	Straight	Slowing
398	PATTERSON RD & 25 RD	9/2/2015	1:47:00 PM	PDO	500	E	Intersection Related	Front to Rear	W	Slowing	Stopped
399	PATTERSON RD & 24 RD	9/2/2015	11:35:00 AM	PDO	30	E	Intersection Related	Front to Rear	W	Straight	Stopped
400	25 RD & PATTERSON RD	9/3/2015	3:27:00 PM	PDO	150	N	Driveway Access Related	Front to Side	E	Left Turn	Straight
401	24 1/2 RD & PATTERSON RD	9/4/2015	4:57:00 PM	PDO	500	S	Driveway Access Related	Front to Side	E	Left Turn	Straight
402	PATTERSON RD & 24 1/2 RD	9/4/2015	3:00:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
403	PATTERSON RD & W INDIAN CREEK DR	9/7/2015	7:34:00 PM	PDO	150	E	Non-Intersection	Sign	E	Straight	UNK
404	PATTERSON RD & 30 RD	9/8/2015	1:01:00 PM	PDO	148	E	Non-Intersection	Fence	E	Straight	UNK
405	25 RD & PATTERSON RD	9/9/2015	12:33:00 PM	PDO	150	N	Driveway Access Related	Front to Side	N	Left Turn	Straight
406	PATTERSON RD & 24 1/2 RD	9/10/2015	6:14:00 PM	PDO	205	E	Driveway Access Related	Front to Side	N	Left Turn	Straight
407	PATTERSON RD & 28 1/4 RD	9/10/2015	5:03:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
408	24 RD & PATTERSON RD	9/11/2015	7:08:00 PM	INJ			Intersection Related	Front to Rear	W	Straight	Stopped
409	PATTERSON RD & N 12TH ST	9/11/2015	8:04:00 PM	INJ			At Intersection	Front to Side	E	Left Turn	Straight
410	N 1ST ST & PATTERSON RD	9/12/2015	11:30:00 AM	PDO	25	S	Intersection Related	Front to Rear	N	Straight	Stopped
411	PATTERSON RD & 28 RD	9/14/2015	10:13:00 AM	INJ			At Intersection	Front to Side	S	Left Turn	Straight
412	24 RD & PATTERSON RD	9/15/2015	7:35:00 PM	PDO			At Intersection	Front to Front	E	Left Turn	Straight
413	30 RD & PATTERSON RD	9/16/2015	6:30:00 PM	PDO	258	S	Non-Intersection	Other Fixed Object	N	Straight	UNK
414	PATTERSON RD & 29 1/2 RD	9/20/2015	3:57:00 PM	INJ			At Intersection	Front to Side	W	Left Turn	Straight
415	PATTERSON RD & 24 1/2 RD	9/24/2015	5:38:00 PM	INJ			At Intersection	Front to Front	E	Straight	Left Turn
416	PATTERSON RD & 29 RD	9/25/2015	1:31:00 PM	PDO	75	E	Intersection Related	Side to Side Same Dir	W	Changing Lanes	Straight
417	25 RD & PATTERSON RD	9/28/2015	9:28:00 AM	PDO	100	N	Driveway Access Related	Front to Side	E	Left Turn	Straight
418	PATTERSON RD & MEANDER DR	9/28/2015	5:16:00 PM	PDO			Non-Intersection	Front to Rear	E	Straight	Stopped
419	PATTERSON RD & N 1ST ST	9/29/2015	3:49:00 PM	INJ	220	E	At Intersection	Front to Rear	W	Slowing	Stopped
420	PATTERSON RD & N 12TH ST	9/29/2015	8:38:00 AM	PDO	100	E	Non-Intersection	Front to Rear	W	Slowing	Slowing
421	N 12TH ST & PATTERSON RD	9/29/2015	7:55:00 AM	PDO	100	N	Intersection Related	Front to Rear	S	Straight	Stopped
422	PATTERSON RD & 29 RD	9/29/2015	3:49:00 PM	PDO			At Intersection	Front to Rear	S	Straight	Stopped
423	PATTERSON RD & N 1ST ST	10/1/2015	11:32:00 AM	PDO	100	E	Intersection Related	Front to Rear	W	Slowing	Stopped
424	PATTERSON RD & N 12TH ST	10/3/2015	9:13:00 AM	PDO	100	W	Driveway Access Related	Front to Rear	W	Slowing	Stopped
425	PATTERSON RD & 25 RD	10/8/2015	1:20:00 PM	PDO	60	E	Intersection Related	Front to Rear	W	Changing Lanes	Stopped
426	29 RD & PATTERSON RD	10/9/2015	5:38:00 PM	PDO	50	S	At Intersection	Front to Rear	S	Straight	Slowing
427	29 RD & PATTERSON RD	10/9/2015	5:38:00 PM	PDO			At Intersection	Front to Rear	W	Left Turn	Left Turn
428	PATTERSON RD & 25 RD	10/11/2015	3:07:00 PM	PDO			At Intersection	Front to Rear	W	Straight	Stopped
429	PATTERSON RD & 29 1/2 RD	10/11/2015	5:31:00 PM	PDO			At Intersection	Front to Side	E	Left Turn	Straight
430	PATTERSON RD & 29 1/2 RD	10/12/2015	8:51:00 AM	PDO			At Intersection	Front to Side	S	Right Turn	Straight
431	29 RD & PATTERSON RD	10/13/2015	7:55:00 AM	PDO	393	S	Non-Intersection	Front to Side	S	Left Turn	Straight
432	PATTERSON RD & 24 1/2 RD	10/14/2015	4:07:00 PM	PDO			At Intersection	Side to Side Same Dir	E	Right Turn	Straight
433	PATTERSON RD & NORTHERN WAY	10/15/2015	11:50:00 AM	INJ			Driveway Access Related	Front to Side	N	Straight	Straight
434	24 1/2 RD & PATTERSON RD	10/16/2015	8:47:00 PM	INJ	500	S	At Intersection	Front to Side	E	Left Turn	Straight
435	PATTERSON RD & N 1ST ST	10/16/2015	1:56:00 PM	INJ	150	E	Non-Intersection	Front to Rear	W	Straight	Stopped
436	PATTERSON RD & N 7TH ST	10/16/2015	1:06:00 PM	PDO			At Intersection	Side to Side Same Dir	S	Right Turn	Left Turn
437	PATTERSON RD & 29 RD	10/16/2015	7:19:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
438	30 RD & PATTERSON RD	10/18/2015	5:06:00 PM	PDO			At Intersection	Front to Rear	W	Slowing	Stopped
439	PATTERSON RD & 29 1/2 RD	10/19/2015	7:29:00 AM	PDO	30	E	Intersection Related	Front to Rear	N	Right Turn	Straight
440	PATTERSON RD & N 1ST ST	10/19/2015	4:18:00 PM	PDO	288	W	Intersection Related	Front to Rear	E	Straight	Stopped
441	PATTERSON RD & N 12TH ST	10/21/2015	2:05:00 PM	PDO			Intersection Related	Side to Side Same Dir	S	Right Turn	Left Turn
442	PATTERSON RD & MIRA VISTA RD	10/24/2015	2:54:00 PM	INJ	250	W	Non-Intersection	Front to Side	E	Changing Lanes	Straight
443	PATTERSON RD & N 8TH CT	10/24/2015	12:51:00 PM	PDO	200	E	Intersection Related	Front to Rear	W	Slowing	Stopped
444	N 12TH ST & PATTERSON RD	10/26/2015	8:26:00 PM	PDO			Intersection Related	Front to Side	E	Right Turn	Stopped
445	PATTERSON RD & NORTHERN WAY	10/27/2015	9:15:00 AM	INJ	308	E	Non-Intersection	Front to Front	E	Left Turn	Straight
446	N 12TH ST & PATTERSON RD	10/30/2015	9:44:00 AM	INJ	75	N	Intersection Related	Front to Rear	S	Straight	Stopped
447	PATTERSON RD & 25 RD	10/30/2015	2:28:00 PM	PDO	360	E	Non-Intersection	Side to Side Same Dir	W	Changing Lanes	Straight
448	PATTERSON RD & 27 1/2 RD	10/31/2015	12:09:00 PM	INJ	820	W	Non-Intersection	Front to Rear	W	Straight	Slowing
449	PATTERSON RD & N 1ST ST	10/31/2015	11:02:00 AM	PDO	25	E	Intersection Related	Front to Rear	W	Straight	Stopped
450	PATTERSON RD & MARKET ST	11/1/2015	1:42:00 PM	INJ	1114	E	Intersection Related	Side to Side Same Dir	W	Changing Lanes	Straight
451	24 1/2 RD & PATTERSON RD	11/3/2015	5:40:00 PM	INJ	500	S	At Intersection	Front to Side	E	Left Turn	Straight
452	PATTERSON RD & RIO GRANDE DR DR	11/6/2015	4:15:00 PM	INJ	50	E	Non-Intersection	Front to Rear	E	Straight	Stopped
453	29 RD & PATTERSON RD	11/9/2015	8:35:00 AM	INJ	417	S	Driveway Access Related	Front to Side	S	Left Turn	Straight
454	N 12TH ST & PATTERSON RD	11/10/2015	3:52:00 PM	INJ	625	S	Non-Intersection	Front to Rear	N	Straight	Stopped
455	N 12TH ST & PATTERSON RD	11/10/2015	4:39:00 PM	PDO			At Intersection	Front to Side	N	Left Turn	Straight
456	MEANDER DR & PATTERSON RD	11/11/2015	1:09:00 PM	INJ			At Intersection	Side to Side Same Dir	S	Right Turn	Right Turn
457	PATTERSON RD & N 7TH ST	11/11/2015	3:26:00 PM	PDO	400	E	Non-Intersection	Front to Rear	E	Slowing	Slowing
458	PATTERSON RD & 27 1/2 RD	11/12/2015	8:56:00 AM	PDO			At Intersection	Side to Side Same Dir	S	Left Turn	Left Turn
459	PATTERSON RD & 25 RD	11/12/2015	12:34:00 PM	PDO	150	E	Intersection Related	Side to Side Same Dir	W	Straight	Stopped
460	PATTERSON RD & SPRING VALLEY CIR	11/13/2015	8:54:00 AM	INJ			At Intersection	Front to Rear	W	Slowing	Stopped
461	PATTERSON RD & 24 RD	11/14/2015	10:59:00 AM	PDO	70	E	Intersection Related	Front to Rear	W	Straight	Stopped
462	PATTERSON RD & N 15TH ST	11/14/2015	10:58:00 AM	PDO	10	W	Intersection Related	Vehicle Debris or Cargo	E	Slowing	Stopped
463	PATTERSON RD & N 12TH ST	11/15/2015	1:42:00 PM	PDO			At Intersection	Front to Side	N	Left Turn	Straight
464	25 RD & PATTERSON RD	11/16/2015	8:30:00 PM	PDO	20	N	Intersection Related	Front to Rear	N	Backing	Stopped
465	25 RD & PATTERSON RD	11/19/2015	9:18:00 AM	PDO	150	N	Driveway Access Related	Side to Side Opp Dir	E	Backing	Stopped
466	MARKET ST & PATTERSON RD	11/19/2015	12:59:00 PM	PDO			Driveway Access Related	Front to Side	E	Right Turn	Straight
467	PATTERSON RD & N 1ST ST	11/20/2015	3:50:00 PM	PDO	60	W	Intersection Related	Front to Rear	E	Slowing	Stopped
468	24 RD & PATTERSON RD	11/23/2015	1:42:00 PM	INJ			At Intersection	Front to Rear	S	Straight	Stopped
469	N 12TH ST & PATTERSON RD	11/23/2015	9:54:00 PM	PDO	50	N	Intersection Related	Front to Rear	S	Straight	Stopped
470	PATTERSON RD & N 1ST ST	11/25/2015	4:36:00 PM	PDO			At Intersection	Front to Front	W	Left Turn	Straight
471	PATTERSON RD & PARK DR	11/29/2015	11:42:00 PM	PDO	200	E	Non-Intersection	Wall or Building	E	Straight	UNK
472	PATTERSON RD & 29 RD	11/29/2015	10:00:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
473	N 15TH ST & PATTERSON RD	11/30/2015	8:59:00 AM	PDO	150	N	Intersection Related	Front to Rear	S	Straight	Stopped
474	PATTERSON RD & N 18T ST	12/1/2015	8:55:00 AM	INJ	25	E	At Intersection	Front to Rear	W	Straight	Stopped
475	PATTERSON RD & N 12TH ST	12/2/2015	5:14:00 PM	INJ	200	W	Non-Intersection	Front to Rear	E	Straight	Stopped
476	PATTERSON RD & N 15TH ST	12/4/2015	1:54:00 PM	INJ			Intersection Related	Front to Side	W	Left Turn	Straight
477	PATTERSON RD & 25 RD	12/6/2015	10:21:00 AM	INJ	150	W	Non-Intersection	Front to Rear	W	Straight	Stopped
478	PATTERSON RD & PARK DR	12/7/2015	12:48:00 PM	INJ			Non-Intersection	Front to Rear	W	Straight	Stopped
479	PATTERSON RD & 25 RD	12/7/2015	11:39:00 AM	PDO	150	E	Driveway Access Related	Front to Side	N	Left Turn	Straight
480	PATTERSON RD & N 18T ST	12/9/2015	5:50:00 PM	PDO	600	W	Non-Intersection	Front to Rear	E	Straight	Stopped
481	PATTERSON RD & 29 RD	12/9/2015	3:49:00 PM	PDO			At Intersection	Front to Side	E	Left Turn	Straight
482	PATTERSON RD & 25 1/2 RD	12/11/2015	4:44:00 PM	PDO	10	W	At Intersection	Front to Rear	E	Straight	Stopped
483	24 1/2 RD & PATTERSON RD	12/15/2015	5:14:00 PM	PDO	500	S	Driveway Access Related	Front to Side	E	Left Turn	Straight
484	24 1/2 RD & PATTERSON RD	12/15/2015	3:48:00 PM	PDO	50	S	Non-Intersection	Front to Rear	N	Straight	Stopped
485	PATTERSON RD & 28 1/4 RD	12/16/2015	12:55:00 PM	INJ	30	W	Intersection Related	Front to Rear	E	Slowing	Stopped
486	PATTERSON RD & SERANADE ST	12/17/2015	9:50:00 PM	PDO	240	E	Non-Intersection	Light Pole / Utility Pole	W	Straight	Straight
487	PATTERSON RD & N 7TH ST	12/18/2015	3:23:00 PM	INJ	300	E	Non-Intersection	Rear to Side	E	Straight	Stopped
488	PATTERSON RD & N 12TH ST	12/18/2015	3:06:00 PM	PDO	659	W	Driveway Access Related	Front to Side	W	Left Turn	Straight
489	PATTERSON RD & 25 1/2 RD	12/18/2015	6:45:00 PM	PDO	276	W	Non-Intersection	Front to Front	E	Straight	Straight
490	PATTERSON RD & SERANADE ST	12/22/2015	7:50:00 PM	INJ	290	E	Driveway Access Related	Front to Side	S	Left Turn	Straight
491	PATTERSON RD & N 12TH ST	12/23/2015	11:48:00 AM	INJ			At Intersection	Front to Front	N	Left Turn	Straight
492	PATTERSON RD & NORTHERN WAY	12/23/2015	12:45:00 PM	PDO	20	W	Non-Intersection	Front to Front	E	Changing Lanes	Straight
493	PATTERSON RD & 25 RD	12/23/2015	2:41:00 PM	PDO	475	W	Driveway Access Related	Front to Side	S	Right Turn	Straight
494	PATTERSON RD & SERANADE ST	12/23/2015	5:34:00 PM	PDO			Driveway Access Related	Front to Front	E	Left Turn	Straight
495	PATTERSON RD & N 12TH ST	12/23/2015	1:20:00 PM	PDO	100	W	Intersection Related	Front to Rear	E	Straight	Stopped
496	PATTERSON RD & EL CORONA DR	12/23/2015	3:00:00 PM	PDO			At Intersection	Front to Rear	N	Left Turn	Straight
497	PATTERSON RD & MARKET ST	12/23/2015	2:54:00 PM	PDO	348	E	At Intersection	Front to Side	S	Left Turn	Straight
498	24 RD & PATTERSON RD	12/24/2015	9:18:00 PM	PDO			At Intersection	Front to Side	W	Changing Lanes	Straight
499	PATTERSON RD & N 12TH ST	12/27/2015	5:31:00 PM	PDO			At Intersection	Rear to Side	E	Left Turn	Straight
500	N 12TH ST & PATTERSON RD	12/28/2015	8:06:00 AM	INJ	200	S	Driveway Access Related	Front to Side	N	Left Turn	Straight
501	MARKET ST & PATTERSON RD	12/29/2015	2:30:00 PM	PDO	150	N	Non-Intersection	Side to Side Same Dir	S	Passing	Stopped
502	PATTERSON RD & 24 1/2 RD	12/30/2015	2:17:00 PM	PDO			At Intersection	Side to Side Same Dir	E	Changing Lanes	Straight
503	PATTERSON RD & RIO GRANDE DR DR	12/31/2015	2:31:00 PM	PDO	145	E	Intersection Related	Front to Rear	E	Changing Lanes	Stopped
504	PATTERSON RD & SERANADE ST	12/31/2015	12:14:00 PM	PDO	40	N	Intersection Related	Front to Rear	S	Straight	Stopped
505	24 1/2 RD & PATTERSON RD	1/1/2016	2:20:00 PM	PDO	25	S	At Intersection	Front to Rear	N	Slowing	Slowing
506	PATTERSON RD & N 1ST	1/2/2016	6:14:00 PM	PDO	0		At Intersection	Front to Rear	N	Right Turn	Right Turn
507	24 1/2 RD & PATTERSON RD	1/5/2016	1:32:00 PM	PDO	500	S	Driveway Access Related	Front to Side	E	Right Turn	Straight/following RD
508	PATTERSON RD & N 7TH ST	1/7/2016	6:11:00 PM	PDO	300	W	Non-Intersection	Front to Rear	E	Straight/following RD	Stopped
509	PATTERSON RD & VIEW POINT DR	1/7/2016	2:35:00 AM	PDO	161	W	Non-Intersection	Concrete Highway Barrier	W	Straight/following RD	UNK
510	PATTERSON RD & LEGENDS WAY	1/7/2016	7:19:00 AM	PDO	0		At Intersection	Sign	E	Straight/following RD	UNK
511	PATTERSON RD & N ST	1/9/2016	5:30:00 PM	PDO	300	W	Non-Intersection	Side to Side Same Dir	E	Weaving	Straight/following RD
512	PATTERSON RD & 30	1/13/2016	4:11:00 PM	INJ	239	W	Non-Intersection	Front to Rear	W	Straight/following RD	Stopped
513	PATTERSON RD & 24 1/2 RD	1/14/2016	6:15:00 PM	PDO	500	W	Non-Intersection	Side to Side Same Dir	E	Straight/following RD	Straight/following RD
514	28 1/4 RD & PATTERSON RD	1/15/2016	6:19:00 AM	INJ	0		At Intersection	Bicycle	S	Straight/following RD	Straight/following RD
515	PATTERSON RD & 29 RD	1/20/2016	5:35:00 PM	PDO	0		Intersection Related	Front to Front	W	Left Turn	Straight/following RD
516	PATTERSON RD & N ST	1/20/2016	12:34:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Straight/following RD
517	PATTERSON RD & N 15TH ST	1/24/2016	1:54:00 PM	PDO	0		At Intersection	Front to Side	W	Straight/following RD	Straight/following RD
518	24 RD & PATTERSON RD	1/25/2016	3:13:00 PM	PDO	350	S	Highway Interchange	Front to Side	W	Right Turn	Straight/following RD
519	PATTERSON RD & 28 3/4 RD RD	1/26/2016	10:53:00 AM	PDO	100	E	Non-Intersection	Side to Side Same Dir	W	Changing Lanes	Straight/following RD
520	PATTERSON RD & 30 RD	1/29/2016	8:16:00 PM	INJ	0		At Intersection	Front to Rear	W	Straight/following RD	Right Turn
521	PATTERSON RD & N ST	1/30/2016	7:26:00 PM	PDO	0		At Intersection	Front to Rear	N	Right Turn	Straight/following RD
522	PATTERSON RD & 25 RD RD	2/1/2016	6:35:00 PM	INJ	0		At Intersection	Front to Front	S	Left Turn	Straight/following RD
523	NORTHERN WAY & PATTERSON RD	2/1/2016	4:02:00 PM	PDO	300	N	Non-Intersection	Rear to Side	E	Backing	Straight/following RD
524	25 RD & PATTERSON RD	2/5/2016	11:10:00 AM	PDO	130	N	Driveway Access Related	Front to Side	E	Right Turn	Straight/following RD
525	30 RD & PATTERSON RD	2/8/2016	8:56:00 AM	PDO	200	N	Driveway Access Related	Side to Side Same Dir	S	Passing	Right Turn
526	PATTERSON RD & RIO GRANDE DR	2/11/2016	5:28:00 PM	PDO	100	E	Non-Intersection	Front to Rear	E	Straight/following RD	Stopped
527	PATTERSON RD & 24 RD	2/15/2016	2:38:00 PM	PDO	0		At Intersection	Side to Side Opposite Dir	W	Straight/following RD	Stopped
528	PATTERSON RD & 29 RD	2/16/2016	6:31:00 PM	INJ	0		At Intersection	Front to Side	W	Left Turn	Straight/following RD
529	PATTERSON RD & N 12TH ST	2/19/2016	6:42:00 PM	INJ	0		At Intersection	Front to Rear	N	Straight/following RD	Stopped
530	24 RD & PATTERSON RD	2/22/2016	8:26:00 PM	PDO	250	S	Intersection Related	Front to Side	W	Right Turn	Straight/following RD
531	PATTERSON RD & MARKET ST	2/27/2016	10:45:00 AM	INJ	0		At Intersection	Front to Side	W	Straight/following RD	Straight/following RD
532	PATTERSON RD & 25 RD	2/29/2016	3:05:00 AM	INJ	50	W	Intersection Related	Tree	W	Straight/following RD	UNK
533	PATTERSON RD & 24 RD RD	3/2/2016	1:42:00 PM	PDO	200	E	Non-Intersection	Side to Side Same Dir	W	Changing Lanes	Straight/following RD
534	PATTERSON RD & 25 RD	3/4/2016	1:01:00 PM	PDO	200	W	Intersection Related	Front to Rear	E	Straight/following RD	Slowing
535	PATTERSON RD & 24 1/2 RD RD	3/4/2016	5:18:00 PM	PDO	0		Intersection Related	Front to Rear	S	Right Turn	Right Turn
536	PATTERSON RD & 29 3/8 RD RD	3/5/2016	2:35:00 PM	PDO	93	E	Driveway Access Related	Front to Rear	W	Changing Lanes	Right Turn
537	PATTERSON RD & BEECHWOOD ST	3/7/2016	3:48:00 PM	INJ	0		At Intersection	Front to Rear	W	Slowing	Stopped
538	PATTERSON RD & N 1ST	3/8/2016	8:59:00 AM	PDO	400	E	Non-Intersection	Front to Rear	W	Straight/following RD	Slowing
539	28 1/4 RD & PATTERSON RD	3/9/2016	8:41:00 AM	PDO	50	N	Intersection Related	Front to Rear	N	Slowing	Stopped
540	PATTERSON RD & NORTHERN WAY	3/10/2016	12:17:00 PM	INJ	100	E	Driveway Access Related	Side to Side Opposite Dir	S	Left Turn	Straight/following RD
541	PATTERSON RD & N 12TH ST	3/10/2016	4:12:00 PM	PDO	80	N	Intersection Related	Front to Rear	S	Slowing	Stopped
542	24 1/2 RD & PATTERSON RD	3/11/2016	12:43:00 PM	PDO	500	S	Driveway Access Related	Front to Side	W	Straight/following RD	Straight/following RD
543	24 1/2 RD & PATTERSON RD	3/18/2016	1:01:00 PM	PDO	500	S	Driveway Access Related	Front to Front	S	Left Turn	Straight/following RD
544	PATTERSON RD & PIONEER RD	3/19/2016	11:49:00 PM	PDO	0		At Intersection	Front to Side	S	Left Turn	Left Turn
545	PATTERSON RD & 25 RD	3/25/2016	2:05:00 PM	PDO	130	E	Driveway Access Related	Front to Rear	E	Straight/following RD	Slowing
546	PATTERSON RD & MEANDER DR	3/26/2016	5:01:00 PM	PDO	50	E	Non-Intersection	Front to Rear	E	Straight/following RD	Slowing
547	PATTERSON RD & 28 1/4 RD RD	3/27/2016	1:45:00 PM	PDO	1600	E	Non-Intersection	Front to Side	E	U-Turn	Straight/following RD
548	PATTERSON RD & 27 1/2 RD RD	3/29/2016	6:19:00 PM	PDO	0		At Intersection	Side to Side Same Dir	S	Right Turn	Straight/following RD
549	PATTERSON RD & N ST	4/2/2016	2:38:00 PM	INJ	318	W	Driveway Access Related	Front to Side	W	Left Turn	Straight/following RD
550	PATTERSON RD & 28 1/4 RD	4/3/2016	7:09:00 AM	PDO	0		At Intersection	Front to Side	E	Straight/following RD	Left Turn
551	PATTERSON RD & N 15TH ST	4/5/2016	11:22:00 AM	PDO	0		Intersection Related	Front to Rear	W	Straight/following RD	Slowing
552	PATTERSON RD & 25 RD	4/6/2016	4:32:00 PM	INJ	90	E	Driveway Access Related	Front to Rear	E	Straight/following RD	Slowing
553	25 RD & PATTERSON RD	4/8/2016	2:14:00 PM	INJ	100	N	Intersection Related	Front to Rear	S	Slowing	Stopped
554	PATTERSON RD & 29 3/8 RD	4/11/2016	7:54:00 AM	PDO	150	E	Non-Intersection	Front to Rear	W	Straight/following RD	Slowing
555	PATTERSON RD & N ST	4/12/2016	10:53:00 AM	PDO	0		Intersection Related	Front to Rear	E	Backing	Stopped
556	PATTERSON RD & MEANDER DR	4/12/2016	3:42:00 PM	PDO	0		Intersection Related	Side to Side Same Dir	W	Weaving	Straight/following RD
557	PATTERSON RD & N ST	4/13/2016	1:47:00 PM	PDO	880	W	Driveway Access Related	Other Object	N	Right Turn	UNK
558	PATTERSON RD & 29 1/2 RD RD	4/15/2016	7:01:00 AM	PDO	297	W	Driveway Access Related	Bicycle	S	Right Turn	Straight/following RD
559	PATTERSON RD & N 7TH ST	4/15/2016	7:12:00 AM	PDO			At Intersection	Front to Front	E	Straight/following RD	Left Turn
560	PATTERSON RD & N ST	4/15/2016	3:37:00 PM	PDO	300	E	Intersection Related	Front to Rear	W	Other	Passing
561	PATTERSON RD & N ST	4/16/2016	12:20:00 PM	PDO			Intersection Related	Front to Side	W	Passing	Straight/following RD
562	PATTERSON RD & 30 RD RD	4/19/2016	9:15:00 AM	PDO			At Intersection	Front to Front	N	Left Turn	Straight/following RD
563	PATTERSON RD & 28 RD RD	4/20/2016	2:00:00 PM	INJ			At Intersection	Front to Side	S	Left Turn	Left Turn
564	PATTERSON RD & PARK AVE	4/20/2016	2:00:00 PM	PDO			Non-Intersection	Side to Side Same Dir	E	Changing Lanes	Straight/following RD
565	PATTERSON RD & MIRA VISTA RD	4/20/2016	5:17:00 PM	PDO	20	E	At Intersection	Front to Rear	E	Straight/following RD	Stopped
566	PATTERSON RD & 28 RD RD	4/21/2016	12:01:00 PM	INJ			At Intersection	Front to Side	S	Left Turn	Straight/following RD
567	30 RD & PATTERSON RD	4/21/2016	12:17:00 PM	PDO	50	S	Intersection Related	Front to Rear	N	Slowing	Stopped
568	PATTERSON RD & BEECHWOOD ST	4/22/2016	8:00:00 AM	PDO			Driveway Access Related	Front to Side	W	Left Turn	Straight/following RD
569	PATTERSON RD & 28 1/4 RD RD	4/22/2016	11:27:00 AM	PDO	100	W	Intersection Related	Side to Side Same Dir	E	Changing Lanes	Straight/following RD
570	PATTERSON RD & 30 RD RD	4/25/2016	5:35:00 PM	INJ	225	W	At Intersection	Front to Rear	E	Slowing	Stopped
571	PATTERSON RD & N ST	4/27/2016	7:36:00 AM	INJ			At Intersection	Front to Side	W	Left Turn	Straight/following RD
572	24 RD & PATTERSON RD	4/29/2016	11:16:00 AM	INJ	70	S	Intersection Related	Front to Rear	N	Slowing	Stopped
573	PATTERSON RD & 29 1/2 RD	4/29/2016	4:29:00 PM	INJ	70	W	Non-Intersection	Front to Rear	E	Straight/following RD	Straight/following RD
574	PATTERSON RD & 25 RD	5/2/2016	2:41:00 PM	INJ	100	E	Intersection Related	Front to Rear	W	Straight/following RD	Slowing
575	PATTERSON RD & 24 1/2 RD RD	5/2/2016	5:18:00 PM	PDO			At Intersection	Front to Side	S	Left Turn	Straight/following RD
576	PATTERSON RD & N ST	5/2/2016	4:45:00 PM	PDO	600	W	Non-Intersection	Front to Rear	E	Changing Lanes	Stopped
577	PATTERSON RD & N 12TH ST	5/3/2016	7:19:00 PM	INJ	295	N	Non-Intersection	Side to Side Opposite Dir	E	Left Turn	Straight/following RD
578	PATTERSON RD & N 7TH ST	5/5/2016	4:14:00 PM	PDO	900	W	Non-Intersection	Front to Rear	E	Straight/following RD	Stopped
579	PATTERSON RD & 25 RD RD	5/6/2016	11:58:00 AM	PDO	1433	W	Driveway Access Related	Front to Side	S	Right Turn	Straight/following RD
580	PATTERSON RD & N ST	5/8/2016	11:28:00 AM	INJ	100	W	Intersection Related	Front to Rear	E	Slowing	Stopped
581	PATTERSON RD & SPRING VALLEY CIR	5/11/2016	2:26:00 PM	INJ	150	E	Non-Intersection	Front to Rear	W	Straight/following RD	Slowing
582	PATTERSON RD & BROKEN RD	5/15/2016	6:48:00 PM	INJ			At Intersection	Front to Side	E	Left Turn	Straight/following RD
583	PATTERSON RD & 24 1/2 RD	5/15/2016	2:10:00 AM	PDO			At Intersection	Traffic Signal Pole	W	Straight/following RD	UNK
584	PATTERSON RD & 25 RD	5/16/2016	2:13:00 PM	PDO	75	W	Intersection Related	Front to Rear	E	Straight/following RD	Slowing
585	PATTERSON RD & 29 RD	5/17/2016	7:41:00 AM	PDO			At Intersection	Front to Side	W	Straight/following RD	Left Turn
586	PATTERSON RD & 24 RD RD	5/18/2016	5:10:00 PM	PDO			At Intersection	Side to Side Same Dir	E	Right Turn	Left Turn
587	PATTERSON RD & 30 RD	5/19/2016	12:14:00 PM	PDO			At Intersection	Front to Side	E	Straight/following RD	Left Turn

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
588	PATTERSON RD & 29 1/2 RD RD	5/20/2016	4:39:00 PM	INJ	300	E	Intersection Related	Front to Rear	W	Slowing	Stopped
589	PATTERSON RD & NORTHGATE DR	5/24/2016	3:20:00 PM	PDO			At Intersection	Side to Side Same Dir	N	Left Turn	Straight/following RD
590	PATTERSON RD & 30 RD	5/26/2016	1:52:00 PM	INJ	100	W	Intersection Related	Front to Rear	E	Straight/following RD	Stopped
591	PATTERSON RD & 29 RD	5/27/2016	5:17:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight/following RD
592	24 RD & PATTERSON RD	6/1/2016	6:14:00 PM	INJ	350	S	Highway Interchange	Front to Rear	NW	Straight/following RD	Stopped
593	PATTERSON RD & 27 1/2 RD RD	6/1/2016	8:00:00 AM	PDO	250	W	Driveway Access Related	Front to Side	N	Left Turn	Straight/following RD
594	PATTERSON RD & N 1ST	6/1/2016	8:33:00 AM	PDO			At Intersection	Front to Rear	W	Straight/following RD	Straight/following RD
595	PATTERSON RD & 28 RD	6/1/2016	5:19:00 PM	PDO	70	E	Intersection Related	Front to Rear	E	Straight/following RD	Stopped
596	PATTERSON RD & N 12TH ST	6/3/2016	5:10:00 PM	INJ	300	W	Intersection Related	Front to Rear	E	Straight/following RD	Stopped
597	PATTERSON RD & 28 3/4 RD	6/3/2016	8:49:00 AM	PDO	60	E	Non-Intersection	Front to Rear	W	Straight/following RD	Stopped
598	PATTERSON RD & 25 RD RD	6/4/2016	4:27:00 PM	PDO	120	W	Driveway Access Related	Front to Side	S	Left Turn	Straight/following RD
599	PATTERSON RD & N ST	6/7/2016	9:57:00 AM	PDO	400	W	Non-Intersection	Front to Rear	W	Changing Lanes	Straight/following RD
600	PATTERSON RD & N 12TH ST	6/7/2016	2:24:00 PM	PDO			At Intersection	Front to Side	E	Straight/following RD	Left Turn
601	PATTERSON RD & 29 RD	6/8/2016	8:58:00 AM	PDO	300	E	Non-Intersection	Front to Rear	W	Straight/following RD	Slowing
602	PATTERSON RD & N 15TH ST	6/8/2016	7:32:00 PM	PDO			At Intersection	Front to Rear	E	Straight/following RD	Stopped
603	PATTERSON RD & SPRING VALLEY CIR	6/9/2016	8:57:00 AM	PDO			At Intersection	Front to Rear	E	Straight/following RD	Slowing
604	24 RD & PATTERSON RD	6/10/2016	4:57:00 PM	PDO			Intersection Related	Side to Side Same Dir	N	Right Turn	Straight/following RD
605	PATTERSON RD & 28 1/4 RD RD	6/11/2016	2:25:00 PM	PDO	500	W	Non-Intersection	Front to Rear	E	Slowing	Stopped
606	PATTERSON RD & MARKET ST	6/14/2016	9:19:00 AM	INJ			At Intersection	Front to Side	E	Straight/following RD	Left Turn
607	PATTERSON RD & VIEW POINT DR	6/15/2016	11:42:00 AM	PDO	240	W	Intersection Related	Front to Rear	W	Straight/following RD	Stopped
608	PATTERSON RD & N ST	6/16/2016	8:22:00 AM	PDO	10	E	Intersection Related	Front to Rear	W	Slowing	Stopped
609	PATTERSON RD & RIO DR	6/20/2016	10:22:00 PM	INJ			At Intersection	Front to Rear	S	Right Turn	Straight/following RD
610	PATTERSON RD & N 15TH ST	6/20/2016	4:21:00 PM	PDO	30	E	Intersection Related	Front to Rear	W	Straight/following RD	Stopped
611	PATTERSON RD & N ST	6/21/2016	8:21:00 AM	PDO			At Intersection	Front to Side	N	Left Turn	Straight/following RD
612	PATTERSON RD & N ST	6/21/2016	3:42:00 PM	PDO			At Intersection	Front to Side	N	Left Turn	Straight/following RD
613	24 1/2 RD & PATTERSON RD	6/22/2016	4:28:00 PM	INJ	500	S	At Intersection	Front to Side	E	Left Turn	Straight/following RD
614	PATTERSON RD & 29 RD	6/22/2016	9:06:00 AM	PDO			At Intersection	Front to Side	E	Straight/following RD	Straight/following RD
615	PATTERSON RD & 25 RD RD	6/24/2016	3:32:00 PM	PDO	150	E	Driveway Access Related	Front to Side	N	Left Turn	Straight/following RD
616	PATTERSON RD & 28 RD	6/25/2016	10:30:00 AM	PDO	300	W	Non-Intersection	Front to Rear	W	Straight/following RD	Straight/following RD
617	PATTERSON RD & 28 1/4 RD RD	6/27/2016	12:40:00 PM	PDO			At Intersection	Front to Front	N	Left Turn	Straight/following RD
618	PATTERSON RD & 28 RD RD	6/29/2016	2:30:00 PM	INJ			At Intersection	Side to Side Same Dir	W	Right Turn	Straight/following RD
619	PATTERSON RD & 29 RD	6/29/2016	3:04:00 PM	INJ			At Intersection	Front to Side	W	Left Turn	Straight/following RD
620	PATTERSON RD & 29 RD	7/1/2016	2:56:00 PM	INJ			At Intersection	Front to Side	W	Left Turn	Straight/following RD
621	PATTERSON RD & N 7TH ST	7/1/2016	1:04:00 PM	PDO			At Intersection	Front to Side	W	Straight/following RD	Straight/following RD
622	PATTERSON RD & 29 RD	7/3/2016	11:50:00 PM	PDO			Non-Intersection	Sign	E	Straight/following RD	UNK
623	PATTERSON RD & N ST	7/6/2016	5:05:00 PM	PDO	300	W	Driveway Access Related	Front to Side	N	Left Turn	Straight/following RD
624	PATTERSON RD & 29 1/2 RD	7/11/2016	6:45:00 AM	INJ			Non-Intersection	Front to Rear	W	Straight/following RD	Stopped
625	PATTERSON RD & LEGENDS WAY	7/12/2016	5:35:00 PM	PDO	50	W	Non-Intersection	Front to Rear	E	Slowing	Stopped
626	PATTERSON RD & 29 RD	7/14/2016	5:47:00 PM	PDO	520	E	Intersection Related	Front to Rear	W	Straight/following RD	Stopped
627	PATTERSON RD & 28 1/4 RD RD	7/16/2016	5:12:00 PM	PDO			Non-Intersection	Front to Side	W	U-Turn	Left Turn
628	PATTERSON RD & 29 1/2 RD	7/17/2016	1:51:00 PM	PDO	60	E	Intersection Related	Front to Rear	W	Straight/following RD	Stopped
629	PATTERSON RD & MIRA VISTA RD	7/19/2016	3:38:00 PM	PDO	110	E	Non-Intersection	Front to Rear	E	Straight/following RD	Stopped
630	24 RD & PATTERSON RD	7/21/2016	4:09:00 PM	PDO	500	S	Intersection Related	Side to Side Same Dir	W	Right Turn	Straight/following RD
631	PATTERSON RD & N ST	7/24/2016	5:22:00 PM	INJ	0		At Intersection	Front to Side	W	Left Turn	Straight/following RD
632	PATTERSON RD & N 12TH ST	7/29/2016	6:29:00 PM	INJ	320	S	Non-Intersection	All Other Peds	W	Straight/following RD	Straight/following RD
633	PATTERSON RD & 25 1/2 RD RD	8/1/2016	5:32:00 PM	INJ			At Intersection	Front to Side	S	Left Turn	Straight/following RD
634	PATTERSON RD & 27 1/2 RD	8/1/2016	7:08:00 PM	PDO			Driveway Access Related	Front to Rear	E	Straight/following RD	Right Turn
635	PATTERSON RD & N 1ST	8/3/2016	7:52:00 AM	INJ	30	E	At Intersection	Front to Rear	W	Straight/following RD	Stopped
636	PATTERSON RD & 27 1/2 RD	8/5/2016	4:05:00 PM	INJ	250	E	Intersection Related	Front to Rear	W	Straight/following RD	Stopped
637	PATTERSON RD & MESA MALL ACCESS	8/8/2016	5:59:00 PM	INJ	150	W	Intersection Related	Front to Rear	E	Straight/following RD	Stopped
638	PATTERSON RD & 25 RD	8/8/2016	1:51:00 PM	PDO	100	E	Intersection Related	Front to Rear	W	Straight/following RD	Stopped
639	PATTERSON RD & 28 RD RD	8/8/2016	4:52:00 PM	PDO			At Intersection	Front to Side	S	Left Turn	Straight/following RD
640	PATTERSON RD & BURKEY ST	8/10/2016	10:33:00 AM	PDO			Non-Intersection	Front to Rear	E	Slowing	Stopped
641	PATTERSON RD & BEECHWOOD ST	8/11/2016	4:00:00 PM	PDO			Driveway Access Related	Front to Rear	E	Straight/following RD	Right Turn
642	PATTERSON RD & EL DR	8/13/2016	3:28:00 PM	PDO			At Intersection	Front to Side	N	Left Turn	Left Turn
643	28 1/4 RD & PATTERSON RD	8/14/2016	5:05:00 PM	INJ			Non-Intersection	Side to Side Same Dir	S	U-Turn	Straight/following RD
644	PATTERSON RD & N ST	8/15/2016	9:15:00 AM	PDO			At Intersection	Front to Rear	N	Left Turn	Straight/following RD
645	PATTERSON RD & N 1ST	8/15/2016	3:44:00 PM	PDO	300	E	Intersection Related	Front to Rear	W	Straight/following RD	Stopped
646	PATTERSON RD & N ST	8/17/2016	7:42:00 PM	PDO			Intersection Related	Front to Rear	S	Slowing	Stopped
647	PATTERSON RD & N 15TH ST	8/23/2016	9:14:00 AM	PDO	40	E	Intersection Related	Front to Rear	W	Straight/following RD	Straight/following RD
648	PATTERSON RD & 25 1/2 RD RD	8/26/2016	2:46:00 AM	INJ			At Intersection	Front to Side	W	Right Turn	Stopped
649	PATTERSON RD & N 12TH ST	8/26/2016	12:24:00 PM	PDO	104	N	Intersection Related	Side to Side Same Dir	S	Changing Lanes	Straight/following RD
650	PATTERSON RD & 30 RD	8/30/2016	8:20:00 PM	INJ			At Intersection	Front to Side	W	Straight/following RD	Left Turn
651	PATTERSON RD & 29 RD	8/31/2016	3:53:00 PM	INJ			At Intersection	Front to Front	W	Left Turn	Straight/following RD
652	PATTERSON RD & N 12TH ST	9/5/2016	6:45:00 PM	PDO	200	S	Driveway Access Related	Side to Side Same Dir	S	Changing Lanes	Straight/following RD
653	PATTERSON RD & GRAND CASCADE WAY	9/6/2016	7:50:00 AM	INJ	400	E	Non-Intersection	Front to Rear	W	Straight/following RD	Straight/following RD
654	PATTERSON RD & MESA ACCESS	9/7/2016	9:11:00 AM	INJ			At Intersection	Front to Front	W	Left Turn	Straight/following RD
655	PATTERSON RD & PARK AVE	9/9/2016	5:18:00 PM	INJ			At Intersection	Front to Rear	E	Slowing	Stopped
656	25 RD & PATTERSON RD	9/9/2016	8:30:00 AM	PDO	120	N	Driveway Access Related	Front to Side	E	Right Turn	Straight/following RD
657	PATTERSON RD & 25 RD	9/12/2016	7:09:00 AM	INJ			At Intersection	Front to Side	E	Straight/following RD	Straight/following RD
658	PATTERSON RD & N 7TH ST	9/13/2016	2:56:00 PM	INJ	20	E	Intersection Related	Front to Rear	W	Straight/following RD	Right Turn
659	PATTERSON RD & PHEASANT TRAIL CT	9/13/2016	7:56:00 AM	INJ	150	E	Non-Intersection	Front to Rear	W	Straight/following RD	Stopped
660	PATTERSON RD & 25 1/2 RD RD	9/13/2016	7:56:00 AM	PDO			At Intersection	Front to Rear	W	Backing	Stopped
661	PATTERSON RD & 25 1/2 RD	9/13/2016	7:57:00 AM	PDO			At Intersection	Front to Side	W	Straight/following RD	Straight/following RD
662	PATTERSON RD & MARKET ST	9/16/2016	2:51:00 PM	PDO			Intersection Related	Front to Side	E	Changing Lanes	Straight/following RD
663	PATTERSON RD & N 15TH ST	9/17/2016	8:39:00 PM	INJ			Intersection Related	Front to Rear	E	Straight/following RD	Stopped
664	PATTERSON RD & GRAND CASCADE WAY	9/20/2016	12:40:00 PM	INJ	125	E	Non-Intersection	Front to Rear	W	Straight/following RD	Stopped
665	PATTERSON RD & 24 1/2 RD RD	9/21/2016	4:38:00 PM	PDO	350	E	Non-Intersection	Front to Side	N	Left Turn	Straight/following RD
666	PATTERSON RD & PIONEER RD	9/26/2016	7:47:00 AM	PDO			Non-Intersection	Front to Rear	W	Slowing	Stopped
667	PATTERSON RD & 29 RD	9/27/2016	6:41:00 AM	PDO			At Intersection	Front to Side	N	Left Turn	Straight/following RD
668	PATTERSON RD & N ST	9/28/2016	12:00:00 PM	PDO			At Intersection	Front to Front	W	Left Turn	Straight/following RD
669	25 1/2 RD & PATTERSON RD	9/29/2016	8:12:00 AM	INJ			Intersection Related	Front to Rear	S	Straight/following RD	Stopped
670	PATTERSON RD & 25 RD RD	9/29/2016	1:45:00 PM	PDO	1150	W	Driveway Access Related	Front to Side	S	Left Turn	Straight/following RD
671	PATTERSON RD & N 1ST	9/29/2016	11:36:00 AM	PDO			At Intersection	Side to Side Same Dir	N	Left Turn	Left Turn
672	PATTERSON RD & 29 RD	9/30/2016	9:18:00 PM	PDO			At Intersection	Side to Side Opposite Dir	W	Left Turn	Straight/following RD
673	PATTERSON RD & BURKEY ST	10/5/2016	3:24:00 PM	INJ			Intersection Related	Other - Non Collision	E	Slowing	Slowing
674	25 RD & PATTERSON RD	10/6/2016	9:47:00 AM	PDO	158	N	Driveway Access Related	Front to Front	E	Left Turn	Slowing
675	25 RD & PATTERSON RD	10/6/2016	3:02:00 PM	PDO	125	N	Driveway Access Related	Front to Front	E	Left Turn	Straight/following RD
676	PATTERSON RD & N ST	10/8/2016	11:59:00 AM	PDO			At Intersection	Front to Rear	E	Slowing	Stopped
677	24 1/2 RD & PATTERSON RD	10/8/2016	11:08:00 AM	PDO	315	S	Non-Intersection	Side to Side Same Dir	S	Changing Lanes	Straight/following RD
678	PATTERSON RD & N ST	10/10/2016	1:33:00 PM	INJ			At Intersection	Front to Front	W	Left Turn	Straight/following RD
679	PATTERSON RD & 25 RD RD	10/12/2016	8:20:00 PM	INJ	150	W	Intersection Related	Front to Side	S	Left Turn	Straight/following RD
680	PATTERSON RD & 24 RD	10/13/2016	7:48:00 PM	PDO	30	E	Intersection Related	Front to Rear	W	Straight/following RD	Stopped
681	PATTERSON RD & 25 1/2 RD	10/15/2016	10:08:00 AM	PDO			At Intersection	Front to Side	W	Straight/following RD	Straight/following RD
682	PATTERSON RD & 30 RD	10/17/2016	4:53:00 PM	PDO			At Intersection	Front to Side	S	Straight/following RD	Straight/following RD
683	PATTERSON RD & MARKET ST	10/18/2016	12:10:00 PM	INJ	731	E	Non-Intersection	Side to Side Same Dir	W	Changing Lanes	Straight/following RD
684	PATTERSON RD & 25 1/2 RD RD	10/18/2016	4:32:00 PM	PDO			Intersection Related	Front to Rear	N	Stopped	Stopped
685	PATTERSON RD & 29 RD	10/20/2016	3:38:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight/following RD
686	PATTERSON RD & 29 1/2 RD RD	10/21/2016	11:44:00 AM	PDO	50	E	Intersection Related	Front to Rear	W	Other	Stopped
687	24 1/2 RD & PATTERSON RD	10/21/2016	6:26:00 PM	PDO	500	S	Intersection Related	Front to Side	E	Left Turn	Straight/following RD
688	PATTERSON RD & N 1ST	10/23/2016	1:40:00 AM	PDO			Intersection Related	Front to Front	W	Left Turn	Stopped
689	PATTERSON RD & N 7TH ST	10/25/2016	1:22:00 PM	INJ	400	W	Non-Intersection	Front to Rear	E	Straight/following RD	Stopped
690	PATTERSON RD & MARKET ST	10/26/2016	2:42:00 PM	INJ			At Intersection	Front to Side	E	Straight/following RD	Left Turn
691	PATTERSON RD & 29 RD	10/28/2016	4:00:00 PM	PDO			At Intersection	Front to Side	W	Straight/following RD	Slowing
692	PATTERSON RD & N 15TH ST	11/2/2016	2:28:00 PM	INJ			At Intersection	Front to Side	W	Straight/following RD	Straight/following RD
693	PATTERSON RD & GRAND CASCADE WAY	11/4/2016	2:37:00 PM	INJ	450	E	Non-Intersection	Bicycle	E	Straight/following RD	Straight/following RD
694	PATTERSON RD & 24 1/2 RD	11/5/2016	6:36:00 AM	PDO	150	E	Non-Intersection	Curb	W	Straight/following RD	UNK
695	PATTERSON RD & 28 RD RD	11/9/2016	12:09:00 PM	INJ			At Intersection	Front to Side	S	Left Turn	Straight/following RD
696	PATTERSON RD & MIRA RD	11/10/2016	4:07:00 PM	PDO	300	E	Driveway Access Related	Front to Front	W	Left Turn	Straight/following RD
697	PATTERSON RD & N 15TH ST	11/10/2016	9:04:00 AM	PDO	225	W	Non-Intersection	Front to Rear	W	Straight/following RD	Stopped
698	PATTERSON RD & SPRING CIR	11/10/2016	3:26:00 PM	PDO			At Intersection	Front to Side	E	Left Turn	Straight/following RD
699	24 1/2 RD & PATTERSON RD	11/11/2016	10:30:00 AM	INJ	150	S	Driveway Access Related	Front to Rear	N	Straight/following RD	Stopped
700	PATTERSON RD & 24 1/2 RD RD	11/13/2016	6:19:00 PM	INJ	1350	W	At Intersection	Front to Side	N	Left Turn	Straight/following RD
701	PATTERSON RD & 24 1/2 RD RD	11/13/2016	11:47:00 AM	PDO			Non-Intersection	Front to Front	E	Right Turn	Straight/following RD
702	PATTERSON RD & MEANDER DR	11/14/2016	4:13:00 PM	PDO			At Intersection	Wild Animal	E	Straight/following RD	UNK
703	PATTERSON RD & N 12TH ST	11/17/2016	8:00:00 AM	PDO	80	N	Non-Intersection	Side to Side Opposite Dir	N	Straight/following RD	Straight/following RD

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
704	PATTERSON RD & 24 1/2 RD RD	11/18/2016	6:02:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight/following RD
705	PATTERSON RD & 30 RD	11/23/2016	4:30:00 PM	PDO	300	W	Non-Intersection	Front to Rear	E	Straight/following RD	Slowing
706	PATTERSON RD & MARKET ST	11/23/2016	5:45:00 PM	PDO			Intersection Related	Front to Rear	W	Straight/following RD	Stopped
707	PATTERSON RD & 25 3/4 RD	11/25/2016	9:14:00 PM	INJ			Non-Intersection	Front to Rear	E	Straight/following RD	Slowing
708	24 RD & PATTERSON RD	11/29/2016	11:00:00 AM	PDO	500	S	At Intersection	Side to Side Same Dir	W	Right Turn	Straight/following RD
709	25 RD & PATTERSON RD	11/30/2016	12:48:00 PM	PDO	200	N	Driveway Access Related	Front to Side	N	Left Turn	Straight/following RD
710	PATTERSON RD & 25 RD RD	12/1/2016	4:15:00 PM	PDO	300	E	Non-Intersection	Side to Side Same Dir	W	Changing Lanes	Straight/following RD
711	PATTERSON RD & 27 1/2 RD	12/1/2016	9:11:00 PM	PDO	800	W	Non-Intersection	Wild Animal	W	Straight/following RD	UNK
712	PATTERSON RD & 28 1/4 RD RD	12/1/2016	9:38:00 AM	PDO	200	E	Intersection Related	Front to Rear	W	Slowing	Slowing
713	PATTERSON RD & N ST	12/5/2016	7:42:00 PM	INJ			At Intersection	Front to Side	E	Left Turn	Straight/following RD
714	PATTERSON RD & N ST	12/5/2016	6:26:00 PM	PDO	400	W	Non-Intersection	Front to Rear	W	Slowing	Stopped
715	PATTERSON RD & N ST	12/5/2016	6:48:00 PM	PDO	100	W	Non-Intersection	Side to Side Same Dir	W	Changing Lanes	Straight/following RD
716	PATTERSON RD & MARKET ST	12/9/2016	12:58:00 PM	INJ			At Intersection	Front to Side	W	Straight/following RD	Straight/following RD
717	PATTERSON RD & MARKET ST	12/10/2016	2:24:00 PM	INJ	595	E	Driveway Access Related	Front to Side	S	Left Turn	Straight/following RD
718	PATTERSON RD & N 12TH ST	12/12/2016	10:14:00 AM	PDO			At Intersection	Front to Side	W	Straight/following RD	Straight/following RD
719	PATTERSON RD & 28 1/4 RD RD	12/14/2016	12:24:00 PM	INJ			At Intersection	Front to Side	W	Left Turn	Straight/following RD
720	PATTERSON RD & 25 RD RD	12/15/2016	1:31:00 PM	INJ	155	W	Intersection Related	Front to Rear	E	Slowing	Stopped
721	PATTERSON RD & 24 1/2 RD RD	12/19/2016	10:22:00 AM	PDO	250	E	Driveway Access Related	Front to Side	N	Right Turn	Straight/following RD
722	PATTERSON RD & N 12TH ST	12/19/2016	4:04:00 PM	PDO	560	W	Intersection Related	Front to Rear	E	Straight/following RD	Stopped
723	PATTERSON RD & N 7TH ST	12/19/2016	4:22:00 PM	PDO	60	E	Intersection Related	Front to Rear	W	Straight/following RD	Slowing
724	PATTERSON RD & 27 1/2 RD	12/19/2016	4:07:00 PM	PDO			At Intersection	Front to Rear	W	Straight/following RD	Stopped
725	PATTERSON RD & 25 RD RD	12/22/2016	12:15:00 PM	PDO	480	E	Non-Intersection	Front to Rear	W	Changing Lanes	Straight/following RD
726	25 1/2 RD & PATTERSON RD	1/2/2017	11:52:00 AM	PDO	250	N	Driveway Related	Front to Rear	N	Straight	Slowing
727	N 7TH ST & PATTERSON RD	1/9/2017	7:30:00 AM	PDO	350	N	Non-Int	Side-Side Same Dir	S	Spun Out Of Control	Spun Out Of Control
728	24 1/2 RD & PATTERSON RD	1/13/2017	8:20:00 PM	INJ	500	S	Driveway Related	Front to Side	E	Left Turn	Straight
729	24 1/2 RD & PATTERSON RD	1/16/2017	11:51:00 AM	PDO	500	S	Driveway Related	Front to Side	E	Left Turn	Straight
730	HWY 6 & 50 & PATTERSON RD	1/16/2017	1:10:00 PM	PDO			At Intersection	Front to Side	E	Left Turn	Straight
731	PATTERSON RD & COLANWOOD ST	1/19/2017	4:49:00 AM	PDO			At Intersection	Front to Side	N	Straight	Straight
732	PATTERSON RD & N 1ST ST	1/19/2017	5:24:00 PM	PDO			At Intersection	Front to Rear	W	Slowing	Stopped
733	24 1/2 RD & PATTERSON RD	1/21/2017	12:25:00 PM	INJ	500	S	At Intersection	Front to Side	W	Straight	Straight
734	N 7TH ST & PATTERSON RD	1/22/2017	9:35:00 AM	PDO			At Intersection	Front to Rear	S	Straight	Stopped
735	29 RD & PATTERSON RD	1/23/2017	4:50:00 PM	PDO	30	S	Intersection Related	Front to Rear	N	Straight	Stopped
736	25 RD & PATTERSON RD	1/25/2017	3:16:00 PM	INJ			Intersection Related	Front to Rear	N	Straight	Stopped
737	PATTERSON RD & 29 RD	1/26/2017	7:52:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
738	PATTERSON RD & 29 RD	1/27/2017	3:30:00 PM	PDO			At Intersection	Front to Rear	W	Left Turn	Left Turn
739	PATTERSON RD & MESA MALL ACCESS RD	1/27/2017	7:55:00 PM	PDO			At Intersection	Front to Side	E	Left Turn	Straight
740	PATTERSON RD & N 1ST ST	1/29/2017	11:08:00 PM	PDO	415	W	Non-Int	Curb	W	Straight	UNK
741	PATTERSON RD & MARKET ST	1/30/2017	5:08:00 PM	INJ			Intersection Related	Front to Rear	S	Straight	Stopped
742	MARKET ST & PATTERSON RD	1/30/2017	5:14:00 PM	INJ	420	N	Non-Int	Curb	S	Spun Out Of Control	UNK
743	PATTERSON RD & MEANDER DR	2/2/2017	6:10:00 PM	INJ			At Intersection	Front to Rear	W	Slowing	Straight
744	PATTERSON RD & 25 RD	2/7/2017	5:52:00 PM	INJ			At Intersection	Front to Side	N	Left Turn	Straight
745	PATTERSON RD & SPRING VALLEY CIR	2/8/2017	10:19:00 AM	INJ			Intersection Related	Bicycle	W	Straight	Stopped
746	24 1/2 RD & PATTERSON RD	2/9/2017	4:51:00 PM	PDO	1000	S	Non-Int	Side-Side Same Dir	S	Changing Lanes	Straight
747	PATTERSON RD & CIDER MILL RD	2/9/2017	5:22:00 PM	PDO	245	W	Intersection Related	Front to Rear	W	Straight	Stopped
748	PATTERSON RD & 30 RD	2/12/2017	12:21:00 PM	INJ	30	W	Intersection Related	Front to Rear	E	Straight	Slowing
749	PATTERSON RD & 25 RD	2/14/2017	10:41:00 AM	INJ			At Intersection	Front to Front	N	Left Turn	Straight
750	PATTERSON RD & N 12TH ST	2/14/2017	5:58:00 PM	PDO			At Intersection	Front to Side	S	Left Turn	Straight
751	24 RD & PATTERSON RD	2/16/2017	5:39:00 PM	PDO	100	S	Intersection Related	Front to Rear	N	Straight	Stopped
752	PATTERSON RD & 29 RD	2/22/2017	6:17:00 PM	INJ			At Intersection	Front to Side	W	Left Turn	Straight
753	PATTERSON RD & 28 1/4 RD	2/25/2017	10:04:00 PM	PDO			At Intersection	Front to Front	W	Left Turn	Straight
754	PATTERSON RD & MIRA VISTA RD	2/27/2017	12:18:00 PM	PDO	309	E	Non-Int	Side-Side Same Dir	N	Left Turn	Changing Lanes
755	25 1/2 RD & PATTERSON RD	2/28/2017	10:41:00 AM	PDO	160	S	Non-Int	Curb	S	Straight	UNK
756	PATTERSON RD & N 7TH ST	2/28/2017	10:39:00 AM	PDO			At Intersection	Front to Side	E	Straight	Left Turn
757	PATTERSON RD & 27 1/2 RD	3/1/2017	10:32:00 AM	INJ			At Intersection	Front to Side	E	Straight	Left Turn
758	PATTERSON RD & 29 RD	3/6/2017	5:21:00 PM	INJ	200	E	Intersection Related	Front to Rear	W	Slowing	Stopped
759	PATTERSON RD & 29 1/2 RD	3/7/2017	2:22:00 PM	INJ	80	W	Intersection Related	Front to Rear	E	Slowing	Slowing
760	PATTERSON RD & MARKET ST	3/11/2017	3:02:00 PM	PDO	20	W	Intersection Related	Front to Rear	W	Straight	Stopped
761	PATTERSON RD & 24 1/2 RD	3/13/2017	12:02:00 PM	INJ	250	E	Intersection Related	Front to Rear	W	Straight	Slowing
762	PATTERSON RD & 25 RD	3/16/2017	9:41:00 PM	PDO			At Intersection	Front to Side	E	Left Turn	Straight
763	PATTERSON RD & 24 RD	3/18/2017	11:28:00 AM	PDO			At Intersection	Front to Side	N	Right Turn	Left Turn
764	25 RD & PATTERSON RD	3/19/2017	3:03:00 PM	INJ	50	N	Intersection Related	Front to Rear	S	Straight	Stopped
765	N 12TH ST & PATTERSON RD	3/20/2017	4:17:00 PM	PDO	30	N	Intersection Related	Front to Rear	S	Straight	Stopped
766	PATTERSON RD & 29 1/2 RD	3/23/2017	11:40:00 AM	INJ	250	E	At Intersection	Front to Rear	W	Straight	Stopped
767	29 RD & PATTERSON RD	3/24/2017	4:52:00 PM	PDO	75	S	Intersection Related	Front to Rear	N	Left Turn	Left Turn
768	PATTERSON RD & 25 RD	3/27/2017	11:12:00 AM	INJ	481	W	Driveway Related	Front to Side	S	Left Turn	Straight
769	PATTERSON RD & 30 RD	4/2/2017	4:20:00 PM	PDO			Intersection Related	Front to Rear	E	Straight	Stopped
770	PATTERSON RD & PARK DR	4/5/2017	7:13:00 PM	PDO	100	E	Non-Int	Guard Rail	W	Straight	UNK
771	PATTERSON RD & 30 RD	4/9/2017	8:07:00 PM	INJ			Intersection Related	All Other Peds	N	Right Turn	Straight
772	PATTERSON RD & 24 RD	4/9/2017	1:53:00 PM	PDO			At Intersection	Front to Side	N	Left Turn	Straight
773	PATTERSON RD & 29 RD	4/10/2017	4:52:00 PM	INJ	200	W	Non-Int	Front to Rear	E	Straight	Stopped
774	25 RD & PATTERSON RD	4/10/2017	9:49:00 AM	PDO	200	N	Driveway Related	Front to Front	E	Right Turn	Straight
775	25 1/2 RD & PATTERSON RD	4/12/2017	4:37:00 PM	PDO	20	N	Intersection Related	Front to Rear	S	Straight	Stopped
776	PATTERSON RD & MESA MALL ACCESS RD	4/13/2017	6:46:00 PM	PDO			At Intersection	Front to Side	E	Straight	Straight
777	25 RD & PATTERSON RD	4/14/2017	1:16:00 PM	PDO	100	S	Intersection Related	Front to Rear	N	Straight	Stopped
778	PATTERSON RD & N 12TH ST	4/14/2017	2:47:00 PM	PDO			At Intersection	Front to Side	S	Left Turn	Left Turn
779	HWY 6 & 50 & PATTERSON RD	4/15/2017	4:29:00 PM	INJ			Hwy Interchange	Other - Non Collision	SW	Right Turn	UNK
780	PATTERSON RD & BROKEN SPOKE RD	4/15/2017	1:21:00 PM	PDO			At Intersection	Front to Side	S	Straight	Straight
781	PATTERSON RD & COMMERCE BLVD	4/18/2017	10:32:00 AM	INJ	305	E	Driveway Related	Front to Side	S	Left Turn	Straight
782	PATTERSON RD & MESA MALL ACCESS RD	4/20/2017	1:04:00 PM	PDO	30	E	Intersection Related	Front to Rear	W	Straight	Straight
783	PATTERSON RD & 29 RD	4/26/2017	5:12:00 PM	PDO			Intersection Related	Side-Side Same Dir	E	Other	Stopped
784	PATTERSON RD & N 1ST ST	4/27/2017	11:35:00 AM	INJ			At Intersection	Front to Side	W	Left Turn	Straight
785	PATTERSON RD & 25 RD	5/4/2017	2:20:00 PM	INJ	350	E	Non-Int	Front to Rear	W	Straight	Stopped
786	PATTERSON RD & MARKET ST	5/4/2017	7:26:00 PM	PDO			At Intersection	Front to Side	N	Straight	Straight
787	PATTERSON RD & 25 RD	5/5/2017	5:26:00 PM	INJ	135	W	Driveway Related	Front to Side	S	Left Turn	Straight
788	PATTERSON RD & N 7TH ST	5/5/2017	12:56:00 PM	PDO			At Intersection	Front to Rear	W	Left Turn	Left Turn
789	PATTERSON RD & STARLIGHT DR	5/9/2017	12:30:00 AM	INJ	130	E	Non-Int	Tree	W	Straight	UNK
790	PATTERSON RD & E INDIAN CREEK DR	5/9/2017	7:00:00 AM	PDO			At Intersection	School Age To/From School	E	Straight	Right Turn
791	24 1/2 RD & PATTERSON RD	5/10/2017	3:37:00 PM	PDO	400	N	Driveway Related	Side-Side Same Dir	S	Passing	Right Turn
792	PATTERSON RD & 28 1/4 RD	5/12/2017	10:20:00 AM	PDO	450	W	Non-Int	Front to Rear	E	Straight	Stopped
793	29 RD & PATTERSON RD	5/17/2017	11:02:00 AM	PDO	420	S	Driveway Related	Front to Side	W	Left Turn	Straight
794	24 RD & PATTERSON RD	5/19/2017	10:07:00 AM	PDO			At Intersection	Side-Side Same Dir	S	Left Turn	Left Turn
795	PATTERSON RD & 25 1/2 RD	5/20/2017	8:22:00 PM	INJ	222	W	Intersection Related	Curb	W	Straight	UNK
796	PATTERSON RD & RIO GRANDE DR	5/22/2017	3:46:00 PM	PDO	40	E	Intersection Related	Front to Rear	E	Slowing	Stopped
797	PATTERSON RD & 29 RD	5/22/2017	5:34:00 PM	PDO	500	W	Intersection Related	Front to Rear	E	Slowing	Stopped
798	PATTERSON RD & N 7TH ST	5/28/2017	11:20:00 PM	INJ			At Intersection	Front to Side	W	Straight	Straight
799	PATTERSON RD & 25 1/2 RD	5/30/2017	4:06:00 PM	INJ	200	E	Non-Int	Front to Rear	W	Straight	Stopped
800	PATTERSON RD & MIRA VISTA RD	5/30/2017	2:58:00 PM	PDO	330	E	Driveway Related	Front to Rear	E	Straight	Left Turn
801	PATTERSON RD & 29 3/8 RD	5/30/2017	7:20:00 PM	PDO			Non-Int	Side-Side Same Dir	W	Weaving	Straight
802	PATTERSON RD & N 15TH ST	5/31/2017	4:32:00 PM	PDO	100	E	Intersection Related	Front to Rear	W	Changing Lanes	Stopped
803	PATTERSON RD & N 12TH ST	6/4/2017	3:05:00 PM	PDO			At Intersection	Front to Side	N	Straight	Straight
804	27 1/2 RD & PATTERSON RD	6/7/2017	8:04:00 AM	PDO			Intersection Related	Front to Rear	S	Straight	Stopped
805	PATTERSON RD & BEECHWOOD ST	6/8/2017	2:18:00 PM	PDO			Non-Int	Front to Rear	E	Straight	Stopped
806	PATTERSON RD & 29 RD	6/8/2017	7:24:00 AM	PDO	265	E	Intersection Related	Front to Rear	W	Straight	Slowing
807	PATTERSON RD & BEECHWOOD ST	6/8/2017	2:14:00 PM	PDO			At Intersection	Front to Rear	E	Straight	Stopped
808	PATTERSON RD & N 15TH ST	6/12/2017	7:59:00 AM	INJ			At Intersection	Bicycle	N	Left Turn	Straight
809	PATTERSON RD & N 1ST ST	6/13/2017	4:54:00 PM	PDO			At Intersection	Front to Side	N	Left Turn	Straight
810	PATTERSON RD & CIDER MILL RD	6/15/2017	5:12:00 PM	INJ			Non-Int	Front to Rear	W	Straight	Straight
811	PATTERSON RD & N 15TH ST	6/17/2017	8:39:00 AM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
812	PATTERSON RD & 25 1/2 RD	6/19/2017	1:18:00 PM	INJ	279	E	Driveway Related	Front to Side	S	Left Turn	Straight
813	N 12TH ST & PATTERSON RD	6/20/2017	4:13:00 PM	PDO			At Intersection	Front to Rear	S	Straight	Stopped
814	PATTERSON RD & N 1ST ST	6/21/2017	8:07:00 PM	INJ	380	W	Intersection Related	Front to Rear	E	Straight	Stopped
815	PATTERSON RD & 24 RD	6/21/2017	2:10:00 PM	PDO	449	W	Driveway Related	Front to Front	N	Right Turn	Straight
816	PATTERSON RD & N 7TH ST	6/23/2017	5:26:00 PM	PDO	300	W	Intersection Related	Front to Rear	E	Straight	Stopped
817	PATTERSON RD & 25 1/2 RD	6/26/2017	11:53:00 AM	INJ	50	W	Intersection Related	Front to Rear	E	Straight	Stopped
818	PATTERSON RD & MARKET ST	6/26/2017	12:42:00 PM	INJ			At Intersection	Front to Side	W	Straight	Straight
819	PATTERSON RD & 27 1/2 RD	6/29/2017	9:28:00 AM	INJ			At Intersection	Front to Side	E	Left Turn	Straight
820	N 7TH ST & PATTERSON RD	6/29/2017	12:53:00 PM	PDO	130	N	Driveway Related	Front to Side	E	Right Turn	Straight

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
821	PATTERSON RD & GRAND CASCADE WAY	7/6/2017	7:53:00 AM	INJ			At Intersection	Front to Side	W	Straight	Slowing
822	PATTERSON RD & 27 1/2 RD	7/7/2017	6:40:00 PM	PDO			At Intersection	Front to Side	E	Straight	Left Turn
823	PATTERSON RD & 25 RD	7/9/2017	10:51:00 AM	PDO	100	W	Driveway Related	Side-Side Same Dir	S	Left Turn	Straight
824	PATTERSON RD & 27 1/2 RD	7/9/2017	11:01:00 AM	PDO	200	E	Intersection Related	Front to Rear	W	Straight	Stopped
825	PATTERSON RD & 25 RD	7/10/2017	11:02:00 AM	PDO			At Intersection	Front to Rear	W	Left Turn	Straight
826	PATTERSON RD & N 1ST ST	7/10/2017	4:26:00 PM	PDO	200	W	Intersection Related	Front to Rear	E	Straight	Stopped
827	24 RD & PATTERSON RD	7/14/2017	8:47:00 AM	PDO			Driveway Related	Guard Rail	S	U-Turn	UNK
828	PATTERSON RD & N 1ST ST	7/17/2017	2:15:00 PM	INJ	792	E	Driveway Related	Front to Front	E	Straight	Stopped
829	PATTERSON RD & 28 3/4 RD	7/20/2017	8:34:00 AM	PDO	25	W	Non-Int	Side-Side Same Dir	W	Changing Lanes	Stopped
830	PATTERSON RD & 29 RD	7/21/2017	6:35:00 PM	INJ			At Intersection	Front to Side	W	Left Turn	Straight
831	30 RD & PATTERSON RD	7/21/2017	4:07:00 PM	PDO	260	N	Non-Int	Front to Side	W	Left Turn	Straight
832	PATTERSON RD & 24 1/2 RD	7/29/2017	8:45:00 PM	PDO			At Intersection	Front to Front	N	Left Turn	Straight
833	25 1/2 RD & PATTERSON RD	7/31/2017	11:52:00 AM	INJ			At Intersection	Front to Side	E	Left Turn	Straight
834	PATTERSON RD & 28 1/4 RD	8/1/2017	2:59:00 PM	PDO	400	W	Intersection Related	Front to Rear	E	Straight	Slowing
835	PATTERSON RD & N 15TH ST	8/2/2017	8:00:00 AM	PDO	100	W	Intersection Related	Front to Rear	W	Slowing	Stopped
836	PATTERSON RD & 30 RD	8/5/2017	4:25:00 PM	PDO			At Intersection	Front to Side	W	Straight	Straight
837	PATTERSON RD & W GREENFIELD CIR	8/5/2017	7:44:00 AM	PDO	100	E	Non-Int	Side-Side Same Dir	W	Changing Lanes	Straight
838	PATTERSON RD & N 1ST ST	8/8/2017	7:42:00 PM	INJ			At Intersection	Bicycle	W	Straight	Straight
839	PATTERSON RD & BEECHWOOD ST	8/8/2017	7:50:00 AM	PDO	228	E	Non-Int	Front to Rear	W	Slowing	Slowing
840	PATTERSON RD & N 7TH ST	8/10/2017	9:37:00 PM	PDO			At Intersection	All Other Peds	N	Left Turn	Straight
841	PATTERSON RD & 28 1/4 RD	8/11/2017	4:49:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
842	24 1/2 RD & PATTERSON RD	8/12/2017	2:45:00 PM	PDO	210	S	Driveway Related	Bicycle	W	Straight	Straight
843	PATTERSON RD & 25 1/2 RD	8/12/2017	11:21:00 AM	PDO	50	E	Intersection Related	Side-Side Same Dir	W	Changing Lanes	Slowing
844	PATTERSON RD & 28 RD	8/14/2017	7:12:00 PM	INJ			At Intersection	Front to Side	S	Left Turn	Straight
845	PATTERSON RD & N 12TH ST	8/14/2017	2:09:00 PM	PDO	400	E	Non-Int	Front to Rear	E	Straight	Slowing
846	PATTERSON RD & 25 3/4 RD	8/15/2017	10:30:00 AM	PDO	225	E	Non-Int	Curb	E	Changing Lanes	Avoiding Object
847	PATTERSON RD & N 12TH ST	8/15/2017	12:15:00 PM	PDO	418	W	Driveway Related	Front to Side	N	Straight	Straight
848	PATTERSON RD & 25 1/2 RD	8/16/2017	5:08:00 PM	PDO			At Intersection	Front to Front	W	Left Turn	Straight
849	PATTERSON RD & 25 RD	8/22/2017	1:01:00 PM	PDO	190	W	Intersection Related	Front to Rear	E	Straight	Stopped
850	PATTERSON RD & COMMERCE BLVD	8/26/2017	5:09:00 PM	PDO			Intersection Related	Front to Side	E	Left Turn	Straight
851	24 1/2 RD & PATTERSON RD	8/27/2017	12:49:00 PM	PDO	500	S	Driveway Related	Front to Side	E	Straight	Straight
852	PATTERSON RD & MESA MALL ACCESS RD	8/28/2017	4:23:00 PM	PDO	60	E	Intersection Related	Other Object	N	Right Turn	UNK
853	24 RD & PATTERSON RD	8/29/2017	3:29:00 PM	PDO			Intersection Related	Side-Side Same Dir	W	Left Turn	Left Turn
854	PATTERSON RD & N 12TH ST	9/8/2017	12:08:00 PM	PDO	250	W	Driveway Related	Front to Side	N	Right Turn	Left Turn
855	PATTERSON RD & N 7TH ST	9/8/2017	6:19:00 AM	PDO			At Intersection	Front to Side	N	UNK	Straight
856	PATTERSON RD & N 15TH ST	9/8/2017	11:57:00 AM	PDO	500	E	Intersection Related	Front to Rear	W	Slowing	Stopped
857	PATTERSON RD & 25 RD	9/8/2017	8:34:00 PM	PDO			At Intersection	Front to Side	NE	Straight	Straight
858	PATTERSON RD & FORESIGHT CIR	9/7/2017	4:53:00 PM	PDO			At Intersection	Front to Side	S	Left Turn	Left Turn
859	MARKET ST & PATTERSON RD	9/9/2017	3:14:00 PM	PDO			Driveway Related	Front to Side	E	Right Turn	Left Turn
860	PATTERSON RD & N 12TH ST	9/11/2017	7:28:00 AM	PDO			At Intersection	Front to Side	W	Right Turn	Straight
861	PATTERSON RD & N 15TH ST	9/11/2017	6:23:00 PM	PDO			At Intersection	Front to Side	E	Straight	Left Turn
862	N 1ST & PATTERSON RD	9/12/2017	5:43:00 PM	PDO	750	N	Driveway Related	Front to Rear	N	Straight	Stopped
863	PATTERSON RD & 25 RD	9/14/2017	12:45:00 PM	PDO	100	W	Non-Int	Front to Rear	W	Slowing	Stopped
864	PATTERSON RD & 25 RD	9/14/2017	4:12:00 PM	PDO	500	W	Non-Int	Front to Rear	W	Straight	Stopped
865	24 RD & PATTERSON RD	9/16/2017	8:51:00 AM	PDO	40	S	Intersection Related	Front to Rear	N	Straight	Stopped
866	PATTERSON RD & N 7TH ST	9/21/2017	4:24:00 PM	PDO			Intersection Related	Front to Rear	S	Right Turn	Right Turn
867	PATTERSON RD & N 7TH ST	9/21/2017	4:46:00 PM	PDO	100	W	Intersection Related	Front to Rear	E	Straight	Stopped
868	24 1/2 RD & PATTERSON RD	9/22/2017	11:08:00 AM	PDO			At Intersection	Front to Rear	S	Right Turn	Right Turn
869	PATTERSON RD & 25 RD	9/22/2017	12:12:00 PM	PDO	190	W	Intersection Related	Front to Rear	E	Changing Lanes	Stopped
870	24 RD & PATTERSON RD	9/23/2017	10:10:00 PM	PDO	605	N	Non-Int	Curb	N	Straight	UNK
871	PATTERSON RD & N 1ST ST	9/26/2017	9:18:00 PM	PDO	856	E	Non-Int	Guard Rail	W	Straight	UNK
872	PATTERSON RD & 29 1/2 RD	9/26/2017	6:37:00 PM	PDO			At Intersection	Bicycle	W	Left Turn	Straight
873	PATTERSON RD & 30 RD	9/28/2017	7:21:00 AM	PDO			At Intersection	Front to Side	E	Straight	Left Turn
874	PATTERSON RD & CRIS-MAR ST	9/28/2017	7:43:00 AM	PDO			At Intersection	Front to Rear	W	Straight	Stopped
875	PATTERSON RD & NORTHGATE DR	9/29/2017	7:36:00 PM	PDO			Non-Int	Front to Rear	N	Straight	Straight
876	PATTERSON RD & VIEW POINT DR	10/2/2017	5:18:00 PM	PDO			Non-Int	Front to Rear	E	Straight	Stopped
877	PATTERSON RD & 30 RD	10/2/2017	3:16:00 PM	PDO	100	W	Intersection Related	Front to Rear	E	Straight	Stopped
878	25 RD & PATTERSON RD	10/4/2017	5:22:00 PM	PDO	100	N	Intersection Related	Front to Rear	N	Straight	Stopped
879	PATTERSON RD & 25 1/2 RD	10/4/2017	12:53:00 PM	PDO	75	E	Non-Int	Front to Rear	W	Straight	Stopped
880	24 RD & PATTERSON RD	10/6/2017	6:09:00 PM	INJ			Intersection Related	Front to Front	N	Left Turn	Straight
881	PATTERSON RD & N 7TH ST	10/9/2017	6:40:00 AM	PDO			At Intersection	All Other Peds	S	Right Turn	Straight
882	PATTERSON RD & 30 RD	10/11/2017	4:34:00 PM	PDO			At Intersection	Front to Rear	S	Other	Stopped
883	PATTERSON RD & N 8TH CT	10/12/2017	3:48:00 PM	PDO	500	E	Non-Int	Front to Rear	W	Straight	Stopped
884	PATTERSON RD & N 12TH ST	10/12/2017	12:08:00 PM	PDO	375	E	Intersection Related	Front to Rear	W	Straight	Stopped
885	PATTERSON RD & N 15TH ST	10/12/2017	4:11:00 PM	PDO	600	E	Intersection Related	Front to Rear	W	Straight	Stopped
886	PATTERSON RD & MESA MALL ACCESS RD	10/16/2017	6:00:00 PM	PDO			At Intersection	Front to Rear	W	Slowing	Stopped
887	PATTERSON RD & 27 1/2 RD	10/17/2017	3:15:00 PM	PDO	170	E	Intersection Related	Front to Rear	W	Straight	Stopped
888	PATTERSON RD & 27 1/2 RD	10/18/2017	5:18:00 PM	PDO			At Intersection	Front to Rear	W	Straight	Stopped
889	PATTERSON RD & 28 1/4 RD	10/19/2017	2:43:00 PM	PDO			Intersection Related	Side-Side Same Dir	E	Changing Lanes	Straight
890	PATTERSON RD & N 12TH ST	10/21/2017	1:29:00 PM	INJ			At Intersection	Front to Side	E	Left Turn	Straight
891	PATTERSON RD & MESA MALL ACCESS RD	10/21/2017	12:06:00 PM	PDO			Intersection Related	Side-Side Same Dir	W	U-Turn	Right Turn
892	PATTERSON RD & N 12TH ST	10/22/2017	1:24:00 PM	PDO			Intersection Related	Front to Side	S	Left Turn	Right Turn
893	PATTERSON RD & N 12TH ST	10/23/2017	11:14:00 AM	PDO	20	E	Intersection Related	Front to Rear	W	Slowing	Stopped
894	PATTERSON RD & N 1ST ST	10/24/2017	5:06:00 PM	PDO	300	E	Non-Int	Guard Rail	W	Straight	UNK
895	PATTERSON RD & 25 RD	10/24/2017	11:19:00 AM	PDO	40	E	Intersection Related	Front to Rear	W	Left Turn	Left Turn
896	PATTERSON RD & 24 1/2 RD	10/26/2017	5:44:00 PM	PDO	983	E	Non-Int	Sign	W	Straight	UNK
897	PATTERSON RD & RIO GRANDE DR	10/27/2017	4:06:00 PM	INJ	100	W	Non-Int	Front to Rear	E	Straight	Stopped
898	PATTERSON RD & DARBY DR	10/27/2017	6:24:00 PM	PDO			At Intersection	Front to Side	N	Left Turn	Straight
899	PATTERSON RD & 25 RD	10/28/2017	11:07:00 PM	INJ			At Intersection	Front to Front	S	Straight	Straight
900	PATTERSON RD & MARKET ST	11/2/2017	9:30:00 AM	PDO			At Intersection	Front to Side	W	Straight	Straight
901	PATTERSON RD & PARK DR	11/3/2017	11:26:00 AM	PDO	60	E	Intersection Related	Front to Rear	W	Slowing	Stopped
902	25 RD & PATTERSON RD	11/6/2017	11:48:00 AM	PDO	127	N	Driveway Related	Front to Front	N	Left Turn	Straight
903	PATTERSON RD & 25 RD	11/7/2017	4:47:00 PM	PDO	150	E	Intersection Related	Front to Rear	W	Slowing	Stopped
904	PATTERSON RD & 25 RD	11/8/2017	2:38:00 PM	PDO	199	E	Intersection Related	Front to Rear	W	Slowing	Stopped
905	PATTERSON RD & N 12TH ST	11/10/2017	9:46:00 AM	PDO	642	E	Non-Int	Side-Side Same Dir	NE	Changing Lanes	Straight
906	PATTERSON RD & 24 1/2	11/10/2017	5:53:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
907	PATTERSON RD & 28 1/4	11/10/2017	6:34:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
908	PATTERSON RD & 24 1/2	11/10/2017	3:19:00 PM	PDO			At Intersection	Side-Side Same Dir	SE	Changing Lanes	Straight
909	PATTERSON RD & 24 1/2	11/11/2017	10:24:00 PM	PDO			At Intersection	Front to Side	W	Straight	Straight
910	29 RD & PATTERSON RD	11/13/2017	4:04:00 PM	PDO	268	N	Intersection Related	Front to Rear	S	Passing	Stopped
911	PATTERSON RD & 28 1/4	11/17/2017	6:49:00 PM	PDO			Non-Int	Side-Side Same Dir	W	Weaving	Straight
912	PATTERSON RD & 29 RD	11/17/2017	9:08:00 AM	PDO			At Intersection	Front to Front	E	Straight	Left Turn
913	PATTERSON RD & 25 1/2	11/18/2017	12:46:00 PM	PDO			At Intersection	Front to Rear	E	Straight	Stopped
914	PATTERSON RD & N 12TH ST	11/19/2017	10:03:00 AM	PDO			Intersection Related	Front to Rear	N	Left Turn	Left Turn
915	PATTERSON RD & 30 RD	11/19/2017	4:32:00 PM	PDO			Intersection Related	Front to Rear	S	Straight	Slowing
916	PATTERSON RD & N 7TH ST	11/22/2017	2:38:00 PM	PDO	10	W	Intersection Related	Front to Rear	E	Other	Stopped
917	PATTERSON RD & N 12TH ST	11/24/2017	1:46:00 PM	PDO	350	W	Driveway Related	Front to Rear	W	Straight	Slowing
918	PATTERSON RD & N 15TH ST	11/28/2017	1:34:00 PM	PDO			At Intersection	Front to Side	E	Straight	Straight
919	PATTERSON RD & 25 1/2	11/28/2017	5:31:00 PM	PDO			At Intersection	Front to Side	N	Straight	Left Turn
920	29 RD & PATTERSON RD	12/2/2017	2:39:00 PM	PDO	350	S	Driveway Related	Front to Side	W	Left Turn	Straight
921	PATTERSON RD & N 7TH ST	12/4/2017	8:37:00 PM	PDO			At Intersection	Front to Front	N	Straight	Straight
922	PATTERSON RD & FORESIGHT CIR	12/5/2017	3:38:00 PM	PDO	480	E	Intersection Related	Front to Rear	W	Straight	Stopped
923	PATTERSON RD & N 1ST ST	12/5/2017	5:27:00 PM	PDO			Intersection Related	Front to Rear	W	Straight	Stopped
924	PATTERSON RD & 25 RD	12/7/2017	2:37:00 PM	PDO	40	E	Intersection Related	Front to Rear	W	Straight	Slowing
925	PATTERSON RD & 24 1/2	12/8/2017	12:45:00 PM	PDO			At Intersection	Front to Front	E	Left Turn	Straight
926	PATTERSON RD & 24 RD	12/8/2017	1:50:00 PM	PDO			At Intersection	Front to Side	N	Straight	Left Turn
927	PATTERSON RD & N 7TH ST	12/14/2017	1:11:00 PM	PDO			Intersection Related	Front to Side	W	Straight	Left Turn
928	PATTERSON RD & HOME DEPOT SIGNAL	12/14/2017	1:55:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
929	PATTERSON RD & N 1ST ST	12/15/2017	9:50:00 PM	PDO	100	W	Non-Int	Side-Side Same Dir	E	Changing Lanes	Straight
930	PATTERSON RD & 30 RD	12/16/2017	2:49:00 PM	PDO			At Intersection	Front to Side	N	Straight	Straight
931	PATTERSON RD & 29 RD	12/17/2017	5:31:00 PM	PDO	350	E	Driveway Related	Front to Rear	N	Right Turn	Straight
932	PATTERSON RD & AGANA	12/17/2017	1:44:00 PM	PDO	130	W	Intersection Related	Fence	N	Left Turn	UNK
933	PATTERSON RD & 24 RD	12/18/2017	2:35:00 PM	PDO	160	W	Intersection Related	Front to Front	NE	Changing Lanes	Straight
934	PATTERSON RD & 25 1/2	12/21/2017	6:15:00 PM	PDO			At Intersection	Front to Side	E	Left Turn	Straight
935	PATTERSON RD & MARKET ST	12/22/2017	2:40:00 PM	PDO	25	W	Non-Int	Front to Rear	W	Straight	Stopped
936	PATTERSON RD & 29 RD	12/23/2017	4:24:00 AM	PDO			At Intersection	Traffic Signal Pole	N	Left Turn	UNK
937	PATTERSON RD & 28 RD	12/25/2017	4:17:00 PM	PDO			At Intersection	Front to Side	S	Left Turn	Straight
938	PATTERSON RD & N 1ST ST	12/29/2017	2:44:00 PM	PDO			At Intersection	Front to Rear	W	Straight	Stopped

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
939	PATTERSON RD & N 12TH ST	12/31/2017	10:07:00 PM	PDO			At Intersection	Front to Side	W	Left Turn	Straight
940	PATTERSON RD & 25 RD	1/2/2018	10:58:00 AM	PDO	1215	N	Driveway Access Related	Front to Front	E	Left Turn	Left Turn
941	PATTERSON RD & 25 RD	1/3/2018	3:01:00 PM	PDO	120	S	Intersection Related	Front to Rear	N	Straight/following road	Stopped
942	PATTERSON RD & N 15TH ST	1/3/2018	5:24:00 PM	PDO	602	E	Intersection Related	Side to Side Same Dir	E	Changing Lanes	Straight/following road
943	PATTERSON RD & 25 RD	1/4/2018	1:55:00 PM	PDO	108	E	Driveway Access Related	Front to Side	N	Left Turn	Straight/following road
944	PATTERSON RD & 29 RD	1/6/2018	5:50:00 PM	PDO	0		Intersection Related	Front to Rear	N	Straight/following road	Stopped
945	PATTERSON RD & HOME DEPOT SIGNAL	1/9/2018	11:50:00 AM	PDO	500	E	Non-Intersection	Light Pole / Utility Pole	W	Straight/following road	UNK
946	PATTERSON RD & 24 1/2 RD	1/10/2018	2:14:00 PM	PDO	500	S	At Intersection	Front to Rear	S	Changing Lanes	Stopped
947	PATTERSON RD & 24 1/2 RD	1/10/2018	2:01:00 PM	PDO	0		Intersection Related	Front to Side	E	Left Turn	Stopped
948	PATTERSON RD & 30 RD	1/12/2018	10:15:00 AM	PDO	30	S	Intersection Related	Front to Rear	N	Straight/following road	Stopped
949	638 MARKET ST & PATTERSON RD	1/12/2018	5:15:00 PM	PDO	224	N	At Intersection	Front to Side	E	Right Turn	Left Turn
950	PATTERSON RD & N 1ST ST	1/16/2018	8:57:00 AM	PDO	20	E	Intersection Related	Enbankment	N	Right Turn	Straight/following road
951	PATTERSON RD & 29 1/2 RD	1/19/2018	3:52:00 PM	FAT	0		At Intersection	Front to Side	W	Left Turn	Straight/following road
952	PATTERSON RD & 27 1/2 RD	1/19/2018	8:20:00 PM	PDO	0		At Intersection	Traffic Signal Pole	S	Left Turn	UNK
953	PATTERSON RD & HWY 6 & 50	1/19/2018	11:11:00 PM	PDO	150	N	Non-Intersection	Enbankment	W	Straight/following road	UNK
954	PATTERSON RD & N 12TH ST	1/20/2018	7:54:00 PM	INJ	200	S	Driveway Access Related	Front to Side	E	Straight/following road	Straight/following road
955	PATTERSON RD & 28 1/4 RD	1/21/2018	5:18:00 AM	PDO	0		At Intersection	Curb	N	Left Turn	UNK
956	PATTERSON RD & 25 RD	1/21/2018	12:47:00 PM	PDO	100	N	Intersection Related	Front to Rear	S	Straight/following road	Stopped
957	PATTERSON RD & N 12TH ST	1/21/2018	4:07:00 PM	PDO	0		At Intersection	Front to Side	W	Straight/following road	Straight/following road
958	PATTERSON RD & 27 1/2 RD	1/22/2018	8:54:00 AM	PDO	0		At Intersection	Side to Side Same Dir	E	Straight/following road	Stopped
959	PATTERSON RD & 29 RD	1/23/2018	5:43:00 PM	PDO	73	S	Intersection Related	Front to Rear	N	Straight/following road	Stopped
960	PATTERSON RD & N 12TH ST	1/24/2018	5:49:00 PM	PDO	0		Intersection Related	Front to Side	N	Right Turn	Left Turn
961	PATTERSON RD & N 15TH ST	1/27/2018	11:40:00 AM	PDO	600	E	Intersection Related	Front to Rear	W	Straight/following road	Stopped
962	PATTERSON RD & 25 RD	1/29/2018	10:13:00 AM	INJ	1500	E	Driveway Access Related	Front to Rear	W	Straight/following road	Slowing
963	PATTERSON RD & 24 1/2 RD	1/30/2018	7:55:00 AM	PDO	1200	E	Non-Intersection	Side to Side Same Dir	W	Changing Lanes	Straight/following road
964	PATTERSON RD & 27 1/2 RD	1/31/2018	3:25:00 PM	PDO	0		At Intersection	Front to Side	E	Left Turn	Straight/following road
965	PATTERSON RD & N 15TH ST	2/2/2018	5:32:00 PM	PDO	300	E	Non-Intersection	Side to Side Same Dir	W	Straight/following road	Straight/following road
966	PATTERSON RD & 29 RD	2/3/2018	1:00:00 PM	PDO	200	S	Intersection Related	Front to Rear	N	Straight/following road	Stopped
967	PATTERSON RD & 25 RD	2/3/2018	10:40:00 PM	PDO	50	N	At Intersection	Side to Side Same Dir	S	Changing Lanes	Straight/following road
968	PATTERSON RD & 28 1/4 RD	2/6/2018	7:40:00 AM	INJ	0		Intersection Related	Front to Rear	W	Straight/following road	Stopped
969	PATTERSON RD & 24 1/2 RD	2/6/2018	11:14:00 AM	PDO	0		Intersection Related	Front to Rear	N	Straight/following road	Straight/following road
970	PATTERSON RD & GRAND CASCADE WY	2/9/2018	7:53:00 AM	PDO	50	E	Non-Intersection	Front to Rear	W	Straight/following road	Stopped
971	PATTERSON RD & GRAND CASCADE WY	2/9/2018	7:53:00 AM	PDO	70	E	Non-Intersection	Front to Rear	W	Straight/following road	Stopped
972	PATTERSON RD & 25 1/2 RD	2/12/2018	2:02:00 PM	PDO	50	E	Intersection Related	Side to Side Same Dir	E	Changing Lanes	Straight/following road
973	PATTERSON RD & 25 1/2 RD	2/13/2018	11:51:00 AM	PDO	300	E	Intersection Related	Front to Rear	W	Straight/following road	Slowing
974	PATTERSON RD & N 12TH ST	2/14/2018	5:14:00 PM	PDO	230	E	Intersection Related	Front to Rear	W	Straight/following road	Slowing
975	PATTERSON RD & N 7TH ST	2/14/2018	10:07:00 AM	PDO	0		At Intersection	Front to Front	N	Left Turn	Straight/following road
976	PATTERSON RD & N 7TH ST	2/15/2018	6:42:00 PM	PDO	0		At Intersection	Front to Front	N	Left Turn	Straight/following road
977	PATTERSON RD & MARKET ST	2/15/2018	6:53:00 PM	PDO	0		At Intersection	Front to Rear	W	Backing	Stopped
978	PATTERSON RD & N 12TH ST	2/16/2018	8:43:00 AM	PDO	0		Intersection Related	Front to Side	W	Changing Lanes	Straight/following road
979	PATTERSON RD & N 7TH ST	2/20/2018	3:08:00 PM	PDO	0		At Intersection	Front to Side	N	Left Turn	Straight/following road
980	PATTERSON RD & SPRING VALLEY CIR	2/22/2018	7:11:00 AM	INJ	150	E	Non-Intersection	Front to Side	E	Straight/following road	Straight/following road
981	PATTERSON RD & GRAND CASCADE WY	2/22/2018	6:51:00 AM	PDO	250	E	Non-Intersection	Front to Side	W	Straight/following road	Straight/following road
982	PATTERSON RD & 24 RD	2/22/2018	7:11:00 PM	PDO	0		At Intersection	Front to Side	N	Left Turn	Straight/following road
983	PATTERSON RD & 24 1/2 RD	2/25/2018	11:44:00 AM	PDO	50	W	Intersection Related	Front to Rear	E	Straight/following road	Stopped
984	PATTERSON RD & N 12TH ST	2/26/2018	2:40:00 PM	PDO	100	W	Intersection Related	Side to Side Same Dir	E	Changing Lanes	Stopped
985	PATTERSON RD & 28 RD	2/26/2018	5:21:00 PM	PDO	70	E	Non-Intersection	Front to Rear	E	Straight/following road	Straight/following road
986	PATTERSON RD & 29 RD	2/26/2018	7:41:00 AM	PDO	0		At Intersection	Front to Side	E	Left Turn	Straight/following road
987	PATTERSON RD & N 7TH ST	2/26/2018	10:45:00 AM	PDO	0		At Intersection	Front to Side	N	Right Turn	Left Turn
988	PATTERSON RD & N 7TH ST	2/26/2018	1:24:00 PM	PDO	0		At Intersection	Front to Side	N	Left Turn	Straight/following road
989	PATTERSON RD & PARTEE DR	3/1/2018	7:45:00 AM	PDO	0		Non-Intersection	Front to Rear	W	Straight/following road	Stopped
990	PATTERSON RD & 27 1/2 RD	3/1/2018	3:22:00 PM	PDO	300	W	At Intersection	Front to Rear	E	Straight/following road	Slowing
991	PATTERSON RD & N 1ST ST	3/3/2018	10:01:00 AM	PDO	30	N	Intersection Related	Front to Rear	S	Straight/following road	Stopped
992	PATTERSON RD & N 7TH ST	3/3/2018	10:36:00 AM	PDO	20	N	Intersection Related	Front to Rear	S	Straight/following road	Stopped
993	PATTERSON RD & 24 1/2 RD	3/3/2018	2:13:00 PM	PDO	400	S	At Intersection	Front to Side	E	Left Turn	Straight/following road
994	PATTERSON RD & 30 RD	3/5/2018	3:56:00 PM	PDO	0		At Intersection	Front to Rear	W	Straight/following road	Stopped
995	PATTERSON RD & N 1ST ST	3/6/2018	5:20:00 PM	PDO	160	W	Non-Intersection	Front to Rear	E	Slowing	Stopped
996	PATTERSON RD & 25 RD	3/6/2018	4:57:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Straight/following road
997	PATTERSON RD & 25 RD	3/8/2018	10:47:00 AM	PDO	15	E	Intersection Related	Front to Rear	W	Straight/following road	Stopped
998	PATTERSON RD & 24 1/2 RD	3/8/2018	1:23:00 PM	PDO	0		At Intersection	Front to Side	N	Left Turn	Straight/following road
999	PATTERSON RD & BURKEY ST	3/8/2018	2:11:00 PM	PDO	0		At Intersection	Bicycle	S	Right Turn	Straight/following road
1000	PATTERSON RD & N 15TH ST	3/8/2018	9:46:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Straight/following road
1001	PATTERSON RD & N 1ST ST	3/9/2018	4:06:00 PM	PDO	0		Intersection Related	Front to Rear	E	Straight/following road	Stopped
1002	PATTERSON RD & 25 1/2 RD	3/14/2018	4:10:00 PM	PDO	0		At Intersection	Front to Side	UNK	UNK	Straight/following road
1003	PATTERSON RD & 30 RD	3/15/2018	12:17:00 PM	PDO	181	N	Driveway Access Related	Front to Front	W	Left Turn	Slowing
1004	PATTERSON RD & 24 1/2 RD	3/19/2018	5:15:00 PM	PDO	0		At Intersection	Front to Side	E	Left Turn	Straight/following road
1005	PATTERSON RD & N 12TH ST	3/21/2018	2:55:00 PM	PDO	220	W	Intersection Related	Front to Rear	E	Slowing	Stopped
1006	PATTERSON RD & N 12TH ST	3/21/2018	5:08:00 PM	PDO	370	W	Intersection Related	Front to Rear	E	Straight/following road	Stopped
1007	PATTERSON RD & N 1ST ST	3/24/2018	5:22:00 PM	PDO	0		At Intersection	Front to Side	E	Left Turn	Left Turn
1008	PATTERSON RD & MARKET ST	3/28/2018	10:08:00 AM	PDO	0		At Intersection	Front to Side	E	Straight/following road	Straight/following road
1009	PATTERSON RD & N 12TH ST	3/28/2018	12:30:00 PM	PDO	0		Intersection Related	Front to Rear	N	Straight/following road	Stopped
1010	PATTERSON RD & 30 RD	3/29/2018	7:10:00 AM	PDO	0		At Intersection	Front to Side	E	Straight/following road	Straight/following road
1011	PATTERSON RD & N 7TH ST	4/1/2018	8:34:00 PM	PDO	0		At Intersection	Front to Rear	S	Straight/following road	Stopped
1012	PATTERSON RD & 29 RD	4/2/2018	1:11:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Straight/following road
1013	PATTERSON RD & N 15TH ST	4/4/2018	7:25:00 AM	PDO	403	E	Intersection Related	Front to Rear	W	Slowing	Stopped
1014	PATTERSON RD & N 15TH ST	4/4/2018	4:17:00 PM	PDO	383	E	Intersection Related	Front to Rear	E	Straight/following road	Stopped
1015	PATTERSON RD & 24 RD	4/8/2018	12:27:00 PM	PDO	0		At Intersection	Front to Side	N	Left Turn	Straight/following road
1016	PATTERSON RD & 25 1/2 RD	4/9/2018	4:34:00 PM	PDO	0		Non-Intersection	Front to Rear	W	Straight/following road	Avoiding Object
1017	PATTERSON RD & 25 RD	4/12/2018	3:42:00 PM	PDO	0		At Intersection	Bicycle	W	Straight/following road	Right Turn
1018	PATTERSON RD & 24 1/2 RD	4/16/2018	1:27:00 PM	PDO	170	N	Driveway Access Related	Front to Side	W	Left Turn	Straight/following road
1019	PATTERSON RD & N 12TH ST	4/16/2018	12:27:00 PM	PDO	40	S	Intersection Related	Front to Rear	N	Changing Lanes	Stopped
1020	PATTERSON RD & N 1ST ST	4/20/2018	11:08:00 AM	PDO	0		At Intersection	Front to Side	N	Right Turn	Straight/following road
1021	PATTERSON RD & MIRA VISTA RD	4/21/2018	6:12:00 PM	PDO	300	W	Non-Intersection	Front to Rear	W	Straight/following road	Slowing
1022	PATTERSON RD & VIEW POINT DR	4/21/2018	3:54:00 PM	PDO	0		At Intersection	All Other Peds	S	Right Turn	Straight/following road
1023	PATTERSON RD & 29 RD	4/27/2018	3:18:00 PM	PDO	200	E	Intersection Related	Front to Rear	W	Slowing	Stopped
1024	PATTERSON RD & N 12TH ST	5/2/2018	11:30:00 AM	PDO	100	S	Driveway Access Related	Side to Side Same Dir	N	Changing Lanes	Straight/following road
1025	PATTERSON RD & 24 1/2 RD	5/2/2018	8:37:00 PM	PDO	500	S	Driveway Access Related	Front to Side	E	Left Turn	Straight/following road
1026	PATTERSON RD & 30 RD	5/2/2018	3:12:00 PM	PDO	20	E	Intersection Related	Front to Rear	W	Straight/following road	Stopped
1027	PATTERSON RD & N 12TH ST	5/2/2018	4:41:00 PM	PDO	300	E	Intersection Related	Front to Rear	W	Straight/following road	Stopped
1028	PATTERSON RD & N 15TH ST	5/3/2018	5:29:00 PM	INJ	500	E	Non-Intersection	Front to Rear	W	Straight/following road	Stopped
1029	PATTERSON RD & 27 1/2 RD	5/3/2018	10:47:00 AM	PDO	0		At Intersection	Front to Side	E	Left Turn	Straight/following road
1030	PATTERSON RD & 25 RD	5/4/2018	12:31:00 PM	PDO	0		At Intersection	Front to Front	N	Left Turn	Straight/following road
1031	PATTERSON RD & 24 RD	5/5/2018	9:05:00 PM	INJ	0		At Intersection	Front to Side	E	Left Turn	Straight/following road
1032	PATTERSON RD & N 7TH ST	5/5/2018	12:15:00 PM	PDO	570	W	Intersection Related	Front to Rear	E	Straight/following road	Stopped
1033	PATTERSON RD & 29 RD	5/6/2018	4:32:00 PM	PDO	0		At Intersection	Front to Rear	W	Straight/following road	Stopped
1034	PATTERSON RD & 24 1/2 RD	5/8/2018	12:58:00 PM	PDO	466	S	Driveway Access Related	Front to Side	E	Left Turn	Straight/following road
1035	PATTERSON RD & 25 RD	5/9/2018	1:32:00 PM	PDO	130	S	Driveway Access Related	Front to Side	E	Left Turn	Straight/following road
1036	PATTERSON RD & RIO GRANDE DR	5/9/2018	4:10:00 PM	PDO	0		Non-Intersection	Curb	W	Straight/following road	UNK
1037	PATTERSON RD & N 12TH ST	5/9/2018	6:38:00 AM	PDO	0		At Intersection	Front to Side	N	Straight/following road	Straight/following road
1038	PATTERSON RD & 25 RD	5/11/2018	12:49:00 PM	PDO	230	S	Intersection Related	Front to Rear	N	Other	Stopped
1039	PATTERSON RD & N 12TH ST	5/12/2018	6:30:00 PM	PDO	400	W	Driveway Access Related	Front to Rear	E	Straight/following road	Slowing
1040	PATTERSON RD & 25 RD	5/13/2018	9:24:00 AM	PDO	1000	W	Driveway Access Related	Side to Side Same Dir	W	Changing Lanes	Straight/following road
1041	PATTERSON RD & HWY 6 & 50	5/15/2018	2:24:00 PM	PDO	250	N	Intersection Related	Side to Side Same Dir	NE	Changing Lanes	Straight/following road
1042	PATTERSON RD & MIRA VISTA RD	5/15/2018	5:00:00 PM	PDO	355	E	Intersection Related	Front to Rear	UNK	UNK	UNK
1043	I-70B & PATTERSON RD	5/16/2018	9:51:00 AM	PDO	0		Driveway Access Related	Front to Side	W	Changing Lanes	Left Turn
1044	PATTERSON RD & 27 1/2 RD	5/16/2018	3:55:00 PM	INJ	250	W	Intersection Related	Overturning	E	Other	UNK
1045	PATTERSON RD & GRAND VALLEY DR	5/22/2018	8:55:00 AM	INJ	155	W	Non-Intersection	Front to Rear	E	Straight/following road	Straight/following road
1046	PATTERSON RD & GRAND VALLEY DR	5/22/2018	8:55:00 AM	INJ	155	W	Non-Intersection	Front to Rear	E	Straight/following road	Straight/following road
1047	PATTERSON RD & SANTA FE DR	5/23/2018	7:16:00 AM	PDO	50	E	Intersection Related	Front to Rear	W	Straight/following road	Slowing
1048	PATTERSON RD & N 15TH ST	5/23/2018	4:12:00 PM	PDO	200	E	Intersection Related	Front to Rear	UNK	UNK	Slowing
1049	PATTERSON RD & 24 1/2 RD	5/25/2018	5:46:00 PM	PDO	0		At Intersection	Front to Side	N	U-Turn	Left Turn
1050	PATTERSON RD & MARKET ST	5/27/2018	7:18:00 AM	PDO	150	E	At Intersection	Light Pole / Utility Pole	E	Straight/following road	UNK
1051	638 MARKET ST & PATTERSON RD	5/28/2018	11:43:00 AM	PDO	250	N	Intersection Related	Front to Side	E	Right Turn	Straight/following road
1052	PATTERSON RD & MEANDER DR	5/30/2018	2:38:00 PM	PDO	451	W	Driveway Access Related	Bicycle	S	Stopped	Straight/following road
1053	PATTERSON RD & 29 RD	5/30/2018	7:51:00 PM	PDO	780	W	Non-Intersection	Front to Rear	W	Straight/following road	Straight/following road
1054	PATTERSON RD & 25 1/2 RD	6/4/2018	4:24:00 PM	PDO	0		Intersection Related	Front to Rear	W	Straight/following road	Straight/following road
1055	PATTERSON RD & 24 1/2 RD	6/5/2018	10:53:00 AM	PDO	500	W	Driveway Access Related	Front to Side	W	Right Turn	Straight/following road
1056	PATTERSON RD & N 7TH ST	6/5/2018	3:13:00 PM	PDO	0		At Intersection	Front to Side	E	Straight/following road	Left Turn

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
1057	PATTERSON RD & 24 1/2 RD	6/6/2018	11:56:00 AM	PDO	0		Intersection Related	Front to Rear	W	Slowing	Stopped
1058	PATTERSON RD & 27 1/2 RD	6/6/2018	5:02:00 PM	PDO	0		At Intersection	Front to Rear	E	Straight/following road	Stopped
1059	PATTERSON RD & 25 RD	6/7/2018	12:50:00 PM	PDO	350	W	Non-Intersection	Front to Rear	E	Slowing	Slowing
1060	PATTERSON RD & 24 1/2 RD	6/7/2018	2:28:00 PM	PDO	0		At Intersection	Front to Side	E	Left Turn	Straight/following road
1061	PATTERSON RD & 28 3/4 RD	6/8/2018	4:42:00 PM	PDO	0		Non-Intersection	Front to Rear	E	Straight/following road	Stopped
1062	PATTERSON RD & N 12TH ST	6/9/2018	12:38:00 PM	PDO	0		At Intersection	Front to Side	S	Straight/following road	Straight/following road
1063	PATTERSON RD & 24 1/2 RD	6/9/2018	6:19:00 PM	PDO	0		At Intersection	Front to Rear	S	Right Turn	Right Turn
1064	PATTERSON RD & 29 1/2 RD	6/12/2018	7:05:00 AM	PDO	40	E	Non-Intersection	Side to Side Opposite Dir	E	Drove Wrong Way	Straight/following road
1065	PATTERSON RD & 24 1/2 RD	6/12/2018	3:40:00 PM	PDO	0		At Intersection	Front to Side	E	Left Turn	Straight/following road
1066	PATTERSON RD & 24 1/2 RD	6/14/2018	4:22:00 PM	PDO	500	S	Driveway Access Related	Front to Side	E	Left Turn	Straight/following road
1067	PATTERSON RD & 24 1/2 RD	6/16/2018	2:54:00 PM	PDO	0		At Intersection	Front to Rear	W	Straight/following road	Slowing
1068	PATTERSON RD & MCMULLIN DR	6/19/2018	5:13:00 PM	INJ	0		At Intersection	Front to Side	W	Left Turn	Straight/following road
1069	PATTERSON RD & N 7TH ST	6/20/2018	11:25:00 AM	PDO	150	W	Driveway Access Related	Front to Side	W	Straight/following road	Left Turn
1070	PATTERSON RD & 29 RD	6/23/2018	11:53:00 PM	PDO	750	S	Non-Intersection	Front to Rear	S	Straight/following road	Slowing
1071	PATTERSON RD & 25 RD	6/25/2018	10:38:00 AM	PDO	150	N	Intersection Related	Front to Rear	S	Straight/following road	Stopped
1072	PATTERSON RD & MIRA VISTA RD	6/27/2018	2:26:00 PM	FAT	260	W	Non-Intersection	Front to Rear	UNK	UNK	Left Turn
1073	PATTERSON RD & COMMERCE BLVD	6/27/2018	8:55:00 AM	INJ	306	E	Driveway Access Related	Front to Side	S	Left Turn	Straight/following road
1074	PATTERSON RD & N 7TH ST	6/27/2018	9:45:00 AM	PDO	580	W	Driveway Access Related	Front to Side	E	Left Turn	Straight/following road
1075	PATTERSON RD & 30 RD	6/28/2018	3:57:00 PM	PDO	0		At Intersection	Front to Side	E	Straight/following road	Straight/following road
1076	PATTERSON RD & N 1ST ST	6/29/2018	10:56:00 AM	PDO	400	W	Intersection Related	Front to Rear	E	Slowing	Stopped
1077	PATTERSON RD & 25 RD	7/2/2018	2:23:00 PM	PDO	173	N	Driveway Access Related	Front to Side	E	Left Turn	Straight/following road
1078	PATTERSON RD & N 12TH ST	7/2/2018	3:48:00 PM	PDO	50	S	Non-Intersection	Front to Rear	N	Straight/following road	Slowing
1079	PATTERSON RD & 30 RD	7/2/2018	11:19:00 PM	PDO	0		Non-Intersection	Front to Rear	E	Straight/following road	Slowing
1080	PATTERSON RD & 24 1/2 RD	7/2/2018	2:38:00 PM	PDO	0		At Intersection	Front to Front	E	Left Turn	Straight/following road
1081	PATTERSON RD & 24 RD	7/5/2018	10:04:00 AM	PDO	80	N	Intersection Related	Side to Side Same Dir	S	Right Turn	Straight/following road
1082	PATTERSON RD & SPRING VALLEY CIR	7/5/2018	12:48:00 PM	PDO	0		Intersection Related	Front to Rear	W	Straight/following road	Stopped
1083	PATTERSON RD & 28 RD	7/7/2018	10:39:00 AM	PDO	0		At Intersection	Front to Side	S	Left Turn	Straight/following road
1084	PATTERSON RD & 30 RD	7/8/2018	7:46:00 PM	INJ	0		At Intersection	Front to Rear	N	Straight/following road	Straight/following road
1085	PATTERSON RD & N 1ST ST	7/9/2018	3:17:00 PM	PDO	0		At Intersection	Front to Side	S	Left Turn	Straight/following road
1086	PATTERSON RD & N 12TH ST	7/9/2018	1:43:00 PM	PDO	0		At Intersection	Front to Rear	E	Straight/following road	Stopped
1087	PATTERSON RD & 24 1/2 RD	7/12/2018	12:57:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Straight/following road
1088	PATTERSON RD & N 12TH ST	7/20/2018	1:32:00 PM	PDO	150	E	Driveway Access Related	Front to Side	N	Straight/following road	Straight/following road
1089	PATTERSON RD & 25 RD	7/22/2018	12:41:00 PM	PDO	0		At Intersection	Front to Rear	E	Straight/following road	Slowing
1090	PATTERSON RD & 25 RD	7/23/2018	5:32:00 PM	PDO	132	N	Driveway Access Related	Front to Front	E	Left Turn	Slowing
1091	638 MARKET ST & PATTERSON RD	7/24/2018	9:08:00 AM	PDO	224	N	Driveway Access Related	Front to Side	E	Right Turn	Left Turn
1092	PATTERSON RD & 27 1/2 RD	7/26/2018	4:28:00 PM	PDO	50	E	Non-Intersection	Front to Rear	E	Straight/following road	Stopped
1093	PATTERSON RD & N 12TH ST	7/26/2018	5:20:00 PM	PDO	350	E	Non-Intersection	Front to Rear	E	Straight/following road	Slowing
1094	PATTERSON RD & 29 RD	7/26/2018	2:24:00 PM	PDO	0		At Intersection	Front to Front	E	Straight/following road	Left Turn
1095	PATTERSON RD & PLACER ST	7/26/2018	10:52:00 AM	PDO	288	W	Non-Intersection	Front to Front	E	Other	Straight/following road
1096	PATTERSON RD & 28 1/4 RD	7/29/2018	4:29:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Straight/following road
1097	PATTERSON RD & MARKET ST	7/31/2018	4:23:00 PM	PDO	0		At Intersection	Overturning	E	Straight/following road	Straight/following road
1098	PATTERSON RD & N 7TH ST	8/8/2018	11:54:00 AM	PDO	250	W	Driveway Access Related	Front to Side	S	Left Turn	Straight/following road
1099	638 MARKET ST & PATTERSON RD	8/7/2018	12:05:00 PM	PDO	294	N	At Intersection	Front to Side	E	Right Turn	Left Turn
1100	PATTERSON RD & 30 RD	8/8/2018	4:08:00 PM	PDO	0		At Intersection	Front to Side	W	Straight/following road	Straight/following road
1101	638 MARKET ST & PATTERSON RD	8/12/2018	2:24:00 PM	PDO	220	N	Driveway Access Related	Front to Side	E	Right Turn	Left Turn
1102	PATTERSON RD & 29 1/2 RD	8/12/2018	9:52:00 AM	PDO	0		At Intersection	Front to Side	N	Left Turn	Stopped
1103	PATTERSON RD & 25 RD	8/14/2018	2:16:00 PM	PDO	695	W	Non-Intersection	Side to Side Same Dir	S	Left Turn	Straight/following road
1104	PATTERSON RD & 28 1/4 RD	8/14/2018	3:19:00 PM	PDO	0		At Intersection	Front to Side	E	Straight/following road	Left Turn
1105	PATTERSON RD & 29 1/2 RD	8/14/2018	4:52:00 PM	PDO	245	W	Intersection Related	Other - Non Collision	E	Other	UNK
1106	PATTERSON RD & 29 RD	8/18/2018	6:10:00 AM	INJ	0		At Intersection	All Other Peds	N	UNK	Straight/following road
1107	PATTERSON RD & N 12TH ST	8/22/2018	11:41:00 AM	PDO	50	N	Intersection Related	Front to Rear	S	Changing Lanes	Stopped
1108	PATTERSON RD & 28 1/4 RD	8/22/2018	3:35:00 PM	PDO	0		At Intersection	Side to Side Same Dir	N	Left Turn	Left Turn
1109	PATTERSON RD & N 12TH ST	8/23/2018	6:48:00 PM	PDO	20	E	Intersection Related	Side to Side Same Dir	N	Right Turn	Straight/following road
1110	PATTERSON RD & N 15TH ST	8/26/2018	2:14:00 PM	PDO	0		At Intersection	Front to Side	E	Left Turn	Straight/following road
1111	PATTERSON RD & 30 RD	8/26/2018	8:01:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Straight/following road
1112	PATTERSON RD & 25 RD	8/26/2018	8:17:00 PM	PDO	0		At Intersection	Front to Front	W	Left Turn	Straight/following road
1113	PATTERSON RD & N 15TH ST	8/27/2018	5:43:00 PM	INJ	685	E	Non-Intersection	Front to Rear	E	Straight/following road	Slowing
1114	PATTERSON RD & N 7TH ST	8/29/2018	5:41:00 PM	PDO	150	E	Non-Intersection	Front to Rear	W	Straight/following road	Stopped
1115	PATTERSON RD & 25 RD	8/29/2018	12:27:00 PM	PDO	0		At Intersection	Front to Side	W	Left Turn	Straight/following road
1116	PATTERSON RD & N 1ST ST	8/29/2018	12:40:00 PM	PDO	100	E	Intersection Related	Front to Rear	W	Straight/following road	Stopped
1117	PATTERSON RD & N 7TH ST	8/29/2018	5:26:00 PM	PDO	0		At Intersection	Front to Front	S	Right Turn	Straight/following road
1118	PATTERSON RD & N 15TH ST	9/4/2018	8:03:00 AM	PDO	175	W	Non-Intersection	Front to Rear	W	Straight/following road	Slowing
1119	PATTERSON RD & 29 RD	9/4/2018	3:17:00 PM	PDO	0		At Intersection	Front to Rear	E	Straight/following road	Right Turn
1120	PATTERSON RD & 25 1/2 RD	9/5/2018	5:27:00 PM	PDO	0		At Intersection	Front to Side	E	Left Turn	Straight/following road
1121	PATTERSON RD & N 7TH ST	9/6/2018	4:05:00 PM	PDO	200	N	Driveway Access Related	Front to Side	E	Right Turn	Straight/following road
1122	PATTERSON RD & N 12TH ST	9/7/2018	11:54:00 AM	PDO	350	E	Intersection Related	Side to Side Same Dir	W	Changing Lanes	Straight/following road
1123	PATTERSON RD & N 15TH ST	9/14/2018	6:24:00 PM	INJ	15	W	At Intersection	All Other Peds	N	Left Turn	Straight/following road
1124	PATTERSON RD & N 1ST ST	9/14/2018	3:07:00 PM	INJ	0		At Intersection	Front to Side	W	Left Turn	Straight/following road
1125	PATTERSON RD & 24 1/2 RD	9/18/2018	11:30:00 AM	PDO	0		At Intersection	Front to Side	W	Straight/following road	Straight/following road
1126	PATTERSON RD & 25 RD	9/21/2018	12:36:00 PM	PDO	150	W	Non-Intersection	Front to Side	E	Left Turn	Straight/following road
1127	PATTERSON RD & 30 RD	9/25/2018	10:33:00 AM	INJ	0		At Intersection	Front to Side	S	Right Turn	Straight/following road
1128	PATTERSON RD & 24 1/2 RD	9/25/2018	1:53:00 PM	PDO	0		At Intersection	Front to Side	N	Straight/following road	Straight/following road
1129	PATTERSON RD & N 7TH ST	9/27/2018	5:25:00 PM	PDO	0		Intersection Related	Front to Rear	E	Straight/following road	Stopped
1130	PATTERSON RD & 24 1/2 RD	9/29/2018	2:15:00 PM	PDO	0		Intersection Related	Front to Rear	W	Slowing	Stopped
1131	PATTERSON RD & 25 RD	10/1/2018	5:22:00 PM	PDO	500	S	Non-Intersection	Front to Rear	N	Slowing	Stopped
1132	PATTERSON RD & 24 1/2 RD	10/6/2018	7:48:00 PM	PDO	500	S	At Intersection	Front to Side	E	Straight/following road	Straight/following road
1133	PATTERSON RD & N 12TH ST	10/7/2018	10:34:00 PM	PDO	0		At Intersection	Front to Side	S	Straight/following road	Straight/following road
1134	PATTERSON RD & BEECHWOOD ST	10/9/2018	7:59:00 AM	PDO	250	W	Non-Intersection	Front to Rear	W	Straight/following road	Slowing
1135	PATTERSON RD & N 12TH ST	10/11/2018	7:54:00 AM	PDO	600	E	Non-Intersection	Front to Rear	W	Slowing	Stopped
1136	PATTERSON RD & 25 RD	10/13/2018	2:25:00 PM	PDO	60	E	Non-Intersection	Front to Rear	E	Straight/following road	Slowing
1137	PATTERSON RD & SERANADE ST	10/13/2018	10:32:00 PM	PDO	158	E	Driveway Access Related	Front to Side	S	Left Turn	Straight/following road
1138	PATTERSON RD & N 12TH ST	10/14/2018	10:06:00 AM	PDO	0		At Intersection	Front to Side	W	Straight/following road	Straight/following road
1139	PATTERSON RD & N 15TH ST	10/17/2018	4:55:00 PM	PDO	20	E	Intersection Related	Front to Rear	E	Straight/following road	Stopped
1140	PATTERSON RD & BELHAVEN WY	10/18/2018	3:54:00 PM	PDO	0		At Intersection	Front to Rear	E	Straight/following road	Straight/following road
1141	PATTERSON RD & 25 RD	10/19/2018	12:30:00 PM	PDO	100	E	Intersection Related	Front to Rear	W	Straight/following road	Stopped
1142	PATTERSON RD & N 12TH ST	10/24/2018	11:00:00 AM	PDO	150	W	Driveway Access Related	Front to Rear	W	Slowing	Slowing
1143	PATTERSON RD & 27 1/2 RD	10/25/2018	11:09:00 AM	PDO	200	W	Non-Intersection	Front to Rear	E	Slowing	Slowing
1144	PATTERSON RD & COTTAGE MEADOWS	10/26/2018	6:04:00 PM	INJ	0		At Intersection	Other - Non Collision	W	Changing Lanes	UNK
1145	PATTERSON RD & HWY 6 & 50	10/26/2018	8:37:00 PM	INJ	0		Non-Intersection	Embankment	SW	Straight/following road	UNK
1146	PATTERSON RD & BEECHWOOD ST	10/27/2018	3:28:00 PM	PDO	50	W	Non-Intersection	Sign	W	Straight/following road	UNK
1147	PATTERSON RD & 30 RD	10/30/2018	10:29:00 AM	PDO	0		At Intersection	Front to Rear	W	Straight/following road	Stopped
1148	PATTERSON RD & 28 1/4 RD	10/31/2018	3:06:00 PM	PDO	200	W	Intersection Related	Front to Rear	E	Straight/following road	Slowing
1149	PATTERSON RD & 25 RD	11/3/2018	4:05:00 PM	PDO	492	E	Non-Intersection	Front to Rear	W	Straight/following road	Stopped
1150	PATTERSON RD & 24 1/2 RD	11/3/2018	11:20:00 AM	PDO	0		At Intersection	Front to Side	E	Left Turn	Straight/following road
1151	PATTERSON RD & GRAND CASCADE WY	11/4/2018	7:34:00 PM	PDO	0	W	Non-Intersection	Side to Side Same Dir	W	Straight/following road	Straight/following road
1152	PATTERSON RD & 27 1/2 RD	11/6/2018	7:53:00 PM	PDO	0		Intersection Related	Front to Rear	W	Straight/following road	Stopped
1153	PATTERSON RD & 27 1/2 RD	11/7/2018	6:46:00 PM	PDO	200	E	Driveway Access Related	Front to Side	N	Left Turn	Straight/following road
1154	638 MARKET ST & PATTERSON RD	11/9/2018	11:52:00 AM	PDO	250	N	Driveway Access Related	Front to Side	E	Right Turn	Left Turn
1155	PATTERSON RD & 28 1/4 RD	11/9/2018	6:22:00 PM	PDO	400	W	Intersection Related	Front to Rear	E	UNK	Stopped
1156	PATTERSON RD & 25 RD	11/12/2018	5:28:00 PM	PDO	250	W	Driveway Access Related	Front to Side	E	Left Turn	Straight/following road
1157	PATTERSON RD & N 7TH ST	11/12/2018	6:09:00 PM	PDO	0	S	At Intersection	Front to Side	S	Left Turn	Straight/following road
1158	PATTERSON RD & MIRA VISTA RD	11/13/2018	12:13:00 PM	PDO	500	W	Non-Intersection	Front to Rear	E	Straight/following road	Slowing
1159	PATTERSON RD & 29 RD	11/14/2018	4:03:00 PM	PDO	400	S	Driveway Access Related	Front to Side	W	Left Turn	Straight/following road
1160	PATTERSON RD & 29 RD	11/16/2018	6:07:00 PM	PDO	0		At Intersection	Front to Rear	E	Slowing	Stopped
1161	PATTERSON RD & 24 1/2 RD	11/17/2018	2:38:00 PM	PDO	0		At Intersection	Front to Front	S	Left Turn	Straight/following road
1162	PATTERSON RD & MARKET ST	11/17/2018	5:18:00 PM	PDO	0		At Intersection	Front to Side	N	Right Turn	Left Turn
1163	PATTERSON RD & 30 RD	11/22/2018	5:06:00 PM	PDO	0	W	At Intersection	Front to Side	W	Left Turn	Straight/following road
1164	PATTERSON RD & 30 RD	11/28/2018	9:58:00 PM	PDO	0		At Intersection	Front to Side	S	Straight/following road	Straight/following road
1165	PATTERSON RD & GRAND CASCADE WY	11/29/2018	5:00:00 PM	PDO	0		Non-Intersection	Front to Rear	E	Slowing	Slowing
1166	PATTERSON RD & 29 RD	11/29/2018	4:20:00 PM	PDO	0		At Intersection	Front to Front	W	Left Turn	Straight/following road
1167	PATTERSON RD & BELHAVEN WY	11/29/2018	4:39:00 PM	PDO	0	N	At Intersection	Front to Side	N	Left Turn	Straight/following road
1168	PATTERSON RD & N 12TH ST	11/30/2018	6:07:00 PM	PDO	0		At Intersection	Side to Side Same Dir	E	Right Turn	Left Turn
1169	REDLANDS PKWY RAMP & PATTERSON RD	12/2/2018	8:53:00 AM	PDO	400	S	Highway Interchange	Front to Rear	NW	Changing Lanes	Changing Lanes
1170	PATTERSON RD & N 1ST ST	12/5/2018	5:15:00 PM	PDO	50	E	Intersection Related	Front to Rear	W	Slowing	Stopped
1171	PATTERSON RD & N 12TH ST	12/5/2018	9:28:00 AM	PDO	0		At Intersection	Front to Side	E	Right Turn	Straight/following road
1172	PATTERSON RD & N 1ST ST	12/7/2018	4:11:00 PM	PDO	150	W	Non-Intersection	Front to Rear	E	Straight/following road	Stopped
1173	PATTERSON RD & 25 RD	12/7/2018	12:09:00 PM	PDO	233	N	Driveway Access Related	Front to Side	E	Left Turn	Straight/following road

#	Intersection	Date	Time	Severity	Distance From Int	Direction from Int	Road Description	Accident Type	Dir	Vehicle 1 Movement	Vehicle 2 Movement
1174	PATTERSON RD & 24 1/2 RD	12/7/2018	2:52:00 PM	PDO	189	N	Driveway Access Related	Front to Side	W	Left Turn	Straight/following road
1175	PATTERSON RD & 24 1/2 RD	12/8/2018	2:21:00 PM	PDO	0		At Intersection	Front to Rear	N	Straight/following road	Stopped
1176	PATTERSON RD & 25 RD	12/10/2018	6:45:00 AM	PDO	0		At Intersection	Front to Side	N	Right Turn	Straight/following road
1177	PATTERSON RD & 24 RD	12/11/2018	8:57:00 PM	PDO	0		At Intersection	Front to Side	N	Left Turn	Straight/following road
1178	PATTERSON RD & MESA MALL ENTRANCE	12/13/2018	10:48:00 AM	PDO	0		At Intersection	Front to Side	W	Straight/following road	Left Turn
1179	PATTERSON RD & 25 RD	12/13/2018	3:19:00 PM	PDO	0		At Intersection	Front to Side	E	Straight/following road	Left Turn
1180	PATTERSON RD & 25 RD	12/14/2018	3:15:00 PM	PDO	570	W	Non-Intersection	Front to Rear	E	Straight/following road	Stopped
1181	PATTERSON RD & 24 1/2 RD	12/15/2018	4:56:00 PM	PDO	500	S	At Intersection	Front to Front	E	Left Turn	Left Turn
1182	PATTERSON RD & 30 RD	12/16/2018	3:14:00 PM	PDO	400	W	Intersection Related	Front to Rear	E	Straight/following road	Slowing
1183	PATTERSON RD & 28 1/4 RD	12/18/2018	12:23:00 PM	PDO	150	W	Non-Intersection	Front to Rear	E	Straight/following road	Stopped
1184	PATTERSON RD & MIRA VISTA RD	12/19/2018	3:51:00 PM	PDO	0		At Intersection	Front to Rear	W	Straight/following road	Stopped
1185	PATTERSON RD & 29 1/2 RD	12/23/2018	5:37:00 PM	PDO	0		At Intersection	Bicycle	W	Straight/following road	Left Turn
1186	PATTERSON RD & 29 1/2 RD	12/24/2018	2:59:00 PM	PDO	0		At Intersection	Front to Side	E	Straight/following road	Left Turn

Appendix D - Traffic Methodology, Data, and Analysis

CITY OF GRAND JUNCTION
PATTERSON ROAD ACCESS STUDY – TRAFFIC OPERATIONS

US 6/ US 50/ I-70B to Lodgepole Street

January 2021

Prepared for:

City of Grand Junction
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1.0 EXISTING TRAFFIC OPERATIONS

1.1 Traffic Volumes

Existing traffic volumes were collected throughout the study area. Turning movement counts were collected on Tuesday, March 3, 2020 during the AM peak period (7:00-9:00 AM) and the PM peak period (4:00-6:00 PM) at 15 intersections. Vehicle classification counts were collected at 13 locations along Patterson Rd from March 3-4, 2020. Since turning movements were not collected at 15th St, the volumes at that intersection were taken from a Traffic Impact Study conducted by Kimley Horn for the intersection of 12th St and Patterson Rd. The existing traffic counts are included in Appendix D.

1.2 Level of Service Criteria

Traffic analyses were conducted in accordance with procedures outlined in the Highway Capacity Manual, 6th Edition (HCM), and include intersection and highway segment Level-of-Service (LOS). LOS is a measure of the quality of traffic flow and ranges from LOS A (nearly ideal traffic conditions with very little delay for motorists) to LOS F (poor traffic conditions with long motorist delays). LOS C is typically considered a "good" traffic condition. LOS D or better conditions are typically desirable during peak traffic periods; however, LOS E conditions are not uncommon. LOS F, although undesirable, is also not uncommon for side street traffic movements at full movement, unsignalized intersections with high volume arterial roadways.

Where an unsignalized intersection operates at LOS E or F, a volume to capacity (V/C) ratio has been reported for the critical movement. The V/C ratio is a measure of how close a movement is to capacity, with 1.00 indicating that the movement has reached capacity. Where V/C exceeds 1.00, traffic demand during peak periods exceeds the capacity for the movement. This condition will cause queues (amount of traffic backed up at an intersection) to grow, potentially overflowing auxiliary lanes and blocking adjacent traffic lanes until demand decreases. Examples of LOS for various modes of travel are shown below.

Source: FDOT Quality/Level of Service Handbook

Table 1 provides a summary of the HCM's LOS Criteria for intersections and Table 2 provides a summary of the LOS Criteria for urban street segments.

Table 1 – Intersection LOS Criteria

Level of Service (LOS)	Signalized Intersection	Unsignalized Intersection	Traffic Characteristics
	Average Intersection Delay (sec/veh)	Worst Movement (sec/veh)	
A	<= 10	<= 10	Free Flow / Insignificant Delays
B	> 10-20	> 10-15	Stable Flow / Minimal Delays
C	> 20-35	>15-25	Stable Flow / Acceptable Delays
D	> 35-55	>25-35	Nearing Unstable / Tolerable Delays
E	> 55-80	>35-50	Unstable Flow / Significant Delays
F	> 80	> 50	Forced Flow / Excessive Delays

Table 2 – Urban Street LOS Criteria

LOS	Travel Speed Threshold by Base Free-Flow Speed (mi/h)							Volume to Capacity Ratio
	55	50	45	40	35	30	25	
A	>44	>40	>36	>32	>28	>24	>20	<=1.0
B	>37	>34	>30	>27	>23	>20	>17	
C	>28	>25	>23	>20	>18	>15	>13	
D	>22	>20	>18	>16	>14	>12	>10	
E	>17	>15	>14	>12	>11	>9	>8	
F	<=17	<=15	<=14	<=12	<=11	<=9	<=8	
F	Any							>1.0

1.3 LOS Analysis

1.3.1 Intersections

Traffic operations were evaluated using the *Highway Capacity Manual, 6th Edition* methods as

applied in the HCS 7 software. The Streets module in HCS was the primary tool used for analyzing traffic operations for both the intersections and the roadway segments between intersections along Patterson Rd. TEAPAC files containing the existing signal timings were provided by the City of Grand Junction. Since HCS is better suited to conduct the traffic analysis required by this ACP, the timings from TEAPAC were imported into the HCS models. Table 3 and

Table 4 show the existing traffic operations at the stop-controlled and signalized intersections.

Table 3 – Existing Stop-Controlled Intersection Delay & LOS

Intersection	AM			PM		
	Movement	Delay (sec)	LOS (V/C)	Movement	Delay (sec)	LOS (V/C)
28 Rd & Patterson Rd	SBL	613.0	F (1.57)	SBL	527.9	F (1.34)

Table 4 – Existing Signalized Intersection Delay & LOS

Intersection	AM		PM	
	Delay (sec)	LOS	Delay (sec)	LOS
24 Rd & Patterson Rd	31.4	C	48.6	D
Market St & Patterson Rd	11.8	B	27.8	C
Mesa Mall Access & Patterson Rd	8.4	A	19.2	B
24 1/2 Rd & Patterson Rd	15.7	B	27.4	C
25 Rd & Patterson Rd	33.2	C	108.8	F
25 1/2 Rd & Patterson Rd	21.7	C	34.0	C
N 1st St & Patterson Rd	24.3	C	19.0	B
N 7th St & Patterson Rd	26.1	C	28.2	C
N 12th St & Patterson Rd	32.9	C	39.4	D
N 15th St & Patterson Rd	5.1	A	7.1	A
27 1/2 Rd & Patterson Rd	18.9	B	18.5	B
28 1/4 Rd & Patterson Rd	18.4	B	19.0	B
29 Rd & Patterson Rd	56.1	E	54.8	D
29 1/2 Rd & Patterson Rd	19.0	B	14.1	B
30 Rd & Patterson Rd	31.7	C	30.2	C

All the signalized intersections operate at acceptable levels of service, with the exception of Patterson Rd & 25 Rd, which operates at LOS F in the PM peak hour. This is primarily due to the eastbound thru movement being over capacity. The stop-controlled intersection of Patterson Rd & 28 Rd fails in both the AM and PM time periods as a result of the southbound left turn movement having difficulty finding gaps in traffic while turning onto Patterson Rd. The V/C ratio is well over 1.00 in both time periods, indicating that queuing is likely a problem for the southbound left turning movement. Since the traffic volumes at this intersection are too low to warrant a signal, restricting the southbound left turn movement should be considered. The HCS results have been included in Appendix D.

1.3.2 Facility Operations

In accordance with HCM methods, traffic operations for both the individual urban street segments and the overall facility were analyzed. Table 5 shows the travel speed, percent of free flow speed (PFFS), and the LOS.

Table 5 – Existing Facility Operations

Segment	AM						PM					
	Eastbound			Westbound			Eastbound			Westbound		
	Travel Speed MPH	PFFS	LOS	Travel Speed MPH	PFFS	LOS	Travel Speed MPH	PFFS	LOS	Travel Speed MPH	PFFS	LOS
24 Rd to Market St	12.3	29.2	F	24.8	59.7	C	12.7	30.1	E	13.1	31.6	E
Market St to Mesa Mall Access	21.6	51.3	C	25.8	61.8	C	14.4	34.1	E	18.0	43.1	D
Mesa Mall Access to 24 1/2 Rd	30.2	75.2	B	30.3	74.5	B	26.3	65.5	C	28.9	70.9	B
24 1/2 Rd to 25 Rd	34.8	85.5	A	25.2	58.6	C	26.1	64.2	C	26.2	61.0	C
25 Rd to 25 1/2 Rd	22.2	51.4	C	35.5	82.3	A	7.4	17.2	F	30.4	70.4	B
25 1/2 Rd to 1st St	31.5	73.1	B	29.6	72.6	B	21.6	50.1	C	33.2	81.6	A
1st St to 7th St	30.6	72.5	B	27.4	68.7	B	29.8	70.7	B	24.4	61.1	C
7th St to 12th St	33.6	84.0	A	23.6	55.7	C	25.9	64.7	C	22.6	53.4	C
12th St to 15th St	14.7	36.8	E	34.1	80.7	A	14.5	36.3	E	31.7	75.1	B
15th St to 27 1/2 Rd	36.2	82.2	A	27.0	61.3	C	32.8	74.5	B	26.4	59.8	C
27 1/2 Rd to 28 1/4 Rd	36.5	84.0	A	34.7	75.6	B	37.4	85.9	A	36.4	79.4	B
28 1/4 Rd to 29 Rd	35.8	84.1	A	32.6	72.6	B	34.7	81.6	A	32.4	72.2	B
29 Rd to 29 1/2 Rd	27.6	62.8	C	31.1	70.8	B	24.5	55.9	C	36.8	83.7	A
29 1/2 Rd to 30 Rd	36.7	80.6	A	20.5	50.2	C	37.4	82.1	A	19.6	48.1	D
Facility (24 Rd to 30 Rd)	**29.2**	**68.7**	**B**	**28.5**	**66.8**	**C**	**21.9**	**51.5**	**F**	**27.3**	**64.0**	**C**

As can be seen in the table, most of the segments operate acceptably. Notably, the segment from 24 Rd to Market St operates at a LOS F for the eastbound direction in the AM, and LOS E in both directions during the PM. The segment from 25 Rd to 25 ½ Rd operates at LOS F for the eastbound direction in the PM. Overall, the facility operates at LOS B and C for the eastbound and westbound directions in the AM. The westbound direction operates at LOS C in the PM, while the eastbound direction operates at LOS F. HCS gives a facility LOS of F if any of the segments are over capacity, so while the eastbound direction in the PM is technically LOS F, it is only due to one segment operating over capacity. Overall, the travel speeds along the corridor are good.

2.0 YEAR 2045 NO BUILD TRAFFIC OPERATIONS

2.1 Year 2045 Traffic Volumes and Roadway Network

The 2045 No Build scenario models the projected traffic conditions in the year 2045, assuming the access recommendations proposed by the ACP have not been implemented. The No Build scenario is used to identify which locations will potentially develop operational issues due to growth in traffic volumes, and is used to compare operational characteristics with the Year 2045 ACP scenario. Traffic operations or conditions in the 2045 No Build scenario may be unacceptable, with potential solutions to these issues proposed in the ACP scenario.

While the roadway geometry remained consistent with the Existing scenario, the traffic volumes were increased to reflect the expected growth in the surrounding area. The 2045 intersection volumes were forecasted using the Grand Valley MPO Travel Demand Model. The primary purpose of the year 2045 Travel Demand Model is to forecast traffic and travel in communities throughout the region. Additionally, the model can support evaluation of proposed roadway projects, help evaluate potential impacts of proposed development projects, and support various other studies of the region, subareas, corridors, and other planning activities. The model has been calibrated to reflect a base year of 2018, and contains future year data reflecting the forecasted year 2045 conditions. Generally speaking, collector roadways and

above are reflected in the model. Local roadways and private accesses are not represented. Land and roadway developments that are expected to be completed by the year 2045 have been incorporated into the model, while projects that are not yet a certainty, have not been included. The City of Grand Junction has provided information on several proposed developments that are expected to be completed by the year 2045. The location of each development is listed below:

- NW corner of 27 Rd and Patterson Rd
- 2566 & 2580 Patterson
- Burkey Park
- Matchett Park
- Orange Grove and Thunder Valley
- NW of 7th and Patterson

The year 2045 model from the Grand Valley MPO has the option to include an interchange between I-70 and 29 Rd. This interchange would increase traffic volumes along a portion of Patterson Rd, and decrease the volumes along a different portion. This project is currently unfunded, and there is no certainty of it being completed by 2045. Because of the uncertainty, the year 2045 Travel Demand Model that is used for this project will not include an interchange at 29 Rd.

The Iterative Procedure – Directional Method as described in NCHRP Report 765 Analytical Travel Forecasting Approaches for Project-Level Planning and Design was used to generate intersection turning movement forecasts for the horizon year. The directional method uses an iterative approach to alternatively balance entering traffic and departing traffic volumes until an acceptable level of convergence is reached. The program Turns32 was used to balance the volumes. There were three sets of volumes for this project: year 2020 turning movement counts, year 2018 travel demand model, and year 2045 travel demand model. The increase in link volumes from the 2018 to 2045 travel demand model was calculated, and then added to the link volumes of the 2020 turning movement counts. These link volumes, along with the raw 2020 turning movement counts were input into Turns32. The turning movement counts were then increased in Turns32 to balance with the link volumes. These increased turning movements are the 2045 projected turning movements used in the traffic analysis. The 2045 projected turning movement volumes are 33% higher than the 2020 turning movement counts in the AM peak hour, and 24% higher in the PM peak hour.

2.2 Signal Warrants

In order to identify potential future traffic control at full movement intersections, traffic signal warrants were evaluated at a high level. The Manual on Uniform Traffic Control Devices (MUTCD) contains nine traffic signal warrants that help determine if installing a traffic signal at a particular location is justified. The signal warrants are listed below.

#1 – Eight-Hour Vehicular Volume
#2 – Four-Hour Vehicular Volume
#3 – Peak Hour Vehicular Volume
#4 – Pedestrian Volume
#5 – School Crossing
#6 – Coordinated Signal System
#7 – Crash Experience

#8 – Roadway Network
#9 – Intersection Near a (Railroad) Grade Crossing

The only unsignalized intersection being studied along Patterson Rd is the intersection of Patterson Rd & 28 Rd, which is currently stop-controlled. Since 2045 traffic volumes are speculative, only the Peak Hour (#3) signal warrant was evaluated at corridor intersections. In order for a signal to be warranted, the left turning movement from 28 Rd onto Patterson Rd would have to be at least 100 vph. It is projected to be 49 vph in the AM, and 77 vph in the PM, meaning that a signal is not warranted. In 2021 the City will be connecting 28 Rd to the signal at 28 ¼ Rd via Hawthorne Ave. This will alleviate the left turn delay problem.

2.3 Auxiliary Lanes

With the increased volumes expected for 2045, each turning movement was assessed to see if an auxiliary lane is warranted, based on the requirements outlined by the Grand Junction Transportation Engineering Design Standards (TEDS) Manual. The number of vehicles required to warrant an auxiliary lane is based on the number of thru lanes on the arterial, the speed limit, and whether it is a right or left turning movement. These requirements can be found in section 29.28.170 of the TEDS Manual. According to the manual, dual lefts were included in locations where the left turning movement exceeded 300 vph. The warranted auxiliary lanes were included in both the 2045 No Build and Build HCS models. Some level of ROW impacts, typical to a public project, are anticipated to occur in order to accommodate the additional auxiliary lanes. Table 6 shows the warranted auxiliary lanes that are not currently in place. The ACP found that thirteen intersections warranted auxiliary lanes as listed in the table below.

Table 6–Required Auxiliary Lanes

Intersection	Movement Warranting Auxiliary Lane	
	Left Decel	Right Decel
24 Rd & Patterson Rd		EBR, WBR, SBR
Market St & Patterson Rd		EBR
Mesa Mall Access & Patterson Rd		EBR
24 1/2 Rd & Patterson Rd		EBR, WBR
25 Rd & Patterson Rd		EBR, WBR
25 1/2 Rd & Patterson Rd		EBR, WBR
N 1st St & Patterson Rd		WBR
N 7th St & Patterson Rd		WBR
N 12th St & Patterson Rd	WBL (Dual Lefts)	WBR
28 1/4 Rd & Patterson Rd		EBR
29 Rd & Patterson Rd		EBR, WBR
29 1/2 Rd & Patterson Rd	NBL, SBL	EBR, WBR
30 Rd & Patterson Rd		EBR, WBR

2.4 Additional Geometric Changes to No Build Model

Along with the required auxiliary lanes that were added to the HCS models for the 2045 No Build scenario, several other intersection improvements that are expected to be completed by the year 2045 were added to the models. The intersection of Patterson Rd & 24 Rd was

modeled with two northbound thru lanes and two eastbound left turn lanes. The intersection of Patterson Rd & 12th St was assumed to have dual lefts for each approach, and the intersection of Patterson Rd & 29 Rd was assumed to have dual northbound left turn lanes. These three intersection improvements were modeled in both the 2045 No Build and the 2045 ACP models. It is anticipated that the 12th Street project will require additional ROW. The other two projects may be able to fit the proposed infrastructure within existing ROW, but may need temporary easements for tie-ins.

2.5 2045 No Build Traffic Operations

2.5.1 Intersections

Traffic operations were evaluated using *Highway Capacity Manual, 6th Edition* methods as applied in the HCS 7 software. The Streets module in HCS is the primary tool for analyzing traffic operations for both the intersections and the roadway segments between intersections along Patterson Rd. The cycle lengths, splits, and offsets were optimized to accommodate the 2045 traffic patterns. The roadway network was updated to include all of the warranted auxiliary lanes, but the specific changes proposed by this ACP are not in the No Build scenario. Table 7 and

Table 8 show the traffic operations for the intersections along Patterson Rd in the 2045 No Build scenario. The HCS printouts of the results can be found in Appendix D.

Table 7 – 2045 No Build Stop-Control Intersection Delay & LOS

Intersection	AM			PM		
	Movement	Delay (sec)	LOS (V/C)	Movement	Delay (sec)	LOS (V/C)
28 Rd & Patterson Rd	SBL	1520.1	F (3.30)	SBL	1682.2	F (3.92)

Table 8 – 2045 No Build Signalized Intersection Delay & LOS

Intersection	AM		PM	
	Delay (sec)	LOS	Delay (sec)	LOS
24 Rd & Patterson Rd	38.2	D	40.4	D
Market St & Patterson Rd	9.0	A	24.4	C
Mesa Mall Access & Patterson Rd	13.5	B	34.4	C
24 1/2 Rd & Patterson Rd	22.6	C	39.5	D
25 Rd & Patterson Rd	31.2	C	74.0	E
25 1/2 Rd & Patterson Rd	20.9	C	24.4	C
N 1st St & Patterson Rd	30.7	C	50.5	D
N 7th St & Patterson Rd	20.4	C	52.5	D
N 12th St & Patterson Rd	33.3	C	76.4	E
N 15th St & Patterson Rd	5.9	A	6.0	A
27 1/2 Rd & Patterson Rd	19.9	B	19.2	B
28 1/4 Rd & Patterson Rd	26.1	C	36.0	D
29 Rd & Patterson Rd	30.1	C	39.2	D
29 1/2 Rd & Patterson Rd	14.3	B	50.6	D
30 Rd & Patterson Rd	27.2	C	20.1	C

The stop-controlled intersection at 28 Rd & Patterson Rd is expected to continue to operate at LOS F in 2045, due to left turns out of the side streets having difficulty finding gaps in the traffic along Patterson Rd. The V/C ratio is far over 1.00, indicating that queueing will be problematic.

Delays have increased at most of the signalized intersections along the corridor due to the increase in traffic volume. The intersections of Patterson Rd & 25 Rd and of Patterson Rd & 12th St are expected to operate at LOS E in the PM. The poor level of service is caused by the eastbound thru movement operating over capacity at both intersections. Without a third eastbound thru lane, it will be difficult to allocate enough green time to the eastbound thru movement without causing operational issues for the side streets.

2.5.2 Facility Operations

Traffic operations for both the individual urban street segments and the overall facility were analyzed using the HCS Streets methods. Table 9 shows the travel speed, percent of free flow speed (PFFS), and the LOS.

Table 9 – 2045 No Build Facility Operations

Segment	AM						PM					
	Eastbound			Westbound			Eastbound			Westbound		
	Travel Speed MPH	PFFS	LOS	Travel Speed MPH	PFFS	LOS	Travel Speed MPH	PFFS	LOS	Travel Speed MPH	PFFS	LOS
24 Rd to Market St	7.5	17.9	F	18.6	44.8	D	3.2	7.7	F	10.8	26.1	F
Market St to Mesa Mall Access	29.8	70.9	B	26.5	63.6	C	18.2	43.3	D	12.3	29.6	F
Mesa Mall Access to 24 1/2 Rd	26.6	66.3	C	28.2	69.2	B	16.9	42.0	D	18.4	56.7	C
24 1/2 Rd to 25 Rd	28.1	69.2	B	23.1	53.7	C	21.0	51.6	C	12.3	28.6	F
25 Rd to 25 1/2 Rd	25.9	60.0	C	34.3	79.5	B	11.5	26.7	F	36.7	85.0	A
25 1/2 Rd to 1st St	30.6	71.0	B	23.6	57.8	C	30.1	69.9	B	26.0	63.8	C
1st St to 7th St	22.6	53.6	C	31.0	77.7	B	13.5	32.0	F	23.0	57.8	C
7th St to 12th St	29.9	74.6	B	20.2	47.8	D	11.1	27.7	F	19.2	45.3	D
12th St to 15th St	13.8	34.6	E	33.9	80.1	A	5.2	13.1	F	35.6	84.1	A
15th St to 27 1/2 Rd	32.8	74.5	B	19.0	43.2	D	28.8	65.4	C	22.4	50.8	C
27 1/2 Rd to 28 1/4 Rd	35.7	82.1	A	29.4	64.1	C	37.4	85.9	A	27.4	59.8	C
28 1/4 Rd to 29 Rd	32.8	77.0	B	28.1	62.6	C	26.2	61.6	C	24.7	54.9	C
29 Rd to 29 1/2 Rd	24.2	55.1	C	34.9	79.5	B	20.7	47.3	D	23.2	53.0	C
29 1/2 Rd to 30 Rd	41.5	91.1	A	28.1	68.9	B	14.9	32.8	F	31.9	78.1	B
Facility (24 Rd to 30 Rd)	**26.7**	**62.9**	C	**26.8**	**62.8**	C	**15.5**	**42.5**	F	**22.4**	**52.3**	F

The travel speeds along the highway segments of Patterson Rd have decreased from the Existing Conditions scenario. The roadway segment between 24 Rd and Market St is the most problematic, operating at LOS F for the eastbound direction in the AM and LOS F for both directions in the PM. Several other segments operate at LOS F for the PM time period, most notably the eastbound segment of Patterson Rd from 1st St to 15th St.

3.0 YEAR 2045 ACP TRAFFIC OPERATIONS

3.1 Year 2045 ACP Scenario

The ACP scenario analyzes the traffic conditions assuming that all of the recommendations proposed by the ACP have been implemented. The base traffic volumes remain the same as in

the 2045 No Build scenario, however, in locations where a movement has been restricted in the ACP scenario, the vehicles are rerouted, resulting in different turning movement volumes.

3.2 Auxiliary Lanes

Since the volumes of several of the turning movements in the ACP scenario differ from those in the No Build scenario, each turning movement was reassessed to see if an auxiliary lane is warranted based on the requirements outlined by the Grand Junction Transportation Engineering Design Standards (TEDS) Manual. The number of vehicles required to warrant an auxiliary lane is based on the number of thru lanes on the arterial, the speed limit, and whether it is a right or left turning movement. These requirements can be found in section 29.28.170 of the TEDS Manual. Per the TEDS Manual, dual lefts were included in locations where the left turning movement exceeded 300 vph. Along with identifying the warranted auxiliary lanes, their required lengths were calculated as well, and are shown in Table 10. The total length for both right and left turn lanes in the TEDS Manual standards is calculated by adding the taper length to the 90% queue length. The required auxiliary lanes have been included in the HCS models. It is anticipated that some level of ROW impacts, typical to a public project, will occur to accommodate the additional auxiliary lanes.

Table 10 – 2045 ACP Required Auxiliary Lanes

Intersection	Movement	Volume	Speed Limit	Taper Length	90% Queue Length	Total Length
Patterson Rd & 24 Rd	SBR	71	40	90	43	133
	EBR	207	35	60	0	60
	WBR	359	35	60	0	60
Patterson Rd & Market St	EBR	141	35	60	41	101
Patterson Rd & Home Depot	EBR	227	35	60	103	163
	NBL	279	20	60	139	199
	NBR	249	20	60	205	265
Patterson Rd & 24 1/2 Rd	EBR	251	35	60	165	225
	WBR	282	35	60	92	152
Patterson Rd & 25 Rd	EBR	181	40	90	124	214
	WBR	147	40	90	89	179
Patterson Rd & 25 1/2 Rd	EBR	144	40	90	84	174
	WBR	147	40	90	17	107
Patterson Rd & 1st St	WBR	124	35	60	93	153
Patterson Rd & 7th St	WBR	172	35	60	30	90
Patterson Rd & 12 St	SBL	288	40	90	139	229
	WBL (Dual)	382	40	90	79	169
	WBR	151	40	90	59	149
Patterson Rd & 15 St	EBR	30	40	90	175	265
	WBR	194	40	90	30	120
Patterson Rd & 28 1/4 Rd	EBR	329	40	90	73	163
Patterson Rd & 29 Rd	EBR	310	45	90	154	244
	WBR	98	45	90	21	111
Patterson Rd & 29 1/2 Rd	EBR	96	45	90	73	163
	WBR	265	45	90	114	204
	NBL	86	35	60	73	133
	SBL	155	35	60	191	251
Patterson Rd & 30 Rd	EBR	319	35	60	34	94
	WBR	69	45	90	33	123

3.3 Geometric Changes to 2045 ACP Model

The required auxiliary lanes were included in the 2045 ACP HCS models. The following three changes were added to the 2045 ACP models, just as they were to the 2045 No Build models as well. The intersection of Patterson Rd & 24 Rd was modeled with two northbound thru lanes and two eastbound left turn lanes. The intersection of Patterson Rd & 12th St was assumed to have dual lefts for each approach, and the intersection of Patterson Rd & 29 Rd was assumed to have dual northbound left turn lanes.

3.4 2045 ACP Traffic Operations

3.4.1 Intersections

Traffic operations were evaluated using *Highway Capacity Manual, 6th Edition* methods as applied in the HCS 7 software. The Streets module in HCS is the primary tool for analyzing traffic operations for both the intersections and the roadway segments between intersections along Patterson Rd. The signal cycle lengths, splits, and offsets were optimized to accommodate the changed traffic patterns. Table 11 and Table 13 show the traffic operations for the intersections along Patterson Rd in the 2045 ACP scenario. The HCS printouts of the results can be found in Appendix D.

Table 11 – 2045 ACP Stop-Control Intersection Delay & LOS

Intersection	AM			PM		
	Movement	Delay (sec)	LOS (V/C)	Movement	Delay (sec)	LOS (V/C)
28 Rd & Patterson Rd	SBR	26.4	D	SBR	16.6	C

Table 12 – 2045 ACP Signalized Intersection Delay & LOS

Intersection	AM		PM	
	Delay (sec)	LOS	Delay (sec)	LOS
24 Rd & Patterson Rd	30.1	C	37.6	D
Market St & Patterson Rd	9.7	A	22.6	C
Mesa Mall Access & Patterson Rd	8.7	A	35.5	D
24 1/2 Rd & Patterson Rd	20.5	C	35.4	D
25 Rd & Patterson Rd	28.9	C	55.7	E
25 1/2 Rd & Patterson Rd	25.7	C	31.1	C
N 1st St & Patterson Rd	27.8	C	49.0	D
N 7th St & Patterson Rd	25.6	C	34.8	C
N 12th St & Patterson Rd	27.4	C	62.4	E
N 15th St & Patterson Rd	4.5	A	10.5	B
27 1/2 Rd & Patterson Rd	20.0	C	30.4	C
28 1/4 Rd & Patterson Rd	24.5	C	33.4	C
29 Rd & Patterson Rd	26.7	C	38.4	D
29 1/2 Rd & Patterson Rd	17.8	B	32.9	C
30 Rd & Patterson Rd	21.5	C	23.0	C

The intersection results are similar to those of the 2045 No Build scenario, with the intersections of Patterson Rd & 25 Rd and Patterson Rd & 12th St still expected to operate at LOS E in the

PM. Unless geometric changes are made to increase the capacity of the eastbound thru movement, it is likely that operations at these two intersections will be problematic by year 2045.

3.4.2 Facility Operations

Traffic operations for both the individual urban street segments and the overall facility were analyzed using the HCS Streets methods. Table 13 shows the travel speed, percent of free flow speed (PFFS), and the LOS.

Table 13 – 2045 ACP Facility Operations

Segment	AM						PM					
	Eastbound			Westbound			Eastbound			Westbound		
	Travel Speed MPH	PFFS	LOS	Travel Speed MPH	PFFS	LOS	Travel Speed MPH	PFFS	LOS	Travel Speed MPH	PFFS	LOS
24 Rd to Market St	7.3	17.3	F	18.6	44.8	D	6.2	14.7	F	16.2	39.1	E
Market St to Mesa Mall Access	27.7	66.7	C	27.1	65.2	C	16.7	40.3	D	13.5	32.5	E
Mesa Mall Access to 24 1/2 Rd	31.9	79.2	B	26.6	65.0	C	16.8	41.7	D	21.3	52.2	C
24 1/2 Rd to 25 Rd	29.8	72.8	B	23.8	54.9	C	21.2	51.6	C	21.8	50.4	C
25 Rd to 25 1/2 Rd	25.7	59.9	C	29.8	69.4	B	16.1	37.6	F	31.6	73.6	B
25 1/2 Rd to 1st St	29.1	67.2	B	24.2	59.1	C	24.3	56.1	C	22.8	55.6	C
1st St to 7th St	24.3	56.8	C	27.0	66.8	C	14.7	34.5	F	29.3	72.6	B
7th St to 12th St	23.9	58.7	C	23.4	54.4	C	31.6	77.5	B	23.7	55.0	C
12th St to 15th St	14.0	34.7	E	34.4	80.7	A	6.1	15.0	F	24.2	56.8	C
15th St to 27 1/2 Rd	35.2	79.8	B	20.7	46.9	D	28.6	65.0	C	12.4	28.2	F
27 1/2 Rd to 28 1/4 Rd	37.7	87.2	A	31.6	69.4	B	36.6	84.6	A	16.4	36.0	F
28 1/4 Rd to 29 Rd	32.8	75.5	B	31.4	68.6	B	31.4	72.3	B	23.9	52.3	C
29 Rd to 29 1/2 Rd	28.1	62.6	C	32.1	71.3	B	23.3	51.8	C	31.5	70.1	B
29 1/2 Rd to 30 Rd	33.6	73.8	B	28.7	70.3	B	28.2	61.9	C	30.5	74.8	B
Facility (24 Rd to 30 Rd)	**26.8**	**62.7**	C	**27.4**	**63.6**	C	**19.9**	**46.5**	F	**22.3**	**51.8**	F

The roadway segment between 24 Rd and Market St is the most problematic, operating at LOS F for the eastbound direction during both time periods, similar to the 2045 No Build scenario. Much of Patterson Rd, between 25 Rd and 27 ½ Rd, is expected to be over capacity for the eastbound direction during the PM peak hour. Overall, however, travel times for both directions and time periods are expected to experience a slight improvement with the implementation of the ACP. This can mostly be attributed to the reduction of access points along the corridor.

3.5 Evaluated Alternatives

Prior to finalizing the ACP, several alternative designs were evaluated along Patterson Rd.

Market St as a Stop-Controlled Intersection: Due to the proximity of Market St to 24 Rd, and the resulting overlap of functional intersection areas, this alternative called for the signal to be removed from the intersection of Patterson Rd & Market St. The north side of the intersection would be right-in right-out, and the south side would be a ¾ movement. The northbound thru and left turn movements were rerouted to the Home Depot access point, while the southbound thru and left turn movements, and eastbound left turn movement were rerouted to 24 Rd. Although the intersection of Patterson Rd & Market St was expected to operate well in this scenario, it increased the volumes at the intersections of Patterson Rd & 24 Rd and Patterson Rd & Home Depot access. The southern leg of the Home Depot access would require dual northbound left turn lanes, a thru lane, and a right turn lane in order to operate acceptably. This

would result in impacts to the Mesa Mall circulation road and parking. The southbound left turn movement at 24 Rd was expected to increase from 465 vph to 808 vph in the PM. In order for the movement to operate under capacity, there would need to be three left turn lanes, or an alternative intersection design, such as a continuous flow intersection (CFI). Due to the impacts along 24 Rd and at the Mesa Mall and in consideration of the potential relief that a future extension of F 1/2 Rd as a principal arterial would provide, it was decided to keep Market St signalized.

Patterson Rd & 24 Rd as CFI: With Market St as a stop-controlled intersection, the intersection of Patterson Rd & 24 Rd was evaluated as a CFI to handle the increased southbound left turn movement. Only the northern leg of the intersection was analyzed as a CFI, since making the other legs CFI's did not provide significant improvements to traffic operations. The CFI option was expected to operate well during all time periods. Since it was decided to keep Market St as a signalized intersection, the forecasted southbound left turn volume was reduced back to 465 vph, making a CFI unnecessary. The intersection of Patterson Rd & 24 Rd will remain a conventional signalized intersection, with an additional northbound thru and eastbound left turn lane constructed to help traffic operations.

Patterson Rd & 15th St as a ¾ movement: A scenario was analyzed where 15th St was made a ¾ movement stop-controlled intersection, with the left turns out restricted. Although traffic operations were good under this alternative, the pedestrian crossings would be eliminated if the intersection were to be made stop controlled. As this intersection sees frequent pedestrian crossings, it was considered necessary for the pedestrian crossings to remain, so the intersection will remain signalized.

Memorandum

To: Patterson Road Access Control Plan (ACP) Project Team

From: Maxwell Rusch, PE

Date: March 18, 2020

Re: Patterson Road Traffic Methodology

This memorandum describes the general traffic engineering and transportation planning approach proposed by Stolfus & Associates, Inc. for the Patterson Road Access Control Plan (ACP). The purpose of this memorandum is to outline the primary assumptions and procedures that will be used in the traffic analyses for the project. All traffic analyses conducted for the ACP will be in accordance with this methodology, and used to support access-related decisions made during the course of the project. While access point consolidation is the primary goal of the project, recommendations resulting from the ACP traffic analyses, such as the addition of auxiliary lanes, may be incorporated as well.

STUDY AREA

The study area consists of a 7-mile segment of Patterson Road in Mesa County. The roadway is an undivided, 4-lane roadway. The segment begins at the intersection of I-70 Business & Patterson Road and ends at the intersection of Lodgepole St & Patterson Rd. The entirety of the study area lies within the Grand Junction City boundaries.

EXISTING TRAFFIC

Daily Classification Counts that will be conducted over a two-day period, have been proposed for the following 13 locations:

- East of 24 Road
- West of 24 Road
- East of 24½ Road
- West of 24½ Road
- West of 25 Road
- East of 25 Road
- West of 1st Street
- West of 7th Street
- West of 12th Street
- West of 28 ¼ Road
- West of 29 Road
- East of 29 Road
- East of 30 Road

Peak Hour Turning Movement Counts (7:00-9:00 AM & 4:00-6:00 PM) have been proposed for the following 15 locations:

- 24 Road & Patterson
- Market Street/Mall Access & Patterson
- Home Depot Access/Mesa Mall Access & Patterson
- 24 ½ Road & Patterson
- 25 Road & Patterson
- 25 ½ Road & Patterson
- 1st Street & Patterson
- 7th Street & Patterson
- 12th Street & Patterson
- 27 ½ Road & Patterson
- 28 Road & Patterson.
- 28 ¼ Road & Patterson
- 29 Road & Patterson
- 29 ½ Road & Patterson
- 30 Road & Patterson

FUTURE TRAFFIC

Future intersection volumes will be forecasted using the Grand Valley MPO Travel Demand Model. Models for existing conditions (year 2018-2019) and future conditions (year 2045) will be provided by the MPO. Roadway volumes from the model's base year traffic assignment will be compared to available traffic count data in order to ensure that the model is reasonably representing observed traffic patterns. Some amount of deviation between existing and modeled volumes is acceptable and expected. As is typical with regional models, traffic volumes on higher volume facilities are more reliable than traffic volumes on low volume facilities, such as collector streets and arterial streets. The table below reports the maximum desirable amount of deviation between modeled traffic volume and ground counts for the base year. If the deviation exceeds what is listed below, alterations may be made to the future models link volumes.

Model Volume Validation Criteria

Link Type	Max. Deviation
Freeway	+/- 10%
Expressway	+/- 10%
Principal Arterial	+/- 10%
Minor Arterial	+/- 15%
Collector	+/- 25%

The primary purpose of the year 2045 Travel Demand Model is to forecast traffic and travel in communities throughout the region. Additionally, the model can support evaluation of proposed roadway projects, help evaluate potential impacts of proposed development projects, and support various other studies of the region, subareas, corridors, and other planning activities. The model has been calibrated to reflect a base year of 2018 and contains future year data reflecting the forecasted year 2045 conditions. Generally speaking, Collector roadways and above are reflected in the model. Local roadways and private accesses are not represented. Land and roadway developments that are expected to be completed by the year 2045 have been incorporated into the model, while projects that are not yet a certainty, have not been included. The City of Grand Junction has provided information on several proposed developments that are expected to be completed by the year 2045. The location of each development is listed below:

- NW corner of 27 Rd and Patterson Rd
- 2566 & 2580 Patterson
- Burkey Park
- Matchett Park
- Orange Grove and Thunder Valley
- NW of 7th and Patterson

Intersection improvements have been proposed at the following intersections:

- Patterson Road & 25 Road
- Patterson Road & 28 ½ Road
- Patterson Road & 29 Road
- Patterson Road & 12th Street

Once the 2045 Travel Demand Models have been provided, they will be checked to confirm that these projects and intersection improvements are reflected in the models.

The year 2045 model will have the option to include an interchange between I-70 and 29 Rd. This interchange would increase traffic volumes along a portion of Patterson Rd, and decrease the volumes along a different portion. This project is currently unfunded, and there is no certainty of it being completed by 2045. Because of the uncertainty, the year 2045 Travel Demand Model that is used for this project will not include an interchange at 29 Rd.

The Iterative Procedure – Directional Method as described in NCHRP Report 765 Analytical Travel Forecasting Approaches for Project-Level Planning and Design will be used to generate intersection turning movement forecasts for the horizon year. The directional method uses an iterative approach to alternatively balance entering traffic and departing traffic volumes until an acceptable level of convergence is reached. This method applies existing turning movement volumes, and base and future year link volumes. The iterative procedure—directional method was previously documented in *NCHRP Report 255*. The method has been in use for many years and is widely accepted by transportation practitioners. Directional link volume forecasts and an estimate of intersection turning movement percentages are required. Estimated turning percentages can be based on existing turning movement counts, turning movement patterns at similar intersections, or professional judgment. The method alternatively balances intersection approach and departure volumes in an iterative process until an acceptable level of convergence is reached.

TRAFFIC ANALYSIS SCENARIOS

Traffic operations will be evaluated for the following three scenarios:

- Existing
- '2045 No ACP'
- '2045 ACP'

The existing scenario will be evaluated using existing count data and the existing roadway geometry. The 2045 No ACP scenario will evaluate traffic conditions using volumes from the Year 2045 Travel Demand Model. Roadway developments that are expected to occur irrespective of this ACP will be incorporated into the models. The 2045 ACP scenario will analyze the study area assuming full implementation of the proposed ACP plan. Movements will be rerouted when necessary. Traffic signal timings will be optimized in both 2045 scenarios, and where warranted by the Transportation Engineering Design Standards (TEDS) criteria, auxiliary lanes will also be assumed.

TRAFFIC ANALYSIS APPROACH

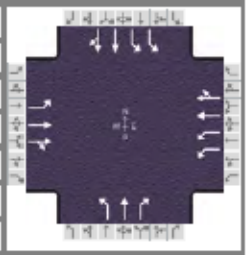
Traffic operations will be evaluated using *Highway Capacity Manual, 6th Edition* methods as applied in the HCS 7 software. The Streets module in HCS will be the primary tool for analyzing traffic operations for both the intersections and the roadway segments between intersections along Patterson Rd.

The impacts of the ACP, from a traffic operations standpoint, are applicable to two of the project goals. The first goal is to provide effective and efficient thru travel for traffic on Patterson Road. This will be evaluated by the corridor travel time in the HCS reports. A decrease in corridor travel time will be deemed favorable, while an increase will be unfavorable. The second goal is to provide safe, effective, and efficient access to and from Patterson Road for businesses, residents, and guests. This will be evaluated by looking at three metrics. The first will be to analyze the left turning movements onto and off of Patterson Road. A decrease in the number of left turning movements with unacceptable traffic operations (LOS E or F) will be deemed favorable, while an increase will be unfavorable. Another criterion that will be evaluated is the extent to which the auxiliary lanes along Patterson Road conform to the Grand Junction TEDS Manual, with the objective being to increase the compliance between the No ACP and ACP scenarios. Finally, while not a directly quantifiable measure, the amount of out of direction travel required to access stores, business, and homes from Patterson Rd, and vice versa, will be evaluated.

TEAPAC files containing the existing signal timings have been provided by the City of Grand Junction. Since HCS is better suited to conduct the traffic analysis required by this ACP, the timings from TEAPAC will be imported into the HCS models. In the year 2045 HCS models, the signal timings will be optimized to accommodate changing traffic patterns. HCS printouts summarizing the optimized timings and LOS results will be included in the technical appendices. The metrics used by HCS to determine the LOS for multimodal forms of travel along a corridor are unlikely to be changed by this ACP. As a result, while the future signal timings will ensure sufficient pedestrian crossing times, multimodal results will not be reported in this ACP.

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.91
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	24 Road & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	67	140	51	118	151	115	67	426	360	112	204	17

Signal Information			
Cycle, s	100.0	Reference Phase	6
Offset, s	85	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.8	0.5	33.2	7.8	0.9	27.8	
Yellow	3.5	3.5	4.0	3.5	0.0	4.0	
Red	0.5	0.5	1.0	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	2.0	4.0	1.1	3.0	2.0	4.0
Phase Duration, s	16.3	42.7	11.8	38.2	11.8	32.8	12.7	33.7
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	12.2		5.6		4.7	26.9	5.4	7.2
Green Extension Time (g_e), s	0.0	0.0	0.7	0.0	0.1	0.9	0.3	7.3
Phase Call Probability	1.00		0.97		0.87	1.00	0.97	1.00
Max Out Probability	1.00		0.00		0.08	1.00	0.17	0.19

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	292	436	396	130	152	140	74	468	396	123	122	121
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1725	1841	1669	1716	1826	1571	1810	1826	1585	1730	1841	1789
Queue Service Time (g_s), s	10.2	15.6	15.2	3.6	6.1	6.5	2.7	24.9	21.4	3.4	5.1	5.2
Cycle Queue Clearance Time (g_c), s	10.2	15.6	15.2	3.6	6.1	6.5	2.7	24.9	21.4	3.4	5.1	5.2
Green Ratio (*g/C*)	0.47	0.38	0.38	0.08	0.33	0.33	0.36	0.28	0.36	0.09	0.29	0.29
Capacity (*c*), veh/h	564	694	629	267	607	522	462	508	564	301	528	513
Volume-to-Capacity Ratio (*X*)	0.518	0.629	0.630	0.485	0.250	0.269	0.159	0.922	0.701	0.409	0.231	0.235
Back of Queue (*Q*), ft/ln (90 th percentile)	175	200.8	175.1	64.1	107.5	99.9	45.9	425.2	271.7	58.6	90	91.2
Back of Queue (*Q*), veh/ln (90 th percentile)	7.6	8.8	7.9	2.8	4.7	4.5	2.1	18.6	12.2	2.6	4.0	3.9
Queue Storage Ratio (*RQ*) (90 th percentile)	0.98	0.00	0.00	0.29	0.00	0.00	0.35	0.00	1.54	0.44	0.00	0.00
Uniform Delay (d_1), s/veh	19.0	16.3	15.3	44.2	24.3	24.5	21.8	35.0	27.6	43.2	27.2	27.3
Incremental Delay (d_2), s/veh	1.1	4.3	4.7	1.7	0.9	1.1	0.2	22.3	4.2	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	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	20.1	20.6	20.0	45.9	25.2	25.6	22.0	57.4	31.8	44.5	27.6	27.6
Level of Service (LOS)	C	C	C	D	C	C	C	E	C	D	C	C
Approach Delay, s/veh / LOS	20.3	C		31.7	C		43.8	D		33.3	C	
Intersection Delay, s/veh / LOS	31.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.28	B	2.44	B	2.29	B
Bicycle LOS Score / LOS	0.72	A	0.84	A	2.03	B	0.79	A

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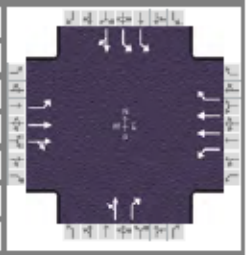
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	Market Street/Mall Acce…	File Name	Existing AM.xus		
Project Description					



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	541	31	12	348	72	12	6	10	60	7	23

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	0.9	3.6		68.7	3.0	4.8	0.0					
Yellow	3.5	0.0		4.0	4.0	4.0	0.0					
Red	0.5	0.0		1.0	1.0	1.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	3.0		11.0		10.0
Phase Duration, s	8.5	77.3	4.9	73.7		8.0		9.8
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time (g_s), s	3.3		2.1			3.2		4.1
Green Extension Time (g_e), s	0.1	0.0	0.0	0.0		0.0		0.2
Phase Call Probability	0.90		0.18			0.61		0.95
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	85	555	545	7	208	43		22	12	72	36	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1856	1820	1810	1766	1522		1839	1610	1702	1670	
Queue Service Time (g_s), s	1.3	16.3	16.4	0.1	1.0	0.2		1.2	0.7	2.1	2.1	
Cycle Queue Clearance Time (g_c), s	1.3	16.3	16.4	0.1	1.0	0.2		1.2	0.7	2.1	2.1	
Green Ratio (*g/C*)	0.75	0.72	0.72	0.70	0.69	0.69		0.03	0.03	0.05	0.05	
Capacity (*c*), veh/h	912	1342	1316	369	2426	1045		56	49	162	79	
Volume-to-Capacity Ratio (*X*)	0.093	0.414	0.414	0.019	0.086	0.041		0.388	0.246	0.447	0.455	
Back of Queue (*Q*), ft/ln (90 th percentile)	14.6	227.7	219.8	1.5	13.7	3		22.1	12.2	36.6	36.1	
Back of Queue (*Q*), veh/ln (90 th percentile)	0.6	10.1	10.0	0.1	0.6	0.1		1.0	0.6	1.6	1.6	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.10	0.00	0.00	0.01	0.00	0.03		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	3.4	9.1	9.1	5.8	2.6	1.0		47.6	47.4	46.3	46.4	
Incremental Delay (d_2), s/veh	0.0	0.9	0.9	0.0	0.1	0.1		1.6	1.0	0.7	1.5	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	3.4	9.9	10.0	5.8	2.7	1.1		49.2	48.3	47.1	47.9	
Level of Service (LOS)	A	A	B	A	A	A		D	D	D	D	
Approach Delay, s/veh / LOS	9.5	A		2.5	A		48.9	D		47.3	D	
Intersection Delay, s/veh / LOS	11.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.85	B	2.05	B	2.47	B	2.31	B
Bicycle LOS Score / LOS	1.10	A	0.92	A	0.54	A	0.67	A

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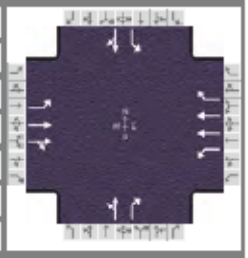
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.84
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	Home Depot Access/Me...	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	33	559	13	12	405	13	7	5	10	26	4	19

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	51	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	0.9	3.3	70.2	4.0	2.6	0.0	
Yellow	3.5	0.0	4.0	4.0	4.0	0.0	
Red	0.5	0.0	1.0	1.0	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	4.0	1.1	3.0		11.0		10.0
Phase Duration, s	8.2	78.5	4.9	75.2		7.6		9.0
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0		5.4		5.4
Queue Clearance Time (g_s), s	3.0		2.1			2.8		3.7
Green Extension Time (g_e), s	0.3	0.0	0.0	0.0		0.1		0.2
Phase Call Probability	0.85		0.18			0.52		0.80
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	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	67	587	582	7	236	8		14	12	31	27	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1856	1840	1810	1752	1610		1846	1610	1767	1654	
Queue Service Time (g_s), s	1.0	12.4	12.4	0.1	2.5	0.2		0.8	0.7	1.7	1.6	
Cycle Queue Clearance Time (g_c), s	1.0	12.4	12.4	0.1	2.5	0.2		0.8	0.7	1.7	1.6	
Green Ratio (*g/C*)	0.76	0.74	0.74	0.71	0.70	0.70		0.03	0.03	0.04	0.04	
Capacity (*c*), veh/h	883	1364	1353	376	2459	1130		48	56	71	66	
Volume-to-Capacity Ratio (*X*)	0.076	0.430	0.430	0.019	0.096	0.007		0.299	0.213	0.437	0.413	
Back of Queue (*Q*), ft/ln (90 th percentile)	11.3	147.2	144	1.5	32.5	2.2		16.5	13.1	35.4	30.6	
Back of Queue (*Q*), veh/ln (90 th percentile)	0.5	6.5	6.5	0.1	1.4	0.1		0.7	0.6	1.6	1.4	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.08	0.00	0.00	0.01	0.00	0.00		0.00	0.15	0.27	0.00	
Uniform Delay (d_1), s/veh	3.2	5.2	5.2	4.9	5.6	5.9		47.8	46.9	46.9	46.8	
Incremental Delay (d_2), s/veh	0.0	0.9	0.9	0.0	0.1	0.0		4.9	2.7	5.9	5.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	3.3	6.1	6.1	4.9	5.7	6.0		52.7	49.6	52.8	52.6	
Level of Service (LOS)	A	A	A	A	A	A		D	D	D	D	
Approach Delay, s/veh / LOS	6.0	A		5.7	A		51.3	D		52.7	D	
Intersection Delay, s/veh / LOS	8.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.85	B	1.86	B	2.46	B	2.32	B
Bicycle LOS Score / LOS	1.08	A	0.91	A	0.53	A	0.58	A

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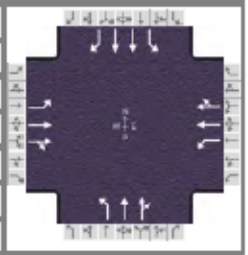
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.92
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	24 1/2 Rd & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	26	502	45	71	358	102	71	121	59	117	156	24

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	28	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.1	0.7		59.9	5.3		2.9		9.5			
Yellow	3.5	0.0		4.0	3.5		0.0		4.0			
Red	0.5	0.0		1.5	0.5		0.0		1.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phase Duration, s	7.9	66.1	7.1	65.4	9.3	14.5	12.2	17.4
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	3.2		2.7		5.9	7.6	8.3	6.5
Green Extension Time (g_e), s	0.2	0.0	0.1	0.0	0.1	2.0	0.1	2.2
Phase Call Probability	0.78		0.63		0.88	1.00	0.97	1.00
Max Out Probability	0.00		0.00		1.00	0.03	1.00	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	54	577	561	36	117	114	77	100	96	127	170	26
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1697	1870	1816	1810	1856	1716	1767	1856	1656	1767	1738	1397
Queue Service Time (g_s), s	1.2	6.9	6.4	0.7	2.2	2.5	3.9	5.1	5.6	6.3	4.5	1.7
Cycle Queue Clearance Time (g_c), s	1.2	6.9	6.4	0.7	2.2	2.5	3.9	5.1	5.6	6.3	4.5	1.7
Green Ratio (*g/C*)	0.64	0.61	0.61	0.63	0.60	0.60	0.15	0.10	0.10	0.19	0.12	0.12
Capacity (*c*), veh/h	767	1134	1101	389	1111	1028	236	177	158	264	432	174
Volume-to-Capacity Ratio (*X*)	0.071	0.509	0.510	0.092	0.106	0.110	0.328	0.564	0.606	0.482	0.392	0.150
Back of Queue (*Q*), ft/ln (90 th percentile)	17.4	81.6	73.1	10.9	34.6	35.7	70.2	102.3	98.5	111.7	80	26.6
Back of Queue (*Q*), veh/ln (90 th percentile)	0.7	3.6	3.3	0.5	1.5	1.6	3.1	4.5	4.4	5.0	3.5	1.1
Queue Storage Ratio (*RQ*) (90 th percentile)	0.13	0.00	0.00	0.08	0.00	0.00	0.53	0.00	0.00	0.84	0.00	0.00
Uniform Delay (d_1), s/veh	7.1	2.9	2.6	7.4	6.8	7.4	38.0	43.2	43.4	35.9	40.3	39.1
Incremental Delay (d_2), s/veh	0.0	1.5	1.5	0.1	0.2	0.2	1.1	4.0	5.2	1.9	0.8	0.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	7.1	4.3	4.1	7.5	7.0	7.6	39.1	47.2	48.7	37.8	41.1	39.6
Level of Service (LOS)	A	A	A	A	A	A	D	D	D	D	D	D
Approach Delay, s/veh / LOS	4.3	A		7.3	A		45.4	D		39.7	D	
Intersection Delay, s/veh / LOS	15.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	2.39	B	2.31	B	2.30	B
Bicycle LOS Score / LOS	1.00	A	0.96	A	0.71	A	0.75	A

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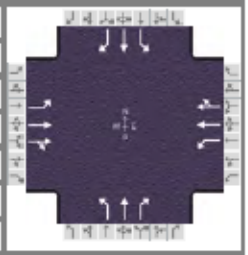
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.87
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	25 Road & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	70	532	37	157	524	105	92	241	91	174	270	37

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	65	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.0	36.0	10.0	25.0	0.0	0.0
Yellow	3.5	4.5	3.5	4.0	0.0	0.0
Red	0.5	1.5	0.5	1.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	14.0	42.0	14.0	42.0	14.0	30.0	14.0	30.0
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	5.5		3.7		6.2	15.5	10.1	17.5
Green Extension Time (g_e), s	0.2	0.0	0.1	0.0	0.1	2.9	0.0	2.5
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.35		1.00	0.46	1.00	0.65

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	117	480	469	57	115	112	106	277	87	200	310	43
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1870	1827	1795	1885	1777	1753	1811	1610	1795	1811	1585
Queue Service Time (g_s), s	3.5	22.7	22.6	1.7	4.9	4.9	4.2	13.5	3.7	8.1	15.5	2.1
Cycle Queue Clearance Time (g_c), s	3.5	22.7	22.6	1.7	4.9	4.9	4.2	13.5	3.7	8.1	15.5	2.1
Green Ratio (*g/C*)	0.46	0.36	0.36	0.46	0.36	0.36	0.35	0.25	0.35	0.35	0.25	0.25
Capacity (*c*), veh/h	578	673	658	319	679	640	323	453	564	349	453	396
Volume-to-Capacity Ratio (*X*)	0.202	0.713	0.713	0.177	0.169	0.175	0.327	0.612	0.155	0.574	0.685	0.107
Back of Queue (*Q*), ft/ln (90 th percentile)	51.3	341.2	331.1	29	88.6	84.2	78.5	226.9	58.2	145.7	258.5	33.6
Back of Queue (*Q*), veh/ln (90 th percentile)	2.3	15.3	14.8	1.3	4.0	3.8	3.5	9.8	2.6	6.6	11.2	1.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.29	0.00	0.00	0.16	0.00	0.00	0.35	0.00	0.33	1.10	0.00	0.25
Uniform Delay (d_1), s/veh	12.5	29.9	29.4	17.3	26.6	25.4	24.2	33.2	22.3	25.3	33.9	28.9
Incremental Delay (d_2), s/veh	0.7	5.9	6.0	1.0	0.5	0.5	2.7	6.1	0.6	6.7	8.2	0.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	13.3	35.8	35.5	18.3	27.0	25.9	26.9	39.3	22.9	32.0	42.1	29.4
Level of Service (LOS)	B	D	D	B	C	C	C	D	C	C	D	C
Approach Delay, s/veh / LOS	33.2	C		24.9	C		33.4	C		37.5	D	
Intersection Delay, s/veh / LOS	33.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.11	B	2.29	B	2.29	B
Bicycle LOS Score / LOS	1.09	A	1.23	A	1.26	A	1.40	A

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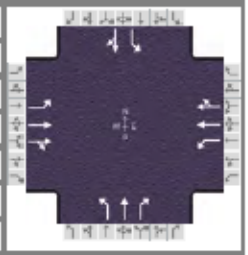
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.82
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	25 1/2 Road & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	17	678	43	138	863	90	40	55	83	133	108	48

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	17	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.4	2.1	53.9	8.0	13.6	0.0	
Yellow	3.5	0.0	4.5	3.5	4.0	0.0	
Red	0.5	0.0	1.5	0.5	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	7.4	59.9	9.6	62.0	12.0	18.6	12.0	18.6
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.3	5.2	5.3
Queue Clearance Time (g_s), s	2.5		3.0		4.2	7.9	10.0	12.5
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0	0.0	1.5	0.0	1.1
Phase Call Probability	0.43		0.69		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.14	1.00	0.66

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	20	431	422	43	148	146	49	67	101	162	190	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1870	1831	1781	1870	1808	1767	1885	1585	1682	1758	
Queue Service Time (g_s), s	0.5	12.5	11.9	1.0	2.5	2.4	2.2	3.2	5.9	8.0	10.5	
Cycle Queue Clearance Time (g_c), s	0.5	12.5	11.9	1.0	2.5	2.4	2.2	3.2	5.9	8.0	10.5	
Green Ratio (*g/C*)	0.57	0.54	0.54	0.60	0.56	0.56	0.22	0.14	0.14	0.22	0.14	
Capacity (*c*), veh/h	701	1008	986	439	1048	1013	226	256	215	303	239	
Volume-to-Capacity Ratio (*X*)	0.029	0.428	0.428	0.097	0.142	0.144	0.216	0.262	0.471	0.535	0.798	
Back of Queue (*Q*), ft/ln (90 th percentile)	7.2	166.7	154.6	14.9	39.2	36.6	43.5	60.2	96.3	151.9	182.2	
Back of Queue (*Q*), veh/ln (90 th percentile)	0.3	7.5	7.0	0.7	1.8	1.6	1.9	2.7	4.3	6.4	8.1	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.05	0.00	0.00	0.11	0.00	0.00	0.39	0.00	1.09	1.13	0.00	
Uniform Delay (d_1), s/veh	9.5	11.8	11.0	9.6	6.7	6.3	32.4	38.7	39.9	34.4	41.9	
Incremental Delay (d_2), s/veh	0.0	1.2	1.2	0.1	0.2	0.2	2.2	0.8	2.3	6.6	10.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	9.6	13.0	12.3	9.7	6.9	6.5	34.6	39.5	42.2	41.0	52.6	
Level of Service (LOS)	A	B	B	A	A	A	C	D	D	D	D	
Approach Delay, s/veh / LOS	12.5	B		7.1	A		39.6	D		47.3	D	
Intersection Delay, s/veh / LOS	21.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.08	B	1.89	B	2.30	B	2.30	B
Bicycle LOS Score / LOS	1.23	A	1.59	B	0.85	A	1.07	A

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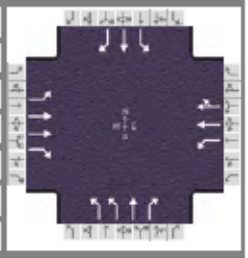
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.77
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	1st Street & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	704	131	174	966	22	113	125	143	94	250	30

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	73	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.9	3.4	48.3	5.5	1.7	19.7	
Yellow	3.5	0.0	3.0	3.5	0.0	4.0	
Red	0.5	0.0	2.5	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	6.9	53.8	10.3	57.2	9.5	24.7	11.2	26.4
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	2.4		3.4		5.3	11.7	7.3	18.4
Green Extension Time (g_e), s	0.0	0.0	0.2	0.0	0.3	3.8	0.2	3.1
Phase Call Probability	0.36		0.79		0.98	1.00	0.97	1.00
Max Out Probability	0.00		0.00		0.73	0.17	1.00	0.41

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	16	566	105	56	159	159	147	162	186	122	325	39
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1766	1598	1781	1870	1855	1743	1856	1598	1810	1885	1610
Queue Service Time (g_s), s	0.4	8.5	2.2	1.4	5.0	5.0	3.3	7.7	9.7	5.3	16.4	1.9
Cycle Queue Clearance Time (g_c), s	0.4	8.5	2.2	1.4	5.0	5.0	3.3	7.7	9.7	5.3	16.4	1.9
Green Ratio (*g/C*)	0.51	0.48	0.54	0.56	0.52	0.52	0.25	0.20	0.26	0.27	0.21	0.24
Capacity (*c*), veh/h	606	1705	859	489	967	959	399	366	416	329	404	391
Volume-to-Capacity Ratio (*X*)	0.027	0.332	0.123	0.114	0.165	0.165	0.367	0.443	0.446	0.372	0.804	0.100
Back of Queue (*Q*), ft/ln (90 th percentile)	6.4	116.3	30	20.2	79.2	79.2	55.6	133.9	139.1	92.5	263.1	29
Back of Queue (*Q*), veh/ln (90 th percentile)	0.3	5.2	1.4	0.9	3.5	3.5	2.5	5.9	6.3	4.2	11.9	1.3
Queue Storage Ratio (*RQ*) (90 th percentile)	0.05	0.00	0.23	0.18	0.00	0.00	0.42	0.00	1.05	0.84	0.00	0.00
Uniform Delay (d_1), s/veh	11.6	12.9	7.5	9.9	14.4	14.3	30.7	35.3	30.9	29.0	37.3	29.4
Incremental Delay (d_2), s/veh	0.0	0.4	0.2	0.1	0.2	0.2	0.8	1.2	1.1	1.0	7.6	0.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	11.7	13.4	7.7	10.0	14.6	14.5	31.5	36.5	32.0	30.0	44.9	29.5
Level of Service (LOS)	B	B	A	A	B	B	C	D	C	C	D	C
Approach Delay, s/veh / LOS	12.5	B		13.9	B		33.3	C		39.9	D	
Intersection Delay, s/veh / LOS	24.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.09	B	2.30	B	2.45	B
Bicycle LOS Score / LOS	1.40	A	1.73	B	1.30	A	1.29	A

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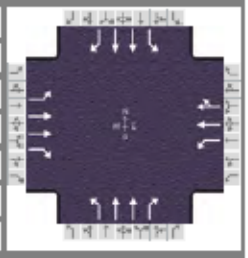
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.80
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	7th Street & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	101	573	204	147	955	89	88	292	78	75	391	188

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	22	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.4	2.0	49.4	5.7	1.0	19.5	
Yellow	3.5	0.0	4.0	3.5	0.0	4.0	
Red	0.5	0.0	1.0	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	10.4	56.5	8.4	54.4	10.7	25.5	9.7	24.5
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	6.8		5.2		6.9	10.5	6.1	15.0
Green Extension Time (g_e), s	0.2	0.0	0.2	0.0	0.1	6.3	0.0	4.5
Phase Call Probability	0.91		0.82		0.95	1.00	0.93	1.00
Max Out Probability	0.26		0.00		1.00	0.43	1.00	0.73

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	87	496	154	61	217	213	110	365	81	94	489	235
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1766	1431	1810	1870	1816	1767	1795	1588	1795	1809	1578
Queue Service Time (g_s), s	4.8	3.9	1.0	3.2	7.9	7.9	4.9	8.5	3.8	4.1	12.6	13.0
Cycle Queue Clearance Time (g_c), s	4.8	3.9	1.0	3.2	7.9	7.9	4.9	8.5	3.8	4.1	12.6	13.0
Green Ratio (*g/C*)	0.06	0.51	0.58	0.04	0.49	0.49	0.26	0.20	0.25	0.25	0.20	0.26
Capacity (*c*), veh/h	115	1818	842	79	924	898	240	736	395	269	706	410
Volume-to-Capacity Ratio (*X*)	0.758	0.273	0.183	0.772	0.235	0.237	0.458	0.496	0.206	0.349	0.693	0.574
Back of Queue (*Q*), ft/ln (90 th percentile)	98	52.9	13.1	61.6	124.4	124.2	87.8	132.8	56.8	72.8	191.8	175.2
Back of Queue (*Q*), veh/ln (90 th percentile)	4.5	2.3	0.6	2.8	5.6	5.4	3.9	6.0	2.6	3.3	8.7	7.9
Queue Storage Ratio (*RQ*) (90 th percentile)	0.56	0.00	0.08	0.47	0.00	0.00	0.40	0.00	0.32	0.66	0.00	0.00
Uniform Delay (d_1), s/veh	48.9	5.7	1.6	39.4	18.1	17.9	30.0	32.0	27.1	30.0	37.5	32.3
Incremental Delay (d_2), s/veh	11.1	0.3	0.4	15.3	0.4	0.5	1.9	0.7	0.4	1.1	2.4	1.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	60.0	6.0	2.0	54.7	18.6	18.4	31.9	32.7	27.5	31.1	39.8	34.1
Level of Service (LOS)	E	A	A	D	B	B	C	C	C	C	D	C
Approach Delay, s/veh / LOS	11.5	B		22.9	C		31.8	C		37.2	D	
Intersection Delay, s/veh / LOS	26.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.41	B	2.30	B	2.49	B
Bicycle LOS Score / LOS	1.37	A	1.71	B	0.95	A	1.16	A

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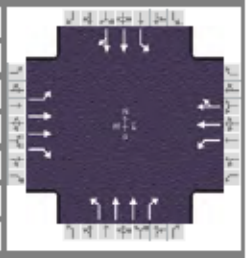
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.80
Urban Street	Patterson Rd	Analysis Year	Existing	Analysis Period	1> 7:00
Intersection	12th Street & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	109	470	116	259	993	96	137	295	74	73	338	82

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	69	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.0	12.0	24.5	11.0	21.0	0.0
Yellow	3.5	3.5	4.0	3.5	4.0	0.0
Red	0.5	0.5	1.5	0.5	1.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	13.0	30.0	29.0	46.0	15.0	26.0	15.0	26.0
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	7.3		5.1		9.2	11.1	5.6	15.6
Green Extension Time (g_e), s	0.1	0.0	0.6	0.0	0.1	4.2	0.1	2.8
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.00		1.00	0.55	0.90	0.97

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	131	565	139	142	303	295	171	369	93	91	270	255
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1766	1602	1795	1885	1826	1781	1781	1572	1795	1870	1740
Queue Service Time (g_s), s	5.3	14.0	5.9	3.1	14.0	13.8	7.2	9.1	3.4	3.6	13.3	13.6
Cycle Queue Clearance Time (g_c), s	5.3	14.0	5.9	3.1	14.0	13.8	7.2	9.1	3.4	3.6	13.3	13.6
Green Ratio (*g/C*)	0.34	0.24	0.36	0.52	0.40	0.40	0.32	0.21	0.46	0.32	0.21	0.21
Capacity (*c*), veh/h	433	866	570	599	763	740	316	748	723	362	393	365
Volume-to-Capacity Ratio (*X*)	0.302	0.653	0.245	0.237	0.397	0.399	0.543	0.493	0.128	0.252	0.688	0.698
Back of Queue (*Q*), ft/ln (90 th percentile)	83.6	187.7	81.4	46.3	225.2	215.9	133.5	150	50.3	67.1	231.5	223.7
Back of Queue (*Q*), veh/ln (90 th percentile)	3.7	8.3	3.7	2.1	10.2	9.7	6.0	6.7	2.2	3.0	10.4	10.0
Queue Storage Ratio (*RQ*) (90 th percentile)	0.47	0.00	0.56	0.18	0.00	0.00	0.60	0.00	0.23	0.51	0.00	0.00
Uniform Delay (d_1), s/veh	23.3	31.9	21.2	9.5	29.5	28.8	27.1	34.8	15.5	25.0	36.5	36.6
Incremental Delay (d_2), s/veh	1.1	2.3	0.6	0.8	1.3	1.3	6.6	2.3	0.4	1.7	9.4	10.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	24.4	34.3	21.9	10.3	30.8	30.1	33.6	37.1	15.9	26.7	45.9	47.1
Level of Service (LOS)	C	C	C	B	C	C	C	D	B	C	D	D
Approach Delay, s/veh / LOS	30.7	C		26.6	C		33.1	C		43.6	D	
Intersection Delay, s/veh / LOS	32.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.44	B	2.27	B	2.30	B	2.45	B
Bicycle LOS Score / LOS	1.20	A	1.88	B	1.01	A	1.00	A

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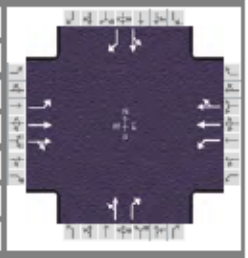
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	Existing	Analysis Period	1> 7:00
Intersection	Patterson Rd & 15th St	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	37	541	12	23	1518	29	13	3	20	13	3	62

Signal Information					EB			WB			NB			SB		
Cycle, s	100.0	Reference Phase	2													
Offset, s	47	Reference Point	Begin	Green	1.4	2.5		75.9	6.7	0.0	0.0					
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0		3.5	3.5	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0		1.0	1.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		8		4
Case Number	1.1	4.0	1.1	4.0		7.0		7.0
Phase Duration, s	8.4	82.9	5.9	80.4		11.2		11.2
Change Period, ($Y+R_c$), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time (g_s), s	2.6		2.2			3.4		6.6
Green Extension Time (g_e), s	0.1	0.0	0.0	0.0		0.2		0.2
Phase Call Probability	0.78		0.28			0.98		0.98
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	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	54	408	405	12	405	402		19	24		19	75
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1856	1781	1870	1858		1508	1585		1508	1585
Queue Service Time (g_s), s	0.6	2.0	2.0	0.2	3.3	3.3		0.0	1.4		0.0	4.6
Cycle Queue Clearance Time (g_c), s	0.6	2.0	2.0	0.2	3.3	3.3		1.1	1.4		1.1	4.6
Green Ratio (*g/C*)	0.80	0.78	0.78	0.77	0.76	0.76		0.07	0.07		0.07	0.07
Capacity (*c*), veh/h	632	1467	1455	597	1420	1411		166	106		166	106
Volume-to-Capacity Ratio (*X*)	0.086	0.278	0.278	0.020	0.285	0.285		0.116	0.228		0.116	0.707
Back of Queue (*Q*), ft/ln (90 th percentile)	5.3	21.8	22	1.4	35.3	35.4		18.3	23.1		18.3	76.5
Back of Queue (*Q*), veh/ln (90 th percentile)	0.2	1.0	1.0	0.1	1.6	1.6		0.8	1.0		0.8	3.4
Queue Storage Ratio (*RQ*) (90 th percentile)	0.07	0.00	0.00	0.02	0.00	0.00		0.00	0.52		0.00	1.73
Uniform Delay (d_1), s/veh	2.2	0.8	0.8	2.6	1.5	1.6		44.0	44.2		44.0	45.7
Incremental Delay (d_2), s/veh	0.0	0.4	0.4	0.0	0.4	0.4		0.1	0.4		0.1	3.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Control Delay (*d*), s/veh	2.2	1.2	1.3	2.6	2.0	2.0		44.2	44.6		44.2	48.9
Level of Service (LOS)	A	A	A	A	A	A		D	D		D	D
Approach Delay, s/veh / LOS	1.3	A		2.0	A		44.4	D		47.9	D	
Intersection Delay, s/veh / LOS	5.1						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.83	B	1.84	B	2.31	B	2.31	B
Bicycle LOS Score / LOS	1.07	A	2.05	B	0.56	A	0.64	A

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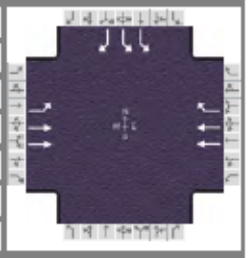
HCS7 Signalized Intersection Results Summary

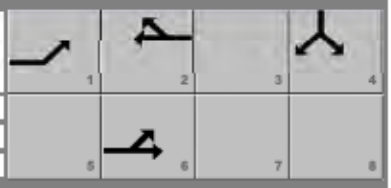
General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	Existing	Analysis Period	1> 7:00
Intersection	27 1/2 Road & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	71	503			1418	444				344		152

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	47	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.0	59.0	20.0	0.0	0.0	0.0
Yellow	3.5	4.5	4.0	0.0	0.0	0.0
Red	0.5	1.5	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2				4
Case Number	1.0	4.0		7.3				9.0
Phase Duration, s	10.0	75.0		65.0				25.0
Change Period, ($Y+R_c$), s	4.0	6.0		6.0				5.0
Max Allow Headway (*MAH*), s	5.2	0.0		0.0				5.3
Queue Clearance Time (g_s), s	3.2							12.9
Green Extension Time (g_e), s	0.0	0.0		0.0				2.2
Phase Call Probability	1.00							1.00
Max Out Probability	1.00							0.67

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2	12				7		14
Adjusted Flow Rate (*v*), veh/h	64	453			672	210				414		183
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1795			1795	1610				1757		1522
Queue Service Time (g_s), s	1.2	7.1			8.8	4.9				10.7		10.9
Cycle Queue Clearance Time (g_c), s	1.2	7.1			8.8	4.9				10.7		10.9
Green Ratio (*g/C*)	0.67	0.69			0.59	0.59				0.20		0.20
Capacity (*c*), veh/h	488	2477			2118	950				703		304
Volume-to-Capacity Ratio (*X*)	0.131	0.183			0.317	0.221				0.590		0.602
Back of Queue (*Q*), ft/ln (90 th percentile)	17.6	95			114.4	62				168.3		173.8
Back of Queue (*Q*), veh/ln (90 th percentile)	0.8	4.3			5.2	2.8				7.7		7.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.12	0.00			0.00	1.17				1.01		0.00
Uniform Delay (d_1), s/veh	6.2	9.8			9.4	7.2				36.3		36.4
Incremental Delay (d_2), s/veh	0.4	0.1			0.3	0.4				3.6		8.5
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0				0.0		0.0
Control Delay (*d*), s/veh	6.6	9.9			9.7	7.7				39.9		44.9
Level of Service (LOS)	A	A			A	A				D		D
Approach Delay, s/veh / LOS	9.5	A		9.2	A		0.0			41.4	D	
Intersection Delay, s/veh / LOS	18.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	0.66	A	2.07	B	2.32	B	2.32	B
Bicycle LOS Score / LOS	1.06	A	2.34	B				F

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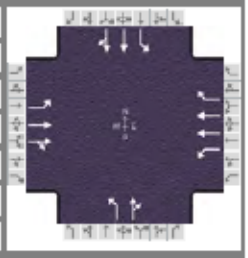
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.85
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	28 1/4 Road & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	53	697	155	138	1550	61	207	20	47	23	11	22

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	50	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.0	50.0	5.0	1.0	11.0	0.0	
Yellow	3.5	4.5	3.5	3.5	4.0	0.0	
Red	0.5	1.5	0.5	0.5	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	3.0	1.1	4.0	1.1	4.0
Phase Duration, s	14.0	56.0	14.0	56.0	14.0	21.0	9.0	16.0
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.1	0.0	5.2	5.4	5.2	5.4
Queue Clearance Time (g_s), s	2.7		3.5		12.0	6.1	3.3	3.5
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.3
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.10		0.30		1.00	0.05	1.00	0.24

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	31	253	240	66	744	29	244	79		27	13	26
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1885	1767	1795	1795	1610	1795	1687		1810	1900	1610
Queue Service Time (g_s), s	0.7	5.6	5.2	1.5	11.5	1.0	10.0	4.1		1.3	0.6	1.5
Cycle Queue Clearance Time (g_c), s	0.7	5.6	5.2	1.5	11.5	1.0	10.0	4.1		1.3	0.6	1.5
Green Ratio (*g/C*)	0.60	0.50	0.50	0.60	0.50	0.55	0.23	0.16		0.16	0.11	0.11
Capacity (*c*), veh/h	511	943	883	637	1795	886	383	270		295	209	177
Volume-to-Capacity Ratio (*X*)	0.060	0.268	0.272	0.104	0.414	0.033	0.635	0.292		0.092	0.062	0.146
Back of Queue (*Q*), ft/ln (90 th percentile)	11.3	84.3	75.5	21.5	136.4	28.4	210	74.3		24	12.5	25.9
Back of Queue (*Q*), veh/ln (90 th percentile)	0.5	3.8	3.4	1.0	6.2	1.3	9.5	3.4		1.1	0.6	1.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.04	0.00	0.00	0.08	0.00	0.29	0.79	0.00		0.22	0.00	0.00
Uniform Delay (d_1), s/veh	9.9	9.7	8.6	8.4	13.0	13.1	35.0	37.0		35.8	39.9	40.3
Incremental Delay (d_2), s/veh	0.2	0.5	0.6	0.2	0.5	0.0	7.8	2.7		0.6	0.6	1.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	10.1	10.2	9.2	8.6	13.5	13.2	42.8	39.7		36.4	40.4	42.0
Level of Service (LOS)	B	B	A	A	B	B	D	D		D	D	D
Approach Delay, s/veh / LOS	9.7	A		13.1	B		42.0	D		39.4	D	
Intersection Delay, s/veh / LOS	18.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.09	B	2.09	B	2.45	B	2.30	B
Bicycle LOS Score / LOS	1.37	A	2.19	B	1.02	A	0.54	A

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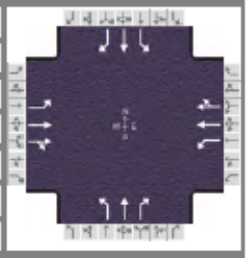
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	29 Road & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	97	506	169	115	1269	62	243	157	57	50	142	267

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	14	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.5	45.5	7.5	4.0	13.0	0.0	
Yellow	3.5	4.5	3.5	0.0	4.0	0.0	
Red	1.0	2.0	1.0	0.0	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	14.0	52.0	14.0	52.0	16.0	22.0	12.0	18.0
Change Period, ($Y+R_c$), s	4.5	6.5	4.5	6.5	4.5	5.0	4.5	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	3.9		4.1		13.5	11.3	5.3	15.0
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0	0.0	1.4	0.0	0.0
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.21		0.24		1.00	0.67	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	76	273	254	81	470	462	293	189	27	60	171	261
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1885	1724	1767	1870	1839	1767	1870	1610	1753	1870	1610
Queue Service Time (g_s), s	1.9	11.1	11.4	2.1	17.7	17.5	11.5	9.3	1.2	3.3	8.8	13.0
Cycle Queue Clearance Time (g_c), s	1.9	11.1	11.4	2.1	17.7	17.5	11.5	9.3	1.2	3.3	8.8	13.0
Green Ratio (*g/C*)	0.55	0.46	0.46	0.55	0.46	0.46	0.12	0.17	0.27	0.08	0.13	0.23
Capacity (*c*), veh/h	396	858	784	519	851	837	203	318	427	131	243	362
Volume-to-Capacity Ratio (*X*)	0.191	0.318	0.324	0.155	0.553	0.553	1.441	0.595	0.062	0.458	0.704	0.722
Back of Queue (*Q*), ft/ln (90 th percentile)	30.1	168.6	162	30.6	223.4	216.5	589.3	172.8	19.8	74.1	176.5	226.6
Back of Queue (*Q*), veh/ln (90 th percentile)	1.3	7.6	7.2	1.4	10.0	9.7	26.1	7.7	0.9	3.3	7.9	10.3
Queue Storage Ratio (*RQ*) (90 th percentile)	0.10	0.00	0.00	0.08	0.00	0.00	2.66	0.00	0.09	0.56	0.00	1.72
Uniform Delay (d_1), s/veh	12.0	22.8	22.9	10.7	18.6	18.3	44.3	38.3	27.5	44.3	41.7	35.9
Incremental Delay (d_2), s/veh	0.8	0.7	0.8	0.4	1.8	1.8	223.9	8.0	0.3	11.1	15.7	11.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	12.8	23.5	23.7	11.2	20.4	20.1	268.2	46.3	27.7	55.4	57.4	47.6
Level of Service (LOS)	B	C	C	B	C	C	F	D	C	E	E	D
Approach Delay, s/veh / LOS	22.2	C		19.5	B		173.1	F		52.0	D	
Intersection Delay, s/veh / LOS	56.1						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.15	B	2.17	B	2.30	B	2.30	B
Bicycle LOS Score / LOS	1.25	A	1.92	B	1.33	A	1.30	A

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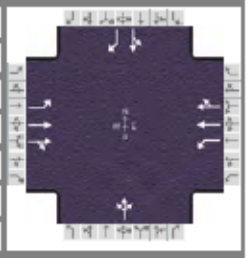
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.85
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	29 1/2 Road & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	14	496	88	94	1231	129	78	34	59	71	49	56

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	71	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.5	3.1	50.1	14.3	10.5	0.0						
Yellow	3.5	0.0	5.0	4.0	4.0	0.0						
Red	0.5	0.0	1.5	1.0	1.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	4.0	1.1	4.0		12.0		11.0
Phase Duration, s	5.5	56.6	8.6	59.8		19.3		15.5
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5		5.0		5.0
Max Allow Headway (*MAH*), s	4.5	0.0	4.5	0.0		4.7		4.7
Queue Clearance Time (g_s), s	2.3		4.4			13.7		9.7
Green Extension Time (g_e), s	0.0	0.0	0.3	0.0		0.6		0.9
Phase Call Probability	0.30		0.92			1.00		1.00
Max Out Probability	0.00		0.00			0.07		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	13	270	259	91	671	652		201			141	66
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1885	1786	1795	1885	1822		1669			1788	1585
Queue Service Time (g_s), s	0.3	5.1	4.5	2.4	22.7	21.7		11.7			7.7	3.9
Cycle Queue Clearance Time (g_c), s	0.3	5.1	4.5	2.4	22.7	21.7		11.7			7.7	3.9
Green Ratio (*g/C*)	0.52	0.50	0.50	0.56	0.53	0.53		0.14			0.11	0.11
Capacity (*c*), veh/h	219	945	895	551	1004	970		238			188	167
Volume-to-Capacity Ratio (*X*)	0.058	0.286	0.289	0.166	0.669	0.671		0.845			0.752	0.396
Back of Queue (*Q*), ft/ln (90 th percentile)	5.2	71.9	61.3	35.2	238.2	214.6		191.8			138.3	62.9
Back of Queue (*Q*), veh/ln (90 th percentile)	0.2	3.2	2.8	1.6	10.7	9.4		8.3			6.1	2.8
Queue Storage Ratio (*RQ*) (90 th percentile)	0.04	0.00	0.00	0.27	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	14.4	7.7	6.6	10.9	12.8	11.5		41.8			43.5	41.8
Incremental Delay (d_2), s/veh	0.1	0.5	0.5	0.1	2.6	2.7		9.3			5.9	1.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Control Delay (*d*), s/veh	14.5	8.2	7.2	11.0	15.4	14.2		51.1			49.4	43.3
Level of Service (LOS)	B	A	A	B	B	B		D			D	D
Approach Delay, s/veh / LOS	7.9	A		14.5	B		51.1	D		47.5	D	
Intersection Delay, s/veh / LOS	19.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.67	B	1.89	B	2.31	B	2.32	B
Bicycle LOS Score / LOS	1.07	A	1.90	B	0.82	A	0.83	A

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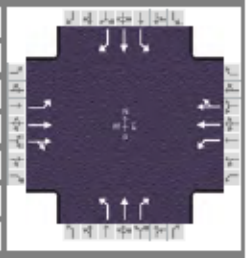
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year		Analysis Period	1> 7:00
Intersection	30 Road & Patterson	File Name	Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	72	368	142	101	827	14	303	45	45	37	95	182

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	19	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.2	40.8	8.5	6.0	11.0	0.0	
Yellow	3.5	5.0	3.5	3.5	4.0	0.0	
Red	0.5	1.5	0.5	0.5	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	14.2	47.3	14.2	47.3	22.5	26.0	12.5	16.0
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.2	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	4.5		6.2		19.7	4.8	4.0	7.8
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0	0.0	1.1	0.0	0.4
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.19		1.00		1.00	0.00	0.73	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	87	321	294	145	607	603	365	54	53	45	114	108
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1885	1706	1795	1885	1874	1781	1870	1560	1810	1885	1585
Queue Service Time (g_s), s	2.5	7.6	7.7	4.2	29.4	29.4	17.7	2.4	2.8	2.0	5.8	5.8
Cycle Queue Clearance Time (g_c), s	2.5	7.6	7.7	4.2	29.4	29.4	17.7	2.4	2.8	2.0	5.8	5.8
Green Ratio (*g/C*)	0.51	0.41	0.41	0.51	0.41	0.41	0.31	0.21	0.21	0.19	0.11	0.21
Capacity (*c*), veh/h	301	769	696	508	769	765	462	393	328	370	207	336
Volume-to-Capacity Ratio (*X*)	0.289	0.417	0.422	0.286	0.789	0.789	0.790	0.138	0.162	0.121	0.552	0.323
Back of Queue (*Q*), ft/ln (90 th percentile)	41.6	98.3	92.5	67.9	449.1	447.2	285.8	45.5	46.2	37.5	122.3	97.4
Back of Queue (*Q*), veh/ln (90 th percentile)	1.9	4.4	4.2	3.1	20.2	20.2	12.8	2.0	2.0	1.7	5.5	4.4
Queue Storage Ratio (*RQ*) (90 th percentile)	0.32	0.00	0.00	0.51	0.00	0.00	1.29	0.00	0.26	0.28	0.00	0.73
Uniform Delay (d_1), s/veh	18.7	10.7	10.7	12.4	30.7	30.7	29.9	32.1	32.3	33.2	42.2	33.3
Incremental Delay (d_2), s/veh	1.6	1.1	1.3	1.4	8.0	8.1	12.9	0.7	1.1	0.7	10.2	2.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	20.3	11.8	12.0	13.8	38.8	38.8	42.8	32.9	33.4	33.9	52.3	35.9
Level of Service (LOS)	C	B	B	B	D	D	D	C	C	C	D	D
Approach Delay, s/veh / LOS	12.9	B		36.1	D		40.6	D		42.6	D	
Intersection Delay, s/veh / LOS	31.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.23	B	2.30	B	2.30	B
Bicycle LOS Score / LOS	1.07	A	1.42	A	1.27	A	0.93	A

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HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	24 Road & Patterson	Market Street/Mall Access & Patterson		Analysis Period	1> 7:00
Project Description					

Basic Segment Information (24 Rd - Market St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
1	35	35	2	2	637	637	50	50	0	0	100	0	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
1	Bay/Lane Spillback Time, h					never	
1	Shared Lane Spillback Time, h				never		never
1	Base Free-Flow Speed, mph	41.58			42.05		
1	Running Time, s	14.79			15.06		
1	Running Speed, mph	29.37			28.85		
1	Through Delay, s/veh	2.71			20.29		
1	Travel Time, s	17.50			35.34		
1	Travel Speed, mph	24.82			12.29		
1	Stop Rate, stops/veh	0.12			0.47		
1	Spatial Stop Rate, stops/mi	0.97			3.88		
1	Through vol/cap Ratio	0.09			0.63		
1	Percent of Base FFS	59.69			29.23		
1	Level of Service	C			F		
1	Auto Traveler Perception Score	2.28			2.76		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	2.30		B	3.47		C
1	Bicycle Segment LOS Score / LOS	2.00		A	2.64		B
1	Transit Segment LOS Score / LOS	1.18		A	2.57		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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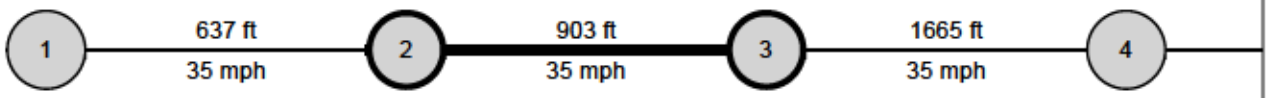
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	Market Street/Mall Access & Pat	Home Depot Access/Mesa Mall Access &		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Market St - Home Depot)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
2	35	35	2	2	903	903	50	50	2	1	70	0	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
2	Bay/Lane Spillback Time, h		never				
2	Shared Lane Spillback Time, h	never					
2	Base Free-Flow Speed, mph	41.72			42.05		
2	Running Time, s	18.20			18.58		
2	Running Speed, mph	33.83			33.13		
2	Through Delay, s/veh	5.69			9.94		
2	Travel Time, s	23.89			28.53		
2	Travel Speed, mph	25.77			21.58		
2	Stop Rate, stops/veh	0.24			0.45		
2	Spatial Stop Rate, stops/mi	1.42			2.62		
2	Through vol/cap Ratio	0.10			0.41		
2	Percent of Base FFS	61.77			51.32		
2	Level of Service	C			C		
2	Auto Traveler Perception Score	2.35			2.55		
Multimodal Results (Segment)							
2	Pedestrian Segment LOS Score / LOS	2.71		B	3.63		D
2	Bicycle Segment LOS Score / LOS	2.22		B	2.77		C
2	Transit Segment LOS Score / LOS	1.12		A	1.62		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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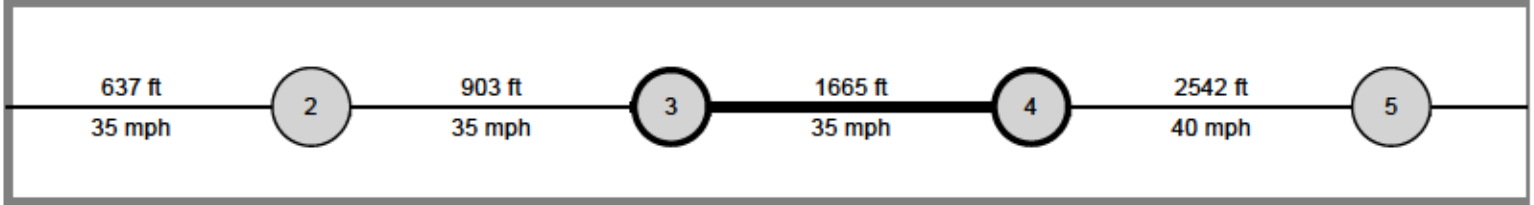
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	Home Depot Access/Mesa Mall /	24 1/2 Rd & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Home Depot - 24 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
3	35	35	2	2	1665	1665	50	50	550	550	70	100	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
3	Bay/Lane Spillback Time, h		never			never	
3	Shared Lane Spillback Time, h	never			never		
3	Base Free-Flow Speed, mph	40.71			40.19		
3	Running Time, s	30.21			31.44		
3	Running Speed, mph	37.58			36.11		
3	Through Delay, s/veh	7.20			6.10		
3	Travel Time, s	37.41			37.54		
3	Travel Speed, mph	30.34			30.24		
3	Stop Rate, stops/veh	0.27			0.25		
3	Spatial Stop Rate, stops/mi	0.85			0.79		
3	Through vol/cap Ratio	0.11			0.43		
3	Percent of Base FFS	74.53			75.24		
3	Level of Service	B			B		
3	Auto Traveler Perception Score	2.27			2.26		
Multimodal Results (Segment)							
3	Pedestrian Segment LOS Score / LOS	2.83		C	3.58		D
3	Bicycle Segment LOS Score / LOS	2.29		B	2.82		C
3	Transit Segment LOS Score / LOS	0.81		A	0.98		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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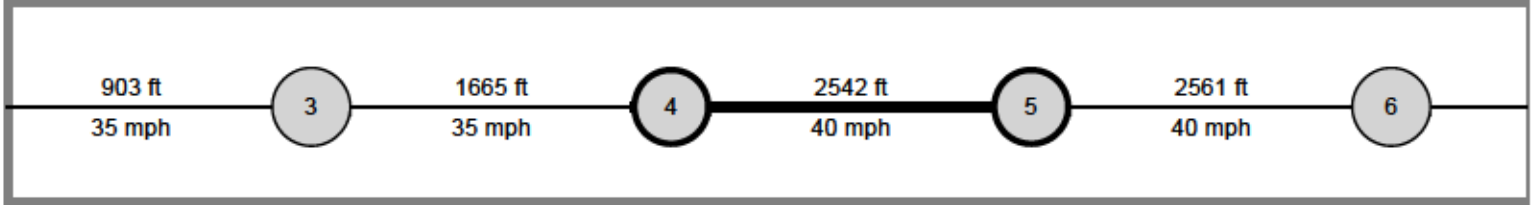
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	24 1/2 Rd & Patterson	25 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (24 1/2 Rd - 25 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
4	40	35	2	2	2542	2542	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
4	Bay/Lane Spillback Time, h		never			never	
4	Shared Lane Spillback Time, h	never		never	never		
4	Base Free-Flow Speed, mph	42.99			40.64		
4	Running Time, s	42.20			45.62		
4	Running Speed, mph	41.07			37.99		
4	Through Delay, s/veh	26.61			4.26		
4	Travel Time, s	68.81			49.87		
4	Travel Speed, mph	25.19			34.75		
4	Stop Rate, stops/veh	0.69			0.12		
4	Spatial Stop Rate, stops/mi	1.44			0.26		
4	Through vol/cap Ratio	0.17			0.51		
4	Percent of Base FFS	58.59			85.52		
4	Level of Service	C			A		
4	Auto Traveler Perception Score	2.36			2.18		
Multimodal Results (Segment)							
4	Pedestrian Segment LOS Score / LOS	2.81		C	3.18		C
4	Bicycle Segment LOS Score / LOS	2.35		B	2.77		C
4	Transit Segment LOS Score / LOS	1.22		A	0.71		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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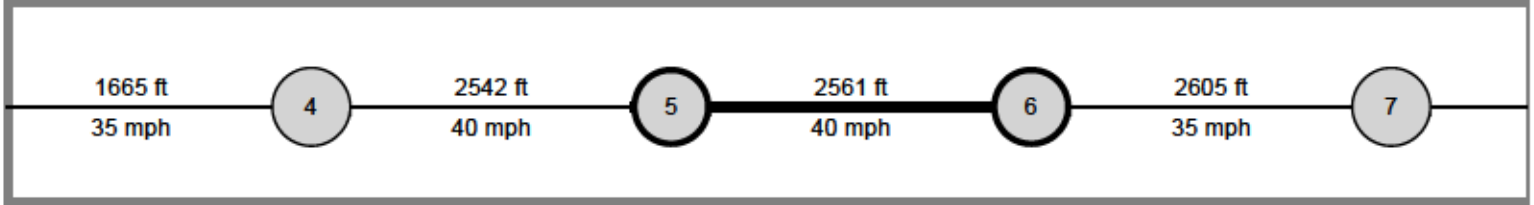
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	25 Road & Patterson	25 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 Rd - 25 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
5	40	40	2	2	2561	2561	50	50	260	260	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
5	Bay/Lane Spillback Time, h		never			never	
5	Shared Lane Spillback Time, h	never			never		never
5	Base Free-Flow Speed, mph	43.13			43.13		
5	Running Time, s	42.42			43.26		
5	Running Speed, mph	41.16			40.37		
5	Through Delay, s/veh	6.75			35.44		
5	Travel Time, s	49.17			78.70		
5	Travel Speed, mph	35.51			22.19		
5	Stop Rate, stops/veh	0.23			0.83		
5	Spatial Stop Rate, stops/mi	0.48			1.71		
5	Through vol/cap Ratio	0.14			0.71		
5	Percent of Base FFS	82.34			51.44		
5	Level of Service	A			C		
5	Auto Traveler Perception Score	2.21			2.40		
Multimodal Results (Segment)							
5	Pedestrian Segment LOS Score / LOS	2.64		B	3.44		C
5	Bicycle Segment LOS Score / LOS	2.39		B	2.81		C
5	Transit Segment LOS Score / LOS	0.54		A	1.58		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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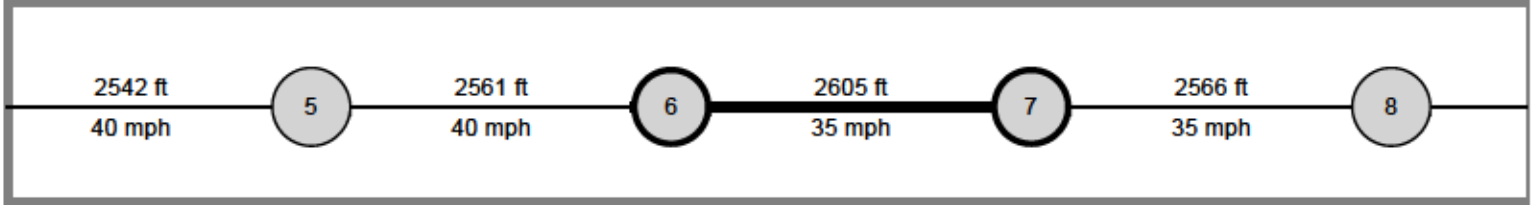
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	25 1/2 Road & Patterson	1st Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 1/2 Rd - 26 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
6	35	40	2	2	2605	2605	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
6	Bay/Lane Spillback Time, h		never			never	
6	Shared Lane Spillback Time, h	never			never		
6	Base Free-Flow Speed, mph	40.74			43.09		
6	Running Time, s	45.46			43.74		
6	Running Speed, mph	39.07			40.61		
6	Through Delay, s/veh	14.58			12.69		
6	Travel Time, s	60.04			56.42		
6	Travel Speed, mph	29.58			31.48		
6	Stop Rate, stops/veh	0.47			0.39		
6	Spatial Stop Rate, stops/mi	0.96			0.79		
6	Through vol/cap Ratio	0.16			0.42		
6	Percent of Base FFS	72.62			73.05		
6	Level of Service	B			B		
6	Auto Traveler Perception Score	2.28			2.26		
Multimodal Results (Segment)							
6	Pedestrian Segment LOS Score / LOS	2.85		C	3.12		C
6	Bicycle Segment LOS Score / LOS	2.45		B	2.73		B
6	Transit Segment LOS Score / LOS	0.90		A	0.88		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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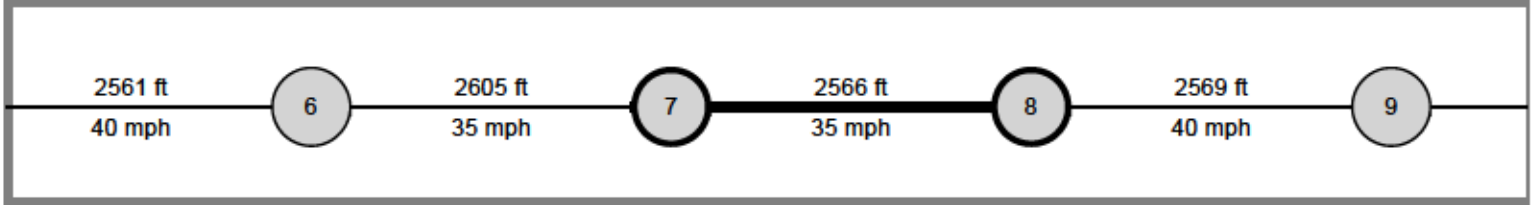
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	1st Street & Patterson	7th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 Rd - 26 1/2)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
7	35	40	2	2	2566	2566	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
7	Bay/Lane Spillback Time, h		never			never	
7	Shared Lane Spillback Time, h	never			never		never
7	Base Free-Flow Speed, mph	39.83			42.18		
7	Running Time, s	45.92			43.76		
7	Running Speed, mph	38.10			39.98		
7	Through Delay, s/veh	18.00			13.49		
7	Travel Time, s	63.93			57.26		
7	Travel Speed, mph	27.37			30.56		
7	Stop Rate, stops/veh	0.57			0.40		
7	Spatial Stop Rate, stops/mi	1.16			0.82		
7	Through vol/cap Ratio	0.23			0.32		
7	Percent of Base FFS	68.72			72.45		
7	Level of Service	B			B		
7	Auto Traveler Perception Score	2.31			2.26		
Multimodal Results (Segment)							
7	Pedestrian Segment LOS Score / LOS	2.77		C	2.94		C
7	Bicycle Segment LOS Score / LOS	2.53		B	2.64		B
7	Transit Segment LOS Score / LOS	1.07		A	0.89		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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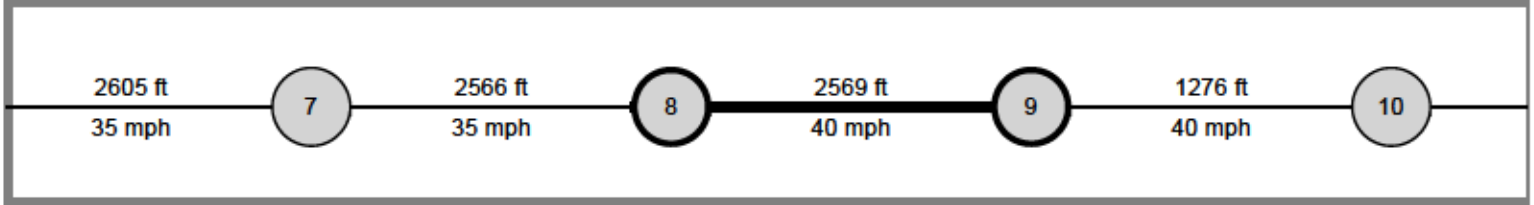
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	7th Street & Patterson	12th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 1/2 Rd to 12th St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
8	40	35	2	2	2569	2569	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
8	Bay/Lane Spillback Time, h		never			never	
8	Shared Lane Spillback Time, h	never			never		never
8	Base Free-Flow Speed, mph	42.34			39.99		
8	Running Time, s	43.73			46.13		
8	Running Speed, mph	40.05			37.97		
8	Through Delay, s/veh	30.49			6.04		
8	Travel Time, s	74.22			52.17		
8	Travel Speed, mph	23.60			33.57		
8	Stop Rate, stops/veh	0.83			0.19		
8	Spatial Stop Rate, stops/mi	1.71			0.39		
8	Through vol/cap Ratio	0.40			0.27		
8	Percent of Base FFS	55.74			83.95		
8	Level of Service	C			A		
8	Auto Traveler Perception Score	2.40			2.20		
Multimodal Results (Segment)							
8	Pedestrian Segment LOS Score / LOS	3.01		C	2.94		C
8	Bicycle Segment LOS Score / LOS	2.70		B	2.60		B
8	Transit Segment LOS Score / LOS	1.41		A	0.70		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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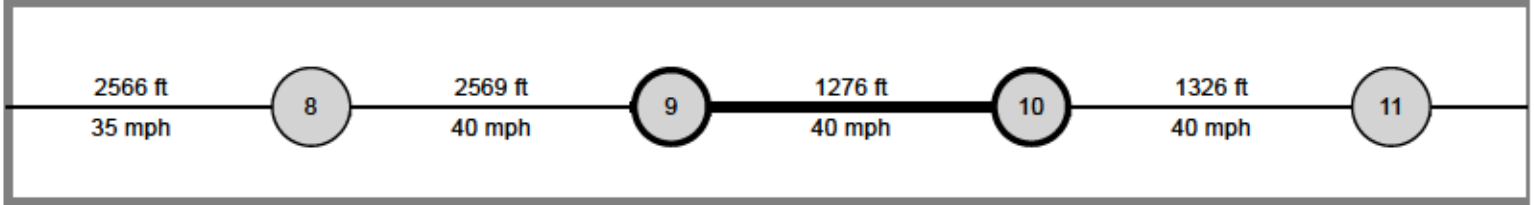
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	12th Street & Patterson	Patterson Rd & 15th St		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (12th St - 27 1/4 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
9	40	35	2	2	1276	1276	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
9	Bay/Lane Spillback Time, h		never			never	
9	Shared Lane Spillback Time, h	never			never		never
9	Base Free-Flow Speed, mph	42.30			39.95		
9	Running Time, s	23.50			24.88		
9	Running Speed, mph	37.03			34.97		
9	Through Delay, s/veh	2.00			34.28		
9	Travel Time, s	25.49			59.16		
9	Travel Speed, mph	34.13			14.71		
9	Stop Rate, stops/veh	0.08			0.75		
9	Spatial Stop Rate, stops/mi	0.32			3.11		
9	Through vol/cap Ratio	0.28			0.65		
9	Percent of Base FFS	80.68			36.81		
9	Level of Service	A			E		
9	Auto Traveler Perception Score	2.19			2.63		
Multimodal Results (Segment)							
9	Pedestrian Segment LOS Score / LOS	2.99		C	3.33		C
9	Bicycle Segment LOS Score / LOS	2.67		B	2.70		B
9	Transit Segment LOS Score / LOS	0.68		A	2.25		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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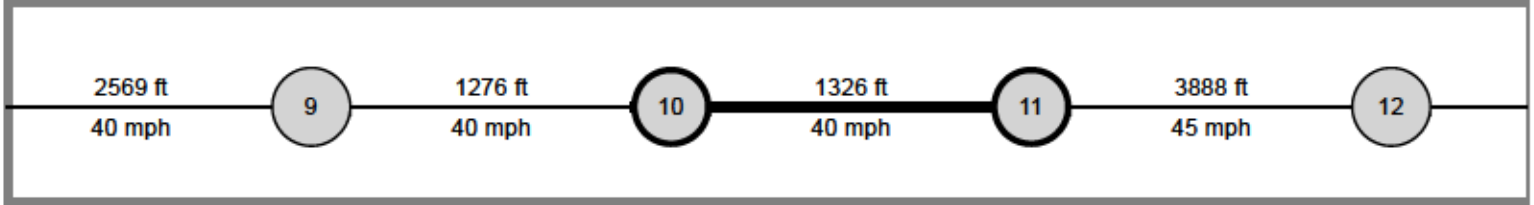
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	Patterson Rd & 15th St	27 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
10	40	40	2	2	1326	1326	50	50	0	0	70	70	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
10	Bay/Lane Spillback Time, h		never			never	
10	Shared Lane Spillback Time, h	never		never	never		
10	Base Free-Flow Speed, mph	44.07			44.07		
10	Running Time, s	23.72			23.71		
10	Running Speed, mph	38.11			38.13		
10	Through Delay, s/veh	9.73			1.25		
10	Travel Time, s	33.45			24.96		
10	Travel Speed, mph	27.03			36.22		
10	Stop Rate, stops/veh	0.33			0.05		
10	Spatial Stop Rate, stops/mi	1.32			0.19		
10	Through vol/cap Ratio	0.32			0.28		
10	Percent of Base FFS	61.33			82.20		
10	Level of Service	C			A		
10	Auto Traveler Perception Score	2.56			2.17		
Multimodal Results (Segment)							
10	Pedestrian Segment LOS Score / LOS	3.43		C	3.45		C
10	Bicycle Segment LOS Score / LOS	2.78		C	2.72		B
10	Transit Segment LOS Score / LOS	1.16		A	0.57		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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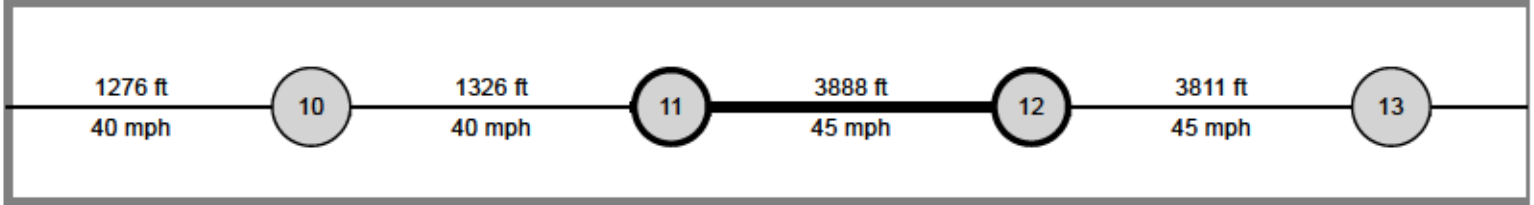
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	27 1/2 Road & Patterson	28 1/4 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (27 1/4 Rd - 27 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
11	45	40	2	2	3888	3888	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement		2	12	1	6	
11	Bay/Lane Spillback Time, h		never			never	
11	Shared Lane Spillback Time, h	never		never	never		
11	Base Free-Flow Speed, mph	45.84			43.49		
11	Running Time, s	60.16			62.64		
11	Running Speed, mph	44.06			42.32		
11	Through Delay, s/veh	16.34			9.91		
11	Travel Time, s	76.50			72.55		
11	Travel Speed, mph	34.65			36.54		
11	Stop Rate, stops/veh	0.48			0.40		
11	Spatial Stop Rate, stops/mi	0.65			0.55		
11	Through vol/cap Ratio	0.44			0.18		
11	Percent of Base FFS	75.59			84.01		
11	Level of Service	B			A		
11	Auto Traveler Perception Score	2.34			2.22		
Multimodal Results (Segment)							
11	Pedestrian Segment LOS Score / LOS	3.61		D	2.96		C
11	Bicycle Segment LOS Score / LOS	2.81		C	2.55		B
11	Transit Segment LOS Score / LOS	0.69		A	0.51		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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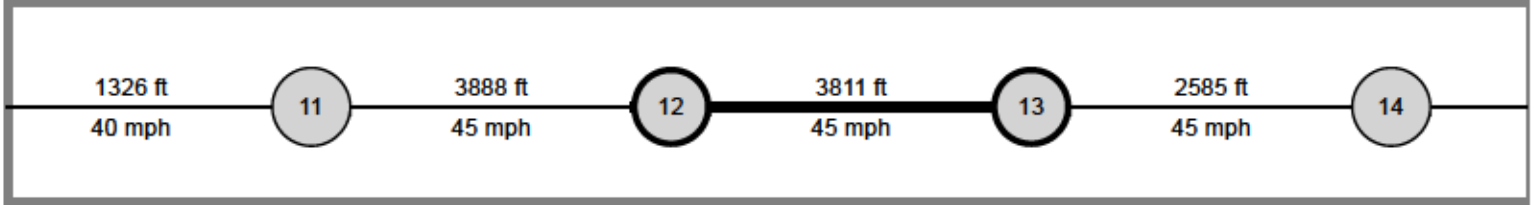
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	28 1/4 Road & Patterson	29 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (28 1/4 Rd - 29 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12	45	40	2	2	3811	3811	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
12	Bay/Lane Spillback Time, h		never			never	
12	Shared Lane Spillback Time, h	never		never	never		never
12	Base Free-Flow Speed, mph	44.90			42.55		
12	Running Time, s	59.68			62.81		
12	Running Speed, mph	43.54			41.37		
12	Through Delay, s/veh	20.06			9.82		
12	Travel Time, s	79.74			72.63		
12	Travel Speed, mph	32.58			35.78		
12	Stop Rate, stops/veh	0.53			0.30		
12	Spatial Stop Rate, stops/mi	0.74			0.41		
12	Through vol/cap Ratio	0.58			0.27		
12	Percent of Base FFS	72.57			84.07		
12	Level of Service	B			A		
12	Auto Traveler Perception Score	2.25			2.20		
Multimodal Results (Segment)							
12	Pedestrian Segment LOS Score / LOS	3.58		D	2.95		C
12	Bicycle Segment LOS Score / LOS	2.86		C	2.57		B
12	Transit Segment LOS Score / LOS	0.85		A	0.56		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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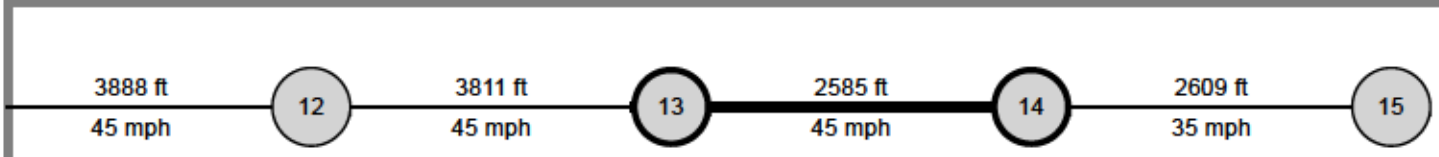
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	29 Road & Patterson	29 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 Rd - 29 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
13	45	45	2	2	2585	2585	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
13	Bay/Lane Spillback Time, h		never			never	
13	Shared Lane Spillback Time, h	never			never		never
13	Base Free-Flow Speed, mph	43.89			43.89		
13	Running Time, s	41.28			40.34		
13	Running Speed, mph	42.69			43.69		
13	Through Delay, s/veh	15.41			23.58		
13	Travel Time, s	56.69			63.92		
13	Travel Speed, mph	31.09			27.57		
13	Stop Rate, stops/veh	0.41			0.68		
13	Spatial Stop Rate, stops/mi	0.83			1.38		
13	Through vol/cap Ratio	0.69			0.32		
13	Percent of Base FFS	70.84			62.82		
13	Level of Service	B			C		
13	Auto Traveler Perception Score	2.26			2.35		
Multimodal Results (Segment)							
13	Pedestrian Segment LOS Score / LOS	3.81		D	3.24		C
13	Bicycle Segment LOS Score / LOS	2.95		C	2.62		B
13	Transit Segment LOS Score / LOS	1.02		A	1.10		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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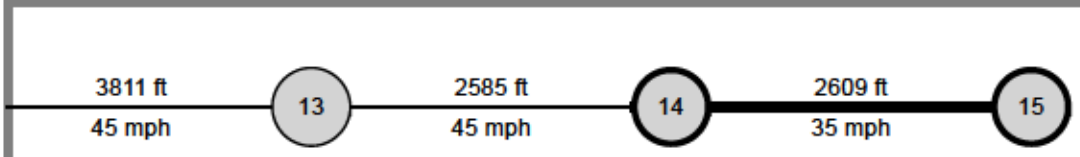
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	Existing AM.xus	Analysis Year	Existing	System Cycle Length, s	100
Intersections	29 1/2 Road & Patterson	30 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 1/2 Rd - 30 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
14	35	45	2	2	2609	2609	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
14	Bay/Lane Spillback Time, h					never	
14	Shared Lane Spillback Time, h				never		
14	Base Free-Flow Speed, mph	40.82			45.52		
14	Running Time, s	46.85			40.65		
14	Running Speed, mph	37.97			43.76		
14	Through Delay, s/veh	40.02			7.82		
14	Travel Time, s	86.88			48.46		
14	Travel Speed, mph	20.48			36.71		
14	Stop Rate, stops/veh	0.92			0.23		
14	Spatial Stop Rate, stops/mi	1.86			0.47		
14	Through vol/cap Ratio	0.81			0.29		
14	Percent of Base FFS	50.16			80.63		
14	Level of Service	C			A		
14	Auto Traveler Perception Score	2.42			2.21		
Multimodal Results (Segment)							
14	Pedestrian Segment LOS Score / LOS	3.95		D	2.92		C
14	Bicycle Segment LOS Score / LOS	2.89		C	2.56		B
14	Transit Segment LOS Score / LOS	1.77		A	0.54		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	753.72	737.51
Facility Travel Speed, mph	28.53	29.16
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	66.77	68.66
Facility Level of Service	C	B
Facility Auto Traveler Perception Score	2.31	2.27

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.14	C
Bicycle Facility LOS Score / LOS	2.63	C	2.66	C
Transit Facility LOS Score / LOS	1.01	A	0.92	A

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HCS7 Two-Way Stop-Control Report

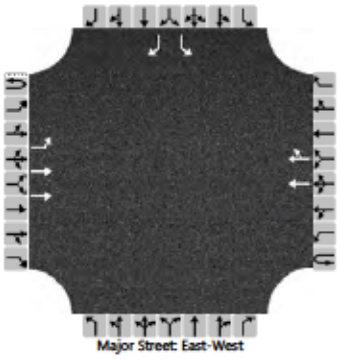
General Information

Analyst	
Agency/Co.	Stolfus and Associates
Date Performed	4/30/2020
Analysis Year	2018
Time Analyzed	AM
Intersection Orientation	East-West
Project Description	Patterson ACP

Site Information

Intersection	28 RD
Jurisdiction	
East/West Street	
North/South Street	
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	0		0	0	0		1	0	1
Configuration		L	T				T	TR						L		R
Volume (veh/h)	0	10	833				1759	57						37		58
Percent Heavy Vehicles (%)	3	1												3		0
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized														No		
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.12												6.86		6.90
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.21												3.53		3.30

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11												40		63
Capacity, c (veh/h)		294												26		250
v/c Ratio		0.04												1.57		0.25
95% Queue Length, Q_{95} (veh)		0.1												4.9		1.0
Control Delay (s/veh)		17.7												613.0		24.2
Level of Service (LOS)		C												F		C
Approach Delay (s/veh)	0.2												253.5			
Approach LOS													F			

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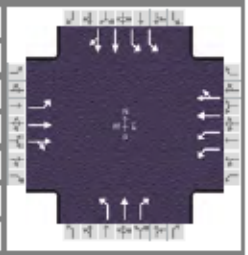
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.92
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	24 Road & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	63	155	176	493	322	177	42	291	215	207	444	25

Signal Information			
Cycle, s	110.0	Reference Phase	6
Offset, s	81	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.7	6.6	36.8	6.0	3.7	24.3	
Yellow	3.5	3.5	4.0	3.5	0.0	4.0	
Red	0.5	0.5	1.0	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	2.0	4.0	1.1	3.0	2.0	4.0
Phase Duration, s	14.7	41.8	25.3	52.4	10.0	29.3	13.7	32.9
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	10.1		18.1		4.1	19.3	8.9	15.3
Green Extension Time (g_e), s	0.6	0.0	3.2	0.0	0.1	5.0	0.8	6.3
Phase Call Probability	1.00		1.00		0.75	1.00	1.00	1.00
Max Out Probability	0.42		0.07		0.00	0.47	0.22	0.20

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	209	513	583	536	285	257	46	316	234	225	257	253
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1870	1579	1743	1885	1662	1810	1885	1598	1743	1856	1819
Queue Service Time (g_s), s	8.1	27.4	36.8	16.1	11.2	11.5	2.1	17.3	11.0	6.9	13.2	13.3
Cycle Queue Clearance Time (g_c), s	8.1	27.4	36.8	16.1	11.2	11.5	2.1	17.3	11.0	6.9	13.2	13.3
Green Ratio (*g/C*)	0.43	0.33	0.33	0.19	0.43	0.43	0.28	0.22	0.41	0.09	0.25	0.25
Capacity (*c*), veh/h	512	626	528	674	813	716	268	416	661	307	471	462
Volume-to-Capacity Ratio (*X*)	0.408	0.820	1.103	0.795	0.351	0.359	0.170	0.761	0.353	0.734	0.546	0.548
Back of Queue (*Q*), ft/ln (90 th percentile)	132.4	415	740.9	228.3	171.7	160.6	36.5	272	149.4	120.3	205.3	209.7
Back of Queue (*Q*), veh/ln (90 th percentile)	6.0	18.6	33.4	10.3	7.7	7.2	1.7	12.3	6.7	5.4	9.1	9.0
Queue Storage Ratio (*RQ*) (90 th percentile)	0.75	0.00	0.00	1.04	0.00	0.00	0.28	0.00	0.85	0.91	0.00	0.00
Uniform Delay (d_1), s/veh	20.8	32.1	41.9	42.3	21.0	21.1	30.3	40.2	22.1	48.9	35.6	35.6
Incremental Delay (d_2), s/veh	0.7	11.5	70.4	2.8	1.1	1.2	0.4	5.6	0.5	4.8	1.4	1.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	21.6	43.6	112.3	45.1	22.0	22.3	30.7	45.8	22.6	53.7	37.0	37.0
Level of Service (LOS)	C	D	F	D	C	C	C	D	C	D	D	D
Approach Delay, s/veh / LOS	70.8	E		33.5	C		35.5	D		42.1	D	
Intersection Delay, s/veh / LOS	48.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.27	B	2.45	B	2.29	B
Bicycle LOS Score / LOS	0.84	A	1.38	A	1.47	A	1.09	A

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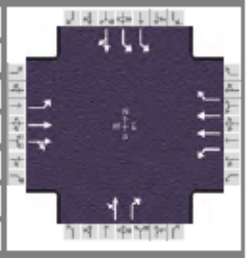
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.94
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Market Street/Mall Acce…	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	83	435	86	28	756	256	76	46	22	228	21	179

Signal Information					EB			WB			NB		
Cycle, s	110.0	Reference Phase	2										
Offset, s	0	Reference Point	Begin	Green	1.5	2.2		56.7	9.7	17.0	0.0		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5		4.0	4.0	4.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.5		1.0	1.0	1.0	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	3.0		11.0		10.0
Phase Duration, s	11.7	67.9	5.5	61.7		14.7		22.0
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.4
Queue Clearance Time (g_s), s	7.4		2.3			9.6		15.9
Green Extension Time (g_e), s	0.3	0.0	0.0	0.0		0.2		1.0
Phase Call Probability	1.00		0.29			0.99		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	198	639	605	11	307	104		130	23	243	213	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1885	1777	1810	1795	1610		1843	1610	1757	1636	
Queue Service Time (g_s), s	5.4	28.6	29.5	0.3	6.3	5.1		7.6	1.5	6.9	13.9	
Cycle Queue Clearance Time (g_c), s	5.4	28.6	29.5	0.3	6.3	5.1		7.6	1.5	6.9	13.9	
Green Ratio (*g/C*)	0.60	0.57	0.57	0.53	0.52	0.52		0.09	0.09	0.15	0.15	
Capacity (*c*), veh/h	691	1077	1015	219	1849	830		163	142	542	252	
Volume-to-Capacity Ratio (*X*)	0.287	0.593	0.596	0.052	0.166	0.125		0.798	0.165	0.448	0.844	
Back of Queue (*Q*), ft/ln (90 th percentile)	79.8	395.5	387.5	5	103.7	79		134.6	24	115.8	197.5	
Back of Queue (*Q*), veh/ln (90 th percentile)	3.6	17.8	17.6	0.2	4.7	3.6		6.1	1.1	5.3	9.0	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.55	0.00	0.00	0.05	0.00	0.75		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	10.1	21.7	22.9	14.8	18.6	20.3		49.2	46.4	42.3	45.2	
Incremental Delay (d_2), s/veh	0.1	2.0	2.1	0.0	0.2	0.3		3.4	0.2	0.2	3.0	
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	
Control Delay (*d*), s/veh	10.2	23.6	25.0	14.9	18.7	20.6		52.6	46.6	42.5	48.2	
Level of Service (LOS)	B	C	C	B	B	C		D	D	D	D	
Approach Delay, s/veh / LOS	22.4	C		19.1	B		51.6	D		45.2	D	
Intersection Delay, s/veh / LOS	27.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	2.09	B	2.48	B	2.30	B
Bicycle LOS Score / LOS	1.02	A	1.40	A	0.74	A	1.24	A

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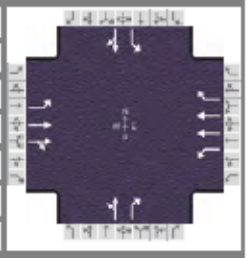
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.91
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Home Depot Access/Me...	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	58	598	44	74	879	65	59	22	88	89	13	89

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	43	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	3.6	1.6	66.3	10.1	9.3	0.0	
Yellow	3.5	0.0	4.0	4.0	4.0	0.0	
Red	0.5	0.0	1.0	1.0	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	4.0	1.1	3.0		11.0		10.0
Phase Duration, s	9.2	73.0	7.6	71.3		14.3		15.1
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0		5.5		5.5
Queue Clearance Time (g_s), s	4.8		2.9			8.3		9.3
Green Extension Time (g_e), s	0.6	0.0	0.2	0.0		1.0		0.8
Phase Call Probability	0.98		0.72			1.00		1.00
Max Out Probability	0.00		0.00			0.00		0.09

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	121	677	663	42	500	37		89	97	98	112	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1885	1839	1810	1809	1610		1833	1585	1810	1642	
Queue Service Time (g_s), s	2.8	20.4	20.2	0.9	10.1	1.7		5.1	6.3	5.7	7.3	
Cycle Queue Clearance Time (g_c), s	2.8	20.4	20.2	0.9	10.1	1.7		5.1	6.3	5.7	7.3	
Green Ratio (*g/C*)	0.65	0.62	0.62	0.64	0.60	0.60		0.08	0.12	0.09	0.09	
Capacity (*c*), veh/h	594	1165	1136	297	2181	971		155	186	167	151	
Volume-to-Capacity Ratio (*X*)	0.204	0.581	0.583	0.142	0.229	0.038		0.574	0.520	0.587	0.741	
Back of Queue (*Q*), ft/ln (90 th percentile)	41.9	237.8	227.6	13.4	154.9	23.3		101.7	106.3	108.9	127.4	
Back of Queue (*Q*), veh/ln (90 th percentile)	1.9	10.7	10.3	0.6	7.0	1.1		4.6	4.8	4.9	5.8	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.32	0.00	0.00	0.12	0.00	0.00		0.00	1.20	0.82	0.00	
Uniform Delay (d_1), s/veh	8.0	9.7	9.4	8.9	16.3	14.8		48.4	45.6	47.9	48.7	
Incremental Delay (d_2), s/veh	0.2	1.9	2.0	0.3	0.2	0.1		4.7	3.2	4.6	9.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	8.2	11.6	11.4	9.2	16.6	14.9		53.2	48.8	52.5	58.4	
Level of Service (LOS)	A	B	B	A	B	B		D	D	D	E	
Approach Delay, s/veh / LOS	11.2	B		15.9	B		50.9	D		55.7	E	
Intersection Delay, s/veh / LOS	19.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	1.88	B	2.46	B	2.32	B
Bicycle LOS Score / LOS	1.12	A	1.41	A	0.79	A	0.83	A

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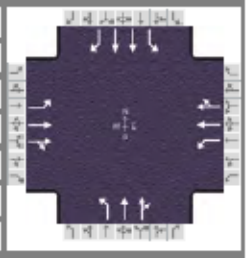
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.91
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	24 1/2 Rd & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	53	515	161	204	720	174	219	222	166	170	208	80

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	23	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.3	0.5	58.3	9.0	1.4	13.0	
Yellow	3.5	0.0	4.0	3.5	3.5	4.0	
Red	0.5	0.0	1.5	0.5	0.5	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	3.0
Phase Duration, s	9.3	63.8	9.7	64.3	18.4	23.4	13.0	18.0
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	5.1		5.4		14.4	15.0	11.0	8.7
Green Extension Time (g_e), s	0.4	0.0	0.5	0.0	0.1	3.4	0.0	3.6
Phase Call Probability	0.97		0.98		1.00	1.00	1.00	1.00
Max Out Probability	0.01		0.00		1.00	0.36	1.00	0.30

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	112	740	692	123	277	262	241	224	202	187	229	88
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1885	1732	1795	1885	1758	1810	1885	1622	1795	1781	1585
Queue Service Time (g_s), s	3.1	31.2	29.8	3.4	5.8	5.6	12.4	12.4	13.0	9.0	6.7	5.7
Cycle Queue Clearance Time (g_c), s	3.1	31.2	29.8	3.4	5.8	5.6	12.4	12.4	13.0	9.0	6.7	5.7
Green Ratio (*g/C*)	0.58	0.53	0.53	0.58	0.53	0.53	0.27	0.17	0.17	0.20	0.12	0.12
Capacity (*c*), veh/h	552	1000	918	252	1008	940	365	316	272	243	421	188
Volume-to-Capacity Ratio (*X*)	0.203	0.740	0.754	0.489	0.275	0.279	0.659	0.710	0.743	0.770	0.542	0.469
Back of Queue (*Q*), ft/ln (90 th percentile)	50.3	382.9	313.2	57.3	90.1	82	195.6	204.2	192	186.6	116.6	94.6
Back of Queue (*Q*), veh/ln (90 th percentile)	2.3	17.3	14.2	2.6	4.1	3.7	8.9	9.2	8.7	8.4	5.2	4.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.38	0.00	0.00	0.43	0.00	0.00	1.48	0.00	0.00	1.41	0.00	0.00
Uniform Delay (d_1), s/veh	11.1	16.7	13.9	17.4	8.2	7.8	34.5	43.2	43.5	41.0	45.7	45.3
Incremental Delay (d_2), s/veh	0.2	4.4	5.1	1.9	0.6	0.7	4.7	4.2	6.3	14.8	1.5	2.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	11.4	21.1	19.0	19.3	8.8	8.4	39.1	47.5	49.8	55.8	47.2	47.8
Level of Service (LOS)	B	C	B	B	A	A	D	D	D	E	D	D
Approach Delay, s/veh / LOS	19.5	B		10.6	B		45.2	D		50.5	D	
Intersection Delay, s/veh / LOS	27.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.41	B	2.30	B	2.31	B
Bicycle LOS Score / LOS	1.15	A	1.48	A	1.04	A	0.90	A

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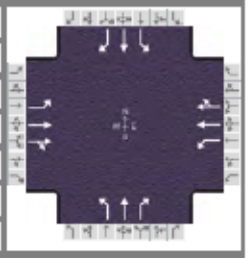
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.90
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	25 Road & Patterson	File Name	Existing PM.xus		
Project Description					



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	741	147	222	834	147	180	308	176	205	301	111

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	102	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	16.9	40.2	12.5	21.4	0.0	0.0	
Yellow	3.5	4.5	3.5	4.0	0.0	0.0	
Red	0.5	1.5	0.5	1.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.9	46.2	20.9	46.2	16.5	26.4	16.5	26.4
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	5.6		6.5		11.6	21.7	13.1	21.3
Green Extension Time (g_e), s	0.4	0.0	0.4	0.0	0.1	0.0	0.0	0.1
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.02		0.04		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	131	890	872	141	318	304	200	342	179	228	334	123
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1885	1778	1795	1885	1786	1781	1885	1598	1795	1870	1610
Queue Service Time (g_s), s	3.6	40.2	40.2	4.5	12.0	12.9	9.6	19.7	9.0	11.1	19.3	7.3
Cycle Queue Clearance Time (g_c), s	3.6	40.2	40.2	4.5	12.0	12.9	9.6	19.7	9.0	11.1	19.3	7.3
Green Ratio (*g/C*)	0.52	0.37	0.37	0.52	0.37	0.37	0.31	0.19	0.35	0.31	0.19	0.19
Capacity (*c*), veh/h	530	689	650	341	689	653	269	367	556	269	364	313
Volume-to-Capacity Ratio (*X*)	0.247	1.291	1.342	0.412	0.462	0.465	0.744	0.933	0.322	0.845	0.919	0.394
Back of Queue (*Q*), ft/ln (90 th percentile)	56.2	1399.3	1481.6	79.1	168.5	177.5	184.7	373.2	134.3	221.2	363.5	120.5
Back of Queue (*Q*), veh/ln (90 th percentile)	2.6	63.1	66.3	3.6	7.6	7.9	8.3	16.8	6.1	10.0	16.3	5.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.32	0.00	0.00	0.45	0.00	0.00	0.84	0.00	0.76	1.67	0.00	0.91
Uniform Delay (d_1), s/veh	11.9	39.5	40.3	20.7	20.4	22.5	31.7	43.6	26.3	32.2	43.5	38.6
Incremental Delay (d_2), s/veh	1.0	141.2	163.2	3.1	1.9	2.0	17.0	32.8	1.5	26.4	30.6	3.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	12.9	180.7	203.5	23.8	22.2	24.5	48.7	76.4	27.8	58.7	74.0	42.3
Level of Service (LOS)	B	F	F	C	C	C	D	E	C	E	E	D
Approach Delay, s/veh / LOS	179.6	F		23.4	C		56.7	E		63.2	E	
Intersection Delay, s/veh / LOS	108.8						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.11	B	2.30	B	2.30	B
Bicycle LOS Score / LOS	1.36	A	1.59	B	1.68	B	1.62	B

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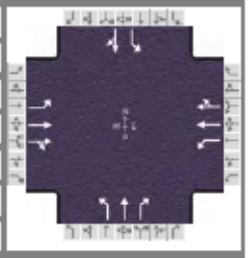
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.89
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	25 1/2 Road & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	36	1077	89	182	1079	104	92	145	189	185	118	46

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	28	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.2	1.5	54.5	11.0	17.7	0.0	
Yellow	3.5	0.0	4.5	3.5	4.0	0.0	
Red	0.5	0.0	1.5	0.5	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	10.2	60.5	11.8	62.1	15.0	22.7	15.0	22.7
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.3	5.2	5.3
Queue Clearance Time (g_s), s	3.4		5.2		7.0	16.0	12.6	12.7
Green Extension Time (g_e), s	0.1	0.0	0.3	0.0	0.1	1.7	0.0	2.3
Phase Call Probability	0.78		0.97		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.02		1.00	0.85	1.00	0.39

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	49	803	790	114	375	364	103	163	212	208	184	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1767	1885	1834	1795	1885	1826	1781	1870	1610	1795	1780	
Queue Service Time (g_s), s	1.4	42.1	42.9	3.2	12.0	11.2	5.0	8.8	14.0	10.6	10.7	
Cycle Queue Clearance Time (g_c), s	1.4	42.1	42.9	3.2	12.0	11.2	5.0	8.8	14.0	10.6	10.7	
Green Ratio (*g/C*)	0.55	0.50	0.50	0.57	0.51	0.51	0.26	0.16	0.16	0.26	0.16	
Capacity (*c*), veh/h	438	935	909	226	961	931	299	301	259	309	287	
Volume-to-Capacity Ratio (*X*)	0.112	0.860	0.869	0.503	0.390	0.391	0.346	0.541	0.819	0.673	0.643	
Back of Queue (*Q*), ft/ln (90 th percentile)	20.2	578.7	578.3	62.5	163.6	149	96.3	152.5	215.6	189.1	173.5	
Back of Queue (*Q*), veh/ln (90 th percentile)	0.9	26.1	26.1	2.8	7.4	6.6	4.3	6.8	9.8	8.5	7.8	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.15	0.00	0.00	0.47	0.00	0.00	0.87	0.00	2.45	1.43	0.00	
Uniform Delay (d_1), s/veh	11.2	27.0	27.2	24.6	14.1	12.6	32.7	42.4	44.6	34.6	43.2	
Incremental Delay (d_2), s/veh	0.1	9.3	10.2	2.0	1.0	1.0	3.2	2.1	14.1	11.2	3.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	11.3	36.3	37.4	26.6	15.0	13.7	35.8	44.6	58.7	45.8	46.8	
Level of Service (LOS)	B	D	D	C	B	B	D	D	E	D	D	
Approach Delay, s/veh / LOS	36.1	D		16.0	B		49.0	D		46.3	D	
Intersection Delay, s/veh / LOS	34.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.09	B	1.90	B	2.30	B	2.30	B
Bicycle LOS Score / LOS	1.60	B	1.75	B	1.28	A	1.13	A

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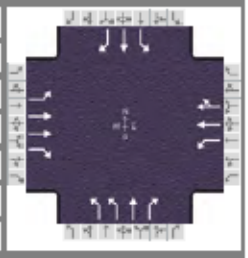
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.93
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	1st Street & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	55	1203	167	187	1110	60	184	179	183	82	132	37

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	74	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.8	1.0	59.6	7.5	0.5	16.2	
Yellow	3.5	0.0	3.0	3.5	0.0	4.0	
Red	0.5	0.0	2.5	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	10.8	65.1	11.8	66.0	12.0	21.7	11.5	21.2
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.3	5.2	5.3
Queue Clearance Time (g_s), s	3.5		4.9		7.1	14.0	6.5	9.6
Green Extension Time (g_e), s	0.2	0.0	0.5	0.0	0.5	2.7	0.2	3.1
Phase Call Probability	0.85		0.97		1.00	1.00	0.93	1.00
Max Out Probability	0.00		0.00		0.70	0.19	0.37	0.08

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	62	1358	189	114	360	354	198	192	197	88	142	40
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1795	1610	1781	1885	1851	1757	1885	1598	1795	1885	1610
Queue Service Time (g_s), s	1.5	25.1	3.6	2.9	6.9	6.6	5.1	10.6	12.0	4.5	7.6	2.2
Cycle Queue Clearance Time (g_c), s	1.5	25.1	3.6	2.9	6.9	6.6	5.1	10.6	12.0	4.5	7.6	2.2
Green Ratio (*g/C*)	0.60	0.54	0.61	0.61	0.55	0.55	0.22	0.15	0.22	0.22	0.15	0.21
Capacity (*c*), veh/h	521	1943	989	296	1037	1018	576	287	356	225	278	337
Volume-to-Capacity Ratio (*X*)	0.119	0.699	0.191	0.386	0.347	0.348	0.343	0.671	0.553	0.392	0.511	0.118
Back of Queue (*Q*), ft/ln (90 th percentile)	22.1	236.5	45.3	48.5	89.6	86	87.4	179.9	169.2	81	136.1	34.8
Back of Queue (*Q*), veh/ln (90 th percentile)	1.0	10.7	2.1	2.2	4.0	3.8	4.0	8.1	7.6	3.7	6.1	1.6
Queue Storage Ratio (*RQ*) (90 th percentile)	0.17	0.00	0.34	0.44	0.00	0.00	0.66	0.00	1.28	0.73	0.00	0.00
Uniform Delay (d_1), s/veh	8.8	11.8	5.4	14.3	6.9	6.5	35.8	44.0	37.9	36.4	43.2	35.3
Incremental Delay (d_2), s/veh	0.1	1.8	0.4	0.7	0.6	0.6	0.5	3.8	1.9	1.6	2.1	0.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	8.9	13.6	5.8	15.1	7.4	7.0	36.3	47.9	39.8	37.9	45.3	35.5
Level of Service (LOS)	A	B	A	B	A	A	D	D	D	D	D	D
Approach Delay, s/veh / LOS	12.5	B		8.3	A		41.3	D		41.5	D	
Intersection Delay, s/veh / LOS	19.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.09	B	2.30	B	2.46	B
Bicycle LOS Score / LOS	1.75	B	1.69	B	1.46	A	0.93	A

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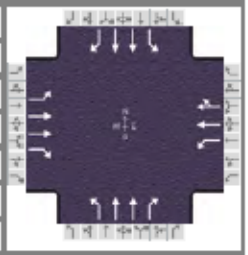
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.93
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	7th Street & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	142	1204	163	104	920	46	247	407	197	66	255	174

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	15	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.5	0.4	46.5	7.1	4.3	18.3	
Yellow	3.5	3.5	4.0	3.5	3.5	4.0	
Red	0.5	0.5	1.0	0.5	0.5	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	15.8	55.9	11.5	51.5	19.4	31.6	11.1	23.3
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	11.6		7.2		14.8	12.9	5.5	12.9
Green Extension Time (g_e), s	0.4	0.0	0.2	0.0	0.6	7.2	0.1	5.4
Phase Call Probability	0.99		0.93		1.00	1.00	0.89	1.00
Max Out Probability	0.41		0.01		1.00	0.20	1.00	0.50

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	156	1326	151	89	414	407	266	438	198	71	274	187
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1795	1795	1438	1795	1885	1856	1810	1795	1590	1810	1781	1562
Queue Service Time (g_s), s	9.6	30.6	2.7	5.2	17.9	17.8	12.8	10.9	10.1	3.5	7.7	10.9
Cycle Queue Clearance Time (g_c), s	9.6	30.6	2.7	5.2	17.9	17.8	12.8	10.9	10.1	3.5	7.7	10.9
Green Ratio (*g/C*)	0.11	0.46	0.60	0.07	0.42	0.42	0.32	0.24	0.31	0.23	0.17	0.27
Capacity (*c*), veh/h	193	1659	889	122	797	784	410	868	493	283	591	430
Volume-to-Capacity Ratio (*X*)	0.809	0.799	0.170	0.729	0.519	0.520	0.647	0.504	0.401	0.251	0.464	0.435
Back of Queue (*Q*), ft/ln (90 th percentile)	172.2	317.5	30	91.1	251	253.1	194.9	159.6	136.1	61.6	128.5	151.8
Back of Queue (*Q*), veh/ln (90 th percentile)	7.8	14.3	1.4	4.1	11.3	11.1	8.9	7.2	6.1	2.8	5.7	6.8
Queue Storage Ratio (*RQ*) (90 th percentile)	0.98	0.00	0.19	0.69	0.00	0.00	0.89	0.00	0.77	0.56	0.00	0.00
Uniform Delay (d_1), s/veh	53.2	17.1	4.5	45.0	23.7	23.4	30.0	31.9	26.5	34.0	41.4	33.0
Incremental Delay (d_2), s/veh	9.8	3.4	0.3	8.5	1.8	1.8	2.9	0.6	0.8	0.7	0.8	1.0
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	0.0
Control Delay (*d*), s/veh	63.0	20.5	4.8	53.4	25.5	25.2	33.0	32.6	27.3	34.7	42.3	34.0
Level of Service (LOS)	E	C	A	D	C	C	C	C	C	C	D	C
Approach Delay, s/veh / LOS	23.1	C		28.1	C		31.5	C		38.3	D	
Intersection Delay, s/veh / LOS	28.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.44	B	2.43	B	2.30	B	2.49	B
Bicycle LOS Score / LOS	1.80	B	1.43	A	1.23	A	0.93	A

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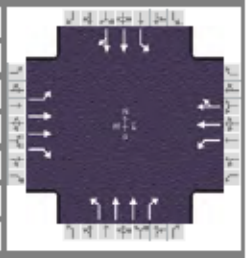
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.95
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	12th Street & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	89	1185	175	152	692	52	212	364	216	136	416	112

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	85	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.5	44.0	10.3	2.6	18.1	0.0	
Yellow	3.5	4.0	3.5	3.5	4.0	0.0	
Red	0.5	1.5	0.5	0.5	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	16.5	49.5	16.5	49.5	20.9	29.7	14.3	23.1
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	5.2		9.1		12.3	14.1	9.0	18.8
Green Extension Time (g_e), s	0.2	0.0	0.3	0.0	0.5	5.2	0.1	0.0
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.23		1.00		1.00	0.59	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	97	1295	191	210	521	508	223	383	227	143	287	269
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1809	1593	1795	1885	1838	1810	1809	1598	1810	1885	1741
Queue Service Time (g_s), s	3.2	36.3	6.1	7.1	25.5	25.8	10.3	10.1	12.1	7.0	16.5	16.8
Cycle Queue Clearance Time (g_c), s	3.2	36.3	6.1	7.1	25.5	25.8	10.3	10.1	12.1	7.0	16.5	16.8
Green Ratio (*g/C*)	0.51	0.40	0.55	0.51	0.40	0.40	0.34	0.22	0.34	0.26	0.16	0.16
Capacity (*c*), veh/h	349	1447	883	288	754	735	354	812	540	329	310	287
Volume-to-Capacity Ratio (*X*)	0.279	0.895	0.217	0.730	0.691	0.691	0.631	0.472	0.421	0.435	0.925	0.938
Back of Queue (*Q*), ft/ln (90 th percentile)	57.3	434.5	80	128.8	356.7	356.7	178	162.4	171.4	127.2	327.7	321.2
Back of Queue (*Q*), veh/ln (90 th percentile)	2.6	19.8	3.6	5.8	16.1	16.1	8.1	7.4	7.7	5.8	14.8	14.4
Queue Storage Ratio (*RQ*) (90 th percentile)	0.32	0.00	0.55	0.49	0.00	0.00	0.81	0.00	0.78	0.96	0.00	0.00
Uniform Delay (d_1), s/veh	19.6	28.6	11.0	22.2	28.3	29.2	29.4	37.0	28.1	33.0	45.3	45.4
Incremental Delay (d_2), s/veh	1.2	5.7	0.3	12.7	4.3	4.4	8.3	2.0	2.4	4.1	35.1	39.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	20.9	34.4	11.4	34.9	32.6	33.6	37.7	39.0	30.5	37.2	80.4	84.9
Level of Service (LOS)	C	C	B	C	C	C	D	D	C	D	F	F
Approach Delay, s/veh / LOS	30.8	C		33.4	C		36.3	D		73.3	E	
Intersection Delay, s/veh / LOS	39.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.28	B	2.30	B	2.46	B
Bicycle LOS Score / LOS	1.75	B	1.27	A	1.18	A	1.06	A

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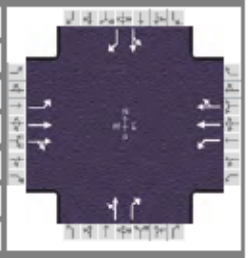
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.95
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Patterson Rd & 15th St	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	90	1577	39	35	1002	39	20	6	53	65	5	85

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	88	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.6	1.0	83.4	8.5	0.0	0.0	
Yellow	3.5	0.0	3.5	3.5	0.0	0.0	
Red	1.0	0.0	1.0	1.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		8		4
Case Number	1.1	4.0	1.1	4.0		7.0		7.0
Phase Duration, s	9.1	88.9	8.1	87.9		13.0		13.0
Change Period, ($Y+R_c$), s	4.5	4.5	4.5	4.5		4.5		4.5
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time (g_s), s	3.1		2.6			5.7		8.1
Green Extension Time (g_e), s	0.1	0.0	0.0	0.0		0.4		0.4
Phase Call Probability	0.92		0.72			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	1	6	16	5	2	12	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	83	750	745	42	632	624		27	56		74	89
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1856	1840	1781	1885	1860		1522	1585		1435	1585
Queue Service Time (g_s), s	1.1	9.9	10.1	0.6	9.6	9.3		0.0	3.7		3.8	6.1
Cycle Queue Clearance Time (g_c), s	1.1	9.9	10.1	0.6	9.6	9.3		1.7	3.7		5.5	6.1
Green Ratio (*g/C*)	0.80	0.77	0.77	0.79	0.76	0.76		0.08	0.08		0.08	0.08
Capacity (*c*), veh/h	437	1424	1412	355	1430	1411		175	122		174	122
Volume-to-Capacity Ratio (*X*)	0.191	0.527	0.528	0.119	0.442	0.442		0.156	0.457		0.425	0.733
Back of Queue (*Q*), ft/ln (90 th percentile)	9.9	90.1	88.7	5.5	90.9	86.4		28.7	60.2		80.3	100.9
Back of Queue (*Q*), veh/ln (90 th percentile)	0.4	4.0	4.0	0.2	4.1	3.9		1.3	2.7		3.6	4.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.12	0.00	0.00	0.06	0.00	0.00		0.00	1.36		0.00	2.28
Uniform Delay (d_1), s/veh	2.8	2.1	2.2	3.2	3.0	2.8		47.6	48.6		49.4	49.7
Incremental Delay (d_2), s/veh	0.1	1.1	1.1	0.0	0.6	0.7		0.2	1.0		0.6	3.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Control Delay (*d*), s/veh	2.9	3.3	3.3	3.2	3.6	3.5		47.8	49.6		50.0	52.8
Level of Service (LOS)	A	A	A	A	A	A		D	D		D	D
Approach Delay, s/veh / LOS	3.3	A		3.5	A		49.0	D		51.6	D	
Intersection Delay, s/veh / LOS	7.1						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.84	B	1.84	B	2.31	B	2.31	B
Bicycle LOS Score / LOS	1.97	B	1.42	A	0.62	A	0.76	A

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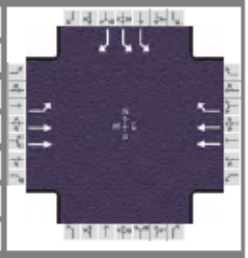
HCS7 Signalized Intersection Results Summary

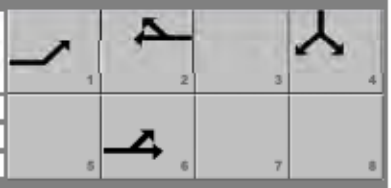
General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.99
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	27 1/2 Road & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	138	1436			822	342				545		124

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	88	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.3	64.4	20.3	0.0	0.0	0.0	
Yellow	3.5	4.5	4.0	0.0	0.0	0.0	
Red	0.5	1.5	1.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2				4
Case Number	1.0	4.0		7.3				9.0
Phase Duration, s	14.3	84.7		70.4				25.3
Change Period, ($Y+R_c$), s	4.0	6.0		6.0				5.0
Max Allow Headway (*MAH*), s	5.2	0.0		0.0				5.3
Queue Clearance Time (g_s), s	4.0							18.7
Green Extension Time (g_e), s	0.2	0.0		0.0				0.7
Phase Call Probability	1.00							1.00
Max Out Probability	0.43							1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2	12				7		14
Adjusted Flow Rate (*v*), veh/h	99	1028			932	388				551		125
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795			1795	1610				1757		1610
Queue Service Time (g_s), s	2.0	13.4			13.3	10.4				16.7		7.6
Cycle Queue Clearance Time (g_c), s	2.0	13.4			13.3	10.4				16.7		7.6
Green Ratio (*g/C*)	0.70	0.72			0.59	0.59				0.18		0.18
Capacity (*c*), veh/h	431	2568			2101	943				649		297
Volume-to-Capacity Ratio (*X*)	0.229	0.400			0.443	0.411				0.849		0.422
Back of Queue (*Q*), ft/ln (90 th percentile)	30.5	150.9			154.1	115				263.8		124.3
Back of Queue (*Q*), veh/ln (90 th percentile)	1.4	6.8			6.9	5.2				12.0		5.7
Queue Storage Ratio (*RQ*) (90 th percentile)	0.20	0.00			0.00	2.18				1.58		0.00
Uniform Delay (d_1), s/veh	7.2	6.9			9.7	7.7				43.4		39.7
Incremental Delay (d_2), s/veh	0.9	0.3			0.6	1.1				13.1		4.3
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0				0.0		0.0
Control Delay (*d*), s/veh	8.1	7.3			10.2	8.8				56.4		44.0
Level of Service (LOS)	A	A			B	A				E		D
Approach Delay, s/veh / LOS	7.3	A		9.8	A		0.0			54.1	D	
Intersection Delay, s/veh / LOS	18.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	0.66	A	2.08	B	2.32	B	2.32	B
Bicycle LOS Score / LOS	1.80	B	1.46	A				F

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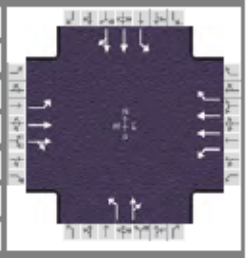
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.97
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	28 1/4 Road & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	29	1509	266	95	913	26	226	14	156	39	22	45

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	63	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.2	57.8	7.0	0.4	12.6	0.0			
Yellow	3.5	4.5	3.5	3.5	4.0	0.0			
Red	0.5	1.5	0.5	0.5	1.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	3.0	1.1	4.0	1.1	4.0
Phase Duration, s	13.2	63.8	13.2	63.8	15.4	22.0	11.0	17.6
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.1	0.0	5.2	5.4	5.2	5.4
Queue Clearance Time (g_s), s	2.5		4.2		13.4	13.2	4.1	4.9
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0	0.0	0.5	0.0	0.8
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.13		1.00		1.00	1.00	1.00	0.38

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	18	561	532	90	868	25	233	175		40	23	46
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1885	1786	1810	1795	1560	1810	1631		1810	1900	1610
Queue Service Time (g_s), s	0.5	15.8	14.2	2.2	13.5	0.6	11.4	11.2		2.1	1.2	2.9
Cycle Queue Clearance Time (g_c), s	0.5	15.8	14.2	2.2	13.5	0.6	11.4	11.2		2.1	1.2	2.9
Green Ratio (*g/C*)	0.61	0.53	0.53	0.61	0.53	0.59	0.24	0.15		0.18	0.11	0.11
Capacity (*c*), veh/h	460	991	939	407	1886	919	372	252		223	218	184
Volume-to-Capacity Ratio (*X*)	0.039	0.566	0.567	0.222	0.460	0.027	0.626	0.695		0.180	0.104	0.252
Back of Queue (*Q*), ft/ln (90 th percentile)	7.2	169.1	144.2	33.9	148.5	7.8	206.4	186.8		40.1	24.1	51.9
Back of Queue (*Q*), veh/ln (90 th percentile)	0.3	7.6	6.4	1.5	6.7	0.3	9.4	8.5		1.8	1.1	2.4
Queue Storage Ratio (*RQ*) (90 th percentile)	0.03	0.00	0.00	0.13	0.00	0.08	0.78	0.00		0.36	0.00	0.00
Uniform Delay (d_1), s/veh	10.3	9.8	8.3	10.2	11.7	7.6	37.3	44.0		38.4	43.6	44.4
Incremental Delay (d_2), s/veh	0.1	1.8	1.9	0.8	0.5	0.0	7.7	14.7		1.8	1.0	3.2
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	10.4	11.6	10.2	11.0	12.3	7.6	45.0	58.8		40.1	44.6	47.6
Level of Service (LOS)	B	B	B	B	B	A	D	E		D	D	D
Approach Delay, s/veh / LOS	10.9	B		12.0	B		50.9	D		44.2	D	
Intersection Delay, s/veh / LOS	19.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.09	B	2.09	B	2.46	B	2.31	B
Bicycle LOS Score / LOS	2.02	B	1.37	A	1.16	A	0.58	A

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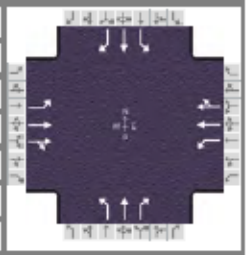
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.95
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	29 Road & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	155	1207	310	127	766	28	238	136	183	52	83	76

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	18	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	11.5	51.5	9.5	17.0	0.0	0.0	
Yellow	3.5	4.5	3.5	4.0	0.0	0.0	
Red	1.0	2.0	1.0	1.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	4.0	1.1	4.0	2.0	3.0	2.0	3.0
Phase Duration, s	16.0	58.0	16.0	58.0	14.0	22.0	14.0	22.0
Change Period, ($Y+R_c$), s	4.5	6.5	4.5	6.5	4.5	5.0	4.5	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	5.0		6.5		11.5	10.8	5.3	6.7
Green Extension Time (g_e), s	0.1	0.0	0.2	0.0	0.0	0.9	0.0	1.2
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.11		0.50		1.00	0.44	1.00	0.07

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	111	562	523	158	498	491	251	143	156	55	87	27
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1795	1885	1751	1795	1885	1861	1795	1826	1598	1711	1826	1560
Queue Service Time (g_s), s	3.0	27.5	27.7	4.5	19.8	19.7	9.5	7.9	8.8	3.3	4.7	1.5
Cycle Queue Clearance Time (g_c), s	3.0	27.5	27.7	4.5	19.8	19.7	9.5	7.9	8.8	3.3	4.7	1.5
Green Ratio (*g/C*)	0.57	0.47	0.47	0.57	0.47	0.47	0.09	0.15	0.26	0.09	0.15	0.26
Capacity (*c*), veh/h	408	883	820	357	883	871	155	282	414	148	282	404
Volume-to-Capacity Ratio (*X*)	0.272	0.637	0.637	0.443	0.564	0.564	1.616	0.507	0.376	0.370	0.310	0.068
Back of Queue (*Q*), ft/ln (90 th percentile)	47.1	378.7	366.9	73	245.6	241.3	579.9	151.1	135.7	70.7	95.1	23.7
Back of Queue (*Q*), veh/ln (90 th percentile)	2.1	17.1	16.3	3.3	11.1	10.8	26.1	6.6	6.1	3.0	4.2	1.0
Queue Storage Ratio (*RQ*) (90 th percentile)	0.15	0.00	0.00	0.18	0.00	0.00	2.63	0.00	0.62	0.53	0.00	0.18
Uniform Delay (d_1), s/veh	12.5	28.0	28.6	16.2	19.0	18.7	50.3	42.7	33.5	47.4	41.3	30.7
Incremental Delay (d_2), s/veh	1.2	2.6	2.8	2.7	1.8	1.8	304.8	6.4	2.6	7.0	2.8	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	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	13.8	30.6	31.4	18.9	20.8	20.5	355.0	49.0	36.1	54.4	44.1	31.1
Level of Service (LOS)	B	C	C	B	C	C	F	D	D	D	D	C
Approach Delay, s/veh / LOS	29.4	C		20.4	C		184.9	F		45.3	D	
Intersection Delay, s/veh / LOS	54.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.15	B	2.17	B	2.30	B	2.30	B
Bicycle LOS Score / LOS	1.94	B	1.29	A	1.39	A	0.77	A

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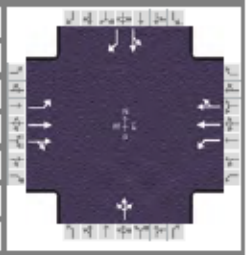
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.97
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	29 1/2 Road & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	69	1265	73	61	793	59	82	46	124	84	19	32

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	56	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.0	0.5	61.9	28.0	0.0	0.0	
Yellow	3.5	0.0	5.0	4.0	0.0	0.0	
Red	0.5	0.0	1.5	1.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	4.0	1.1	4.0		8.0		7.0
Phase Duration, s	8.0	68.4	8.6	69.0		33.0		33.0
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5		5.0		5.0
Max Allow Headway (*MAH*), s	4.5	0.0	4.5	0.0		4.8		4.8
Queue Clearance Time (g_s), s	3.4		4.0			30.0		16.0
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0		0.0		1.5
Phase Call Probability	0.81		0.91			1.00		1.00
Max Out Probability	0.01		0.04			1.00		0.08

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	54	525	514	79	562	548		260			106	33
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1885	1849	1810	1885	1839		1009			712	1572
Queue Service Time (g_s), s	1.4	9.7	9.3	2.0	11.2	10.6		14.0			0.0	1.8
Cycle Queue Clearance Time (g_c), s	1.4	9.7	9.3	2.0	11.2	10.6		28.0			14.0	1.8
Green Ratio (*g/C*)	0.60	0.56	0.56	0.60	0.57	0.57		0.25			0.25	0.25
Capacity (*c*), veh/h	363	1062	1041	403	1071	1044		300			241	400
Volume-to-Capacity Ratio (*X*)	0.148	0.494	0.494	0.197	0.525	0.525		0.865			0.441	0.082
Back of Queue (*Q*), ft/ln (90 th percentile)	20	102.1	96.6	29.9	116.4	110.5		282.7			106.8	27.3
Back of Queue (*Q*), veh/ln (90 th percentile)	0.9	4.6	4.4	1.4	5.2	4.9		12.6			4.6	1.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.15	0.00	0.00	0.23	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	10.3	5.5	5.2	9.9	5.8	5.4		43.6			35.5	31.2
Incremental Delay (d_2), s/veh	0.1	1.1	1.1	0.2	1.3	1.4		22.2			1.3	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Control Delay (*d*), s/veh	10.4	6.6	6.3	10.1	7.2	6.7		65.9			36.8	31.3
Level of Service (LOS)	B	A	A	B	A	A		E			D	C
Approach Delay, s/veh / LOS	6.6	A		7.2	A		65.9	E		35.5	D	
Intersection Delay, s/veh / LOS	14.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.67	B	1.89	B	2.29	B	2.29	B
Bicycle LOS Score / LOS	1.68	B	1.26	A	0.92	A	0.72	A

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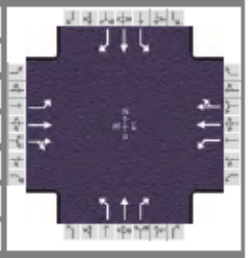
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.96
Urban Street	Patterson Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	30 Road & Patterson	File Name	Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	155	933	219	55	580	52	197	87	80	36	55	97

Signal Information			
Cycle, s	110.0	Reference Phase	2
Offset, s	26	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.0	1.0	41.5	10.0	24.0	0.0
Yellow	3.5	3.5	5.0	3.5	4.0	0.0
Red	0.5	0.5	1.5	0.5	1.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	4.0	1.1	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	19.0	53.0	14.0	48.0	14.0	29.0	14.0	29.0
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.2	0.0	4.2	4.2	4.2	4.2
Queue Clearance Time (g_s), s	7.1		5.1		12.0	6.6	3.6	4.7
Green Extension Time (g_e), s	0.3	0.0	0.1	0.0	0.0	0.7	0.0	0.8
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.05		0.50		1.00	0.00	0.06	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	161	619	581	92	537	521	205	91	82	38	57	5
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1795	1885	1761	1810	1885	1830	1767	1900	1610	1810	1900	1572
Queue Service Time (g_s), s	5.1	23.6	23.8	3.1	29.0	29.0	10.0	4.3	4.6	1.6	2.7	0.2
Cycle Queue Clearance Time (g_c), s	5.1	23.6	23.8	3.1	29.0	29.0	10.0	4.3	4.6	1.6	2.7	0.2
Green Ratio (*g/C*)	0.53	0.42	0.42	0.47	0.38	0.38	0.31	0.22	0.22	0.31	0.22	0.35
Capacity (*c*), veh/h	371	797	744	319	711	690	460	415	351	428	415	558
Volume-to-Capacity Ratio (*X*)	0.435	0.777	0.780	0.289	0.755	0.755	0.446	0.219	0.234	0.088	0.138	0.009
Back of Queue (*Q*), ft/ln (90 th percentile)	82.2	203.4	195	56.1	449	440.1	164.7	83.8	77.4	29.1	51.8	3.7
Back of Queue (*Q*), veh/ln (90 th percentile)	3.7	9.2	8.8	2.6	20.2	19.8	7.3	3.8	3.5	1.3	2.4	0.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.62	0.00	0.00	0.43	0.00	0.00	0.74	0.00	0.44	0.22	0.00	0.03
Uniform Delay (d_1), s/veh	19.5	12.9	12.9	18.0	36.6	36.8	29.8	35.3	35.4	27.0	34.7	23.0
Incremental Delay (d_2), s/veh	2.5	5.1	5.5	2.3	7.3	7.5	3.1	1.2	1.6	0.4	0.7	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	0.0
Control Delay (*d*), s/veh	22.0	18.0	18.4	20.3	43.9	44.3	32.9	36.5	37.0	27.4	35.4	23.0
Level of Service (LOS)	C	B	B	C	D	D	C	D	D	C	D	C
Approach Delay, s/veh / LOS	18.6	B		42.2	D		34.7	C		31.7	C	
Intersection Delay, s/veh / LOS	30.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	2.24	B	2.30	B	2.30	B
Bicycle LOS Score / LOS	1.61	B	1.08	A	1.11	A	0.65	A

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HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	24 Road & Patterson	Market Street/Mall Access & Patterson		Analysis Period	1> 7:00
Project Description					

Basic Segment Information (24 Rd - Market St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
1	35	35	2	2	637	637	50	50	0	0	100	0	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement		2	12	1	6	
1	Bay/Lane Spillback Time, h				0.02	never	
1	Shared Lane Spillback Time, h				0.15		never
1	Base Free-Flow Speed, mph	41.58			42.05		
1	Running Time, s	14.85			15.15		
1	Running Speed, mph	29.24			28.67		
1	Through Delay, s/veh	18.20			19.12		
1	Travel Time, s	33.05			34.27		
1	Travel Speed, mph	13.14			12.67		
1	Stop Rate, stops/veh	0.55			0.46		
1	Spatial Stop Rate, stops/mi	4.53			3.77		
1	Through vol/cap Ratio	0.17			0.22		
1	Percent of Base FFS	31.60			30.14		
1	Level of Service	E			E		
1	Auto Traveler Perception Score	2.88			2.75		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	2.52		B	3.63		D
1	Bicycle Segment LOS Score / LOS	2.20		B	2.65		B
1	Transit Segment LOS Score / LOS	2.34		B	2.55		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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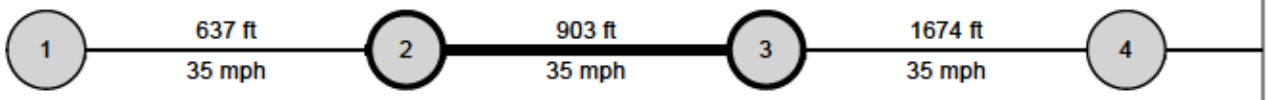
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	Market Street/Mall Access & Pat	Home Depot Access/Mesa Mall Access &		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Market St - Home Depot)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
2	35	35	2	2	903	903	50	50	2	1	70	0	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
2	Bay/Lane Spillback Time, h		never				
2	Shared Lane Spillback Time, h	never					
2	Base Free-Flow Speed, mph	41.72			42.05		
2	Running Time, s	18.36			18.75		
2	Running Speed, mph	33.53			32.83		
2	Through Delay, s/veh	15.91			24.16		
2	Travel Time, s	34.27			42.91		
2	Travel Speed, mph	17.97			14.35		
2	Stop Rate, stops/veh	0.56			0.71		
2	Spatial Stop Rate, stops/mi	3.26			4.13		
2	Through vol/cap Ratio	0.23			0.59		
2	Percent of Base FFS	43.06			34.12		
2	Level of Service	D			E		
2	Auto Traveler Perception Score	2.66			2.81		
Multimodal Results (Segment)							
2	Pedestrian Segment LOS Score / LOS	2.93		C	3.87		D
2	Bicycle Segment LOS Score / LOS	2.47		B	2.77		C
2	Transit Segment LOS Score / LOS	1.86		A	2.37		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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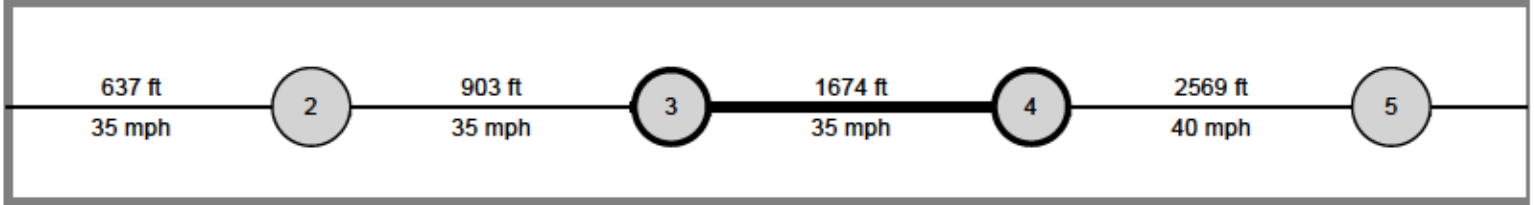
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	Home Depot Access/Mesa Mall /	24 1/2 Rd & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Home Depot - 24 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
3	35	35	2	2	1674	1674	50	50	550	550	70	100	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
3	Bay/Lane Spillback Time, h		never			never	
3	Shared Lane Spillback Time, h	never			never		
3	Base Free-Flow Speed, mph	40.72			40.20		
3	Running Time, s	30.68			31.84		
3	Running Speed, mph	37.21			35.84		
3	Through Delay, s/veh	8.84			11.51		
3	Travel Time, s	39.52			43.35		
3	Travel Speed, mph	28.88			26.33		
3	Stop Rate, stops/veh	0.27			0.35		
3	Spatial Stop Rate, stops/mi	0.85			1.11		
3	Through vol/cap Ratio	0.28			0.58		
3	Percent of Base FFS	70.93			65.49		
3	Level of Service	B			C		
3	Auto Traveler Perception Score	2.27			2.31		
Multimodal Results (Segment)							
3	Pedestrian Segment LOS Score / LOS	3.21		C	3.66		D
3	Bicycle Segment LOS Score / LOS	2.61		B	2.84		C
3	Transit Segment LOS Score / LOS	0.99		A	1.30		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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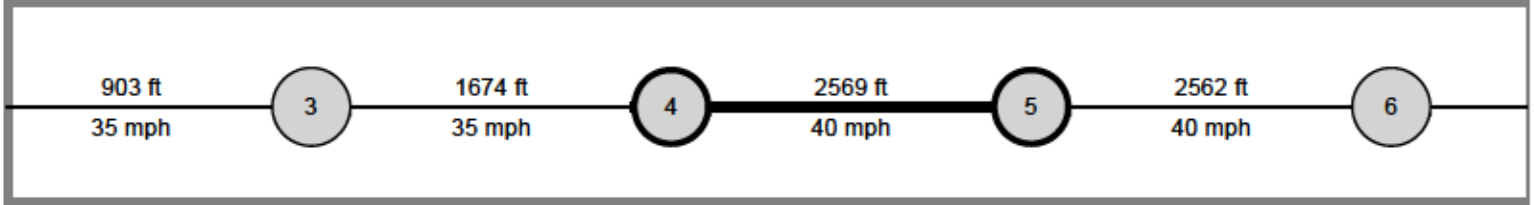
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	24 1/2 Rd & Patterson	25 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (24 1/2 Rd - 25 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
4	40	35	2	2	2569	2569	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
4	Bay/Lane Spillback Time, h		never			never	
4	Shared Lane Spillback Time, h	never		never	never		
4	Base Free-Flow Speed, mph	43.00			40.65		
4	Running Time, s	43.15			46.64		
4	Running Speed, mph	40.60			37.55		
4	Through Delay, s/veh	23.66			20.46		
4	Travel Time, s	66.81			67.10		
4	Travel Speed, mph	26.22			26.10		
4	Stop Rate, stops/veh	0.55			0.54		
4	Spatial Stop Rate, stops/mi	1.12			1.12		
4	Through vol/cap Ratio	0.46			0.74		
4	Percent of Base FFS	60.98			64.22		
4	Level of Service	C			C		
4	Auto Traveler Perception Score	2.31			2.31		
Multimodal Results (Segment)							
4	Pedestrian Segment LOS Score / LOS	3.32		C	3.68		D
4	Bicycle Segment LOS Score / LOS	2.70		B	2.86		C
4	Transit Segment LOS Score / LOS	1.18		A	1.36		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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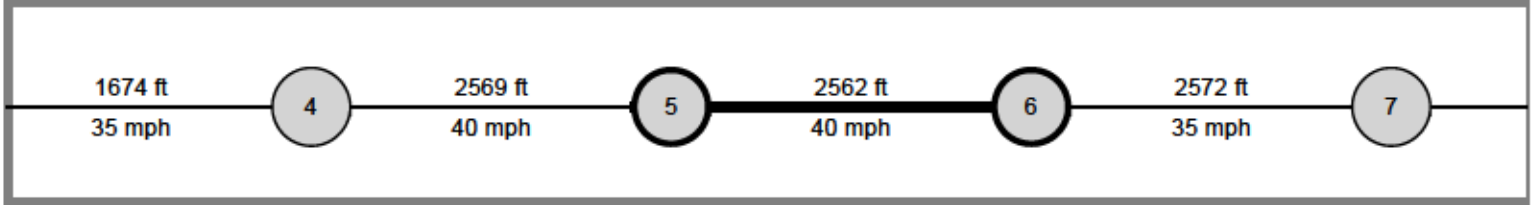
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	25 Road & Patterson	25 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 Rd - 25 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
5	40	40	2	2	2562	2562	50	50	260	260	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
5	Bay/Lane Spillback Time, h		never		never	0.65	
5	Shared Lane Spillback Time, h	never			never		0.25
5	Base Free-Flow Speed, mph	43.13			43.13		
5	Running Time, s	43.02			44.51		
5	Running Speed, mph	40.61			39.25		
5	Through Delay, s/veh	14.48			190.39		
5	Travel Time, s	57.50			234.90		
5	Travel Speed, mph	30.38			7.44		
5	Stop Rate, stops/veh	0.41			1.93		
5	Spatial Stop Rate, stops/mi	0.84			3.97		
5	Through vol/cap Ratio	0.39			1.31		
5	Percent of Base FFS	70.44			17.24		
5	Level of Service	B			F		
5	Auto Traveler Perception Score	2.26			2.78		
Multimodal Results (Segment)							
5	Pedestrian Segment LOS Score / LOS	3.22		C	4.11		D
5	Bicycle Segment LOS Score / LOS	2.71		B	3.00		C
5	Transit Segment LOS Score / LOS	0.95		A	3.37		C

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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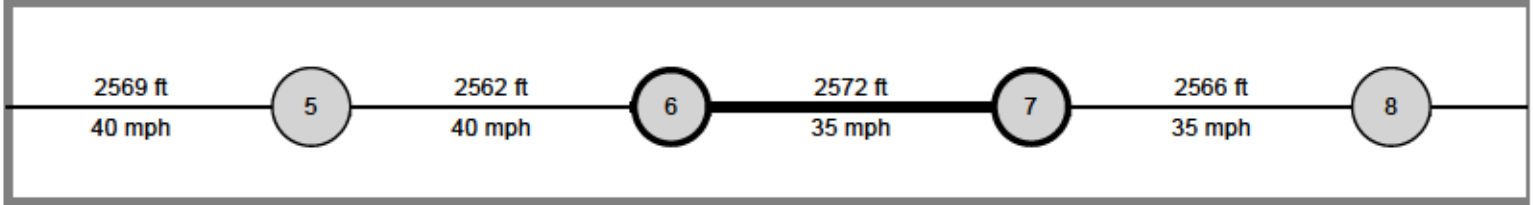
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	25 1/2 Road & Patterson	1st Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 1/2 Rd - 26 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
6	35	40	2	2	2572	2572	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
6	Bay/Lane Spillback Time, h		never			never	
6	Shared Lane Spillback Time, h	never			never		
6	Base Free-Flow Speed, mph	40.73			43.08		
6	Running Time, s	45.51			44.31		
6	Running Speed, mph	38.53			39.57		
6	Through Delay, s/veh	7.25			36.91		
6	Travel Time, s	52.76			81.23		
6	Travel Speed, mph	33.24			21.59		
6	Stop Rate, stops/veh	0.22			0.84		
6	Spatial Stop Rate, stops/mi	0.45			1.73		
6	Through vol/cap Ratio	0.35			0.87		
6	Percent of Base FFS	81.61			50.12		
6	Level of Service	A			C		
6	Auto Traveler Perception Score	2.21			2.40		
Multimodal Results (Segment)							
6	Pedestrian Segment LOS Score / LOS	3.26		C	3.95		D
6	Bicycle Segment LOS Score / LOS	2.71		B	2.97		C
6	Transit Segment LOS Score / LOS	0.75		A	1.72		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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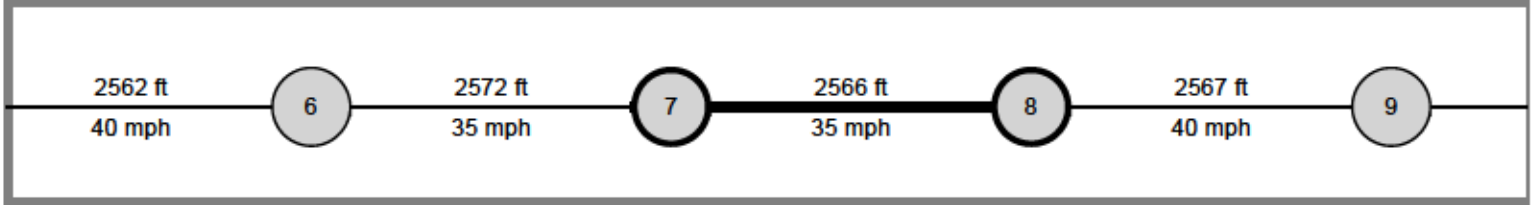
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	1st Street & Patterson	7th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 Rd - 26 1/2)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
7	35	40	2	2	2566	2566	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
7	Bay/Lane Spillback Time, h		never			never	
7	Shared Lane Spillback Time, h	never			never		never
7	Base Free-Flow Speed, mph	39.83			42.18		
7	Running Time, s	46.50			45.07		
7	Running Speed, mph	37.63			38.82		
7	Through Delay, s/veh	25.35			13.61		
7	Travel Time, s	71.85			58.68		
7	Travel Speed, mph	24.35			29.82		
7	Stop Rate, stops/veh	0.64			0.36		
7	Spatial Stop Rate, stops/mi	1.32			0.74		
7	Through vol/cap Ratio	0.52			0.70		
7	Percent of Base FFS	61.14			70.69		
7	Level of Service	C			B		
7	Auto Traveler Perception Score	2.34			2.25		
Multimodal Results (Segment)							
7	Pedestrian Segment LOS Score / LOS	3.33		C	3.59		D
7	Bicycle Segment LOS Score / LOS	2.74		B	2.94		C
7	Transit Segment LOS Score / LOS	1.37		A	1.09		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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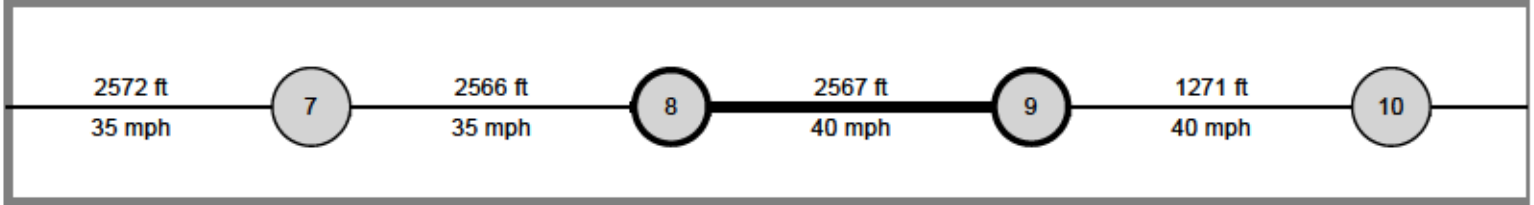
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	7th Street & Patterson	12th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 1/2 Rd to 12th St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
8	40	35	2	2	2567	2567	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
8	Bay/Lane Spillback Time, h	never	never		never	never	
8	Shared Lane Spillback Time, h	never			never		never
8	Base Free-Flow Speed, mph	42.34			39.99		
8	Running Time, s	44.36			47.57		
8	Running Speed, mph	39.46			36.80		
8	Through Delay, s/veh	33.07			20.13		
8	Travel Time, s	77.42			67.69		
8	Travel Speed, mph	22.61			25.86		
8	Stop Rate, stops/veh	0.77			0.51		
8	Spatial Stop Rate, stops/mi	1.57			1.05		
8	Through vol/cap Ratio	0.69			0.80		
8	Percent of Base FFS	53.39			64.65		
8	Level of Service	C			C		
8	Auto Traveler Perception Score	2.38			2.30		
Multimodal Results (Segment)							
8	Pedestrian Segment LOS Score / LOS	3.56		D	3.64		D
8	Bicycle Segment LOS Score / LOS	2.82		C	2.92		C
8	Transit Segment LOS Score / LOS	1.56		A	1.37		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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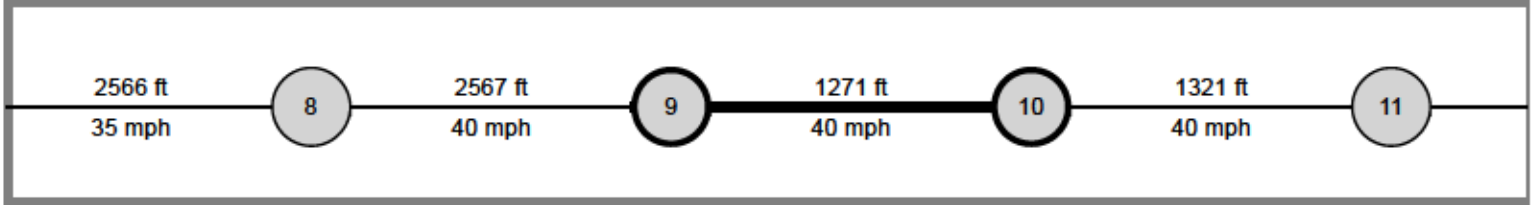
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	12th Street & Patterson	Patterson Rd & 15th St		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (12th St - 27 1/4 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
9	40	35	2	2	1271	1271	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
9	Bay/Lane Spillback Time, h		never		never	never	never
9	Shared Lane Spillback Time, h	never			never		never
9	Base Free-Flow Speed, mph	42.29			39.94		
9	Running Time, s	23.76			25.45		
9	Running Speed, mph	36.48			34.05		
9	Through Delay, s/veh	3.54			34.36		
9	Travel Time, s	27.30			59.82		
9	Travel Speed, mph	31.74			14.49		
9	Stop Rate, stops/veh	0.13			0.80		
9	Spatial Stop Rate, stops/mi	0.52			3.31		
9	Through vol/cap Ratio	0.44			0.89		
9	Percent of Base FFS	75.05			36.27		
9	Level of Service	B			E		
9	Auto Traveler Perception Score	2.22			2.67		
Multimodal Results (Segment)							
9	Pedestrian Segment LOS Score / LOS	3.57		D	4.07		D
9	Bicycle Segment LOS Score / LOS	2.73		B	2.93		C
9	Transit Segment LOS Score / LOS	0.91		A	2.40		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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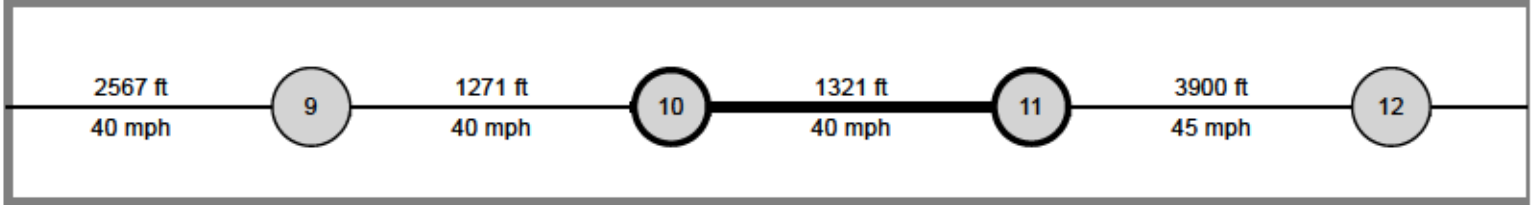
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	Patterson Rd & 15th St	27 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
10	40	40	2	2	1321	1321	50	50	0	0	70	70	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
10	Bay/Lane Spillback Time, h		never			never	
10	Shared Lane Spillback Time, h	never		never	never		
10	Base Free-Flow Speed, mph	44.07			44.07		
10	Running Time, s	23.96			24.17		
10	Running Speed, mph	37.59			37.27		
10	Through Delay, s/veh	10.22			3.28		
10	Travel Time, s	34.18			27.44		
10	Travel Speed, mph	26.35			32.82		
10	Stop Rate, stops/veh	0.31			0.10		
10	Spatial Stop Rate, stops/mi	1.26			0.40		
10	Through vol/cap Ratio	0.44			0.53		
10	Percent of Base FFS	59.80			74.48		
10	Level of Service	C			B		
10	Auto Traveler Perception Score	2.55			2.20		
Multimodal Results (Segment)							
10	Pedestrian Segment LOS Score / LOS	3.87		D	4.14		D
10	Bicycle Segment LOS Score / LOS	2.90		C	2.96		C
10	Transit Segment LOS Score / LOS	1.28		A	0.89		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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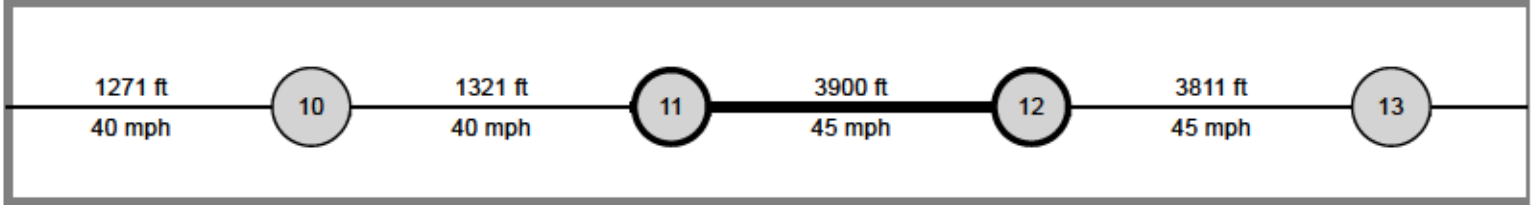
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	27 1/2 Road & Patterson	28 1/4 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (27 1/4 Rd - 27 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
11	45	40	2	2	3900	3900	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement		2	12	1	6	
11	Bay/Lane Spillback Time, h		never			never	
11	Shared Lane Spillback Time, h	never		never	never		
11	Base Free-Flow Speed, mph	45.85			43.50		
11	Running Time, s	60.72			63.94		
11	Running Speed, mph	43.79			41.59		
11	Through Delay, s/veh	12.38			7.25		
11	Travel Time, s	73.10			71.20		
11	Travel Speed, mph	36.38			37.35		
11	Stop Rate, stops/veh	0.34			0.28		
11	Spatial Stop Rate, stops/mi	0.46			0.39		
11	Through vol/cap Ratio	0.47			0.40		
11	Percent of Base FFS	79.35			85.87		
11	Level of Service	B			A		
11	Auto Traveler Perception Score	2.31			2.20		
Multimodal Results (Segment)							
11	Pedestrian Segment LOS Score / LOS	3.81		D	3.59		D
11	Bicycle Segment LOS Score / LOS	2.86		C	2.87		C
11	Transit Segment LOS Score / LOS	0.62		A	0.57		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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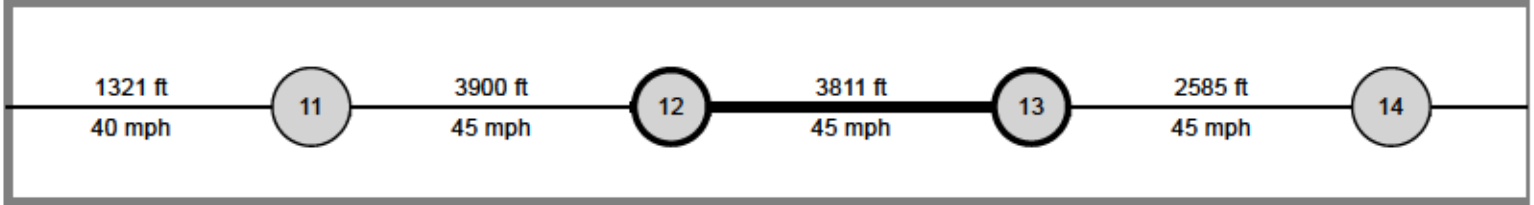
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	28 1/4 Road & Patterson	29 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (28 1/4 Rd - 29 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12	45	40	2	2	3811	3811	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
12	Bay/Lane Spillback Time, h		never			never	
12	Shared Lane Spillback Time, h	never		never	never		never
12	Base Free-Flow Speed, mph	44.90			42.55		
12	Running Time, s	59.86			63.85		
12	Running Speed, mph	43.41			40.69		
12	Through Delay, s/veh	20.26			11.02		
12	Travel Time, s	80.12			74.87		
12	Travel Speed, mph	32.43			34.70		
12	Stop Rate, stops/veh	0.51			0.28		
12	Spatial Stop Rate, stops/mi	0.71			0.39		
12	Through vol/cap Ratio	0.57			0.57		
12	Percent of Base FFS	72.23			81.55		
12	Level of Service	B			A		
12	Auto Traveler Perception Score	2.25			2.20		
Multimodal Results (Segment)							
12	Pedestrian Segment LOS Score / LOS	3.78		D	3.55		D
12	Bicycle Segment LOS Score / LOS	2.88		C	2.86		C
12	Transit Segment LOS Score / LOS	0.87		A	0.73		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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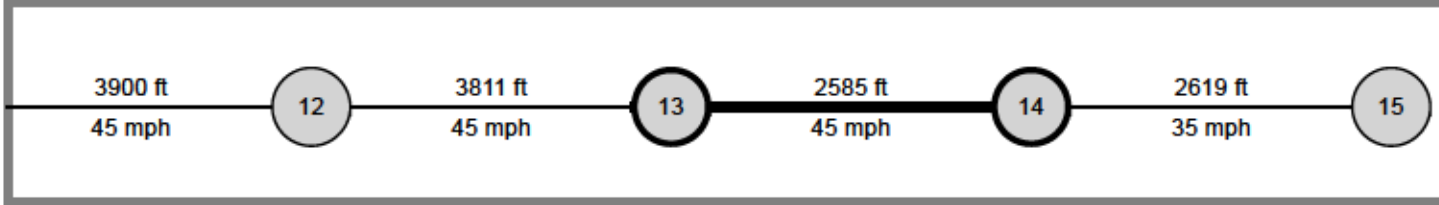
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	29 Road & Patterson	29 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 Rd - 29 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
13	45	45	2	2	2585	2585	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
13	Bay/Lane Spillback Time, h		never			never	
13	Shared Lane Spillback Time, h	never			never		never
13	Base Free-Flow Speed, mph	43.89			43.89		
13	Running Time, s	40.98			40.98		
13	Running Speed, mph	43.01			43.01		
13	Through Delay, s/veh	6.98			30.88		
13	Travel Time, s	47.96			71.86		
13	Travel Speed, mph	36.75			24.53		
13	Stop Rate, stops/veh	0.18			0.77		
13	Spatial Stop Rate, stops/mi	0.38			1.57		
13	Through vol/cap Ratio	0.53			0.64		
13	Percent of Base FFS	83.72			55.88		
13	Level of Service	A			C		
13	Auto Traveler Perception Score	2.20			2.38		
Multimodal Results (Segment)							
13	Pedestrian Segment LOS Score / LOS	3.67		D	3.41		C
13	Bicycle Segment LOS Score / LOS	2.85		C	2.90		C
13	Transit Segment LOS Score / LOS	0.63		A	1.42		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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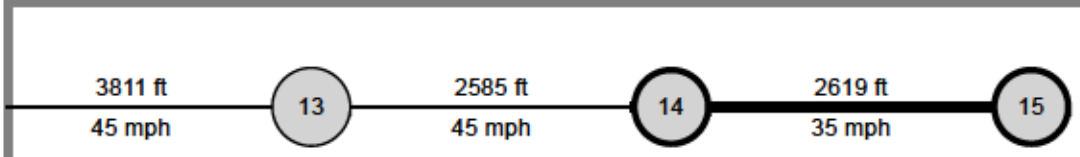
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	Existing PM.xus	Analysis Year	2020	System Cycle Length, s	110
Intersections	29 1/2 Road & Patterson	30 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 1/2 Rd - 30 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
14	35	45	2	2	2619	2619	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
14	Bay/Lane Spillback Time, h					never	
14	Shared Lane Spillback Time, h				never		
14	Base Free-Flow Speed, mph	40.83			45.53		
14	Running Time, s	46.66			41.38		
14	Running Speed, mph	38.27			43.15		
14	Through Delay, s/veh	44.37			6.43		
14	Travel Time, s	91.03			47.81		
14	Travel Speed, mph	19.62			37.35		
14	Stop Rate, stops/veh	0.94			0.17		
14	Spatial Stop Rate, stops/mi	1.89			0.35		
14	Through vol/cap Ratio	0.76			0.49		
14	Percent of Base FFS	48.05			82.05		
14	Level of Service	D			A		
14	Auto Traveler Perception Score	2.43			2.19		
Multimodal Results (Segment)							
14	Pedestrian Segment LOS Score / LOS	3.27		C	3.40		C
14	Bicycle Segment LOS Score / LOS	2.82		C	2.81		C
14	Transit Segment LOS Score / LOS	1.81		A	0.58		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	786.87	983.12
Facility Travel Speed, mph	27.34	21.89
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	63.99	51.53
Facility Level of Service	C	F
Facility Auto Traveler Perception Score	2.32	2.34

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.47	C	3.69	D
Bicycle Facility LOS Score / LOS	2.77	C	2.89	C
Transit Facility LOS Score / LOS	1.10	A	1.37	A

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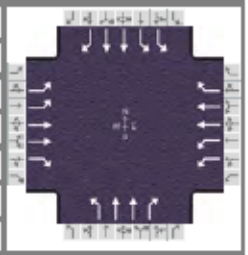
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.91
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	24 Road & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	216	235	72	125	217	278	87	934	412	413	633	71

Signal Information			
Cycle, s	100.0	Reference Phase	6
Offset, s	85	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.8	3.0	18.4	8.4	2.6	37.8	
Yellow	3.5	3.5	4.0	3.5	0.0	4.0	
Red	0.5	0.5	1.0	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	2.0	3.0	1.1	3.0	2.0	3.0
Phase Duration, s	18.8	30.4	11.8	23.4	12.4	42.8	15.0	45.4
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	14.5		5.8		5.0	28.1	13.0	16.8
Green Extension Time (g_e), s	0.3	0.0	0.5	0.0	0.2	9.7	0.0	18.0
Phase Call Probability	1.00		0.98		0.93	1.00	1.00	1.00
Max Out Probability	1.00		0.02		0.27	0.85	1.00	0.62

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	540	587	180	137	238	305	96	1026	453	454	696	78
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1675	1752		1716	1738		1810	1738	1585	1730	1752	1518
Queue Service Time (g_s), s	12.5	15.4		3.8	6.0		3.0	26.1	21.7	11.0	14.8	3.2
Cycle Queue Clearance Time (g_c), s	12.5	15.4		3.8	6.0		3.0	26.1	21.7	11.0	14.8	3.2
Green Ratio (*g/C*)	0.35	0.25		0.08	0.18		0.46	0.38	0.46	0.11	0.40	0.40
Capacity (*c*), veh/h	847	890		269	641		391	1314	723	381	1417	614
Volume-to-Capacity Ratio (*X*)	0.637	0.660		0.512	0.372		0.245	0.781	0.626	1.193	0.491	0.127
Back of Queue (*Q*), ft/ln (90 th percentile)	172.3	240.8		68.1	105.1		49.2	346	258.8	346.8	201.6	46.3
Back of Queue (*Q*), veh/ln (90 th percentile)	7.5	10.6		3.0	4.6		2.2	15.1	11.6	15.5	8.9	2.0
Queue Storage Ratio (*RQ*) (90 th percentile)	0.97	0.00		0.31	0.00		0.37	0.00	1.46	2.62	0.00	0.71
Uniform Delay (d_1), s/veh	24.2	36.1		44.3	35.7		16.5	27.5	20.7	44.5	22.1	18.7
Incremental Delay (d_2), s/veh	1.8	3.8		1.9	1.5		0.5	3.0	1.8	109.8	0.4	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	26.0	39.9	0.0	46.2	37.2	0.0	16.9	30.5	22.5	154.3	22.5	18.8
Level of Service (LOS)	C	D	A	D	D	A	B	C	C	F	C	B
Approach Delay, s/veh / LOS	28.6	C		22.3	C		27.4	C		71.0	E	
Intersection Delay, s/veh / LOS	38.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.44	B	2.59	C	2.57	C	2.57	C
Bicycle LOS Score / LOS	0.96	A	1.05	A	1.79	B	1.50	B

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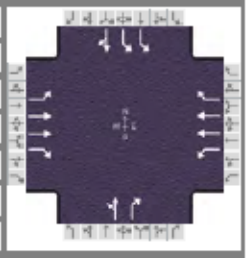
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Market Street/Mall Acce…	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	71	848	83	25	580	94	30	12	19	87	17	44

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	52	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.7	3.0	65.6	4.4	6.4	0.0	
Yellow	3.5	0.0	4.0	4.0	4.0	0.0	
Red	0.5	0.0	1.0	1.0	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		11.0		10.0
Phase Duration, s	8.7	73.6	5.7	70.6		9.4		11.4
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time (g_s), s	3.7		2.3			4.7		6.3
Green Extension Time (g_e), s	0.2	0.0	0.0	0.0		0.0		0.2
Phase Call Probability	0.94		0.34			0.87		0.99
Max Out Probability	0.00		0.00			1.00		0.32

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	99	1179	115	15	342	55		51	23	105	73	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1766	1610	1810	1766	1522		1834	1610	1702	1682	
Queue Service Time (g_s), s	1.7	4.6	0.3	0.3	4.7	2.3		2.7	1.4	3.0	4.3	
Cycle Queue Clearance Time (g_c), s	1.7	4.6	0.3	0.3	4.7	2.3		2.7	1.4	3.0	4.3	
Green Ratio (*g/C*)	0.71	0.69	0.69	0.67	0.66	0.66		0.04	0.04	0.06	0.06	
Capacity (*c*), veh/h	759	2423	1104	402	2317	998		80	70	217	107	
Volume-to-Capacity Ratio (*X*)	0.130	0.487	0.105	0.037	0.148	0.056		0.634	0.327	0.482	0.685	
Back of Queue (*Q*), ft/ln (90 th percentile)	22.5	43.1	4.7	3.4	67.8	30.5		52	22.7	52.4	74.4	
Back of Queue (*Q*), veh/ln (90 th percentile)	1.0	1.9	0.2	0.2	3.0	1.3		2.4	1.0	2.3	3.4	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.15	0.00	0.04	0.03	0.00	0.28		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	4.8	1.4	0.6	5.2	8.7	11.6		47.0	46.4	45.2	45.8	
Incremental Delay (d_2), s/veh	0.0	0.6	0.2	0.0	0.1	0.1		3.1	1.0	0.6	2.9	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	4.8	1.9	0.7	5.2	8.8	11.7		50.1	47.4	45.8	48.7	
Level of Service (LOS)	A	A	A	A	A	B		D	D	D	D	
Approach Delay, s/veh / LOS	2.0	A		9.1	A		49.3	D		47.0	D	
Intersection Delay, s/veh / LOS	9.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.86	B	2.06	B	2.47	B	2.46	B
Bicycle LOS Score / LOS	1.48	A	1.18	A	0.61	A	0.78	A

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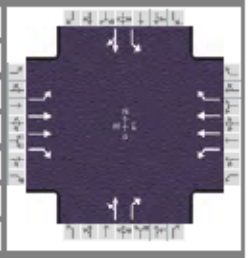
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.84
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Home Depot Access/Me...	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	39	756	189	87	571	13	70	21	47	25	30	28

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	27	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	3.9	0.3		62.2	5.8		8.7	0.0				
Yellow	3.5	0.0		4.0	4.0		4.0	0.0				
Red	0.5	0.0		1.0	1.0		1.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		11.0		10.0
Phase Duration, s	8.2	67.5	7.9	67.2		13.7		10.8
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0		5.4		5.4
Queue Clearance Time (g_s), s	3.4		3.1			7.7		5.9
Green Extension Time (g_e), s	0.4	0.0	0.3	0.0		1.0		0.4
Phase Call Probability	0.85		0.79			0.99		0.94
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	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	67	1308	327	56	367	8		108	56	30	69	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1766	1598	1810	1752	1610		1830	1610	1767	1748	
Queue Service Time (g_s), s	1.4	20.2	8.1	1.1	2.8	0.1		5.7	3.1	1.6	3.9	
Cycle Queue Clearance Time (g_c), s	1.4	20.2	8.1	1.1	2.8	0.1		5.7	3.1	1.6	3.9	
Green Ratio (*g/C*)	0.66	0.63	0.63	0.66	0.62	0.62		0.09	0.13	0.06	0.06	
Capacity (*c*), veh/h	719	2209	999	269	2182	1002		159	203	103	102	
Volume-to-Capacity Ratio (*X*)	0.094	0.592	0.327	0.208	0.168	0.008		0.683	0.275	0.288	0.676	
Back of Queue (*Q*), ft/ln (90 th percentile)	19.3	220	100.2	16	38.8	2		112.7	51.9	31.4	78.7	
Back of Queue (*Q*), veh/ln (90 th percentile)	0.8	9.8	4.5	0.7	1.7	0.1		5.1	2.4	1.4	3.6	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.14	0.00	0.50	0.15	0.00	0.00		0.00	0.59	0.24	0.00	
Uniform Delay (d_1), s/veh	6.1	9.5	7.0	9.0	4.8	5.4		44.3	39.6	45.1	46.1	
Incremental Delay (d_2), s/veh	0.1	1.1	0.8	0.5	0.2	0.0		7.2	1.0	2.2	10.5	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	6.2	10.6	7.8	9.5	4.9	5.4		51.5	40.6	47.2	56.7	
Level of Service (LOS)	A	B	A	A	A	A		D	D	D	E	
Approach Delay, s/veh / LOS	9.8	A		5.5	A		47.8	D		53.8	D	
Intersection Delay, s/veh / LOS	13.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	1.88	B	2.46	B	2.47	B
Bicycle LOS Score / LOS	1.45	A	1.15	A	0.76	A	0.65	A

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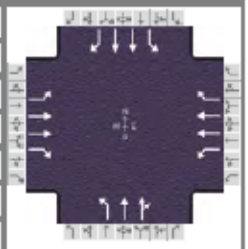
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.92
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	24 1/2 Rd & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	724	70	147	442	121	144	138	62	211	307	83

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	15	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.4	0.3	52.6	10.0	1.0	13.2	
Yellow	3.5	0.0	4.0	3.5	0.0	4.0	
Red	0.5	0.0	1.5	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	8.4	58.1	8.7	58.4	14.0	18.2	15.0	19.2
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	4.1		4.5		9.5	7.9	13.0	11.1
Green Extension Time (g_e), s	0.4	0.0	0.3	0.0	0.7	3.4	0.0	3.1
Phase Call Probability	0.88		0.94		0.99	1.00	1.00	1.00
Max Out Probability	0.00		0.01		0.00	0.15	1.00	0.24

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	78	1405	136	100	301	82	157	111	106	229	334	90
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1697	1781	1610	1810	1766	1598	1767	1856	1665	1767	1738	1397
Queue Service Time (g_s), s	2.1	26.8	3.0	2.5	3.6	2.3	7.5	5.5	5.9	11.0	9.1	5.9
Cycle Queue Clearance Time (g_c), s	2.1	26.8	3.0	2.5	3.6	2.3	7.5	5.5	5.9	11.0	9.1	5.9
Green Ratio (*g/C*)	0.57	0.53	0.53	0.57	0.53	0.53	0.23	0.13	0.13	0.24	0.14	0.14
Capacity (*c*), veh/h	597	1873	847	245	1867	844	279	245	220	351	493	198
Volume-to-Capacity Ratio (*X*)	0.130	0.750	0.160	0.409	0.161	0.098	0.562	0.453	0.483	0.654	0.676	0.455
Back of Queue (*Q*), ft/ln (90 th percentile)	29.2	271	40.8	41.2	54.9	33	127.2	105.4	100.8	182.8	149.8	95.8
Back of Queue (*Q*), veh/ln (90 th percentile)	1.2	12.1	1.9	1.9	2.4	1.5	5.6	4.7	4.5	8.1	6.5	3.8
Queue Storage Ratio (*RQ*) (90 th percentile)	0.22	0.00	0.18	0.31	0.00	0.13	0.96	0.00	0.00	1.38	0.00	0.00
Uniform Delay (d_1), s/veh	9.3	12.8	8.1	15.1	9.7	10.6	32.9	40.1	40.2	33.4	40.7	39.4
Incremental Delay (d_2), s/veh	0.1	2.5	0.4	1.4	0.2	0.2	2.5	1.9	2.3	4.9	2.3	2.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	9.4	15.3	8.5	16.5	9.9	10.8	35.4	41.9	42.5	38.3	43.0	41.7
Level of Service (LOS)	A	B	A	B	A	B	D	D	D	D	D	D
Approach Delay, s/veh / LOS	14.5	B		11.4	B		39.4	D		41.2	D	
Intersection Delay, s/veh / LOS	22.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.25	B	2.41	B	2.46	B	2.45	B
Bicycle LOS Score / LOS	1.24	A	1.12	A	0.80	A	1.03	A

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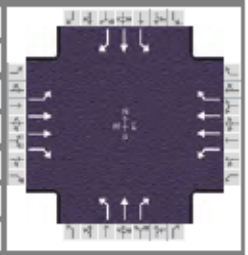
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.87
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	25 Road & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	83	774	55	206	687	109	125	261	120	190	305	41

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	40	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.0	9.0	31.0	6.0	2.0	23.0	
Yellow	3.5	3.5	4.5	3.5	0.0	4.0	
Red	0.5	0.5	1.5	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	23.0	50.0	10.0	37.0	10.0	28.0	12.0	30.0
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	5.1		6.2		8.0	17.3	10.0	20.0
Green Extension Time (g_e), s	0.5	0.0	0.0	0.0	0.0	2.4	0.0	2.1
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.00		1.00		1.00	0.92	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	135	1262	90	113	376	60	144	300	121	218	351	47
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1781	1585	1795	1795	1585	1753	1811	1610	1795	1811	1585
Queue Service Time (g_s), s	3.1	28.7	2.2	4.2	9.1	2.8	6.0	15.3	5.8	8.0	18.0	2.3
Cycle Queue Clearance Time (g_c), s	3.1	28.7	2.2	4.2	9.1	2.8	6.0	15.3	5.8	8.0	18.0	2.3
Green Ratio (*g/C*)	0.52	0.44	0.44	0.37	0.31	0.31	0.29	0.23	0.29	0.31	0.25	0.25
Capacity (*c*), veh/h	610	1567	697	234	1113	491	226	417	467	291	453	396
Volume-to-Capacity Ratio (*X*)	0.222	0.806	0.129	0.481	0.338	0.121	0.637	0.720	0.258	0.751	0.774	0.119
Back of Queue (*Q*), ft/ln (90 th percentile)	45.7	320.8	30.8	84.2	144.5	43.5	131	261.3	92.6	182.8	302.9	37.3
Back of Queue (*Q*), veh/ln (90 th percentile)	2.0	14.3	1.4	3.8	6.5	1.9	5.8	11.3	4.2	8.2	13.1	1.7
Queue Storage Ratio (*RQ*) (90 th percentile)	0.26	0.00	0.19	0.48	0.00	0.34	0.59	0.00	0.53	1.38	0.00	0.28
Uniform Delay (d_1), s/veh	9.0	19.1	10.3	23.8	32.0	25.6	30.2	35.5	27.2	30.9	34.9	29.0
Incremental Delay (d_2), s/veh	0.8	4.2	0.4	5.9	0.7	0.4	12.9	10.3	1.3	16.3	12.2	0.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	9.8	23.3	10.6	29.6	32.7	26.0	43.1	45.8	28.6	47.2	47.1	29.6
Level of Service (LOS)	A	C	B	C	C	C	D	D	C	D	D	C
Approach Delay, s/veh / LOS	21.3	C		31.3	C		41.4	D		45.8	D	
Intersection Delay, s/veh / LOS	31.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	2.12	B	2.45	B	2.44	B
Bicycle LOS Score / LOS	1.35	A	1.44	A	1.42	A	1.50	B

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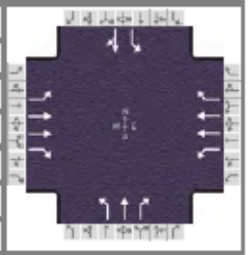
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.82
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	25 1/2 Road & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



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	934	51	137	986	90	73	89	98	212	149	118

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	98	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.2	1.4		45.1	6.0	1.0	18.3					
Yellow	3.5	0.0		4.5	3.5	3.5	4.0					
Red	0.5	0.0		1.5	0.5	0.5	1.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	9.2	51.1	10.6	52.5	10.0	23.3	15.0	28.3
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.3	5.2	5.3
Queue Clearance Time (g_s), s	3.1		3.9		6.0	8.7	13.0	19.9
Green Extension Time (g_e), s	0.1	0.0	0.3	0.0	0.0	3.5	0.0	3.3
Phase Call Probability	0.65		0.83		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.01	1.00	0.03

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	38	1109	61	64	460	42	89	109	120	259	326	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1781	1598	1781	1781	1572	1767	1885	1585	1682	1719	
Queue Service Time (g_s), s	1.1	18.7	0.6	1.9	4.4	0.4	4.0	5.0	6.7	11.0	17.9	
Cycle Queue Clearance Time (g_c), s	1.1	18.7	0.6	1.9	4.4	0.4	4.0	5.0	6.7	11.0	17.9	
Green Ratio (*g/C*)	0.50	0.45	0.45	0.52	0.47	0.47	0.24	0.18	0.18	0.31	0.23	
Capacity (*c*), veh/h	532	1606	720	317	1657	732	213	344	289	402	400	
Volume-to-Capacity Ratio (*X*)	0.071	0.691	0.084	0.202	0.278	0.057	0.418	0.315	0.413	0.644	0.814	
Back of Queue (*Q*), ft/ln (90 th percentile)	17.3	177.1	8.8	30.1	60.5	5.6	82.3	93	105.5	207.8	260.5	
Back of Queue (*Q*), veh/ln (90 th percentile)	0.8	7.9	0.4	1.3	2.7	0.3	3.7	4.2	4.7	8.8	11.6	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.13	0.00	0.07	0.23	0.00	0.04	0.74	0.00	1.19	1.55	0.00	
Uniform Delay (d_1), s/veh	13.4	11.7	3.8	15.1	7.8	3.4	31.4	35.4	36.1	29.0	36.3	
Incremental Delay (d_2), s/veh	0.1	2.2	0.2	0.4	0.3	0.1	5.9	0.7	1.3	7.7	5.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	13.5	13.9	4.0	15.5	8.1	3.5	37.4	36.2	37.5	36.8	42.0	
Level of Service (LOS)	B	B	A	B	A	A	D	D	D	D	D	
Approach Delay, s/veh / LOS	13.4	B		8.6	A		37.0	D		39.7	D	
Intersection Delay, s/veh / LOS	20.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	1.90	B	2.45	B	2.45	B
Bicycle LOS Score / LOS	1.51	B	1.71	B	1.01	A	1.45	A

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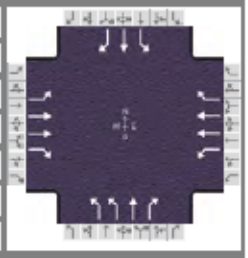
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.77
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	1st Street & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	54	966	180	173	1046	40	114	213	143	178	475	67

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	47	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.7	1.8	30.0	6.9	4.0	33.1	
Yellow	3.5	0.0	3.0	3.5	0.0	4.0	
Red	0.5	0.0	2.5	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	2.0	3.0	1.1	3.0
Phase Duration, s	9.7	35.5	11.4	37.3	10.9	38.1	14.9	42.1
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	3.5		5.5		6.1	13.7	9.9	32.6
Green Extension Time (g_e), s	0.1	0.0	0.3	0.0	0.9	8.0	1.0	4.5
Phase Call Probability	0.71		0.93		0.98	1.00	1.00	1.00
Max Out Probability	0.01		0.00		0.00	0.20	0.02	0.74

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	44	791	147	95	576	22	148	277	186	231	617	87
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1766	1598	1781	1781	1572	1743	1856	1598	1810	1885	1610
Queue Service Time (g_s), s	1.5	19.7	5.4	3.5	13.4	0.9	4.1	11.7	7.8	7.9	30.6	3.3
Cycle Queue Clearance Time (g_c), s	1.5	19.7	5.4	3.5	13.4	0.9	4.1	11.7	7.8	7.9	30.6	3.3
Green Ratio (*g/C*)	0.36	0.30	0.37	0.37	0.32	0.32	0.07	0.33	0.41	0.46	0.37	0.43
Capacity (*c*), veh/h	312	1061	590	266	1132	500	242	614	648	471	700	689
Volume-to-Capacity Ratio (*X*)	0.142	0.746	0.250	0.358	0.509	0.044	0.612	0.450	0.287	0.491	0.882	0.126
Back of Queue (*Q*), ft/ln (90 th percentile)	23.6	260.3	76.8	57.6	182.7	13.7	74.9	181.6	111.9	123.2	452.2	47.4
Back of Queue (*Q*), veh/ln (90 th percentile)	1.1	11.5	3.5	2.6	8.2	0.6	3.4	8.1	5.0	5.6	20.4	2.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.18	0.00	0.58	0.52	0.00	0.13	0.57	0.00	0.85	1.12	0.00	0.00
Uniform Delay (d_1), s/veh	19.4	29.2	17.2	22.2	28.5	21.6	45.2	26.3	20.0	17.9	29.4	17.3
Incremental Delay (d_2), s/veh	0.2	4.0	0.8	0.7	1.0	0.1	3.5	0.7	0.3	1.1	11.4	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	19.6	33.3	18.1	22.9	29.5	21.7	48.8	27.0	20.3	19.1	40.8	17.4
Level of Service (LOS)	B	C	B	C	C	C	D	C	C	B	D	B
Approach Delay, s/veh / LOS	30.4	C		28.4	C		30.3	C		33.2	C	
Intersection Delay, s/veh / LOS	30.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.11	B	2.43	B	2.43	B
Bicycle LOS Score / LOS	1.77	B	1.84	B	1.49	A	2.03	B

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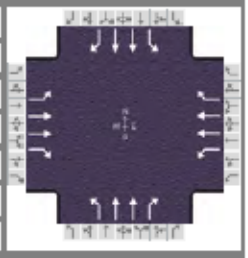
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.80
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	7th Street & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	69	716	189	238	1007	106	80	301	147	168	654	204

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.2	3.0		36.5	5.7	3.3	29.2					
Yellow	3.5	0.0		4.0	3.5	0.0	4.0					
Red	0.5	0.0		1.0	0.5	0.0	1.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	8.2	41.5	11.2	44.6	9.7	34.2	13.0	37.5
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	5.1		6.7		5.9	9.4	10.0	21.7
Green Extension Time (g_e), s	0.2	0.0	0.7	0.0	0.2	13.2	0.0	10.8
Phase Call Probability	0.79		0.98		0.94	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.53	0.28	1.00	0.46

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	57	589	134	142	602	60	100	376	168	210	818	255
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1766	1374	1810	1781	1543	1767	1795	1591	1795	1809	1586
Queue Service Time (g_s), s	3.1	7.8	1.6	4.7	6.9	0.7	3.9	7.4	6.7	8.0	19.7	12.1
Cycle Queue Clearance Time (g_c), s	3.1	7.8	1.6	4.7	6.9	0.7	3.9	7.4	6.7	8.0	19.7	12.1
Green Ratio (*g/C*)	0.04	0.37	0.42	0.45	0.40	0.40	0.35	0.29	0.36	0.40	0.33	0.37
Capacity (*c*), veh/h	76	1291	592	416	1410	611	229	1049	581	423	1176	583
Volume-to-Capacity Ratio (*X*)	0.746	0.456	0.227	0.342	0.427	0.099	0.436	0.359	0.288	0.497	0.695	0.438
Back of Queue (*Q*), ft/ln (90 th percentile)	69.5	98.6	19.9	78.5	86.5	10.6	68.9	115.6	94.6	127.6	268.2	160.3
Back of Queue (*Q*), veh/ln (90 th percentile)	3.2	4.4	0.9	3.6	3.9	0.5	3.1	5.2	4.3	5.8	12.2	7.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.39	0.00	0.13	0.59	0.00	0.07	0.31	0.00	0.54	1.16	0.00	0.00
Uniform Delay (d_1), s/veh	49.2	11.5	3.7	17.6	9.5	4.9	24.5	23.9	19.2	21.2	29.4	23.9
Incremental Delay (d_2), s/veh	15.3	0.9	0.7	0.5	0.7	0.2	1.9	0.3	0.4	1.3	1.3	0.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	64.6	12.4	4.4	18.1	10.2	5.1	26.4	24.2	19.6	22.5	30.7	24.6
Level of Service (LOS)	E	B	A	B	B	A	C	C	B	C	C	C
Approach Delay, s/veh / LOS	14.8	B		11.2	B		23.3	C		28.2	C	
Intersection Delay, s/veh / LOS	20.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.45	B	2.43	B	2.45	B	2.47	B
Bicycle LOS Score / LOS	1.47	A	1.88	B	1.02	A	1.55	B

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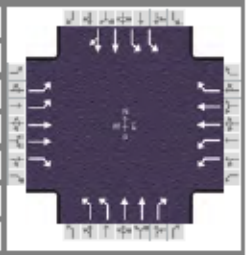
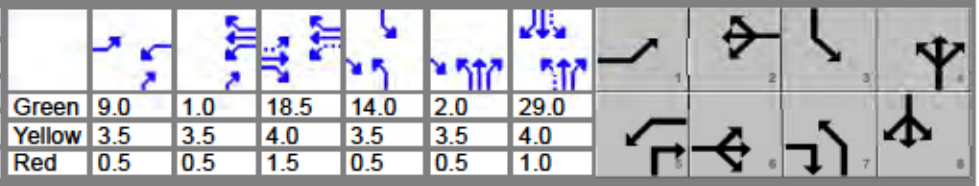
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.80
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	12th Street & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	135	571	179	382	1138	114	224	501	122	96	570	107

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	45	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	9.0	1.0	18.5	14.0	2.0	29.0
Yellow	3.5	3.5	4.0	3.5	3.5	4.0
Red	0.5	0.5	1.5	0.5	0.5	1.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	13.0	24.0	18.0	29.0	24.0	40.0	18.0	34.0
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	4.9		6.2		6.3	15.9	4.0	23.6
Green Extension Time (g_e), s	0.2	0.0	0.7	0.0	1.4	10.4	0.4	4.0
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.25		0.02	0.48	0.04	0.99

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	128	540	169	224	667	67	280	626	153	120	435	411
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1730	1766	1600	1743	1795	1598	1730	1781	1572	1743	1870	1764
Queue Service Time (g_s), s	2.9	13.9	6.4	4.2	17.5	3.0	4.3	13.9	5.5	2.0	21.5	21.6
Cycle Queue Clearance Time (g_c), s	2.9	13.9	6.4	4.2	17.5	3.0	4.3	13.9	5.5	2.0	21.5	21.6
Green Ratio (*g/C*)	0.28	0.18	0.39	0.34	0.24	0.24	0.51	0.35	0.49	0.43	0.29	0.29
Capacity (*c*), veh/h	513	654	618	700	844	375	933	1246	771	900	542	512
Volume-to-Capacity Ratio (*X*)	0.249	0.826	0.274	0.320	0.790	0.178	0.300	0.502	0.198	0.133	0.803	0.803
Back of Queue (*Q*), ft/ln (90 th percentile)	50.5	174	77.3	65.4	254.4	47.3	68.5	202.1	80.6	33	346.5	332.3
Back of Queue (*Q*), veh/ln (90 th percentile)	2.3	7.7	3.5	2.9	11.5	2.1	3.1	9.0	3.6	1.5	15.5	14.9
Queue Storage Ratio (*RQ*) (90 th percentile)	0.29	0.00	0.53	0.25	0.00	0.36	0.31	0.00	0.36	0.25	0.00	0.00
Uniform Delay (d_1), s/veh	30.4	30.8	16.3	21.3	36.3	26.9	16.6	25.6	14.4	17.4	32.9	32.9
Incremental Delay (d_2), s/veh	0.7	7.3	0.7	1.0	6.3	0.9	0.8	1.4	0.6	0.3	11.9	12.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	31.1	38.0	17.0	22.3	42.6	27.7	17.4	27.1	15.0	17.7	44.7	45.4
Level of Service (LOS)	C	D	B	C	D	C	B	C	B	B	D	D
Approach Delay, s/veh / LOS	32.7	C		36.8	D		22.8	C		41.7	D	
Intersection Delay, s/veh / LOS	33.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.59	C	2.45	B	2.57	C	2.58	C
Bicycle LOS Score / LOS	1.40	A	2.17	B	1.36	A	1.28	A

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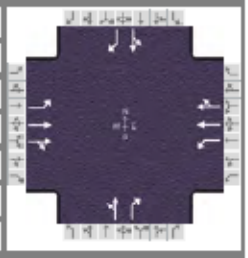
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Patterson Rd & 15th St	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	140	623	15	51	1800	194	12	3	20	12	3	61

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	9	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.2	2.8	75.4	6.6	0.0	0.0	
Yellow	4.0	0.0	4.0	4.0	0.0	0.0	
Red	0.0	0.0	0.0	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		7.0		7.0
Phase Duration, s	10.0	82.2	7.2	79.4		10.6		10.6
Change Period, ($Y+R_c$), s	4.0	4.0	4.0	4.0		4.0		4.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time (g_s), s	4.0		2.3			3.4		6.5
Green Extension Time (g_e), s	0.3	0.0	0.0	0.0		0.2		0.2
Phase Call Probability	0.99		0.53			0.98		0.98
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	179	410	407	27	536	518		18	24		18	73
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1856	1840	1781	1885	1820		1515	1585		1515	1585
Queue Service Time (g_s), s	2.0	8.7	8.6	0.3	4.8	4.2		0.0	1.4		0.0	4.5
Cycle Queue Clearance Time (g_c), s	2.0	8.7	8.6	0.3	4.8	4.2		1.0	1.4		1.0	4.5
Green Ratio (*g/C*)	0.82	0.78	0.78	0.79	0.75	0.75		0.07	0.07		0.07	0.07
Capacity (*c*), veh/h	556	1451	1439	580	1422	1373		165	105		165	105
Volume-to-Capacity Ratio (*X*)	0.322	0.283	0.283	0.046	0.377	0.377		0.110	0.230		0.110	0.701
Back of Queue (*Q*), ft/ln (90 th percentile)	13.3	103.2	98.8	2.9	46	39		17.1	23.1		17.1	75.1
Back of Queue (*Q*), veh/ln (90 th percentile)	0.6	4.6	4.5	0.1	2.1	1.8		0.8	1.0		0.8	3.4
Queue Storage Ratio (*RQ*) (90 th percentile)	0.17	0.00	0.00	0.03	0.00	0.00		0.00	0.52		0.00	1.70
Uniform Delay (d_1), s/veh	2.0	4.8	4.7	2.7	1.6	1.4		44.1	44.3		44.1	45.7
Incremental Delay (d_2), s/veh	0.1	0.5	0.5	0.0	0.5	0.5		0.1	0.4		0.1	3.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Control Delay (*d*), s/veh	2.1	5.3	5.2	2.7	2.1	1.9		44.2	44.7		44.2	48.9
Level of Service (LOS)	A	A	A	A	A	A		D	D		D	D
Approach Delay, s/veh / LOS	4.7	A		2.0	A		44.5	D		47.9	D	
Intersection Delay, s/veh / LOS	5.9						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.83	B	1.84	B	2.31	B	2.31	B
Bicycle LOS Score / LOS	1.26	A	2.52	C	0.56	A	0.64	A

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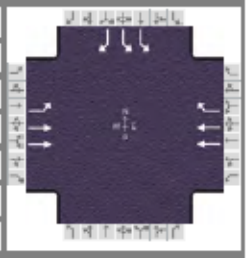
HCS7 Signalized Intersection Results Summary

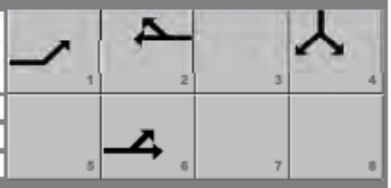
General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	27 1/2 Road & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	70	647			1589	304				385		214

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	59	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.0	38.0	41.0	0.0	0.0	0.0	
Yellow	3.5	4.5	4.0	0.0	0.0	0.0	
Red	0.5	1.5	1.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2				4
Case Number	1.0	4.0		7.3				9.0
Phase Duration, s	10.0	54.0		44.0				46.0
Change Period, ($Y+R_c$), s	4.0	6.0		6.0				5.0
Max Allow Headway (*MAH*), s	5.2	0.0		0.0				5.3
Queue Clearance Time (g_s), s	3.9							14.0
Green Extension Time (g_e), s	0.0	0.0		0.0				5.2
Phase Call Probability	1.00							1.00
Max Out Probability	1.00							0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2	12				7		14
Adjusted Flow Rate (*v*), veh/h	58	533			872	167				464		258
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1795			1795	1610				1757		1522
Queue Service Time (g_s), s	1.9	6.9			18.8	6.1				9.0		12.0
Cycle Queue Clearance Time (g_c), s	1.9	6.9			18.8	6.1				9.0		12.0
Green Ratio (*g/C*)	0.46	0.48			0.38	0.38				0.41		0.41
Capacity (*c*), veh/h	280	1723			1364	612				1441		624
Volume-to-Capacity Ratio (*X*)	0.206	0.309			0.639	0.273				0.322		0.413
Back of Queue (*Q*), ft/ln (90 th percentile)	33.9	92.9			231.7	87.9				134.4		166.8
Back of Queue (*Q*), veh/ln (90 th percentile)	1.5	4.2			10.4	4.0				6.1		7.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.22	0.00			0.00	1.67				0.80		0.00
Uniform Delay (d_1), s/veh	18.5	11.0			22.2	17.5				20.1		21.0
Incremental Delay (d_2), s/veh	1.2	0.3			1.9	0.9				0.6		2.0
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0				0.0		0.0
Control Delay (*d*), s/veh	19.7	11.4			24.1	18.4				20.6		23.0
Level of Service (LOS)	B	B			C	B				C		C
Approach Delay, s/veh / LOS	12.2	B		23.2	C		0.0			21.5	C	
Intersection Delay, s/veh / LOS	19.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	0.70	A	2.11	B	2.32	B	2.32	B
Bicycle LOS Score / LOS	1.20	A	2.37	B				F

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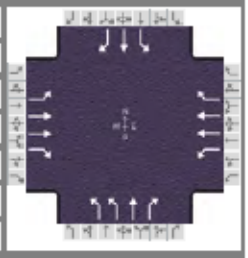
HCS7 Signalized Intersection Results Summary

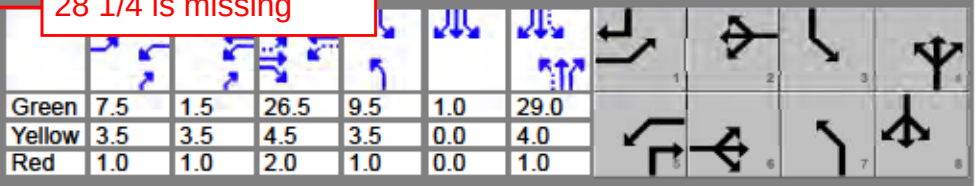
General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	29 Road & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	129	532	231	187	1461	98	194	173	49	73	271	360

28 1/4 is missing

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	50	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	7.5	1.5	26.5	9.5	1.0	29.0		
Yellow	3.5	3.5	4.5	3.5	0.0	4.0		
Red	1.0	1.0	2.0	1.0	0.0	1.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	12.0	33.0	18.0	39.0	14.0	34.0	15.0	35.0
Change Period, ($Y+R_c$), s	4.5	6.5	4.5	6.5	4.5	5.0	4.5	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	6.4		7.0		6.5	10.9	5.2	20.9
Green Extension Time (g_e), s	0.0	0.0	0.2	0.0	0.3	3.7	0.1	2.8
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.13		1.00	0.06	0.34	0.38

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	111	457	198	133	1042	70	234	208	17	88	327	373
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1795	1572	1767	1781	1585	1716	1870	1610	1753	1870	1610
Queue Service Time (g_s), s	4.4	10.8	9.7	5.0	26.8	1.9	4.5	8.9	0.6	3.2	14.8	18.9
Cycle Queue Clearance Time (g_c), s	4.4	10.8	9.7	5.0	26.8	1.9	4.5	8.9	0.6	3.2	14.8	18.9
Green Ratio (*g/C*)	0.34	0.26	0.26	0.42	0.32	0.32	0.38	0.29	0.43	0.40	0.30	0.38
Capacity (*c*), veh/h	226	951	417	457	1157	515	665	542	684	485	561	604
Volume-to-Capacity Ratio (*X*)	0.491	0.480	0.476	0.292	0.900	0.136	0.351	0.384	0.025	0.181	0.582	0.619
Back of Queue (*Q*), ft/ln (90 th percentile)	80.5	154.8	124.5	85.8	289.7	28.1	76.3	152.8	9.2	56.2	236.1	247.8
Back of Queue (*Q*), veh/ln (90 th percentile)	3.6	7.0	5.5	3.8	13.0	1.3	3.4	6.8	0.4	2.5	10.6	11.3
Queue Storage Ratio (*RQ*) (90 th percentile)	0.26	0.00	0.45	0.22	0.00	0.32	0.34	0.00	0.04	0.42	0.00	1.88
Uniform Delay (d_1), s/veh	25.5	31.2	26.3	22.0	24.4	14.1	21.8	28.4	16.7	19.7	29.7	25.4
Incremental Delay (d_2), s/veh	5.5	1.3	2.9	1.1	8.1	0.4	1.5	2.1	0.1	0.8	4.4	4.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	31.1	32.4	29.2	23.1	32.5	14.5	23.2	30.4	16.8	20.5	34.0	30.1
Level of Service (LOS)	C	C	C	C	C	B	C	C	B	C	C	C
Approach Delay, s/veh / LOS	31.4	C		30.5	C		26.3	C		30.7	C	
Intersection Delay, s/veh / LOS	30.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.34	B	2.18	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.37	A	2.22	B	1.25	A	1.79	B

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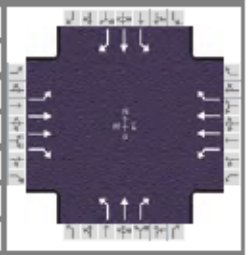
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	29 Road & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	129	532	231	187	1461	98	194	173	49	73	271	360

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	50	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.5	1.5	26.5	9.5	1.0	29.0
Yellow	3.5	3.5	4.5	3.5	0.0	4.0
Red	1.0	1.0	2.0	1.0	0.0	1.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	12.0	33.0	18.0	39.0	14.0	34.0	15.0	35.0
Change Period, ($Y+R_c$), s	4.5	6.5	4.5	6.5	4.5	5.0	4.5	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	6.4		7.0		11.4	10.9	5.2	20.9
Green Extension Time (g_e), s	0.0	0.0	0.2	0.0	0.0	3.7	0.1	2.8
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.13		1.00	0.06	0.34	0.38

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	111	457	198	133	1042	70	234	208	17	88	327	373
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1795	1572	1767	1781	1585	1767	1870	1610	1753	1870	1610
Queue Service Time (g_s), s	4.4	10.8	9.7	5.0	26.8	1.9	9.4	8.9	0.6	3.2	14.8	18.9
Cycle Queue Clearance Time (g_c), s	4.4	10.8	9.7	5.0	26.8	1.9	9.4	8.9	0.6	3.2	14.8	18.9
Green Ratio (*g/C*)	0.34	0.26	0.26	0.42	0.32	0.32	0.38	0.29	0.43	0.40	0.30	0.38
Capacity (*c*), veh/h	226	951	417	457	1157	515	338	542	684	485	561	604
Volume-to-Capacity Ratio (*X*)	0.491	0.480	0.476	0.292	0.900	0.136	0.692	0.384	0.025	0.181	0.582	0.619
Back of Queue (*Q*), ft/ln (90 th percentile)	80.5	154.6	124.5	85.8	289.7	28.1	171.2	152.8	9.2	56.2	236.1	247.8
Back of Queue (*Q*), veh/ln (90 th percentile)	3.6	7.0	5.5	3.8	13.0	1.3	7.6	6.8	0.4	2.5	10.6	11.3
Queue Storage Ratio (*RQ*) (90 th percentile)	0.26	0.00	0.45	0.22	0.00	0.32	0.77	0.00	0.04	0.42	0.00	1.88
Uniform Delay (d_1), s/veh	25.5	31.2	26.3	22.0	24.4	14.1	23.6	28.4	16.7	19.7	29.7	25.4
Incremental Delay (d_2), s/veh	5.5	1.3	2.9	1.1	8.1	0.4	11.1	2.1	0.1	0.8	4.4	4.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	31.1	32.4	29.2	23.1	32.5	14.5	34.7	30.4	16.8	20.5	34.0	30.1
Level of Service (LOS)	C	C	C	C	C	B	C	C	B	C	C	C
Approach Delay, s/veh / LOS	31.4	C		30.5	C		32.1	C		30.7	C	
Intersection Delay, s/veh / LOS	31.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.17	B	2.18	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	1.37	A	2.22	B	1.25	A	1.79	B

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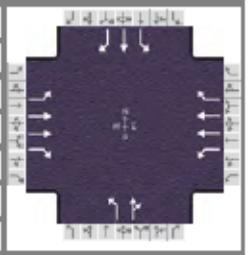
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.85
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	29 1/2 Road & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	531	96	222	1549	265	48	34	67	150	106	64

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	32	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.5	1.6	53.8	9.0	10.6	0.0						
Yellow	3.5	3.5	5.0	4.0	4.0	0.0						
Red	0.5	0.5	1.5	0.0	1.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	5.5	60.3	11.1	65.9	13.0	15.6	13.0	15.6
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	4.5	0.0	4.5	0.0	3.7	4.7	3.7	4.7
Queue Clearance Time (g_s), s	2.3		6.4		4.7	9.1	10.8	8.5
Green Extension Time (g_e), s	0.0	0.0	0.8	0.0	0.0	1.5	0.0	1.5
Phase Call Probability	0.29		0.99		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.40	0.00	1.00	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	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	13	511	92	186	1300	222	56	119		176	125	75
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795	1598	1795	1795	1560	1767	1618		1781	1841	1585
Queue Service Time (g_s), s	0.3	1.5	0.4	4.4	17.8	2.6	2.7	7.1		8.8	6.5	4.5
Cycle Queue Clearance Time (g_c), s	0.3	1.5	0.4	4.4	17.8	2.6	2.7	7.1		8.8	6.5	4.5
Green Ratio (*g/C*)	0.55	0.54	0.54	0.63	0.59	0.59	0.20	0.11		0.20	0.11	0.11
Capacity (*c*), veh/h	236	1930	859	629	2133	927	256	172		252	195	168
Volume-to-Capacity Ratio (*X*)	0.053	0.265	0.107	0.296	0.610	0.240	0.221	0.693		0.701	0.639	0.448
Back of Queue (*Q*), ft/ln (90 th percentile)	4.6	19.6	6.3	55.2	157.2	29.9	51.1	121.2		170.3	121.4	72.6
Back of Queue (*Q*), veh/ln (90 th percentile)	0.2	0.9	0.3	2.5	7.1	1.3	2.3	5.3		7.6	5.3	3.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.04	0.00	0.07	0.42	0.00	0.13	0.66	0.00		1.24	0.00	0.00
Uniform Delay (d_1), s/veh	11.3	2.0	1.5	7.5	8.0	3.1	33.8	43.1		36.4	42.9	42.0
Incremental Delay (d_2), s/veh	0.1	0.2	0.2	0.2	0.9	0.4	2.0	4.9		15.1	3.5	1.9
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	11.3	2.2	1.6	7.7	8.9	3.5	35.7	48.1		51.4	46.3	43.8
Level of Service (LOS)	B	A	A	A	A	A	D	D		D	D	D
Approach Delay, s/veh / LOS	2.3	A		8.1	A		44.1	D		48.2	D	
Intersection Delay, s/veh / LOS	14.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	2.07	B	2.46	B	2.46	B
Bicycle LOS Score / LOS	1.11	A	2.46	B	0.78	A	1.11	A

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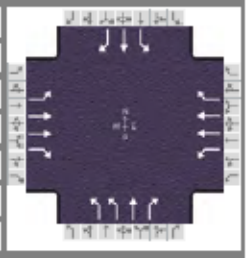
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	30 Road & Patterson	File Name	2045 NoBuild AM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	95	420	203	137	1188	17	438	57	49	42	138	279

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	60	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.0	17.0	24.5	7.0	2.0	20.0	
Yellow	3.5	3.5	5.0	3.5	0.0	4.0	
Red	0.5	0.5	1.5	0.5	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	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	10.0	31.0	31.0	52.0	11.0	25.0	13.0	27.0
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.2	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	6.7		5.4		9.0	5.1	4.0	13.9
Green Extension Time (g_e), s	0.0	0.0	0.5	0.0	0.0	1.8	0.0	1.3
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.00		1.00	0.02	0.41	0.26

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	114	506	245	146	1268	18	528	69	58	51	166	225
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795	1598	1795	1795	1598	1730	1870	1560	1810	1885	1585
Queue Service Time (g_s), s	4.7	10.9	12.2	3.4	23.9	0.3	7.0	3.0	3.1	2.0	7.5	11.9
Cycle Queue Clearance Time (g_c), s	4.7	10.9	12.2	3.4	23.9	0.3	7.0	3.0	3.1	2.0	7.5	11.9
Green Ratio (*g/C*)	0.30	0.24	0.24	0.54	0.46	0.46	0.27	0.20	0.20	0.29	0.22	0.28
Capacity (*c*), veh/h	266	879	391	654	1633	727	633	374	312	453	415	444
Volume-to-Capacity Ratio (*X*)	0.430	0.575	0.625	0.223	0.776	0.025	0.833	0.184	0.185	0.112	0.401	0.508
Back of Queue (*Q*), ft/ln (90 th percentile)	82.1	138.3	145.1	53	217.4	4.8	150.1	59.3	51.5	36.7	137	174
Back of Queue (*Q*), veh/ln (90 th percentile)	3.7	6.2	6.5	2.4	9.8	0.2	6.7	2.7	2.3	1.7	6.2	7.8
Queue Storage Ratio (*RQ*) (90 th percentile)	0.93	0.00	0.52	0.52	0.00	0.08	0.68	0.00	0.29	0.28	0.00	1.31
Uniform Delay (d_1), s/veh	25.9	25.6	25.9	9.8	12.6	7.4	36.3	33.2	33.2	26.0	33.4	30.2
Incremental Delay (d_2), s/veh	3.4	1.9	5.1	0.8	3.7	0.1	12.2	1.1	1.3	0.5	2.9	4.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	29.4	27.4	31.0	10.6	16.3	7.4	48.5	34.3	34.5	26.5	36.2	34.3
Level of Service (LOS)	C	C	C	B	B	A	D	C	C	C	D	C
Approach Delay, s/veh / LOS	28.7	C		15.6	B		45.8	D		34.1	C	
Intersection Delay, s/veh / LOS	27.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.23	B	2.45	B	2.45	B
Bicycle LOS Score / LOS	1.20	A	1.82	B	1.57	B	1.22	A

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HCS7 Two-Way Stop-Control Report

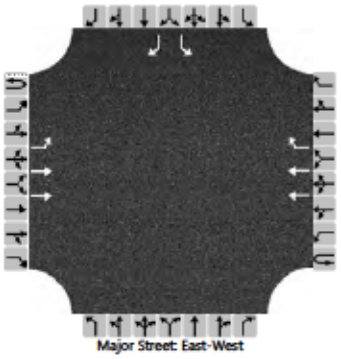
General Information

Analyst	
Agency/Co.	Stolfus and Associates
Date Performed	4/30/2020
Analysis Year	2018
Time Analyzed	AM
Intersection Orientation	East-West
Project Description	Patterson ACP

Site Information

Intersection	28 RD
Jurisdiction	
East/West Street	
North/South Street	
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



what intersection?

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	1		0	0	0		1	0	1
Configuration		L	T				T	R						L		R
Volume (veh/h)	0	51	987				1760	266						49		72
Percent Heavy Vehicles (%)	3	3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized						No								No		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		55												53		78
Capacity, c (veh/h)		232												16		256
v/c Ratio		0.24												3.30		0.31
95% Queue Length, Q_{95} (veh)		0.9												7.4		1.2
Control Delay (s/veh)		25.3												1520.1		25.1
Level of Service (LOS)		D												F		D
Approach Delay (s/veh)		1.2												630.5		
Approach LOS														F		

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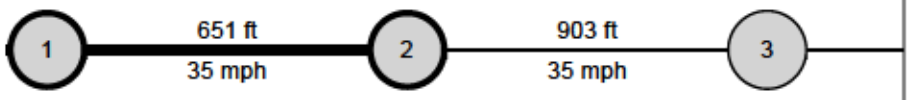
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	24 Road & Patterson	Market Street/Mall Access & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (24 Rd - Market St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
1	35	35	2	2	651	651	50	50	0	0	100	0	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
1	Bay/Lane Spillback Time, h				0.06	never	
1	Shared Lane Spillback Time, h				0.18		never
1	Base Free-Flow Speed, mph	41.58			42.05		
1	Running Time, s	15.01			15.32		
1	Running Speed, mph	29.57			28.98		
1	Through Delay, s/veh	8.80			43.66		
1	Travel Time, s	23.81			58.97		
1	Travel Speed, mph	18.64			7.53		
1	Stop Rate, stops/veh	0.35			0.92		
1	Spatial Stop Rate, stops/mi	2.85			7.48		
1	Through vol/cap Ratio	0.15			0.72		
1	Percent of Base FFS	44.83			17.90		
1	Level of Service	D			F		
1	Auto Traveler Perception Score	2.59			3.44		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	2.22		B	3.66		D
1	Bicycle Segment LOS Score / LOS	2.12		B	2.68		B
1	Transit Segment LOS Score / LOS	1.75		A	3.26		C

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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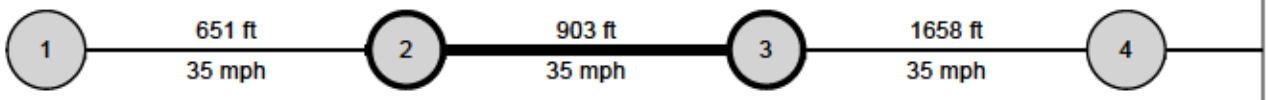
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	Market Street/Mall Access & Pat	Home Depot Access/Mesa Mall Access &		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Market St - Home Depot)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
2	35	35	2	2	903	903	50	50	2	1	70	0	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
2	Bay/Lane Spillback Time, h		never				
2	Shared Lane Spillback Time, h	never		never			
2	Base Free-Flow Speed, mph	41.72			42.05		
2	Running Time, s	18.29			18.72		
2	Running Speed, mph	33.67			32.89		
2	Through Delay, s/veh	4.93			1.93		
2	Travel Time, s	23.22			20.65		
2	Travel Speed, mph	26.51			29.81		
2	Stop Rate, stops/veh	0.19			0.06		
2	Spatial Stop Rate, stops/mi	1.09			0.38		
2	Through vol/cap Ratio	0.17			0.49		
2	Percent of Base FFS	63.55			70.89		
2	Level of Service	C			B		
2	Auto Traveler Perception Score	2.30			2.20		
Multimodal Results (Segment)							
2	Pedestrian Segment LOS Score / LOS	2.88		C	3.70		D
2	Bicycle Segment LOS Score / LOS	2.41		B	2.80		C
2	Transit Segment LOS Score / LOS	1.10		A	1.03		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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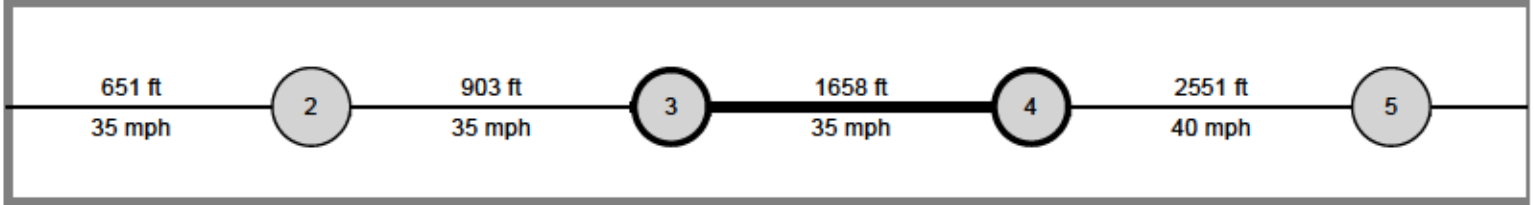
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	Home Depot Access/Mesa Mall /	24 1/2 Rd & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Home Depot - 24 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
3	35	35	2	2	1658	1658	50	50	550	550	70	100	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
3	Bay/Lane Spillback Time, h		never			never	
3	Shared Lane Spillback Time, h	never		never	never		never
3	Base Free-Flow Speed, mph	40.71			40.19		
3	Running Time, s	30.27			31.88		
3	Running Speed, mph	37.34			35.46		
3	Through Delay, s/veh	9.88			10.55		
3	Travel Time, s	40.15			42.44		
3	Travel Speed, mph	28.15			26.64		
3	Stop Rate, stops/veh	0.32			0.36		
3	Spatial Stop Rate, stops/mi	1.03			1.16		
3	Through vol/cap Ratio	0.16			0.59		
3	Percent of Base FFS	69.16			66.29		
3	Level of Service	B			C		
3	Auto Traveler Perception Score	2.29			2.31		
Multimodal Results (Segment)							
3	Pedestrian Segment LOS Score / LOS	3.04		C	3.83		D
3	Bicycle Segment LOS Score / LOS	2.50		B	2.91		C
3	Transit Segment LOS Score / LOS	1.01		A	1.31		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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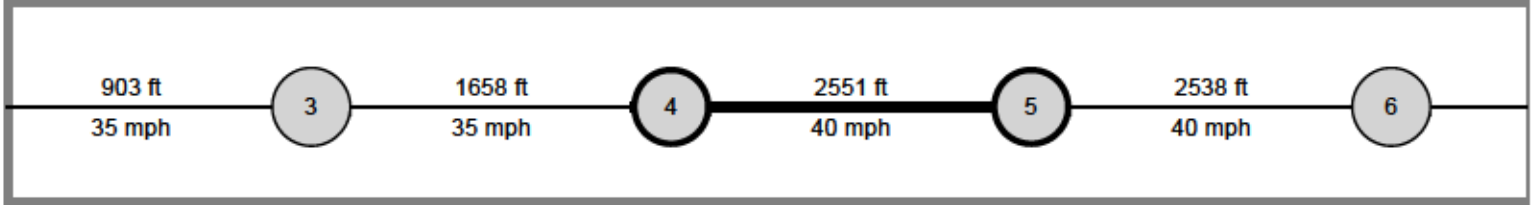
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	24 1/2 Rd & Patterson	25 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (24 1/2 Rd - 25 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
4	40	35	2	2	2551	2551	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
4	Bay/Lane Spillback Time, h		never			never	
4	Shared Lane Spillback Time, h	never		never	never		never
4	Base Free-Flow Speed, mph	42.99			40.64		
4	Running Time, s	42.62			46.47		
4	Running Speed, mph	40.81			37.43		
4	Through Delay, s/veh	32.67			15.35		
4	Travel Time, s	75.30			61.82		
4	Travel Speed, mph	23.10			28.13		
4	Stop Rate, stops/veh	0.79			0.44		
4	Spatial Stop Rate, stops/mi	1.64			0.91		
4	Through vol/cap Ratio	0.34			0.75		
4	Percent of Base FFS	53.73			69.23		
4	Level of Service	C			B		
4	Auto Traveler Perception Score	2.39			2.28		
Multimodal Results (Segment)							
4	Pedestrian Segment LOS Score / LOS	2.99		C	3.53		D
4	Bicycle Segment LOS Score / LOS	2.58		B	2.91		C
4	Transit Segment LOS Score / LOS	1.42		A	1.20		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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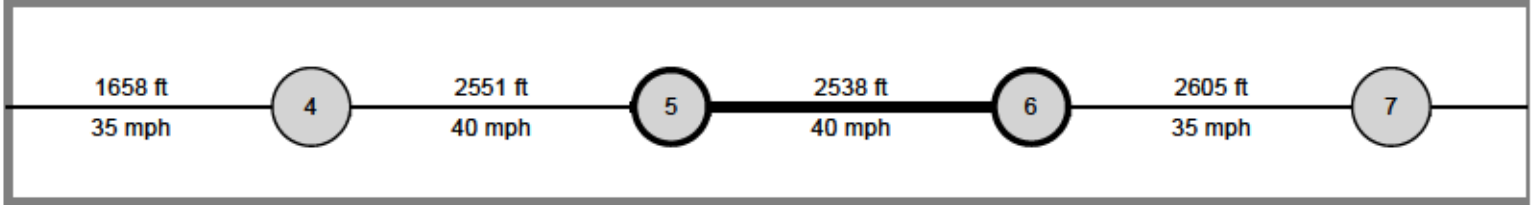
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	25 Road & Patterson	25 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 Rd - 25 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
5	40	40	2	2	2538	2538	50	50	260	260	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
5	Bay/Lane Spillback Time, h		never			never	
5	Shared Lane Spillback Time, h	never		never	never		never
5	Base Free-Flow Speed, mph	43.12			43.12		
5	Running Time, s	42.32			43.49		
5	Running Speed, mph	40.89			39.79		
5	Through Delay, s/veh	8.14			23.34		
5	Travel Time, s	50.46			66.83		
5	Travel Speed, mph	34.29			25.89		
5	Stop Rate, stops/veh	0.24			0.59		
5	Spatial Stop Rate, stops/mi	0.49			1.23		
5	Through vol/cap Ratio	0.28			0.81		
5	Percent of Base FFS	79.52			60.04		
5	Level of Service	B			C		
5	Auto Traveler Perception Score	2.21			2.32		
Multimodal Results (Segment)							
5	Pedestrian Segment LOS Score / LOS	2.80		C	3.62		D
5	Bicycle Segment LOS Score / LOS	2.57		B	2.91		C
5	Transit Segment LOS Score / LOS	0.64		A	1.35		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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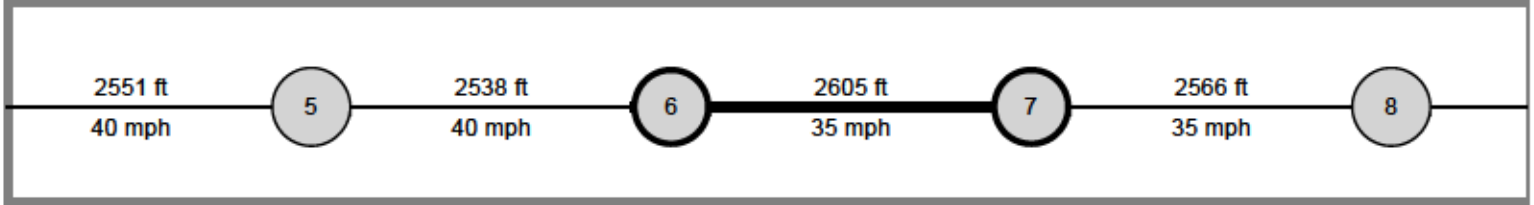
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	25 1/2 Road & Patterson	1st Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 1/2 Rd - 26 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
6	35	40	2	2	2605	2605	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
6	Bay/Lane Spillback Time, h		never			never	
6	Shared Lane Spillback Time, h	never		never	never		never
6	Base Free-Flow Speed, mph	40.74			43.09		
6	Running Time, s	45.86			44.19		
6	Running Speed, mph	38.73			40.20		
6	Through Delay, s/veh	29.53			13.90		
6	Travel Time, s	75.39			58.09		
6	Travel Speed, mph	23.56			30.58		
6	Stop Rate, stops/veh	0.72			0.33		
6	Spatial Stop Rate, stops/mi	1.46			0.68		
6	Through vol/cap Ratio	0.51			0.69		
6	Percent of Base FFS	57.83			70.96		
6	Level of Service	C			B		
6	Auto Traveler Perception Score	2.36			2.24		
Multimodal Results (Segment)							
6	Pedestrian Segment LOS Score / LOS	2.90		C	3.04		C
6	Bicycle Segment LOS Score / LOS	2.66		B	2.80		C
6	Transit Segment LOS Score / LOS	1.39		A	0.98		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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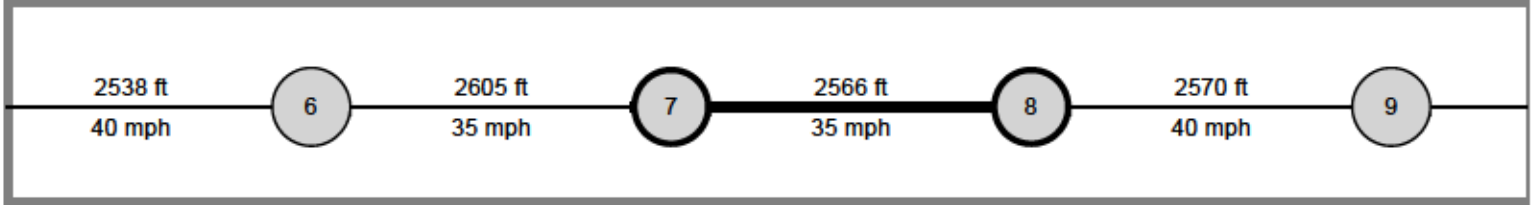
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	1st Street & Patterson	7th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 Rd - 26 1/2)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
7	35	40	2	2	2566	2566	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
7	Bay/Lane Spillback Time, h		never			never	
7	Shared Lane Spillback Time, h	never		never	never		never
7	Base Free-Flow Speed, mph	39.83			42.18		
7	Running Time, s	46.35			44.16		
7	Running Speed, mph	37.75			39.62		
7	Through Delay, s/veh	10.19			33.27		
7	Travel Time, s	56.54			77.42		
7	Travel Speed, mph	30.95			22.60		
7	Stop Rate, stops/veh	0.27			0.75		
7	Spatial Stop Rate, stops/mi	0.55			1.53		
7	Through vol/cap Ratio	0.43			0.75		
7	Percent of Base FFS	77.70			53.58		
7	Level of Service	B			C		
7	Auto Traveler Perception Score	2.22			2.37		
Multimodal Results (Segment)							
7	Pedestrian Segment LOS Score / LOS	2.70		B	2.96		C
7	Bicycle Segment LOS Score / LOS	2.68		B	2.76		C
7	Transit Segment LOS Score / LOS	0.88		A	1.53		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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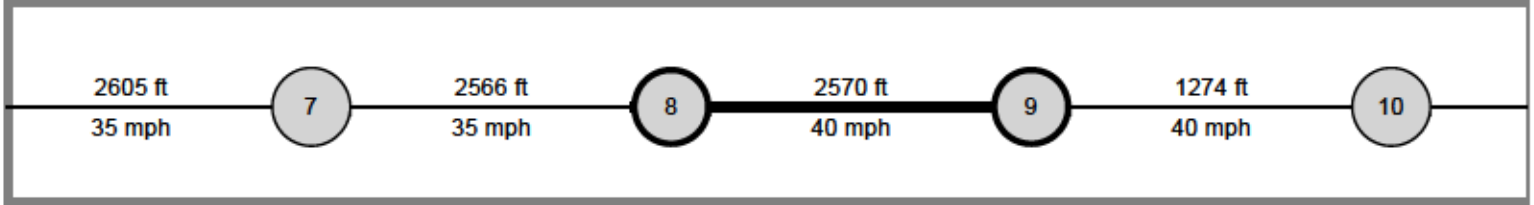
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	7th Street & Patterson	12th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 1/2 Rd to 12th St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
8	40	35	2	2	2570	2570	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
8	Bay/Lane Spillback Time, h		never			never	
8	Shared Lane Spillback Time, h	never		never	never		never
8	Base Free-Flow Speed, mph	42.34			39.99		
8	Running Time, s	44.02			46.24		
8	Running Speed, mph	39.80			37.90		
8	Through Delay, s/veh	42.61			12.47		
8	Travel Time, s	86.63			58.71		
8	Travel Speed, mph	20.23			29.85		
8	Stop Rate, stops/veh	0.88			0.31		
8	Spatial Stop Rate, stops/mi	1.81			0.64		
8	Through vol/cap Ratio	0.79			0.46		
8	Percent of Base FFS	47.77			74.63		
8	Level of Service	D			B		
8	Auto Traveler Perception Score	2.42			2.24		
Multimodal Results (Segment)							
8	Pedestrian Segment LOS Score / LOS	2.88		C	2.72		B
8	Bicycle Segment LOS Score / LOS	2.79		C	2.62		B
8	Transit Segment LOS Score / LOS	1.73		A	0.95		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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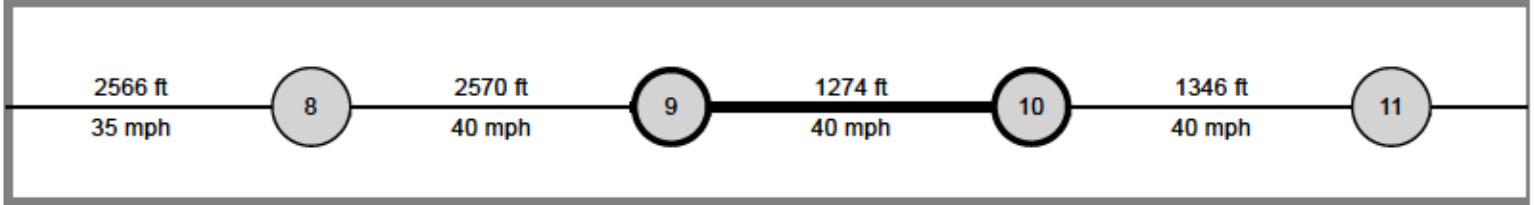
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	12th Street & Patterson	Patterson Rd & 15th St		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (12th St - 27 1/4 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
9	40	35	2	2	1274	1274	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
9	Bay/Lane Spillback Time, h				never	never	
9	Shared Lane Spillback Time, h				never		never
9	Base Free-Flow Speed, mph	42.29			39.94		
9	Running Time, s	23.65			24.85		
9	Running Speed, mph	36.74			34.96		
9	Through Delay, s/veh	2.01			38.03		
9	Travel Time, s	25.65			62.88		
9	Travel Speed, mph	33.86			13.81		
9	Stop Rate, stops/veh	0.07			0.72		
9	Spatial Stop Rate, stops/mi	0.30			2.98		
9	Through vol/cap Ratio	0.38			0.83		
9	Percent of Base FFS	80.07			34.58		
9	Level of Service	A			E		
9	Auto Traveler Perception Score	2.19			2.61		
Multimodal Results (Segment)							
9	Pedestrian Segment LOS Score / LOS	3.00		C	3.33		C
9	Bicycle Segment LOS Score / LOS	2.82		C	2.70		B
9	Transit Segment LOS Score / LOS	0.74		A	2.36		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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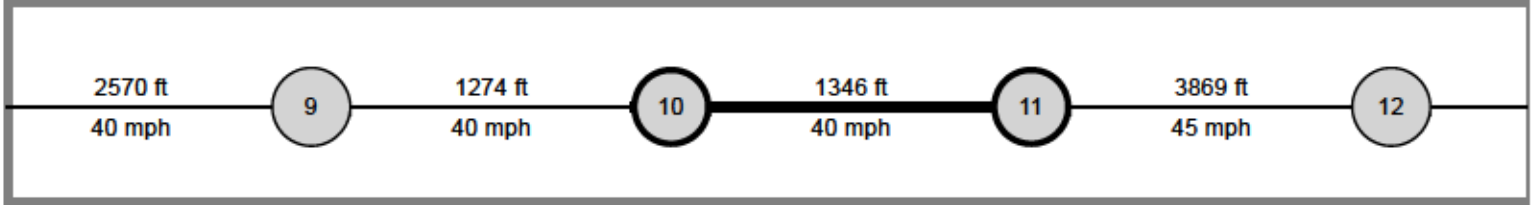
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	Patterson Rd & 15th St	27 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
10	40	40	2	2	1346	1346	50	50	0	0	70	70	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
10	Bay/Lane Spillback Time, h		never				
10	Shared Lane Spillback Time, h	never		never			
10	Base Free-Flow Speed, mph	44.07			44.07		
10	Running Time, s	24.12			24.09		
10	Running Speed, mph	38.05			38.10		
10	Through Delay, s/veh	24.13			3.87		
10	Travel Time, s	48.24			27.95		
10	Travel Speed, mph	19.02			32.83		
10	Stop Rate, stops/veh	0.60			0.16		
10	Spatial Stop Rate, stops/mi	2.36			0.62		
10	Through vol/cap Ratio	0.64			0.28		
10	Percent of Base FFS	43.16			74.49		
10	Level of Service	D			B		
10	Auto Traveler Perception Score	2.74			2.23		
Multimodal Results (Segment)							
10	Pedestrian Segment LOS Score / LOS	3.56		D	3.55		D
10	Bicycle Segment LOS Score / LOS	2.84		C	2.66		B
10	Transit Segment LOS Score / LOS	1.85		A	0.79		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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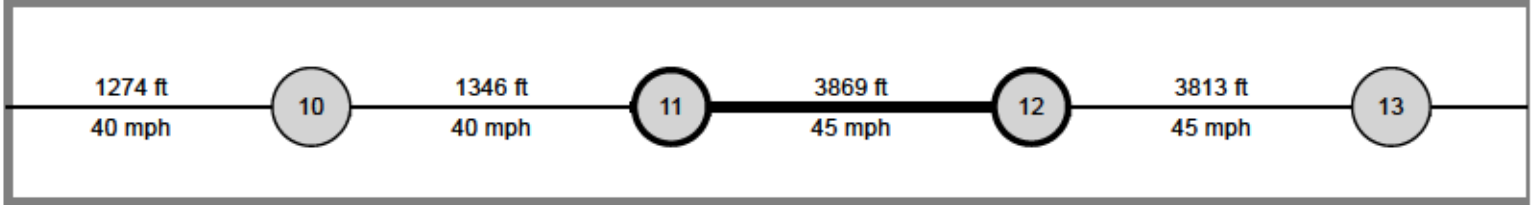
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	27 1/2 Road & Patterson	28 1/4 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (27 1/4 Rd - 27 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
11	45	40	2	2	3869	3869	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement		2	12	1	6	
11	Bay/Lane Spillback Time, h		never			never	
11	Shared Lane Spillback Time, h	never		never	never		
11	Base Free-Flow Speed, mph	45.84			43.49		
11	Running Time, s	60.41			62.49		
11	Running Speed, mph	43.67			42.22		
11	Through Delay, s/veh	29.37			11.38		
11	Travel Time, s	89.78			73.87		
11	Travel Speed, mph	29.38			35.71		
11	Stop Rate, stops/veh	0.73			0.33		
11	Spatial Stop Rate, stops/mi	0.99			0.45		
11	Through vol/cap Ratio	0.65			0.31		
11	Percent of Base FFS	64.10			82.11		
11	Level of Service	C			A		
11	Auto Traveler Perception Score	2.39			2.21		
Multimodal Results (Segment)							
11	Pedestrian Segment LOS Score / LOS	3.87		D	2.76		C
11	Bicycle Segment LOS Score / LOS	2.90		C	2.57		B
11	Transit Segment LOS Score / LOS	1.06		A	0.57		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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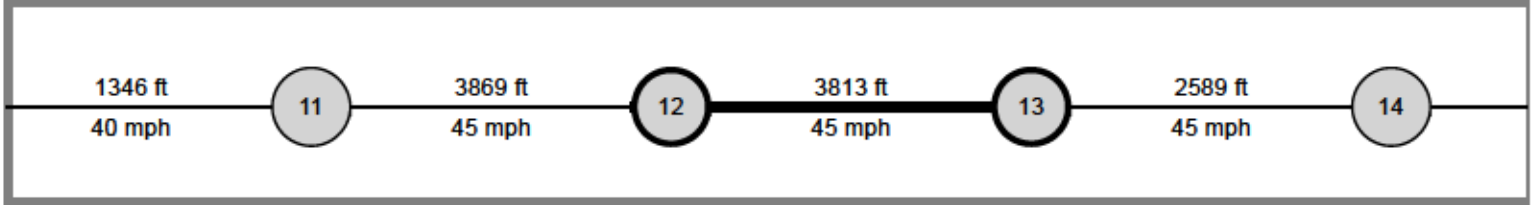
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	28 1/4 Road & Patterson	29 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (28 1/4 Rd - 29 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12	45	40	2	2	3813	3813	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
12	Bay/Lane Spillback Time, h	never	never			never	
12	Shared Lane Spillback Time, h	never		never	never		never
12	Base Free-Flow Speed, mph	44.90			42.55		
12	Running Time, s	60.03			62.97		
12	Running Speed, mph	43.30			41.28		
12	Through Delay, s/veh	32.49			16.34		
12	Travel Time, s	92.52			79.31		
12	Travel Speed, mph	28.10			32.78		
12	Stop Rate, stops/veh	0.67			0.37		
12	Spatial Stop Rate, stops/mi	0.93			0.51		
12	Through vol/cap Ratio	0.90			0.44		
12	Percent of Base FFS	62.57			77.03		
12	Level of Service	C			B		
12	Auto Traveler Perception Score	2.28			2.22		
Multimodal Results (Segment)							
12	Pedestrian Segment LOS Score / LOS	3.64		D	2.76		C
12	Bicycle Segment LOS Score / LOS	2.92		C	2.60		B
12	Transit Segment LOS Score / LOS	1.17		A	0.74		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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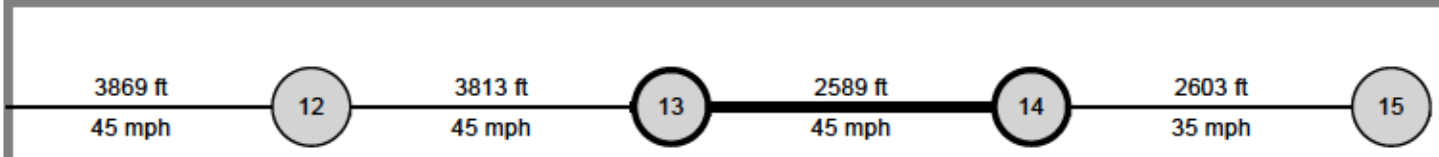
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	29 Road & Patterson	29 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 Rd - 29 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
13	45	45	2	2	2589	2589	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
13	Bay/Lane Spillback Time, h		never			never	
13	Shared Lane Spillback Time, h	never		never	never		never
13	Base Free-Flow Speed, mph	43.89			43.89		
13	Running Time, s	41.68			40.57		
13	Running Speed, mph	42.35			43.51		
13	Through Delay, s/veh	8.91			32.44		
13	Travel Time, s	50.59			73.01		
13	Travel Speed, mph	34.90			24.18		
13	Stop Rate, stops/veh	0.26			0.73		
13	Spatial Stop Rate, stops/mi	0.53			1.48		
13	Through vol/cap Ratio	0.61			0.48		
13	Percent of Base FFS	79.50			55.08		
13	Level of Service	B			C		
13	Auto Traveler Perception Score	2.22			2.36		
Multimodal Results (Segment)							
13	Pedestrian Segment LOS Score / LOS	3.48		C	3.37		C
13	Bicycle Segment LOS Score / LOS	3.02		C	2.72		B
13	Transit Segment LOS Score / LOS	0.81		A	1.38		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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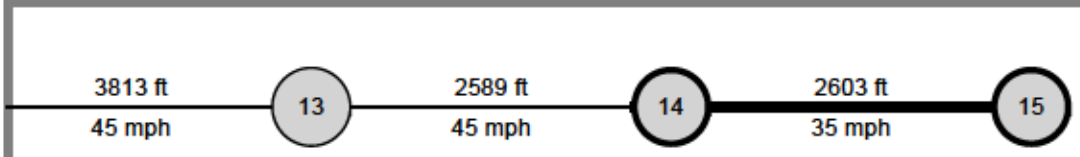
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 NoBuild AM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	29 1/2 Road & Patterson	30 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 1/2 Rd - 30 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
14	35	45	2	2	2603	2603	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
14	Bay/Lane Spillback Time, h					never	
14	Shared Lane Spillback Time, h				never		never
14	Base Free-Flow Speed, mph	40.82			45.52		
14	Running Time, s	46.83			40.63		
14	Running Speed, mph	37.90			43.68		
14	Through Delay, s/veh	16.25			2.19		
14	Travel Time, s	63.09			42.81		
14	Travel Speed, mph	28.13			41.45		
14	Stop Rate, stops/veh	0.37			0.07		
14	Spatial Stop Rate, stops/mi	0.75			0.14		
14	Through vol/cap Ratio	0.78			0.26		
14	Percent of Base FFS	68.92			91.07		
14	Level of Service	B			A		
14	Auto Traveler Perception Score	2.25			2.16		
Multimodal Results (Segment)							
14	Pedestrian Segment LOS Score / LOS	3.75		D	2.98		C
14	Bicycle Segment LOS Score / LOS	2.92		C	2.62		B
14	Transit Segment LOS Score / LOS	1.17		A	0.29		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	801.37	804.78
Facility Travel Speed, mph	26.83	26.72
Facility Base Free Flow Speed, mph	42.73	42.47
Facility Percent of Base FFS	62.79	62.91
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.23	C	3.15	C
Bicycle Facility LOS Score / LOS	2.76	C	2.72	C
Transit Facility LOS Score / LOS	1.16	A	1.08	A

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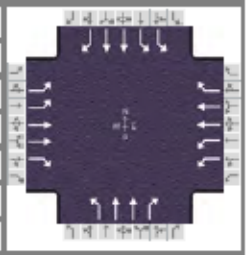
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.91
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	24 Road & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	127	195	207	583	327	359	53	741	341	467	936	45

Signal Information			
Cycle, s	100.0	Reference Phase	6
Offset, s	85	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	11.2	4.1	15.0	7.2	3.8	32.7	
Yellow	3.5	3.5	4.0	3.5	3.5	4.0	
Red	0.5	0.5	1.0	0.5	0.5	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	2.0	3.0	1.1	3.0	2.0	3.0
Phase Duration, s	15.2	20.0	23.3	28.1	11.2	37.7	19.0	45.5
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	11.2		20.5		4.0	22.6	16.8	26.7
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.2	10.1	0.0	12.5
Phase Call Probability	1.00		1.00		0.80	1.00	1.00	1.00
Max Out Probability	1.00		1.00		0.00	0.84	1.00	0.77

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	370	568	603	641	359	395	58	814	375	513	1029	49
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1675	1752		1716	1738		1810	1738	1585	1730	1752	1518
Queue Service Time (g_s), s	9.2	15.0		18.5	8.9		2.0	20.6	14.9	14.8	24.7	2.0
Cycle Queue Clearance Time (g_c), s	9.2	15.0		18.5	8.9		2.0	20.6	14.9	14.8	24.7	2.0
Green Ratio (*g/C*)	0.26	0.15		0.19	0.23		0.40	0.33	0.52	0.15	0.40	0.40
Capacity (*c*), veh/h	688	526		664	803		275	1136	824	519	1418	614
Volume-to-Capacity Ratio (*X*)	0.538	1.081		0.966	0.447		0.211	0.717	0.455	0.989	0.725	0.081
Back of Queue (*Q*), ft/ln (90 th percentile)	156.9	383.6		308.3	141.9		33.9	283.7	179.7	280.2	318.3	28.8
Back of Queue (*Q*), veh/ln (90 th percentile)	6.8	16.9		13.7	6.2		1.5	12.4	8.0	12.5	14.0	1.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.88	0.00		1.39	0.00		0.26	0.00	1.02	2.11	0.00	0.44
Uniform Delay (d_1), s/veh	34.2	49.8		40.0	33.0		20.7	29.6	15.1	42.4	25.1	18.3
Incremental Delay (d_2), s/veh	1.1	62.8		24.8	1.6		0.5	2.1	0.6	36.6	1.9	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
Control Delay (*d*), s/veh	35.3	112.7	0.0	64.8	34.6	0.0	21.2	31.7	15.6	79.0	27.0	18.4
Level of Service (LOS)	D	F	A	E	C	A	C	C	B	E	C	B
Approach Delay, s/veh / LOS	50.0	D		38.7	D		26.4	C		43.5	D	
Intersection Delay, s/veh / LOS	40.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.45	B	2.59	C	2.58	C	2.57	C
Bicycle LOS Score / LOS	0.97	A	1.64	B	1.52	B	1.80	B

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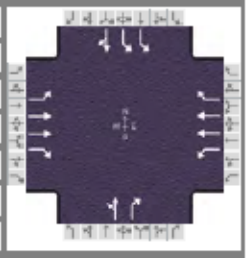
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Market Street/Mall Acce…	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	159	732	141	31	905	336	124	82	34	315	28	257

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	97	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.4	6.5	29.7	24.0	15.5	0.0	
Yellow	3.5	3.5	4.0	4.0	4.0	0.0	
Red	0.5	0.5	1.0	1.0	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		11.0		10.0
Phase Duration, s	15.9	45.2	5.4	34.7		20.5		29.0
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.4
Queue Clearance Time (g_s), s	11.6		2.4			15.1		22.2
Green Extension Time (g_e), s	0.3	0.0	0.0	0.0		0.3		1.8
Phase Call Probability	1.00		0.27			1.00		1.00
Max Out Probability	0.01		0.00			0.12		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	243	1120	216	11	332	123		248	41	380	343	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1766	1610	1810	1766	1522		1844	1610	1702	1635	
Queue Service Time (g_s), s	9.6	21.9	2.8	0.4	6.4	5.1		13.1	2.2	9.5	20.2	
Cycle Queue Clearance Time (g_c), s	9.6	21.9	2.8	0.4	6.4	5.1		13.1	2.2	9.5	20.2	
Green Ratio (*g/C*)	0.44	0.40	0.40	0.31	0.30	0.30		0.15	0.15	0.24	0.24	
Capacity (*c*), veh/h	511	1421	648	180	1049	452		285	249	816	392	
Volume-to-Capacity Ratio (*X*)	0.476	0.788	0.333	0.063	0.317	0.273		0.871	0.165	0.465	0.876	
Back of Queue (*Q*), ft/ln (90 th percentile)	108.9	164.5	33.9	7.5	103.4	78.9		226.1	34.9	147.8	271.6	
Back of Queue (*Q*), veh/ln (90 th percentile)	4.7	7.3	1.5	0.3	4.6	3.4		10.3	1.6	6.5	12.3	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.74	0.00	0.27	0.07	0.00	0.74		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	17.1	13.1	4.6	25.2	22.6	20.9		41.3	36.7	32.5	36.6	
Incremental Delay (d_2), s/veh	0.1	2.1	0.6	0.1	0.7	1.4		11.9	0.1	0.2	5.3	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	17.2	15.2	5.3	25.2	23.4	22.3		53.2	36.8	32.7	41.9	
Level of Service (LOS)	B	B	A	C	C	C		D	D	C	D	
Approach Delay, s/veh / LOS	14.2	B		23.1	C		50.9	D		37.0	D	
Intersection Delay, s/veh / LOS	24.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	2.12	B	2.47	B	2.45	B
Bicycle LOS Score / LOS	1.51	B	1.75	B	0.96	A	1.68	B

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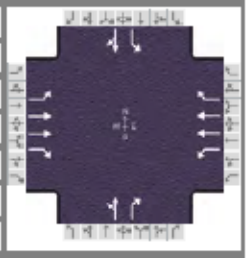
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.84
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Home Depot Access/Me...	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	85	760	227	130	876	65	279	72	249	88	45	127

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	78	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	5.4	1.8	32.9	14.6	26.4	0.0		
Yellow	3.5	0.0	4.0	4.0	4.0	0.0		
Red	0.5	0.0	1.0	1.0	1.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		11.0		10.0
Phase Duration, s	11.2	39.7	9.4	37.9		31.4		19.6
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0		5.4		5.5
Queue Clearance Time (g_s), s	7.0		5.5			23.8		13.9
Green Extension Time (g_e), s	0.4	0.0	0.3	0.0		2.5		0.7
Phase Call Probability	0.97		0.93			1.00		1.00
Max Out Probability	0.05		0.00			0.83		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	132	1178	352	96	647	48		418	296	105	205	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1766	1598	1810	1752	1610		1827	1610	1767	1677	
Queue Service Time (g_s), s	5.0	31.4	9.4	3.5	15.8	2.5		21.8	15.4	5.4	11.9	
Cycle Queue Clearance Time (g_c), s	5.0	31.4	9.4	3.5	15.8	2.5		21.8	15.4	5.4	11.9	
Green Ratio (*g/C*)	0.40	0.35	0.35	0.38	0.33	0.33		0.26	0.32	0.15	0.15	
Capacity (*c*), veh/h	318	1225	554	174	1153	530		482	511	257	244	
Volume-to-Capacity Ratio (*X*)	0.415	0.961	0.635	0.552	0.561	0.091		0.867	0.580	0.407	0.839	
Back of Queue (*Q*), ft/ln (90 th percentile)	91.7	323.1	102.5	62.2	233.8	39.2		345.9	204.8	99.4	203.2	
Back of Queue (*Q*), veh/ln (90 th percentile)	3.9	14.3	4.6	2.8	10.3	1.8		15.7	9.3	4.4	9.2	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.68	0.00	0.51	0.57	0.00	0.00		0.00	2.33	0.75	0.00	
Uniform Delay (d_1), s/veh	22.6	18.7	8.0	25.1	30.1	28.5		35.1	28.5	38.8	41.6	
Incremental Delay (d_2), s/veh	1.1	16.9	5.0	3.6	1.8	0.3		13.1	1.6	1.5	17.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	23.7	35.6	13.0	28.7	31.9	28.8		48.3	30.1	40.3	58.8	
Level of Service (LOS)	C	D	B	C	C	C		D	C	D	E	
Approach Delay, s/veh / LOS	29.9	C		31.3	C		40.7	D		52.5	D	
Intersection Delay, s/veh / LOS	34.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.92	B	2.44	B	2.47	B
Bicycle LOS Score / LOS	1.54	B	1.54	B	1.67	B	1.00	A

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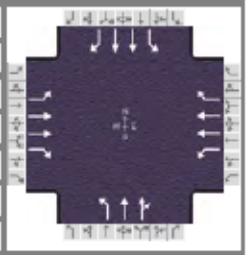
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.92
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	24 1/2 Rd & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	102	670	251	267	735	282	254	410	206	227	333	100

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	61	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	8.9	1.6	40.8	6.0	2.0	22.1	
Yellow	3.5	0.0	4.0	3.5	0.0	4.0	
Red	0.5	0.0	1.5	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	12.9	46.3	14.5	48.0	10.0	27.1	12.0	29.1
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	8.0		9.2		8.0	20.5	10.0	10.8
Green Extension Time (g_e), s	1.0	0.0	1.4	0.0	0.0	1.6	0.0	6.1
Phase Call Probability	0.99		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	1.00	1.00	0.41

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	182	1197	449	235	647	248	276	353	317	247	362	109
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1697	1781	1610	1810	1766	1598	1767	1856	1646	1767	1738	1397
Queue Service Time (g_s), s	6.0	31.1	24.2	7.2	11.8	12.7	6.0	18.3	18.5	8.0	8.8	6.4
Cycle Queue Clearance Time (g_c), s	6.0	31.1	24.2	7.2	11.8	12.7	6.0	18.3	18.5	8.0	8.8	6.4
Green Ratio (*g/C*)	0.50	0.41	0.41	0.51	0.42	0.42	0.28	0.22	0.22	0.30	0.24	0.24
Capacity (*c*), veh/h	393	1454	658	292	1500	678	300	410	364	241	838	337
Volume-to-Capacity Ratio (*X*)	0.464	0.823	0.682	0.804	0.432	0.366	0.921	0.860	0.870	1.026	0.432	0.323
Back of Queue (*Q*), ft/ln (90 th percentile)	101.4	426.6	321.8	125.9	161.5	181.3	222.4	314.7	290.1	217.7	140.7	98.6
Back of Queue (*Q*), veh/ln (90 th percentile)	4.3	19.1	14.6	5.7	7.2	8.2	9.9	14.0	13.1	9.7	6.1	3.9
Queue Storage Ratio (*RQ*) (90 th percentile)	0.76	0.00	1.46	0.95	0.00	0.73	1.67	0.00	0.00	1.64	0.00	0.00
Uniform Delay (d_1), s/veh	16.0	31.1	28.2	22.1	17.6	25.8	37.4	37.5	37.6	34.4	32.1	31.2
Incremental Delay (d_2), s/veh	1.1	4.8	5.0	6.6	0.8	1.4	32.5	16.3	19.2	64.8	0.5	0.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	17.0	36.0	33.3	28.7	18.4	27.2	70.0	53.7	56.8	99.3	32.6	32.0
Level of Service (LOS)	B	D	C	C	B	C	E	D	E	F	C	C
Approach Delay, s/veh / LOS	33.4	C		22.5	C		59.5	E		55.5	E	
Intersection Delay, s/veh / LOS	39.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.27	B	2.42	B	2.45	B	2.44	B
Bicycle LOS Score / LOS	1.40	A	1.64	B	1.27	A	1.08	A

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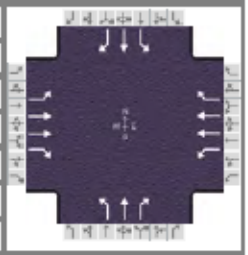
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.87
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	25 Road & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



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	921	181	281	905	147	223	338	257	218	317	110

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	38	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.0	14.0	18.0	7.0	3.0	22.0	
Yellow	3.5	3.5	4.5	3.5	3.5	4.0	
Red	0.5	0.5	1.5	0.5	0.5	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	31.0	42.0	13.0	24.0	18.0	34.0	11.0	27.0
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	5.2		11.0		12.6	21.4	9.0	21.6
Green Extension Time (g_e), s	0.5	0.0	0.0	0.0	0.2	4.1	0.0	0.2
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.00		1.00		1.00	0.80	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	108	1501	295	218	701	114	256	389	278	251	364	126
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1781	1585	1795	1795	1585	1753	1811	1610	1795	1811	1585
Queue Service Time (g_s), s	3.2	36.0	9.4	9.0	18.0	6.8	10.6	19.4	12.9	7.0	19.6	6.8
Cycle Queue Clearance Time (g_c), s	3.2	36.0	9.4	9.0	18.0	6.8	10.6	19.4	12.9	7.0	19.6	6.8
Green Ratio (*g/C*)	0.47	0.36	0.36	0.27	0.18	0.18	0.38	0.29	0.38	0.29	0.22	0.22
Capacity (*c*), veh/h	545	1282	571	234	646	285	338	525	612	257	398	349
Volume-to-Capacity Ratio (*X*)	0.197	1.171	0.517	0.931	1.084	0.399	0.757	0.740	0.455	0.976	0.914	0.363
Back of Queue (*Q*), ft/ln (90 th percentile)	52.9	786.2	104.8	216	390.1	125.2	196	311.2	177.4	210.5	367.2	111.4
Back of Queue (*Q*), veh/ln (90 th percentile)	2.3	35.2	4.7	9.7	17.6	5.6	8.6	13.5	8.1	9.5	15.9	5.0
Queue Storage Ratio (*RQ*) (90 th percentile)	0.30	0.00	0.66	1.22	0.00	0.96	0.88	0.00	1.01	1.59	0.00	0.84
Uniform Delay (d_1), s/veh	15.4	22.3	12.0	33.3	40.2	40.2	25.3	32.1	23.2	36.3	38.1	33.1
Incremental Delay (d_2), s/veh	0.8	85.0	3.1	38.9	57.8	3.5	14.6	9.0	2.4	50.4	28.0	2.9
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	16.2	107.3	15.1	72.1	98.0	43.7	39.9	41.1	25.7	86.7	66.1	36.0
Level of Service (LOS)	B	F	B	E	F	D	D	D	C	F	E	D
Approach Delay, s/veh / LOS	87.9	F		86.5	F		36.1	D		67.9	E	
Intersection Delay, s/veh / LOS	74.0						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.13	B	2.44	B	2.45	B
Bicycle LOS Score / LOS	1.60	B	1.75	B	2.01	B	1.71	B

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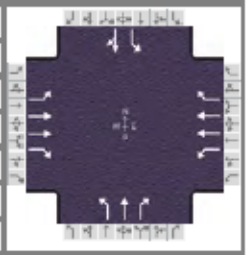
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.82
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	25 1/2 Road & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	92	1205	144	181	1180	147	93	190	189	184	159	75

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	80	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.6	0.1	48.9	6.0	1.0	17.4	
Yellow	3.5	0.0	4.5	3.5	0.0	4.0	
Red	0.5	0.0	1.5	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	11.6	54.9	11.7	55.0	10.0	22.4	11.0	23.4
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.3	5.2	5.3
Queue Clearance Time (g_s), s	4.9		5.3		7.3	16.1	9.0	17.9
Green Extension Time (g_e), s	0.3	0.0	0.6	0.0	0.0	0.9	0.0	0.5
Phase Call Probability	0.95		0.97		1.00	1.00	1.00	1.00
Max Out Probability	0.17		0.00		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	111	1449	173	123	805	100	113	232	230	224	285	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1781	1598	1781	1781	1572	1767	1885	1585	1682	1754	
Queue Service Time (g_s), s	2.9	26.8	1.5	3.3	5.0	0.3	5.3	11.6	14.1	7.0	15.9	
Cycle Queue Clearance Time (g_c), s	2.9	26.8	1.5	3.3	5.0	0.3	5.3	11.6	14.1	7.0	15.9	
Green Ratio (*g/C*)	0.56	0.49	0.49	0.57	0.49	0.49	0.23	0.17	0.17	0.24	0.18	
Capacity (*c*), veh/h	473	1740	781	279	1744	770	184	328	276	241	323	
Volume-to-Capacity Ratio (*X*)	0.234	0.833	0.222	0.443	0.462	0.130	0.617	0.706	0.836	0.931	0.884	
Back of Queue (*Q*), ft/ln (90 th percentile)	45.6	193.5	21.2	54.5	55.3	6.4	115.7	199.4	227.4	189.2	283.2	
Back of Queue (*Q*), veh/ln (90 th percentile)	2.1	8.7	1.0	2.4	2.5	0.3	5.1	9.0	10.2	8.0	12.6	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.35	0.00	0.17	0.41	0.00	0.05	1.04	0.00	2.57	1.41	0.00	
Uniform Delay (d_1), s/veh	11.1	9.5	2.9	17.8	3.7	1.2	32.9	38.9	39.9	38.4	39.8	
Incremental Delay (d_2), s/veh	0.3	4.4	0.6	1.3	0.7	0.3	14.5	7.0	19.3	42.6	23.5	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	11.5	13.9	3.5	19.0	4.4	1.4	47.4	45.9	59.3	81.0	63.3	
Level of Service (LOS)	B	B	A	B	A	A	D	D	E	F	E	
Approach Delay, s/veh / LOS	12.7	B		5.9	A		51.5	D		71.1	E	
Intersection Delay, s/veh / LOS	24.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.09	B	1.90	B	2.45	B	2.45	B
Bicycle LOS Score / LOS	1.94	B	2.00	B	1.44	A	1.33	A

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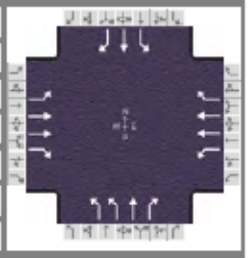
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.77
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	1st Street & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	115	1234	197	217	1180	124	210	394	193	165	311	80

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	50	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.8	36.0	7.0	3.2	27.5	0.0	
Yellow	3.5	3.0	3.5	0.0	4.0	0.0	
Red	0.5	2.5	0.5	0.0	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	2.0	3.0	1.1	3.0
Phase Duration, s	11.8	41.4	11.9	41.5	14.2	35.8	11.0	32.5
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	6.4		7.0		9.6	28.4	9.0	21.8
Green Extension Time (g_e), s	0.6	0.0	0.7	0.0	0.6	2.4	0.0	4.2
Phase Call Probability	0.97		0.98		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	1.00	1.00	0.87

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	129	1385	221	144	784	82	273	512	251	214	404	104
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1766	1598	1781	1781	1572	1743	1856	1598	1810	1885	1610
Queue Service Time (g_s), s	4.4	35.9	7.6	5.0	16.1	2.4	7.6	26.4	11.4	7.0	19.8	4.5
Cycle Queue Clearance Time (g_c), s	4.4	35.9	7.6	5.0	16.1	2.4	7.6	26.4	11.4	7.0	19.8	4.5
Green Ratio (*g/C*)	0.44	0.36	0.46	0.44	0.36	0.36	0.10	0.31	0.39	0.35	0.28	0.35
Capacity (*c*), veh/h	329	1267	737	212	1280	565	357	571	617	216	519	569
Volume-to-Capacity Ratio (*X*)	0.393	1.093	0.300	0.680	0.612	0.146	0.764	0.896	0.406	0.993	0.778	0.183
Back of Queue (*Q*), ft/ln (90 th percentile)	75.5	695.5	99.6	76	184.5	35.4	131.5	423.2	152.7	181.8	306.4	66.5
Back of Queue (*Q*), veh/ln (90 th percentile)	3.4	30.9	4.5	3.4	8.3	1.6	5.9	18.8	6.9	8.3	13.8	3.0
Queue Storage Ratio (*RQ*) (90 th percentile)	0.57	0.00	0.75	0.69	0.00	0.32	0.99	0.00	1.15	1.65	0.00	0.00
Uniform Delay (d_1), s/veh	20.3	31.3	13.8	21.8	20.5	14.1	43.7	33.1	22.3	31.6	33.4	22.4
Incremental Delay (d_2), s/veh	0.9	52.8	0.9	3.3	1.3	0.3	6.0	16.3	0.6	59.1	7.3	0.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	21.3	84.2	14.6	25.1	21.9	14.5	49.7	49.4	23.0	90.6	40.7	22.6
Level of Service (LOS)	C	F	B	C	C	B	D	D	C	F	D	C
Approach Delay, s/veh / LOS	70.6	E		21.7	C		43.1	D		52.9	D	
Intersection Delay, s/veh / LOS	50.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.11	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	2.14	B	2.12	B	2.20	B	1.68	B

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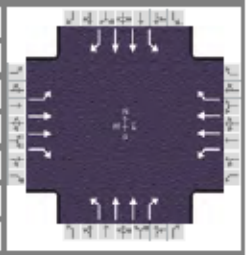
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.80
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	7th Street & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	147	1222	163	202	934	172	245	586	275	151	311	173

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	10	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.3	2.1	31.9	6.0	3.7	29.0		
Yellow	3.5	0.0	4.0	3.5	0.0	4.0		
Red	0.5	0.0	1.0	0.5	0.0	1.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	15.5	39.0	13.3	36.9	10.0	34.0	13.7	37.6
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	11.3		8.5		8.0	19.2	9.0	10.8
Green Extension Time (g_e), s	0.3	0.0	0.9	0.0	0.0	9.8	0.7	13.6
Phase Call Probability	0.99		0.99		1.00	1.00	0.99	1.00
Max Out Probability	1.00		0.00		1.00	0.58	0.05	0.32

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	172	1429	160	179	827	148	306	733	328	189	389	216
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1766	1359	1810	1781	1542	1767	1795	1591	1795	1809	1586
Queue Service Time (g_s), s	9.3	34.0	4.3	6.5	19.5	7.6	6.0	17.2	15.1	7.0	8.1	8.8
Cycle Queue Clearance Time (g_c), s	9.3	34.0	4.3	6.5	19.5	7.6	6.0	17.2	15.1	7.0	8.1	8.8
Green Ratio (*g/C*)	0.11	0.34	0.40	0.41	0.32	0.32	0.35	0.29	0.38	0.40	0.33	0.44
Capacity (*c*), veh/h	207	1203	557	240	1136	492	360	1041	610	309	1181	701
Volume-to-Capacity Ratio (*X*)	0.829	1.188	0.288	0.744	0.728	0.301	0.850	0.704	0.537	0.612	0.329	0.309
Back of Queue (*Q*), ft/ln (90 th percentile)	160.8	745.7	46.9	98	241.4	132.7	209.2	223.1	174.5	117.8	127.7	121
Back of Queue (*Q*), veh/ln (90 th percentile)	7.3	33.1	2.1	4.5	10.8	5.8	9.3	10.1	7.9	5.3	5.8	5.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.91	0.00	0.30	0.74	0.00	0.87	0.94	0.00	0.99	1.07	0.00	0.00
Uniform Delay (d_1), s/veh	42.5	20.5	8.8	22.0	25.7	27.3	32.2	27.1	20.5	22.7	25.4	18.1
Incremental Delay (d_2), s/veh	13.7	91.7	1.1	4.8	3.1	1.2	17.8	1.7	1.0	2.8	0.2	0.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	56.2	112.1	9.9	26.8	28.8	28.4	50.0	28.7	21.5	25.4	25.6	18.4
Level of Service (LOS)	E	F	A	C	C	C	D	C	C	C	C	B
Approach Delay, s/veh / LOS	97.4	F		28.4	C		31.8	C		23.6	C	
Intersection Delay, s/veh / LOS	52.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.45	B	2.44	B	2.45	B	2.47	B
Bicycle LOS Score / LOS	2.04	B	1.83	B	1.61	B	1.14	A

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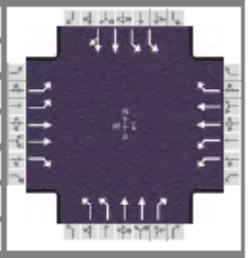
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.80
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	12th Street & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	246	1289	117	106	795	151	145	629	146	288	542	238

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	59	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.0	6.0	29.5	7.0	26.0	0.0		
Yellow	3.5	3.5	4.0	3.5	4.0	0.0		
Red	0.5	0.5	1.5	0.5	1.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	23.0	45.0	13.0	35.0	11.0	31.0	11.0	31.0
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	7.1		4.6		5.7	23.0	9.0	28.0
Green Extension Time (g_e), s	1.6	0.0	0.2	0.0	0.1	2.6	0.0	0.0
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.07		1.00		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	327	1715	156	136	1020	194	181	786	183	360	515	460
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1730	1766	1605	1743	1795	1598	1730	1781	1572	1743	1870	1670
Queue Service Time (g_s), s	5.1	39.5	6.3	2.6	27.7	7.1	3.7	21.0	8.5	7.0	26.0	26.0
Cycle Queue Clearance Time (g_c), s	5.1	39.5	6.3	2.6	27.7	7.1	3.7	21.0	8.5	7.0	26.0	26.0
Green Ratio (*g/C*)	0.50	0.40	0.47	0.38	0.30	0.30	0.33	0.26	0.35	0.33	0.26	0.26
Capacity (*c*), veh/h	818	1396	747	458	1059	471	386	926	550	424	486	434
Volume-to-Capacity Ratio (*X*)	0.400	1.229	0.208	0.297	0.963	0.411	0.469	0.849	0.332	0.850	1.059	1.059
Back of Queue (*Q*), ft/ln (90 th percentile)	76.1	1123.4	118.3	45.7	370.4	93.2	68.2	314.8	127.7	151.7	574.5	527
Back of Queue (*Q*), veh/ln (90 th percentile)	3.4	49.8	5.4	2.1	16.7	4.2	3.1	14.1	5.7	6.8	25.7	23.6
Queue Storage Ratio (*RQ*) (90 th percentile)	0.43	0.00	0.81	0.17	0.00	0.70	0.31	0.00	0.58	1.15	0.00	0.00
Uniform Delay (d_1), s/veh	18.2	33.0	17.8	26.2	29.1	17.5	27.1	35.1	23.9	29.9	37.0	37.0
Incremental Delay (d_2), s/veh	0.9	107.1	0.4	1.4	17.8	2.2	4.1	9.6	1.6	18.8	57.4	59.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	19.1	140.1	18.2	27.6	46.9	19.7	31.1	44.7	25.5	48.7	94.4	96.7
Level of Service (LOS)	B	F	B	C	D	B	C	D	C	D	F	F
Approach Delay, s/veh / LOS	113.5	F		41.1	D		39.5	D		82.9	F	
Intersection Delay, s/veh / LOS	76.4						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.57	C	2.44	B	2.58	C	2.58	C
Bicycle LOS Score / LOS	2.19	B	1.57	B	1.44	A	1.59	B

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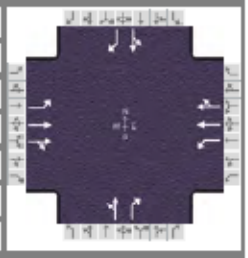
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.95
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Patterson Rd & 15th St	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	69	1629	30	22	1052	27	14	4	36	43	2	64

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	53	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.4	2.1	76.1	6.4	0.0	0.0	
Yellow	4.0	0.0	4.0	4.0	0.0	0.0	
Red	0.0	0.0	0.0	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		7.0		7.0
Phase Duration, s	9.5	82.2	7.4	80.1		10.4		10.4
Change Period, ($Y+R_c$), s	4.0	4.0	4.0	4.0		4.0		4.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time (g_s), s	3.0		2.4			4.3		6.2
Green Extension Time (g_e), s	0.2	0.0	0.0	0.0		0.3		0.3
Phase Call Probability	0.92		0.56			0.99		0.99
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	90	1077	1077	30	729	724		19	38		47	67
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1856	1844	1781	1885	1868		1529	1585		1434	1585
Queue Service Time (g_s), s	1.0	26.7	27.3	0.4	1.7	1.6		0.0	2.3		2.1	4.2
Cycle Queue Clearance Time (g_c), s	1.0	26.7	27.3	0.4	1.7	1.6		1.1	2.3		3.2	4.2
Green Ratio (*g/C*)	0.82	0.78	0.78	0.79	0.76	0.76		0.06	0.06		0.06	0.06
Capacity (*c*), veh/h	442	1451	1441	222	1434	1421		163	102		163	102
Volume-to-Capacity Ratio (*X*)	0.203	0.742	0.747	0.133	0.508	0.509		0.117	0.371		0.291	0.659
Back of Queue (*Q*), ft/ln (90 th percentile)	6.7	178.7	177.3	6.3	12.1	11.6		18	37		46.2	68.4
Back of Queue (*Q*), veh/ln (90 th percentile)	0.3	7.9	8.1	0.3	0.5	0.5		0.8	1.7		2.1	3.1
Queue Storage Ratio (*RQ*) (90 th percentile)	0.08	0.00	0.00	0.07	0.00	0.00		0.00	0.84		0.00	1.55
Uniform Delay (d_1), s/veh	1.8	4.4	4.5	6.8	0.3	0.3		44.2	44.8		45.2	45.7
Incremental Delay (d_2), s/veh	0.1	2.2	2.3	0.0	0.2	0.2		0.1	0.8		0.4	2.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Control Delay (*d*), s/veh	1.8	6.6	6.7	6.8	0.5	0.5		44.3	45.7		45.6	48.4
Level of Service (LOS)	A	A	A	A	A	A		D	D		D	D
Approach Delay, s/veh / LOS	6.4	A		0.6	A		45.2	D		47.2	D	
Intersection Delay, s/veh / LOS	6.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.83	B	1.84	B	2.31	B	2.31	B
Bicycle LOS Score / LOS	1.99	B	1.44	A	0.58	A	0.68	A

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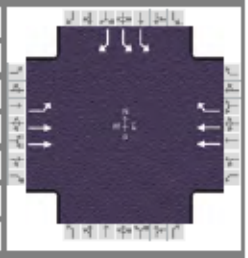
HCS7 Signalized Intersection Results Summary

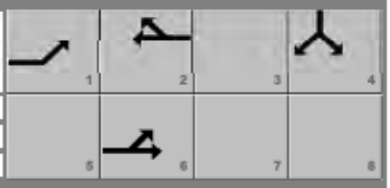
General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	27 1/2 Road & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	217	1478			941	362				543		135

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	19	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	16.0	48.0	21.0	0.0	0.0	0.0	
Yellow	3.5	4.5	4.0	0.0	0.0	0.0	
Red	0.5	1.5	1.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2				4
Case Number	1.0	4.0		7.3				9.0
Phase Duration, s	20.0	74.0		54.0				26.0
Change Period, ($Y+R_c$), s	4.0	6.0		6.0				5.0
Max Allow Headway (*MAH*), s	5.2	0.0		0.0				5.3
Queue Clearance Time (g_s), s	7.3							20.1
Green Extension Time (g_e), s	0.8	0.0		0.0				0.5
Phase Call Probability	1.00							1.00
Max Out Probability	0.20							1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2	12				7		14
Adjusted Flow Rate (*v*), veh/h	233	1589			1082	416				654		163
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1795			1795	1610				1757		1522
Queue Service Time (g_s), s	5.3	17.9			19.9	15.0				18.1		9.5
Cycle Queue Clearance Time (g_c), s	5.3	17.9			19.9	15.0				18.1		9.5
Green Ratio (*g/C*)	0.66	0.68			0.48	0.48				0.21		0.21
Capacity (*c*), veh/h	449	2441			1723	773				738		320
Volume-to-Capacity Ratio (*X*)	0.519	0.651			0.628	0.539				0.887		0.509
Back of Queue (*Q*), ft/ln (90 th percentile)	116.9	134.8			219.3	161.6				284.7		150.6
Back of Queue (*Q*), veh/ln (90 th percentile)	5.1	6.1			9.9	7.3				12.9		6.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.77	0.00			0.00	3.06				1.70		0.00
Uniform Delay (d_1), s/veh	15.9	4.8			15.1	13.1				38.3		34.9
Incremental Delay (d_2), s/veh	3.2	1.0			1.5	2.2				14.8		5.7
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0				0.0		0.0
Control Delay (*d*), s/veh	19.1	5.8			16.5	15.3				53.1		40.6
Level of Service (LOS)	B	A			B	B				D		D
Approach Delay, s/veh / LOS	7.5	A		16.2	B		0.0			50.6	D	
Intersection Delay, s/veh / LOS	19.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	0.67	A	2.09	B	2.32	B	2.32	B
Bicycle LOS Score / LOS	2.17	B	1.78	B				F

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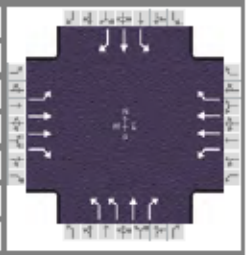
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	29 Road & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	220	1249	310	126	809	57	245	273	267	161	95	166

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	69	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.5	2.0	33.5	12.5	2.0	20.0						
Yellow	3.5	0.0	4.5	3.5	0.0	4.0						
Red	1.0	0.0	2.0	1.0	0.0	1.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	16.0	42.0	14.0	40.0	17.0	25.0	19.0	27.0
Change Period, ($Y+R_c$), s	4.5	6.5	4.5	6.5	4.5	5.0	4.5	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	9.7		8.4		8.4	19.1	10.1	8.3
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0	0.5	0.4	0.2	3.1
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	1.00	0.91	0.13

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	222	1258	312	177	1134	80	295	329	280	194	114	140
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1795	1572	1767	1781	1585	1716	1870	1610	1753	1870	1610
Queue Service Time (g_s), s	7.7	34.6	10.3	6.4	31.1	4.1	6.4	17.1	14.8	8.1	5.1	6.3
Cycle Queue Clearance Time (g_c), s	7.7	34.6	10.3	6.4	31.1	4.1	6.4	17.1	14.8	8.1	5.1	6.3
Green Ratio (*g/C*)	0.45	0.36	0.36	0.43	0.34	0.34	0.32	0.20	0.30	0.34	0.22	0.34
Capacity (*c*), veh/h	289	1274	558	240	1193	531	906	374	475	350	411	539
Volume-to-Capacity Ratio (*X*)	0.767	0.987	0.559	0.736	0.950	0.150	0.326	0.879	0.588	0.555	0.278	0.259
Back of Queue (*Q*), ft/ln (90 th percentile)	150.4	392.1	103.6	103.4	414.9	89.4	106.3	317.8	208.2	145.6	98.7	99.9
Back of Queue (*Q*), veh/ln (90 th percentile)	6.7	17.7	4.6	4.6	18.6	4.0	4.7	14.2	9.5	6.4	4.4	4.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.49	0.00	0.38	0.26	0.00	1.03	0.48	0.00	0.95	1.09	0.00	0.76
Uniform Delay (d_1), s/veh	25.4	23.4	12.1	19.7	32.6	28.2	25.1	38.8	30.1	25.9	32.4	24.2
Incremental Delay (d_2), s/veh	13.5	18.9	3.0	12.8	12.6	0.4	1.0	24.2	5.3	6.2	1.7	1.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	38.8	42.3	15.1	32.6	45.2	28.6	26.0	63.1	35.3	32.2	34.1	25.4
Level of Service (LOS)	D	D	B	C	D	C	C	E	D	C	C	C
Approach Delay, s/veh / LOS	37.1	D		42.6	D		42.4	D		30.5	C	
Intersection Delay, s/veh / LOS	39.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.33	B	2.18	B	2.45	B	2.45	B
Bicycle LOS Score / LOS	2.26	B	1.47	A	1.98	B	1.23	A

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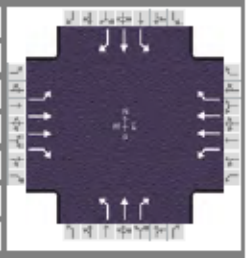
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	29 Road & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	220	1249	310	126	809	57	245	273	267	161	95	166

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	69	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.5	2.0	33.5	12.5	2.0	20.0	
Yellow	3.5	0.0	4.5	3.5	0.0	4.0	
Red	1.0	0.0	2.0	1.0	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	16.0	42.0	14.0	40.0	17.0	25.0	19.0	27.0
Change Period, ($Y+R_c$), s	4.5	6.5	4.5	6.5	4.5	5.0	4.5	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	9.7		8.4		14.5	19.1	10.1	8.3
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0	0.0	0.4	0.2	3.1
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	1.00	0.91	0.13

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	222	1258	312	177	1134	80	295	329	280	194	114	140
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1795	1572	1767	1781	1585	1767	1870	1610	1753	1870	1610
Queue Service Time (g_s), s	7.7	34.6	10.3	6.4	31.1	4.1	12.5	17.1	14.8	8.1	5.1	6.3
Cycle Queue Clearance Time (g_c), s	7.7	34.6	10.3	6.4	31.1	4.1	12.5	17.1	14.8	8.1	5.1	6.3
Green Ratio (*g/C*)	0.45	0.36	0.36	0.43	0.34	0.34	0.32	0.20	0.30	0.34	0.22	0.34
Capacity (*c*), veh/h	289	1274	558	240	1193	531	459	374	475	350	411	539
Volume-to-Capacity Ratio (*X*)	0.767	0.987	0.559	0.736	0.950	0.150	0.643	0.879	0.588	0.555	0.278	0.259
Back of Queue (*Q*), ft/ln (90 th percentile)	150.4	391.8	103.6	103.4	414.5	89.4	216.9	317.8	208.2	145.6	98.7	99.9
Back of Queue (*Q*), veh/ln (90 th percentile)	6.7	17.7	4.6	4.6	18.5	4.0	9.6	14.2	9.5	6.4	4.4	4.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.49	0.00	0.38	0.26	0.00	1.03	0.98	0.00	0.95	1.09	0.00	0.76
Uniform Delay (d_1), s/veh	25.4	23.4	12.1	19.7	32.6	28.2	27.9	38.8	30.1	25.9	32.4	24.2
Incremental Delay (d_2), s/veh	13.5	18.9	3.0	12.8	12.6	0.4	6.8	24.2	5.3	6.2	1.7	1.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	38.8	42.3	15.1	32.6	45.2	28.6	34.7	63.1	35.3	32.2	34.1	25.4
Level of Service (LOS)	D	D	B	C	D	C	C	E	D	C	C	C
Approach Delay, s/veh / LOS	37.1	D		42.6	D		45.2	D		30.5	C	
Intersection Delay, s/veh / LOS	39.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.16	B	2.18	B	2.45	B	2.45	B
Bicycle LOS Score / LOS	2.26	B	1.47	A	1.98	B	1.23	A

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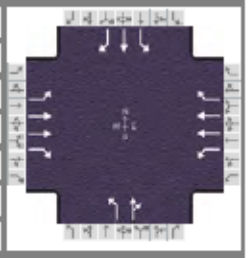
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.85
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	29 1/2 Road & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	91	1484	73	99	859	129	86	98	235	155	29	32

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	54	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.8	2.7		37.1	9.0	5.0	17.9					
Yellow	3.5	0.0		5.0	4.0	4.0	4.0					
Red	0.5	0.0		1.5	0.0	0.0	1.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	8.8	43.6	11.5	46.3	22.0	31.9	13.0	22.9
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	4.5	0.0	4.5	0.0	3.7	4.8	3.7	4.8
Queue Clearance Time (g_s), s	5.0		7.0		5.8	25.6	10.3	4.0
Green Extension Time (g_e), s	0.3	0.0	0.6	0.0	0.2	1.3	0.0	2.3
Phase Call Probability	0.91		0.98		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	0.60	1.00	0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	88	1438	71	148	1287	193	101	392		182	34	38
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795	1598	1795	1795	1560	1767	1607		1781	1841	1585
Queue Service Time (g_s), s	3.0	37.1	3.2	5.0	33.3	8.8	3.8	23.6		8.3	1.6	2.0
Cycle Queue Clearance Time (g_c), s	3.0	37.1	3.2	5.0	33.3	8.8	3.8	23.6		8.3	1.6	2.0
Green Ratio (*g/C*)	0.42	0.37	0.37	0.45	0.40	0.40	0.38	0.27		0.27	0.18	0.18
Capacity (*c*), veh/h	175	1333	593	206	1430	621	605	432		245	329	283
Volume-to-Capacity Ratio (*X*)	0.503	1.078	0.119	0.719	0.900	0.311	0.167	0.907		0.744	0.104	0.133
Back of Queue (*Q*), ft/ln (90 th percentile)	47.3	666	76.9	72.7	398.5	147.8	65.4	353.5		168.2	28.5	31.2
Back of Queue (*Q*), veh/ln (90 th percentile)	2.2	30.0	3.5	3.3	18.0	6.5	2.9	15.3		7.5	1.3	1.4
Queue Storage Ratio (*RQ*) (90 th percentile)	0.36	0.00	0.91	0.55	0.00	0.63	0.84	0.00		1.23	0.00	0.00
Uniform Delay (d_1), s/veh	23.4	32.7	22.7	20.6	26.5	21.8	20.5	35.4		31.3	34.4	34.5
Incremental Delay (d_2), s/veh	1.5	44.8	0.3	3.4	7.1	0.9	0.6	17.9		18.4	0.1	0.2
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	24.9	77.5	22.9	24.0	33.6	22.7	21.1	53.2		49.7	34.5	34.8
Level of Service (LOS)	C	F	C	C	C	C	C	D		D	C	C
Approach Delay, s/veh / LOS	72.2	E		31.4	C		46.7	D		45.5	D	
Intersection Delay, s/veh / LOS	50.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	2.10	B	2.44	B	2.45	B
Bicycle LOS Score / LOS	2.09	B	1.54	B	1.30	A	0.91	A

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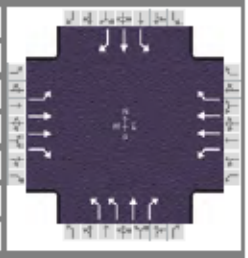
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	30 Road & Patterson	File Name	2045 NoBuild PM Optimized Timings.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	227	1174	319	72	669	69	258	132	104	47	83	128

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	53	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	10.0	52.5	6.0	1.0	7.0	0.0						
Yellow	3.5	5.0	3.5	0.0	4.0	0.0						
Red	0.5	1.5	0.5	0.0	1.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	18.0	63.0	14.0	59.0	11.0	13.0	10.0	12.0
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.2	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	7.6		4.9		9.0	10.0	4.8	7.2
Green Extension Time (g_e), s	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.26		0.48		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	273	1414	384	127	1178	121	311	159	124	57	100	43
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795	1598	1795	1795	1598	1730	1870	1560	1810	1885	1585
Queue Service Time (g_s), s	5.6	6.7	2.3	2.9	14.8	1.6	7.0	8.0	8.0	2.8	5.2	2.2
Cycle Queue Clearance Time (g_c), s	5.6	6.7	2.3	2.9	14.8	1.6	7.0	8.0	8.0	2.8	5.2	2.2
Green Ratio (*g/C*)	0.68	0.56	0.56	0.62	0.52	0.52	0.14	0.08	0.08	0.13	0.07	0.21
Capacity (*c*), veh/h	488	2028	903	378	1884	839	431	150	125	181	132	333
Volume-to-Capacity Ratio (*X*)	0.561	0.697	0.426	0.336	0.625	0.145	0.722	1.063	0.994	0.314	0.758	0.130
Back of Queue (*Q*), ft/ln (90 th percentile)	79.1	49.5	28.1	53.5	143.6	22.5	42.4	250	200.8	57.5	133.7	36.8
Back of Queue (*Q*), veh/ln (90 th percentile)	3.6	2.2	1.3	2.4	6.5	1.0	1.9	11.2	8.8	2.6	6.0	1.6
Queue Storage Ratio (*RQ*) (90 th percentile)	0.90	0.00	0.10	0.53	0.00	0.38	0.19	0.00	1.13	0.44	0.00	0.28
Uniform Delay (d_1), s/veh	9.7	1.5	1.3	8.6	7.4	4.6	41.7	46.0	46.0	39.3	45.7	32.1
Incremental Delay (d_2), s/veh	3.2	1.4	1.0	2.4	1.6	0.4	10.0	91.3	79.1	4.5	32.8	0.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	12.9	2.8	2.3	11.0	8.9	4.9	51.7	137.3	125.1	43.8	78.5	32.9
Level of Service (LOS)	B	A	A	B	A	A	D	F	F	D	E	C
Approach Delay, s/veh / LOS	4.1	A		8.8	A		90.0	F		58.8	E	
Intersection Delay, s/veh / LOS	20.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.25	B	2.22	B	2.46	B	2.46	B
Bicycle LOS Score / LOS	2.20	B	1.29	A	1.47	A	0.82	A

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HCS7 Two-Way Stop-Control Report

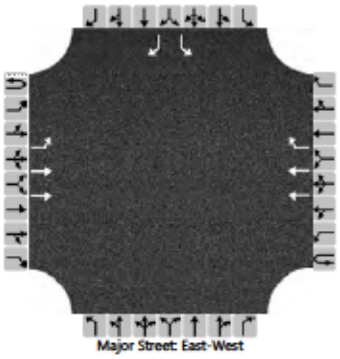
General Information

Analyst	
Agency/Co.	Stolfus and Associates
Date Performed	4/30/2020
Analysis Year	2018
Time Analyzed	AM
Intersection Orientation	East-West
Project Description	Patterson ACP

Site Information

Intersection	28 RD
Jurisdiction	
East/West Street	
North/South Street	
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	0	2	1		0	0	0		1	0	1
Configuration		L	T				T	R						L		R
Volume (veh/h)	0	57	1861				1221	130						77		83
Percent Heavy Vehicles (%)	3	3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized						No								No		
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.5		6.9
Critical Headway (sec)		4.16												6.86		6.96
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		62												84		90
Capacity, c (veh/h)		450												21		401
v/c Ratio		0.14												3.92		0.22
95% Queue Length, Q_{95} (veh)		0.5												10.7		0.9
Control Delay (s/veh)		14.3												1682.2		16.6
Level of Service (LOS)		B												F		C
Approach Delay (s/veh)		0.4												818.1		
Approach LOS														F		

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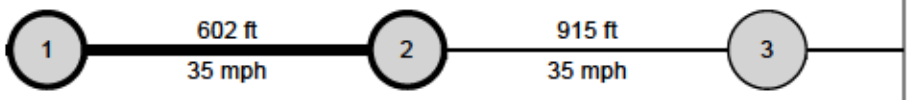
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	24 Road & Patterson	Market Street/Mall Access & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (24 Rd - Market St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
1	35	35	2	2	602	602	50	50	0	0	100	0	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
1	Bay/Lane Spillback Time, h				0.15	1.19	0.03
1	Shared Lane Spillback Time, h				0.24		0.07
1	Base Free-Flow Speed, mph	41.58			42.05		
1	Running Time, s	14.47			14.87		
1	Running Speed, mph	28.37			27.61		
1	Through Delay, s/veh	23.38			112.51		
1	Travel Time, s	37.85			127.37		
1	Travel Speed, mph	10.84			3.22		
1	Stop Rate, stops/veh	0.56			1.58		
1	Spatial Stop Rate, stops/mi	4.93			13.84		
1	Through vol/cap Ratio	0.32			1.08		
1	Percent of Base FFS	26.08			7.66		
1	Level of Service	F			F		
1	Auto Traveler Perception Score	2.95			4.67		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	2.26		B	3.79		D
1	Bicycle Segment LOS Score / LOS	2.29		B	2.42		B
1	Transit Segment LOS Score / LOS	2.64		B	4.03		D

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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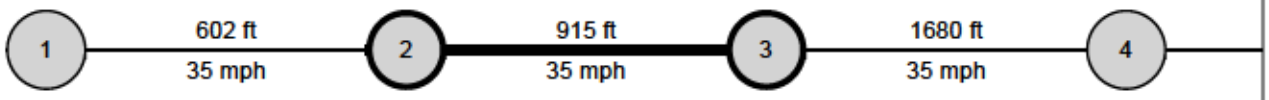
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	Market Street/Mall Access & Pat	Home Depot Access/Mesa Mall Access &		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Market St - Home Depot)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
2	35	35	2	2	915	915	50	50	2	1	70	0	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
2	Bay/Lane Spillback Time, h	never	never				
2	Shared Lane Spillback Time, h	never		never			
2	Base Free-Flow Speed, mph	41.72			42.05		
2	Running Time, s	18.64			19.02		
2	Running Speed, mph	33.47			32.81		
2	Through Delay, s/veh	31.92			15.23		
2	Travel Time, s	50.56			34.25		
2	Travel Speed, mph	12.34			18.22		
2	Stop Rate, stops/veh	0.78			0.34		
2	Spatial Stop Rate, stops/mi	4.51			1.97		
2	Through vol/cap Ratio	0.56			0.79		
2	Percent of Base FFS	29.58			43.32		
2	Level of Service	F			D		
2	Auto Traveler Perception Score	2.88			2.44		
Multimodal Results (Segment)							
2	Pedestrian Segment LOS Score / LOS	2.98		C	3.29		C
2	Bicycle Segment LOS Score / LOS	2.53		B	2.69		B
2	Transit Segment LOS Score / LOS	2.52		B	2.00		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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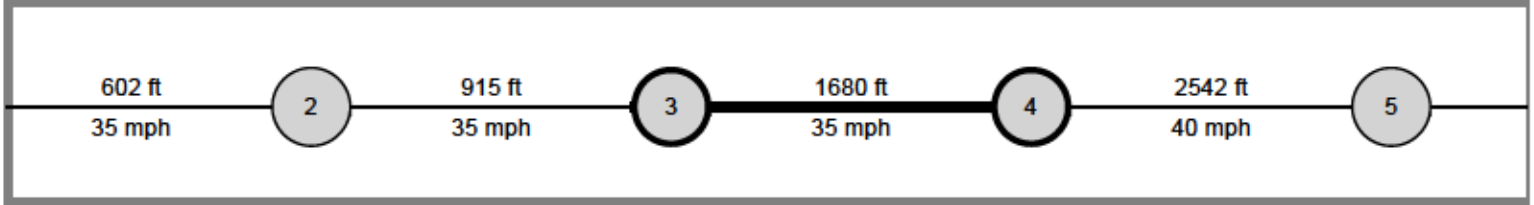
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	Home Depot Access/Mesa Mall /	24 1/2 Rd & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Home Depot - 24 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
3	35	35	2	2	1680	1680	50	50	550	550	70	100	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
3	Bay/Lane Spillback Time, h		never		never	never	never
3	Shared Lane Spillback Time, h	never		never	never		never
3	Base Free-Flow Speed, mph	40.72			40.21		
3	Running Time, s	31.22			32.19		
3	Running Speed, mph	36.69			35.59		
3	Through Delay, s/veh	18.44			35.58		
3	Travel Time, s	49.66			67.77		
3	Travel Speed, mph	23.07			16.90		
3	Stop Rate, stops/veh	0.51			0.64		
3	Spatial Stop Rate, stops/mi	1.59			2.00		
3	Through vol/cap Ratio	0.43			0.96		
3	Percent of Base FFS	56.65			42.04		
3	Level of Service	C			D		
3	Auto Traveler Perception Score	2.38			2.45		
Multimodal Results (Segment)							
3	Pedestrian Segment LOS Score / LOS	3.66		D	3.52		D
3	Bicycle Segment LOS Score / LOS	2.73		B	2.87		C
3	Transit Segment LOS Score / LOS	1.50		A	2.16		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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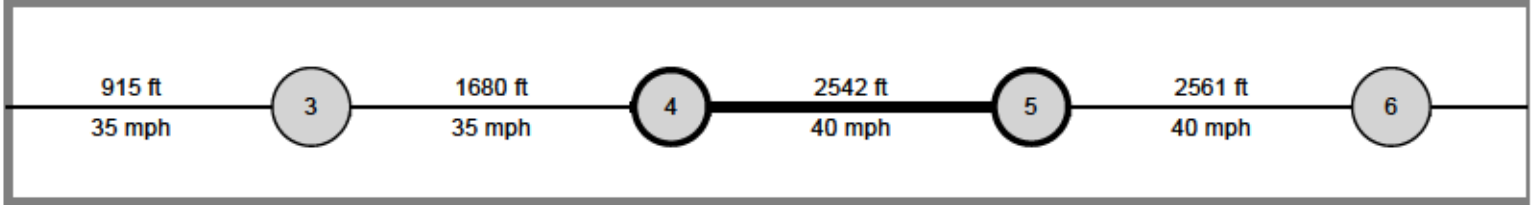
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	24 1/2 Rd & Patterson	25 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (24 1/2 Rd - 25 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
4	40	35	2	2	2542	2542	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
4	Bay/Lane Spillback Time, h	never	4.15	never	never	never	never
4	Shared Lane Spillback Time, h	never		never	never		never
4	Base Free-Flow Speed, mph	42.99			40.64		
4	Running Time, s	43.07			46.71		
4	Running Speed, mph	40.25			37.11		
4	Through Delay, s/veh	97.98			35.96		
4	Travel Time, s	141.04			82.67		
4	Travel Speed, mph	12.29			20.96		
4	Stop Rate, stops/veh	1.37			0.87		
4	Spatial Stop Rate, stops/mi	2.84			1.81		
4	Through vol/cap Ratio	1.08			0.82		
4	Percent of Base FFS	28.59			51.59		
4	Level of Service	F			C		
4	Auto Traveler Perception Score	2.59			2.42		
Multimodal Results (Segment)							
4	Pedestrian Segment LOS Score / LOS	3.11		C	3.48		C
4	Bicycle Segment LOS Score / LOS	2.79		C	2.93		C
4	Transit Segment LOS Score / LOS	2.60		B	1.80		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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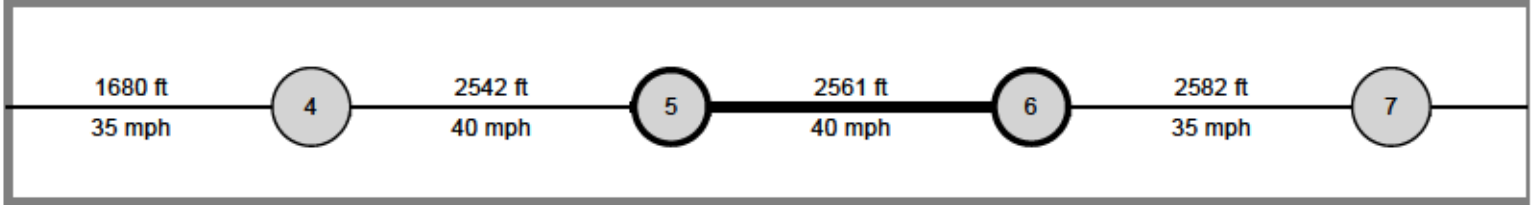
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	25 Road & Patterson	25 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 Rd - 25 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
5	40	40	2	2	2561	2561	50	50	260	260	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
5	Bay/Lane Spillback Time, h		never		never	1.04	never
5	Shared Lane Spillback Time, h	never		never	never		never
5	Base Free-Flow Speed, mph	43.13			43.13		
5	Running Time, s	43.22			44.51		
5	Running Speed, mph	40.40			39.23		
5	Through Delay, s/veh	4.42			107.29		
5	Travel Time, s	47.64			151.80		
5	Travel Speed, mph	36.65			11.50		
5	Stop Rate, stops/veh	0.12			1.31		
5	Spatial Stop Rate, stops/mi	0.25			2.70		
5	Through vol/cap Ratio	0.46			1.17		
5	Percent of Base FFS	84.98			26.67		
5	Level of Service	A			F		
5	Auto Traveler Perception Score	2.18			2.56		
Multimodal Results (Segment)							
5	Pedestrian Segment LOS Score / LOS	3.20		C	3.93		D
5	Bicycle Segment LOS Score / LOS	2.77		C	3.01		C
5	Transit Segment LOS Score / LOS	0.59		A	2.84		C

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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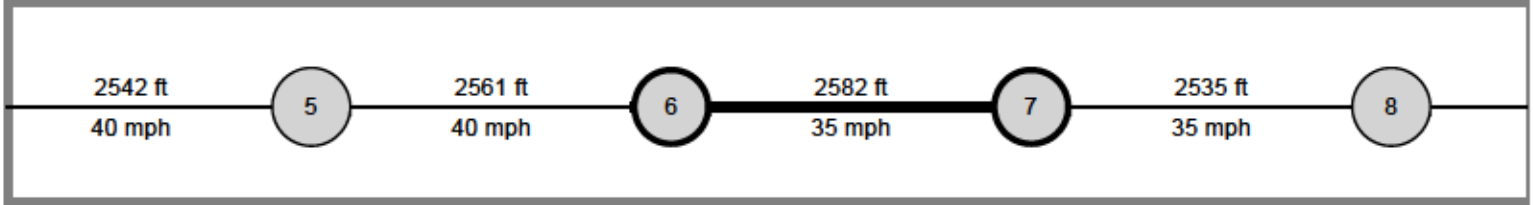
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	25 1/2 Road & Patterson	1st Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 1/2 Rd - 26 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
6	35	40	2	2	2582	2582	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
6	Bay/Lane Spillback Time, h		never			never	
6	Shared Lane Spillback Time, h	never		never	never		never
6	Base Free-Flow Speed, mph	40.73			43.08		
6	Running Time, s	45.93			44.61		
6	Running Speed, mph	38.33			39.47		
6	Through Delay, s/veh	21.87			13.88		
6	Travel Time, s	67.80			58.49		
6	Travel Speed, mph	25.97			30.10		
6	Stop Rate, stops/veh	0.54			0.28		
6	Spatial Stop Rate, stops/mi	1.10			0.58		
6	Through vol/cap Ratio	0.61			0.83		
6	Percent of Base FFS	63.75			69.87		
6	Level of Service	C			B		
6	Auto Traveler Perception Score	2.30			2.23		
Multimodal Results (Segment)							
6	Pedestrian Segment LOS Score / LOS	3.24		C	3.40		C
6	Bicycle Segment LOS Score / LOS	2.80		C	2.96		C
6	Transit Segment LOS Score / LOS	1.26		A	1.10		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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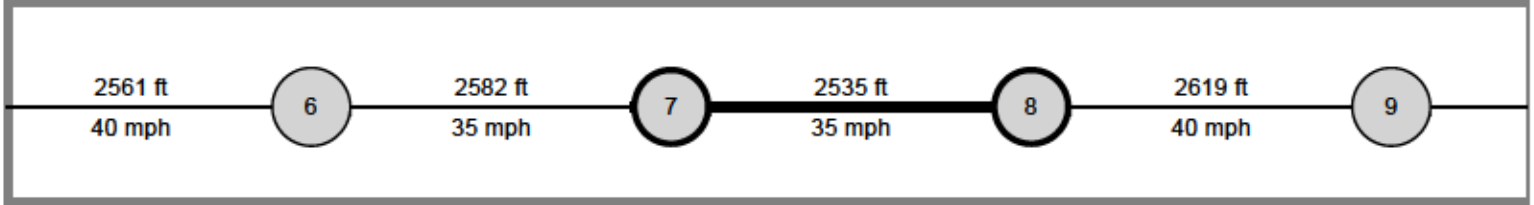
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	1st Street & Patterson	7th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 Rd - 26 1/2)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
7	35	40	2	2	2535	2535	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
7	Bay/Lane Spillback Time, h	never	never		never	1.92	never
7	Shared Lane Spillback Time, h	never		never	never		never
7	Base Free-Flow Speed, mph	39.80			42.15		
7	Running Time, s	46.36			44.79		
7	Running Speed, mph	37.28			38.59		
7	Through Delay, s/veh	28.78			83.23		
7	Travel Time, s	75.15			128.02		
7	Travel Speed, mph	23.00			13.50		
7	Stop Rate, stops/veh	0.67			1.27		
7	Spatial Stop Rate, stops/mi	1.40			2.64		
7	Through vol/cap Ratio	0.73			1.09		
7	Percent of Base FFS	57.78			32.03		
7	Level of Service	C			F		
7	Auto Traveler Perception Score	2.35			2.55		
Multimodal Results (Segment)							
7	Pedestrian Segment LOS Score / LOS	3.10		C	3.42		C
7	Bicycle Segment LOS Score / LOS	2.80		C	2.97		C
7	Transit Segment LOS Score / LOS	1.51		A	2.56		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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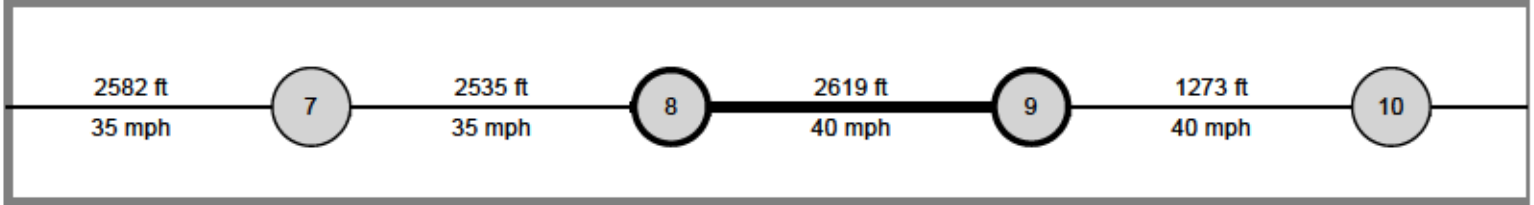
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	7th Street & Patterson	12th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 1/2 Rd to 12th St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
8	40	35	2	2	2619	2619	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
8	Bay/Lane Spillback Time, h	never	never	never	never	1.03	never
8	Shared Lane Spillback Time, h	never		never	never		never
8	Base Free-Flow Speed, mph	42.37			40.02		
8	Running Time, s	45.32			48.68		
8	Running Speed, mph	39.40			36.68		
8	Through Delay, s/veh	47.70			112.15		
8	Travel Time, s	93.02			160.83		
8	Travel Speed, mph	19.20			11.10		
8	Stop Rate, stops/veh	0.90			1.30		
8	Spatial Stop Rate, stops/mi	1.82			2.61		
8	Through vol/cap Ratio	0.96			1.19		
8	Percent of Base FFS	45.30			27.74		
8	Level of Service	D			F		
8	Auto Traveler Perception Score	2.42			2.55		
Multimodal Results (Segment)							
8	Pedestrian Segment LOS Score / LOS	3.11		C	3.52		D
8	Bicycle Segment LOS Score / LOS	2.85		C	2.97		C
8	Transit Segment LOS Score / LOS	1.89		A	2.86		C

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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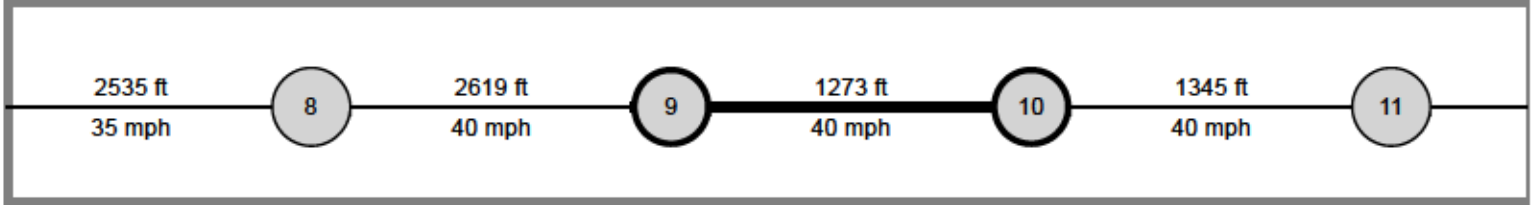
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	12th Street & Patterson	Patterson Rd & 15th St		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (12th St - 27 1/4 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
9	40	35	2	2	1273	1273	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
9	Bay/Lane Spillback Time, h				never	0.35	never
9	Shared Lane Spillback Time, h				never		never
9	Base Free-Flow Speed, mph	42.29			39.94		
9	Running Time, s	23.94			26.20		
9	Running Speed, mph	36.26			33.13		
9	Through Delay, s/veh	0.46			140.13		
9	Travel Time, s	24.40			166.33		
9	Travel Speed, mph	35.57			5.22		
9	Stop Rate, stops/veh	0.01			1.73		
9	Spatial Stop Rate, stops/mi	0.06			7.16		
9	Through vol/cap Ratio	0.51			1.23		
9	Percent of Base FFS	84.10			13.06		
9	Level of Service	A			F		
9	Auto Traveler Perception Score	2.15			3.38		
Multimodal Results (Segment)							
9	Pedestrian Segment LOS Score / LOS	3.33		C	4.47		E
9	Bicycle Segment LOS Score / LOS	2.78		C	3.05		C
9	Transit Segment LOS Score / LOS	0.71		A	3.80		D

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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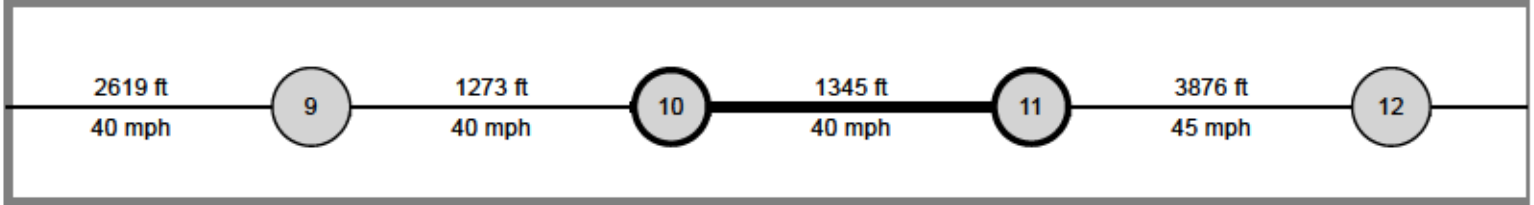
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	Patterson Rd & 15th St	27 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
10	40	40	2	2	1345	1345	50	50	0	0	70	70	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
10	Bay/Lane Spillback Time, h		never				
10	Shared Lane Spillback Time, h	never		never			
10	Base Free-Flow Speed, mph	44.07			44.07		
10	Running Time, s	24.45			25.16		
10	Running Speed, mph	37.50			36.45		
10	Through Delay, s/veh	16.55			6.64		
10	Travel Time, s	41.00			31.80		
10	Travel Speed, mph	22.37			28.83		
10	Stop Rate, stops/veh	0.46			0.19		
10	Spatial Stop Rate, stops/mi	1.79			0.74		
10	Through vol/cap Ratio	0.63			0.74		
10	Percent of Base FFS	50.75			65.43		
10	Level of Service	C			C		
10	Auto Traveler Perception Score	2.64			2.25		
Multimodal Results (Segment)							
10	Pedestrian Segment LOS Score / LOS	3.97		D	4.79		E
10	Bicycle Segment LOS Score / LOS	2.96		C	3.01		C
10	Transit Segment LOS Score / LOS	1.63		A	1.25		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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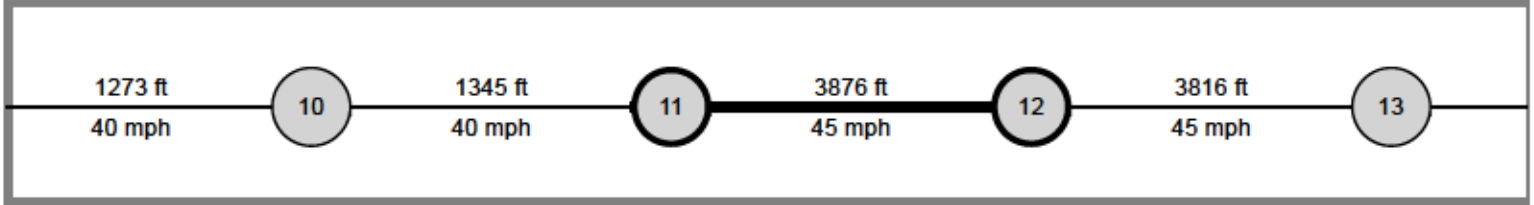
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	27 1/2 Road & Patterson	28 1/4 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (27 1/4 Rd - 27 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
11	45	40	2	2	3876	3876	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement		2	12	1	6	
11	Bay/Lane Spillback Time, h	never	never			never	
11	Shared Lane Spillback Time, h	never		never	never		
11	Base Free-Flow Speed, mph	45.84			43.49		
11	Running Time, s	60.70			64.97		
11	Running Speed, mph	43.53			40.68		
11	Through Delay, s/veh	35.63			5.78		
11	Travel Time, s	96.33			70.75		
11	Travel Speed, mph	27.43			37.36		
11	Stop Rate, stops/veh	0.75			0.18		
11	Spatial Stop Rate, stops/mi	1.02			0.24		
11	Through vol/cap Ratio	0.90			0.65		
11	Percent of Base FFS	59.84			85.89		
11	Level of Service	C			A		
11	Auto Traveler Perception Score	2.40			2.18		
Multimodal Results (Segment)							
11	Pedestrian Segment LOS Score / LOS	3.97		D	3.87		D
11	Bicycle Segment LOS Score / LOS	2.91		C	3.04		C
11	Transit Segment LOS Score / LOS	1.22		A	0.68		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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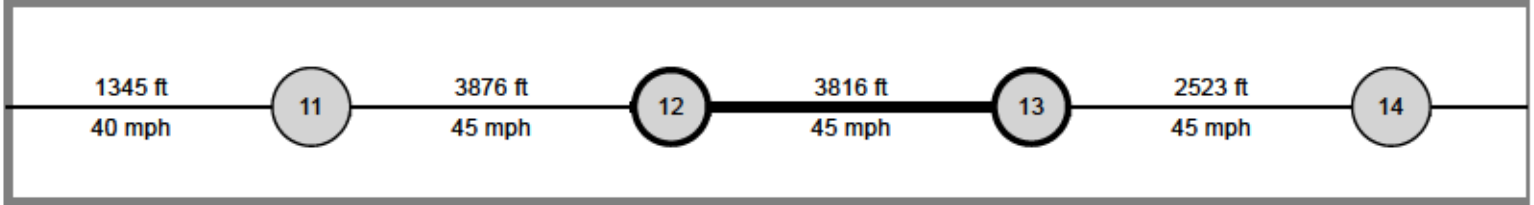
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	28 1/4 Road & Patterson	29 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (28 1/4 Rd - 29 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12	45	40	2	2	3816	3816	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
12	Bay/Lane Spillback Time, h	never	never	never		never	never
12	Shared Lane Spillback Time, h	never		never	never		never
12	Base Free-Flow Speed, mph	44.91			42.56		
12	Running Time, s	60.34			65.36		
12	Running Speed, mph	43.12			39.81		
12	Through Delay, s/veh	45.20			33.90		
12	Travel Time, s	105.54			99.26		
12	Travel Speed, mph	24.65			26.21		
12	Stop Rate, stops/veh	0.92			0.85		
12	Spatial Stop Rate, stops/mi	1.28			1.17		
12	Through vol/cap Ratio	0.95			0.87		
12	Percent of Base FFS	54.90			61.59		
12	Level of Service	C			C		
12	Auto Traveler Perception Score	2.33			2.32		
Multimodal Results (Segment)							
12	Pedestrian Segment LOS Score / LOS	3.62		D	3.76		D
12	Bicycle Segment LOS Score / LOS	2.91		C	3.02		C
12	Transit Segment LOS Score / LOS	1.45		A	1.38		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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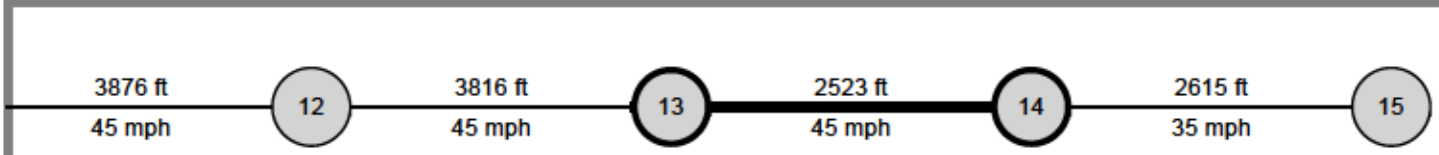
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	29 Road & Patterson	29 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 Rd - 29 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
13	45	45	2	2	2523	2523	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
13	Bay/Lane Spillback Time, h	never	never	never	never	never	never
13	Shared Lane Spillback Time, h	never		never	never		never
13	Base Free-Flow Speed, mph	43.83			43.83		
13	Running Time, s	40.55			40.76		
13	Running Speed, mph	42.43			42.20		
13	Through Delay, s/veh	33.55			42.27		
13	Travel Time, s	74.10			83.03		
13	Travel Speed, mph	23.21			20.72		
13	Stop Rate, stops/veh	0.78			0.78		
13	Spatial Stop Rate, stops/mi	1.63			1.63		
13	Through vol/cap Ratio	0.90			0.99		
13	Percent of Base FFS	52.97			47.27		
13	Level of Service	C			D		
13	Auto Traveler Perception Score	2.39			2.39		
Multimodal Results (Segment)							
13	Pedestrian Segment LOS Score / LOS	3.65		D	3.62		D
13	Bicycle Segment LOS Score / LOS	2.93		C	3.02		C
13	Transit Segment LOS Score / LOS	1.60		A	1.84		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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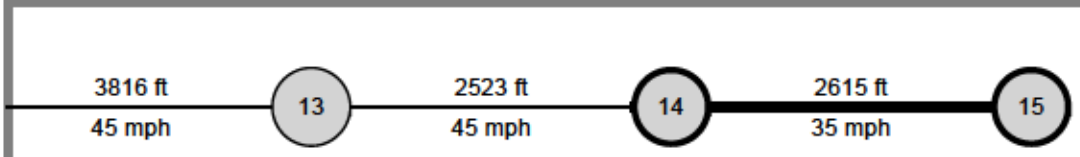
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 NoBuild PM Optimized Tim	Analysis Year	2045	System Cycle Length, s	100
Intersections	29 1/2 Road & Patterson	30 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 1/2 Rd - 30 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
14	35	45	2	2	2615	2615	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
14	Bay/Lane Spillback Time, h				never	2.24	never
14	Shared Lane Spillback Time, h				never		never
14	Base Free-Flow Speed, mph	40.82			45.52		
14	Running Time, s	47.02			41.94		
14	Running Speed, mph	37.92			42.52		
14	Through Delay, s/veh	8.94			77.51		
14	Travel Time, s	55.96			119.44		
14	Travel Speed, mph	31.86			14.93		
14	Stop Rate, stops/veh	0.24			1.23		
14	Spatial Stop Rate, stops/mi	0.49			2.49		
14	Through vol/cap Ratio	0.63			1.08		
14	Percent of Base FFS	78.05			32.79		
14	Level of Service	B			F		
14	Auto Traveler Perception Score	2.21			2.53		
Multimodal Results (Segment)							
14	Pedestrian Segment LOS Score / LOS	3.55		D	4.09		D
14	Bicycle Segment LOS Score / LOS	2.85		C	3.00		C
14	Transit Segment LOS Score / LOS	0.92		A	2.39		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	960.05	1381.81
Facility Travel Speed, mph	22.36	15.53
Facility Base Free Flow Speed, mph	42.73	42.46
Facility Percent of Base FFS	52.33	36.59
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.37	2.44

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.43	C	3.75	D
Bicycle Facility LOS Score / LOS	2.83	C	2.97	C
Transit Facility LOS Score / LOS	1.47	A	1.97	A

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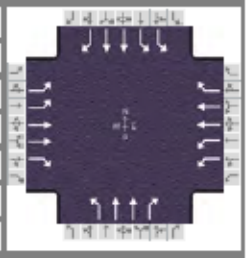
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.91
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	24 Road & Patterson	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	216	235	72	125	217	278	87	934	412	412	633	71

Signal Information			
Cycle, s	100.0	Reference Phase	6
Offset, s	85	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.8	1.9	20.0	8.4	3.0	36.9	
Yellow	3.5	0.0	4.0	3.5	3.5	4.0	
Red	0.5	0.0	1.0	0.5	0.5	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	2.0	3.0	1.1	3.0	2.0	3.0
Phase Duration, s	13.7	26.9	11.8	25.0	12.4	41.9	19.4	48.9
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	11.7		5.8		5.1	28.4	14.7	15.9
Green Extension Time (g_e), s	0.0	0.0	0.4	0.0	0.5	8.5	0.6	19.8
Phase Call Probability	1.00		0.98		0.93	1.00	1.00	1.00
Max Out Probability	1.00		0.17		0.00	0.89	1.00	0.56

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	539	587	180	137	238	305	96	1026	453	453	696	78
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1675	1752		1716	1738		1810	1738	1585	1730	1752	1518
Queue Service Time (g_s), s	9.7	15.7		3.8	5.9		3.1	26.4	22.1	12.7	13.9	3.0
Cycle Queue Clearance Time (g_c), s	9.7	15.7		3.8	5.9		3.1	26.4	22.1	12.7	13.9	3.0
Green Ratio (*g/C*)	0.30	0.22		0.08	0.20		0.45	0.37	0.45	0.15	0.44	0.44
Capacity (*c*), veh/h	705	767		269	695		422	1283	709	532	1539	667
Volume-to-Capacity Ratio (*X*)	0.765	0.765		0.512	0.343		0.227	0.800	0.639	0.851	0.452	0.117
Back of Queue (*Q*), ft/ln (90 th percentile)	89.8	243.7		68.1	103		50	352.9	264.3	206.6	189.3	42.9
Back of Queue (*Q*), veh/ln (90 th percentile)	3.9	10.7		3.0	4.5		2.3	15.4	11.8	9.2	8.3	1.8
Queue Storage Ratio (*RQ*) (90 th percentile)	0.50	0.00		0.31	0.00		0.38	0.00	1.50	1.56	0.00	0.66
Uniform Delay (d_1), s/veh	31.4	36.4		44.3	34.4		16.3	28.2	21.4	41.2	19.6	16.6
Incremental Delay (d_2), s/veh	5.4	7.2		1.9	1.2		0.4	3.6	2.1	11.3	0.3	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	36.8	43.6	0.0	46.2	35.6	0.0	16.7	31.9	23.5	52.4	19.9	16.7
Level of Service (LOS)	D	D	A	D	D	A	B	C	C	D	B	B
Approach Delay, s/veh / LOS	34.8	C		21.8	C		28.5	C		31.7	C	
Intersection Delay, s/veh / LOS	30.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.45	B	2.59	C	2.57	C	2.56	C
Bicycle LOS Score / LOS	0.96	A	1.05	A	1.79	B	1.50	A

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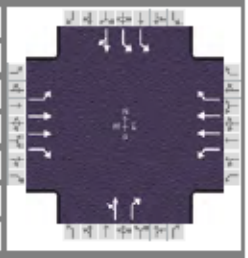
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Market Street/Mall Acce…	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	71	848	83	25	580	94	30	12	19	87	17	44

Signal Information					EB			WB			NB		
Cycle, s	100.0	Reference Phase	2										
Offset, s	1	Reference Point	End	Green	1.7	3.0		65.6	6.3	4.4	0.0		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0		4.0	4.0	4.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.0		1.0	1.0	1.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		11.0		10.0
Phase Duration, s	8.7	73.6	5.7	70.6		9.4		11.3
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time (g_s), s	3.8		2.3			4.7		6.3
Green Extension Time (g_e), s	0.2	0.0	0.0	0.0		0.0		0.1
Phase Call Probability	0.94		0.34			0.87		0.99
Max Out Probability	0.00		0.00			0.03		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	99	1178	115	15	342	55		51	23	105	73	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1766	1610	1810	1766	1522		1834	1610	1702	1682	
Queue Service Time (g_s), s	1.8	8.1	0.9	0.3	4.4	1.4		2.7	1.4	3.0	4.3	
Cycle Queue Clearance Time (g_c), s	1.8	8.1	0.9	0.3	4.4	1.4		2.7	1.4	3.0	4.3	
Green Ratio (*g/C*)	0.71	0.69	0.69	0.67	0.66	0.66		0.04	0.04	0.06	0.06	
Capacity (*c*), veh/h	763	2425	1105	385	2319	999		80	70	216	107	
Volume-to-Capacity Ratio (*X*)	0.129	0.486	0.104	0.038	0.147	0.055		0.634	0.327	0.486	0.690	
Back of Queue (*Q*), ft/ln (90 th percentile)	20.9	79.6	10.9	3.6	62.4	18.5		52	22.7	52.4	74.5	
Back of Queue (*Q*), veh/ln (90 th percentile)	0.9	3.5	0.5	0.2	2.8	0.8		2.4	1.0	2.3	3.4	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.14	0.00	0.09	0.03	0.00	0.17		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	4.4	2.8	1.7	5.7	8.0	6.9		47.0	46.4	45.3	45.9	
Incremental Delay (d_2), s/veh	0.0	0.6	0.2	0.0	0.1	0.1		3.1	1.0	0.6	2.9	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	4.5	3.4	1.9	5.8	8.1	7.0		50.1	47.4	45.9	48.8	
Level of Service (LOS)	A	A	A	A	A	A		D	D	D	D	
Approach Delay, s/veh / LOS	3.3	A		7.9	A		49.3	D		47.1	D	
Intersection Delay, s/veh / LOS	9.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.86	B	2.06	B	2.47	B	2.46	B
Bicycle LOS Score / LOS	1.48	A	1.18	A	0.61	A	0.78	A

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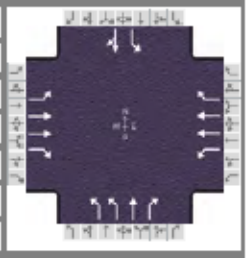
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.84
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Home Depot Access/Me...	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	39	756	189	87	571	13	70	21	47	25	30	28

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	37	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	3.9	0.3	65.3	5.6	5.9	0.0		
Yellow	3.5	0.0	4.0	4.0	4.0	0.0		
Red	0.5	0.0	1.0	1.0	1.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		9.0		10.0
Phase Duration, s	8.2	70.6	7.9	70.3		10.9		10.6
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0		5.4		5.4
Queue Clearance Time (g_s), s	3.3		3.0			5.2		5.9
Green Extension Time (g_e), s	0.3	0.0	0.2	0.0		0.7		0.1
Phase Call Probability	0.85		0.79			0.99		0.94
Max Out Probability	0.00		0.00			0.01		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	67	1307	327	56	367	8	83	25	56	30	69	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1766	1598	1810	1752	1610	1743	1900	1610	1767	1748	
Queue Service Time (g_s), s	1.3	9.2	2.0	1.0	2.8	0.1	2.3	1.3	3.2	1.6	3.9	
Cycle Queue Clearance Time (g_c), s	1.3	9.2	2.0	1.0	2.8	0.1	2.3	1.3	3.2	1.6	3.9	
Green Ratio (*g/C*)	0.69	0.66	0.66	0.69	0.65	0.65	0.06	0.06	0.10	0.06	0.06	
Capacity (*c*), veh/h	749	2316	1047	313	2287	1051	207	113	159	98	97	
Volume-to-Capacity Ratio (*X*)	0.090	0.564	0.312	0.179	0.160	0.008	0.403	0.222	0.352	0.302	0.709	
Back of Queue (*Q*), ft/ln (90 th percentile)	16.9	84.5	25.6	13.7	36.8	1.9	42	25.3	54.6	31.6	80.6	
Back of Queue (*Q*), veh/ln (90 th percentile)	0.7	3.7	1.2	0.6	1.6	0.1	1.9	1.1	2.5	1.4	3.7	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.13	0.00	0.13	0.12	0.00	0.00	0.24	0.00	0.25	0.24	0.00	
Uniform Delay (d_1), s/veh	5.1	2.8	1.2	5.7	4.3	4.8	45.3	44.8	42.1	45.3	46.4	
Incremental Delay (d_2), s/veh	0.1	0.9	0.7	0.4	0.1	0.0	1.8	1.4	1.9	2.4	12.6	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	5.1	3.7	2.0	6.0	4.5	4.8	47.1	46.2	44.0	47.8	59.0	
Level of Service (LOS)	A	A	A	A	A	A	D	D	D	D	E	
Approach Delay, s/veh / LOS	3.4	A		4.7	A		45.9	D		55.6	E	
Intersection Delay, s/veh / LOS	8.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.23	B	1.87	B	2.46	B	2.47	B
Bicycle LOS Score / LOS	1.45	A	1.15	A	0.76	A	0.65	A

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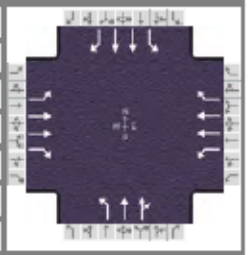
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.92
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	24 1/2 Rd & Patterson	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	724	70	147	442	121	144	138	62	211	307	83

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	11	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.4	0.4	50.9	7.0	2.5	12.3						
Yellow	3.5	0.0	4.0	3.5	3.5	4.0						
Red	0.5	0.0	1.5	0.5	0.5	1.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	8.4	56.4	8.8	56.8	11.0	17.3	17.5	23.8
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	4.1		4.6		9.0	8.0	12.8	10.6
Green Extension Time (g_e), s	0.4	0.0	0.5	0.0	0.0	4.3	0.8	4.4
Phase Call Probability	0.88		0.94		0.99	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	0.16	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	78	1404	136	100	301	82	157	111	106	229	334	90
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1697	1781	1610	1810	1766	1598	1767	1856	1665	1767	1738	1397
Queue Service Time (g_s), s	2.1	23.7	1.7	2.6	4.3	3.0	7.0	5.6	6.0	10.8	8.6	5.6
Cycle Queue Clearance Time (g_c), s	2.1	23.7	1.7	2.6	4.3	3.0	7.0	5.6	6.0	10.8	8.6	5.6
Green Ratio (*g/C*)	0.55	0.51	0.51	0.56	0.51	0.51	0.19	0.12	0.12	0.28	0.19	0.19
Capacity (*c*), veh/h	575	1813	820	251	1811	819	274	228	204	384	654	263
Volume-to-Capacity Ratio (*X*)	0.135	0.774	0.166	0.398	0.166	0.101	0.571	0.488	0.520	0.597	0.510	0.343
Back of Queue (*Q*), ft/ln (90 th percentile)	33.1	187.8	23	41.7	67.6	44.7	135.1	106.9	102.8	167.9	140.1	88.1
Back of Queue (*Q*), veh/ln (90 th percentile)	1.4	8.4	1.0	1.9	3.0	2.0	6.0	4.7	4.6	7.4	6.1	3.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.25	0.00	0.10	0.32	0.00	0.18	1.02	0.00	0.00	1.26	0.00	0.00
Uniform Delay (d_1), s/veh	10.8	9.3	4.3	14.2	12.3	14.6	36.3	40.9	41.1	30.3	36.5	35.2
Incremental Delay (d_2), s/veh	0.1	2.9	0.4	1.3	0.2	0.2	3.5	2.3	2.9	2.1	0.9	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	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	10.9	12.2	4.7	15.6	12.4	14.8	39.8	43.2	44.0	32.5	37.3	36.3
Level of Service (LOS)	B	B	A	B	B	B	D	D	D	C	D	D
Approach Delay, s/veh / LOS	11.5	B		13.5	B		42.0	D		35.5	D	
Intersection Delay, s/veh / LOS	20.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.41	B	2.46	B	2.45	B
Bicycle LOS Score / LOS	1.24	A	1.12	A	0.80	A	1.03	A

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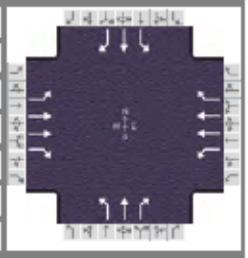
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.87
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	25 Road & Patterson	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	83	774	55	206	687	109	125	261	120	190	305	41

Signal Information					EB			WB			NB			SB		
Cycle, s	100.0	Reference Phase	2													
Offset, s	35	Reference Point	Begin	Green	6.0	1.0		36.0	6.0		24.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	3.5		4.5	3.5		4.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.5		1.5	0.5		1.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	15.0	47.0	10.0	42.0	10.0	29.0	14.0	33.0
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	6.3		5.9		8.0	17.1	10.9	19.3
Green Extension Time (g_e), s	0.2	0.0	0.0	0.0	0.0	2.7	0.0	3.2
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.76	1.00	0.58

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	135	1261	90	113	376	60	144	300	121	218	351	47
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1781	1585	1795	1795	1585	1753	1811	1610	1795	1811	1585
Queue Service Time (g_s), s	4.3	29.1	1.6	3.9	9.1	2.9	6.0	15.1	5.7	8.9	17.3	2.2
Cycle Queue Clearance Time (g_c), s	4.3	29.1	1.6	3.9	9.1	2.9	6.0	15.1	5.7	8.9	17.3	2.2
Green Ratio (*g/C*)	0.49	0.41	0.41	0.42	0.36	0.36	0.30	0.24	0.30	0.36	0.28	0.28
Capacity (*c*), veh/h	517	1460	650	220	1292	571	262	435	483	338	507	444
Volume-to-Capacity Ratio (*X*)	0.262	0.864	0.138	0.512	0.291	0.104	0.549	0.690	0.250	0.646	0.691	0.106
Back of Queue (*Q*), ft/ln (90 th percentile)	71.3	284.2	23.1	71	145	65.6	122.7	254.4	90.9	159.9	279.4	35.4
Back of Queue (*Q*), veh/ln (90 th percentile)	3.1	12.7	1.0	3.2	6.5	2.9	5.4	11.0	4.1	7.2	12.1	1.6
Queue Storage Ratio (*RQ*) (90 th percentile)	0.40	0.00	0.14	0.40	0.00	0.50	0.55	0.00	0.52	1.21	0.00	0.27
Uniform Delay (d_1), s/veh	14.8	17.0	7.6	20.0	30.3	24.7	28.6	34.6	26.5	25.2	32.1	26.7
Incremental Delay (d_2), s/veh	1.1	6.6	0.4	7.0	0.5	0.3	8.0	8.7	1.2	9.2	7.5	0.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	16.0	23.6	8.1	27.0	30.8	25.0	36.6	43.3	27.7	34.4	39.7	27.2
Level of Service (LOS)	B	C	A	C	C	C	D	D	C	C	D	C
Approach Delay, s/veh / LOS	22.0	C		29.4	C		38.3	D		36.8	D	
Intersection Delay, s/veh / LOS	28.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	2.11	B	2.45	B	2.44	B
Bicycle LOS Score / LOS	1.35	A	1.44	A	1.42	A	1.50	B

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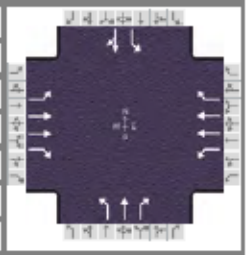
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.82
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	25 1/2 Road & Patterson	File Name	2045 ACP AM.xus		
Project Description					



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	934	51	137	986	90	73	89	98	212	149	118

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	89	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.2	1.4		45.1	6.0		9.0	10.2				
Yellow	3.5	0.0		4.5	3.5		3.5	4.0				
Red	0.5	0.0		1.5	0.5		0.5	1.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	9.2	51.1	10.6	52.6	10.0	15.2	23.0	28.2
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.3	5.2	5.3
Queue Clearance Time (g_s), s	3.0		3.5		6.4	9.3	14.5	19.9
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0	0.0	0.9	0.5	1.5
Phase Call Probability	0.65		0.83		1.00	1.00	1.00	1.00
Max Out Probability	0.07		0.01		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	38	1108	60	64	460	42	89	109	120	259	326	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1781	1598	1781	1781	1572	1767	1885	1585	1682	1719	
Queue Service Time (g_s), s	1.0	21.0	1.4	1.5	7.5	1.4	4.4	5.5	7.3	12.5	17.9	
Cycle Queue Clearance Time (g_c), s	1.0	21.0	1.4	1.5	7.5	1.4	4.4	5.5	7.3	12.5	17.9	
Green Ratio (*g/C*)	0.50	0.45	0.45	0.52	0.47	0.47	0.16	0.10	0.10	0.31	0.23	
Capacity (*c*), veh/h	504	1608	721	306	1659	732	212	192	162	443	399	
Volume-to-Capacity Ratio (*X*)	0.075	0.689	0.084	0.209	0.278	0.057	0.420	0.564	0.739	0.584	0.816	
Back of Queue (*Q*), ft/ln (90 th percentile)	15.6	217.5	20.4	20	108.4	39.5	90.8	106.8	129.9	202.3	278.8	
Back of Queue (*Q*), veh/ln (90 th percentile)	0.7	9.7	0.9	0.9	4.8	1.8	4.0	4.8	5.8	8.6	12.4	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.12	0.00	0.16	0.15	0.00	0.30	0.82	0.00	1.47	1.50	0.00	
Uniform Delay (d_1), s/veh	12.3	14.9	9.9	10.2	15.2	14.2	37.2	42.8	43.6	28.3	36.4	
Incremental Delay (d_2), s/veh	0.1	2.2	0.2	0.4	0.3	0.1	6.0	3.7	13.7	5.5	11.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	12.4	17.1	10.1	10.6	15.5	14.3	43.2	46.4	57.3	33.9	48.1	
Level of Service (LOS)	B	B	B	B	B	B	D	D	E	C	D	
Approach Delay, s/veh / LOS	16.6	B		14.9	B		49.6	D		41.8	D	
Intersection Delay, s/veh / LOS	25.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	1.90	B	2.46	B	2.45	B
Bicycle LOS Score / LOS	1.51	B	1.71	B	1.01	A	1.45	A

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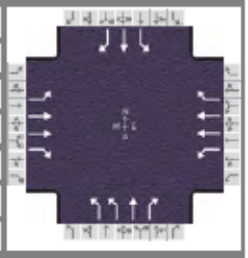
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.77
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	1st Street & Patterson	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	54	966	180	173	1046	40	114	213	143	178	475	67

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	47	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.9	2.5		29.3	6.3	3.5		34.9				
Yellow	3.5	0.0		3.0	3.5	0.0		4.0				
Red	0.5	0.0		2.5	0.5	0.0		1.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	2.0	3.0	1.1	3.0
Phase Duration, s	8.9	34.8	11.4	37.3	10.3	39.9	13.9	43.4
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	3.7		5.4		6.2	13.4	9.9	32.0
Green Extension Time (g_e), s	0.1	0.0	0.4	0.0	0.3	8.7	0.0	6.5
Phase Call Probability	0.71		0.93		0.98	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.11	1.00	0.43

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	44	789	147	95	576	22	148	277	186	231	617	87
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1766	1598	1781	1781	1572	1743	1856	1598	1810	1885	1610
Queue Service Time (g_s), s	1.7	18.5	3.6	3.4	12.9	0.8	4.2	11.4	7.6	7.9	30.0	3.2
Cycle Queue Clearance Time (g_c), s	1.7	18.5	3.6	3.4	12.9	0.8	4.2	11.4	7.6	7.9	30.0	3.2
Green Ratio (*g/C*)	0.34	0.29	0.36	0.37	0.32	0.32	0.06	0.35	0.42	0.46	0.38	0.43
Capacity (*c*), veh/h	302	1036	570	269	1132	500	221	647	676	472	724	698
Volume-to-Capacity Ratio (*X*)	0.146	0.762	0.258	0.355	0.509	0.044	0.669	0.427	0.275	0.489	0.852	0.125
Back of Queue (*Q*), ft/ln (90 th percentile)	28.8	213.8	47.2	50.7	172.4	11.9	76.7	176.8	108.7	122.8	425.8	46.7
Back of Queue (*Q*), veh/ln (90 th percentile)	1.3	9.5	2.1	2.3	7.7	0.5	3.5	7.8	4.9	5.6	19.2	2.1
Queue Storage Ratio (*RQ*) (90 th percentile)	0.22	0.00	0.36	0.46	0.00	0.11	0.58	0.00	0.82	1.12	0.00	0.00
Uniform Delay (d_1), s/veh	24.1	23.9	10.6	19.4	26.8	18.6	45.8	24.9	18.8	17.6	28.2	17.0
Incremental Delay (d_2), s/veh	0.3	4.5	0.9	0.7	1.0	0.1	4.9	0.6	0.3	1.1	7.5	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	24.3	28.3	11.5	20.1	27.8	18.7	50.7	25.5	19.1	18.8	35.7	17.1
Level of Service (LOS)	C	C	B	C	C	B	D	C	B	B	D	B
Approach Delay, s/veh / LOS	25.6	C		26.4	C		29.7	C		29.8	C	
Intersection Delay, s/veh / LOS	27.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.29	B	2.11	B	2.43	B	2.43	B
Bicycle LOS Score / LOS	1.77	B	1.84	B	1.49	A	2.03	B

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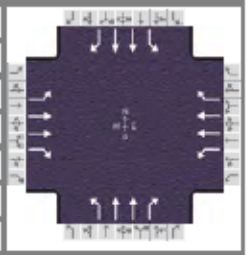
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.80
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	7th Street & Patterson	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	69	716	189	238	1007	106	80	301	147	168	654	204

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	11	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.2	3.0	36.4	6.0	0.9	27.6	
Yellow	3.5	0.0	4.0	3.5	3.5	4.0	
Red	0.5	0.0	1.0	0.5	0.5	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	8.2	41.4	11.2	44.4	10.0	32.6	14.8	37.4
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	5.1		6.9		6.0	9.7	9.9	21.7
Green Extension Time (g_e), s	0.2	0.0	0.4	0.0	0.4	12.7	1.0	10.7
Phase Call Probability	0.79		0.98		0.94	1.00	1.00	1.00
Max Out Probability	0.00		0.12		0.00	0.32	0.00	0.47

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	57	587	134	142	602	60	100	376	168	210	818	255
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1766	1373	1810	1781	1543	1767	1795	1591	1795	1809	1586
Queue Service Time (g_s), s	3.1	13.4	7.9	4.9	11.0	2.4	4.0	7.7	7.0	7.9	19.7	12.1
Cycle Queue Clearance Time (g_c), s	3.1	13.4	7.9	4.9	11.0	2.4	4.0	7.7	7.0	7.9	19.7	12.1
Green Ratio (*g/C*)	0.04	0.36	0.42	0.45	0.39	0.39	0.34	0.28	0.35	0.40	0.32	0.37
Capacity (*c*), veh/h	75	1287	594	373	1404	608	233	989	553	439	1173	581
Volume-to-Capacity Ratio (*X*)	0.749	0.456	0.225	0.382	0.429	0.099	0.429	0.380	0.303	0.478	0.697	0.439
Back of Queue (*Q*), ft/ln (90 th percentile)	65.5	195.6	150.6	57.2	144.9	35.8	70.6	119.4	99	125.5	268.6	160.8
Back of Queue (*Q*), veh/ln (90 th percentile)	3.0	8.7	6.7	2.6	6.5	1.6	3.1	5.4	4.5	5.7	12.2	7.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.37	0.00	0.97	0.43	0.00	0.23	0.32	0.00	0.56	1.14	0.00	0.00
Uniform Delay (d_1), s/veh	45.8	26.9	25.5	13.3	18.4	18.2	25.2	25.4	20.6	20.7	29.5	23.9
Incremental Delay (d_2), s/veh	15.6	0.9	0.7	0.7	0.7	0.2	1.8	0.3	0.4	1.2	1.3	0.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	61.4	27.8	26.3	14.0	19.1	18.5	27.0	25.7	21.0	21.9	30.8	24.7
Level of Service (LOS)	E	C	C	B	B	B	C	C	C	C	C	C
Approach Delay, s/veh / LOS	30.0	C		18.1	B		24.7	C		28.1	C	
Intersection Delay, s/veh / LOS	25.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.45	B	2.43	B	2.45	B	2.47	B
Bicycle LOS Score / LOS	1.47	A	1.88	B	1.02	A	1.55	B

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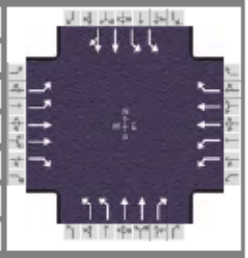
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.80
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	12th Street & Patterson	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	135	571	179	382	1138	114	224	501	122	96	570	107

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	19	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.0	26.5	7.0	39.0	0.0	0.0	
Yellow	3.5	4.0	3.5	4.0	0.0	0.0	
Red	0.5	1.5	0.5	1.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	13.0	32.0	13.0	32.0	11.0	44.0	11.0	44.0
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	4.4		6.5		6.8	15.0	3.9	20.5
Green Extension Time (g_e), s	0.2	0.0	0.3	0.0	0.0	11.8	0.1	10.2
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.37	1.00	0.50

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	127	537	168	224	667	67	280	626	153	120	435	411
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1730	1766	1603	1743	1795	1598	1730	1781	1572	1743	1870	1765
Queue Service Time (g_s), s	2.4	13.8	8.4	4.5	15.7	2.1	4.8	13.0	5.6	1.9	18.5	18.5
Cycle Queue Clearance Time (g_c), s	2.4	13.8	8.4	4.5	15.7	2.1	4.8	13.0	5.6	1.9	18.5	18.5
Green Ratio (*g/C*)	0.36	0.26	0.34	0.36	0.26	0.26	0.46	0.39	0.48	0.46	0.39	0.39
Capacity (*c*), veh/h	582	936	537	618	951	423	627	1389	755	723	729	688
Volume-to-Capacity Ratio (*X*)	0.218	0.573	0.313	0.362	0.701	0.158	0.447	0.451	0.202	0.166	0.597	0.597
Back of Queue (*Q*), ft/ln (90 th percentile)	40.3	198.5	145.2	79.4	202.2	32.5	80.5	188.9	82.6	31.3	275.4	263.6
Back of Queue (*Q*), veh/ln (90 th percentile)	1.8	8.8	6.6	3.6	9.1	1.5	3.6	8.4	3.7	1.4	12.3	11.8
Queue Storage Ratio (*RQ*) (90 th percentile)	0.23	0.00	1.00	0.30	0.00	0.24	0.36	0.00	0.37	0.24	0.00	0.00
Uniform Delay (d_1), s/veh	23.0	35.3	28.1	25.5	27.9	17.7	18.5	22.6	15.0	16.3	24.2	24.3
Incremental Delay (d_2), s/veh	0.5	1.6	0.9	1.4	3.6	0.7	2.3	1.1	0.6	0.5	3.6	3.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	23.5	36.9	29.0	26.8	31.5	18.3	20.8	23.6	15.6	16.8	27.8	28.1
Level of Service (LOS)	C	D	C	C	C	B	C	C	B	B	C	C
Approach Delay, s/veh / LOS	33.2	C		29.5	C		21.7	C		26.6	C	
Intersection Delay, s/veh / LOS	27.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.58	C	2.44	B	2.57	C	2.57	C
Bicycle LOS Score / LOS	1.40	A	2.17	B	1.36	A	1.28	A

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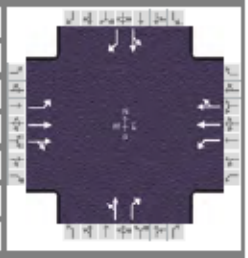
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Patterson Rd & 15th St	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	140	623	15	51	1800	194	12	3	20	12	3	61

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	9	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.2	2.8	75.4	6.6	0.0	0.0	
Yellow	4.0	0.0	4.0	4.0	0.0	0.0	
Red	0.0	0.0	0.0	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		7.0		7.0
Phase Duration, s	10.0	82.2	7.2	79.4		10.6		10.6
Change Period, ($Y+R_c$), s	4.0	4.0	4.0	4.0		4.0		4.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time (g_s), s	4.0		2.3			3.4		6.5
Green Extension Time (g_e), s	0.3	0.0	0.0	0.0		0.3		0.3
Phase Call Probability	0.99		0.53			0.98		0.98
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	178	408	405	27	536	518		18	24		18	73
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1856	1840	1781	1885	1820		1514	1585		1514	1585
Queue Service Time (g_s), s	2.0	3.6	3.7	0.3	3.3	2.9		0.0	1.4		0.0	4.5
Cycle Queue Clearance Time (g_c), s	2.0	3.6	3.7	0.3	3.3	2.9		1.0	1.4		1.0	4.5
Green Ratio (*g/C*)	0.82	0.78	0.78	0.79	0.75	0.75		0.07	0.07		0.07	0.07
Capacity (*c*), veh/h	564	1451	1439	616	1422	1373		165	105		165	105
Volume-to-Capacity Ratio (*X*)	0.316	0.281	0.281	0.044	0.377	0.377		0.109	0.229		0.109	0.699
Back of Queue (*Q*), ft/ln (90 th percentile)	13.3	36.1	35.9	3	33.5	29.8		17.1	23.1		17.1	75.1
Back of Queue (*Q*), veh/ln (90 th percentile)	0.6	1.6	1.6	0.1	1.5	1.4		0.8	1.0		0.8	3.4
Queue Storage Ratio (*RQ*) (90 th percentile)	0.17	0.00	0.00	0.03	0.00	0.00		0.00	0.52		0.00	1.70
Uniform Delay (d_1), s/veh	1.9	1.6	1.6	2.4	1.0	0.9		44.0	44.3		44.0	45.7
Incremental Delay (d_2), s/veh	0.1	0.5	0.5	0.0	0.6	0.6		0.1	0.4		0.1	3.1
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
Control Delay (*d*), s/veh	2.0	2.0	2.1	2.5	1.6	1.5		44.1	44.7		44.1	48.8
Level of Service (LOS)	A	A	A	A	A	A		D	D		D	D
Approach Delay, s/veh / LOS	2.0	A		1.6	A		44.4	D		47.9	D	
Intersection Delay, s/veh / LOS	4.5						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.83	B	1.84	B	2.31	B	2.31	B
Bicycle LOS Score / LOS	1.26	A	2.52	C	0.56	A	0.64	A

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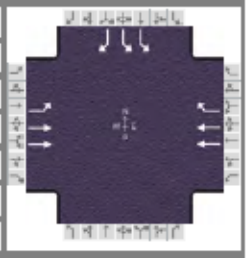
HCS7 Signalized Intersection Results Summary

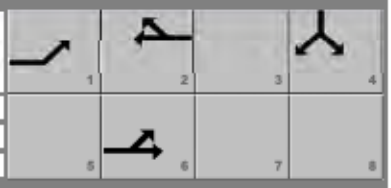
General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	27 1/2 Road & Patterson	File Name	2045 ACP AM.xus		
Project Description					



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	647			1589	304				395		214

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	88	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	11.0	43.0	31.0	0.0	0.0	0.0	
Yellow	3.5	4.5	4.0	0.0	0.0	0.0	
Red	0.5	1.5	1.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2				4
Case Number	1.0	4.0		7.3				9.0
Phase Duration, s	15.0	64.0		49.0				36.0
Change Period, ($Y+R_c$), s	4.0	6.0		6.0				5.0
Max Allow Headway (*MAH*), s	5.2	0.0		0.0				5.3
Queue Clearance Time (g_s), s	3.4							16.1
Green Extension Time (g_e), s	0.1	0.0		0.0				4.3
Phase Call Probability	1.00							1.00
Max Out Probability	0.12							0.18

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2	12				7		14
Adjusted Flow Rate (*v*), veh/h	64	515			872	167				476		258
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1795			1795	1610				1757		1522
Queue Service Time (g_s), s	1.4	5.1			17.3	5.7				10.8		14.1
Cycle Queue Clearance Time (g_c), s	1.4	5.1			17.3	5.7				10.8		14.1
Green Ratio (*g/C*)	0.56	0.58			0.43	0.43				0.31		0.31
Capacity (*c*), veh/h	402	2082			1543	692				1089		472
Volume-to-Capacity Ratio (*X*)	0.158	0.247			0.565	0.241				0.437		0.546
Back of Queue (*Q*), ft/ln (90 th percentile)	22.2	68.6			214.2	81				161.8		199.7
Back of Queue (*Q*), veh/ln (90 th percentile)	1.0	3.1			9.7	3.7				7.4		8.6
Queue Storage Ratio (*RQ*) (90 th percentile)	0.15	0.00			0.00	1.53				0.97		0.00
Uniform Delay (d_1), s/veh	9.8	6.9			19.2	15.0				27.5		28.7
Incremental Delay (d_2), s/veh	0.6	0.2			1.2	0.7				1.3		4.5
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0				0.0		0.0
Control Delay (*d*), s/veh	10.5	7.1			20.5	15.7				28.8		33.2
Level of Service (LOS)	B	A			C	B				C		C
Approach Delay, s/veh / LOS	7.5	A		19.7	B		0.0			30.3	C	
Intersection Delay, s/veh / LOS	20.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	0.69	A	2.10	B	2.32	B	2.32	B
Bicycle LOS Score / LOS	1.21	A	2.37	B				F

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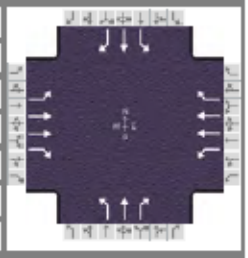
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.85
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	28 1/4 Road & Patterson	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	53	718	264	289	1672	73	290	31	81	80	31	32

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	95	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.0	10.0	30.0	10.0	17.0	0.0	
Yellow	3.5	4.0	4.5	3.5	4.0	0.0	
Red	0.5	0.0	1.5	0.5	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	2.0	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	10.0	36.0	24.0	50.0	18.0	26.0	14.0	22.0
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	3.1	0.0	3.2	5.3	5.2	5.3
Queue Clearance Time (g_s), s	3.2		9.1		16.0	5.7	6.0	4.0
Green Extension Time (g_e), s	0.0	0.0	0.2	0.0	0.0	0.9	0.1	0.9
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.00		1.00	0.01	1.00	0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	31	419	154	151	871	38	341	36	95	94	36	38
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795	1585	1795	1795	1610	1795	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	1.2	6.5	4.2	7.1	18.4	2.0	14.0	1.5	3.7	4.0	1.6	2.0
Cycle Queue Clearance Time (g_c), s	1.2	6.5	4.2	7.1	18.4	2.0	14.0	1.5	3.7	4.0	1.6	2.0
Green Ratio (*g/C*)	0.36	0.30	0.30	0.20	0.44	0.44	0.33	0.21	0.41	0.27	0.17	0.17
Capacity (*c*), veh/h	327	1077	476	359	1579	708	529	399	660	470	323	274
Volume-to-Capacity Ratio (*X*)	0.094	0.389	0.324	0.419	0.552	0.054	0.645	0.091	0.144	0.200	0.113	0.138
Back of Queue (*Q*), ft/ln (90 th percentile)	20.5	91	55.6	111.3	229.4	54.2	241	29.7	56.6	72.2	31.9	33.6
Back of Queue (*Q*), veh/ln (90 th percentile)	0.9	4.1	2.5	5.0	10.3	2.5	10.9	1.4	2.6	3.3	1.4	1.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.08	0.00	0.19	0.42	0.00	0.56	0.91	0.00	0.00	0.66	0.00	0.00
Uniform Delay (d_1), s/veh	22.3	16.8	12.6	33.5	21.8	24.5	28.2	31.8	18.5	28.1	35.1	35.3
Incremental Delay (d_2), s/veh	0.4	0.8	1.4	2.4	0.9	0.1	6.0	0.5	0.5	1.0	0.7	1.0
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	0.0
Control Delay (*d*), s/veh	22.7	17.6	13.9	35.8	22.7	24.6	34.2	32.3	19.0	29.1	35.8	36.3
Level of Service (LOS)	C	B	B	D	C	C	C	C	B	C	D	D
Approach Delay, s/veh / LOS	16.9	B		24.7	C		30.9	C		32.2	C	
Intersection Delay, s/veh / LOS	24.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	2.10	B	2.45	B	2.45	B
Bicycle LOS Score / LOS	1.49	A	2.46	B	1.27	A	0.77	A

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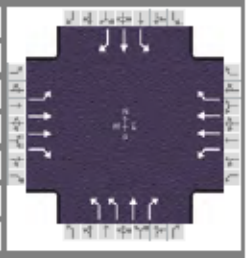
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	29 Road & Patterson	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	129	532	231	187	1461	98	194	173	49	73	271	360

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	50	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	8.5	36.5	8.5	4.0	22.0	0.0
Yellow	3.5	4.5	3.5	0.0	4.0	0.0
Red	1.0	2.0	1.0	0.0	1.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	13.0	43.0	13.0	43.0	13.0	27.0	17.0	31.0
Change Period, ($Y+R_c$), s	4.5	6.5	4.5	6.5	4.5	5.0	4.5	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	5.7		6.6		7.1	11.8	5.4	21.8
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0	0.1	2.9	0.1	1.6
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.31	0.06	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	111	457	198	134	1046	70	234	208	17	88	327	373
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1795	1572	1767	1781	1585	1716	1870	1610	1753	1870	1610
Queue Service Time (g_s), s	3.7	8.8	6.9	4.6	23.6	1.5	5.1	9.8	0.7	3.4	15.7	19.8
Cycle Queue Clearance Time (g_c), s	3.7	8.8	6.9	4.6	23.6	1.5	5.1	9.8	0.7	3.4	15.7	19.8
Green Ratio (*g/C*)	0.45	0.36	0.36	0.45	0.36	0.36	0.30	0.22	0.31	0.36	0.26	0.35
Capacity (*c*), veh/h	282	1310	574	460	1300	579	559	411	491	430	486	556
Volume-to-Capacity Ratio (*X*)	0.392	0.349	0.346	0.291	0.805	0.121	0.418	0.507	0.034	0.205	0.671	0.672
Back of Queue (*Q*), ft/ln (90 th percentile)	69.4	124.2	89.3	78.4	223.2	21.1	89.4	171.5	11.6	60.6	256.2	263.9
Back of Queue (*Q*), veh/ln (90 th percentile)	3.1	5.6	4.0	3.5	10.0	0.9	4.0	7.7	0.5	2.7	11.5	12.0
Queue Storage Ratio (*RQ*) (90 th percentile)	0.22	0.00	0.33	0.20	0.00	0.24	0.40	0.00	0.05	0.46	0.00	2.00
Uniform Delay (d_1), s/veh	21.9	21.6	15.6	18.6	19.3	9.9	27.0	34.2	24.4	22.3	33.2	27.9
Incremental Delay (d_2), s/veh	3.0	0.5	1.2	1.1	3.7	0.3	2.3	4.4	0.1	1.1	7.2	6.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	24.9	22.1	16.8	19.7	23.0	10.2	29.3	38.6	24.5	23.3	40.4	34.3
Level of Service (LOS)	C	C	B	B	C	B	C	D	C	C	D	C
Approach Delay, s/veh / LOS	21.2	C		21.9	C		33.4	C		35.6	D	
Intersection Delay, s/veh / LOS	26.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.33	B	2.18	B	2.45	B	2.44	B
Bicycle LOS Score / LOS	1.37	A	2.22	B	1.25	A	1.79	B

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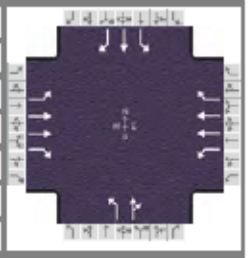
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.85
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	29 1/2 Road & Patterson	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	13	531	96	222	1549	265	48	34	67	150	106	64

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	48	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.5	2.2		50.4	7.0	1.0	10.4					
Yellow	3.5	3.5		5.0	4.0	4.0	4.0					
Red	0.5	0.5		1.5	0.0	0.0	1.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	5.5	56.9	11.7	63.2	11.0	15.4	16.0	20.4
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	4.5	0.0	4.5	0.0	3.7	4.7	3.7	4.7
Queue Clearance Time (g_s), s	2.3		6.9		4.7	9.1	10.3	8.1
Green Extension Time (g_e), s	0.0	0.0	0.8	0.0	0.0	1.3	0.1	1.4
Phase Call Probability	0.29		0.99		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.01	1.00	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	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	13	511	92	187	1304	223	56	119		176	125	75
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795	1598	1795	1795	1560	1767	1618		1781	1841	1585
Queue Service Time (g_s), s	0.3	7.1	2.7	4.9	22.6	6.6	2.7	7.1		8.3	6.1	4.2
Cycle Queue Clearance Time (g_c), s	0.3	7.1	2.7	4.9	22.6	6.6	2.7	7.1		8.3	6.1	4.2
Green Ratio (*g/C*)	0.52	0.50	0.50	0.60	0.57	0.57	0.17	0.10		0.24	0.15	0.15
Capacity (*c*), veh/h	210	1810	806	566	2034	884	281	168		327	283	244
Volume-to-Capacity Ratio (*X*)	0.060	0.282	0.115	0.330	0.641	0.252	0.201	0.708		0.539	0.441	0.309
Back of Queue (*Q*), ft/ln (90 th percentile)	4.9	93.9	73	55.3	225.4	113.6	51.9	121.9		148.5	112.7	66.8
Back of Queue (*Q*), veh/ln (90 th percentile)	0.2	4.2	3.3	2.5	10.2	5.0	2.3	5.3		6.6	5.0	3.0
Queue Storage Ratio (*RQ*) (90 th percentile)	0.04	0.00	0.86	0.42	0.00	0.48	0.67	0.00		1.08	0.00	0.00
Uniform Delay (d_1), s/veh	13.0	11.9	11.4	8.3	12.2	9.7	35.3	43.3		32.2	38.4	37.6
Incremental Delay (d_2), s/veh	0.1	0.3	0.2	0.2	1.1	0.5	1.6	5.4		6.2	1.1	0.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	13.1	12.1	11.6	8.5	13.3	10.2	36.9	48.7		38.5	39.5	38.3
Level of Service (LOS)	B	B	B	A	B	B	D	D		D	D	D
Approach Delay, s/veh / LOS	12.1	B		12.4	B		44.9	D		38.8	D	
Intersection Delay, s/veh / LOS	17.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	2.08	B	2.46	B	2.45	B
Bicycle LOS Score / LOS	1.11	A	2.46	B	0.78	A	1.11	A

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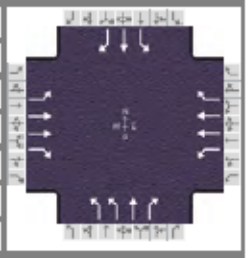
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	AM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	30 Road & Patterson	File Name	2045 ACP AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	95	420	203	137	1188	17	438	57	49	42	138	279

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	55	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.0	46.5	6.0	3.0	18.0	0.0	
Yellow	3.5	5.0	3.5	0.0	4.0	0.0	
Red	0.5	1.5	0.5	0.0	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	11.0	53.0	11.0	53.0	13.0	26.0	10.0	23.0
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.2	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	5.1		6.1		11.0	5.0	4.2	14.4
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.8
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	0.02	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	114	506	245	147	1271	18	528	69	58	51	166	225
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795	1598	1795	1795	1598	1730	1870	1560	1810	1885	1585
Queue Service Time (g_s), s	3.1	4.1	4.6	4.1	22.8	0.3	9.0	3.0	3.0	2.2	7.9	12.4
Cycle Queue Clearance Time (g_c), s	3.1	4.1	4.6	4.1	22.8	0.3	9.0	3.0	3.0	2.2	7.9	12.4
Green Ratio (*g/C*)	0.54	0.46	0.46	0.54	0.46	0.46	0.28	0.21	0.21	0.24	0.18	0.25
Capacity (*c*), veh/h	293	1669	743	487	1669	743	655	393	328	386	339	396
Volume-to-Capacity Ratio (*X*)	0.390	0.303	0.329	0.301	0.761	0.024	0.805	0.175	0.177	0.131	0.490	0.569
Back of Queue (*Q*), ft/ln (90 th percentile)	53.5	53.8	56.3	70	203.5	4.5	113.6	58.2	50.6	40	147.1	184.1
Back of Queue (*Q*), veh/ln (90 th percentile)	2.4	2.4	2.5	3.2	9.2	0.2	5.1	2.6	2.2	1.8	6.6	8.2
Queue Storage Ratio (*RQ*) (90 th percentile)	0.61	0.00	0.20	0.69	0.00	0.08	0.51	0.00	0.29	0.30	0.00	1.39
Uniform Delay (d_1), s/veh	15.7	6.5	6.5	11.9	11.5	6.7	34.2	32.4	32.4	29.7	36.9	32.8
Incremental Delay (d_2), s/veh	2.6	0.3	0.8	1.6	3.3	0.1	10.2	1.0	1.2	0.7	5.0	5.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	18.4	6.8	7.3	13.5	14.9	6.8	44.4	33.4	33.6	30.4	41.9	38.6
Level of Service (LOS)	B	A	A	B	B	A	D	C	C	C	D	D
Approach Delay, s/veh / LOS	8.5	A		14.6	B		42.3	D		38.9	D	
Intersection Delay, s/veh / LOS	21.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.27	B	2.23	B	2.45	B	2.45	B
Bicycle LOS Score / LOS	1.20	A	1.82	B	1.57	B	1.22	A

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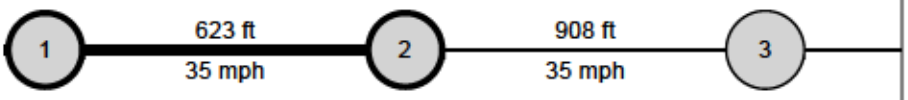
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	24 Road & Patterson	Market Street/Mall Access & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (24 Rd - Market St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
1	35	35	2	2	623	623	50	50	0	0	100	0	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	41.58			42.05		
1	Running Time, s	14.68			14.98		
1	Running Speed, mph	28.93			28.35		
1	Through Delay, s/veh	8.14			43.57		
1	Travel Time, s	22.83			58.56		
1	Travel Speed, mph	18.61			7.25		
1	Stop Rate, stops/veh	0.32			0.89		
1	Spatial Stop Rate, stops/mi	2.75			7.56		
1	Through vol/cap Ratio	0.15			0.77		
1	Percent of Base FFS	44.75			17.25		
1	Level of Service	D			F		
1	Auto Traveler Perception Score	2.57			3.46		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	2.20		B	3.65		D
1	Bicycle Segment LOS Score / LOS	2.10		B	2.67		B
1	Transit Segment LOS Score / LOS	1.75		A	3.30		C

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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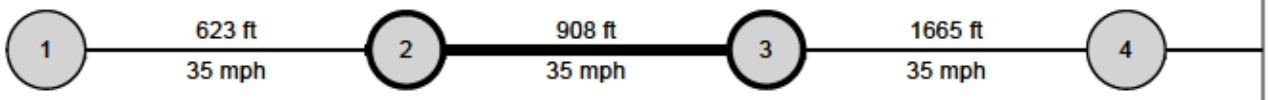
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	Market Street/Mall Access & Pat	Home Depot Access/Mesa Mall Access &		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Market St to Home Depot)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
2	35	35	2	2	908	908	50	50	0	0	70	70	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
2	Bay/Lane Spillback Time, h						
2	Shared Lane Spillback Time, h						
2	Base Free-Flow Speed, mph	41.48			41.48		
2	Running Time, s	18.43			18.98		
2	Running Speed, mph	33.59			32.62		
2	Through Delay, s/veh	4.46			3.39		
2	Travel Time, s	22.89			22.37		
2	Travel Speed, mph	27.05			27.68		
2	Stop Rate, stops/veh	0.18			0.12		
2	Spatial Stop Rate, stops/mi	1.03			0.70		
2	Through vol/cap Ratio	0.16			0.49		
2	Percent of Base FFS	65.20			66.73		
2	Level of Service	C			C		
2	Auto Traveler Perception Score	2.29			2.24		
Multimodal Results (Segment)							
2	Pedestrian Segment LOS Score / LOS	2.88		C	3.75		D
2	Bicycle Segment LOS Score / LOS	2.41		B	2.81		C
2	Transit Segment LOS Score / LOS	1.06		A	1.17		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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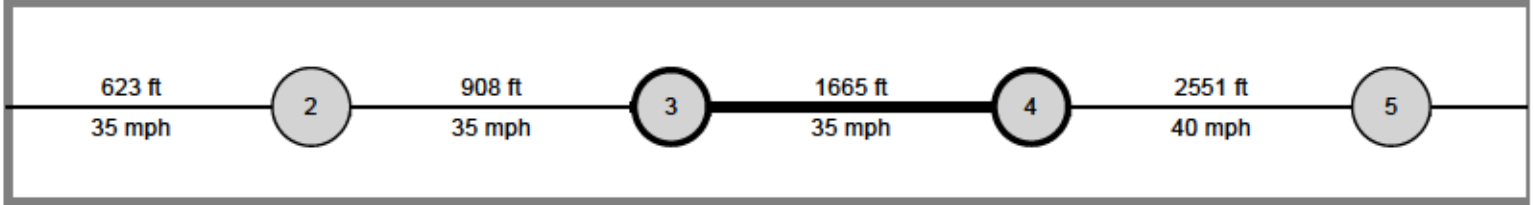
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	Home Depot Access/Mesa Mall /	24 1/2 Rd & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Home Depot - 24 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
3	35	35	2	2	1665	1665	50	50	550	550	70	100	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
3	Bay/Lane Spillback Time, h						
3	Shared Lane Spillback Time, h						
3	Base Free-Flow Speed, mph	40.84			40.32		
3	Running Time, s	30.30			31.90		
3	Running Speed, mph	37.46			35.59		
3	Through Delay, s/veh	12.44			3.67		
3	Travel Time, s	42.74			35.57		
3	Travel Speed, mph	26.56			31.92		
3	Stop Rate, stops/veh	0.40			0.11		
3	Spatial Stop Rate, stops/mi	1.26			0.36		
3	Through vol/cap Ratio	0.17			0.56		
3	Percent of Base FFS	65.04			79.16		
3	Level of Service	C			B		
3	Auto Traveler Perception Score	2.33			2.19		
Multimodal Results (Segment)							
3	Pedestrian Segment LOS Score / LOS	3.04		C	3.86		D
3	Bicycle Segment LOS Score / LOS	2.50		B	2.91		C
3	Transit Segment LOS Score / LOS	1.12		A	0.96		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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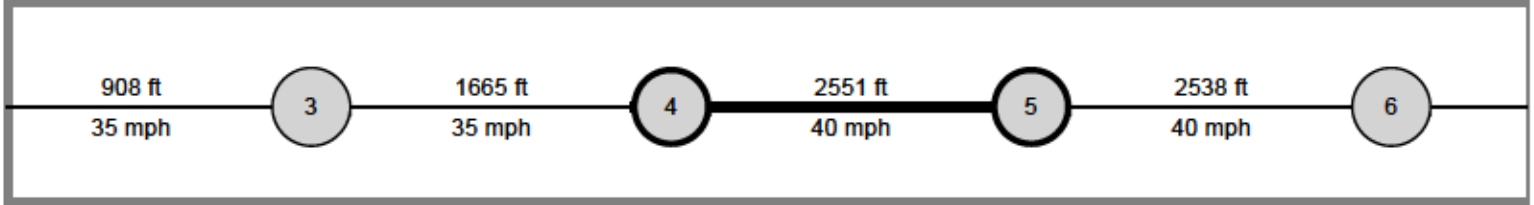
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	24 1/2 Rd & Patterson	25 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (24 1/2 Rd - 25 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
4	40	35	2	2	2551	2551	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
4	Bay/Lane Spillback Time, h						
4	Shared Lane Spillback Time, h						
4	Base Free-Flow Speed, mph	43.32			40.97		
4	Running Time, s	42.33			46.11		
4	Running Speed, mph	41.09			37.72		
4	Through Delay, s/veh	30.81			12.21		
4	Travel Time, s	73.14			58.32		
4	Travel Speed, mph	23.78			29.82		
4	Stop Rate, stops/veh	0.80			0.28		
4	Spatial Stop Rate, stops/mi	1.65			0.59		
4	Through vol/cap Ratio	0.29			0.77		
4	Percent of Base FFS	54.90			72.79		
4	Level of Service	C			B		
4	Auto Traveler Perception Score	2.39			2.23		
Multimodal Results (Segment)							
4	Pedestrian Segment LOS Score / LOS	2.90		C	3.50		C
4	Bicycle Segment LOS Score / LOS	2.58		B	2.90		C
4	Transit Segment LOS Score / LOS	1.36		A	1.09		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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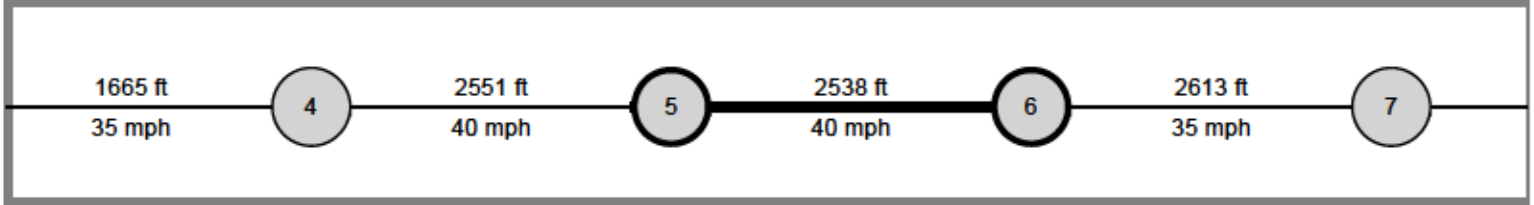
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	25 Road & Patterson	25 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 Rd - 25 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
5	40	40	2	2	2538	2538	50	50	260	260	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
5	Bay/Lane Spillback Time, h						
5	Shared Lane Spillback Time, h						
5	Base Free-Flow Speed, mph	42.96			42.96		
5	Running Time, s	42.47			43.65		
5	Running Speed, mph	40.74			39.65		
5	Through Delay, s/veh	15.54			23.59		
5	Travel Time, s	58.01			67.24		
5	Travel Speed, mph	29.83			25.74		
5	Stop Rate, stops/veh	0.45			0.51		
5	Spatial Stop Rate, stops/mi	0.94			1.07		
5	Through vol/cap Ratio	0.28			0.86		
5	Percent of Base FFS	69.44			59.91		
5	Level of Service	B			C		
5	Auto Traveler Perception Score	2.28			2.30		
Multimodal Results (Segment)							
5	Pedestrian Segment LOS Score / LOS	2.74		B	3.86		D
5	Bicycle Segment LOS Score / LOS	2.58		B	2.91		C
5	Transit Segment LOS Score / LOS	0.92		A	1.36		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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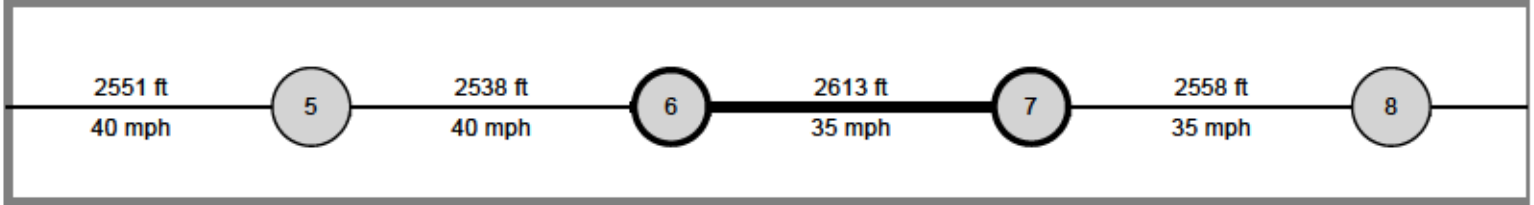
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	25 1/2 Road & Patterson	1st Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 1/2 Rd - 26 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
6	35	40	2	2	2613	2613	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
6	Bay/Lane Spillback Time, h						
6	Shared Lane Spillback Time, h						
6	Base Free-Flow Speed, mph	40.98			43.33		
6	Running Time, s	45.74			44.08		
6	Running Speed, mph	38.95			40.42		
6	Through Delay, s/veh	27.77			17.11		
6	Travel Time, s	73.50			61.19		
6	Travel Speed, mph	24.24			29.12		
6	Stop Rate, stops/veh	0.67			0.43		
6	Spatial Stop Rate, stops/mi	1.36			0.87		
6	Through vol/cap Ratio	0.51			0.69		
6	Percent of Base FFS	59.14			67.19		
6	Level of Service	C			B		
6	Auto Traveler Perception Score	2.35			2.27		
Multimodal Results (Segment)							
6	Pedestrian Segment LOS Score / LOS	2.90		C	3.00		C
6	Bicycle Segment LOS Score / LOS	2.66		B	2.80		C
6	Transit Segment LOS Score / LOS	1.34		A	1.08		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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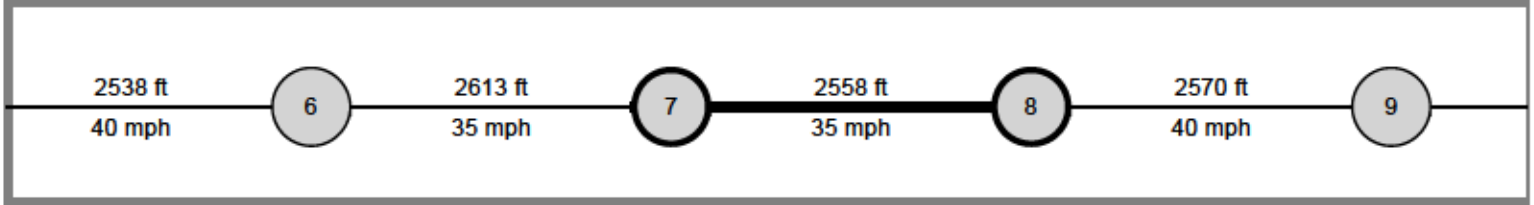
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	1st Street & Patterson	7th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 Rd - 26 1/2)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
7	35	40	2	2	2558	2558	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
7	Bay/Lane Spillback Time, h						
7	Shared Lane Spillback Time, h						
7	Base Free-Flow Speed, mph	40.40			42.75		
7	Running Time, s	45.60			43.48		
7	Running Speed, mph	38.24			40.12		
7	Through Delay, s/veh	19.06			28.35		
7	Travel Time, s	64.67			71.83		
7	Travel Speed, mph	26.97			24.28		
7	Stop Rate, stops/veh	0.50			0.59		
7	Spatial Stop Rate, stops/mi	1.04			1.22		
7	Through vol/cap Ratio	0.43			0.76		
7	Percent of Base FFS	66.77			56.81		
7	Level of Service	C			C		
7	Auto Traveler Perception Score	2.30			2.32		
Multimodal Results (Segment)							
7	Pedestrian Segment LOS Score / LOS	2.68		B	3.01		C
7	Bicycle Segment LOS Score / LOS	2.68		B	2.76		C
7	Transit Segment LOS Score / LOS	1.15		A	1.39		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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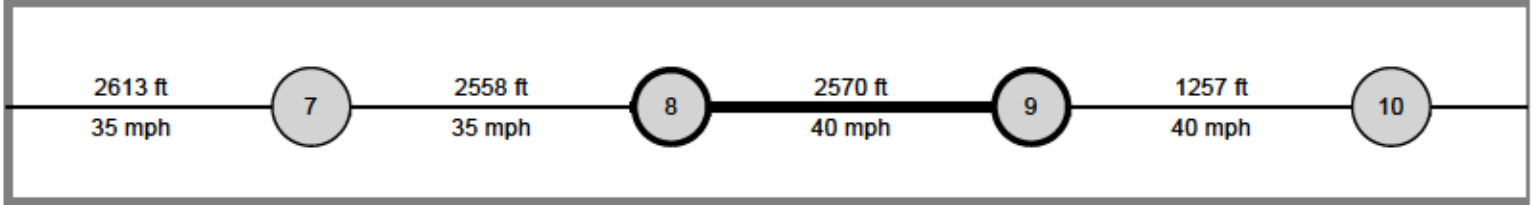
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	7th Street & Patterson	12th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 1/2 Rd to 12th St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
8	40	35	2	2	2570	2570	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
8	Bay/Lane Spillback Time, h						
8	Shared Lane Spillback Time, h						
8	Base Free-Flow Speed, mph	43.08			40.73		
8	Running Time, s	43.32			45.45		
8	Running Speed, mph	40.45			38.55		
8	Through Delay, s/veh	31.46			27.81		
8	Travel Time, s	74.78			73.26		
8	Travel Speed, mph	23.43			23.92		
8	Stop Rate, stops/veh	0.67			0.72		
8	Spatial Stop Rate, stops/mi	1.38			1.48		
8	Through vol/cap Ratio	0.70			0.46		
8	Percent of Base FFS	54.39			58.72		
8	Level of Service	C			C		
8	Auto Traveler Perception Score	2.35			2.36		
Multimodal Results (Segment)							
8	Pedestrian Segment LOS Score / LOS	2.90		C	2.65		B
8	Bicycle Segment LOS Score / LOS	2.79		C	2.64		B
8	Transit Segment LOS Score / LOS	1.46		A	1.38		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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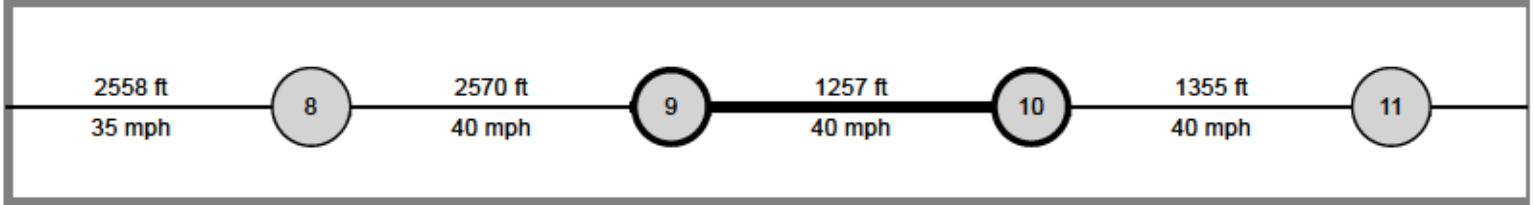
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	12th Street & Patterson	Patterson Rd & 15th St		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (12th St - 27 1/4 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
9	40	35	2	2	1257	1257	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
9	Bay/Lane Spillback Time, h						
9	Shared Lane Spillback Time, h						
9	Base Free-Flow Speed, mph	42.61			40.26		
9	Running Time, s	23.36			24.41		
9	Running Speed, mph	36.68			35.11		
9	Through Delay, s/veh	1.57			36.87		
9	Travel Time, s	24.93			61.28		
9	Travel Speed, mph	34.38			13.98		
9	Stop Rate, stops/veh	0.05			0.84		
9	Spatial Stop Rate, stops/mi	0.23			3.55		
9	Through vol/cap Ratio	0.38			0.57		
9	Percent of Base FFS	80.68			34.73		
9	Level of Service	A			E		
9	Auto Traveler Perception Score	2.17			2.71		
Multimodal Results (Segment)							
9	Pedestrian Segment LOS Score / LOS	2.79		C	3.33		C
9	Bicycle Segment LOS Score / LOS	2.82		C	2.70		B
9	Transit Segment LOS Score / LOS	0.71		A	2.34		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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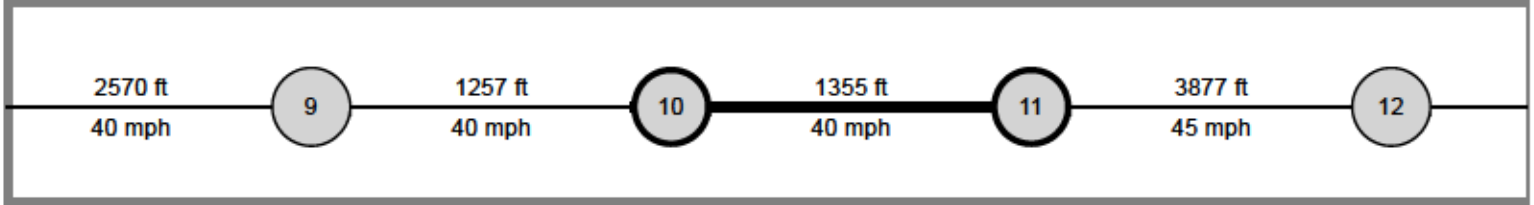
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	Patterson Rd & 15th St	27 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
10	40	40	2	2	1355	1355	50	50	0	0	70	70	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
10	Bay/Lane Spillback Time, h						
10	Shared Lane Spillback Time, h						
10	Base Free-Flow Speed, mph	44.07			44.07		
10	Running Time, s	24.25			24.22		
10	Running Speed, mph	38.10			38.15		
10	Through Delay, s/veh	20.49			2.04		
10	Travel Time, s	44.74			26.26		
10	Travel Speed, mph	20.65			35.18		
10	Stop Rate, stops/veh	0.55			0.08		
10	Spatial Stop Rate, stops/mi	2.14			0.31		
10	Through vol/cap Ratio	0.56			0.28		
10	Percent of Base FFS	46.86			79.84		
10	Level of Service	D			B		
10	Auto Traveler Perception Score	2.70			2.19		
Multimodal Results (Segment)							
10	Pedestrian Segment LOS Score / LOS	3.57		D	3.56		D
10	Bicycle Segment LOS Score / LOS	2.84		C	2.68		B
10	Transit Segment LOS Score / LOS	1.70		A	0.65		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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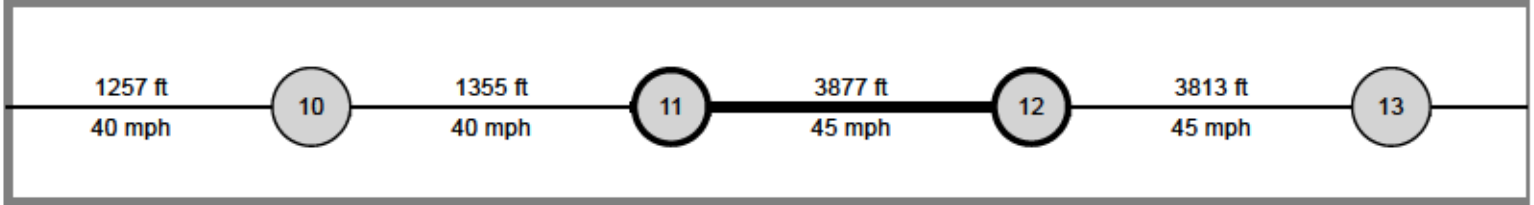
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	27 1/2 Road & Patterson	28 1/4 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (27 1/2 RD - 28 1/4 RD)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
11	45	40	2	2	3877	3877	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement		2	12	1	6	
11	Bay/Lane Spillback Time, h						
11	Shared Lane Spillback Time, h						
11	Base Free-Flow Speed, mph	45.57			43.22		
11	Running Time, s	60.87			63.04		
11	Running Speed, mph	43.43			41.93		
11	Through Delay, s/veh	22.73			7.12		
11	Travel Time, s	83.60			70.16		
11	Travel Speed, mph	31.62			37.68		
11	Stop Rate, stops/veh	0.62			0.24		
11	Spatial Stop Rate, stops/mi	0.84			0.33		
11	Through vol/cap Ratio	0.55			0.25		
11	Percent of Base FFS	69.38			87.16		
11	Level of Service	B			A		
11	Auto Traveler Perception Score	2.37			2.19		
Multimodal Results (Segment)							
11	Pedestrian Segment LOS Score / LOS	3.86		D	2.93		C
11	Bicycle Segment LOS Score / LOS	2.90		C	2.60		B
11	Transit Segment LOS Score / LOS	0.91		A	0.47		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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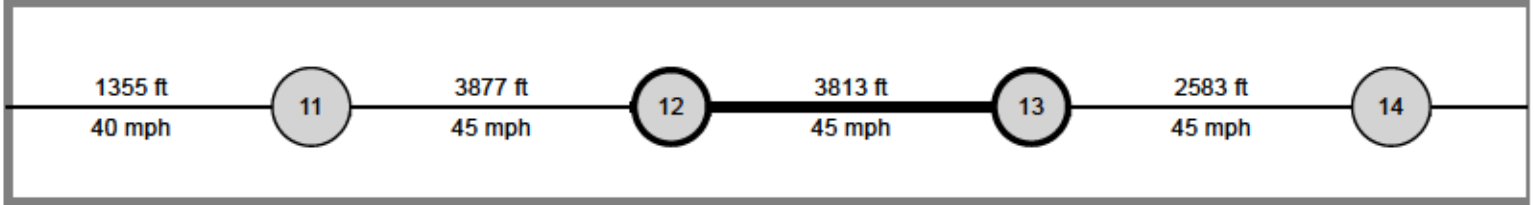
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	28 1/4 Road & Patterson	29 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (28 1/4 Rd - 29 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12	45	40	2	2	3813	3813	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
12	Bay/Lane Spillback Time, h						
12	Shared Lane Spillback Time, h						
12	Base Free-Flow Speed, mph	45.78			43.43		
12	Running Time, s	59.75			61.76		
12	Running Speed, mph	43.51			42.09		
12	Through Delay, s/veh	22.99			17.55		
12	Travel Time, s	82.74			79.31		
12	Travel Speed, mph	31.42			32.78		
12	Stop Rate, stops/veh	0.49			0.41		
12	Spatial Stop Rate, stops/mi	0.68			0.57		
12	Through vol/cap Ratio	0.80			0.39		
12	Percent of Base FFS	68.64			75.47		
12	Level of Service	B			B		
12	Auto Traveler Perception Score	2.24			2.22		
Multimodal Results (Segment)							
12	Pedestrian Segment LOS Score / LOS	3.56		D	2.91		C
12	Bicycle Segment LOS Score / LOS	2.93		C	2.62		B
12	Transit Segment LOS Score / LOS	0.95		A	0.75		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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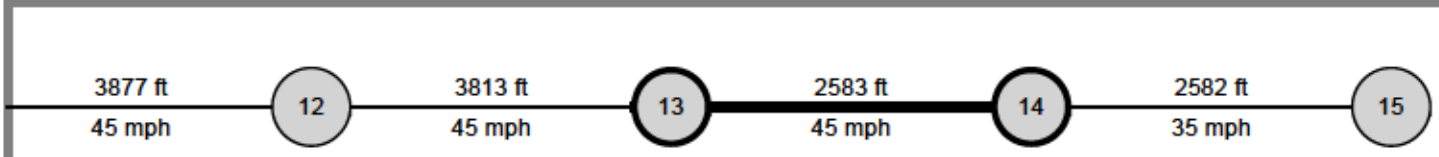
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	29 Road & Patterson	29 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 Rd - 29 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
13	45	45	2	2	2583	2583	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
13	Bay/Lane Spillback Time, h						
13	Shared Lane Spillback Time, h						
13	Base Free-Flow Speed, mph	44.94			44.94		
13	Running Time, s	41.59			40.48		
13	Running Speed, mph	42.34			43.51		
13	Through Delay, s/veh	13.34			22.15		
13	Travel Time, s	54.93			62.63		
13	Travel Speed, mph	32.06			28.12		
13	Stop Rate, stops/veh	0.40			0.56		
13	Spatial Stop Rate, stops/mi	0.82			1.14		
13	Through vol/cap Ratio	0.64			0.35		
13	Percent of Base FFS	71.34			62.57		
13	Level of Service	B			C		
13	Auto Traveler Perception Score	2.26			2.31		
Multimodal Results (Segment)							
13	Pedestrian Segment LOS Score / LOS	3.59		D	3.37		C
13	Bicycle Segment LOS Score / LOS	3.02		C	2.71		B
13	Transit Segment LOS Score / LOS	0.98		A	1.09		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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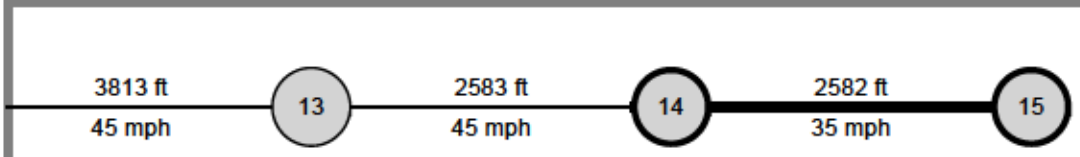
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	AM Peak	Number of Iterations	15
File Name	2045 ACP AM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	29 1/2 Road & Patterson	30 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 1/2 Rd - 30 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
14	35	45	2	2	2582	2582	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
14	Bay/Lane Spillback Time, h						
14	Shared Lane Spillback Time, h						
14	Base Free-Flow Speed, mph	40.81			45.51		
14	Running Time, s	46.49			40.31		
14	Running Speed, mph	37.87			43.67		
14	Through Delay, s/veh	14.85			12.14		
14	Travel Time, s	61.35			52.45		
14	Travel Speed, mph	28.70			33.57		
14	Stop Rate, stops/veh	0.34			0.36		
14	Spatial Stop Rate, stops/mi	0.70			0.74		
14	Through vol/cap Ratio	0.76			0.28		
14	Percent of Base FFS	70.31			73.75		
14	Level of Service	B			B		
14	Auto Traveler Perception Score	2.24			2.25		
Multimodal Results (Segment)							
14	Pedestrian Segment LOS Score / LOS	3.63		D	2.97		C
14	Bicycle Segment LOS Score / LOS	2.91		C	2.62		B
14	Transit Segment LOS Score / LOS	1.13		A	0.71		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	784.82	800.42
Facility Travel Speed, mph	27.36	26.83
Facility Base Free Flow Speed, mph	43.04	42.77
Facility Percent of Base FFS	63.57	62.72
Facility Level of Service	C	C
Facility Auto Traveler Perception Score	2.32	2.29

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.20	C	3.21	C
Bicycle Facility LOS Score / LOS	2.76	C	2.73	C
Transit Facility LOS Score / LOS	1.13	A	1.08	A

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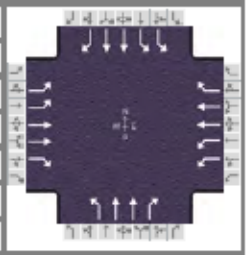
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.91
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	24 Road & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	127	195	207	583	327	359	53	741	341	467	936	45

Signal Information			
Cycle, s	100.0	Reference Phase	6
Offset, s	85	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	12.8	5.3	19.1	7.2	2.8	26.8	
Yellow	3.5	3.5	4.0	3.5	3.5	4.0	
Red	0.5	0.5	1.0	0.5	0.5	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	2.0	3.0	1.1	3.0	2.0	3.0
Phase Duration, s	16.8	24.1	26.1	33.4	11.2	31.8	18.0	38.6
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	10.8		19.9		4.2	24.4	16.0	29.6
Green Extension Time (g_e), s	2.0	0.0	2.2	0.0	0.2	2.4	0.0	3.7
Phase Call Probability	1.00		1.00		0.80	1.00	1.00	1.00
Max Out Probability	0.06		0.78		0.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	379	582	618	641	359	395	58	814	375	513	1029	49
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1675	1752		1716	1738		1810	1738	1585	1730	1752	1517
Queue Service Time (g_s), s	8.8	16.1		17.9	8.3		2.2	22.4	15.8	14.0	27.6	2.2
Cycle Queue Clearance Time (g_c), s	8.8	16.1		17.9	8.3		2.2	22.4	15.8	14.0	27.6	2.2
Green Ratio (*g/C*)	0.32	0.19		0.22	0.28		0.34	0.27	0.49	0.14	0.34	0.34
Capacity (*c*), veh/h	823	670		759	988		224	931	775	484	1176	509
Volume-to-Capacity Ratio (*X*)	0.461	0.870		0.844	0.364		0.261	0.875	0.484	1.060	0.875	0.097
Back of Queue (*Q*), ft/ln (90 th percentile)	148.3	267.8		256.2	131.4		38.3	332.2	192.3	312.8	380.2	33
Back of Queue (*Q*), veh/ln (90 th percentile)	6.4	11.8		11.4	5.7		1.7	14.5	8.6	14.0	16.7	1.4
Queue Storage Ratio (*RQ*) (90 th percentile)	0.83	0.00		1.16	0.00		0.29	0.00	1.09	2.36	0.00	0.51
Uniform Delay (d_1), s/veh	29.3	39.5		37.3	28.6		25.4	35.0	17.1	43.0	31.2	22.8
Incremental Delay (d_2), s/veh	0.6	14.4		6.3	0.9		0.9	9.5	0.7	57.6	7.7	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
Control Delay (*d*), s/veh	29.9	53.9	0.0	43.6	29.5	0.0	26.3	44.5	17.8	100.6	38.9	22.9
Level of Service (LOS)	C	D	A	D	C	A	C	D	B	F	D	C
Approach Delay, s/veh / LOS	27.0	C		27.6	C		35.6	D		58.3	E	
Intersection Delay, s/veh / LOS	37.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.45	B	2.58	C	2.58	C	2.58	C
Bicycle LOS Score / LOS	0.97	A	1.64	B	1.52	B	1.80	B

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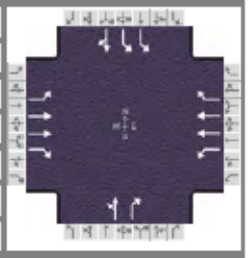
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Market Street/Mall Acce…	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	159	732	141	31	905	336	124	82	34	315	28	257

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	14	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	1.4	6.6	29.4	24.0	15.6	0.0	
Yellow	3.5	3.5	4.0	4.0	4.0	0.0	
Red	0.5	0.5	1.0	1.0	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		11.0		10.0
Phase Duration, s	15.9	45.0	5.4	34.4		20.6		29.0
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.4
Queue Clearance Time (g_s), s	11.6		2.4			15.1		22.2
Green Extension Time (g_e), s	0.4	0.0	0.0	0.0		0.5		1.8
Phase Call Probability	1.00		0.27			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	252	1160	223	11	332	123		248	41	380	343	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1766	1610	1810	1766	1522		1844	1610	1702	1635	
Queue Service Time (g_s), s	9.6	24.7	3.3	0.4	3.5	1.3		13.1	2.2	9.5	20.2	
Cycle Queue Clearance Time (g_c), s	9.6	24.7	3.3	0.4	3.5	1.3		13.1	2.2	9.5	20.2	
Green Ratio (*g/C*)	0.43	0.40	0.40	0.31	0.29	0.29		0.16	0.16	0.24	0.24	
Capacity (*c*), veh/h	537	1413	644	162	1039	448		288	252	818	393	
Volume-to-Capacity Ratio (*X*)	0.469	0.821	0.347	0.070	0.320	0.276		0.861	0.163	0.464	0.874	
Back of Queue (*Q*), ft/ln (90 th percentile)	139.9	198.3	40.8	7.5	51.9	22.3		206.4	34.8	147.7	263.2	
Back of Queue (*Q*), veh/ln (90 th percentile)	6.0	8.8	1.9	0.3	2.3	1.0		9.4	1.6	6.5	12.0	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.95	0.00	0.33	0.07	0.00	0.21		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh	20.7	14.9	5.4	25.8	10.7	4.3		41.1	36.5	32.5	36.5	
Incremental Delay (d_2), s/veh	0.1	3.0	0.8	0.1	0.8	1.5		3.0	0.1	0.2	2.5	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	20.8	17.9	6.1	25.9	11.5	5.8		44.1	36.6	32.6	39.0	
Level of Service (LOS)	C	B	A	C	B	A		D	D	C	D	
Approach Delay, s/veh / LOS	16.7	B		10.3	B		43.0	D		35.6	D	
Intersection Delay, s/veh / LOS	22.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	2.12	B	2.47	B	2.45	B
Bicycle LOS Score / LOS	1.51	B	1.75	B	0.96	A	1.68	B

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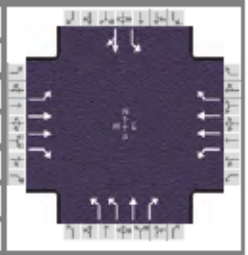
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.84
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Home Depot Access/Me...	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	85	760	227	130	876	65	279	72	249	88	45	127

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	81	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	5.0	2.1	41.0	15.0	18.0	0.0	
Yellow	3.5	0.0	4.0	4.0	4.0	0.0	
Red	0.5	0.0	1.0	1.0	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	3.0		9.0		10.0
Phase Duration, s	11.0	48.1	9.0	46.0		23.0		20.0
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0		5.0		5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0		5.4		5.5
Queue Clearance Time (g_s), s	6.6		5.0			19.4		13.8
Green Extension Time (g_e), s	0.6	0.0	0.3	0.0		0.0		1.2
Phase Call Probability	0.98		0.93			1.00		1.00
Max Out Probability	0.00		0.01			1.00		0.27

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	138	1234	369	96	647	48	332	86	296	105	205	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1766	1598	1810	1752	1610	1743	1900	1610	1767	1677	
Queue Service Time (g_s), s	4.6	32.3	21.7	3.0	15.1	2.1	8.6	3.9	17.4	5.4	11.8	
Cycle Queue Clearance Time (g_c), s	4.6	32.3	21.7	3.0	15.1	2.1	8.6	3.9	17.4	5.4	11.8	
Green Ratio (*g/C*)	0.48	0.43	0.43	0.46	0.41	0.41	0.18	0.18	0.23	0.15	0.15	
Capacity (*c*), veh/h	379	1521	688	190	1437	660	626	341	369	266	252	
Volume-to-Capacity Ratio (*X*)	0.364	0.811	0.536	0.506	0.450	0.073	0.530	0.251	0.804	0.394	0.812	
Back of Queue (*Q*), ft/ln (90 th percentile)	72.7	446.6	327.4	52.9	225	31.8	139.4	73.6	258.6	98.6	188.7	
Back of Queue (*Q*), veh/ln (90 th percentile)	3.1	19.8	14.8	2.4	9.9	1.4	6.3	3.3	11.8	4.4	8.6	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.54	0.00	1.64	0.48	0.00	0.00	0.78	0.00	1.18	0.74	0.00	
Uniform Delay (d_1), s/veh	15.8	31.4	34.7	22.3	26.2	20.9	37.2	35.2	36.4	38.4	41.1	
Incremental Delay (d_2), s/veh	0.8	4.4	2.7	2.8	1.0	0.2	1.1	0.5	12.7	1.4	9.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	16.5	35.8	37.4	25.0	27.2	21.1	38.3	35.8	49.1	39.7	50.8	
Level of Service (LOS)	B	D	D	C	C	C	D	D	D	D	D	
Approach Delay, s/veh / LOS	34.6	C		26.6	C		42.5	D		47.0	D	
Intersection Delay, s/veh / LOS	35.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.27	B	1.91	B	2.45	B	2.47	B
Bicycle LOS Score / LOS	1.54	B	1.54	B	1.67	B	1.00	A

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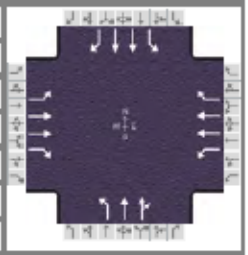
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.92
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	24 1/2 Rd & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	102	670	251	267	735	282	254	410	206	227	333	100

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	6	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

	EB			WB			NB			SB		
Green	9.7	1.9		38.0	7.0	3.4	17.5					
Yellow	3.5	0.0		4.0	3.5	3.5	4.0					
Red	0.5	0.0		1.5	0.5	0.5	1.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	13.7	43.5	15.7	45.4	18.4	29.9	11.0	22.5
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	8.8		10.3		14.2	19.9	9.0	11.6
Green Extension Time (g_e), s	1.0	0.0	1.3	0.0	0.1	5.0	0.0	5.3
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.61	1.00	0.56

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	195	1283	481	235	647	248	276	353	317	247	362	109
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1697	1781	1610	1810	1766	1598	1767	1856	1646	1767	1738	1397
Queue Service Time (g_s), s	6.8	33.9	20.1	8.3	13.3	7.4	12.2	17.7	17.9	7.0	9.6	7.0
Cycle Queue Clearance Time (g_c), s	6.8	33.9	20.1	8.3	13.3	7.4	12.2	17.7	17.9	7.0	9.6	7.0
Green Ratio (*g/C*)	0.48	0.38	0.38	0.50	0.40	0.40	0.34	0.25	0.25	0.25	0.18	0.18
Capacity (*c*), veh/h	383	1352	611	294	1410	638	398	461	409	234	609	244
Volume-to-Capacity Ratio (*X*)	0.510	0.949	0.786	0.799	0.459	0.389	0.693	0.765	0.774	1.056	0.595	0.445
Back of Queue (*Q*), ft/ln (90 th percentile)	110	396.4	164.8	152.5	186.5	92.2	193.8	275.9	251.4	243.4	153.5	110.8
Back of Queue (*Q*), veh/ln (90 th percentile)	4.7	17.7	7.5	6.9	8.3	4.2	8.6	12.2	11.3	10.8	6.7	4.4
Queue Storage Ratio (*RQ*) (90 th percentile)	0.82	0.00	0.75	1.16	0.00	0.37	1.46	0.00	0.00	1.83	0.00	0.00
Uniform Delay (d_1), s/veh	17.1	21.6	12.5	28.2	21.6	12.0	26.9	34.9	35.0	38.5	38.0	36.9
Incremental Delay (d_2), s/veh	1.3	13.7	8.8	6.4	1.0	1.6	5.4	5.9	7.1	74.6	1.3	1.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	18.4	35.3	21.3	34.6	22.6	13.6	32.3	40.8	42.0	113.0	39.3	38.7
Level of Service (LOS)	B	D	C	C	C	B	C	D	D	F	D	D
Approach Delay, s/veh / LOS	30.2	C		23.1	C		38.7	D		64.6	E	
Intersection Delay, s/veh / LOS	35.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.43	B	2.44	B	2.45	B
Bicycle LOS Score / LOS	1.40	A	1.64	B	1.27	A	1.08	A

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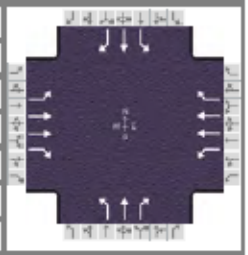
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.87
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	25 Road & Patterson	File Name	2045 ACP PM.xus		
Project Description					



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	921	181	281	905	147	223	338	257	218	317	110

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	45	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.0	6.0	30.0	6.0	3.0	22.0	
Yellow	3.5	3.5	4.5	3.5	3.5	4.0	
Red	0.5	0.5	1.5	0.5	0.5	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.0	46.0	10.0	36.0	17.0	34.0	10.0	27.0
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	4.9		8.0		12.8	21.4	8.0	21.6
Green Extension Time (g_e), s	0.3	0.0	0.0	0.0	0.0	4.1	0.0	0.2
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.02		1.00		1.00	0.80	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	107	1498	294	218	701	114	256	389	278	251	364	126
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1781	1585	1795	1795	1585	1753	1811	1610	1795	1811	1585
Queue Service Time (g_s), s	2.9	40.0	10.6	6.0	17.7	5.6	10.8	19.4	13.6	6.0	19.6	6.8
Cycle Queue Clearance Time (g_c), s	2.9	40.0	10.6	6.0	17.7	5.6	10.8	19.4	13.6	6.0	19.6	6.8
Green Ratio (*g/C*)	0.48	0.40	0.40	0.36	0.30	0.30	0.37	0.29	0.35	0.28	0.22	0.22
Capacity (*c*), veh/h	433	1424	634	180	1077	476	321	525	564	239	398	349
Volume-to-Capacity Ratio (*X*)	0.248	1.052	0.464	1.210	0.651	0.239	0.799	0.740	0.494	1.050	0.914	0.363
Back of Queue (*Q*), ft/ln (90 th percentile)	46.9	629.5	123.9	298.7	256.5	88.5	206.3	311.2	187.1	252.5	367.2	111.4
Back of Queue (*Q*), veh/ln (90 th percentile)	2.1	28.2	5.5	13.5	11.6	4.0	9.1	13.5	8.5	11.4	15.9	5.0
Queue Storage Ratio (*RQ*) (90 th percentile)	0.26	0.00	0.77	1.69	0.00	0.68	0.93	0.00	1.06	1.91	0.00	0.84
Uniform Delay (d_1), s/veh	13.2	25.3	14.7	28.9	34.1	27.4	26.0	32.1	25.5	37.8	38.1	33.1
Incremental Delay (d_2), s/veh	1.3	37.9	2.3	129.9	2.6	1.0	18.5	9.0	3.1	71.8	28.0	2.9
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	14.5	63.2	17.0	158.8	36.7	28.4	44.5	41.1	28.6	109.6	66.1	36.0
Level of Service (LOS)	B	F	B	F	D	C	D	D	C	F	E	D
Approach Delay, s/veh / LOS	53.3	D		61.5	E		38.3	D		75.6	E	
Intersection Delay, s/veh / LOS	55.7						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.12	B	2.44	B	2.45	B
Bicycle LOS Score / LOS	1.60	B	1.75	B	2.01	B	1.71	B

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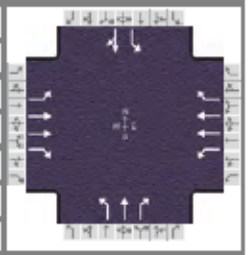
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.82
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	25 1/2 Road & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	92	1205	144	181	1180	147	93	190	189	184	159	75

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	3	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.6	0.2	48.2	6.0	2.0	17.0	
Yellow	3.5	0.0	4.5	3.5	0.0	4.0	
Red	0.5	0.0	1.5	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	11.6	54.2	11.8	54.4	10.0	22.0	12.0	24.0
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.3	5.2	5.3
Queue Clearance Time (g_s), s	4.9		5.5		7.3	16.1	10.0	17.7
Green Extension Time (g_e), s	0.6	0.0	0.7	0.0	0.0	0.9	0.0	1.0
Phase Call Probability	0.95		0.97		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	110	1445	173	130	848	106	113	232	230	224	285	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1781	1598	1781	1781	1572	1767	1885	1585	1682	1754	
Queue Service Time (g_s), s	2.9	35.8	5.8	3.5	12.0	1.2	5.3	11.6	14.1	8.0	15.7	
Cycle Queue Clearance Time (g_c), s	2.9	35.8	5.8	3.5	12.0	1.2	5.3	11.6	14.1	8.0	15.7	
Green Ratio (*g/C*)	0.56	0.48	0.48	0.56	0.48	0.48	0.23	0.17	0.17	0.25	0.19	
Capacity (*c*), veh/h	415	1717	770	249	1723	761	192	320	269	254	333	
Volume-to-Capacity Ratio (*X*)	0.265	0.841	0.224	0.522	0.492	0.139	0.592	0.724	0.856	0.885	0.857	
Back of Queue (*Q*), ft/ln (90 th percentile)	45.4	443.4	83.8	62.5	136.7	16.9	114.2	201.6	232.6	159.2	271.1	
Back of Queue (*Q*), veh/ln (90 th percentile)	2.1	19.8	3.8	2.8	6.1	0.7	5.1	9.1	10.4	6.7	12.0	
Queue Storage Ratio (*RQ*) (90 th percentile)	0.34	0.00	0.66	0.47	0.00	0.13	1.03	0.00	2.63	1.18	0.00	
Uniform Delay (d_1), s/veh	12.1	23.7	13.5	22.0	10.9	4.1	33.1	39.3	40.3	36.9	39.2	
Incremental Delay (d_2), s/veh	0.4	4.7	0.6	2.0	0.8	0.3	12.7	7.8	21.8	33.2	18.6	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	12.6	28.4	14.1	24.0	11.7	4.4	45.8	47.1	62.1	70.1	57.8	
Level of Service (LOS)	B	C	B	C	B	A	D	D	E	E	E	
Approach Delay, s/veh / LOS	26.0	C		12.4	B		52.9	D		63.2	E	
Intersection Delay, s/veh / LOS	31.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.09	B	1.90	B	2.45	B	2.45	B
Bicycle LOS Score / LOS	1.94	B	2.00	B	1.44	A	1.33	A

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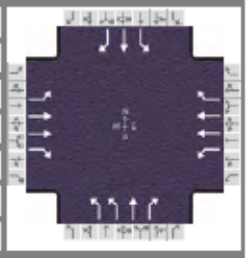
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.77
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	1st Street & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	115	1234	197	217	1180	124	210	394	193	165	311	80

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	72	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.8	0.1	35.7	9.0	2.4	26.6	
Yellow	3.5	0.0	3.0	3.5	0.0	4.0	
Red	0.5	0.0	2.5	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	11.8	41.2	11.9	41.3	13.0	31.6	15.4	33.9
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	6.2		7.2		7.5	28.5	10.3	21.4
Green Extension Time (g_e), s	0.5	0.0	0.7	0.0	1.5	0.0	1.1	4.4
Phase Call Probability	0.97		0.98		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	1.00	0.00	0.83

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	126	1349	215	150	817	86	273	512	251	214	404	104
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1766	1598	1781	1781	1572	1743	1856	1598	1810	1885	1610
Queue Service Time (g_s), s	4.2	35.7	7.5	5.2	20.1	4.4	5.5	26.5	12.2	8.3	19.4	4.4
Cycle Queue Clearance Time (g_c), s	4.2	35.7	7.5	5.2	20.1	4.4	5.5	26.5	12.2	8.3	19.4	4.4
Green Ratio (*g/C*)	0.43	0.36	0.45	0.44	0.36	0.36	0.36	0.27	0.34	0.38	0.29	0.37
Capacity (*c*), veh/h	299	1261	714	212	1276	563	590	492	550	279	545	590
Volume-to-Capacity Ratio (*X*)	0.420	1.070	0.301	0.707	0.640	0.152	0.462	1.040	0.456	0.768	0.741	0.176
Back of Queue (*Q*), ft/ln (90 th percentile)	62.9	627.7	99.1	82.4	269	93	89.7	556.4	163.5	140.8	296.1	64.8
Back of Queue (*Q*), veh/ln (90 th percentile)	2.9	27.8	4.5	3.7	12.0	4.1	4.0	24.7	7.4	6.4	13.4	2.9
Queue Storage Ratio (*RQ*) (90 th percentile)	0.48	0.00	0.75	0.75	0.00	0.85	0.68	0.00	1.24	1.28	0.00	0.00
Uniform Delay (d_1), s/veh	18.2	29.6	14.3	23.0	30.4	26.8	24.7	36.7	25.5	25.2	32.2	21.4
Incremental Delay (d_2), s/veh	1.1	44.3	0.9	3.7	1.5	0.4	0.8	51.2	0.8	6.2	5.8	0.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	19.3	73.9	15.2	26.7	31.9	27.2	25.5	88.0	26.4	31.4	37.9	21.6
Level of Service (LOS)	B	F	B	C	C	C	C	F	C	C	D	C
Approach Delay, s/veh / LOS	62.4	E		30.8	C		56.6	E		33.6	C	
Intersection Delay, s/veh / LOS	49.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.11	B	2.44	B	2.44	B
Bicycle LOS Score / LOS	2.14	B	2.12	B	2.20	B	1.68	B

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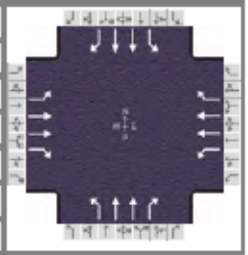
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.80
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	7th Street & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	147	1222	163	202	934	172	245	586	275	151	311	173

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	26	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	8.2	2.2	44.6	5.0	3.0	19.0	
Yellow	3.5	0.0	4.0	3.5	0.0	4.0	
Red	0.5	0.0	1.0	0.5	0.0	1.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	2.0	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	14.4	51.8	12.2	49.6	12.0	27.0	9.0	24.0
Change Period, ($Y+R_c$), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	9.8		7.2		10.0	21.8	7.0	13.2
Green Extension Time (g_e), s	0.8	0.0	1.1	0.0	0.0	0.2	0.0	4.4
Phase Call Probability	0.98		0.99		1.00	1.00	0.99	1.00
Max Out Probability	0.00		0.00		1.00	1.00	1.00	0.97

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	142	1184	133	184	851	152	306	733	328	189	389	216
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1766	1417	1810	1781	1543	1767	1795	1589	1795	1809	1577
Queue Service Time (g_s), s	7.8	15.7	0.9	5.2	13.1	2.2	8.0	19.8	18.0	5.0	9.8	11.2
Cycle Queue Clearance Time (g_c), s	7.8	15.7	0.9	5.2	13.1	2.2	8.0	19.8	18.0	5.0	9.8	11.2
Green Ratio (*g/C*)	0.10	0.47	0.55	0.53	0.45	0.45	0.28	0.22	0.30	0.24	0.19	0.29
Capacity (*c*), veh/h	188	1653	789	345	1589	689	288	789	481	163	686	466
Volume-to-Capacity Ratio (*X*)	0.756	0.716	0.168	0.534	0.535	0.221	1.064	0.929	0.681	1.161	0.566	0.465
Back of Queue (*Q*), ft/ln (90 th percentile)	141.4	126.5	12.3	88.9	145.6	29.6	291.8	303.5	220.2	239.2	154.6	153.3
Back of Queue (*Q*), veh/ln (90 th percentile)	6.4	5.6	0.5	4.0	6.5	1.3	12.9	13.7	9.9	10.8	7.0	6.9
Queue Storage Ratio (*RQ*) (90 th percentile)	0.80	0.00	0.08	0.67	0.00	0.19	1.32	0.00	1.25	2.17	0.00	0.00
Uniform Delay (d_1), s/veh	48.0	6.9	1.8	15.8	12.4	5.3	37.0	34.6	27.7	38.1	36.8	28.9
Incremental Delay (d_2), s/veh	7.0	2.2	0.4	1.4	1.0	0.5	70.9	17.4	4.3	120.4	1.4	1.0
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	0.0
Control Delay (*d*), s/veh	55.0	9.1	2.2	17.2	13.3	5.8	107.9	51.9	32.1	158.6	38.1	29.9
Level of Service (LOS)	D	A	A	B	B	A	F	D	C	F	D	C
Approach Delay, s/veh / LOS	12.9	B		13.0	B		59.7	E		64.5	E	
Intersection Delay, s/veh / LOS	34.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.42	B	2.45	B	2.49	B
Bicycle LOS Score / LOS	2.04	B	1.83	B	1.61	B	1.14	A

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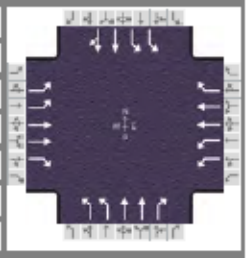
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.80
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	12th Street & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	246	1289	117	106	795	151	145	629	146	288	542	238

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	49	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.0	45.5	5.0	1.0	20.0	0.0	
Yellow	3.5	4.0	3.5	3.5	4.0	0.0	
Red	0.5	1.5	0.5	0.5	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	4.0
Phase Duration, s	10.0	51.0	10.0	51.0	9.0	25.0	14.0	30.0
Change Period, ($Y+R_c$), s	4.0	5.5	4.0	5.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	5.2	0.0	5.2	5.2	5.2	5.2
Queue Clearance Time (g_s), s	7.2		4.0		6.1	22.0	9.8	27.0
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		1.00		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	333	1743	158	137	1024	194	181	786	183	360	515	460
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1730	1766	1606	1743	1795	1598	1730	1781	1572	1743	1870	1670
Queue Service Time (g_s), s	5.2	45.5	5.5	2.0	19.6	4.5	4.1	20.0	9.7	7.8	25.0	25.0
Cycle Queue Clearance Time (g_c), s	5.2	45.5	5.5	2.0	19.6	4.5	4.1	20.0	9.7	7.8	25.0	25.0
Green Ratio (*g/C*)	0.52	0.46	0.51	0.52	0.46	0.46	0.25	0.20	0.26	0.32	0.25	0.25
Capacity (*c*), veh/h	570	1607	811	353	1633	727	317	712	409	493	468	417
Volume-to-Capacity Ratio (*X*)	0.584	1.084	0.195	0.387	0.627	0.268	0.572	1.104	0.446	0.731	1.102	1.102
Back of Queue (*Q*), ft/ln (90 th percentile)	78.2	804.4	105.4	33.1	221.7	58.7	81	470.4	147.8	139.3	619.7	567.1
Back of Queue (*Q*), veh/ln (90 th percentile)	3.5	35.7	4.8	1.5	10.0	2.6	3.6	21.0	6.6	6.3	27.7	25.4
Queue Storage Ratio (*RQ*) (90 th percentile)	0.44	0.00	0.73	0.13	0.00	0.44	0.37	0.00	0.67	1.05	0.00	0.00
Uniform Delay (d_1), s/veh	16.3	28.3	14.0	22.1	16.6	8.9	31.7	40.0	31.0	28.2	37.5	37.5
Incremental Delay (d_2), s/veh	2.7	45.3	0.3	2.6	1.5	0.7	7.3	65.8	3.5	9.2	72.2	74.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	19.0	73.6	14.4	24.7	18.2	9.6	39.0	105.8	34.5	37.4	109.7	111.9
Level of Service (LOS)	B	F	B	C	B	A	D	F	C	D	F	F
Approach Delay, s/veh / LOS	61.3	E		17.6	B		84.0	F		91.0	F	
Intersection Delay, s/veh / LOS	62.4						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.56	C	2.42	B	2.59	C	2.59	C
Bicycle LOS Score / LOS	2.19	B	1.57	B	1.44	A	1.59	B

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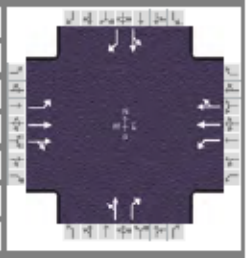
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	Patterson Rd & 15th St	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	69	1629	30	22	1052	27	14	4	36	43	2	64

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	66	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.2	2.3	75.4	7.1	0.0	0.0	
Yellow	4.0	0.0	4.0	4.0	0.0	0.0	
Red	0.0	0.0	0.0	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		7.0		7.0
Phase Duration, s	9.5	81.8	7.2	79.4		11.1		11.1
Change Period, ($Y+R_c$), s	4.0	4.0	4.0	4.0		4.0		4.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.3		3.3
Queue Clearance Time (g_s), s	3.0		2.3			4.6		6.8
Green Extension Time (g_e), s	0.2	0.0	0.0	0.0		0.4		0.3
Phase Call Probability	0.92		0.53			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	90	1083	1083	27	668	663		22	43		54	77
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1856	1844	1781	1885	1868		1526	1585		1433	1585
Queue Service Time (g_s), s	1.0	27.0	27.6	0.3	22.3	22.6		0.0	2.6		2.4	4.8
Cycle Queue Clearance Time (g_c), s	1.0	27.0	27.6	0.3	22.3	22.6		1.2	2.6		3.6	4.8
Green Ratio (*g/C*)	0.81	0.78	0.78	0.79	0.75	0.75		0.07	0.07		0.07	0.07
Capacity (*c*), veh/h	388	1443	1433	216	1422	1409		172	112		172	112
Volume-to-Capacity Ratio (*X*)	0.232	0.751	0.756	0.125	0.470	0.470		0.126	0.387		0.316	0.688
Back of Queue (*Q*), ft/ln (90 th percentile)	14.2	176.2	174.8	5.2	292	291.3		20.5	42.1		52.7	78.2
Back of Queue (*Q*), veh/ln (90 th percentile)	0.6	7.8	7.9	0.2	13.2	13.2		0.9	1.9		2.4	3.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.18	0.00	0.00	0.06	0.00	0.00		0.00	0.95		0.00	1.77
Uniform Delay (d_1), s/veh	5.2	4.4	4.4	6.2	11.2	11.4		43.7	44.4		44.9	45.4
Incremental Delay (d_2), s/veh	0.1	2.3	2.3	0.1	0.7	0.7		0.1	0.8		0.4	2.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Control Delay (*d*), s/veh	5.2	6.6	6.8	6.3	11.9	12.1		43.8	45.2		45.2	48.2
Level of Service (LOS)	A	A	A	A	B	B		D	D		D	D
Approach Delay, s/veh / LOS	6.6	A		11.9	B		44.8	D		47.0	D	
Intersection Delay, s/veh / LOS	10.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.83	B	1.84	B	2.31	B	2.31	B
Bicycle LOS Score / LOS	2.21	B	1.58	B	0.59	A	0.70	A

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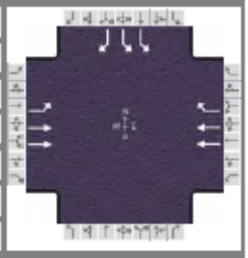
HCS7 Signalized Intersection Results Summary

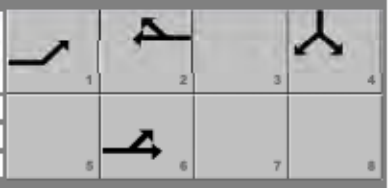
General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	27 1/2 Road & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	227	1478			941	362				558		135

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	56	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	33.0	31.0	21.0	0.0	0.0	0.0	
Yellow	3.5	4.5	4.0	0.0	0.0	0.0	
Red	0.5	1.5	1.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2				4
Case Number	1.0	4.0		7.3				9.0
Phase Duration, s	37.0	74.0		37.0				26.0
Change Period, ($Y+R_c$), s	4.0	6.0		6.0				5.0
Max Allow Headway (*MAH*), s	5.2	0.0		0.0				5.3
Queue Clearance Time (g_s), s	5.6							20.7
Green Extension Time (g_e), s	1.4	0.0		0.0				0.2
Phase Call Probability	1.00							1.00
Max Out Probability	0.00							1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2	12				7		14
Adjusted Flow Rate (*v*), veh/h	243	1584			1005	386				672		163
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1795			1795	1610				1757		1522
Queue Service Time (g_s), s	3.6	19.8			27.3	22.6				18.7		9.5
Cycle Queue Clearance Time (g_c), s	3.6	19.8			27.3	22.6				18.7		9.5
Green Ratio (*g/C*)	0.66	0.68			0.31	0.31				0.21		0.21
Capacity (*c*), veh/h	665	2441			1113	499				738		320
Volume-to-Capacity Ratio (*X*)	0.366	0.649			0.903	0.774				0.911		0.509
Back of Queue (*Q*), ft/ln (90 th percentile)	45.7	157.7			403.4	346.4				298.7		150.6
Back of Queue (*Q*), veh/ln (90 th percentile)	2.0	7.1			18.2	15.7				13.6		6.5
Queue Storage Ratio (*RQ*) (90 th percentile)	0.30	0.00			0.00	6.56				1.79		0.00
Uniform Delay (d_1), s/veh	6.6	5.7			38.5	35.9				38.6		34.9
Incremental Delay (d_2), s/veh	1.2	1.0			10.1	9.4				17.4		5.7
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0				0.0		0.0
Control Delay (*d*), s/veh	7.8	6.7			48.6	45.3				56.0		40.6
Level of Service (LOS)	A	A			D	D				E		D
Approach Delay, s/veh / LOS	6.9	A		47.7	D		0.0			53.0	D	
Intersection Delay, s/veh / LOS	30.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	0.67	A	2.12	B	2.32	B	2.32	B
Bicycle LOS Score / LOS	2.18	B	1.78	B				F

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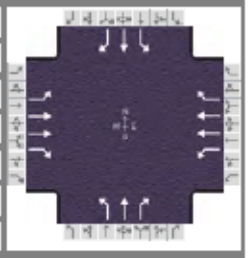
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.85
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	28 1/4 Road & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	38	1469	329	159	965	46	288	30	259	116	37	47

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	72	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	On

Green	11.0	46.0	14.0	2.0	8.0	0.0	
Yellow	3.5	4.5	3.5	0.0	4.0	0.0	
Red	0.5	1.5	0.5	0.0	1.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	2.0	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	15.0	52.0	15.0	52.0	20.0	15.0	18.0	13.0
Change Period, ($Y+R_c$), s	4.0	6.0	4.0	6.0	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	5.2	0.0	3.1	0.0	3.2	5.4	5.2	5.4
Queue Clearance Time (g_s), s	2.9		10.4		18.0	12.0	8.4	5.3
Green Extension Time (g_e), s	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.7
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.05		1.00		1.00	1.00	0.77	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	38	1456	326	156	944	45	339	35	305	136	44	55
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795	1585	1795	1795	1610	1795	1900	1610	1810	1900	1610
Queue Service Time (g_s), s	0.9	35.0	9.9	8.4	23.7	2.4	16.0	1.7	10.0	6.4	2.2	3.3
Cycle Queue Clearance Time (g_c), s	0.9	35.0	9.9	8.4	23.7	2.4	16.0	1.7	10.0	6.4	2.2	3.3
Green Ratio (*g/C*)	0.57	0.46	0.46	0.11	0.46	0.46	0.24	0.10	0.21	0.22	0.08	0.08
Capacity (*c*), veh/h	388	1651	729	197	1651	741	436	190	338	392	152	129
Volume-to-Capacity Ratio (*X*)	0.097	0.882	0.447	0.788	0.572	0.061	0.778	0.186	0.901	0.348	0.286	0.429
Back of Queue (*Q*), ft/ln (90 th percentile)	13.8	366.2	109.6	150.8	325.4	67.2	286.2	35.6	304.4	114.7	47.4	65.2
Back of Queue (*Q*), veh/ln (90 th percentile)	0.6	16.5	4.9	6.8	14.7	3.1	12.9	1.6	13.8	5.2	2.2	3.0
Queue Storage Ratio (*RQ*) (90 th percentile)	0.05	0.00	0.38	0.57	0.00	0.69	1.08	0.00	0.00	1.04	0.00	0.00
Uniform Delay (d_1), s/veh	12.1	19.0	10.9	42.7	31.0	24.4	35.9	41.3	38.5	32.9	43.3	43.8
Incremental Delay (d_2), s/veh	0.4	5.5	1.5	18.7	1.0	0.1	12.8	2.1	29.3	2.4	4.7	10.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	12.5	24.5	12.3	61.4	32.0	24.5	48.7	43.4	67.8	35.4	48.0	53.9
Level of Service (LOS)	B	C	B	E	C	C	D	D	E	D	D	D
Approach Delay, s/veh / LOS	22.1	C		35.7	D		57.0	E		42.1	D	
Intersection Delay, s/veh / LOS	33.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	2.10	B	2.46	B	2.46	B
Bicycle LOS Score / LOS	2.27	B	1.62	B	1.61	B	0.88	A

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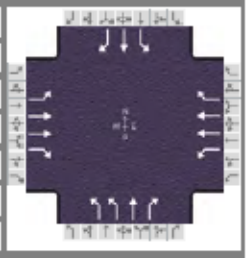
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	29 Road & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	220	1249	310	126	809	57	245	273	267	161	95	166

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	8	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	9.5	5.5		29.5	10.5		6.5		9.0			
Yellow	3.5	3.5		4.5	3.5		3.5		4.0			
Red	1.0	1.0		2.0	1.0		1.0		1.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	24.0	46.0	14.0	36.0	26.0	25.0	15.0	14.0
Change Period, ($Y+R_c$), s	4.5	6.5	4.5	6.5	4.5	5.0	4.5	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.1	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	8.3		7.8		8.4	19.1	12.0	8.8
Green Extension Time (g_e), s	0.6	0.0	0.1	0.0	1.0	0.4	0.0	0.1
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.01		1.00		0.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	230	1304	324	153	983	69	295	329	280	194	114	140
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1795	1572	1767	1781	1585	1716	1870	1610	1753	1870	1610
Queue Service Time (g_s), s	6.3	33.9	13.5	5.8	27.1	3.2	6.4	17.1	14.8	10.0	5.9	6.8
Cycle Queue Clearance Time (g_c), s	6.3	33.9	13.5	5.8	27.1	3.2	6.4	17.1	14.8	10.0	5.9	6.8
Green Ratio (*g/C*)	0.51	0.40	0.40	0.39	0.30	0.30	0.32	0.20	0.30	0.20	0.09	0.29
Capacity (*c*), veh/h	433	1418	621	255	1051	468	950	374	475	264	168	459
Volume-to-Capacity Ratio (*X*)	0.530	0.920	0.521	0.601	0.936	0.148	0.311	0.879	0.588	0.736	0.680	0.305
Back of Queue (*Q*), ft/ln (90 th percentile)	87.3	396.6	153.6	107.8	382.1	49.5	106.1	317.8	208.2	190.7	135.9	108.1
Back of Queue (*Q*), veh/ln (90 th percentile)	3.9	17.9	6.8	4.8	17.1	2.2	4.7	14.2	9.5	8.4	6.1	4.9
Queue Storage Ratio (*RQ*) (90 th percentile)	0.28	0.00	0.56	0.27	0.00	0.57	0.48	0.00	0.95	1.43	0.00	0.82
Uniform Delay (d_1), s/veh	13.3	25.1	17.7	26.9	36.9	26.0	25.3	38.8	30.1	36.8	44.1	28.0
Incremental Delay (d_2), s/veh	3.4	8.7	2.3	7.0	12.0	0.5	0.9	24.2	5.3	16.7	20.0	1.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	16.8	33.8	20.0	33.8	48.9	26.5	26.1	63.1	35.3	53.5	64.1	29.7
Level of Service (LOS)	B	C	B	C	D	C	C	E	D	D	E	C
Approach Delay, s/veh / LOS	29.3	C		45.7	D		42.4	D		48.8	D	
Intersection Delay, s/veh / LOS	38.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.32	B	2.19	B	2.45	B	2.46	B
Bicycle LOS Score / LOS	2.26	B	1.47	A	1.98	B	1.23	A

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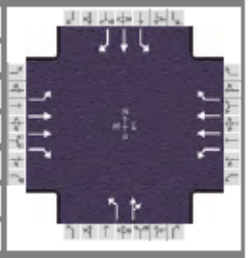
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.85
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	29 1/2 Road & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	91	1484	73	99	859	129	86	98	235	155	29	32

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	58	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.6	1.8		44.2	9.0		9.0	8.0				
Yellow	3.5	0.0		5.0	4.0		4.0	4.0				
Red	0.5	0.0		1.5	0.0		0.0	1.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2	7	4	3	8
Case Number	1.1	3.0	1.1	3.0	1.1	4.0	1.1	3.0
Phase Duration, s	8.6	50.7	10.3	52.4	26.0	26.0	13.0	13.0
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	4.5	0.0	4.5	0.0	3.7	4.8	3.7	4.8
Queue Clearance Time (g_s), s	4.6		6.0		6.1	23.0	11.0	4.2
Green Extension Time (g_e), s	0.3	0.0	0.5	0.0	0.2	0.0	0.0	0.9
Phase Call Probability	0.91		0.98		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	88	1438	71	135	1168	175	101	392		182	34	38
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795	1598	1795	1795	1560	1767	1607		1781	1841	1585
Queue Service Time (g_s), s	2.6	33.7	1.3	4.0	20.8	2.4	4.1	21.0		9.0	1.7	2.2
Cycle Queue Clearance Time (g_c), s	2.6	33.7	1.3	4.0	20.8	2.4	4.1	21.0		9.0	1.7	2.2
Green Ratio (*g/C*)	0.49	0.44	0.44	0.50	0.46	0.46	0.32	0.21		0.17	0.08	0.08
Capacity (*c*), veh/h	250	1585	706	222	1649	716	543	337		232	147	127
Volume-to-Capacity Ratio (*X*)	0.352	0.907	0.100	0.606	0.709	0.245	0.186	1.161		0.785	0.232	0.297
Back of Queue (*Q*), ft/ln (90 th percentile)	40.3	251.3	18.3	67.6	184.3	30.7	73.2	567.9		190.6	33.2	36.6
Back of Queue (*Q*), veh/ln (90 th percentile)	1.8	11.3	0.8	3.0	8.3	1.4	3.2	24.6		8.5	1.5	1.6
Queue Storage Ratio (*RQ*) (90 th percentile)	0.31	0.00	0.22	0.51	0.00	0.13	0.94	0.00		1.39	0.00	0.00
Uniform Delay (d_1), s/veh	16.5	14.8	7.8	23.0	12.7	4.8	24.6	39.5		39.0	43.1	43.3
Incremental Delay (d_2), s/veh	0.6	6.3	0.2	1.9	1.9	0.6	0.8	100.2		22.9	0.8	1.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	17.1	21.1	8.0	24.9	14.6	5.4	25.4	139.7		61.9	43.9	44.6
Level of Service (LOS)	B	C	A	C	B	A	C	F		E	D	D
Approach Delay, s/veh / LOS	20.3	C		14.4	B		116.2	F		56.9	E	
Intersection Delay, s/veh / LOS	32.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	2.10	B	2.45	B	2.46	B
Bicycle LOS Score / LOS	2.09	B	1.54	B	1.30	A	0.91	A

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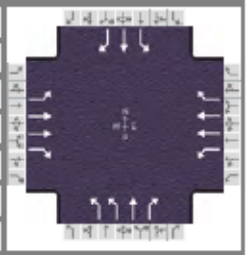
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Stolfus and Associates			Duration, h	0.250
Analyst	Max Rusch	Analysis Date		Area Type	Other
Jurisdiction		Time Period	PM Peak	PHF	0.83
Urban Street	Patterson Rd	Analysis Year	2045	Analysis Period	1> 7:00
Intersection	30 Road & Patterson	File Name	2045 ACP PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	227	1174	319	72	669	69	258	132	104	47	83	128

Signal Information					EB			WB			NB		
Cycle, s	100.0	Reference Phase	2										
Offset, s	90	Reference Point	Begin	Green	11.0	2.0		53.5	6.0		3.0	5.0	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0		5.0	3.5		0.0	4.0	
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.5	0.0		1.5	0.5		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	1.1	3.0	1.1	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	17.0	62.0	15.0	60.0	13.0	13.0	10.0	10.0
Change Period, ($Y+R_c$), s	4.0	6.5	4.0	6.5	4.0	5.0	4.0	5.0
Max Allow Headway (*MAH*), s	4.1	0.0	4.2	0.0	4.2	4.3	4.2	4.3
Queue Clearance Time (g_s), s	8.0		4.4		10.4	10.0	4.9	7.0
Green Extension Time (g_e), s	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.58		0.12		1.00	1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	273	1414	384	116	1080	111	311	159	124	57	100	43
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1795	1598	1795	1795	1598	1730	1870	1560	1810	1885	1585
Queue Service Time (g_s), s	6.0	8.6	3.0	2.4	15.9	2.4	8.4	8.0	8.0	2.9	5.0	2.3
Cycle Queue Clearance Time (g_c), s	6.0	8.6	3.0	2.4	15.9	2.4	8.4	8.0	8.0	2.9	5.0	2.3
Green Ratio (*g/C*)	0.66	0.56	0.56	0.64	0.54	0.54	0.15	0.08	0.08	0.11	0.05	0.18
Capacity (*c*), veh/h	487	1992	887	388	1920	855	455	150	125	181	94	285
Volume-to-Capacity Ratio (*X*)	0.562	0.710	0.433	0.299	0.562	0.130	0.683	1.063	0.994	0.314	1.061	0.152
Back of Queue (*Q*), ft/ln (90 th percentile)	84.6	61.1	34	40	176.4	33.1	146.6	250	200.8	58.8	183	38.9
Back of Queue (*Q*), veh/ln (90 th percentile)	3.8	2.8	1.5	1.8	8.0	1.5	6.6	11.2	8.8	2.7	8.3	1.7
Queue Storage Ratio (*RQ*) (90 th percentile)	0.96	0.00	0.12	0.39	0.00	0.56	0.66	0.00	1.13	0.45	0.00	0.29
Uniform Delay (d_1), s/veh	9.6	2.0	1.8	7.0	10.3	7.7	39.9	46.0	46.0	41.0	47.5	34.6
Incremental Delay (d_2), s/veh	3.2	1.5	1.1	2.0	1.2	0.3	8.1	91.3	79.1	4.5	110.2	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	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	12.7	3.5	2.8	9.0	11.5	8.0	47.9	137.3	125.1	45.5	157.7	35.7
Level of Service (LOS)	B	A	A	A	B	A	D	F	F	D	F	D
Approach Delay, s/veh / LOS	4.6	A		10.9	B		88.0	F		99.5	F	
Intersection Delay, s/veh / LOS	23.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.25	B	2.21	B	2.46	B	2.46	B
Bicycle LOS Score / LOS	2.20	B	1.29	A	1.47	A	0.82	A

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HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	24 Road & Patterson	Market Street/Mall Access & Patterson		Analysis Period	1> 7:00
Project Description					

Basic Segment Information (24 Rd - Market St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
1	35	35	2	2	625	625	50	50	0	0	100	0	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
1	Bay/Lane Spillback Time, h						
1	Shared Lane Spillback Time, h						
1	Base Free-Flow Speed, mph	41.58			42.05		
1	Running Time, s	14.73			15.15		
1	Running Speed, mph	28.93			28.12		
1	Through Delay, s/veh	11.51			53.88		
1	Travel Time, s	26.24			69.04		
1	Travel Speed, mph	16.24			6.17		
1	Stop Rate, stops/veh	0.28			1.01		
1	Spatial Stop Rate, stops/mi	2.34			8.50		
1	Through vol/cap Ratio	0.32			0.87		
1	Percent of Base FFS	39.06			14.68		
1	Level of Service	E			F		
1	Auto Traveler Perception Score	2.50			3.64		
Multimodal Results (Segment)							
1	Pedestrian Segment LOS Score / LOS	2.37		B	3.85		D
1	Bicycle Segment LOS Score / LOS	2.30		B	2.45		B
1	Transit Segment LOS Score / LOS	2.00		A	3.52		D

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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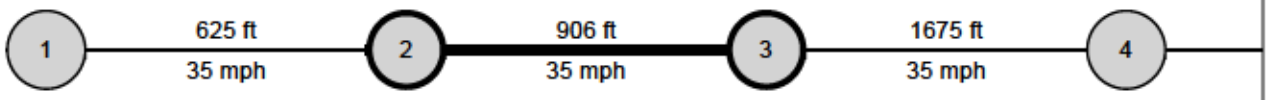
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	Market Street/Mall Access & Pat	Home Depot Access/Mesa Mall Access &		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Market St to Home Deopt Access)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
2	35	35	2	2	906	906	50	50	0	0	70	70	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
2	Bay/Lane Spillback Time, h						
2	Shared Lane Spillback Time, h						
2	Base Free-Flow Speed, mph	41.48			41.48		
2	Running Time, s	18.59			19.12		
2	Running Speed, mph	33.23			32.31		
2	Through Delay, s/veh	27.20			17.86		
2	Travel Time, s	45.79			36.98		
2	Travel Speed, mph	13.49			16.70		
2	Stop Rate, stops/veh	0.75			0.40		
2	Spatial Stop Rate, stops/mi	4.35			2.33		
2	Through vol/cap Ratio	0.45			0.82		
2	Percent of Base FFS	32.53			40.27		
2	Level of Service	E			D		
2	Auto Traveler Perception Score	2.85			2.50		
Multimodal Results (Segment)							
2	Pedestrian Segment LOS Score / LOS	2.99		C	3.54		D
2	Bicycle Segment LOS Score / LOS	2.53		B	2.74		B
2	Transit Segment LOS Score / LOS	2.38		B	2.16		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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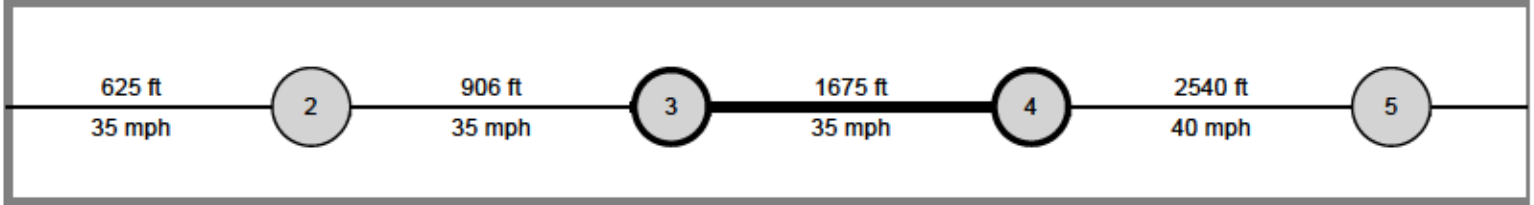
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	Home Depot Access/Mesa Mall /	24 1/2 Rd & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (Home Depot - 24 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
3	35	35	2	2	1675	1675	50	50	550	550	70	100	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
3	Bay/Lane Spillback Time, h						
3	Shared Lane Spillback Time, h						
3	Base Free-Flow Speed, mph	40.85			40.33		
3	Running Time, s	31.05			32.12		
3	Running Speed, mph	36.78			35.56		
3	Through Delay, s/veh	22.56			35.80		
3	Travel Time, s	53.61			67.92		
3	Travel Speed, mph	21.30			16.81		
3	Stop Rate, stops/veh	0.60			0.88		
3	Spatial Stop Rate, stops/mi	1.90			2.77		
3	Through vol/cap Ratio	0.46			0.81		
3	Percent of Base FFS	52.15			41.69		
3	Level of Service	C			D		
3	Auto Traveler Perception Score	2.43			2.57		
Multimodal Results (Segment)							
3	Pedestrian Segment LOS Score / LOS	3.66		D	3.49		C
3	Bicycle Segment LOS Score / LOS	2.75		C	2.87		C
3	Transit Segment LOS Score / LOS	1.65		A	2.18		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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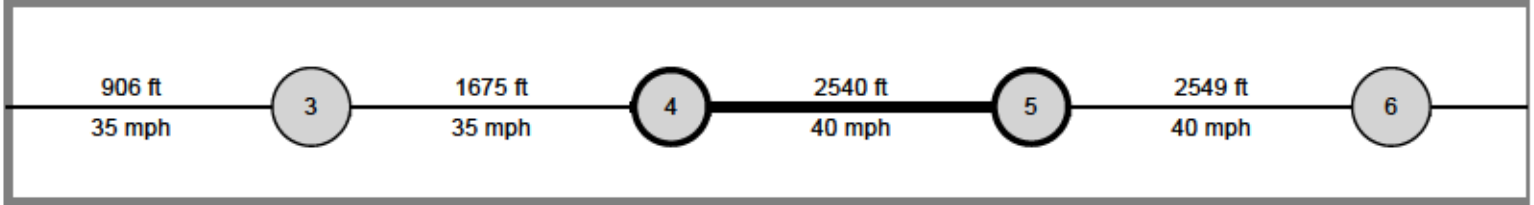
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	24 1/2 Rd & Patterson	25 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (24 1/2 Rd - 25 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
4	40	35	2	2	2540	2540	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
4	Bay/Lane Spillback Time, h						
4	Shared Lane Spillback Time, h						
4	Base Free-Flow Speed, mph	43.32			40.97		
4	Running Time, s	42.73			46.56		
4	Running Speed, mph	40.53			37.20		
4	Through Delay, s/veh	36.66			35.33		
4	Travel Time, s	79.39			81.89		
4	Travel Speed, mph	21.81			21.15		
4	Stop Rate, stops/veh	0.84			0.75		
4	Spatial Stop Rate, stops/mi	1.75			1.55		
4	Through vol/cap Ratio	0.65			0.95		
4	Percent of Base FFS	50.36			51.62		
4	Level of Service	C			C		
4	Auto Traveler Perception Score	2.41			2.38		
Multimodal Results (Segment)							
4	Pedestrian Segment LOS Score / LOS	3.28		C	3.56		D
4	Bicycle Segment LOS Score / LOS	2.79		C	2.97		C
4	Transit Segment LOS Score / LOS	1.61		A	1.81		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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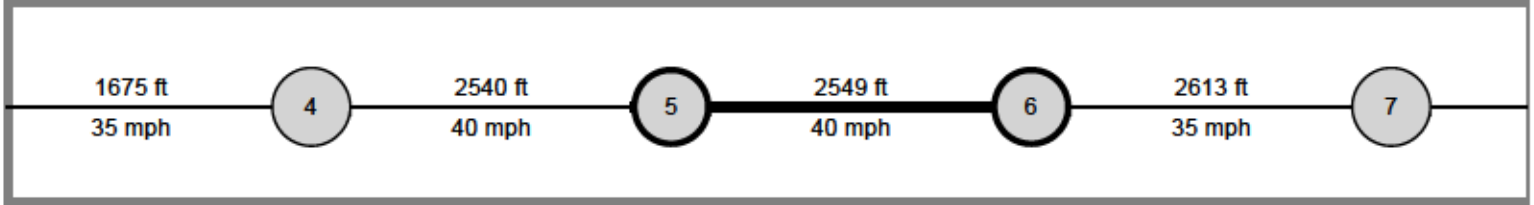
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	25 Road & Patterson	25 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 Rd - 25 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
5	40	40	2	2	2549	2549	50	50	260	260	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
5	Bay/Lane Spillback Time, h						
5	Shared Lane Spillback Time, h						
5	Base Free-Flow Speed, mph	42.96			42.96		
5	Running Time, s	43.26			44.48		
5	Running Speed, mph	40.17			39.08		
5	Through Delay, s/veh	11.67			63.19		
5	Travel Time, s	54.94			107.67		
5	Travel Speed, mph	31.64			16.14		
5	Stop Rate, stops/veh	0.33			1.07		
5	Spatial Stop Rate, stops/mi	0.68			2.21		
5	Through vol/cap Ratio	0.49			1.05		
5	Percent of Base FFS	73.64			37.57		
5	Level of Service	B			F		
5	Auto Traveler Perception Score	2.24			2.48		
Multimodal Results (Segment)							
5	Pedestrian Segment LOS Score / LOS	3.23		C	3.94		D
5	Bicycle Segment LOS Score / LOS	2.80		C	3.01		C
5	Transit Segment LOS Score / LOS	0.89		A	2.29		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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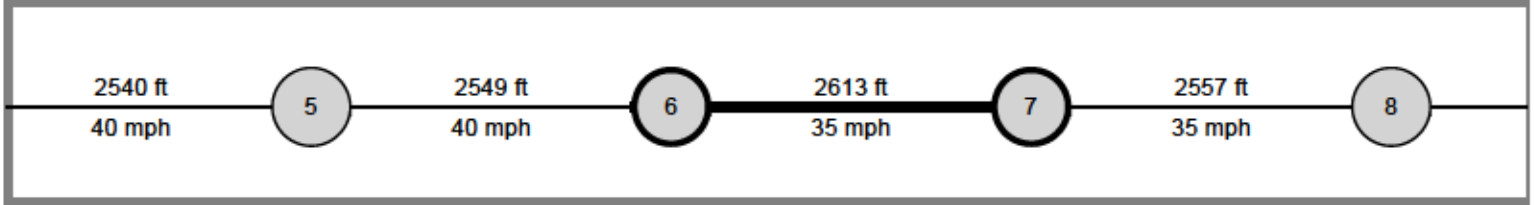
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	25 1/2 Road & Patterson	1st Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (25 1/2 Rd - 26 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
6	35	40	2	2	2613	2613	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
6	Bay/Lane Spillback Time, h						
6	Shared Lane Spillback Time, h						
6	Base Free-Flow Speed, mph	40.98			43.33		
6	Running Time, s	46.23			44.84		
6	Running Speed, mph	38.54			39.73		
6	Through Delay, s/veh	31.92			28.42		
6	Travel Time, s	78.15			73.26		
6	Travel Speed, mph	22.80			24.32		
6	Stop Rate, stops/veh	0.80			0.75		
6	Spatial Stop Rate, stops/mi	1.61			1.52		
6	Through vol/cap Ratio	0.64			0.84		
6	Percent of Base FFS	55.62			56.12		
6	Level of Service	C			C		
6	Auto Traveler Perception Score	2.38			2.37		
Multimodal Results (Segment)							
6	Pedestrian Segment LOS Score / LOS	3.26		C	3.52		D
6	Bicycle Segment LOS Score / LOS	2.82		C	2.97		C
6	Transit Segment LOS Score / LOS	1.52		A	1.51		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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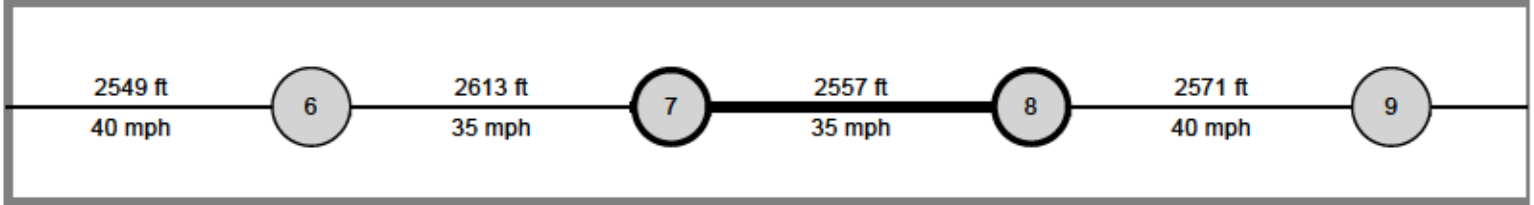
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	1st Street & Patterson	7th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 Rd - 26 1/2)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
7	35	40	2	2	2557	2557	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
7	Bay/Lane Spillback Time, h						
7	Shared Lane Spillback Time, h						
7	Base Free-Flow Speed, mph	40.39			42.74		
7	Running Time, s	46.14			44.48		
7	Running Speed, mph	37.78			39.20		
7	Through Delay, s/veh	13.33			73.91		
7	Travel Time, s	59.47			118.38		
7	Travel Speed, mph	29.31			14.73		
7	Stop Rate, stops/veh	0.36			1.18		
7	Spatial Stop Rate, stops/mi	0.74			2.44		
7	Through vol/cap Ratio	0.54			1.07		
7	Percent of Base FFS	72.57			34.45		
7	Level of Service	B			F		
7	Auto Traveler Perception Score	2.25			2.52		
Multimodal Results (Segment)							
7	Pedestrian Segment LOS Score / LOS	3.10		C	3.61		D
7	Bicycle Segment LOS Score / LOS	2.82		C	2.99		C
7	Transit Segment LOS Score / LOS	1.05		A	2.41		B

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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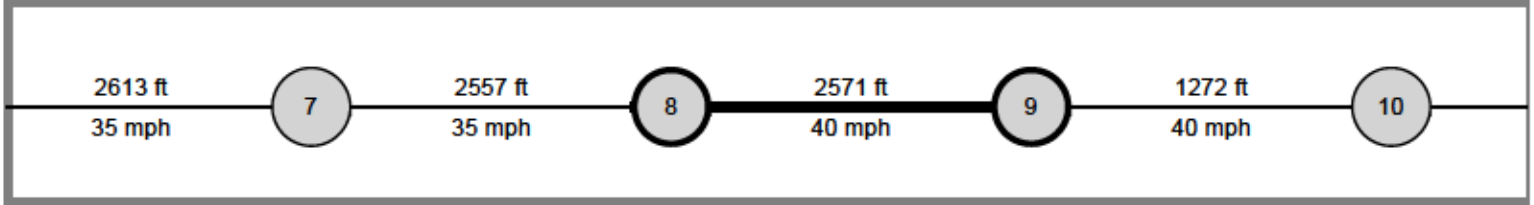
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	7th Street & Patterson	12th Street & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (26 1/2 Rd to 12th St)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
8	40	35	2	2	2571	2571	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
8	Bay/Lane Spillback Time, h						
8	Shared Lane Spillback Time, h						
8	Base Free-Flow Speed, mph	43.08			40.73		
8	Running Time, s	43.87			46.49		
8	Running Speed, mph	39.96			37.70		
8	Through Delay, s/veh	30.19			9.06		
8	Travel Time, s	74.06			55.55		
8	Travel Speed, mph	23.67			31.55		
8	Stop Rate, stops/veh	0.74			0.21		
8	Spatial Stop Rate, stops/mi	1.51			0.43		
8	Through vol/cap Ratio	0.72			0.72		
8	Percent of Base FFS	54.95			77.47		
8	Level of Service	C			B		
8	Auto Traveler Perception Score	2.37			2.20		
Multimodal Results (Segment)							
8	Pedestrian Segment LOS Score / LOS	3.48		C	3.38		C
8	Bicycle Segment LOS Score / LOS	2.92		C	2.90		C
8	Transit Segment LOS Score / LOS	1.50		A	0.95		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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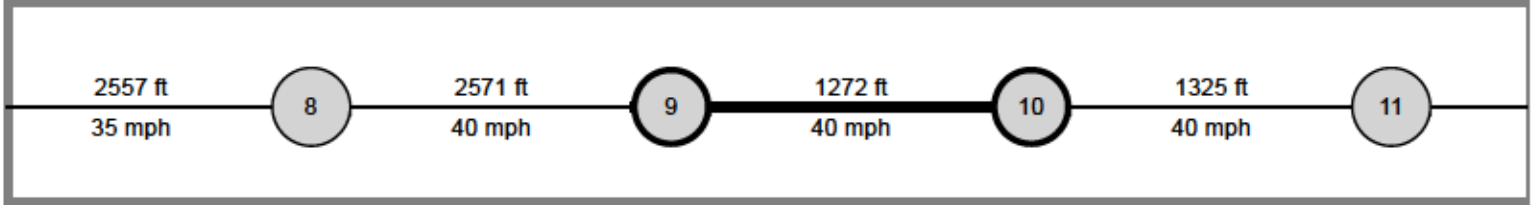
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	12th Street & Patterson	Patterson Rd & 15th St		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (12th St - 27 1/4 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
9	40	35	2	2	1272	1272	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
9	Bay/Lane Spillback Time, h						
9	Shared Lane Spillback Time, h						
9	Base Free-Flow Speed, mph	42.63			40.28		
9	Running Time, s	23.82			26.02		
9	Running Speed, mph	36.41			33.34		
9	Through Delay, s/veh	11.98			117.38		
9	Travel Time, s	35.80			143.39		
9	Travel Speed, mph	24.23			6.05		
9	Stop Rate, stops/veh	0.54			1.55		
9	Spatial Stop Rate, stops/mi	2.24			6.42		
9	Through vol/cap Ratio	0.47			1.18		
9	Percent of Base FFS	56.83			15.02		
9	Level of Service	C			F		
9	Auto Traveler Perception Score	2.49			3.23		
Multimodal Results (Segment)							
9	Pedestrian Segment LOS Score / LOS	3.17		C	4.47		E
9	Bicycle Segment LOS Score / LOS	2.75		B	3.04		C
9	Transit Segment LOS Score / LOS	1.44		A	3.67		D

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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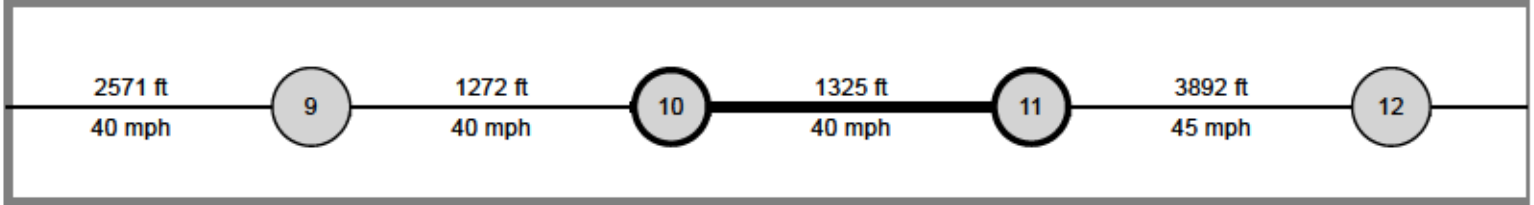
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	Patterson Rd & 15th St	27 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
10	40	40	2	2	1325	1325	50	50	0	0	70	70	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	1	6	16	5	2	12
10	Bay/Lane Spillback Time, h						
10	Shared Lane Spillback Time, h						
10	Base Free-Flow Speed, mph	44.07			44.07		
10	Running Time, s	24.07			24.87		
10	Running Speed, mph	37.53			36.32		
10	Through Delay, s/veh	48.58			6.69		
10	Travel Time, s	72.66			31.56		
10	Travel Speed, mph	12.43			28.62		
10	Stop Rate, stops/veh	0.99			0.18		
10	Spatial Stop Rate, stops/mi	3.96			0.73		
10	Through vol/cap Ratio	0.90			0.75		
10	Percent of Base FFS	28.21			64.95		
10	Level of Service	F			C		
10	Auto Traveler Perception Score	3.02			2.25		
Multimodal Results (Segment)							
10	Pedestrian Segment LOS Score / LOS	3.86		D	4.80		E
10	Bicycle Segment LOS Score / LOS	2.93		C	2.98		C
10	Transit Segment LOS Score / LOS	2.63		B	1.27		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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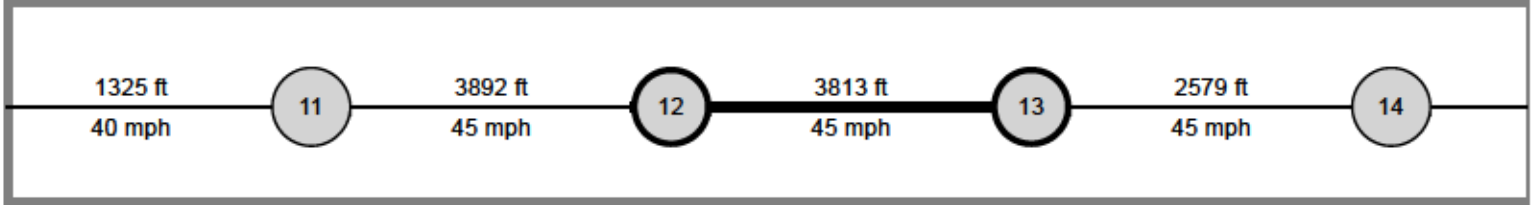
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	28 1/4 Road & Patterson	29 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (28 1/4 Rd - 29 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12	45	40	2	2	3813	3813	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
12	Bay/Lane Spillback Time, h						
12	Shared Lane Spillback Time, h						
12	Base Free-Flow Speed, mph	45.78			43.43		
12	Running Time, s	59.68			64.10		
12	Running Speed, mph	43.56			40.56		
12	Through Delay, s/veh	48.95			18.73		
12	Travel Time, s	108.62			82.83		
12	Travel Speed, mph	23.93			31.39		
12	Stop Rate, stops/veh	0.97			0.49		
12	Spatial Stop Rate, stops/mi	1.34			0.68		
12	Through vol/cap Ratio	0.94			0.83		
12	Percent of Base FFS	52.28			72.27		
12	Level of Service	C			B		
12	Auto Traveler Perception Score	2.34			2.24		
Multimodal Results (Segment)							
12	Pedestrian Segment LOS Score / LOS	3.61		D	3.80		D
12	Bicycle Segment LOS Score / LOS	2.85		C	3.04		C
12	Transit Segment LOS Score / LOS	1.48		A	1.03		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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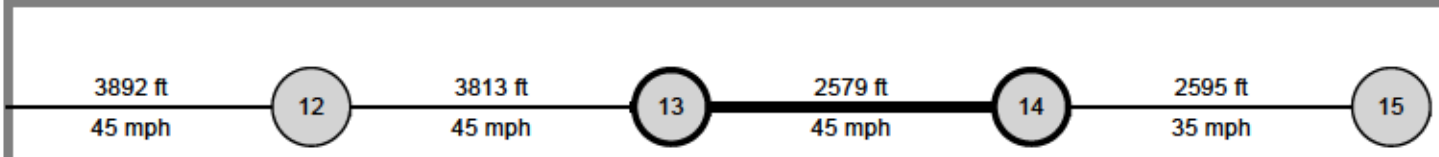
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	29 Road & Patterson	29 1/2 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 Rd - 29 1/2 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
13	45	45	2	2	2579	2579	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
13	Bay/Lane Spillback Time, h						
13	Shared Lane Spillback Time, h						
13	Base Free-Flow Speed, mph	44.94			44.94		
13	Running Time, s	41.22			41.73		
13	Running Speed, mph	42.65			42.14		
13	Through Delay, s/veh	14.59			33.80		
13	Travel Time, s	55.82			75.53		
13	Travel Speed, mph	31.50			23.28		
13	Stop Rate, stops/veh	0.35			0.76		
13	Spatial Stop Rate, stops/mi	0.72			1.56		
13	Through vol/cap Ratio	0.71			0.92		
13	Percent of Base FFS	70.09			51.80		
13	Level of Service	B			C		
13	Auto Traveler Perception Score	2.25			2.38		
Multimodal Results (Segment)							
13	Pedestrian Segment LOS Score / LOS	3.96		D	3.85		D
13	Bicycle Segment LOS Score / LOS	2.89		C	3.05		C
13	Transit Segment LOS Score / LOS	0.98		A	1.63		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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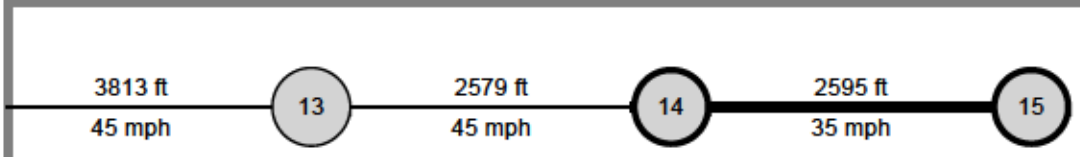
HCS7 Urban Street Segment Report

General Information				Streets Information	
Agency	Stolfus and Associates			Number of Intersections	15
Analyst	Max Rusch	Analysis Date		Number of Segments	14
Jurisdiction		Time Period	PM Peak	Number of Iterations	15
File Name	2045 ACP PM.xus	Analysis Year	2045	System Cycle Length, s	100
Intersections	29 1/2 Road & Patterson	30 Road & Patterson		Analysis Period	1> 7:00
Project Description					



Basic Segment Information (29 1/2 Rd - 30 Rd)

Segment	Speed Limit		Through Lanes		Segment Length		Intersection Wid		Length of RM		Percent Curb		Other Delay	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
14	35	45	2	2	2595	2595	50	50	0	0	90	90	0.0	0.0

		Westbound			Eastbound		
Segment Output Data		WBL	WBT	WBR	EBL	EBT	EBR
Segment	Movement	5	2	12	1	6	16
14	Bay/Lane Spillback Time, h						
14	Shared Lane Spillback Time, h						
14	Base Free-Flow Speed, mph	40.82			45.52		
14	Running Time, s	46.50			41.62		
14	Running Speed, mph	38.05			42.51		
14	Through Delay, s/veh	11.46			21.15		
14	Travel Time, s	57.96			62.77		
14	Travel Speed, mph	30.53			28.19		
14	Stop Rate, stops/veh	0.34			0.42		
14	Spatial Stop Rate, stops/mi	0.69			0.85		
14	Through vol/cap Ratio	0.56			0.91		
14	Percent of Base FFS	74.79			61.92		
14	Level of Service	B			C		
14	Auto Traveler Perception Score	2.24			2.27		
Multimodal Results (Segment)							
14	Pedestrian Segment LOS Score / LOS	3.75		D	4.08		D
14	Bicycle Segment LOS Score / LOS	2.84		C	3.00		C
14	Transit Segment LOS Score / LOS	0.99		A	1.22		A

Facility Output Data	Westbound	Eastbound
Facility Travel Time, s	964.15	1079.36
Facility Travel Speed, mph	22.28	19.91
Facility Base Free Flow Speed, mph	43.04	42.78
Facility Percent of Base FFS	51.77	46.54
Facility Level of Service	F	F
Facility Auto Traveler Perception Score	2.39	2.38

Multimodal Results (Facility)				
Pedestrian Facility LOS Score / LOS	3.50	C	3.86	D
Bicycle Facility LOS Score / LOS	2.82	C	2.98	C
Transit Facility LOS Score / LOS	1.51	A	1.63	A

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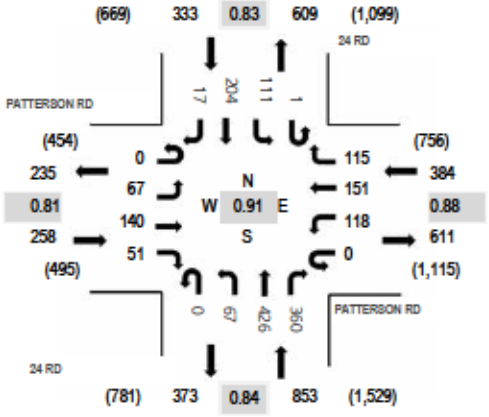
All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

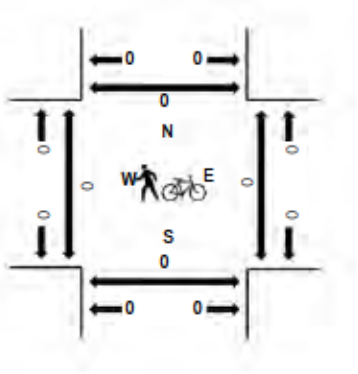
Location: 1 24 RD & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

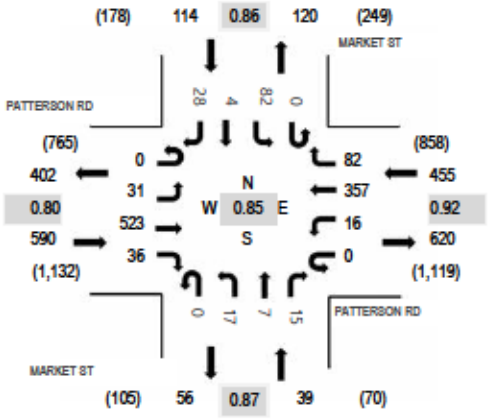
Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				24 RD Northbound				24 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	6	25	5	0	23	23	16	0	10	98	47	0	14	33	3	303	1,726	0	0	0	0
7:15 AM	0	16	29	13	0	29	33	28	0	12	105	86	0	20	52	5	428	1,828	0	0	0	0
7:30 AM	0	27	39	15	0	24	41	35	0	17	111	95	1	31	60	4	500	1,782	0	0	0	0
7:45 AM	0	9	43	11	0	36	31	31	0	14	125	115	0	28	47	5	495	1,743	0	0	0	0
8:00 AM	0	15	29	12	0	29	46	21	0	24	85	64	0	32	45	3	405	1,723	0	0	0	0
8:15 AM	0	13	25	23	0	51	30	20	0	11	69	64	0	17	50	9	382		0	0	0	0
8:30 AM	0	18	42	15	0	42	46	29	0	23	79	67	1	37	57	5	461		0	0	0	0
8:45 AM	0	10	39	16	0	35	33	24	0	18	107	83	0	44	58	8	475		0	0	0	0
Count Total	0	114	271	110	0	269	283	204	0	129	779	621	2	223	402	42	3,449		0	0	0	0
Peak Hour	0	67	140	51	0	118	151	115	0	67	426	360	1	111	204	17	1,828		0	0	0	0

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

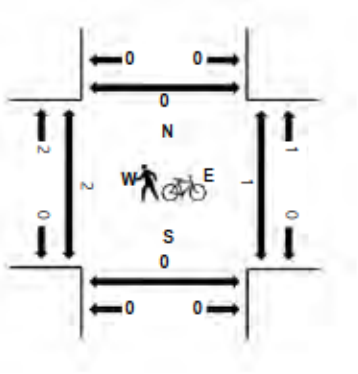
Location: 2 MARKET ST & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

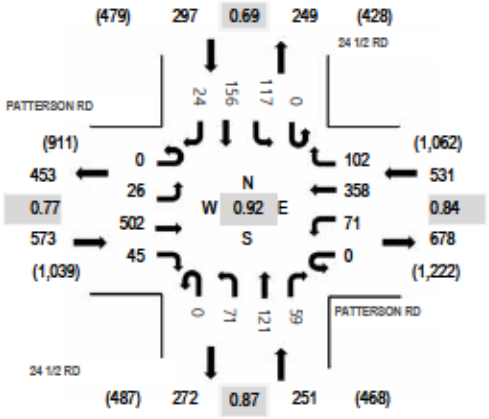
Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				MARKET ST Northbound				MARKET ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	6	72	8	0	0	55	11	0	2	2	1	0	1	0	8	166	1,058	0	0	0	0
7:15 AM	0	12	107	6	0	0	83	16	0	3	1	1	0	11	1	3	244	1,166	0	0	0	0
7:30 AM	0	16	138	6	0	2	90	20	0	4	1	3	0	6	4	7	297	1,176	0	0	0	0
7:45 AM	0	10	174	9	0	4	90	24	0	3	2	2	0	26	1	6	351	1,198	0	1	0	0
8:00 AM	0	6	122	10	0	6	85	12	0	2	2	4	0	17	1	7	274	1,180	0	0	0	0
8:15 AM	0	6	98	5	0	5	86	17	0	6	1	5	0	17	2	6	254		0	0	0	0
8:30 AM	0	9	129	12	0	1	96	29	0	6	2	4	0	22	0	9	319		0	0	0	0
8:45 AM	0	15	142	14	0	3	96	27	0	6	2	5	0	12	5	6	333		0	0	0	0
Count Total	0	80	982	70	0	21	681	156	0	32	13	25	0	112	14	52	2,238		0	1	0	0
Peak Hour	0	31	523	36	0	16	357	82	0	17	7	15	0	82	4	28	1,198		0	1	0	0

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

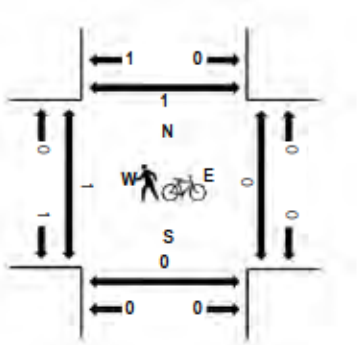
Location: 3 24 1/2 RD & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				24 1/2 RD Northbound				24 1/2 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	5	58	6	0	6	67	24	0	12	30	9	0	13	14	2	246	1,553	0	0	0	0
7:15 AM	0	6	100	7	0	20	78	47	0	11	48	14	0	32	44	6	413	1,652	0	0	0	0
7:30 AM	0	8	124	10	0	15	93	24	0	21	34	12	0	43	54	10	448	1,582	1	0	0	1
7:45 AM	0	6	162	19	0	15	93	16	0	21	22	20	0	28	39	5	446	1,518	0	0	0	0
8:00 AM	0	6	116	9	0	21	94	15	0	18	17	13	0	14	19	3	345	1,495	0	0	0	0
8:15 AM	0	3	99	10	0	20	94	15	0	12	13	25	0	22	22	8	343		0	0	0	0
8:30 AM	0	6	120	15	0	24	106	8	0	17	24	14	0	21	21	8	384		0	0	0	0
8:45 AM	0	5	124	15	0	33	112	22	0	18	24	19	0	20	29	2	423		0	0	0	0
Count Total	0	45	903	91	0	154	737	171	0	130	212	126	0	193	242	44	3,048		1	0	0	1
Peak Hour	0	26	502	45	0	71	358	102	0	71	121	59	0	117	156	24	1,652		1	0	0	1

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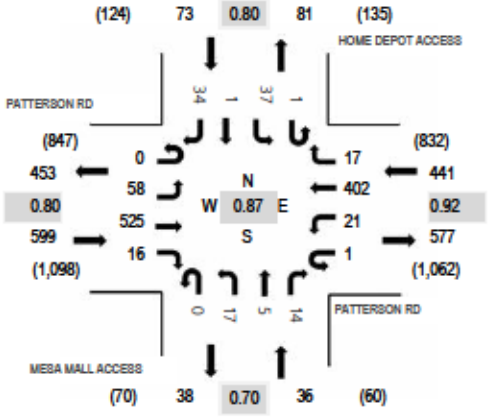
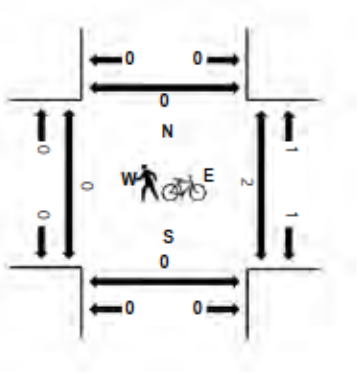
Location: 4 MESA MALL ACCESS & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				MESA MALL ACCESS Northbound				HOME DEPOT ACCESS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	3	67	3	0	2	63	2	0	0	0	1	0	2	1	5	149	994	0	0	0	1
7:15 AM	0	7	116	0	0	3	92	0	0	0	0	2	0	2	3	3	228	1,106	0	0	0	0
7:30 AM	0	5	150	2	0	3	107	5	0	1	1	3	0	5	0	5	287	1,122	0	0	0	0
7:45 AM	0	14	170	6	0	2	108	5	0	3	2	2	0	11	0	7	330	1,149	0	0	0	0
8:00 AM	0	7	123	5	1	3	98	3	0	3	2	3	1	7	1	4	261	1,120	0	2	0	0
8:15 AM	0	13	100	2	0	6	90	5	0	3	1	5	0	6	0	13	244		0	0	0	0
8:30 AM	0	24	132	3	0	10	106	4	0	8	0	4	0	13	0	10	314		0	0	0	0
8:45 AM	0	21	116	9	0	6	98	10	0	6	0	10	0	11	0	14	301		0	0	0	0
Count Total	0	94	974	30	1	35	762	34	0	24	6	30	1	57	5	61	2,114		0	2	0	1
Peak Hour	0	58	525	16	1	21	402	17	0	17	5	14	1	37	1	34	1,149		0	2	0	0

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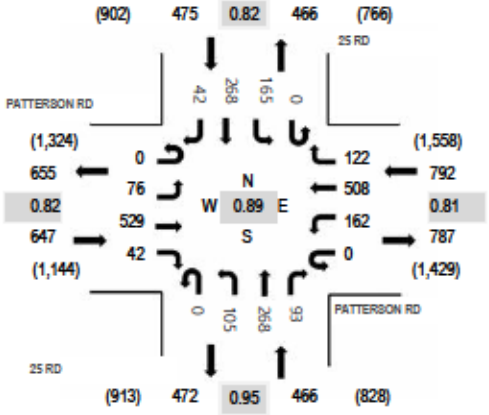
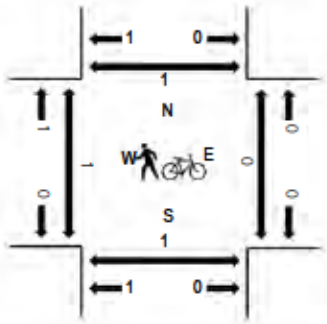
Location: 5 25 RD & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				25 RD Northbound				25 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	4	69	5	0	27	91	19	0	13	34	11	0	32	49	4	358	2,148	0	0	0	0
7:15 AM	0	10	113	9	0	37	141	16	0	15	47	18	0	42	61	8	517	2,330	0	0	0	0
7:30 AM	0	18	146	10	0	47	118	23	0	22	66	27	0	49	63	12	601	2,380	0	0	1	0
7:45 AM	0	26	168	4	0	47	132	29	0	31	63	25	0	50	86	11	672	2,319	0	0	0	0
8:00 AM	0	16	105	14	0	26	133	37	0	24	65	21	0	33	60	6	540	2,284	1	0	0	0
8:15 AM	0	16	110	14	0	42	125	33	0	28	74	20	0	33	59	13	567		0	0	0	0
8:30 AM	0	10	122	9	0	25	132	21	0	24	51	25	0	45	62	14	540		0	0	0	0
8:45 AM	0	8	112	26	0	64	169	24	0	41	56	27	0	26	67	17	637		0	0	0	0
Count Total	0	108	945	91	0	315	1,041	202	0	198	456	174	0	310	507	85	4,432		1	0	1	0
Peak Hour	0	76	529	42	0	162	508	122	0	105	268	93	0	165	268	42	2,380		1	0	1	0

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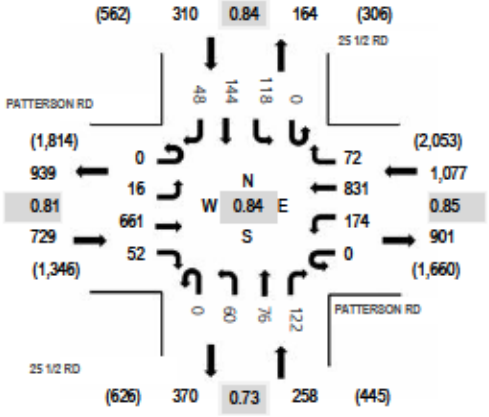
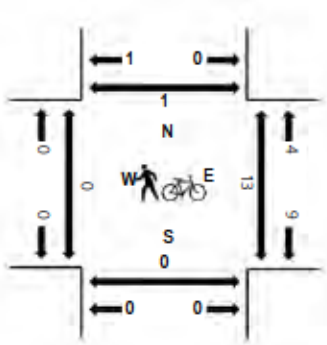
Location: 6 25 1/2 RD & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				25 1/2 RD Northbound				25 1/2 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	3	85	12	0	24	154	20	0	6	7	9	0	20	14	7	361	2,115	0	1	0	0
7:15 AM	0	3	149	5	0	24	211	23	0	6	5	20	0	26	19	7	498	2,296	0	0	0	0
7:30 AM	0	3	178	16	0	23	191	19	0	7	14	19	0	39	26	18	553	2,335	1	0	0	0
7:45 AM	0	8	207	12	0	49	243	28	0	21	15	26	0	45	33	16	703	2,374	0	0	0	0
8:00 AM	0	3	144	10	0	42	218	20	0	6	21	18	0	23	30	7	542	2,291	0	0	0	0
8:15 AM	0	1	140	12	0	43	194	16	0	10	15	26	0	28	37	15	537		0	2	0	0
8:30 AM	0	4	170	18	0	40	176	8	0	23	25	52	0	22	44	10	592		0	11	0	0
8:45 AM	0	3	149	11	0	46	232	9	0	20	33	41	0	24	36	16	620		0	4	0	0
Count Total	0	28	1,222	96	0	291	1,619	143	0	99	135	211	0	227	239	96	4,406		1	18	0	0
Peak Hour	0	16	661	52	0	174	831	72	0	60	76	122	0	118	144	48	2,374		0	13	0	0

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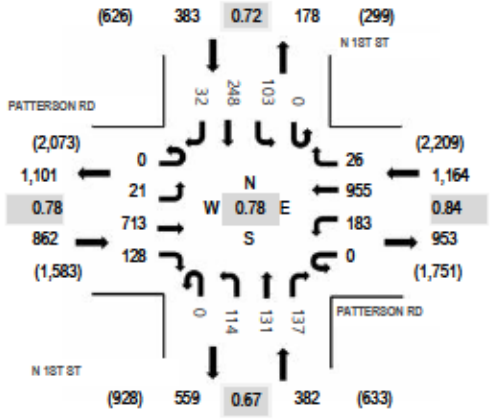
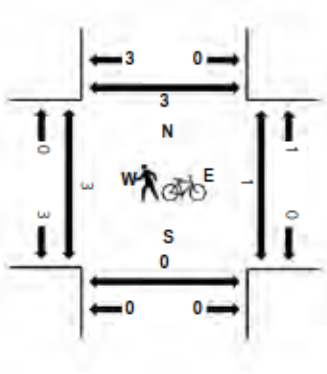
Location: 7 N 1ST ST & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				N 1ST ST Northbound				N 1ST ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	4	92	11	0	18	181	2	0	10	12	17	0	17	21	8	393	2,545	0	0	0	0
7:15 AM	0	5	153	24	0	31	233	2	0	20	14	30	0	19	40	6	577	2,772	2	0	0	0
7:30 AM	0	3	174	43	0	45	204	6	0	28	27	36	0	28	80	4	678	2,791	3	0	0	2
7:45 AM	0	8	227	42	0	52	285	8	0	32	51	59	0	29	93	11	897	2,719	0	0	0	0
8:00 AM	0	4	150	22	0	46	244	6	0	33	33	18	0	18	37	9	620	2,506	0	1	0	0
8:15 AM	0	6	162	21	0	40	222	6	0	21	20	24	0	28	38	8	596		0	0	0	0
8:30 AM	0	2	192	29	0	39	195	13	0	21	24	23	0	25	32	11	606		0	0	0	0
8:45 AM	0	6	179	24	0	66	251	14	0	30	23	27	0	24	34	6	684		0	0	0	1
Count Total	0	38	1,329	216	0	337	1,815	57	0	195	204	234	0	188	375	63	5,051		5	1	0	3
Peak Hour	0	21	713	128	0	183	955	26	0	114	131	137	0	103	248	32	2,791		3	1	0	2

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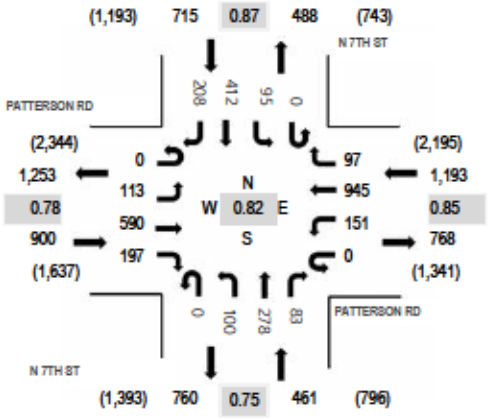
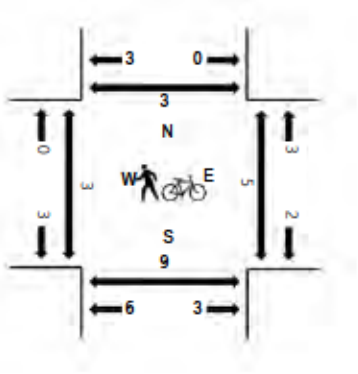
Location: 8 N 7TH ST & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				N 7TH ST Northbound				N 7TH ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	11	67	32	0	20	169	1	0	25	26	12	0	7	61	26	457	2,838	1	0	2	0
7:15 AM	0	13	115	49	0	28	215	6	0	20	52	14	0	7	80	35	634	3,181	2	1	3	0
7:30 AM	0	22	151	53	0	46	225	16	0	11	58	22	0	13	93	37	747	3,269	0	0	1	0
7:45 AM	0	39	187	64	0	38	287	27	0	34	98	21	0	21	123	61	1,000	3,213	1	1	2	0
8:00 AM	0	27	120	38	0	35	228	40	0	23	84	21	0	34	95	55	800	2,983	0	0	3	1
8:15 AM	0	25	132	42	0	32	205	14	0	32	38	19	0	27	101	55	722		1	1	2	0
8:30 AM	0	19	143	65	0	44	203	11	0	19	37	16	0	11	80	43	691		0	0	1	1
8:45 AM	0	18	150	55	0	38	259	8	0	37	53	24	0	7	81	40	770		4	0	6	4
Count Total	0	174	1,065	398	0	281	1,791	123	0	201	446	149	0	127	714	352	5,821		9	3	20	6
Peak Hour	0	113	590	197	0	151	945	97	0	100	278	83	0	95	412	208	3,269		2	2	8	1

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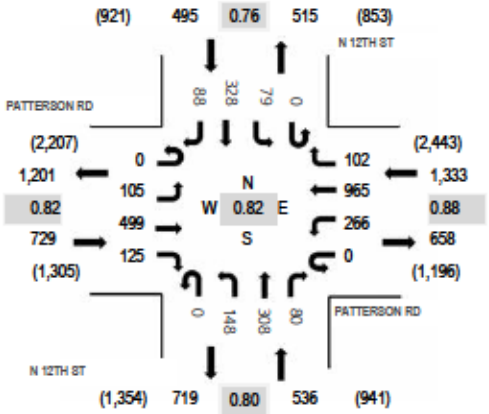
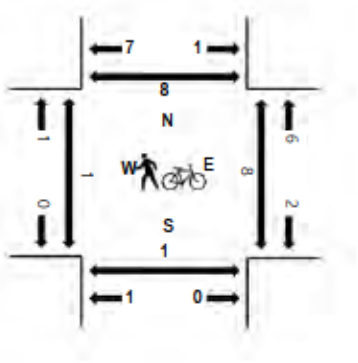
Location: 9 N 12TH ST & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				N 12TH ST Northbound				N 12TH ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	9	56	14	0	36	154	13	0	22	35	19	0	6	34	11	409	2,689	2	1	1	0
7:15 AM	0	20	94	22	0	47	204	13	0	27	45	15	0	10	70	10	577	3,042	0	0	0	0
7:30 AM	0	24	109	34	0	87	240	26	0	28	74	18	0	20	76	21	757	3,093	1	1	0	1
7:45 AM	0	41	143	37	0	67	283	34	0	43	103	21	0	22	120	32	946	3,064	0	4	0	7
8:00 AM	0	24	124	23	0	58	266	23	0	39	73	20	0	21	72	19	762	2,921	0	2	0	0
8:15 AM	0	16	123	31	0	54	176	19	0	38	58	21	0	16	60	16	628		0	0	0	0
8:30 AM	0	18	117	32	0	73	222	18	0	33	49	18	0	30	97	21	728		0	2	0	0
8:45 AM	0	21	128	45	0	62	247	21	0	38	76	28	0	17	103	17	803		4	1	3	0
Count Total	0	173	894	238	0	484	1,792	167	0	268	513	160	0	142	632	147	5,610		7	11	4	8
Peak Hour	0	105	499	125	0	266	965	102	0	148	308	80	0	79	328	88	3,093		1	7	0	8

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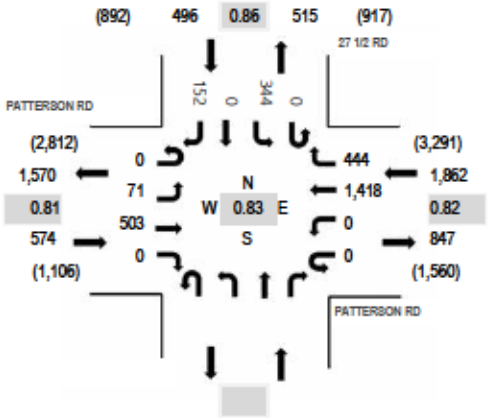
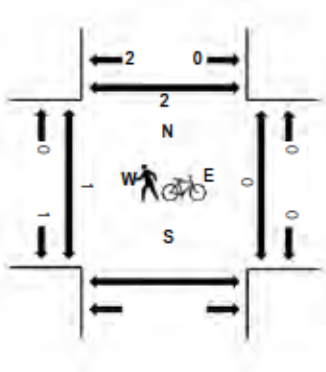
Location: 10 27 1/2 RD & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles on Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				Northbound				27 1/2 RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	8	70	0	0	0	204	79					0	46	0	16	423	2,728	0	0		0
7:15 AM	0	12	104	0	0	0	317	105					0	86	0	28	652	2,932	0	0		0
7:30 AM	0	13	122	0	0	0	381	110					0	99	0	45	770	2,844	0	0		0
7:45 AM	0	18	151	0	0	0	417	152					0	96	0	49	883	2,724	0	0		0
8:00 AM	0	28	126	0	0	0	303	77					0	63	0	30	627	2,561	1	0		1
8:15 AM	0	16	119	0	0	0	250	80					0	59	0	40	564		0	0		0
8:30 AM	0	16	115	0	0	0	325	87					0	65	0	42	650		0	0		0
8:45 AM	0	27	161	0	0	0	315	89					0	78	0	50	720		0	0		1
Count Total	0	138	968	0	0	0	2,512	779					0	592	0	300	5,289		1	0		2
Peak Hour	0	71	503	0	0	0	1,418	444					0	344	0	152	2,932		1	0		1

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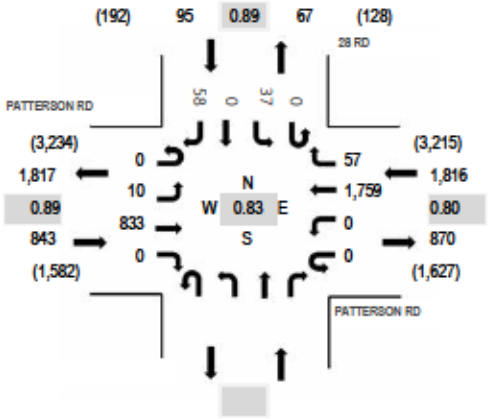
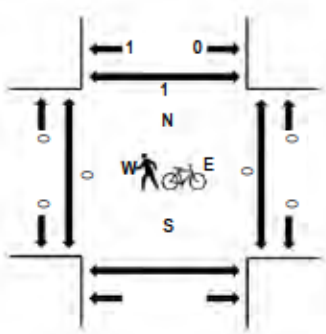
Location: 11 28 RD & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

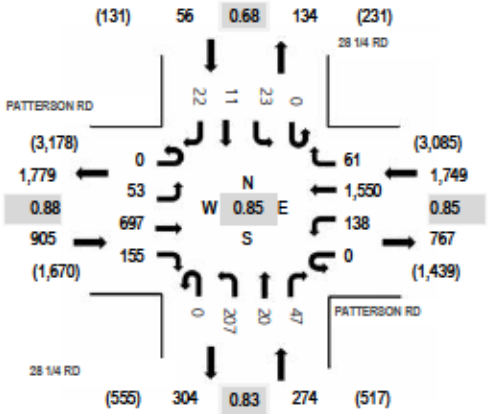
Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				Northbound				28 RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	2	110	0	0	0	284	11					0	12	0	15	434	2,601	0	0		0
7:15 AM	0	2	184	0	0	0	394	6					0	10	0	14	610	2,754	0	0		0
7:30 AM	0	2	214	0	0	0	471	12					0	11	0	17	727	2,689	0	0		0
7:45 AM	0	4	236	0	0	0	542	27					0	7	0	14	830	2,574	0	0		0
8:00 AM	0	2	199	0	0	0	352	12					0	9	0	13	587	2,388	0	0		0
8:15 AM	0	4	197	0	0	0	318	7					0	6	0	13	545		0	0		0
8:30 AM	0	5	191	0	0	0	387	7					0	9	0	13	612		0	0		0
8:45 AM	0	10	220	0	0	0	370	15					0	12	0	17	644		1	0		1
Count Total	0	31	1,551	0	0	0	3,118	97					0	76	0	116	4,989		1	0		1
Peak Hour	0	10	833	0	0	0	1,759	57					0	37	0	58	2,754		0	0		0

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

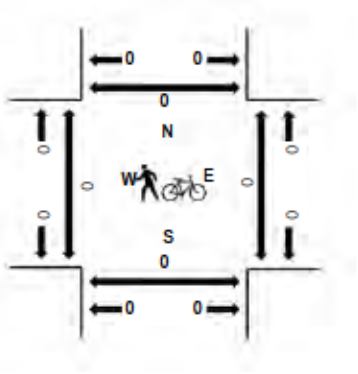
Location: 12 28 1/4 RD & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

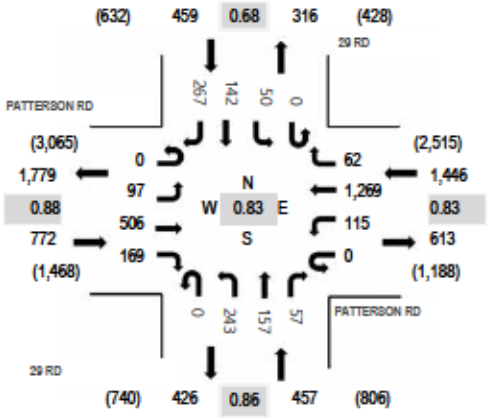
Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				28 1/4 RD Northbound				28 1/4 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	8	101	12	0	16	268	8	0	29	2	8	0	1	1	2	456	2,799	0	0	0	0
7:15 AM	0	9	153	32	0	21	352	17	0	41	4	11	0	7	1	7	655	2,984	0	0	0	0
7:30 AM	0	19	188	33	0	40	424	18	0	57	2	12	0	6	3	4	806	2,929	0	0	0	0
7:45 AM	0	14	198	50	0	46	458	13	0	69	9	8	0	3	6	8	882	2,790	0	0	0	0
8:00 AM	0	11	158	40	0	31	316	13	0	40	5	16	0	7	1	3	641	2,604	0	0	0	0
8:15 AM	0	8	152	46	0	28	268	9	0	48	7	13	0	6	4	11	600		0	0	1	0
8:30 AM	0	10	148	43	0	23	344	6	0	38	6	19	0	13	6	11	667		0	0	0	0
8:45 AM	0	16	184	37	0	27	328	11	0	44	6	23	0	4	8	8	696		0	0	0	0
Count Total	0	95	1,282	293	0	232	2,758	95	0	366	41	110	0	47	30	54	5,403		0	0	1	0
Peak Hour	0	53	697	155	0	138	1,550	61	0	207	20	47	0	23	11	22	2,984		0	0	0	0

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

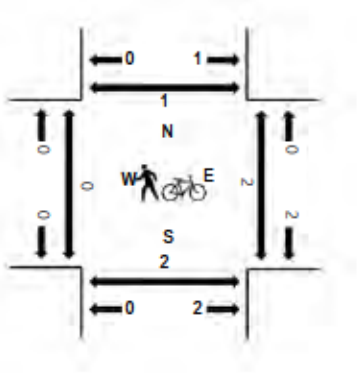
Location: 13 29 RD & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				29 RD Northbound				29 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	10	66	33	0	19	229	6	0	31	9	6	0	1	13	30	453	2,967	0	1	0	0
7:15 AM	0	18	106	46	0	23	297	13	0	68	30	11	0	5	18	41	676	3,134	0	0	0	0
7:30 AM	0	29	138	39	0	29	357	26	0	62	56	15	0	16	43	80	890	2,993	0	1	0	0
7:45 AM	0	33	141	47	0	41	377	19	0	53	50	17	0	23	56	91	948	2,725	0	1	2	1
8:00 AM	0	17	121	37	0	22	238	4	0	60	21	14	0	6	25	55	620	2,454	0	0	0	0
8:15 AM	0	7	125	43	0	25	206	2	0	55	9	22	0	10	12	19	535		1	0	0	0
8:30 AM	0	15	125	39	0	31	268	2	0	62	8	27	0	5	16	24	622		0	0	0	1
8:45 AM	0	18	162	53	0	24	249	8	0	82	18	20	0	6	6	31	677		0	1	1	1
Count Total	0	147	984	337	0	214	2,221	80	0	473	201	132	0	72	189	371	5,421		1	4	3	3
Peak Hour	0	97	506	169	0	115	1,269	62	0	243	157	57	0	50	142	267	3,134		0	2	2	1

All Traffic Data
Services Inc.
(303) 216-2439
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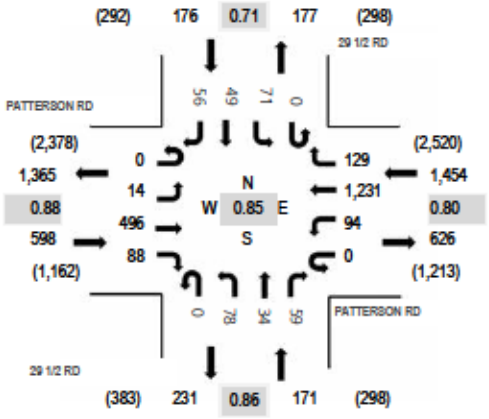
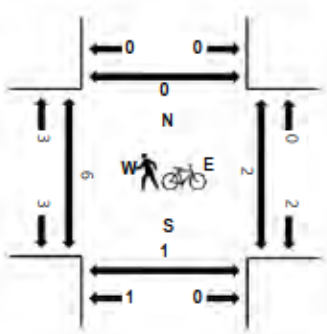
Location: 14 29 1/2 RD & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				29 1/2 RD Northbound				29 1/2 RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	6	64	7	0	17	208	21	0	7	2	4	0	7	4	12	359	2,291	0	0	1	0
7:15 AM	0	4	98	14	0	18	290	25	0	21	9	14	0	16	6	12	527	2,399	4	2	1	0
7:30 AM	0	2	131	21	0	30	382	43	0	28	8	11	0	8	17	18	699	2,332	2	0	0	0
7:45 AM	0	6	150	26	0	31	338	43	0	17	10	23	0	26	17	19	706	2,175	0	0	0	0
8:00 AM	0	2	117	27	0	15	221	18	0	12	7	11	0	21	9	7	467	1,981	0	0	0	0
8:15 AM	0	13	127	16	0	13	205	15	0	12	2	23	0	20	7	7	460		0	0	0	0
8:30 AM	0	4	126	16	0	18	268	22	0	22	6	21	0	27	6	6	542		0	0	0	0
8:45 AM	0	11	153	21	0	23	241	15	0	16	4	8	0	7	4	9	512		0	0	0	0
Count Total	0	48	966	148	0	165	2,153	202	0	135	48	115	0	132	70	90	4,272		6	2	2	0
Peak Hour	0	14	496	88	0	94	1,231	129	0	78	34	59	0	71	49	56	2,399		6	2	1	0

All Traffic Data
Services Inc.
(303) 216-2439
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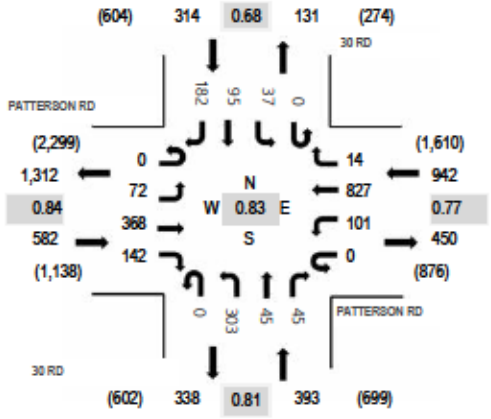
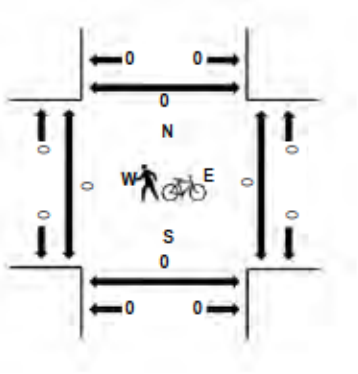
Location: 15 30 RD & PATTERSON RD AM
Date: Tuesday, March 3, 2020
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

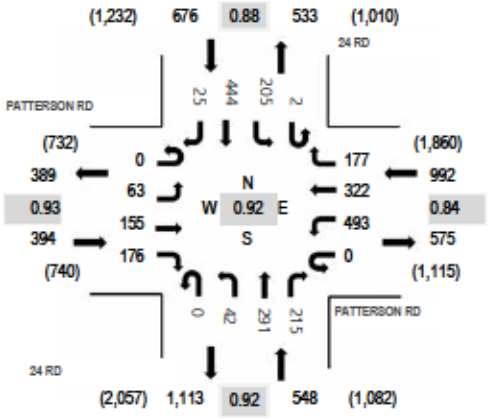
Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				30 RD Northbound				30 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	2	53	10	0	9	119	4	0	63	3	4	0	10	15	38	330	2,120	0	0	0	0
7:15 AM	0	4	94	25	0	21	184	3	0	69	7	10	0	9	20	42	488	2,231	0	0	0	0
7:30 AM	0	11	87	35	0	33	271	3	0	89	8	13	0	18	32	68	668	2,188	0	0	0	0
7:45 AM	0	30	114	51	0	30	213	4	0	96	16	9	0	5	27	39	634	2,052	0	0	0	0
8:00 AM	0	27	73	31	0	17	159	4	0	49	14	13	0	5	16	33	441	1,931	0	0	0	0
8:15 AM	0	26	90	46	0	19	132	4	0	53	10	9	0	12	8	36	445		0	1	0	2
8:30 AM	0	32	97	41	0	18	164	5	0	66	9	17	0	8	21	54	532		0	0	0	0
8:45 AM	0	28	99	32	0	17	169	8	0	42	12	18	0	9	28	51	513		0	0	0	0
Count Total	0	160	707	271	0	164	1,411	35	0	527	79	93	0	76	167	361	4,051		0	1	0	2
Peak Hour	0	72	368	142	0	101	827	14	0	303	45	45	0	37	95	182	2,231		0	0	0	0

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

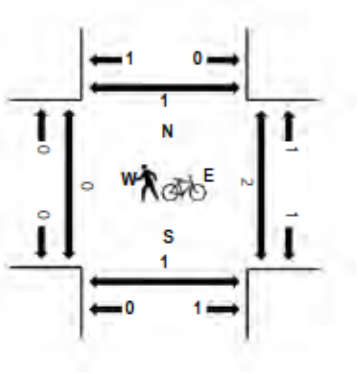
Location: 1 24 RD & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



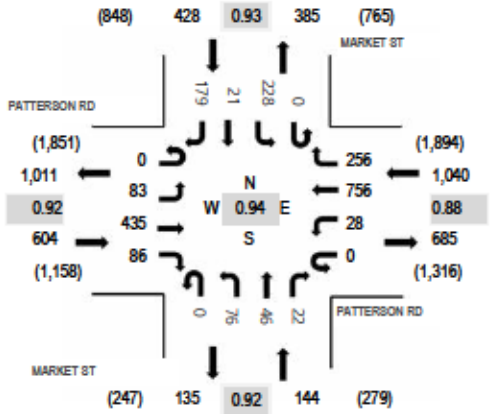
Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				24 RD Northbound				24 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	17	24	32	0	95	81	40	0	11	76	67	0	58	97	4	602	2,470	0	0	0	0
4:15 PM	0	14	39	46	0	94	69	36	0	15	68	73	0	49	96	4	603	2,566	0	0	0	0
4:30 PM	0	13	43	48	0	123	93	50	0	9	72	66	2	63	119	7	708	2,610	0	0	0	0
4:45 PM	0	16	44	37	0	95	60	36	0	13	66	40	0	52	93	5	557	2,468	0	1	1	1
5:00 PM	0	16	43	51	0	147	96	51	0	10	78	50	0	41	107	8	698	2,444	0	0	0	0
5:15 PM	0	18	25	40	0	128	73	40	0	10	75	59	0	49	125	5	647		0	0	0	0
5:30 PM	0	12	33	45	0	111	76	37	1	5	59	42	0	42	99	4	566		0	0	1	0
5:45 PM	0	16	31	37	0	127	62	40	0	10	62	45	0	37	64	2	533		0	0	0	1
Count Total	0	122	282	336	0	920	610	330	1	83	556	442	2	391	800	39	4,914		0	1	2	2
Peak Hour	0	63	155	176	0	493	322	177	0	42	291	215	2	205	444	25	2,610		0	1	1	1

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

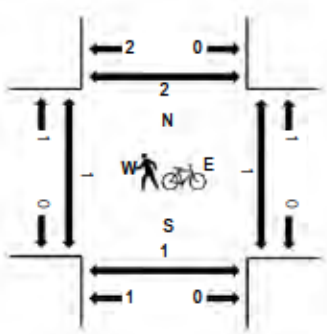
Location: 2 MARKET ST & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



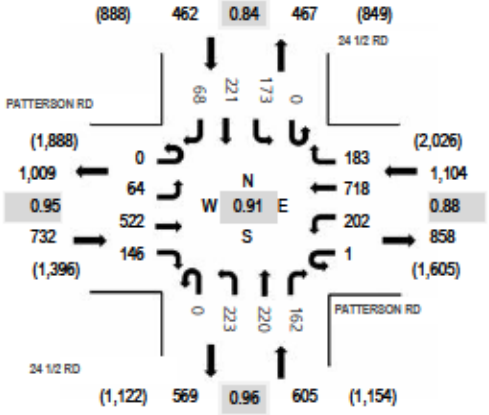
Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				MARKET ST Northbound				MARKET ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	19	111	25	1	7	160	59	0	19	9	7	0	63	9	32	521	2,095	0	0	0	0
4:15 PM	0	31	121	24	0	4	121	54	0	15	10	16	0	35	8	48	487	2,157	0	2	1	1
4:30 PM	0	17	131	27	0	3	203	67	0	22	11	1	0	50	7	50	589	2,216	0	0	0	0
4:45 PM	0	26	95	18	0	12	146	51	0	17	13	8	0	66	7	39	498	2,120	1	0	1	0
5:00 PM	0	20	109	19	0	7	224	63	0	17	15	6	0	52	3	48	583	2,084	0	1	0	1
5:15 PM	0	20	100	22	0	6	183	75	0	20	7	7	0	60	4	42	546		0	0	0	1
5:30 PM	1	21	79	12	0	2	146	79	0	15	7	13	0	55	5	58	493		0	0	0	0
5:45 PM	0	23	75	12	0	3	158	60	0	11	8	5	0	50	1	56	462		0	0	0	1
Count Total	1	177	821	159	1	44	1,341	508	0	136	80	63	0	431	44	373	4,179		1	3	2	4
Peak Hour	0	83	435	86	0	28	756	256	0	76	46	22	0	228	21	179	2,216		1	1	1	2

All Traffic Data
Services Inc.
(303) 216-2439
www.alltrafficdata.net

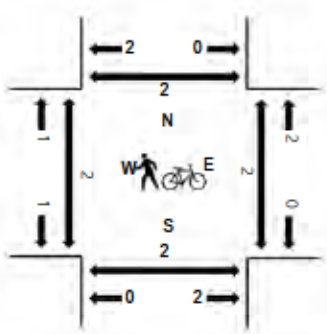
Location: 3 24 1/2 RD & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

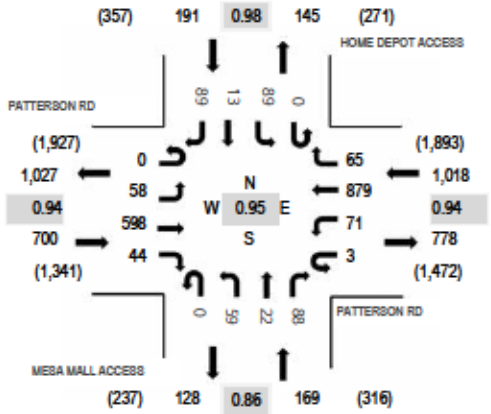
Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				24 1/2 RD Northbound				24 1/2 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	16	123	35	0	47	157	35	0	55	54	33	0	42	58	11	666	2,775	0	1	0	0
4:15 PM	0	24	127	35	0	56	170	48	0	59	57	35	0	44	54	12	721	2,903	0	0	2	0
4:30 PM	0	10	128	39	1	42	171	40	0	61	58	39	0	41	53	18	701	2,892	0	0	0	0
4:45 PM	0	16	122	38	0	49	168	47	0	43	59	43	0	42	48	12	687	2,781	0	1	0	0
5:00 PM	0	14	145	34	0	55	209	48	0	60	46	45	0	46	66	26	794	2,689	1	0	0	0
5:15 PM	0	13	120	50	0	57	172	39	0	55	59	39	0	41	41	24	710		2	0	0	0
5:30 PM	0	13	110	35	0	45	131	38	0	57	37	35	0	27	42	20	590		2	0	0	0
5:45 PM	0	10	101	38	0	43	142	16	0	37	52	36	0	40	62	18	595		0	1	1	1
Count Total	0	116	976	304	1	394	1,320	311	0	427	422	305	0	323	424	141	5,464		5	3	3	1
Peak Hour	0	64	522	146	1	202	718	183	0	223	220	162	0	173	221	68	2,903		1	1	2	0

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

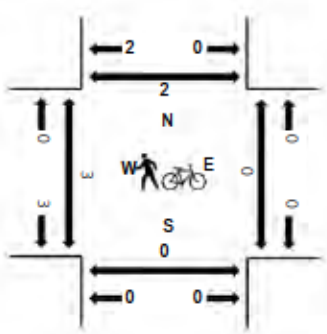
Location: 4 MESA MALL ACCESS & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				MESA MALL ACCESS Northbound				HOME DEPOT ACCESS Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	22	147	13	0	21	204	10	0	13	4	20	0	20	6	21	501	1,986	0	0	0	0
4:15 PM	0	19	148	9	1	14	183	19	0	9	6	22	0	22	6	19	477	2,029	0	0	1	0
4:30 PM	0	11	162	16	1	19	227	22	0	12	5	16	0	22	3	24	540	2,078	0	0	0	0
4:45 PM	0	18	135	13	0	22	171	16	0	18	5	23	0	24	4	19	468	1,994	0	0	0	0
5:00 PM	0	14	150	8	1	15	241	15	0	16	8	27	0	21	1	27	544	1,921	3	0	0	1
5:15 PM	0	15	151	7	1	15	240	12	0	13	4	22	0	22	5	19	526		0	0	0	1
5:30 PM	0	9	133	8	0	15	203	9	0	17	7	16	0	16	3	20	456		0	0	0	0
5:45 PM	0	8	118	7	0	6	182	8	0	11	5	17	0	14	1	18	395		0	0	0	1
Count Total	0	116	1,144	81	4	127	1,651	111	0	109	44	163	0	161	29	167	3,907		3	0	1	3
Peak Hour	0	58	598	44	3	71	879	65	0	59	22	88	0	89	13	89	2,078		3	0	0	2

All Traffic Data Services Inc.

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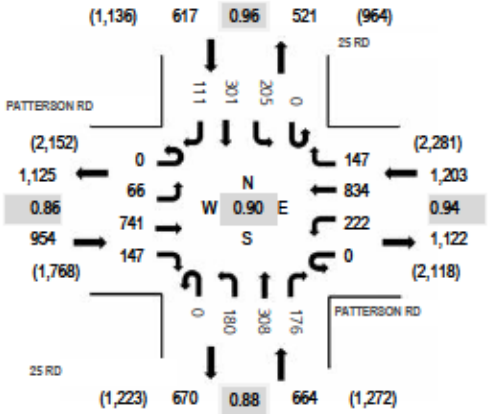
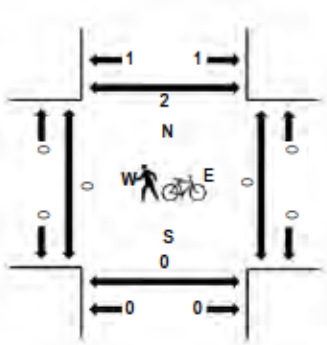
Location: 5 25 RD & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				25 RD Northbound				25 RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	16	171	35	0	56	184	31	0	41	59	57	0	44	67	30	791	3,260	0	0	0	1
4:15 PM	0	9	153	31	0	55	236	27	0	54	64	53	0	42	72	27	823	3,420	0	0	0	0
4:30 PM	0	15	180	36	0	51	209	36	0	45	69	38	0	55	73	28	835	3,438	0	0	0	1
4:45 PM	0	19	173	34	0	56	197	33	0	39	68	50	0	51	63	28	811	3,333	0	0	0	0
5:00 PM	0	18	212	46	0	56	227	42	0	57	86	49	0	49	81	28	951	3,197	0	0	0	0
5:15 PM	0	14	176	31	0	59	201	36	0	39	85	39	0	50	84	27	841		0	0	0	0
5:30 PM	0	18	161	27	0	37	174	37	0	30	78	39	0	41	67	21	730		0	0	0	0
5:45 PM	0	13	157	23	0	34	180	27	0	30	64	39	0	39	49	20	675		0	2	0	3
Count Total	0	122	1,383	263	0	404	1,608	269	0	335	573	364	0	371	556	209	6,457		0	2	0	5
Peak Hour	0	66	741	147	0	222	834	147	0	180	308	176	0	205	301	111	3,438		0	0	0	1

All Traffic Data Services Inc.
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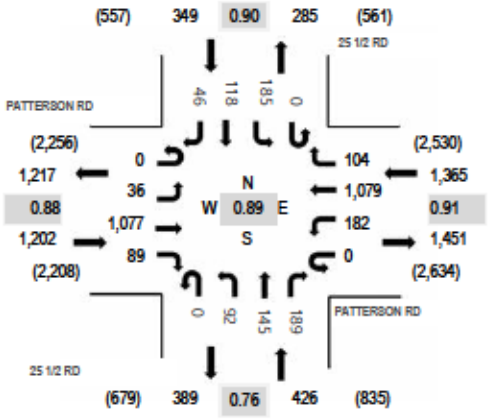
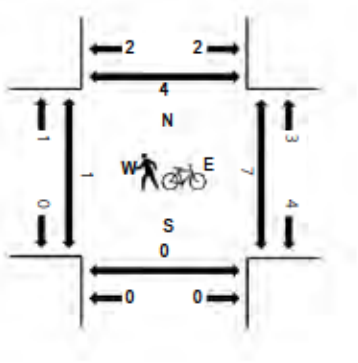
Location: 6 25 1/2 RD & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				25 1/2 RD Northbound				25 1/2 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	12	253	30	0	46	244	30	0	31	48	65	0	25	23	9	816	3,081	0	21	0	0
4:15 PM	0	7	210	15	0	35	253	17	0	24	41	45	0	24	21	10	702	3,205	1	0	0	3
4:30 PM	0	12	252	19	0	43	263	25	0	19	32	32	0	53	28	9	787	3,342	1	2	0	3
4:45 PM	0	5	257	20	0	35	255	33	0	26	26	48	0	39	21	11	776	3,217	0	0	0	1
5:00 PM	0	10	314	18	0	40	305	30	0	22	46	58	0	44	36	17	940	3,049	0	3	0	0
5:15 PM	0	9	254	32	0	64	256	16	0	25	41	51	0	49	33	9	839		0	1	0	0
5:30 PM	0	15	215	14	0	38	229	19	0	9	39	34	0	37	11	2	662		0	1	0	0
5:45 PM	0	11	216	8	0	29	210	15	0	8	22	43	0	16	20	10	608		0	2	0	0
Count Total	0	81	1,971	156	0	330	2,015	185	0	164	295	376	0	287	193	77	6,130		2	30	0	7
Peak Hour	0	36	1,077	89	0	182	1,079	104	0	92	145	189	0	185	118	46	3,342		1	6	0	4

All Traffic Data
Services Inc.
(303) 216-2439
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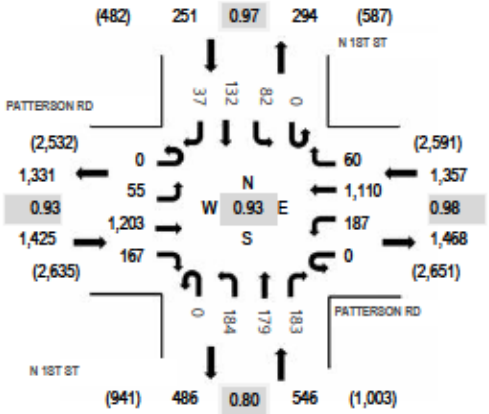
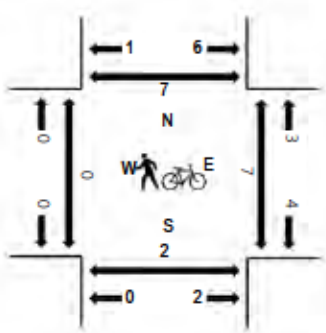
Location: 7 N 1ST ST & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				N 1ST ST Northbound				N 1ST ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	18	300	41	0	33	255	17	0	47	47	31	0	14	36	10	849	3,406	0	2	2	0
4:15 PM	0	17	220	35	0	49	291	14	0	44	34	43	0	15	36	8	806	3,524	0	6	0	1
4:30 PM	0	19	278	37	0	44	297	15	0	33	44	49	0	16	32	12	876	3,579	0	2	1	1
4:45 PM	0	11	287	49	0	50	269	13	0	48	38	46	0	24	34	6	875	3,440	0	4	0	3
5:00 PM	0	16	326	41	0	47	281	22	0	60	52	60	0	22	32	8	967	3,305	0	0	0	2
5:15 PM	0	9	312	40	0	46	263	10	0	43	45	28	0	20	34	11	861		0	1	1	0
5:30 PM	0	9	250	42	0	37	241	13	0	30	40	32	0	7	31	5	737		0	0	0	1
5:45 PM	0	18	223	37	0	34	239	11	0	23	55	31	0	17	44	8	740		0	0	0	0
Count Total	0	117	2,196	322	0	340	2,136	115	0	328	355	320	0	135	279	68	6,711		0	15	4	8
Peak Hour	0	55	1,203	167	0	187	1,110	60	0	184	179	183	0	82	132	37	3,579		0	7	2	6

All Traffic Data
Services Inc.
(303) 216-2439
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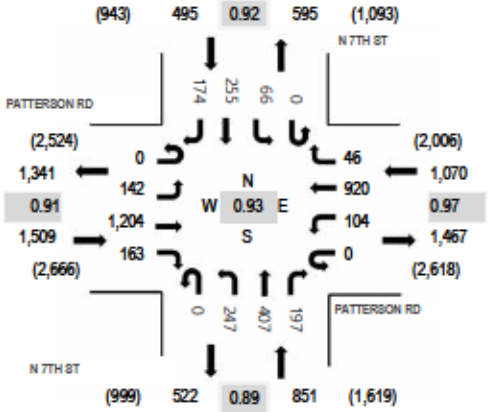
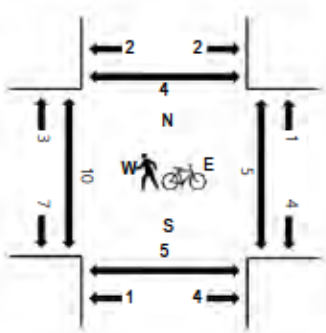
Location: 8 N 7TH ST & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				N 7TH ST Northbound				N 7TH ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	29	282	43	0	26	194	13	0	69	94	56	0	13	70	47	936	3,646	0	1	2	0
4:15 PM	0	33	198	39	0	28	232	7	0	65	89	41	0	13	57	46	848	3,768	5	0	0	0
4:30 PM	0	39	263	34	0	27	231	8	0	66	95	48	0	19	56	49	935	3,925	5	2	1	1
4:45 PM	0	35	273	42	0	27	235	17	0	60	82	53	0	16	49	38	927	3,803	2	2	2	2
5:00 PM	0	35	338	42	0	21	238	9	0	62	127	51	0	11	79	45	1,058	3,588	1	0	2	0
5:15 PM	0	33	330	45	0	29	216	12	0	59	103	45	0	20	71	42	1,005		1	0	0	0
5:30 PM	0	19	236	31	0	27	181	8	0	52	101	56	0	22	42	38	813		1	1	0	1
5:45 PM	0	22	196	29	0	25	183	12	0	42	71	32	0	6	60	34	712		0	0	0	1
Count Total	0	245	2,116	305	0	210	1,710	86	0	475	762	382	0	120	484	339	7,234		15	6	7	5
Peak Hour	0	142	1,204	163	0	104	920	46	0	247	407	197	0	66	255	174	3,925		9	4	5	3

All Traffic Data Services Inc.

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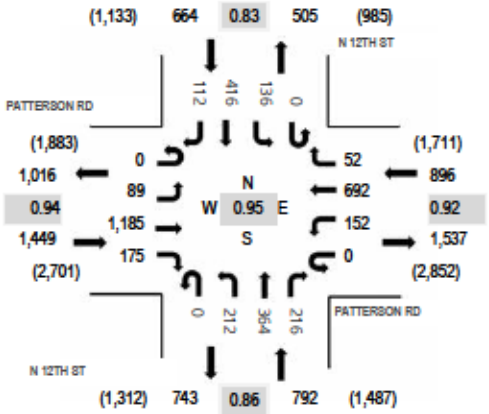
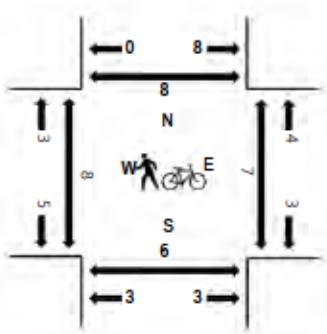
Location: 9 N 12TH ST & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				N 12TH ST Northbound				N 12TH ST Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	26	285	33	0	32	142	15	0	43	104	67	0	25	80	29	881	3,531	5	2	0	1
4:15 PM	0	25	236	37	0	34	207	14	0	45	73	49	0	30	64	16	830	3,646	2	1	0	1
4:30 PM	0	18	276	43	0	35	196	10	0	48	89	50	0	30	90	23	908	3,801	2	2	0	0
4:45 PM	0	26	277	42	0	34	179	11	0	65	83	44	0	27	94	30	912	3,700	0	1	1	0
5:00 PM	0	20	315	43	0	41	159	16	0	51	106	74	0	39	110	22	996	3,501	1	1	0	7
5:15 PM	0	25	317	47	0	42	158	15	0	48	86	48	0	40	122	37	985		2	1	1	1
5:30 PM	0	16	287	49	0	37	128	13	0	43	82	36	0	22	62	32	807		0	0	3	0
5:45 PM	0	24	205	29	0	45	132	16	0	38	72	43	0	30	67	12	713		1	1	2	0
Count Total	0	180	2,198	323	0	300	1,301	110	0	381	695	411	0	243	689	201	7,032		13	9	7	10
Peak Hour	0	89	1,185	175	0	152	692	52	0	212	364	216	0	136	416	112	3,801		5	5	2	8

All Traffic Data Services Inc.

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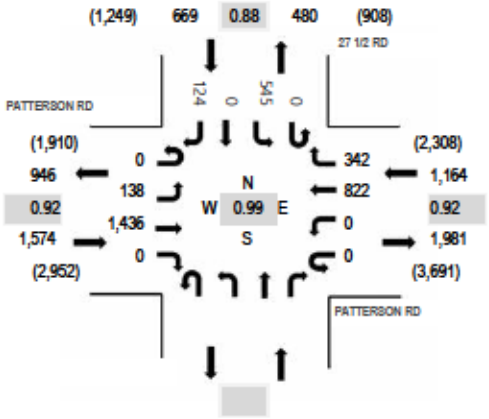
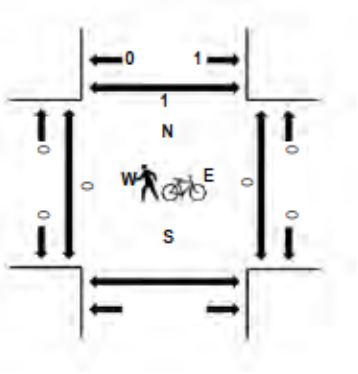
Location: 10 27 1/2 RD & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				Northbound				27 1/2 RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	56	346	0	0	0	221	59					0	135	0	30	847	3,347	0	0		0
4:15 PM	0	33	320	0	0	0	225	78					0	140	0	21	817	3,360	0	0		0
4:30 PM	0	31	332	0	0	0	225	106					0	122	0	31	847	3,407	0	0		0
4:45 PM	0	31	350	0	0	0	219	81					0	126	0	29	836	3,258	0	0		0
5:00 PM	0	35	369	0	0	0	190	76					0	159	0	31	860	3,162	0	0		1
5:15 PM	0	41	385	0	0	0	188	79					0	138	0	33	864		0	0		0
5:30 PM	0	34	279	0	0	0	204	60					0	105	0	16	698		0	0		0
5:45 PM	0	33	277	0	0	0	222	75					0	108	0	25	740		0	0		0
Count Total	0	294	2,658	0	0	0	1,694	614					0	1,033	0	216	6,509		0	0		1
Peak Hour	0	138	1,436	0	0	0	822	342					0	545	0	124	3,407		0	0		1

All Traffic Data
Services Inc.
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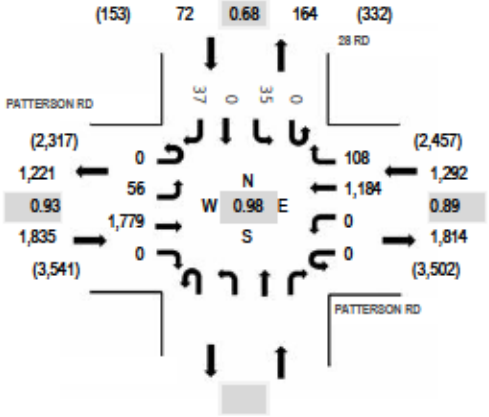
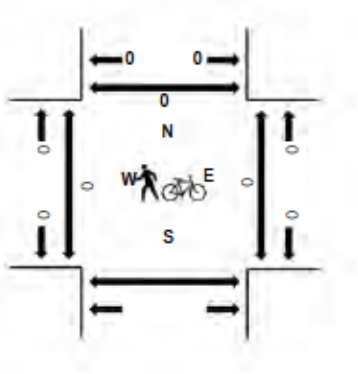
Location: 11 28 RD & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				Northbound				28 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	12	455	0	0	0	265	22					0	9	0	3	766	3,145	0	0		0
4:15 PM	0	12	452	0	0	0	306	28					0	9	0	9	816	3,199	0	0		0
4:30 PM	0	12	423	0	0	0	335	26					0	5	0	6	807	3,184	0	0		0
4:45 PM	0	17	423	0	0	0	276	21					0	10	0	9	756	3,071	0	0		0
5:00 PM	0	15	481	0	0	0	267	33					0	11	0	13	820	3,006	0	0		0
5:15 PM	0	13	493	0	0	0	249	33					0	5	0	8	801		0	0		0
5:30 PM	0	8	367	0	0	0	256	29					0	11	0	23	694		0	0		0
5:45 PM	0	17	341	0	0	0	277	34					0	7	0	15	691		0	0		0
Count Total	0	106	3,435	0	0	0	2,231	226					0	67	0	86	6,151		0	0		0
Peak Hour	0	56	1,779	0	0	0	1,184	108					0	35	0	37	3,199		0	0		0

All Traffic Data Services Inc.
(303) 216-2439
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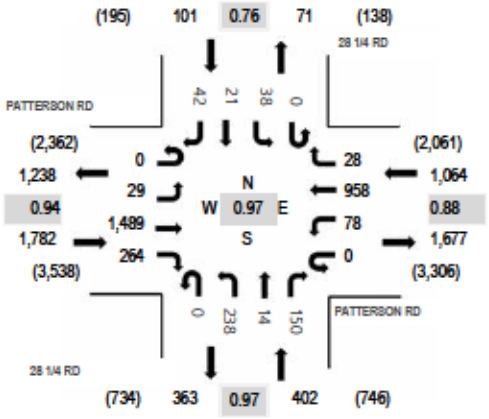
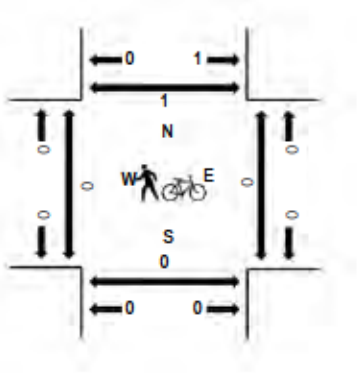
Location: 12 28 1/4 RD & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				28 1/4 RD Northbound				28 1/4 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	11	395	66	0	23	205	1	0	66	2	25	0	13	5	12	824	3,339	1	0	0	0
4:15 PM	0	9	378	72	0	21	255	9	0	63	5	28	0	8	3	12	863	3,349	0	0	0	0
4:30 PM	0	9	369	60	0	17	278	6	0	55	2	42	0	10	6	8	862	3,340	0	0	0	0
4:45 PM	0	7	348	76	0	21	207	8	0	63	2	39	0	9	6	4	790	3,250	0	0	0	1
5:00 PM	0	4	394	56	0	19	218	5	0	57	5	41	0	11	6	18	834	3,201	0	0	0	0
5:15 PM	0	9	398	74	0	38	210	7	0	51	5	34	0	9	4	15	854		0	0	0	0
5:30 PM	0	5	365	66	0	19	211	4	0	42	4	35	0	5	4	12	772		0	0	0	1
5:45 PM	0	7	311	49	0	20	254	5	0	40	7	33	0	6	3	6	741		0	2	0	0
Count Total	0	61	2,958	519	0	178	1,838	45	0	437	32	277	0	71	37	87	6,540		1	2	0	2
Peak Hour	0	29	1,489	264	0	78	958	28	0	238	14	150	0	38	21	42	3,349		0	0	0	1

All Traffic Data Services Inc.
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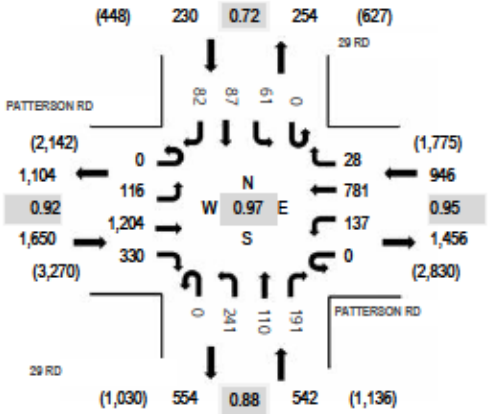
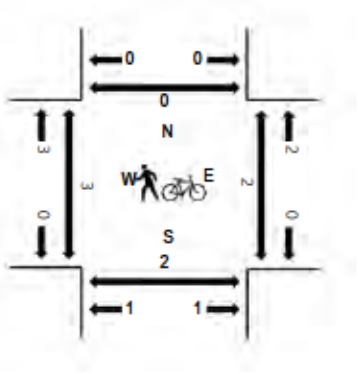
Location: 13 29 RD & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				29 RD Northbound				29 RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	31	322	99	0	34	175	7	0	56	30	53	0	19	29	17	872	3,368	0	0	0	0
4:15 PM	0	32	292	83	0	32	200	11	0	67	27	49	0	18	10	24	845	3,318	2	0	0	0
4:30 PM	0	29	294	73	0	32	214	4	0	67	26	47	0	16	35	29	866	3,361	0	0	0	0
4:45 PM	0	24	296	75	0	39	192	6	0	51	27	42	0	8	13	12	785	3,327	1	0	2	0
5:00 PM	0	44	302	80	0	32	183	6	0	54	32	42	0	11	19	17	822	3,261	1	1	0	0
5:15 PM	0	58	315	82	0	24	177	12	0	66	51	52	0	17	16	18	888		0	0	0	0
5:30 PM	0	44	283	76	0	23	157	7	0	60	49	41	0	20	24	48	832		0	1	1	0
5:45 PM	0	28	244	64	0	24	177	7	0	70	35	42	0	5	12	11	719		2	0	2	0
Count Total	0	290	2,348	632	0	240	1,475	60	0	491	277	368	0	114	158	176	6,629		6	2	5	0
Peak Hour	0	116	1,204	330	0	137	781	28	0	241	110	191	0	61	87	82	3,368		3	0	2	0

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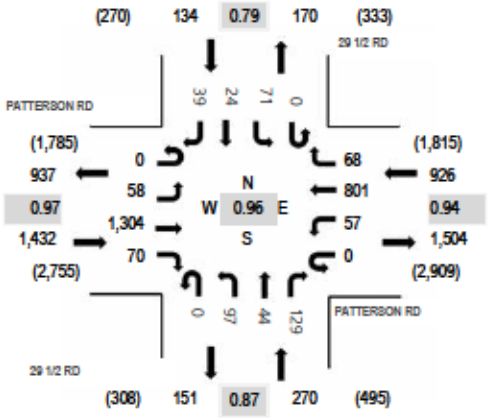
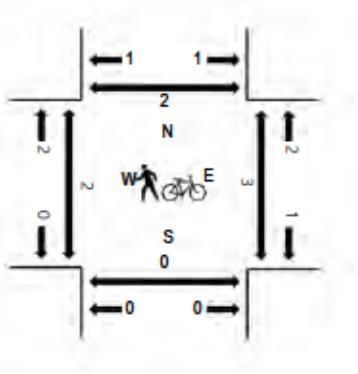
Location: 14 29 1/2 RD & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				29 1/2 RD Northbound				29 1/2 RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	5	330	19	0	18	191	21	0	26	8	44	0	14	4	8	688	2,762	2	0	0	1
4:15 PM	0	18	327	14	0	20	199	19	0	32	8	37	0	25	8	14	721	2,739	0	1	0	1
4:30 PM	0	20	333	17	0	8	223	14	0	22	12	18	0	15	8	7	697	2,707	0	1	0	0
4:45 PM	0	15	314	20	0	11	188	14	0	17	16	30	0	17	4	10	656	2,647	0	1	0	0
5:00 PM	0	15	290	14	0	15	200	14	0	26	10	40	0	24	3	14	665	2,573	2	0	0	2
5:15 PM	0	19	328	22	0	27	182	17	0	17	8	36	0	28	4	1	689		0	0	0	0
5:30 PM	0	14	308	23	0	14	178	20	0	16	9	21	0	24	6	4	637		0	0	0	0
5:45 PM	0	13	271	6	0	14	189	19	0	11	5	26	0	9	9	10	582		0	1	0	0
Count Total	0	119	2,501	135	0	127	1,550	138	0	167	76	252	0	156	46	68	5,335		4	4	0	4
Peak Hour	0	58	1,304	70	0	57	801	68	0	97	44	129	0	71	24	39	2,762		2	3	0	2

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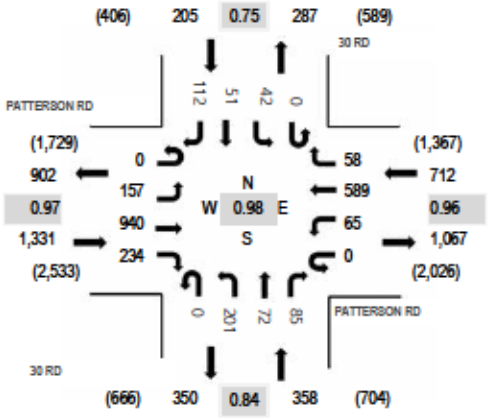
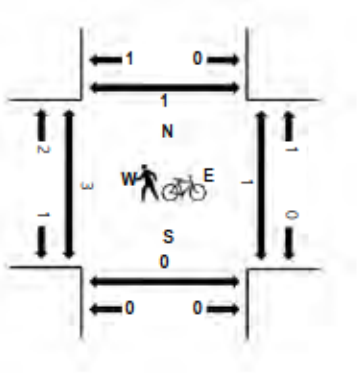
Location: 15 30 RD & PATTERSON RD PM
Date: Tuesday, March 3, 2020
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	PATTERSON RD Eastbound				PATTERSON RD Westbound				30 RD Northbound				30 RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	39	237	66	0	19	146	20	0	55	20	22	0	8	12	24	668	2,606	2	1	0	0
4:15 PM	0	46	221	54	0	14	151	10	0	45	18	23	0	15	12	41	650	2,536	0	0	0	0
4:30 PM	0	33	234	68	0	14	152	15	0	54	12	16	0	12	12	30	652	2,546	1	0	0	1
4:45 PM	0	39	248	46	0	18	140	13	0	47	22	24	0	7	15	17	636	2,486	0	0	0	0
5:00 PM	0	46	212	50	0	9	150	11	0	43	23	15	0	7	8	24	598	2,404	0	0	0	0
5:15 PM	0	37	239	55	0	14	138	13	0	53	30	25	0	10	20	26	660		0	0	0	0
5:30 PM	0	37	212	54	0	17	121	14	0	37	17	26	0	12	15	30	592		0	0	0	0
5:45 PM	0	41	173	46	0	15	144	9	0	40	24	13	0	15	13	21	554		1	1	0	0
Count Total	0	318	1,776	439	0	120	1,142	105	0	374	166	164	0	86	107	213	5,010		4	2	0	1
Peak Hour	0	157	940	234	0	65	589	58	0	201	72	85	0	42	51	112	2,606		3	1	0	1

Appendix E - Access Plan Methodology and Evaluation Process

Memorandum

TO: Patterson Road Access Plan Project Team
FROM: Janet Lundquist
DATE: March 17, 2020
PROJECT: **Patterson Road Access Study**
RE: Access Plan Methodology

This memorandum describes the general approach proposed by Stolfus & Associates, Inc. (Stolfus) to develop the Patterson Road Access Plan. The purpose of this memorandum is to outline, for the benefit of the City of Grand Junction, the primary assumptions that will be used in developing the recommended access plan and to document agency concurrence with the proposed methodology. A separate methodology for the related traffic engineering elements of the project has been prepared documenting the primary assumptions and procedures that will be used to develop future traffic projections and analysis.

STUDY AREA

The study area consists of approximately 7.0 miles of Patterson Road between I-70B (23.75 Road) and Lodgepole Street (30.75 Road). The study area is located within the City of Grand Junction in Mesa County, Colorado.

ACCESS GUIDANCE

The Street Plan Functional Classification Map within the Grand Junction Circulation Plan identifies the corridor as a Minor Arterial from I-70B (23.75 Road) to 25 Road and a Principal Arterial from 25 Road to Lodgepole Street (30.75 Road). Guidance from the Transportation Engineering Design Standards (TEDS) for applicable classifications will be considered in developing the Access Plan. Currently, the study corridor falls under two categories:

Principal Arterial

A principal arterial is a 4-lane roadway with a right-of-way of 110 feet that includes a center median and detached sidewalks. The posted speed limits range from 35 mph-45 mph. Direct access is subordinate to through traffic movements. Full movement intersections are spaced 1/2 mile apart. Exceptions to ½ mile spacing may be permitted if no reasonable alternative exists, the need for the intersection is justified, and spacing meets the functional intersection area. One access is granted per parcel if reasonable access cannot be obtained from a lower classification roadway.

Within the Principal Arterial segment, a majority of accesses will be limited to right-in/right-out movements due to the median separated roadway and to reduce vehicle conflicts. Major intersections will be full movement and will be given priority since they serve many properties and interests. These intersections may currently be signalized or may reasonably be expected to meet signal warrants in the future. Three-quarter (left-in, right-in, right-out only) movements may be permitted if operations at adjacent full movement intersections are improved and design standards are met. Single or individual

properties are typically not granted a three-quarter movement access. Accommodation for passenger vehicle U-turns at major intersections is recommended to provide alternatives for restricted left-turn movements.

Minor Arterial

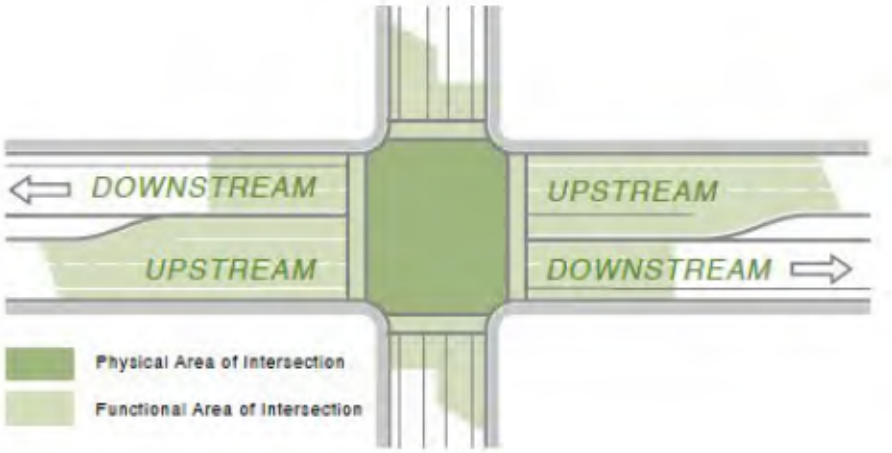
A minor arterial is a 4-lane roadway with a right-of-way of 80 feet, a center median or turn lane, and attached sidewalks. The posted speed limit is 35 mph. Direct access is subordinate to through traffic movements. Full movement intersections are spaced 1/4 mile apart. Exceptions to 1/4 mile spacing may be permitted if no reasonable alternative exists, the need for the intersection is justified, and spacing for the functional intersection area is met. One access is granted per parcel if reasonable access cannot be obtained from a lower classification roadway.

The Minor Arterial typical section allows for a center turn lane or a median. For the purposes of the Access Plan the most restrictive condition will be considered first. Within the Minor Arterial segment, a majority of accesses will be limited to right-in/right-out movements to reduce vehicle conflicts and with the assumption that the segment will be a median separated roadway. Major intersections will be full movement and will be given priority since they serve many properties and interests. These intersections may currently be signalized or may reasonably be expected to meet signal warrants in the future. Three-quarter movements may be permitted if operations at adjacent full movement intersections are improved and design standards are met. Single or individual properties are typically not granted a three-quarter movement access. Accommodation for passenger vehicle U-turns at major intersections is recommended to provide alternatives for restricted left-turn movements.

ACCESS PLAN APPROACH

The following assumptions regarding access points will be used during the development of the Access Plan:

- The existing posted speed limits will be retained through the Plan.
- Maximum 1-mile out of direction travel standard (1/2 mile each way) on Patterson Road.
- While intersection spacing guidance from TEDS will be used as a guideline, minimum full movement intersection spacing will be based on the following measures:
    - Functional Intersection Area – AASHTO and the TRB Access Management Manual indicate separation of access points by a distance not less than the functional area of the intersection. The functional intersection area extends upstream and downstream from the physical intersection. The upstream distance is a combination of the storage length, deceleration and taper length, and the perception-reaction distance required for the speed of the segment. The downstream distance is measured as either acceleration length or decision sight distance. Providing acceleration length allows vehicles to accelerate to normal speed without conflict. Providing decision sight distance allows drivers to pass through an intersection before considering potential conflicts at the next intersection. Based on the suburban character of Patterson Road through this segment, the need for acceleration lanes is low. Therefore, we will use decision sight distance as the controlling downstream functional intersection distance.



The functional intersection area will depend on the speed of the segment and the number of projected turning vehicles. As an example, in a 45-mph suburban section with a maximum of 100 turning vehicles during the peak hour, the upstream and downstream functional intersection areas (FIA) are as follows:

- Upstream FIA = 100' (SHAC storage) + 350'(AASHTO decel + taper) + 100'(Access Management Manual suburban perception-reaction) = 550'
- Downstream FIA = 590'(Access Management Manual suburban DSD)

For additional explanation of the functional intersection area, refer to attached excerpts from AASHTO A Policy on Geometric Design of Highways and Streets, 2018 and TRB Access Management Manual, 2014. The most current guidance available from AASHTO will be used for deceleration and taper lengths.

Ideally, the full functional intersection area will be provided between full movement intersections. At a minimum, the physical length needed to accommodate storage length, deceleration and taper length will be provided between intersections for the current speed limit to ensure that proposed improvements will meet current design standards on opening day upon construction.

- Other site-specific considerations as appropriate, including: locations of existing intersections, physical and/or right-of-way limitations, community and stakeholder input, type of access/traffic using access, etc.

- Three-quarter movement access points may be allowed if spacing meets functional intersection area for major intersections and traffic volumes and operations support a three-quarter movement.
- Relocate private access outside of the functional intersection area, if feasible.
- Consolidate private access to one access per ownership unless extenuating circumstances are identified related to property size, circulation and/or business operations. Multiple parcels under one ownership will be considered a single property or ownership.
- Share private accesses or locate public accesses to serve multiple properties, wherever possible.

- Eliminate direct private access to Patterson Road if reasonable access to the local street network is available. As described in TEDS Chapter 29.12.050: If a property has frontage on more than one street, access will be permitted only on those street frontages where design and safety standards can be met. The primary access shall be on the lower-order street.
- For the purposes of the access evaluation, it is assumed that Patterson Road will become a four-lane roadway with median separation based on the roadway classifications identified in the Grand Junction Circulation and TEDS. The appropriateness of additional access points between full movement intersections will be considered on a case-by-case basis. If such access is appropriate, it will be limited to right-in, right-out unless extenuating circumstances suggest that ¾ movement is more appropriate.
- The Grand Junction Circulation Plan and TEDS will be considered in identifying future access points. Any information available from the update that may impact the Patterson Road corridor will be considered. Additional or modified connections that provide circulation will be identified, if applicable. These local alternate routes may be adopted separately by the City in their Street Plan Functional Classification Map, if deemed beneficial.

- Potential techniques for access management will be identified within the study document, but specific techniques will not be identified for each access point. Full movement intersections may be signalized when warranted or other traffic control recognized by the MUTCD may be implemented.

ACCESS PLAN EVALUATION

The project team will develop a single overall recommended long-term access scenario. While options for specific areas may be identified and evaluated during the overall development of the plan, multiple corridor scenarios will not be developed and compared beyond those defined in the Traffic Methodology Memo. In order to provide a logical means for determining whether the Access Plan meets the purpose and need of the project, a compatibility index was developed. The index identifies a set of evaluation criteria that correspond with each access related project goal defined by the project team at the beginning of the project. A simple rating system that identifies if the plan is favorable, neutral or unfavorable with respect to each criterion is defined. Each of the three ratings under each criterion is given a definition specific to the criterion to assist in the evaluation. In cases where the access plan evaluation requires a comparison, the criteria will be measured against the 2045 No-ACP scenario. Please refer to the attached compatibility index for evaluation criteria and definitions.

IMPLEMENTATION

The improvements recommended in the Access Plan will represent a long-range plan to implement over time as traffic and safety needs arise and as funding becomes available. Construction of the improvements recommended may be completed using public and/or private funding. The following cases will trigger construction.

1. A property redevelops or changes use, resulting in an increase in traffic to and from the site of 20% or more. In this case, improvements at the specific access point may be required by the City. As part of the development review process, additional transportation improvements may also be necessary to address specific traffic-related impacts created by the development. These improvements will be compatible with the Access Control Plan (ACP). Upon redevelopment, the City may require property owners to provide legally defined cross-access easements for shared access points, as defined by the ACP. If a property does not redevelop, the property owner will not be required to construct access modifications. (Private Funding).

2. The City may obtain funding to complete improvements to a segment of the Patterson Road corridor. (Public Funding)

3. A safety or operational issue develops that can be mitigated through the implementation of access management techniques consistent with the ACP. Depending on the extent and type of safety or operational issue, improvements may address a segment of the Patterson Road corridor or may be limited to an isolated location or access point. (Public Funding)

It is important to remember that implementation of improvements recommended in the Access Plan will only occur if one of the triggers listed above are met. If a trigger is not met, a change to the existing condition will not be made. In short, if nothing changes, nothing changes.

A single access control plan table will be developed for this segment of Patterson Road. An access ID number and a reference point will identify the location of each access point in the table. A control point will be established for Patterson Road at I-70B (23.75 Road) to establish reference points. All other access point locations will be measured from the control point established. The access control plan table will provide a listing of each existing and future access point in the study area. For each access point the following information is provided: location, description of the current access status, the future configuration (Access Plan), and the condition(s) for change. Future exhibits graphically illustrating the Access Plan will be used for reference. In case of discrepancy, the access control plan table takes precedence over graphical illustrations.

PUBLIC INVOLVEMENT

The public involvement plan for the Access Plan will include presentations to City Council and Planning Commission. In advance of the public Open Houses a workshop will be held for the City Council and Planning Commission to explain:

- Project background information
- Access management principles and techniques
- Summary of the project process
- Benefits of Access Control Plans
- Preliminary Draft Plan

A group stakeholder meeting will be held in advance of the public first Open House with other agencies including Mesa County, CDOT, Emergency Services, School District, Grand Valley Irrigation Company and Mesa Regional Transportation Planning Organization.

Two public Open Houses will be held to gather input from property owners, tenants, and the general public. All property owners adjacent to the Patterson Road corridor within the project study area will be invited to the open houses with a post card via first class mail. A legal notice and a display ad will be published in the Grand Junction Sentinel in advance of the public Open Houses. The project team will coordinate with the City Manager's office for publications of the Open House Materials on the City website. Exhibits presenting access management principles, the study process, and the recommended draft ACP will be displayed at the Open Houses. The second Open House will present changes to the Plan based upon input from the public and project stakeholders from the first open house and one-on-one meetings. Representatives from the project team will be available for questions and discussion at all open houses.

The project team will hold one-on-one meetings after the first Open House for access points of concern or requiring complex solutions. Additional meetings with stakeholders may also take place during the one-on-one meetings. The purpose of these meetings will be to resolve outstanding issues that require detailed discussion beyond the level possible during a public meeting.

PLAN ACCEPTANCE

The final Access Plan Report and ACP Table will be presented to the Planning Commission and City Council. The final acceptance of the Plan will be in the form of a Resolution adopting the Plan and/or adopting a local ordinance. The final Access Plan will be incorporated within the Grand Junction Circulation Plan. The local alternate routes identified within the Access Plan may be adopted separately by the City in their Street Plan Functional Classification Map.

Access Plan Compatibility Index

The Access Plan will be evaluated using the following criteria to determine if the Plan meets the established project goals. In cases where the evaluation requires a comparison, the criteria will be measured against the 2045 No-Build scenario.

		Status with Respect to Criteria		
Project Goal	**Evaluation Criteria**	**Favorable (+)**	**Neutral (0)**	**Unfavorable (-)**
Provide effective and efficient through travel for traffic on Patterson Road utilizing the existing right-of-way and identify if additional right-of-way is needed.	Corridor Travel Speeds/Time	Increases/improves from No-Build scenario	Little or no change from No-Build scenario	Decreases/degrades from No-Build scenario
	Functional Intersection Area	Full functional intersection area provided between intersections.	At a minimum, accommodates turn lane storage, decel and taper lengths between intersections without overlap.	Turn lane storage, decel and taper lengths overlap between intersections.
	Number of Conflict Points	Fewer conflict points per mile	Number of conflict points maintained	More conflict points per mile
	Right-of-way	Proposed ACP improvements can be implemented within the existing right-of-way	Proposed ACP improvements will require minimal right-of-way typical to a public project which may include minor ROW or easements on a few properties.	Proposed ACP improvements will require significant right-of-way purchase which may include full takes and/or impacts to numerous properties.
Provide safe, effective, and efficient access to and from Patterson Road for businesses, residents, and guests to support the economic viability of the City of Grand Junction and Mesa County.	Intersection Sight Distance	More intersections have adequate sight distance	Same number of intersections have adequate sight distance	Fewer intersections have adequate sight distance
	Intersection LOS or Critical Movements	More intersections or left turn movements operating at better LOS	Intersections or left turn movements operating at similar LOS	More intersections or left turn movements operating worse LOS
	Conformance with Grand Junction TEDS manual	More locations meet auxiliary lane standards	Some locations meet auxiliary lane standards	Fewer locations meet auxiliary lane standards
	Out of Direction Travel Distance	Less out-of-direction travel distance is required	No change	More out-of-direction travel distance is required
	Intersection Crash Risk	Reduced by implementing needed physical improvements and access control measures	Maintained by implementing needed physical improvements only	Increased due to failure to implement needed physical improvements or access control measures
	Business Market Area	Expands market area for the majority of businesses in the corridor	Market area maintained for a majority of businesses in the corridor	Reduced market area for a majority of businesses in the corridor
Maintain compatibility with existing and proposed street network connections that provide local circulation to support the transportation system.	Local Route Circulation	Improve circulation via local routes	Maintain circulation via local routes	Reduce circulation via local routes
	Serviceability of Local Routes to Developments and Properties within the Study Area	Improve serviceability of local routes	Maintain serviceability of local routes	Reduce serviceability of local routes
Support alternative modal choices, including transit, pedestrian, and bicycle routes.	Pedestrian/Bicycle Parallel Access	Number of access points reduced	Number of access points maintained	Number of access points increased
	Pedestrian/Bicycle Crossing Opportunities	Number of potential warranted signalized full movement intersections with opportunities for crossings increased compared to No-Build	No changes to number of potential warranted signalized full movement intersections with opportunities for crossings compared to No-Build	Number of potential warranted signalized full movement intersections with opportunities for crossings decreased compared to No-Build
	Transit Opportunities	Increases opportunities to expand future transit plans	Maintains compatibility with future transit plans	Reduces compatibility with future transit plans
Provide a plan that can be implemented in phases.	Public Support	Has positive public support	Has balanced public support	Does not have public support
	Phasing Opportunities	Plan recommendations can be segmented into logical, compatible pieces funded by private development	Plan recommendations can be segmented into logical, compatible pieces requiring public & private funding	Plan recommendations not easily segmented and require significant public investment to implement
	Physical Constraints	No physical constraints	Manageable physical constraints	Physical constraints are not manageable
	Funding Opportunities	Commitment for public and/or private funding	Opportunity for public and/or private funding	Opportunity for public and/or private funding unlikely
Maintain compatibility with previous local planning efforts, such as, the GVCP Plan, Ballot 2A measure, and the One Grand Junction Comprehensive Plan.	Compatibility with Local Planning	Expands/improves upon previous local planning recommendations	Consistent with previous local planning recommendations	Not consistent with previous local planning efforts

Access Plan Compatibility Index

Stolfus

The Access Plan will be evaluated using the following criteria to determine if the Plan meets the established project goals. In cases where the evaluation requires a comparison, the criteria will be measured against the 2045 No-Build scenario.

Project Goal	Evaluation Criteria	Rating	Reasoning
Provide effective and efficient through travel for traffic on Patterson Road utilizing the existing right-of-way and identify if additional right-of-way is needed.	Corridor Travel Speeds/Time	Favorable	The segment PFFS is approximately 1% better with the ACP. Generally the travel speed and corridor travel time are better than the No-Build.
	Functional Intersection Area	Neutral	Generally full functional intersection area is provided between intersections. There are a few locations, including between 24 Rd and Market St and a few 3/4 movement locations where only turn lane requirements can be met or a variance is required. In addition, conditional safety access points are identified for public road intersections inside the functional intersection area that have alternative circulation options, These access points may be closed in the future if safety issues develop.
	Number of Conflict Points	Favorable	Access points decrease from 283 to 149-160 total access points and there are over 125 restricted movement access points resulting in a significant reduction in conflict points.
	Right-of-way	Neutral	Typical ROW easements for a public project anticipated to install identified auxiliary lanes and to install a barrier median through the narrow segment between 1st St and Mira Vista.
Provide safe, effective, and efficient access to and from Patterson Road for businesses, residents, and guests to support the economic viability of the City of Grand Junction and Mesa County.	Intersection Sight Distance	Favorable	Restricting movements at locations with sight distance concerns such as between 24 1/2 Road and the Home Depot access and in the narrow section between 1st St and Mira Vista has reduced the risk of conflicts due to sight distance.
	Intersection LOS or Critical Movements	Neutral	5 intersections operate at better LOS, 3 intersections operate at worse LOS. Generally, the intersection results are similar to the No Build scenario or slightly better.
	Conformance with Grand Junction TEDS Manual	Favorable	The Plan allows for full movement intersections and 3/4 movement access points to meet the auxiliary lane standards by protecting functional intersection areas at intersections.
	Out of Direction Travel Distance	Unfavorable	Out of direction travel increases due to the application of limited movement intersections. The 1-mile out-of-direction travel standard established at the beginning of the project is followed using 3/4 movement's where signals are spaced farther apart.
	Intersection Crash Risk	Favorable	The intersection crash risk has been reduced by implementing needed physical improvements and access control measures through anticipated implementation of raised medians throughout the corridor to restrict movements.
	Business Market Area	Favorable	The market area is maintained for a majority of businesses in the corridor as evidenced by improved/unchanged travel times.
Maintain compatibility with existing and proposed street network connections that provide local circulation to support the transportation system.	Local Route Circulation	Favorable	The Plan is consistent with the GJCP Plan and recommends alternative routes that will help improve circulation via existing and proposed local routes to provide circulation for restricted movement access points at adjacent full movement intersections.
	Serviceability of Local Routes to Developments and Properties within the Study Area	Favorable	Access points are compatible with routes identified in the GJCP Plan to serve major traffic generators and consistent with travel patterns. Full movement access points and 3/4 movements serve public road intersections or private access points supporting multiple properties.
Support alternative modal choices, including transit, pedestrian, and bicycle routes.	Pedestrian/Bicycle Parallel Access	Favorable	The number of access points is reduced along the corridor thereby reducing conflicts for parallel ped/bike routes.
	Pedestrian/Bicycle Crossing Opportunities	Neutral	No changes to number of signalized full movement intersections with opportunities for crossings compared to No-Build. Recommend further traffic and safety analysis of future opportunities for mid-block crossings to support pedestrian accessibility and transit access.
	Transit Opportunities	Neutral	The Plan maintains compatibility with future transit plans along the corridor.
Provide a plan that can be implemented in phases.	Public Support	Neutral	Generally the public supports improving Patterson Road. Some individual property owners view the plan unfavorably as it relates to their individual property, but not as it relates to the entire corridor. Property owners that participated in the outreach program helped form the plan and several revisions were incorporated based on public comment. In particular, several conditional right-in,right-out access points were added to clearly denote where redevelopment would trigger the closure of the access rather than a public project.
	Phasing Opportunities	Favorable	The plan recommendations can be segmented into logical, compatible pieces funded by private development. Conditional access points provided for interim development conditions. (Public funding may be used to implement plan, if available).
	Physical Constraints	Neutral	Beyond the narrow segment between 1st St and Mira Vista, few physical constraints have been identified and are anticipated to be manageable. (Several physical constraints identified during the development of the plan through one-on-one meetings and observation resulted in modifications to the plan.)
	Funding Opportunities	Favorable	Plan implementation has potential for public and/or private funding as redevelopment and corridor development occurs. Several public projects that support access and circulation are already funded through the Ballot 2A measure. City of Grand Junction is actively applying access management principles and plan recommendations with developments currently in process.
Maintain compatibility with previous local planning efforts, such as, the GJCP Plan, Ballot 2A measure, and the One Grand Junction Comprehensive Plan.	Compatibility with Local Planning	Favorable	The Plan is compatible with existing planning and will improves upon previous local planning recommendations including the GJCP Plan, Ballot 2A measure, and One Grand Junction Comprehensive Plan. The ACP has expanded upon the GJCP Plan to identify additional circulation routes.

Functional Intersection Area References

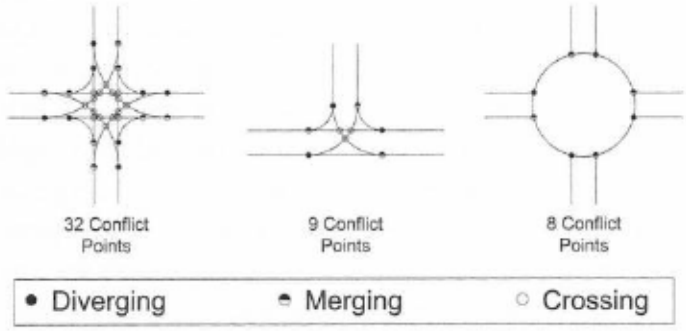


Figure 9-1. Conflict Points at Various Intersection Types

9.2.2 Intersection Functional Area

An intersection is defined by both its functional and physical areas (*18*), as illustrated in Figure 9-2. The functional area of an intersection extends both upstream and downstream from the physical intersection area and includes any auxiliary lanes and their associated channelization.

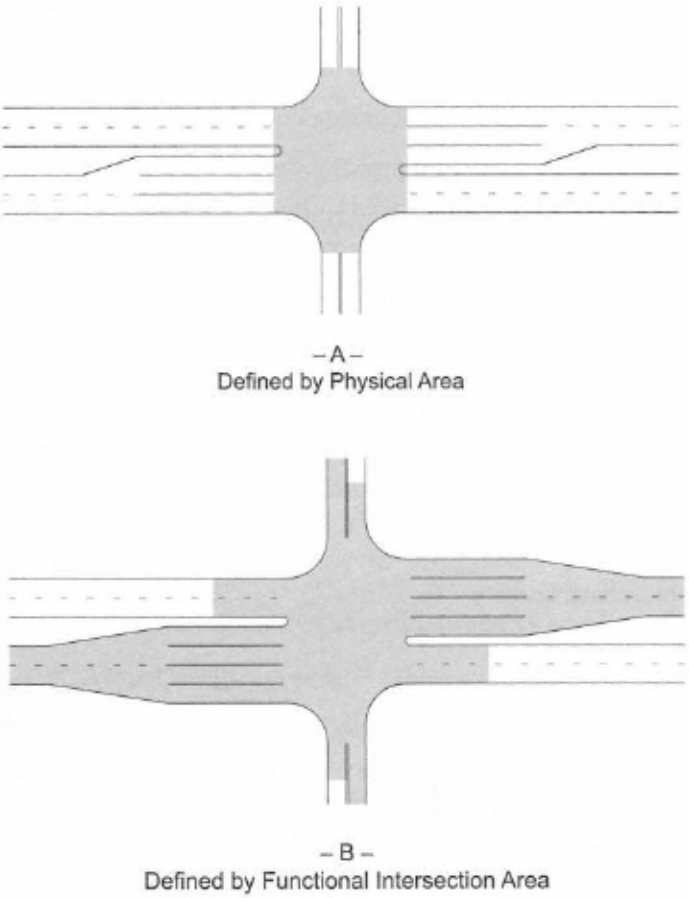


Figure 9-2. Physical and Functional Area of an Intersection

The functional area on the approach to an intersection or driveway consists of three basic elements: (1) perception–reaction decision distance, (2) maneuver distance, and (3) queue-storage distance. These elements are shown in Figure 9-3. The distance traveled during the perception–reaction time will depend upon vehicle speed, driver characteristics, and driver familiarity with the location. Where there is a left- or right-turn lane, the maneuver distance includes the length needed for both braking and lane changing. In the absence of turn lanes, it involves braking to a comfortable stop. The storage length should be sufficient to accommodate the longest queue expected most of the time. Ideally, driveways should not be located within the functional area of an intersection, as shown in Figure 9-2, or within the influence area of an adjacent driveway.

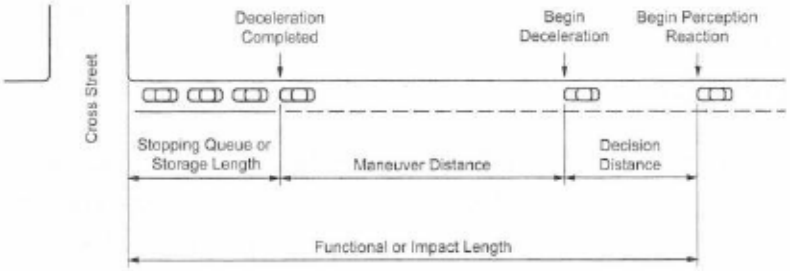


Figure 9-3. Elements of the Functional Area of an Intersection

9.2.3 Design Objectives

The key to any intersection design is achieving a set of fundamental design principles that includes speed reductions, lane alignments, and human factors needs. The goal of any intersection design, regardless of type or location, should be to implement the following principles:

- Reduce vehicle speeds through the intersection, as appropriate;
- Provide the appropriate number of lanes and lane assignment to achieve adequate capacity, lane volume, and lane continuity;
- Provide channelization that operates smoothly, is intuitive to drivers, and results in vehicles naturally using the intended lanes;
- Provide adequate accommodation for the design vehicles;
- Meet the needs of pedestrians and bicyclists; and
- Provide appropriate sight distance and visibility.

Each element described above influences the operational efficiency and potential for crashes at intersections. When developing a design, the appropriate balance of operational performance for various modes, safety, and cost considerations should be sought throughout the design process. Favoring one component of the design may negatively affect another.

Deceleration lanes are advantageous on higher speed roads, because the driver of a vehicle leaving the roadway has no choice but to slow down on the through-traffic lane if a deceleration lane is not provided. The failure to brake by the following drivers, because of a lack of alertness, may result in rear-end collisions. Acceleration lanes are advantageous on roads without stop control, particularly those with higher operating speeds and/or higher volumes. Acceleration lanes are not desirable at all-way stop-controlled or signalized intersections where entering drivers can wait for an opportunity to merge without disrupting through traffic. For additional design guidance related to lengths and other aspects of deceleration and acceleration auxiliary lanes, refer to Section 10.9.6.

9.7.2 Deceleration Lanes

Figure 9-32 illustrates the upstream functional area of an intersection in relation to the components of deceleration lane length, which consist of the perception–reaction distance, the lane change and deceleration distance (also called the maneuver distance), and the storage length (also called the queue storage distance) (*39*).

Desirably, the total physical length of the auxiliary lane should be the sum of the length for these three components (lane change, deceleration, and storage distances). Common practice, however, is to accept a moderate amount of deceleration within the through lanes and to consider the taper length as a part of the deceleration within the through lanes. Each component of the deceleration lane length is discussed below.

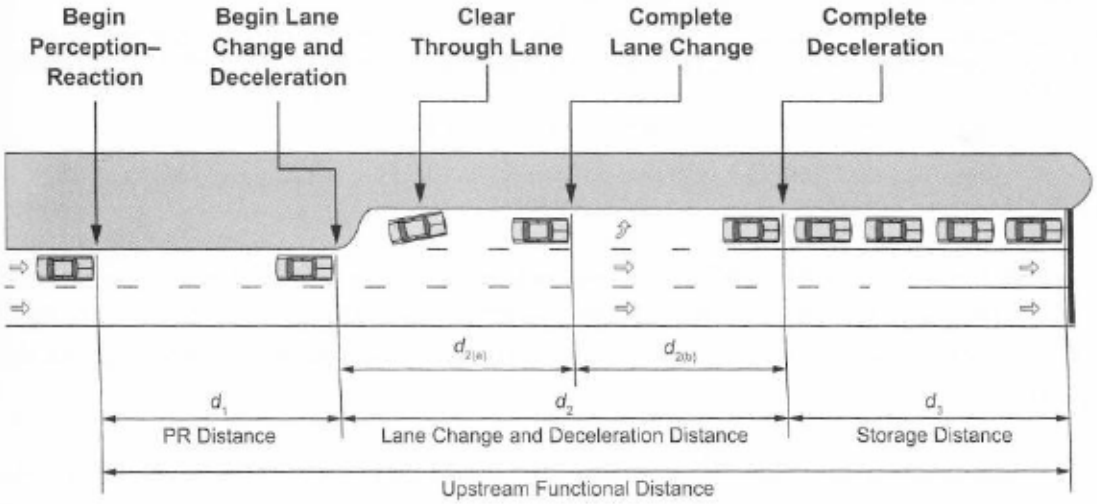
9.7.2.1 Perception–Reaction Distance

The perception–reaction distance (d_1) in Figure 9-32 represents the distance traveled while a driver recognizes the upcoming turn lane and prepares for the left-turn maneuver. The distance increases with perception–reaction time and speed. The perception–reaction time varies with the driver's familiarity with the roadway segment and state of alertness; for example, an alert driver who is familiar with the roadway and traffic conditions has a smaller perception–reaction time than an unfamiliar driver. Traffic conditions on urban and suburban roadways could result in drivers having a higher level of alertness than those on highways in rural areas. Therefore, a value of 1.5 s is often used as the perception–reaction time for suburban, urban, urban core, and rural town contexts, and 2.5 s is often used for rural contexts (*44*).

Provision for deceleration clear of the through-traffic lanes is a desirable objective on arterial roads and streets and should be incorporated into design, whenever practical. Approximately two-thirds of the drivers observed making left turns in a research study concerning turn lanes used deceleration rates greater than 6.5 ft/s^2 [2.0 m/s^2] to come to a stop at the stop line (*16*). A turn lane design based on that rate will accommodate the preferred behavior of 85 percent of turning drivers at high-speed sites. Table 9-20 presents the estimated distances needed by drivers to maneuver from the through lane into a left- or right-turn lane and brake to a stop based on an equivalent deceleration rate of 6.5 ft/s^2 [2.0 m/s^2]. These distances are based on accommodat-

ing observed driver behavior; drivers and vehicles are capable of much greater comfortable, controlled deceleration, when needed. Since provision of deceleration length based deceleration at a rate of 6.5 ft/s² [2.0 m/s²] is not always practical, it should be noted that drivers are capable of much higher deceleration rates. For example, the stopping sight distance calculations in Chapter 3 use 11.2 ft/s² [3.4 m/s²] as a comfortable, controlled deceleration threshold for most drivers and the *Access Management Manual* (*48*) presents distances for "limiting conditions" based on the equivalent of a 9.9-ft/s² [3.0-m/s²] deceleration rate throughout the full deceleration length (i.e., taper and full-width deceleration lane). Thus, deceleration rates greater than 6.5 ft/s² [2.0 m/s²] may be used where needed.

As noted above, it is not practical on many facilities to provide the full length of the auxiliary lane for deceleration due to constraints such as restricted right-of-way, distance available between adjacent intersections, and storage needs. However, research has demonstrated that providing a left- and right-turn lane on any intersection approach has a substantial crash reduction benefit (*22*). Therefore, turn lanes should be installed where warranted (see Section 9.7.3), even where the distances in Table 9-20 cannot be achieved.



Where:

d_1 = distance traveled while driver recognizes upcoming turn lane and prepares for the left-turn maneuver

$d_{2(a)}$ = distance traveled while decelerating and changing lanes from the through-lane into the turn lane

$d_{2(b)}$ = distance traveled during deceleration after lane change

d_3 = distance provided for the storage of the queue of stopped vehicles waiting to turn

Figure 9-32. Functional Area Upstream of an Intersection Illustrating Components of Deceleration Lane Length

Table 9-20. Desirable Lane Change and Deceleration Distances

U.S. Customary		Metric	
Speed (mph)	Lane Change and Deceleration Distance (ft)	Speed (km/h)	Lane Change and Deceleration Distance (m)
20	70	30	25
25	105	40	35
30	150	50	50
35	205	55	65
40	265	65	85
45	340	70	105
50	415	80	130
55	505	90	155
60	600	95	185
65	700	105	215
70	815	110	250

Notes:

1. The lane change and deceleration lengths are shown as d_2 in Figure 9-32.
2. Deceleration lengths are based on a 6.5 ft/s² [2.0 m/s²] deceleration throughout the entire length. Larger deceleration rates may be used when deceleration lengths based on 6.5 ft/s² [2.0 m/s²] are impractical.
3. Access points should not be located in the deceleration areas.

9.7.2.2 Storage Length

A deceleration lane should be sufficiently long to store the number of vehicles likely to accumulate in a queue during a critical period. The storage length should be sufficient to avoid spillback of turning vehicles into the through-travel lanes waiting for a signal change or for a gap in the opposing traffic flow.

At signalized intersections, the storage length needed should be determined by an intersection traffic analysis, and will depend on the signal cycle length, the signal phasing arrangement, and the rate of arrivals and departures of turning vehicles. The storage length is a function of the probability of occurrence of events and should usually be based on 1.5 to 2 times the average number of vehicles that would need to be stored per signal cycle, which should be estimated based on the design volume or directly from traffic counts. Where turning lanes are designed for two-lane operation, the storage length is reduced to approximately half of that needed for single-lane operation. For further information, refer to the *Highway Capacity Manual* (*49*).

The storage length needed for a left-turn lane for any set of turning movement volumes and an assumed probability the storage length will be exceeded can be determined with the following sequence of equations, adapted from (*16*):

14

Functional Intersection Area and Access Location

14.1 INTRODUCTION

The area around an urban intersection is complex and unique. It is affected by the numerous conflicts that can occur within and near the intersection. Consequently, the design and control of access features, geometrics, and operations in the vicinity of intersections must be explicitly considered. Considerations include

- Geometrics within and near the intersection, such as number and width of lanes, presence of raised medians, curb returns, channelization features, and turn lanes;
- Traffic conditions, including the volume, peak times, mix of vehicle types, speeds, traffic control, and queuing;
- Driver performance and human factors, including perception–reaction time, deceleration characteristics, and drivers' understanding of traffic controls;
- Transit, pedestrian, and bicycle presence, considering the number, frequency, and location of transit stops, pedestrian crossings, and bicycle lanes; and
- Land use activities that require access, generate travel demand, and require transportation service for patrons and deliveries.

Management of conflicts within the intersection area requires identification of the functional area of the intersection. The functional area of an intersection extends both upstream and downstream from the physical intersection area and includes the longitudinal limits of auxiliary lanes. The influence area associated with a driveway includes (*a*) the impact length (the distance back from a driveway in which cars begin to be affected), (*b*) the perception–reaction distance, and (*c*) the car length.

Thus, the functional intersection area includes any area upstream or downstream of an intersection where intersection operation and conflicts significantly influence driver behavior, vehicle operations, or traffic conditions. Consequently, the functional intersection area can always be expected to be larger than the physical intersection, as shown in Exhibit 14-1. Although the intersection depicted in Exhibit 14-1 is a typical at-grade intersection,

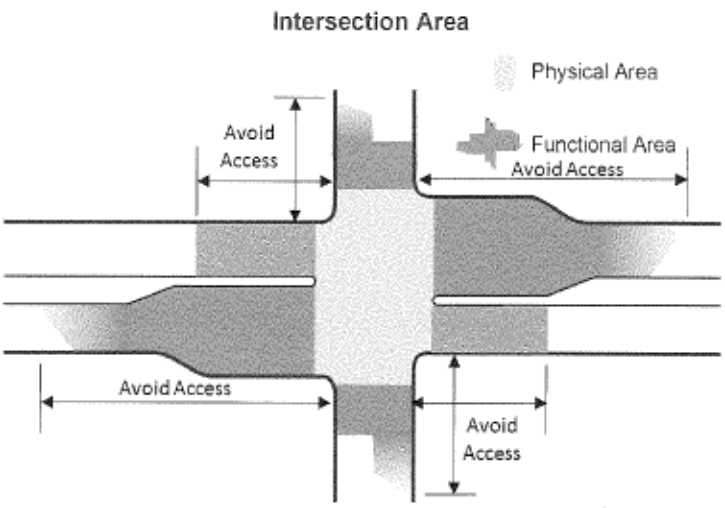


EXHIBIT 14-1 Functional area in which access should be avoided (*1*).

the concept of functional intersection area applies to stop-controlled intersections, signalized intersections, and roundabouts.

Ideally, no access should be provided within these functional distances. If access must be provided within the functional distance, the challenge is to determine the best location and the type of access that may be permitted. This chapter provides methods and guidelines for determining the upstream and downstream functional distances of an intersection, how to manage access connections within the functional area, and how to determine the best location, or window, where access can be provided with the least negative impact on the intersection. Also addressed are considerations relative to connection on opposite sides of a roadway, as well as the location of transit access.

14.2 UPSTREAM FUNCTIONAL DISTANCE

The presence of an auxiliary lane, such as a right-turn lane, can potentially extend the functional intersection area if the transition from the through lane to the turn lane requires additional time and attention by the driver. As illustrated in Exhibit 14-2, the upstream functional distance of an intersection on a roadway consists of three elements:

- Distance traveled during a perception–reaction time (d_1);
- Deceleration distance while the driver maneuvers to a stop (d_2); and
- Queue storage (d_3).

The minimum physical length consists of the perception–reaction distance (d_1), the deceleration–maneuver distance (d_2), plus the queue storage (d_3). Exhibit 14-2*a* demonstrates the upstream functional intersection area for locations without a turn lane; Exhibit 14-2*b* represents the upstream functional intersection area at locations where a right-turn lane is present.

The functional intersection area is defined for through lanes on the basis of the same three elements: perception–reaction distance, deceleration to a stop at the back of the queue, and size of the queue. Thus, the functional intersection area is defined by the largest functional intersection distance of the lanes on an approach.

14.2.1 Distance Traveled During Perception–Reaction Time

Distance d_1 in Exhibit 14-2 increases with perception–reaction time and speed. The perception–reaction time varies with the driver's familiarity with the roadway segment and state of alertness. The perception–reaction time of an alert driver who is familiar with the roadway and traffic conditions is less than that of an unfamiliar driver.

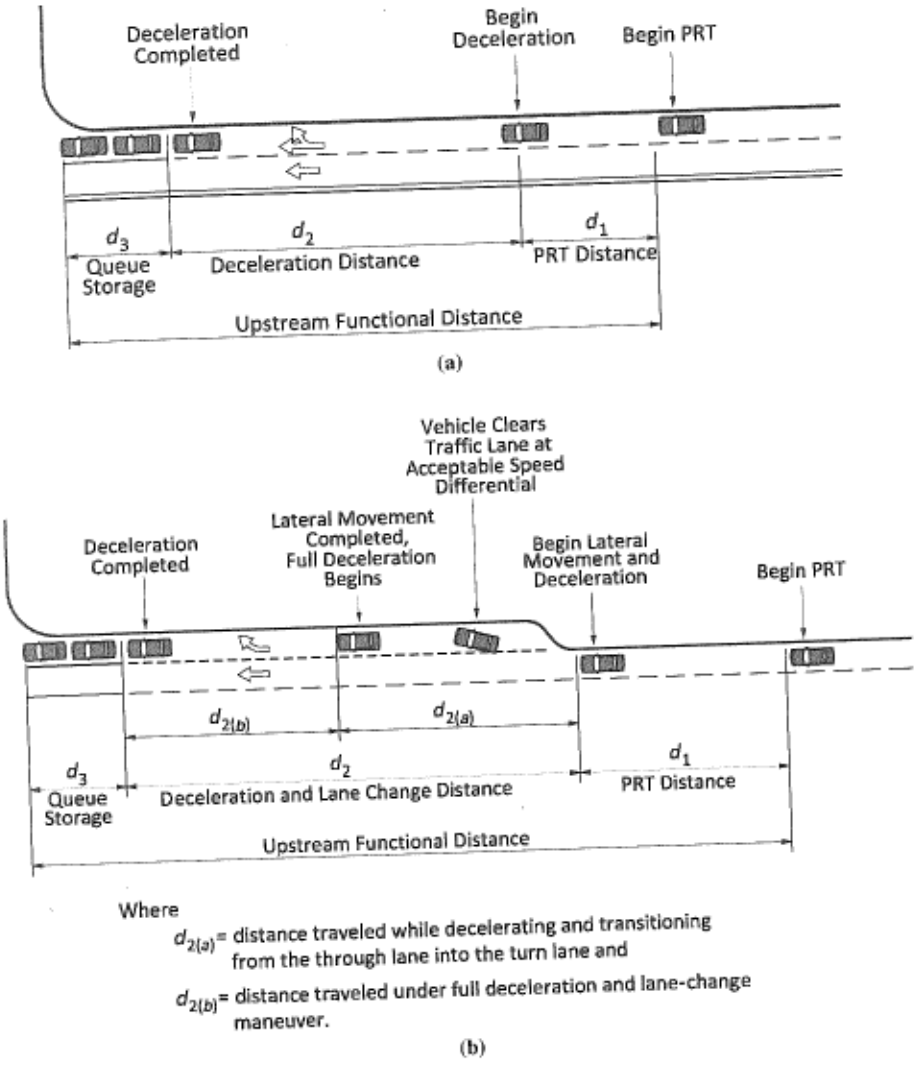


EXHIBIT 14-2 Upstream functional intersection area: (*a*) without a turn bay and (*b*) with a turn bay (*1*, *2*). (NOTE: PRT = perception–reaction time.)

Additionally, traffic conditions on urban and suburban roadways result in drivers having a higher level of alertness than drivers on rural highways. Thus, a value of 1.5 s is often used as the perception–reaction time for urban and suburban conditions, and 2.5 s is often used for rural situations (*1*). Exhibit 14-3 demonstrates the perception–reaction distances for a variety of speed and perception–reaction time values.

14.2.2 Distance Traveled During Deceleration–Maneuver

During low-volume conditions and in locations with only a few driveways, deceleration characteristics of the vehicles and their drivers determine the length of the deceleration–maneuver distance (d_2). Studies have determined, however, that with increasing and closely spaced driveway density, the additional influence of driveway maneuvers introduces associated delays and reduced roadway capacity (*3*). Consequently, the deceleration–maneuver distance can also be influenced by ambient traffic activities, including driveway maneuvers. National Cooperative Highway Research Program (NCHRP) Report 420 (*3*) introduced the concept of probability-based impact lengths that take into consideration these additional operational constraints. The distance traveled during the deceleration–maneuver component

EXHIBIT 14-3 Distance Traveled During Driver's Perception–Reaction

Speed (mph)	Perception–Reaction Distance (d_1) (ft), by Perception–Reaction Time						
	1.0 s	1.5 s	2.0 s	2.5 s	3.0 s	3.5 s	4.0 s
20	30	45	60	75	90	105	120
25	35	55	75	90	110	130	145
30	45	65	85	110	130	155	175
35	50	75	105	130	155	180	205
40	60	90	120	145	175	205	235
45	65	100	130	165	200	230	265
50	75	110	145	185	220	255	295
55	80	120	160	200	240	285	325
60	90	130	175	220	265	265	355
65	95	145	190	240	285	335	380
70	105	155	205	255	310	360	410
75	110	165	220	275	330	385	440

NOTE: Distances rounded to 5 ft.

of upstream functional distance may be determined by two parameters:

1. Deceleration distance and
2. Impact distance.

The largest length should then be conservatively applied.

The deceleration method provides values of d_2 for a wide range of speeds on the basis of deceleration rate; the impact method is applicable only for select speeds of 30, 40, 45, and 50 mph. For the impact distance method, the difference in the recommended distance for 30 and 35 mph is very small (on the order of 20% or less); thus, it is suggested that the 30-mph curve also be used for 35 mph.

The deceleration and impact methods are described in detail in the following subsections.

14.2.2.1 Deceleration Distance

Gates et al. (*4*), Chang et al. (*5*), and Williams (*6*) reported similar deceleration rates for drivers braking to a stop at a traffic signal without changing lanes. The research by Gates et al. (*4*) is the most recent and the most detailed and is used as the basis for the deceleration–maneuver distances in Exhibit 14-4. Gates et al. also reported that deceleration rate is related to drivers traveling at a slower speed before braking and thereby using a lower average deceleration rate than those traveling at a higher initial speed (*4*). Thus, the deceleration distances at slower speeds (less than 40 mph) are slightly longer (15 ft or less) than the deceleration–maneuver distances given in Exhibit 14-4. The conservative and recommended deceleration distance for locations with left-turn or right-turn lanes is associated with the column labeled "Most Drivers" in Exhibit 14-4. Because turn-lane operations are more complex than queuing in a through lane, the column labeled "Limiting Conditions" can be applied to through lanes or shared right-turn lanes, as the sighting conditions and braking to the back of the queue are straightforward and less complex than those of the turning lanes.

As demonstrated in Exhibit 14-2, more distance is required for d_2 at turn-lane locations than for d_2 at locations without turn lanes. In general, a vehicle will reduce speed by approximately 10 mph while maneuvering into a turn lane. Because of the attention needed to accomplish the lane change, the vehicle does not initiate full deceleration until it has cleared the through lane. Consequently, the full deceleration portion of d_2 [referred to as $d_{2(b)}$ (see Exhibit 14-2*b*)] begins at a lower speed than the initial intersection

EXHIBIT 14-4 Deceleration–Maneuver Distance Based on Average Deceleration Rate

Speed (mph)	Deceleration–Maneuver Distance (d_2) (ft)	
	Most Drivers[a]	Limiting Conditions[b]
20	60	45
25	95	70
30	135	100
35	185	135
40	240	175
45	305	220
50	375	275
55	455	330
60	540	395
65	635	460
70	735	535
75	840	610

NOTE: Deceleration while steering straight ahead. Distances rounded to 5 ft.

[a]Eighty-five percent of drivers traveling at a speed of 40 mph or less were reported to use a deceleration rate of 7.2 ft/s² or less. Thus, the distance for d_2 given in the table accommodates 85% of drivers; only 15% will require a longer distance (*4*).

[b]Based on 50th percentile of drivers using a deceleration rate of 9.9 ft/s², yielding a shorter deceleration–maneuver distance (*4*). Braking distances to determine AASHTO stopping sight distance are based on 11.2 ft/s² (*7*).

EXHIBIT 14-5 Distance Traveled During Lane Change and Deceleration to a Stop

Speed (mph)	Distance Traveled (ft)		
	Deceleration[a] and Lateral Movement [$d_{2(a)}$]	Full Deceleration Distance[b] [$d_{2(b)}$]	Total Distance (d_2)
20	55	15	70
25	70	35	105
30	90	60	150
35	130	95	225
40	155	135	290
45	175	185	360
50	200	240	440
55	220	305	525
60	380	375	655
65	310	455	755
70	335	540	875
75	360	635	995

NOTE: Distance traveled rounded to 5 ft.

[a]Deceleration while moving laterally from through lane into turn lane:

Speed (mph)	*Time in Lateral Movement (s)*	*Deceleration Rate (ft/s²)*
≤30	2.5	5.9
30–55	3	4.9
≥60	3.5	4.2

[b]7.2 ft/s².

approach speed. Exhibit 14-5 presents distances similar to those shown in Exhibit 14-4 that directly define the two distances that collectively result in the d_2 value. These candidate values are based on assumed values for time in lateral movement and their respective deceleration rates. Exhibit 14-6 shows how one agency has adapted d_2 values on the basis of deceleration for its jurisdiction.

EXHIBIT 14-6 Alternative Values for d_2 from the Lincoln, Nebraska, *Access Management Policy* (*8*)

Speed (mph)	d_2 (ft)	AASHTO (ft)
15	NA	80
20	NA	115
25	80	155
30	115	200
35	155	250
40	200	305
45	250	360
50	305	425
55	360	496

NOTE: AASHTO values for stopping sight distance after 10-mph speed reduction before entering the turn lane (assumes deceleration rate of 11.2 ft/s²); NA = not available.

14.2.2.2 Impact Distance

Impact distance is the distance upstream of an access connection at which the brake lights of a through vehicle in the curb lane are activated in response to the interference of a right-turning vehicle. This impact distance concept is based on the research in NCHRP 420 (*3*). This empirical method for determining d_2 has two advantages: (*a*) a value for d_2

EXHIBIT 14-7 Suggested Percentage of Through Vehicles That Will Sustain an Impact, by Functional Roadway Category

Functional Roadway Category	Through Vehicles Sustaining Impact[a] (%)
Principal arterial	2–4
Minor arterial	4–10
Major collector	5–20
Minor collector	10–30
Local	na

NOTE: na = not applicable.
[a]May also be stated as "the probability that a through vehicle must decelerate because of a preceding turning vehicle."

can be obtained for different probabilities that a through vehicle will sustain an impact (see Exhibit 14-7) and (*b*) the probability that a through vehicle will sustain an impact can be estimated for a queue distance d_2.

Exhibit 14-8 depicts these impact distances. For example, if it is acceptable to affect 10% of through vehicles on a 40-mph roadway, the d_2 distance is approximately 250 ft. This distance is comparable to the 240 ft for most drivers based on the deceleration–maneuver distance in Exhibit 14-4.

EXHIBIT 14-9 Example of Calculation of d_2 by Impact Method

Estimation of d_2 by the impact method:

Given a principal arterial where 2% probability of impact is considered acceptable,

if

speed = 45 mph

then

d_2 = 460 ft (according to Exhibit 14-8).

Estimation of probability of impact given d_2:

If

impact distance = 220 ft and
speed = 40 mph,

then

probability of impact = 20%
(according to Exhibit 14-8).

A limitation of the impact distance for determining d_2 is that data are available for only four speeds; in contrast, the deceleration method provides a d_2 value for all speeds. The examples in Exhibit 14-9 demonstrate the use of the impact method to estimate d_2.

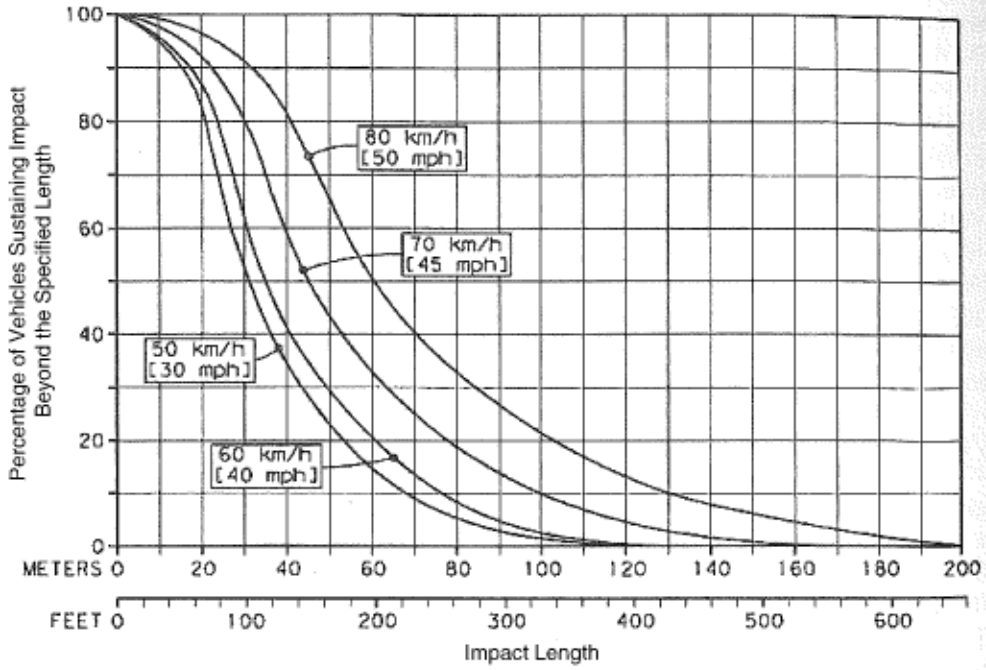


EXHIBIT 14-8 Cumulative frequency distribution of impact lengths.
[SOURCE: Research conducted in association with NCHRP Report 420 (*3*).]

14.2.3 Queue Storage

In rural areas, turn volumes are typically low and speeds are high. Although queue storage (d_3) is short, long upstream functional distances result from the long distances traveled during drivers' perception–reaction times plus the long maneuver distances.

In urban areas, different traffic conditions are encountered in peak and off-peak periods. In peak periods, traffic volumes are high and speeds are slow in comparison with off-peak conditions. Peak periods commonly require more queue storage and less maneuver distance, as well as shorter distances for the perception–reaction (decision-making) process. The upstream functional distance may thus be determined by the peak or the off-peak, whichever results in the greater sum of $d_1 + d_2 + d_3$. Thus, determination of the upstream functional distance requires calculation for both the peak and off-peak, especially for urban roadways.

As illustrated in Exhibit 14-2, the physical length of a turn bay is the functional length minus the distance traveled during the driver's perception–reaction time (i.e., $d_2 + d_3$). The physical length, which is an access design topic, is discussed in Chapter 16. The functional distance for a specific approach can be calculated by adding the appropriate distance for d_1 from Exhibit 14-3 to the maneuver distance (d_2) plus queue storage (d_3) by using procedures presented in Chapter 16. When traffic volumes and speeds are different in peak and off-peak periods, the sum of $d_1 + d_2 + d_3$ is calculated for both the peak and off-peak for the through lanes and the turn lanes; the largest distance is the upstream functional intersection distance.

The examples in Exhibit 14-10 demonstrate the calculation for the overall functional intersection distance. For the purposes of these examples, a queue storage length (d_3) is assumed. In the calculation of the upstream functional distance of a specific access connection, the procedures presented in Chapter 16 would be used.

14.3 DOWNSTREAM FUNCTIONAL DISTANCE

The downstream functional distance can be affected by various factors:

- **Geometric features**—acceleration lanes, bus bays, bus pullouts, parked vehicles, midblock pedestrian crossings, bulb-outs;
- **Operational effects**—speeds, right and left turns into driveways, right and left turns out of driveways, bicycles, multilane cross sections, two-way left-turn lanes (TWLTLs), bus stops and reentry points, major weaving movement from the side access to a downstream left-turn opportunity; and
- **Human factors**—driver perception–reaction times, acceleration and deceleration characteristics, and drivers' sighting ability.

Drivers must have the time and distance provided by the downstream functional distance to deal with traffic conflicts, roadside activities, and roadway features. This requirement may be addressed by providing sight distance to see and avoid conflicts or by assuring there is adequate distance to accelerate to roadway speed.

Research conducted for NCHRP Project 03-99, "Development and Application of Access Management Guidelines," suggests that the nonemergency driving activity associated with driveway detection and reaction, during which a vehicle may reduce speed to accommodate driveway activities, results in driver perception–reaction times that range from 2.8 s for left-turn driveway maneuvers up to 6.5 s for right-turn driveway maneuvers. An average perception–reaction time associated with access management activities is approximately 2.8 s, with an 85th percentile perception–reaction duration of 4.3 s. These lengths are considerably longer than the values based on geometric design associated with the AASHTO geometric design policy for alert drivers (*7*).

The downstream functional distances discussed in the following subsections help to limit access points that are close enough to the intersection to create unacceptable conflicts, cause breakdowns in platoons, and generate shock waves when slower vehicles enter the traffic stream. If conditions are restricted, a variance in determination of the downstream functional distance may be offered. If conditions are not complex, reduced stopping sight distance or perception–reaction times may be accepted, if a study of the conditions shows these changes are acceptable. Principal and strategic arterials would not receive this variance.

EXHIBIT 14-10 Examples of Calculation of Overall Functional Intersection Distance

Example 1. Determination of upstream functional distance for a rural roadway environment

Given a perception–reaction time of 3.5 s and a speed of 65 mph, the upstream functional intersection distance is calculated as follows:

If

d_1 (Exhibit 14-3) = 335 ft,
d_2 (Exhibit 14-4) = 635 ft, and
d_3 (assuming one vehicle) = 25 ft,

then

upstream functional distance = 1,195 ft.

Example 2. Comparison of upstream functional distance for peak and off-peak conditions for a suburban roadway environment

Given

perception–reaction time = 1.5 s,
off-peak speed = 45 mph,
peak speed = 30 mph,
assumed off-peak queue storage = 75 ft, and
assumed peak queue storage = 225 ft,

Find the upstream functional distance on the basis of

Method A, deceleration–maneuver distance or
Method B, impact distance.

Method A: Upstream Functional Distance Based on Deceleration–Maneuver Distance

Component	*Off-Peak (ft)*	*Peak (ft)*
d_1 (Exhibit 14-3)	100	65
d_2 (Exhibit 14-4)	305	135
d_3 (assumed)	75	225
Upstream functional distance	480	425

Solution: The off-peak distance is longer than the peak period distance; thus, the upstream functional distance is 480 ft.

Method B. Upstream Functional Distance Based on Impact Distance

Component	*Off-Peak (ft)*	*Peak (ft)*
d_1 (Exhibit 14-3)	100	65
d_2 (Exhibit 14-4, 15% probability of impact)	280	190
d_3 (assumed)	75	225
Upstream functional distance	455	480

Solution: The peak period distance is longer; thus, the upstream functional distance is 480 ft.

14.3.1 Adequate Downstream Acceleration Distance

Sufficient distance must be provided for vehicles leaving the intersection from a stop to accelerate to normal roadway speed. Access points within this distance would introduce unacceptable conflicts and unexpected operations. These acceleration distances are given in Exhibit 14-11.

The total acceleration lane length, including the taper distance, would be the required downstream functional distance. If an acceleration lane is not provided, the downstream functional distance would be the acceleration distance alone. Acceleration rates are much

EXHIBIT 14-11 Ideal Downstream Functional Distance Based on Acceleration

Speed (mph)	Acceleration Distance[a] (ft)	Typical Taper Distance[b] (ft)	Downstream Functional Distance[c] (ft)
20	100	60	160
25	150	80	230
30	220	100	320
35	320	120	440
40	440	140	580
45	580	160	740
50	770	180	950
55	1,000	200	1,200
60	1,300	220	1,520
65	1,750	240	1,990
70	2,320	260	2,580

[a]Based on AASHTO (*7*, Figure 2-24).
[b]Based on AASHTO (*7*, Figure 9-49 and p. 9-127).
[c]Acceleration lane length.

less than comfortable deceleration rates, which may result in acceleration lane lengths and downstream functional distances that exceed upstream functional distances at some intersections. No driveway access should be allowed in the acceleration-based ideal downstream intersection distance.

14.3.2 Sufficient Downstream Sight Distance

If a vehicle is not required to stop at a traffic signal, the driver requires sufficient time to identify conflicts and associated downstream operational constraints after he or she has successfully navigated the intersection. The available distance must be long enough so that the driver can see, understand, and react to downstream conditions. Depending on the complexity of the downstream configuration, a distance longer than stopping sight distance may be necessary. Stopping sight distance provides perception–reaction time plus braking distance to a single clearly discernible hazard in the middle of the roadway. The downstream functional distance often must provide sight distance to more subtle and complex situations, both within the traffic stream and along the roadside. Consequently, a longer sight distance, such as decision sight distance, should be provided.

Use of decision sight distance for recommended downstream functional distances recognizes the added complexity, increased conflicts, and added difficulty in viewing both roadside and traffic stream conditions through increased perception–reaction times and longer braking or maneuver times. These values are given in Exhibit 14-12.

Decision sight distance to a stop is a logical minimum downstream functional distance for arterials and is based on adequate perception–reaction and maneuver times plus braking to a stop. Multilane arterials may use decision sight distance for changes in speed, path, or direction that accommodate safe, smooth, comfortable operations. Decision sight distance for a change in speed, path, or direction provides sufficient travel time to adjust to traffic conditions and make a lane change in multilane facilities. The larger of the distances—acceleration distance versus decision sight distance—should be used to determine the downstream functional distance.

14.4 IDENTIFYING THE ACCESS WINDOW

AASHTO states, "Ideally, driveways should not be situated within the functional area of an intersection or in the influence area of an

EXHIBIT 14-12 Ideal Downstream Functional Distance Based on Decision Sight Distance to Stop and for Change in Speed, Path, or Direction

Speed (mph)	Decision Sight Distance to Stop (ft)			Decision Sight Distance (ft) for Change in Speed, Path, or Direction		
	Rural[a]	Suburban[b]	Urban[c]	Rural[d]	Suburban[e]	Urban[f]
20	130	215	305	305	340	430
25	180	280	400	375	400	525
30	220	350	490	450	535	620
35	275	425	590	525	625	720
40	330	505	690	600	715	825
45	395	590	800	675	800	930
50	465	680	910	750	890	1,030
55	535	775	1,030	865	980	1,135
60	610	875	1,150	990	1,125	1,280
65	695	980	1,275	1,050	1,220	1,365
70	780	1,090	1,410	1,105	1,275	1,445
75	875	1,200	1,545	1,180	1,365	1,545

[a]Stop on a rural road with perception–reaction time (PRT) = 3.0 s.
[b]Stop on a suburban road with PRT = 6.0 s.
[c]Stop on an urban road with PRT = 9.1 s.
[d]Change in speed, path, or direction on a rural road, PRT = 10.2 to 11.2 s.
[e]Change in speed, path, or direction on a suburban road, PRT = 12.1 to 12.9 s.
[f]Change in speed, path, or direction on an urban road, PRT = 14.0 to 14.5 s.

adjacent driveway" (*7*, p. 9-182). To identify where access can best be located, it is helpful to first identify where access should not be located (Exhibit 14-13). The remaining window is where access can be located with the least interference to the abutting roadway and with the most benefit and flexibility for the site (*1*).

The steps in determining the location and size of the access window are as follows:

1. Locate nearby intersections (streets and driveway connections).
2. Arrange these intersections in descending order of importance; for example, arterial-to-arterial intersections are the most important, arterial–collector intersections are next in importance, and so on.
3. Define the upstream functional area of each intersection (i.e., the distance traveled during perception–reaction time plus maneuver distance plus queue storage). Note the largest queue may be in a through lane.
4. Define the downstream functional area of each intersection.
5. Identify the window in which direct access can best be provided. The larger the window, the greater the flexibility in site layout, including building location, site circulation design, and driveway design. Keep in mind that traffic queue lengths (and, therefore, upstream functional areas) are sensitive to changing traffic volumes and intersection traffic control.
6. Ask the question, how much flexibility is there for the site access and circulation to accommodate changing traffic conditions?
7. If the access window is very small or if there is no access window, additional questions need to be asked:
   - How much interference will be caused by the site development and direct access to the abutting street? What safety and operational problems can be expected?
   - Can the site traffic that is necessary for a successful development adequately enter or exit the site? If not, how much traffic can be accommodated and at what times of the day?

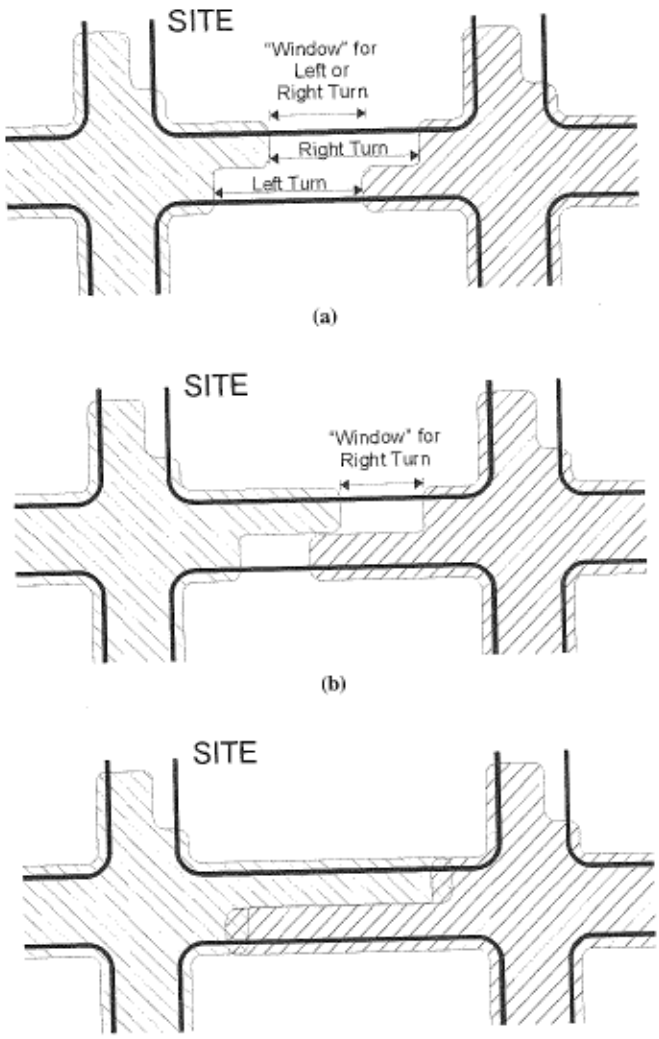


EXHIBIT 14-13 Window of opportunity for direct access drive: (*a*) left or right turn, (*b*) right turn only, and (*c*) no window (*1*).

14.5 ACCESS CONNECTIONS WITHIN THE FUNCTIONAL AREA

Although it is desirable to avoid access within the functional area, this is not always possible in urban areas, where short street spacing and small property frontages are common. If the property frontage is within the functional intersection area and alternative access is not available or cannot be provided at reasonable cost, it may be necessary to permit an access connection. Locating a connection within the functional area may be necessary if (*a*) no other reasonable access to the property is available or (*b*) topographic conditions preclude locating the access beyond the upstream or downstream functional distance. In such cases, including the following conditions in the access permit can minimize the adverse impacts of the connection:

1. Require that the access connection be located as far as possible from the intersection.
2. Limit movements to right in, right out by provision of a nontraversable median or flexible pylons (see Exhibits 14-14 and 14-15 for examples).
3. Specify the maximum volume entering and leaving the driveway in the 1-h peak and in a 24-h period.
4. Require the applicant to agree to close the access connection if and when alternative access becomes available.

If the property frontage is within the functional intersection area, and alternative access is not available or cannot be provided at reasonable cost, it may be necessary to permit an access connection.

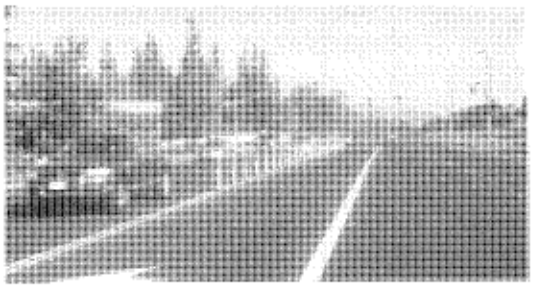


EXHIBIT 14-14 Installation of flexible pylons to restrict movements on opposite sides of this roadway and permit right-in, right-out only.
(Photograph by V.G. Stover.)

EXHIBIT 14-16 Problem resulting from an access connection located within the left-turn queue length.
(Photograph by V.G. Stover.)

Exhibit 14-16 illustrates a problem that can occur when an access connection is located within the upstream functional distance of an intersection. After exiting from a driveway that is within the upstream functional intersection distance, a driver blocks the through traffic lanes while waiting to enter the left-turn lane. Corrective actions might be to make the driveway a one-way entrance only and to use flexible pylons between the left-turn lane and the adjacent through lane.

14.5.1 Driveways and Auxiliary Lanes

The placement of a driveway within the physical boundaries of a turn lane or located in the upstream deceleration lanes or downstream acceleration lanes should be avoided. Placing a driveway within the turn-lane boundaries creates a driver expectancy problem: drivers of trailing vehicles expect the leading vehicle to turn at the intersection and often must stop abruptly to accommodate the vehicle turning into the driveway. Similarly, drivers should be introduced to one decision at a time. Positioning a driveway in acceleration or deceleration lanes or adjacent to lanes where acceleration and deceleration movements are expected to occur creates unexpected vehicle conflicts with turning vehicles.

EXHIBIT 14-15 Nontraversable median installed circa 2009 on Southwest Parkway at Texas Avenue, College Station, Texas, as a retrofit action to restrict left turns at a driveway serving a strip commercial center.
(Photograph by V.G. Stover.)

14.5.2 Corner Clearance

Corner clearance represents the distance that is provided between an intersection and the nearest driveway. Because it is a special case of access spacing, it is addressed in Chapter 15. Section 15.4 discusses how corner clearance is determined and is integrated with the functional intersection area.

14.6 CONNECTIONS ON OPPOSITE SIDES OF A ROADWAY

Access connections on opposite sides of a roadway present specific access location and management issues. Closely spaced connections on opposite sides of an undivided roadway or on a roadway with a TWLTL result in jog maneuvers instead of separate and distinct turning movements, as illustrated in Exhibit 14-17. Such connections can also result in conflicting left turns, as illustrated in Exhibit 14-18.

Separation of the access connections to create two separately functioning T-intersections

Patterson Road Functional Intersection Area

Major Intersection	Speed Limit	Dir.	2045 Left Turn Projection (vph)		[1] 2045 90th %-ile Queue (ft/ln)		Required Storage (ft)	[2] Full-Decel Length/ Decel Distance (ft)	Perception-Reaction Time (ft)	Total Length (ft)
			AM Peak	PM Peak	AM Peak	PM Peak				
24 Rd	35 mph	EB	216	127	90	148	148	215	75	438
	35 mph	WB	125	583	68	256	256	215	75	546
Market St	35 mph	EB	71	159	21	140	140	215	75	430
	35 mph	WB	25	31	4	8	50	215	75	340
Mesa Mall Access	35 mph	EB	39	85	17	73	73	215	75	363
	35 mph	WB	87	130	14	53	53	215	75	343
24 1/2 Rd	35 mph	EB	40	102	33	110	110	215	75	400
	35 mph	WB	147	267	42	153	153	215	75	443
Commerce Blvd	40 mph	EB					50	275	90	415
	40 mph	WB					50	275	90	415
25 Rd	40 mph	EB	83	66	71	47	71	275	90	436
	40 mph	WB	206	281	71	299	299	275	90	664
25 1/2 Rd	40 mph	EB	32	92	16	45	50	275	90	415
	40 mph	WB	137	181	20	63	63	275	90	428
N 1st St	40 mph	EB	54	115	29	63	63	275	90	428
	35 mph	WB	173	217	51	82	82	215	75	372
N 7th St	35 mph	EB	69	147	66	141	141	215	75	431
	40 mph	WB	238	202	57	89	89	275	90	454
N 12th St	35 mph	EB	135	246	40	78	78	215	75	368
	40 mph	WB	382	106	79	33	79	275	90	444
15th St	35 mph	EB	140	69	13	14	50	215	75	340
	40 mph	WB	51	22	3	5	50	275	90	415
27 1/2 Rd	35 mph	EB	80	227	22	46	50	215	75	340
28 Rd	40 mph	EB					50	275	90	415
28 1/4 Rd	40 mph	EB	53	38	21	14	50	275	90	415
	40 mph	WB	289	159	111	151	151	275	90	516
W Indian Creek Dr	45 mph	EB					50	345	100	495
	45 mph	WB					50	345	100	495
29 Rd	40 mph	EB	129	220	69	87	87	275	90	452
	45 mph	WB	187	126	78	108	108	345	100	553
29 1/2 Rd	45 mph	EB	13	91	5	40	50	345	100	495
	45 mph	WB	222	99	55	68	68	345	100	513
30 Rd	45 mph	EB	95	227	54	85	85	345	100	530
	45 mph	WB	137	72	70	40	70	345	100	515

[1] Does not account for grades

[2] TEDS Storage Length reported for unsignalized intersections

(3) Bay tapers shall be symmetrical reverse curves in accordance with the following:

(i) Use 60-foot reverse curve for 25 to 35 miles per hour.

(ii) Use 90-foot reverse curve for 40 to 50 miles per hour.

(iii) Use 140-foot reverse curve for 55 to 65 miles per hour.

Assuming 12' turn lane and 4' median

	R=60'	R=90'
Length (ft)	54	60
Equivalent	4.5:1	5:1

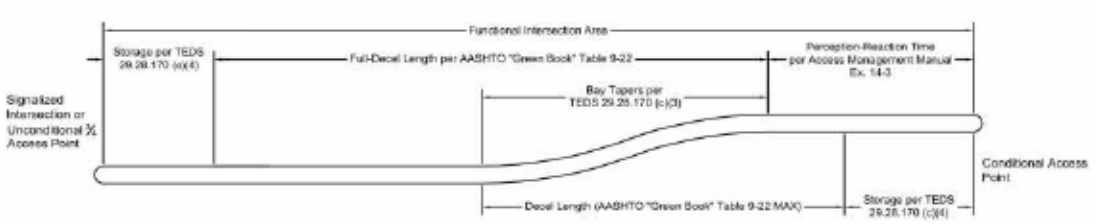
Minimum Storage Lengths for Unsignalized Turn Lanes

Turning VPH	≤60	100	200	300
Required Storage Length	50	100	175	250

(4) Storage lengths for turn lanes at signalized intersections shall be determined based on a signal timing analysis that predicts the 90 percent queue length required for the turn lane.

Full-Decel Length					
	35 mph	40 mph	45 mph	50 mph	55 mph
Greenbook	-	275 ft	-	425 ft	-
TAMU Greenbook calc	215 ft	275 ft	345 ft	425 ft	510 ft
SHAC Table 4-6	310 ft	370 ft	435 ft	500 ft	600 ft

* shortest length was selected



Appendix F - Access Control Plan Tables

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
1	0.060	LT	2384 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops.
2	0.133	RT	2381, 2385, 2387 Patterson Rd	Unsignalized Full Movement	Conditional Shared Unsignalized 3/4 Movement	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-054-09-001 and parcel no. 2945-054-00-087 and any adjacent properties with same ownership upon redevelopment. If a public project is funded prior to redevelopment, parcel no. 2945-054-09-001 must provide a cross access agreement to parcel no. 2945-054-00-087 or the access shall be restricted to Right-In/Right-Out.
3	0.149	LT	2384 Patterson Rd	Unsignalized Full Movement	Conditional Unsignalized Full Movement	Movements may be restricted when safety or operational issues occur. Access will be restricted to Right-In/Right-Out when property redevelops.
4	0.157	LT	2388 Patterson Rd	Unsignalized Full Movement	Close - Access via Rae Lynn St	When property redevelops, safety or operational issues occur, or when a public project is funded.
5	0.167	RT	2386 Hwy 6 & 50	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Access will close when alternate access is available via Access 2. Cross access agreements required between parcel no. 2945-054-09-001 and parcel no. 2945-054-00-087 and any adjacent properties with same ownership upon redevelopment.
6	0.222	RT	Rae Lynn St (private)	Unsignalized Full Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access to 24 Rd available.
7	0.226	LT	Rae Lynn St (public)	Unsignalized Full Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. Once Rae Lynn St is extended to Leland Ave (and to 24 Rd), the access may be closed if a safety or operational issue develops.
8	0.292	RT	24 Rd	Signalized Full Movement	Signalized Full Movement	
9	0.292	LT	24 Rd	Signalized Full Movement	Signalized Full Movement	
10	0.421	RT	Commercial access for Mesa Mall	Signalized Full Movement	Signalized Full Movement	
11	0.421	LT	Market St	Signalized Full Movement	Signalized Full Movement	
12	0.498	LT	2412 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-043-022-002 and parcel no. 2945-043-01-001 and any adjacent properties with same ownership upon redevelopment.
13	0.505	LT	2422 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 12 or 14	When property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-043-022-002 and parcel no. 2945-043-01-001 and any adjacent properties with same ownership upon redevelopment.
14	0.534	LT	2422 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Access will be closed when alternate access to Access 12 is available. Cross access agreements required between parcel no. 2945-043-022-002 and parcel no. 2945-043-01-001 and any adjacent properties with same ownership upon redevelopment.
15	0.600	LT	2424, 2428, 2430, 2436 Patterson Rd (Home Depot)	Signalized Full Movement	Signalized Full Movement	

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
16	0.600	RT	Commercial access for Mesa Mall	Signalized Full Movement	Signalized Full Movement	
17	0.675	LT	2430, 2436 Patterson Rd	Unsignalized 3/4 Movement	Conditional Safety Right-In Only	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access via Access 15 available.
18	0.734	LT	2436, 2438, 2440 Patterson Rd and 625 24 1/2 Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
19	0.814	LT	2442, 2444 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
20	0.855	LT	2446, 2448 Patterson Rd	Right-In/Right-Out	Shared Right-In Only	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
21	0.944	LT	24 1/2 Rd	Signalized Full Movement	Signalized Full Movement	
22	0.944	RT	24 1/2 Rd	Signalized Full Movement	Signalized Full Movement	
23	1.009	LT	2452, 2454 Patterson Rd	Right-In/Right-Out	Conditional Right-In/Right-Out	Access will close upon redevelopment and when alternate access to Flatop Ln is available.
24	1.031	RT	2451, 2463, 2465 Patterson Rd and 590 24 1/2 Rd	Unsignalized Full Movement	Shared Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access via 24 1/2 Rd and Commerce Blvd available.
25	1.071	LT	2460, 2464 Patterson Rd	Unsignalized Full Movement	Shared Right-In Only	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no 2945-044-10-002 and parcel no 2945-044-18-000 and any adjacent properties with same ownership upon redevelopment.
26	1.113	LT	2470, 2472, 2474 Patterson Rd (north side)	Unsignalized Full Movement	Shared Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no 2945-044-10-002 and parcel no 2945-044-18-000 and any adjacent properties with same ownership upon redevelopment.If a public project is funded prior to redevelopment, parcel no. 2945-044-18-000 must provide a cross access agreement to parcel no. 2945-044-10-002 or the access shall be restricted to Right-In/Right-Out.
27	1.113	RT	Commerce Blvd (south side)	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
28	1.176	LT	2470, 2472, 2474 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no 2945-044-00-065 and parcel no 2945-044-17-000 and any adjacent properties with same ownership upon redevelopment.
29	1.235	LT	2478 Patterson Rd	Unsignalized Full Movement	Shared Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-044-00-068, parcel no 2945-044-00-065 and parcel no 2945-044-17-000 and any adjacent properties with same ownership upon redevelopment. If a public project is funded prior to redevelopment, parcel no. 2945-044-17-000 must provide a cross access agreement to parcel no. 2945-044-00-068 and parcel no. 2945-044-00-065 or the access shall be restricted to Right-In/Right-Out.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
30	1.308	LT	2482 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-044-00-068, parcel no 2945-04-17-000 and parcel no. 2945-044-05-000 and any adjacent properties with same ownership upon redevelopment.
31	1.325	RT	2488 Commerce Blvd	Unsignalized Full Movement	Close - Access via Commerce Blvd	When property redevelops, safety or operational issues occur, or when a public project is funded.
32	1.358	LT	2486, 2490 2494 Patterson Rd	Unsignalized Full Movement	Shared Conditional Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Access will close when alternate access is available via Access 30. Cross access agreements required between parcel no. 2945-044-00-068 and parcel no. 2945-044-05-000 and any adjacent properties with same ownership upon redevelopment.
33	1.404	RT	599 25 Rd	Right In-Right Out	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via 25 Rd. Cross access agreements required between property numbers 2945-091-06-001, 2945-091-06-002, and 2945-091-06-003 and any adjacent properties with same ownership upon redevelopment.
34	1.424	LT	2498 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via 25 Rd. Cross access agreements required between parcel no. 2945-044-05-002 and parcel no. 2945-044-05-000 and any adjacent properties with same ownership upon redevelopment.
35	1.459	LT	25 Rd	Signalized Full Movement	Signalized Full Movement	
36	1.459	RT	25 Rd	Signalized Full Movement	Signalized Full Movement	
37	1.492	RT	596 25 Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via 25 Rd.
38	1.538	RT	2515 Patterson Rd	Unsignalized 3/4 Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via Access 38a.
38a	1.590	RT	2515 Patterson Rd	None	Right-In/Right-Out	When property redevelops.
39	1.600	LT	Foresight Cir (outbound)	Unsignalized Full Movement	Right-Out Only	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
40	1.619	LT	Foresight Cir (inbound)	Unsignalized Full Movement	Right-In Only	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
41	1.648	RT	Northgate Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
42	1.715	LT	2526, 2528 Patterson Rd, 606 East Foresight Cir	Shared Right In-Right Out	Shared Right-In/Right-Out	
43	1.768	LT	2532 Patterson Rd	Unsignalized 3/4 Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
44	1.861	LT	Burkey St	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
47	1.975	LT	25 1/2 Rd	Signalized Full Movement	Signalized Full Movement	
48	1.975	RT	25 1/2 Rd	Signalized Full Movement	Signalized Full Movement	

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
49	2.040	LT	2554, 2555, 2556, 2558, 2560 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.Cross access agreements required between parcel no. 2945-034-17-001 and parcel no. 2945-034-17-002 and any adjacent properties with same ownership upon redevelopment.
50	2.092	LT	2562 Patterson Rd - Consolidated with properties at Accesses 50 through 55	Unsignalized Full Movement	Right-Out Only	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
51	2.104	LT	2566 Patterson Rd - Consolidated with properties at Accesses 50 through 55	Unsignalized Full Movement	Close - access via Accesses 50 and 53	When property redevelops, safety or operational issues occur, or when a public project is funded.
52	2.124	LT	2570 Patterson Rd - Consolidated with properties at Accesses 50 through 55	Unsignalized Full Movement	Close - access via Accesses 50 and 53	When property redevelops, safety or operational issues occur, or when a public project is funded.
53	2.141	LT	2570 Patterson Rd - Consolidated with properties at Accesses 50 through 55	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when properties redevelop, safety or operational issues occur or when a public project is funded.Cross access agreements required for properties currently served by Access 53, 56, 57, 58, 59, 61 upon redevelopment.
54	2.138	RT	Cider Mill Rd - Consolidated with properties at Accesses 50 through 55	Unsignalized Full Movement	Right In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
55	2.146	LT	2570 Patterson Rd - Consolidated with properties at Accesses 50 through 55	Unsignalized Full Movement	Close - access via Accesses 50 and 53	When property redevelops, safety or operational issues occur, or when a public project is funded.
56	2.165	LT	2572 Patterson Rd	Unsignalized Full Movement	Close - access via Access 53 or 61	When property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required for properties currently served by Access 53, 56, 57, 58, 59, 61 upon redevelopment.
57	2.181	LT	2574 Patterson Rd	Unsignalized Full Movement	Close - access via Access 53 or 61	When property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required for properties currently served by Access 53, 56, 57, 58, 59, 61 upon redevelopment.
58	2.204	LT	2576 Patterson Rd	Unsignalized Full Movement	Close - access via Access 53 or 61	When property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required for properties currently served by Access 53, 56, 57, 58, 59, 61 upon redevelopment.
59	2.209	LT	2580 Patterson Rd	Unsignalized Full Movement	Close - access via Access 61	When property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required for properties currently served by Access 53, 56, 57, 58, 59, 61 upon redevelopment.
60	2.253	RT	Unaddressed Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops or when alternate access to a public road is available.
61	2.229	LT	2580 Patterson Rd	Unsignalized Full Movement	Conditional Unsignalized 3/4 Movement	Access 61 is a conditional 3/4 movement and is conditional upon the developer demonstrating the left turn lanes into the site meet TEDS requirements based on projected traffic volumes. Access 61 will be restricted to RIRO if safety or operational issues develop. Cross access agreements required for properties currently served by Access 53, 56, 57, 58, 59, 61 upon redevelopment.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
62	2.266	RT	25 3/4 Rd	Unsignalized Full Movement	Conditional Unsignalized 3/4 Movement	Access 62 and Access 64 shall be evaluated to determine if a 3/4 movement may be implemented at both locations. A design variance or speed reduction must be justified and approved by the City to allow 3/4 movement at both locations. Otherwise, one location must be restricted to RIRO as determined by the City. Movements may be restricted when adjacent properties redevelop, safety or operational issues occur or when a public project is funded.
63	2.255	LT	2582, 2584 Patterson Rd	Shared Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
64	2.353	LT	Meander Dr	Unsignalized Full Movement	Conditional Unsignalized 3/4 Movement	Access 62 and Access 64 shall be evaluated to determine if a 3/4 movement may be implemented at both locations. A design variance or speed reduction must be justified and approved by the City to allow 3/4 movement at both locations. Otherwise, one location must be restricted to RIRO as determined by the City. Movements may be restricted when adjacent properties redevelop, safety or operational issues occur or when a public project is funded.
65	2.353	RT	Meander Ct	Unsignalized 3/4 Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
66	2.430	LT	2594, 2596 Patterson Rd	Shared Right In-Right Out	Shared Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when adjacent properties redevelop - access via Meander Dr or 26 Rd.
67	2.487	LT	26 Rd (N 1st St)	Signalized Full Movement	Signalized Full Movement	
68	2.487	RT	N 1st St (26 Rd)	Signalized Full Movement	Signalized Full Movement	
69	2.561	RT	Park Dr	Right In-Right Out	Conditional Safety Right-In/Right-out	If a safety or operational issue develops, the access may be closed - alternate access to 1st St via Belaire Dr available.
70	2.651	RT	2615 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 71	When property redevelops, safety or operational issues occur, or when a public project is funded.
71	2.674	RT	2615 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via Lost Lane. Cross access agreements required between parcel no. 2945-112-00-004 and parcel no. 2945-112-11-018 and any adjacent properties with same ownership upon redevelopment.
72	2.706	RT	2621 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops and alternate access to Access 73 is available. Cross access agreements required between parcel no. 2945-112-11-018, parcel no 2945-112-11-019, parcel no 2945-112-00-004, and any adjacent properties with same ownership upon redevelopment.
73	2.714	RT	2623 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.Cross access agreements required between parcel no. 2945-112-11-018, parcel no 2945-112-11-019, and any adjacent properties with same ownership upon redevelopment.
74	2.718	LT	2626 Patterson Rd	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. The connection to Horizon Place will be a public street and all appropriate Rights-Of-Way shall be dedicated upon redevelopment.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
75	2.722	RT	2623 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops and alternate acccess to Access 73 is available.Cross access agreements required between parcel no. 2945-112-11-018, parcel no 2945-112-11-019, and any adjacent properties with same ownership upon redevelopment.
76	2.732	RT	2625 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops.
77	2.740	LT	2626 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 74	When property redevelops, safety or operational issues occur, or when a public project is funded.
78	2.746	RT	2625 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
79	2.749	LT	2628 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops and alternate access to Access 83 is available.Cross access agreements required between parcel no. 2945-023-00-038, parcel no 2945-023-00-039, and any adjacent properties with same ownership upon redevelopment.
80	2.756	RT	326 Belaire Dr	Unsignalized Full Movement	Close - Access via Belaire Dr	When property redevelops, safety or operational issues occur, or when a public project is funded.
81	2.761	LT	2628 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 79 or 83	When property redevelops, safety or operational issues occur, or when a public project is funded.
82	2.765	RT	336 Belaire Dr	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via Belaire Dr.
83	2.768	LT	2630 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-023-00-040, parcel no 2945-023-00-039, parcel no. 2945-023-00-038, and any adjacent properties with same ownership upon redevelopment.
84	2.779	LT	2630 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 83	When property redevelops, safety or operational issues occur, or when a public project is funded.
85	2.785	LT	2632 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops and alternate access to Access 87 or 83 is available.Cross access agreements required between parcel no. 2945-023-00-040, parcel no. 2945-023-00-042, parcel no 2945-023-00-039, and any adjacent properties with same ownership upon redevelopment.
86	2.794	RT	Mira Vista Rd	Unsignalized Full Movement	Conditional Unsignalized 3/4 Movement	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Conditions are that movements may be further restricted to Right-In/Right-Out when safety or operational issues occur.
87	2.807	LT	2634 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-023-00-041, parcel no 2945-023-00-042, parcel no. 2945-023-14-010, parcel no. 2945-023-00-040 and any adjacent properties with same ownership upon redevelopment.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
88	2.818	LT	2634 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 87	When property redevelops, safety or operational issues occur, or when a public project is funded.
89	2.829	LT	2636, 2638 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-023-00-041, parcel no. 2945-023-00-042, parcel no 2945-023-14-009, parcel no. 2945-023-14-010 and any adjacent properties with same ownership upon redevelopment.
90	2.848	LT	2640 Patterson Rd	Unsignalized Full Movement	Close - Access via 89	When property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-023-14-008, parcel no 2945-023-14-009, parcel no. 2945-023-14-010 and any adjacent properties with same ownership upon redevelopment.
91	2.859	LT	2640 Patterson Rd	Unsignalized Full Movement	Close - Access via 89	When property redevelops, safety or operational issues occur, or when a public project is funded.
92	2.867	LT	2642 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-023-14-008, parcel no 2945-023-14-009 and any adjacent properties with same ownership upon redevelopment. Access will close when property redevelops and cross access to 89 is available.
93	2.867	RT	2635 N 7th St	Unsignalized Full Movement	Conditional Unsignalized 3/4 Movement	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Conditions are that movements may be further restricted to Right-In/Right-Out when safety or operational issues occur.
94	2.878	LT	2642 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 92	When property redevelops, safety or operational issues occur, or when a public project is funded.
95	2.894	LT	2644 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 96	When property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-023-14-006, parcel no 2945-023-14-007 and any adjacent properties with same ownership upon redevelopment.
96	2.910	LT	2646 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-023-14-006, parcel no 2945-023-14-007 and any adjacent properties with same ownership upon redevelopment.
97	2.943	LT	2646, 2648 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
98	2.960	LT	2648 Patterson Rd	Unsignalized Full Movement	Close - Access via 26 1/2 Rd or Access 97	When property redevelops, safety or operational issues occur, or when a public project is funded.
99	3.000	LT	26 1/2 Rd (N 7th St)	Signalized Full Movement	Signalized Full Movement	
100	3.000	RT	N 7th St (26 1/2 Rd)	Signalized Full Movement	Signalized Full Movement	
101	3.072	LT	N 8th Ct	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
102	3.136	RT	2661 Patterson Rd, 750 Wellington Ave	Unsignalized 3/4 Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
103	3.164	LT	2666 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via Viewpoint Dr.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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1. Oriented from direction of reference point (W-E)
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4. Unless otherwise specified, conditions listed refer to proposed configuration.
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6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
104	3.190	LT	View Point Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
105	3.216	LT	2674 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when adjacent properties redevelop - access via Viewpoint Dr.
106	3.262	LT	26 3/4 Rd	Unsignalized Full Movement	Conditional Unsignalized Full Movement	Conditions are that movements may be restricted when safety or operational issues occur.
107	3.308	LT	2416 26 3/4 Rd, 935, 959 Northern Way	Unsignalized Full Movement	Close - Access via Northern Way	When property redevelops, safety or operational issues occur, or when a public project is funded.
108	3.333	LT	Northern Way	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
109	3.333	RT	Private road, 2683 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
110	3.353	RT	2683 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when alternate access is available to Access 109, 114, or 116.
111	3.358	LT	960 Northern Way	Unsignalized Full Movement	Close - Access via Northern Way	When property redevelops, safety or operational issues occur, or when a public project is funded.
112	3.368	LT	2686 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 115	When property redevelops, safety or operational issues occur, or when a public project is funded.
113	3.376	RT	2683 Patterson Rd	Unsignalized Full Movement	Conditional Right Out Only	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops.
114	3.391	RT	2687 Patterson Rd	Unsignalized Full Movement	Conditional Unsignalized 3/4 Movement	Movements may be restricted when safety or operational issues occur, with redevelopment, or when a public project is funded. Cross access agreements required between parcel no. 2945-111-27-005 and parcel no. 2945-111-00-009 and any adjacent properties with same ownership upon redevelopment. If a public project is funded prior to redevelopment, parcel no. 2945-111-00-009 must provide a cross access agreement to parcel no. 2945-111-27-005 or the access shall be restricted to Right-In/Right-Out.
115	3.395	LT	2686 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
116	3.426	RT	2691, 2695, 2699 Patterson Rd, 2531 N 12th St	Shared Unsignalized Full Movement	Conditional Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-111-27-005 and parcel no. 2945-111-00-009 and any adjacent properties with same ownership upon redevelopment. Access 116 will close once on-site truck circulation can be accomodated at another access.
117	3.447	RT	2691, 2695, 2699 Patterson Rd, 2531 N 12th St	Unsignalized Full Movement	Right In/Right-Out	When property redevelops, safety or operational issues occur, or when a public project is funded.
118	3.456	LT	2686 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 115	When property redevelops, safety or operational issues occur, or when a public project is funded. Access closure will require coordination with Grand Valley Transit since they use this access point to stop on the hospital site.
119	3.515	LT	N 12th St	Signalized Full Movement	Signalized Full Movement	
120	3.515	RT	N 12th St	Signalized Full Movement	Signalized Full Movement	

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
121	3.560	LT	2702 Patterson Rd	Right In-Right Out	Close - Access via 12th St	When property redevelops, safety or operational issues occur, or when a public project is funded.
122	3.574	LT	2708 Patterson Rd	Right In-Right Out	Close - Access via Access 124	When property redevelops, safety or operational issues occur, or when a public project is funded.
123	3.585	RT	2600 N 12th St	Unsignalized 3/4 Movement	Unsignalized 3/4 Movement	
124	3.592	LT	2708 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
125	3.619	LT	2710 Patterson Rd	Right In-Right Out	Right-In/Right-Out	
126	3.639	LT	2714 Patterson Rd	Right In-Right Out	Conditional Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. A single shared access will be provided at Access 126/127 when cross access agreements are established and the other access will be closed. Cross access agreements required between parcel no. 2945-013-00-013 and 2945-013-00-014 and any adjacent properties with same ownership upon redevelopment.
127	3.643	LT	2718 Patterson Rd	Right In-Right Out	Conditional Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. A single shared access will be provided at Access 126/127 when cross access agreements are established and the other access will be closed. Cross access agreements required between parcel no. 2945-013-00-013 and 2945-013-00-014 and any adjacent properties with same ownership upon redevelopment.
128	3.659	LT	2718 Patterson Rd	Unsignalized Full Movement	Close- Access via Access 126 or 127	When property redevelops, safety or operational issues occur, or when a public project is funded.
129	3.664	RT	2721 Patterson Rd	Unsignalized Full Movement	Conditional Unsignalized 3/4 Movement	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Conditions are that movements may be further restricted to Right-In/Right-Out when safety or operational issues occur.
130	3.744	RT	2721 Patterson Rd	Unsignalized Full Movement	Right-Out Only	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
131	3.773	RT	N 15th St	Signalized Full Movement	Signalized Full Movement	
132	3.773	LT	N 15th St	Signalized Full Movement	Signalized Full Movement	
133	3.805	LT	2726 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via 27 1/4 Rd.
134	3.811	LT	2728 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
135	3.837	RT	2680 N 15th St	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via 15th St.
136	3.853	LT	2734 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Access 136a. Cross access agreements required between parcel no. 2945-013-00-030, parcel no. 2945-013-00-031, and any adjacent properties with same ownership upon redevelopment.
136a	3.863	LT	2734/2736 Patterson Rd Property Line	None	Shared Right-In/Right-Out	Shared access at the property line when either property redevelops. Movements may be restricted to right-in/right-out when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-013-00-030, parcel no. 2945-013-00-031, and any adjacent properties with same ownership upon redevelopment.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
137	3.872	LT	2736 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Access 136a. Cross access agreements required between parcel no. 2945-013-00-030, parcel no. 2945-013-00-031, and any adjacent properties with same ownership upon redevelopment.
138	3.875	RT	2737, 2741, 2745 Patterson Rd	Unsignalized Full Movement	Right In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-122-28-004, parcel no. 2945-122-40-003, and any adjacent properties with same ownership upon redevelopment.
139	3.887	RT	2737 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 138	When property redevelops, safety or operational issues occur, or when a public project is funded.
140	3.902	LT	2738 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
141	3.934	RT	2737, 2741, 2745 Patterson Rd	Unsignalized Full Movement	Shared Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops and access to Access 141a or 138 is available. Cross access agreements required between parcel no. 2945-122-28-002, parcel no. 2945-122-40-003, parcel no. 2945-122-40-004 and any adjacent properties with same ownership upon redevelopment.
141a	3.948	RT		None	Shared Right-In/Right-Out	Shared access at the property line when either property redevelops. Movements may be restricted to right-in/right-out when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-122-28-002, parcel no. 2945-122-40-003, and any adjacent properties with same ownership upon redevelopment.
142	3.942	LT	2742 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Access 142a.Cross access agreements required between parcel no. 2945-013-00-33, parcel no. 2945-013-22-003, and any adjacent properties with same ownership upon redevelopment.
142a	3.955	LT	2742 Patterson Rd, Empty lot	None	Shared Right-In/Right-Out	Shared access at the property line when either property redevelops. Movements may be restricted to right-in/right-out when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-013-00-33, parcel no. 2945-013-22-003, and any adjacent properties with same ownership upon redevelopment.
143	3.967	LT	Empty lot	Signalized Full Movement	Close - Access via 27 1/2 Rd	When property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-013-00-33, parcel no. 2945-013-22-003, and any adjacent properties with same ownership upon redevelopment.
144	4.015	LT	Empty lot	Signalized Full Movement	Close - Access via 27 1/2 Rd	When property redevelops, safety or operational issues occur, or when a public project is funded.
145	4.049	LT	27 1/2 Rd	Signalized Full Movement	Signalized Full Movement	
145a	4.049	RT	South leg 27 1/2 Rd	None	Signalized Full Movement	Installation of the south leg of 27 1/2 Rd may be implemented when the property redevelops, if desired and approved by the City. Access 148 must be restricted to RIRO if implemented.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
146	4.061	RT	2751, 2765 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops and/or access to Access 145a or 148 becomes available.
147	4.121	LT	Spring Valley Cir	Unsignalized 3/4 Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
148	4.121	RT	2751, 2765 Patterson Rd	Unsignalized Full Movement	Shared Conditional Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If Access 145a is implemented, access must be restricted to RIRO.
149	4.250	RT	2771, 2773, 2775 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-121-00-002 and parcel no. 2945-121-00-019 and any adjacent properties with same ownership upon redevelopment.
150	4.258	LT	Beechwood St	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
151				Not used		
152	4.292	RT	2777 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-121-00-018 and parcel no. 2945-121-00-003 and any adjacent properties with same ownership upon redevelopment.
153	4.323	LT	2778 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
154	4.356	LT	Pheasant Trail Ct	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
155	4.356	RT	El Corona Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
156	4.384	RT	Mount View Dr	Unsignalized Full Movement	Conditional Unsignalized Full Movement	Access will be restricted to 3/4 movement when safety or operational issues occur. Either Access 156 or 157 may be Conditional Unsignalized Full Movement with the other access as Right-In/Right-Out.
157	4.457	RT	Manley Heights Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. Either Access 156 or 157 may be Conditional Unsignalized Full Movement with the other access as Right-In/Right-Out.
158	4.504	RT	Santa Fe Dr	Unsignalized Full Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access to E Park Ave available.
159	4.546	LT	28 Rd	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
160	4.558	RT	2801 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
161	4.584	RT	E Park Ave	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
162	4.620	RT	2811 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Camino Del Rey Dr or Rio Grande Drive.
163	4.677	RT	Rio Grande Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
164	4.677	LT	2814 Patterson Rd, 615 28 1/4 Rd	Right-In/Right-Out	Right-In/Right-Out	
165	4.739	RT	2813, 2815, 2825 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
166	4.776	RT	2813, 2815, 2825 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 165	When property redevelops, safety or operational issues occur, or when a public project is funded.
167	4.828	RT	28 1/4 Rd	Signalized Full Movement	Signalized Full Movement	
168	4.828	LT	28 1/4 Rd	Signalized Full Movement	Signalized Full Movement	
169	4.866	RT	2827 Patterson Rd	Unsignalized Full Movement	Close - Access via 28 1/4 Rd	When property redevelops, safety or operational issues occur, or when a public project is funded.
170	4.916	RT	2835 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
171	4.930	LT	2844 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 176	When property redevelops, safety or operational issues occur, or when a public project is funded.
172	4.946	RT	Grand Cascade Way	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
173	4.972	LT	2844 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 176	When property redevelops, safety or operational issues occur, or when a public project is funded.
174	4.980	LT	2844 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 176	When property redevelops, safety or operational issues occur, or when a public project is funded.
175	5.000	LT	2844 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 176	When property redevelops, safety or operational issues occur, or when a public project is funded.
176	5.037	LT	2844 Patterson Rd	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2943-064-00-082, parcel no. 2943-064-00-083, and parcel no. 2943-062-00-101 and any adjacent properties with same ownership upon redevelopment.
177	5.048	LT	2844 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 176	When property redevelops, safety or operational issues occur, or when a public project is funded.
178	5.082	LT	2854 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 176	When alternate access to Access 176 is available. Cross access agreements required between parcel no. 2943-064-00-082 and parcel no. 2943-062-00-101 and any adjacent properties with same ownership upon redevelopment.
179	5.111	LT	2856 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 176	When alternate access to Access 176 is available. Cross access agreements required between parcel no. 2943-064-00-083 and parcel no. 2943-062-00-101 and any adjacent properties with same ownership upon redevelopment.
180	5.153	LT	2844 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Access 176.
181	5.165	RT	Legends Way	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
182	5.189	LT	2872 Patterson Rd	Unsignalized Full Movement	Close - Access via 28 3/4 Rd	When property redevelops, safety or operational issues occur, or when a public project is funded.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
183	5.229	LT	2872 Patterson Rd	Unsignalized Full Movement	Close - Access via 28 3/4 Rd	When property redevelops, safety or operational issues occur, or when a public project is funded.
184	5.248	LT	28 3/4 Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
185	5.264	RT	598 Sinatra Way	Unsignalized Full Movement	Close - Access via Naples Dr	Access closing with Bella Dimora subivision redevelopment
186	5.277	LT	604 28 3/4 Rd	Unsignalized Full Movement	Close - Access via 28 3/4 Rd	When property redevelops, safety or operational issues occur, or when a public project is funded.
187	5.280	RT	598 Sinatra Way	Unsignalized Full Movement	Close - Access via Naples Dr	Access closing with Bella Dimora subivision redevelopment
188	5.288	LT	2876 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
189	5.302	LT	2876 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 188	When property redevelops, safety or operational issues occur, or when a public project is funded.
190	5.303	RT	598 Sinatra Way	Unsignalized Full Movement	Close - Access via Naples Dr	Access closing with Bella Dimora subivision redevelopment
191	5.326	RT	2879 Patterson Rd	Unsignalized Full Movement	Close - Access via W Indian Creek Dr	When property redevelops, safety or operational issues occur, or when a public project is funded.
192	5.360	RT	W Indian Creek Dr	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
193	5.360	LT	W Indian Creek Dr	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
194	5.438	RT	Belhaven Way	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
195	5.447	RT	2893 Patterson Rd	Unsignalized Full Movement	Close - Access via Belhaven Way	When property redevelops, safety or operational issues occur, or when a public project is funded. Belhaven Way to be widened to full width with redevelopment or a public project.
196	5.488	LT	E Indian Creek Dr	Unsignalized Full Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access via W Indian Creek Dr available.
197	5.488	RT	2893 Patterson Rd	Unsignalized Full Movement	Close - Access via Belhaven Way	When property redevelops, safety or operational issues occur, or when a public project is funded.
198	5.527	RT	2893 Patterson Rd	Right-In/Right-Out	Close - Access via Belhaven Way	When property redevelops, safety or operational issues occur, or when a public project is funded.
199	5.572	RT	29 Rd	Signalized Full Movement	Signalized Full Movement	
200	5.572	LT	29 Rd	Signalized Full Movement	Signalized Full Movement	
201	5.610	LT	2902, 2904, 2906 Patterson Rd, 606, 608 29 Rd	Right In-Right Out	Shared Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when adjacent properties redevelop - access via 29 Road,
202	5.645	LT	2908 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements are required between properties currently served by Access 202, 203, 204, and 206 upon redevelopment. Access points shall be consolidated and shared between these properties as redevelopment occurs. Proposed configuration to be approved by the City.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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1. Oriented from direction of reference point (W-E)
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4. Unless otherwise specified, conditions listed refer to proposed configuration.
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6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
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Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
203	5.662	LT	2910 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements are required between properties currently served by Access 202, 203, 204, and 206 upon redevelopment. Access points shall be consolidated and shared between these properties as redevelopment occurs. Proposed configuration to be approved by the City.
204	5.679	LT	2912 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements are required between properties currently served by Access 202, 203, 204, and 206 upon redevelopment. Access points shall be consolidated and shared between these properties as redevelopment occurs. Proposed configuration to be approved by the City.
205	5.679	RT	2901, 2903, 2905, 2913, 2915 Patterson Rd	Unsignalized 3/4 Movement	Unsignalized 3/4 Movement	
206	5.696	LT	2914 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements are required between properties currently served by Access 202, 203, 204, and 206 upon redevelopment. Access points shall be consolidated and shared between these properties as redevelopment occurs. Proposed configuration to be approved by the City.
207	5.719	RT	2901, 2903, 2905, 2913, 2915 Patterson Rd	Right In-Right Out	Right-In/Right-Out	Cross access agreements required between parcel no. 2943-082-33-003, parcel no. 2943-082-33-002 and parcel no. 2943-082-00-043 and any adjacent properties with same ownership upon redevelopment.
208	5.732	LT	Partee Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
209	5.750	RT	2917 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops and alternative access to Access 207 is available.Cross access agreements required between parcel no. 2943-082-33-003, parcel no. 2943-082-33-002 and parcel no. 2943-082-00-043 and any adjacent properties with same ownership upon redevelopment.
210	5.764	LT	2918 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Partee Dr.
211	5.792	LT	Cris-Mar St	Unsignalized Full Movement	Conditional Unsignalized Full Movement	Movements may be restricted to Right-In/Right-Out when Bonito Ave is connected to 29 1/2 Rd.
212	5.795	RT	Redwing Ln	Unsignalized Full Movement	Conditional Unsignalized Full Movement	Movements may be restricted to 3/4 when Bonito Ave is connected to 29 1/2 Rd or safety or operational issues occur.
213	5.829	LT	Parcel Number: 2943-053-40-000	Unsignalized Full Movement	Gated Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
214	5.836	LT	2926 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
215	5.858	LT	2926 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 214	When property redevelops, safety or operational issues occur, or when a public project is funded.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
216	5.858	RT	29 1/4 Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
217	5.880	LT	2934 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
218	5.891	LT	2934 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 217	When property redevelops, safety or operational issues occur, or when a public project is funded.
219	5.897	LT	2938 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
220	5.905	LT	2938 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 219	When property redevelops, safety or operational issues occur, or when a public project is funded.
221	5.931	LT	29 3/8 Rd	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
222	5.931	RT	29 3/8 Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
223	5.951	LT	2940 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops or when alternative access to 29 3/8 Rd is available.
224	5.969	LT	2942 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops and alternative access to 29 1/2 Rd via Penny Lane is available.Cross access agreements required between parcel no. 2943-053-00-051 and parcel no. 2943-053-00-052 and any adjacent properties with same ownership upon redevelopment.
225	5.974	RT	2939 Patterson Rd	Unsignalized Full Movement	Close - Access via Colanwood St.	When property redevelops, safety or operational issues occur, or when a public project is funded.
226	6.000	LT	2944 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops and alternative access to 29 1/2 Rd via Penny Lane is available.Cross access agreements required between parcel no. 2943-053-00-051 and parcel no. 2943-053-00-052 and any adjacent properties with same ownership upon redevelopment.
227	6.020	RT	Colanwood St	Unsignalized Full Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access via Wellington Ave or Parkway Dr available.
228	6.025	LT	2948 Patterson Rd	Unsignalized 3/4 Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via 29 1/2 Rd.
229	6.041	RT	2945 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
230	6.057	RT	599 29 1/2 Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via 29 1/2 Rd.
231	6.087	RT	29 1/2 Rd	Signalized Full Movement	Signalized Full Movement	
232	6.087	LT	29 1/2 Rd	Signalized Full Movement	Signalized Full Movement	

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
233	6.160	RT	E Greenfield Cir	Unsignalized Full Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access via Bookcliff Ave available.
234	6.188	LT	Pioneer Rd	Unsignalized Full Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access via Bonito Ln available.
235	6.243	LT	Broken Spoke Rd	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when safety or operational issues occur, or when a public project is funded.
236	6.282	RT	Darby Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
237	6.345	LT	Maintenance access	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when access to Access 241 is available.
238	6.352	RT	2977 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
239	6.391	LT	2980 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 241	When property redevelops, safety or operational issues occur, or when a public project is funded.
240	6.400	RT	Placer St	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
241	6.404	LT	2982 Patterson Rd	Unsignalized Full Movement	Shared Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
242	6.484	LT	2982 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 241	When property redevelops, safety or operational issues occur, or when a public project is funded.
243	6.474	RT	Maintenance access	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when alternate access to Access 245 or 30 Rd is available. Cross access agreements required between parcel no. 2943-081-00-042 and parcel no. 2943-081-00-051 and any adjacent properties with same ownership upon redevelopment.
244	6.497	LT	Hudson Bay Dr	Unsignalized Full Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access via F 1/4 Rd available.
245	6.497	RT	599 30 Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via 30 Rd. Cross access agreements required between parcel no. 2943-081-00-042 and parcel no. 2943-081-00-051 and any adjacent properties with same ownership upon redevelopment.
246	6.528	LT	2992 Patterson Rd	Unsignalized 3/4 Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. When property redevelops, a right turn lane must be provided or access will be closed.
247	6.532	RT	599 30 Rd	Unsignalized Full Movement	Close - Access via Access 245	When property redevelops, safety or operational issues occur, or when a public project is funded.
248	6.600	RT	30 Rd	Signalized Full Movement	Signalized Full Movement	
249	6.600	LT	30 Rd	Signalized Full Movement	Signalized Full Movement	

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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6. Implement with land development, redevelopment or use change
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8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
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Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
250	6.667	LT	Ronlin Dr	Unsignalized Full Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access via E Vista Dr available.
251	6.721	LT	Agana Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
252	6.721	RT	Agana Dr	Unsignalized Full Movement	Close - Access via Seranade Dr	When adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
253	6.776	LT	Starlight Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
254	6.831	LT	Serenade St	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
255	6.831	RT	Serenade St	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
256	6.863	RT	3027 Patterson Rd	Unsignalized Full Movement	Close - Access via McMullin Dr	When property redevelops, safety or operational issues occur, or when a public project is funded.
257	6.863	LT	3026 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Access 258. Cross access agreements required between parcel no. 2943-043-00-143 and parcel no. 2943-043-00-082 and any adjacent properties with same ownership upon redevelopment.
258	6.882	LT	3026 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2943-043-00-143 and parcel no. 2943-043-00-082 and any adjacent properties with same ownership upon redevelopment.
259	6.897	LT	3028 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Access 258. Cross access agreements required between parcel no. 2943-043-00-143, parcel no. 2943-043-00-082 and parcel no 2943-043-00-195 and any adjacent properties with same ownership upon redevelopment.
260	6.911	LT	3030 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Access 263. Cross access agreements required between parcel no. 2943-043-00-195 and parcel no. 2943-043-00-082 and any adjacent properties with same ownership upon redevelopment.
261	6.913	RT	McMullin Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
262	6.962	RT	Gerken Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
263	6.962	LT	Round Table Rd	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
264	6.991	RT	599 Grand Valley Dr	Unsignalized Full Movement	Close - Access via Grand Valley Dr	When property redevelops, safety or operational issues occur, or when a public project is funded.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
265	7.002	RT	599 Grand Valley Dr	Unsignalized Full Movement	Close - Access via Grand Valley Dr	When property redevelops, safety or operational issues occur, or when a public project is funded.
266	7.016	RT	Grand Valley Dr	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
267	7.016	LT	Grand Valley Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
268	7.039	RT	598 Grand Valley Dr	Unsignalized Full Movement	Close - Access via Grand Valley Dr	When property redevelops, safety or operational issues occur, or when a public project is funded.
269	7.053	RT	3047 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur or when a public project is funded. Access will be closed when property redevelops - access via Wellington Ave or Kirby Lane.
270	7.060	LT	3044 Patterson Rd	Unsignalized Full Movement	Close - access via Stoney Brook Ln	When property redevelops, safety or operational issues occur, or when a public project is funded.
271	7.082	RT	3047 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops or when alternate access to Wellington Ave or Kirby Lane is available.
272	7.111	RT	3049 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Wellington Ave.
273	7.120	LT	Mesa Valley Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
274	7.147	LT	3054 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 276	When property redevelops, safety or operational issues occur, or when a public project is funded.
275	7.147	RT	Shoshone St	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
276	7.168	LT	3054 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
277	7.221	LT	Cottage Meadows Ct	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
278	7.243	RT	3065 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 284, 286 and Wellington Ave	When property redevelops, safety or operational issues occur, or when a public project is funded.
279	7.256	LT	3064 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
280	7.264	LT	3066 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops and alternate access to Orange Grove Way is available. Cross access agreements required between parcel no. 2943-044-00-217, and parcel no. 2943-044-37-002 and any adjacent properties with same ownership upon redevelopment.
281	7.276	LT	3068 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Orange Grove Way.
282	7.279	RT	3067 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

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1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
283	7.290	LT	3068 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 281	When property redevelops, safety or operational issues occur, or when a public project is funded.
284	7.295	RT	3073 Patterson Rd	Gated Unsignalized Full Movement	Gated Unsignalized Full Movement	When property redevelops, close access - access via Access 286.
285	7.319	RT	3073 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 284 and 286	When property redevelops, safety or operational issues occur, or when a public project is funded.
286	7.341	RT	3073 Patterson Rd	Gated Unsignalized Full Movement	Gated Unsignalized Full Movement	When property redevelops, realign Access 286 across from Lodgepole St. Realigned access does not need to be gated.
287	7.349	LT	Lodgepole St	Unsignalized Full Movement	Unsignalized Full Movement	

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3A

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3B

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3C

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3D

PATTERSON ROAD ACP EXHIBIT

NOTE:
A DESIGN VARIANCE OR SPEED REDUCTION MUST BE JUSTIFIED AND APPROVED BY THE CITY TO ALLOW 3/4 MOVEMENT AT BOTH ACCESS 62 AND 64. OTHERWISE, RI-RO WILL BE APPLIED TO ONE LOCATION AS DETERMINED BY THE CITY.

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- **G** GATED ACCESS POINT
- **C** CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- **S** CONDITIONAL SAFETY ACCESS POINT

FIG. 3E

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3F

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3G

PATTERSON ROAD ACP EXHIBIT

NOTE:
A SINGLE SHARED RI-RO FOR THESE PROPERTIES WILL BE PROVIDED.

LOWELL CT
LOWELL LN
PATTERSON RD
N 12TH ST
N 15TH ST
27 1/4 RD
MATCHLINE G
MATCHLINE H
SPEED LIMIT 35
SPEED LIMIT 40
SPEED LIMIT 30
108 111 112 115 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 110 113 114 116 117
0 200 400 800 Feet
N

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3H

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 31

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3J

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3K

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3L

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3M

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3N

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 30

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS.
  TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

FIG. 3P

The following Table includes comments the City received from community members reviewing the Janaury 2021 draft Patterson Road Access Control Plan online at GJSpeaks.org. The Planning and Engineering team at the City and with the City's Consutlant team at Stolfus & Associates reviewed the comments, met with or contacted neighborhoods and individuals, then conducted further study and analysis for each comment and access point questioned. Many changes were made in the April 2021 Final Draft Access Control Plan where a solution could be found to 1) maintain better long term access to properties and 2) to further the goals of the Access Control Plan. CONDITIONS NOTES: RIRO = Right In Right Out; 3/4 Movement = Right In Right Out Left In; Full Movement = Right In Right Out Left In Left Out

Name	Area/Location of Concern / Public Comments	Access Point(s)	Draft Condition (January 2021)	Changes Made to Final Draft ACP (April 2021)
Cris-Mar Neighbors	**Cris-Mar Neighorhood Meeting** - previously summarized. Requesting a note be added that the access control measures would not be added until the Bonito/Penny Lane connection to 29 1/2 Road is added. Improvements needed to Bonito for two blocks east of 29 Road to accommodate additional traffic.	211/212	211-RIRO, 212-3/4 movement	Add connection between Penny Lane and Bonito on the alt routes map. Make Cris Mar and Redwing conditional unsignalized full movement. Cris Mar goes to RIRO and Redwing goes to 3/4 upon connection to 29 1/2 Road.
Mantey Heights Neighbors	**Mantey Heights Neighorhood Meeting** - Approximately 25 people attended the meeting at 4:00 on Thursday 3/18. Speeding is big concern. They are concerned about emergency access, tight streets due to vegetation, sight distance. I would like to look into the possibility of a left out accel lane at access 157. We have received 3 letters: Gloria Deschamp (124 Mount View Drive); Beth McKee (135 Carlitos Ave), and Marc Burdick and Colin Carman (114 Camino Del Rey Dr). Gary Lucero is the primary contact.	156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. An option to select either 156 or 157 as a conditional full movement to be restricted to 3/4 if safety/ operational issues occur will be included in the Plan. The other access will become RIRO. From an operational/ safety/ spacing standpoint, 156 is preferred. From the neighborhood's perspective, 157 is preferred, but 157 can only be implemented if sight distance is improved to meets standards. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.
Vanderen-Ford Heights Subdivision Neighbors	**Mira Vista/Belair/Mayfair Neighborhood Meeting** - 23 people attended the meeting at 5:00 on Thursday 3/18. They are adamant about not sharing anything access/road/etc with St. Mary's. Their CC&R's restrict their neighborhood to only residential uses therefore they argue that St. Mary's Hospital will not be able to expand to the west even if they do own all of it. They want the lefts out of Patterson at access 93 (St. Mary's) to be eliminated and then they will be fine. At peak hours the neighborhood already uses access 86 as a 3/4. Would like for it to be at least 3/4. One individual asked we consider just restricting full motion access for certain hours of the day. We received one letter from Bill Crawford (2551 Mayfair Dr). Danielle Schuster is the primary contact.	86/86a/93	86 - Conditional RIRO, 86a - Conditional 3/4, 93 - Conditional RIRO	Eliminate 86a. Make 86 and 93 conditional 3/4 with conditions to restrict to RIRO if safety or operational issues develop.
	Patterson Gardens - Barbara Sundermeier is concerned about no 3/4 access at 129. She states that it is unrealistic to think that someone can make a U-turn at the access #123 City Market 3/4 access. Rick and Andrew have already weighed in via email stating 3/4 access is possible and not get into the functional intersection area of Patterson and 15th.	129	129-RIRO	Change Access 129 to conditional 3/4 with conditions to restrict to RIRO if safety or operational issues develop.

Name	Area/Location of Concern / Public Comments	Access Point(s)	Draft Condition (January 2021)	Changes Made to Final Draft ACP (April 2021)
Danielle Wills-Olivas	**ACCESS #3** - self-storage company - Concern that large truck traffic entering and exiting the storage unit facility with only a right in right out option will find it difficult to make U-turns further west on Patterson Road near the I-70 B intersection to go east.	1/3	1-closed, 3-RIRO	I-70 B to 24 Rd provides alternate access to get back to Patterson going east or to enter from the west. Change Access 3 to unsignalized full movement (conditional) with condition to restrict movements only when left turn improvements are implemented at I-70B. Change Access 1 to conditional RIRO with condition to close upon redevelopment only.
Susan Waterhouse	**ACCESS #29** and other north access around Patterson Village Square between 24 1/2 and 25 Road - Impact these changeswill have on intersections at 24 1/2 and 25 Road is a cnocern. Often it takes more than one light cycle now to make a left. By making everyone on my block go to these intersections to make left turns makes the situation worse. Are there plans to increase turn lanes or make changes to improve traffic flow at these intersections.	29	29-Conditional 3/4 - no change proposed	Not all left turns will need to be accommodated at 24 1/2 Rd/25 Rd. Multiple options for eastbound movements are provided including left turns at Commerce, U-turns along Patterson, access to Flat Top. The traffic study for the ACP identified some auxiliary lane improvements at 24 1/2 Rd and 25 Rd along Patterson, but did not identify the need for improvements on these roads. The City will continue to monitor how traffic reroutes and traffic volumes increase at public road intersections to identify the need for additional improvements at signalized intersections in the future.
Anne Landman	**ACCESS #44** - Need to retain full movement at Burkey Street (Post Office Annex access). **ACCESS #106 and #108** - Concerned with limiting tunring movements into the Northen Way neighborhood.	44/106/108	44-3/4 movement (no change) 106- 3/4 movement, 108-RIRO(no change)	Burkey Street has a 3/4 movement allowing left-turns in. Blichman Avenue to the north provides access back to 25 Rd for left turns out. Access 106 is changed to conditional full movement to be restricted to 3/4 only with safety or operational issues. Either U-turns at 7th Street or re-routing via 7th to Bookcliff or 7th to Horizon will achieve movements to the east for vehicles not comfortable making left turns at 106. Left turn movements can be made at Access 106 - no change proposed for Access 108.
Interested Developer	**ACCESS 53 and 61** - Developer interested in potential for 3/4 movement at both Access 53 and 61.	53/61	53-conditional 3/4 movement, 61-conditional 3/4 movement (conditions changed)	Conditions were removed from Access 53 and it will be a 3/4 movement. Access 61 is a conditional 3/4 movement and is conditional upon the developer demonstrating the left turn movements meet TEDS requirements based on projected traffic volumes. Access 61 will be restricted to RIRO if safety or operational issues develop.
Willi Goemmel	**ACCESS #69** - E Park Avenue - Extra traffic would not be good using Park Aveune	69	69- Safety RIRO (no change)	Park Avenue will be restricted to RIRO when a median is constructed on Patterson. It has the potential to close if safety or operational issues ever occurred at that location due to its proximity to 1st St. Alternate access to 1st Street already exists. The access restrictions are not expected to increase traffic to the neighborhood.
Randall Zmerzli	**ACCESS 70 and 71** - Property owner at Access 70 and 71.	70/71	70-closed (no change), 71-conditional RIRO(no change)	Add cross access between 71 and 72. Access 71 will close upon redevelopment.
Dan O'Connor	**ACCESS 70 and 71** - Potential buyer for Access 70 and 71. Interested in maintaining one access to Patterson in addition to the Lost Lane access currently proposed by the plan.	70/71	70-closed (no change), 71-conditional RIRO(no change)	Add cross access between 71 and 72. Access 71 will close upon redevelopment.

Name	Area/Location of Concern / Public Comments	Access Point(s)	Draft Condition (January 2021)	Changes Made to Final Draft ACP (April 2021)
John. E Smith	**ACCESS #86** - Mira Vista Rd - Don't limit this intersection to RI / RO only.	86/86a/93	86 - Conditional RIRO, 86a - Conditional 3/4, 93 - Conditional RIRO	Eliminate 86a. Make 86 and 93 conditional 3/4 with conditions to restrict to RIRO if safety or operational issues develop.
Ronald W Gibbs	**ACCESS # 116 and #117** - Wants 3/4 Movement for west bound Patterson Traffic in to Village Fair Shopping Center @ 12th and Patterson	114/116/117	114-conditional RIRO, 116-RIRO, 117- closed	Change Access 117 to RIRO. Change Access 116 to conditional RIRO - cannot close until truck circulation can be accommodated on site. 3/4 movement at 116 was evaluated and determined to be too close to 12th St. Change access 114 to conditional 3/4 - conditioned upon providing access to parcels both east/west.
Patricia Star	**ACCESS #129 and #130** - Concerned with safety issues and access to Patterson Gardens Townhomes between 12th and 15th Streets	129/130	129-RIRO, 130- right-out only (no change)	Change Access 129 to conditional 3/4 with conditions to restrict to RIRO if safety or operational issues develop.
Gloria J Deschamp	**ACCESS #156** - Mt View Drive - Mantey Heights - I have had no problems navigating the entering and existing onto Patterson Road, no to any closures.	156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. An option to select either 156 or 157 as a conditional full movement to be restricted to 3/4 if safety/ operational issues occur will be included in the Plan. The other access will become RIRO. From an operational/ safety/ spacing standpoint, 156 is preferred. From the neighborhood's perspective, 157 is preferred, but 157 can only be implemented if sight distance is improved to meets standards. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.
Janice E Hart	**ACCESS # 156-158 and #160-163** - Mantey Heights - Access from the east	156/157/158/161/163	156-RIRO, 157 - RIRO, 158-Closed, 161-3/4 movement (no change), 163- RIRO)(no change)	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. An option to select either 156 or 157 as a conditional full movement to be restricted to 3/4 if safety/ operational issues occur will be included in the Plan. The other access will become RIRO. From an operational/ safety/ spacing standpoint, 156 is preferred. From the neighborhood's perspective, 157 is preferred, but 157 can only be implemented if sight distance is improved to meets standards. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.

Name	Area/Location of Concern / Public Comments	Access Point(s)	Draft Condition (January 2021)	Changes Made to Final Draft ACP (April 2021)
Kitty Nicholason	**Access #157 and #158** - Don't close #158, easier to see from #158 than #157 (Santa Fe Drive, Mantey Heights)	156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. An option to select either 156 or 157 as a conditional full movement to be restricted to 3/4 if safety/ operational issues occur will be included in the Plan. The other access will become RIRO. From an operational/ safety/ spacing standpoint, 156 is preferred. From the neighborhood's perspective, 157 is preferred, but 157 can only be implemented if sight distance is improved to meets standards. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.
Jeff Anderson	**Access #157 and #158** - Don't close #158, easier to see from #158 than #157 (Santa Fe Drive, Mantey Heights) Santa Fe Drive, Mantey Heights	156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. An option to select either 156 or 157 as a conditional full movement to be restricted to 3/4 if safety/ operational issues occur will be included in the Plan. The other access will become RIRO. From an operational/ safety/ spacing standpoint, 156 is preferred. From the neighborhood's perspective, 157 is preferred, but 157 can only be implemented if sight distance is improved to meets standards. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.
Karen E Perrin	**Access #157 and #158** - Don't close #158, easier to see from #158 than #157 (Santa Fe Drive, Mantey Heights)	156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. An option to select either 156 or 157 as a conditional full movement to be restricted to 3/4 if safety/ operational issues occur will be included in the Plan. The other access will become RIRO. From an operational/ safety/ spacing standpoint, 156 is preferred. From the neighborhood's perspective, 157 is preferred, but 157 can only be implemented if sight distance is improved to meets standards. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.

Name	Area/Location of Concern / Public Comments	Access Point(s)	Draft Condition (January 2021)	Changes Made to Final Draft ACP (April 2021)
Ray McGuinness	**Access #157 and #158** - Don't close #158, easier to see from #158 than #157 (Santa Fe Drive, Mantey Heights)	156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. An option to select either 156 or 157 as a conditional full movement to be restricted to 3/4 if safety/ operational issues occur will be included in the Plan. The other access will become RIRO. From an operational/ safety/ spacing standpoint, 156 is preferred. From the neighborhood's perspective, 157 is preferred, but 157 can only be implemented if sight distance is improved to meets standards. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.
Tod Pace	**Access #158** - Don't close #158 (Santa Fe Drive, Mantey Heights)	156/157/158	156-RIRO, 157 - RIRO, 158-Closed	The proximity of Access 158 to 28 Rd is concerning from a safety and operational standpoint. Access 158 will be changed to a safety RIRO- conditions note closure only if safety or operational issues develop. Add connection between Camino Del Rey and Rio Grande. An option to select either 156 or 157 as a conditional full movement to be restricted to 3/4 if safety/ operational issues occur will be included in the Plan. The other access will become RIRO. From an operational/ safety/ spacing standpoint, 156 is preferred. From the neighborhood's perspective, 157 is preferred, but 157 can only be implemented if sight distance is improved to meets standards. Access 161 (E Park Ave) will be a 3/4 movement providing left-turn access from the east. Connection between Camino Del Rey and Rio Grande will connect 163 to 161.
James Vidmar	**ACCESS 159** - difficult to turn left. Need a connector road between 28 Road and 28 1/4 Road to allow neighborhood to access the 28 1/4 Road traffic light.	159	159-3/4 movement (no change)	City is currently connecting Hawthorne to 28 1/4 Rd to address left-turn out need. This connection was previously identified in the City's Street plan before the ACP.
Brenda Walker	**ACCESS #168** - Don't connect 28 1/4 Road with Hawthorne Drive. Going to 29 Road as an alternate route to go west on Patterson Road adds additional time to commute.	168	168 signalized full movement (no change)	The Hawthorne connection was already planned prior to the ACP and is currently moving forward. You will still be able to use 28 Rd to go west on Patterson. You will just need to reroute to go east on Patterson.
Kaylynn Tompkins	**ACCESS # 184** - 28 3/4 Road - Don't connect Matchett Park with Navajo Way. Against making 28 3/4 Road a RI / RO.	184	184-RIRO (no change)	The plan attempts to balance 3/4 movements to the north and south of Patterson and to provide 3/4 movements where the most vehicles/properties can be served. 28 3/4 is too close to Legends Way to provide a 3/4 movement. The connection between Navajo and Matchett Park is meant to provide alternate routes for the neighborhoods on the north to reach a traffic signal for left turn movements.
Brad Tompkins	**ACCESS #168** - Don't connect 28 1/4 Road with Hawthorne Drive and Matchett Park and with Indian Creek Subdivision, instead provide a connection from Indian Creek to 29 Road. **ACCESS #184** - 28 3/4 Road - Don't like limitiing 28 3/4 Road to right in and right out only.	168/184	168 signalized full movement (no change), 184-RIRO(no change)	City is currently connecting Hawthorne to 28 1/4 Rd to address need. This connection was previously identified in the City's Street plan before the ACP. While a connection from Indian Creek to 29 Road would be beneficial, the availability of land to make that connection without impacting homes in Indian Creek is not available. Crossing of a major drainageway would also be required to connect to 29 Rd.

Name	Area/Location of Concern / Public Comments	Access Point(s)	Draft Condition (January 2021)	Changes Made to Final Draft ACP (April 2021)
Ruth Morrison-Morin	**ACCESS #216** - 29 1/4 Road - Concerned with limiting 29 1/4 Road to right only. To go westbound on Patterson Road will add 3 to 5 minutes to my commute as I will have to go south and make my way over to 29 Road, then sit at a stoplight that backs up in the left turn lane now at Patterson.	216	216-RIRO (no change)	Implementation of this plan will occur over time as needed. A median will be added in this section when safety and operations on Patterson calls for it. In the future, it is anticipated that making left turns from 29 1/4 will become more difficult and finding an alternate route will actually be faster and safer than waiting for a gap in traffic on Patterson Rd. Currently there are no plans to implement a median in this segment.
Margaret E Molnar	**ACCESS #233** - E Greenfield Cir - no access to 29 1/2 Road, 30 Road too far away for circulation	233	233-Safety RIRO(no change)	Access 233 is too close to 29 1/2 Rd to provide left-turns in. When a median is implemented at 29 1/2 Rd, Greenfield will be restricted to RIRO. It will only be closed if safety or operational issues develop. Alternate left-turn in access is available at Placer St. In addition, u-turns are available at either Placer or 30 Rd for left-turn movements out. Out of direction travel to u-turn at Placer St is less than 1/2 mile total.
Laura Johnson	**ACCESS #235 and #244** - Oxbow and Trading Post subdivisions - One full access to these subdivison wold be helpful instead of access required to go to 30 Road.	235/244	235-RIRO, 244-Safety RIRO(no change)	Change 235 to 3/4. 241 is also 3/4 and will provide access to neighborhoods. The plan looks to identify key locations with appropriate spacing for traffic signals for ideal operations on Patterson Rd for full movement intersections, which is basically already in place at 1/2 mile spacing. The plan has identified additional 3/4 movement access between signals where operations are improved and multiple properties/businesses can be served. Access 244 is too close to 30 Rd to provide anything more than RIRO. Alternate access via F 1/4 Rd is available and if safety or operational issues develop at 244, the access will close.
Interested Developer	**ACCESS 246** - Developer interested in RIRO at Access 246	246	246- Conditional RIRO (conditions changed)	Change conditions for 246 conditional RIRO to property owner constructing right turn lane when redevelopment occurs.
Ruth Kinnett	**ACCESS #266** - Grand Valley Drive - Concern this will make Grand Valley Dirve a throughfare.Don't eliminate the center lane, need for turn movements and emergency vehicles.	262/266	262-3/4 movement, 266-RIRO	Change 3/4 movement to Access 266 and change Access 262 to RIRO. Access 266 provides more connectivity and better circulation for the City overall and the location doesn't create overlapping left issues on Patterson. May increase traffic and speeds on Grand Valley, but probably a similar amount of traffic at Gerken with the 3/4 at 262. The plan has considered emergency services and alternate circulation routes for emergency services and the general public.
Daniel Nordmeyer	**ACCESS #266** - Grand Valley Drive - The better choice for a south bound road would be Grand Valley Drive, it is a straight road all the way to E 1/2 Road. The plan for Patterson Road between 30 and 31 Roads needs work.	262/266	262-3/4 movement, 266-RIRO	Change 3/4 movement to Access 266 and change Access 262 to RIRO. We agree that 266 provides more connectivity and better circulation for the City overall and the location doesn't create overlapping left issues on Patterson. May increase traffic and speeds on Grand Valley, but probably a similar amount of traffic at Gerken with the 3/4 at 262.
T. Dykema	**GENERAL COMMENTS** - Enforce traffic laws	N/A	N/A	This plan supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.

NAME	GENERAL COMMENTS	Access Point(s)	Draft Condition (January 2021)	Changes Made to Final Draft ACP (April 2021)
Bruce Schwenke	**GENERAL COMMENTS** - Enforce Traffic Laws. Suggest flashing yellow arrows in intersection turn lanes.	N/A	N/A	This plan supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.The City is considering implementing flashing yellow arrows as funding is available and signals are upgraded.
Tom Matthews	**GENERAL COMMENTS** - All this project will do is direct more traffic onto Patterson Road and 29 Road.	N/A	N/A	This project is meant to allow Patterson to operate to accommodate traffic for it's classification, which is a major arterial. Patterson is a key east-west arterial for the City. If improvements to Patterson are not made, congestion will occur and traffic will look for alternate routes either north or south of Patterson to meet the demand.
Julie Bauer	**GENERAL COMMENTS** - Supports controlling turn movements	N/A	N/A	Thank you for your input.
Katherine Hardwick	**GENERAL COMMENTS** - Don't push traffic into neighborhoods, reduce speed limits and enforce traffic laws	N/A	N/A	This project is meant to allow Patterson to operate to accommodate traffic for it's classification, which is a major arterial. Major arterials proiritize through movements and higher speeds. Patterson is a key east-west arterial for the City. If improvements to Patterson are not made, congestion will occur and traffic will look for alternate routes either north or south of Patterson to meet the demand. This plan also supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.
Molly Nelson	**GENERAL COMMENTS** - Reduce speed limits and enforce traffic laws	N/A	N/A	This project is meant to allow Patterson to operate to accommodate traffic for it's classification, which is a major arterial. Major arterials proiritize through movements and higher speeds. Patterson is a key east-west arterial for the City. If improvements to Patterson are not made, congestion will occur and traffic will look for alternate routes either north or south of Patterson to meet the demand. This plan also supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.
Tiffany Hoover	**GENERAL COMMENTS** - Enforce traffic laws	N/A	N/A	This plan supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.
B Anderson	**GENERAL COMMENTS** - Concerned about the additional traffic in neighborhoods due to the need to access their homes through neighborhood streets that tie into north/south streets such as 30 Road and 31 Road.	N/A	N/A	The plan does result in additional circulation by neighborhood traffic. The volumes anticipated are very low and neighborhood traffic may already be choosing to take these routes during peak hours. We do not believe we have created any cut-through routes that would increase traffic from outside the neighborhood.

NAME	GENERAL COMMENTS	Access Point(s)	Draft Condition (January 2021)	Changes Made to Final Draft ACP (April 2021)
Pamela Gayle Fults	**GENERAL COMMENTS** - Don't approve any new subdivisions that have to access Patterson Rd. Not fair homeowner has to build a new driveway to existing garage when existing driveway is closed to garage.	N/A	N/A	All new subdivisions will be subject to this ACP in the future. Any homes that have access to a garage today have conditions on their access closure to only occur if redevelopment occurs. Otherwise access to the garage remains.
Kent Beverly	**GENERAL COMMENTS** - Enforce traffic laws.	N/A	N/A	This plan supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.
Kevin Molick	My comments don't exactly pertain to the changes proposed on Patterson rd but rather an observation as a newcomer to GJ. I moved my from my Denver home of forty years and a growing recreational manufacturing business here almost three years ago hoping to grow my business and find a slower paced life on the western slope. I live barely 100 yards from Patterson Rd where I get to witness an amazingly huge amount of idiot drivers either " rolling coal" in their oversized noisy air polluting trucks or any number of crotch rockets and noisy little souped up cars intending to see how fast and loud they can get from 28 Rd to 29 Rd! If there ever were a reason to pack up both my home and business this would be it! If it weren't for the fact that we love our house and aren't ones to move as a knee jerk reaction because we live near what friend that's lived here a long time has started the road " Neanderthal Blvd". It makes me incredibly tense every time I venture out onto Patterson (aka Neanderthal). We Don't need to make the road faster! We need to make it a more evenly paced road with ways to slow the stretches down so as to not make it appealing the the " rolling coal trucks and drag racers". I don't have any great suggestions but I think some smarter engineers ought to be able to come up with some solutions. Maybe there needs to be ways to break up the speedways while creating a more even flow.	N/A	N/A	Access Management is a proven technique both in the US and Europe used to make traffic flow smoother and easier and extend the life of arterial corridors. It is not specifically a traffic calming technique, but is meant to improve safety and congestion on the most critical connections and highest volume streets in cities. In addition, raised medians have been shown to have traffic calming results. This project is meant to allow Patterson to operate to accommodate traffic for it's classification, which is a major arterial. Major arterials prioritize through movements and higher speeds. Patterson is a key east-west arterial for the City. If improvements to Patterson are not made, congestion will occur and traffic will look for alternate routes either north or south of Patterson to meet the demand.
Tyler Hardwick	**GENERAL COMMENTS** - Don't push traffic into neighborhoods, reduce speed limits and enforce traffic laws	N/A	N/A	This project is meant to allow Patterson to operate to accommodate traffic for it's classification, which is a major arterial. Major arterials proiritize through movements and higher speeds. Patterson is a key east-west arterial for the City. If improvements to Patterson are not made, congestion will occur and traffic will look for alternate routes either north or south of Patterson to meet the demand. This plan also supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.

NAME	GENERAL COMMENTS	Access Point(s)	Draft Condition (January 2021)	Changes Made to Final Draft ACP (April 2021)
Gwen Costello	**GENERAL COMMENT** - 25 Road and Commerce Blvd - about existing business on Commerce Blvd not being affected as long as new development doesn't occur	35/36/27	35/36-signalized full movement(no change), 27-3/4 movement (no change)	Commerce Blvd will likely be restricted to 3/4 movement with a public project.
Susan Sederstrom	**QUESTION:** (E Greenfield Cir and Patterson Road). Question: What is the definition of "Conditional Safety Access Point"	233	233-Safety RIRO(no change)	Conditional safety access point means if a safety or operational issue develops at this intersection, it will be closed. These are the only conditions that a closure could occur. Alternate access to other streets has been confirmed at all locations with a Conditional Safety designation. Specifically at Greenfield, a circulation via BookCliff Ave is available to multiple other access points.
Danielle Schuster	**QUESTION:** (Mira Vista). "Hello, I live at 306 Belaire Dr. According to the proposed plan our street Mira Vista would eventually be closed once a new street is constructed next door on hospital property. Here are my questions: Will the city of Grand Junction be buying the homes/property from St. Mary's in order to make a new road? Or would the entrance to our neighborhood be controlled by St. Mary's? That sounds worrisome to only be able to access our homes through a private property street. Will this new street (86A) have a street name? How will people know where to turn to access Belaire Dr? Once Mira Vista is closed, will the City make an effort to provide an aesthetically pleasing street closure? (i.e. a brick wall, or row of trees) Or will we be stuck with a florescent metal gate indicating closure? Thank you"	86/86a/93	86 - Conditional RIRO, 86a - Conditional 3/4, 93 - Conditional RIRO	Based on additional public feedback, the plan has been changed as follows:Eliminate 86a. Make 86 and 93 conditional 3/4 with conditions to restrict to RIRO if safety or operational issues develop.

NAME	GENERAL COMMENTS	Access Point(s)	Draft Condition (January 2021)	Changes Made to Final Draft ACP (April 2021)
James Schultz	**GENERAL COMMENTS:** My name is James Schultz and I worked for 30 years as a real estate consultant with Monument Realty, RE\MAX 4000, and RE\MAX Two Rivers from 1981 through 2011. I also have my Accredited Land Consultant designation through the Realty Land Institute, Rocky Mountain Region. I worked on developing land in the county and in the city and created several parcels that were built on, from home sites, recreation sites, and commercial/residential (Multi-Use) along 24 Rd. through Kathy Portner.I have traveled a lot of Europe and of course, a lot of the USA, and I cannot believe you would build (and have built) such attrocities in this county as double round-a-bouts, reverse lane changes (22 Rd Overpass), 1st street from Orchard to Patterson with speed bumps(thanks to Pat Gormley), and others. Now, you are contemplating destroying Patterson Road for 7 miles? Kathy Portner called it "calming traffic". Why don't you force all of the traffic control people to move out along Patterson and see how they like trying to negotiate their travel under those conditions? Watch what happens to emergency vehicles such as fire engines and rescue squads trying to hurry to their destinations. How many people will suffer from that? I'll bet they avoid 1st Street past Pat Gormley's house. Most businesses will be hurt by this plan along Patterson as well.Why not study the means that other growing cities use to make traffic flow smoother and easier. That would be the best thing for all parties, rather than "calming traffic" and making everybody suffer for it. Perhaps a few patrolmen, especially at night, with radar guns would solve the problem spoken of, and raise some money for the City of Grand Junction.Think about the suffering....	N/A	N/A	Access Management is a proven technique both in the US and Europe used to make traffic flow smoother and easier and extend the life of arterial corridors. It is not a traffic calming technique, but is meant to improve safety and congestion on the most critical connections and highest volume streets in cities. The plan has been reviewed with emergency services, alternate routes for circulation have been identified, and improved operations will improve the time to get to the hospital on Patterson. This plan supports law enforcement in being able to enforce traffic laws. Passive traffic control like signage is not proven to work in controlling traffic movements and puts extra pressure on already stretched law enforcement resources to enforce.

Proposed Patterson Rd Access Control Plan (ACP)

April 2021 Draft Public Comments

Additional Public Comments Received

Proposed Patterson Road Access Control Plan April 2021 Draft

May 26, 2021

Grand Junction Speaks
Published Comments for May 19, 2021 Patterson Access Control Meeting
Patterson Road Access Control Plan

I live on Patterson between 1st and 7th, on of the last owner-occupied homes left between mall and 27Road. I have lived there for almost 25 years. Yes, the traffic is increasing, but this plan is not the solution. Connecting 29 Road to the Interstate and finishing that project and developing G Road will make a bigger difference. I really wish the city would look forward! Look at all the growth on the north side, then look at how those people will be able to travel the valley east and west. That is why Patterson is so busy. Options are limited. Develop G Road now while you can and get the 29 Road access to I-70 done. After that, reevaluate Patterson.
Now I would like to address the plan itself in my area. Putting a median in Patterson is exactly the opposite thing to do! In the afternoon when the eastbound traffic is stopped, both lanes can be stopped and full. Has anyone given reasonable thought to the ambulances getting to the hospital and fire trucks from the Pomona station?? They can and do use the center lane all the time!! Keping the center lane open is exactly how people get on and off Patterson!! It is how I have done it safely for 25 years!!
I would ask every council member to come visit and observe what I see out my front window! This is a real invitation! Come look into our backyards on the north side. Then tell me the plan for our area is realistic. Come observe the people walking or riding a bike until they get to Mira Vista and they have to try to cross Patterson because there isn't a sidewalk on the south side. (Someone will be sadly hit and seriously hurt soon.) And notice the bottleneck that is a reality, not just a blip on an aerial view! I'd echo another suggestion that the speed limit needs to be reduced and monitored between 1st and 7th.
Instead of messing with Patterson, develop G Road NOW while you can and get the 29 Road access to I-70 done. After that, reevaluate the needs on Patterson.

05/17/2021 5:05 pm

Ms. Terry Porter
2632 PATTERSON RD
GRAND JCT, 81506-1941

The Patterson Road Access Control Plan misses the mark.

The "right hand turn only", creates a hardship for those who live in communities along F Road (Patterson) by not allowing them to access their homes or their work by forcing them to find alternative routes through sub-divisions, to gain access to F Road (Patterson) as they commute. The changes will cause traffic into the neighborhoods that are not designed to handle major traffic, I strongly ask you to support our community and find a better alternative. You have to allow our residents who live North and South of F Road the ability to access their homes without asking them to find alternatives that don't exist.

As an example, with the controlled right-hand turn onto Patterson Road, you will be forcing

people to travel school zones which should have limited traffic for the safety of children. Have you considered the extra traffic on 30 Road and how it will impact Fruitvale Elementary among other schools in the area. What about the emergency services that need to be able to access roads for the protection and security of the people of Grand Junction. Personally, this will force my neighbors and I to travel through the school zone to gain access to town and work, This is not convenient for anyone.

My family has lived and owned our property since 1973. We have seen numerous changes to Patterson Road in the last 48 years. Going from a two-lane road with farms and open space to subdivisions, businesses increasing the traffic on one of the main roads that connect the East and West side of the Grand Valley. With this plan we will lose the right to access to our property that has always been granted to us and the freedom to travel to the West. I strongly oppose this plan. Not a benefit to the citizens of the communities North and South of F Road (Patterson).

What the planning team needs to be focus on is completing:
- The 29 Road access to I-70, leaving it unfinished is not a benefit to anyone.
- An additional artery that travels East to West that can take addition commuters.

Planning team you need to do better, this proposal is not it.

05/17/2021 4:57 pm

Moschetti Family
598 GRAND VALLEY DR
GRAND JUNCTION, 81504

The City should try traffic enforcement first.
Patterson road is a raceway with cars exceeding the speed limit by 10 to 15 MPH.
You very seldom see an officer writing a ticket.

Asking an outside firm to find a fix for Patterson and you will get exactly what the staff tells them they want.
This whole plan makes no sense and is a waste of money.

Go ahead and hook up Hawthorne and you will solve most of the accident at 28 and Patterson without limiting left turns.

05/17/2021 12:48 pm

Larry William Clever
2822 Ridge Drive
Grand Junction, 81506

We, Jack, and Karen Perrin, live in the Mantey Heights area – Jack since 1967 and Karen since 1982. We have an incredibly special neighborhood – one of the oldest "subdivisions" in the Grand Junction area (I would say "City", but we were not in the G.J. City limits until the late 1980's I believe). We have seen F Road go from a two- lane road to 5 lanes and the traffic increase to the point that Patterson Road is now one of the most travelled roads in Grand Junction.
According to the latest flyer from the City, one of the major access management points made is that the City wants to "decrease travel times and provides smoother traffic flow"

(along Patterson Road) – i.e., make it possible for a traveler to get from Clifton to the Mall in the shortest amount of time. This is NOT WHAT A ROAD THAT SERVES RESIDENTIAL PROPERTIES should be about!

Our specific concerns are:

• Speed limits need to be reduced to NO MORE THAN 35 mph. We realize that this is not specifically addressed in the Patterson Road Access Control Plan, but by reducing the speeds – and enforcing the speed limits – the safety of residents entering and leaving Patterson Road will be enhanced – and safety must be a major goal of any access plan.

• The four roads that access Patterson from our neighborhood need to remain as is!!

o With the upcoming changes that are planned for 28 Road, there will be no reason to shut down or limit the access to any of the Mantey Heights access roads. Mantey Heights Drive itself is the most used (and widest) road in the neighborhood. It definitely needs full movement access.

o If we are allowed only one road that allows left-hand turns out of the neighborhood, it will cause traffic to back-up and will make people attempt turns that are unsafe. The ACP will in fact, create a safety hazard that is not present right now.

• We are not in favor of the proposed plan to extend Camino Del Rey to Rio Grand Drive. We were promised by the City of Grand Junction when they developed the Ridge Heights Subdivision that they would not develop that specific road and create a thoroughfare from our neighborhood to Ridge Heights. Apparently promises do not mean a thing to the City! Yes, it would allow us a round-about way to make a left-hand turn to Patterson (after driving through Ridge Height Subdivision, making a left turn onto 28 ¼ Rd – then to Patterson) – but it means creating more traffic for Ridge Heights – a residential neighborhood!! It also means that east bound Patterson Road traffic will exit through our neighborhood when traffic backs-up – going through our residential area – then Ridge Heights -so that they can get to 28 ¼ Rd. more quickly!

o The Mantey Heights roads are narrow roads (pretty much single-lane) with no sidewalks – if you have enjoyed driving our streets on Christmas Eve to enjoy the luminaria display you know what I mean. The residents, many who are older and/or disabled – also children on bikes and people with dogs enjoy walking the neighborhood – which means they are in the streets. By increasing outside traffic to people who are in a hurry, the City is creating a situation that will be endangering our lives and the lives of the rest of our neighbors.

Bottom line: decrease speeds on Patterson Road and then leave our neighborhood roads as they are!

05/16/2021 2:36 pm

Karen E Perrin
131 Carlitos Ave
Grand Junction, 81501

The following comments are submitted by Red Bud, LLC and Village Fair Association, Inc. seeking to have the City change the April 2021 Draft of the Patterson Access Control Plan, (herein the "April 2021 ACP") to provide for ¾ movement access for west bound Patterson traffic into the Village Fair Shopping Center at access point #116, (herein "AP #116").

The Village Fair Shopping Center, (herein "VFSC") is located on the southwest corner of Patterson Road and 12th Street. The VFSC consists of 17 commercial businesses located on a land area of just over 5.5 acres. For over 20 years, Red Bud, LLC has owned the two retail

buildings within the VFSC, which are located at 2695 Patterson Road, and which contain 14 commercial retail units occupied by small locally owned businesses. The VFSC also contains a restaurant building located at 2691 Patterson Road, which is currently a Which Wich sandwich shop; a building located at 2699 Patterson Road, which most recently was occupied as a bank; and, a restaurant building located at 2531 N. 12th Street, which is currently the Breckenridge Ale House. Village Fair Association, Inc. is the Commercial Owner's Association charged with managing the driveways, parking lots, and other common areas of the VFSC.

In the April 2021 ACP the two access points which serve the VFSC from Patterson Road are AP #116 and AP #117. Both AP #116 and AP #117 are currently full movement access points, specifically allowing west bound Patterson Road traffic to access the VFSC, but the 2021 ACP proposes that all west bound Patterson traffic be denied direct access to the VFSC.

The economic viability of the VFSC, and the 17 small locally owned businesses located therein, depends upon west bound Patterson Road traffic being able to easily and directly access the VFSC by a 3/4 movement driveway at AP #116.

AP #116 currently accommodates customer access and truck deliveries to the VFSC, and is currently a full movement driveway. It is planned as a conditional right-in / right-out driveway, to be restricted as a full movement driveway when safety or operational issues occur or a public project is funded to reconstruct the signalized intersection at 12th Street and Patterson Road, and "once on-site truck circulation can be accommodated at another access."

AP #116 should be maintained as an unconditional ¾ movement access point rather than being planned as a conditional right-in / right-out driveway, for the following reasons:

1. WEST BOUND PATTERSON ROAD TRAFFIC CAN SAFELY CROSS EAST BOUND PATTERSON ROAD AT AP #116 BECAUSE OF THE UNIQUE LACK OF FEEDER TRAFFIC ONTO EAST BOUND PATTERSON BETWEEN 7TH STREET AND 12TH STREET.

Traffic from west bound Patterson Road turning across the two east bound lanes of Patterson Road does not now, and will not in the future, pose any traffic safety concerns. The south side of Patterson Road between 7th Street and 12th Street has only six access points contributing limited traffic to east bound Patterson over this ½ mile stretch. The lack of traffic turning onto east bound Patterson Road in this area is because the Grand Valley Irrigation Canal parallels the south side of Patterson Road for a considerable distance, so there are only a few access points to feed vehicle traffic on to east bound Patterson Road. Because of the lack of access points onto the south side of Patterson Road, the signal at 7th Street allows for consistent wide breaks in the traffic on east bound Patterson, which easily and safely accommodate vehicles turning from west bound Patterson across east bound Patterson.

2. AP #116 WHICH SERVES THE VFSC, AND IS CURRENTLY PLANNED AS A CONDITIONAL RIGHT-IN / RIGHT-OUT ACCESS POINT, IS LOCATED 85 FEET FURTHER FROM THE 12TH STREET INTERSECTION THAN AP #123 WHICH SERVES THE CITY MARKET PROPERTY AND WHICH IS PLANNED AS A ¾ MOVEMENT ACCESS POINT FOR WEST BOUND PATTERSON ROAD TRAFFIC.

Fundamental fairness would dictate that if AP #123 can safely remain a ¾ movement

access point to the City Market property for west bound Patterson traffic, then AP #116 can also remain a ¾ movement access point serving the VFSC. AP #116 is located 377 feet west of the west right-of-way line for 12th Street, while AP #123, the ¾ movement access point serving the City Market property, is only 292 feet east of the east right-of-way line for 12th Street. AP #116 is 85 feet further from the 12th Street intersection than AP #123.

While City Staff has argued that the traffic que for AP #116 will back traffic toward the 12th Street intersection, while the que for AP #123 backs traffic away from 12th Street, we have pointed out that VFSC only needs a two car que in order to accommodate AP #116 as a ¾ movement access point. AP #116 currently works fine as a full movement driveway, as does AP #117. AP #117 currently has a two car que and is approximately 110 feet closer to the 12th Street than AP #116. It presents no operational or safely issues.

Since the April 2021 ACP now provides for a ¾ movement access point at AP #114 serving the property just west of the VFSC, the same center lane should accommodate both the ¾ movement access at AP #116 and a continuous and longer que for AP #114, without creating any risk of traffic backup onto the west bound travel lanes of Patterson.

Allowing ¾ traffic movement at AP #116 would support 17 local businesses on 5.5 acres, without causing the start of the ¾ movement que to be located any closer to the 12th Street intersection than the current ¾ movement driveway (AP #123) which serves the City Market property.

We would request that you change the April 2021 ACP to provide that AP #116 be a non-conditional ¾ movement access point serving the VFSC.

Ronald W. Gibbs, President
Village Fair Association, Inc.

Ronald W. Gibbs, Manager
Red Bud, LLC

05/16/2021 11:56 am

Ronald W Gibbs
2258 Willow Wood RD
Grand Junction, 81507

I live in the Cody Subdivision and I never have a hard time crossing Patterson. I do have to wait for traffic to clear in each direction but very doable. If I had to do right in, right out it would take me way out of my way to where I need to go causing more congestion in those areas and using much more gas. Maybe in areas with more traffic this may work but out past 29 road I don't see that as needed. Why don't you want to widen the road, that makes much more sense to me. The only accidents I have seen while traveling Patterson is at lights anyway, not as people are coming on or getting off Patterson at other streets. What are the accident rates on the side streets? What are the accidents at lights? The only accident I had on Patterson was stopped at a light and being rear ended. Are any of the planning committee that has suggested this living close to Patterson? I'm very concerned what this will do and I think it's as bad of an idea as backwards parking on 7th street was a few years ago. Only to cost more in the future to correct.

05/14/2021 8:50 am

Verna Bunn
591 Eastwood St.

RECEIVED
MAY 18 2021
BY:

May 14, 2021

To: Grand Junction City Council
Re. Mantey Heights Subdivision, Grand Junction, Colorado, Proposed Patterson Road ACP

Dear Council Members:

Paramount Statement: Using the most forceful (polite) language, Mantey Heights Subdivision egress/ingress points to Patterson Road (Mt. View Drive, Mantey Heights Drive and Santa Fe Drive) NEED TO REMAIN AS CURRENTLY ESTABLISHED.

Why?

Mantey Heights Subdivision is shaped in a 'U' (or more precisely as a 'W') with the three main egress/ingress points available to residents—Mt. View Drive, Mantey Heights Drive and Santa Fe Drive. It is imperative that these three points of connection with Patterson Road be 'left intact' and as currently configured. This is SO important for reasons of Safety and ease of use. (Safety for emergency vehicles gaining access to the Subdivision and ease of use for residents needing to 'turn left' to go to St. Mary's and Community Hospitals)

Ease of Use:

Even during 'morning and evening rush hour', residents of Mantey Heights can gain entrance to Patterson Road.
During 'rush hour', residents only have to 'wait for a break in the traffic on Patterson Road'.
This 'break in traffic' during rush hour is supplied by the Stop Lights at 27 ½ on the west and 28 ¼ on the east. AT OTHER TIMES OF THE DAY, IT IS VERY EASY TO GAIN ENTRANCE ONTO PATTERSON ROAD. Point: If something isn't 'broke', please don't try to fix it!

Another Factor-near term:

There is a 'City Project' set for Spring 2022 that will 'extend' 28 ¼ going north from Patterson Road up to Hawthorn. This Project will probably relieve some of the traffic 'pressure' on Patterson Road. Thank You for this!!

Expression of Appreciation:

Messieurs Trent Prall and Rick Dorris are appreciated and commended for taking time to visit our subdivision citizens and listen to our concerns. BRAVO!!!!

Thomas Conrad Tucker Mary Tucker

Thomas Conrad and Mary Tucker, 2551 Santa Fe Drive, Grand Junction, CO 81501
970-245-5356

From: jeanne parkhurst <jeannepark7777@msn.com>
Sent: Wednesday, May 26, 2021 9:17 AM
To: Council <council@gjcity.org>
Subject: Patterson Access Plan

** - EXTERNAL SENDER. Only open links and attachments from known senders. DO NOT provide sensitive information. Check email for threats per risk training. - **

Sent from Mail for Windows 10
Dear City council leaders,

We live in Mantey heights and have been following closely the future plans for Patterson access to our area. We have had many meetings of just the residents and then planning commission representatives to clarify the intent and to express our own concerns.

Our needs have not changed . We do not want access to our neighborhood closed off at any street. We are not a two way street and the circle from Santa FE to Mantey Heights Rd allows for both residents and commercial vehicles plus fire, ambulance, garbage etc to enter and exit easily.
Except for a portion of Santa FE the roads are sub standard, no curb or sidewalks and the matt width is narrow and need to be improved or brought up to code.

We want to be able to get to St Mary 's and City Market which is a left turn. We are some of the original residents to this area of GJ and the roads should not be compromised.

Separate from your plan to make it easier to travel fast on Patterson we wish to have the speed limit at 35 miles an hr for safety and have people ticketed to encourage this behavior. This is the least expensive solution to helping control traffic . There are other Rd's that could be developed for your plan. Randall Reitz has pointed out that the inconvenience to residents and people accessing services is inconvenient and contributes to the congestion on Patterson.

Please listen to these concerns . Jeanne and George Parkhurst

5/26/21

Dear Mayor and City Council Members,

I am writing this letter in regard to the City of Grand Junction, Colorado, "Patterson Road Access Control Plan". I am a resident in the Mantey Heights neighborhood. I have lived in this neighborhood over 31 years.

This plan still needs a lot of work, it should not be considered for final approval. There are many flaws to this plan and not enough consideration and concern for the residents who live off of the Patterson Road corridor.

This plan proposes to:

SAFETY

Reduces number of conflict crashes

According to the Grand Junction Police Department there have been zero automobile accidents in the Mantey Heights section of Patterson Road, which includes; Mount View Drive, Mantey Heights Drive, Santa Fe Drive and Park Ave. in 2019 and 2020.

At one of our neighborhood meetings with the Director of Public Works, Trent Prall, he suggested that after turning right, we drive down to the nearest traffic light which would be Patterson Road and 28 1/4 Road and make a U-turn in order to go west on Patterson Road. Seriously? In my mind that seems way more dangerous than turning left on any neighborhood street.

Provides safe access to businesses and residents

This is a flawed statement. How can access be safe if there is only one street out of four that you can turn left on? The majority of residents in the Mantey Heights neighborhood turn left. How can that be safe if cars are backed up on the only street that allows a left hand turn? As it is today, we all, (residents in Mantey Heights) use any one of the four streets in our neighborhood to turn left. We all wait patiently for a break in traffic before proceeding with a left hand turn. It is only common sense that patience will not last long if cars are backed up even 3 deep and having to wait for 10-15 minutes to exit because there is only one street that allows for a left hand turn. Impatient drivers don't make safe drivers.

— over —

INCREASED ABILITY TO ACCOMMODATE TRAFFIC DEMANDS

Decreases travel times and provides smoother traffic flow

How can this plan possibly decrease travel times when every neighborhood is required to make a right hand turn only, when exiting the neighborhood? That would mean every person needing to go left for the very short distance of a half mile, can't. Instead, we would be required to travel an extra mile or two and even three to accommodate a right turn only.

Postpones the need for additional lanes for traffic

The city of Grand Junction has been talking about opening 29 road all the way to the interstate and making G Road another east west access since the 1980's. Why is that not being done? We as concerned residents are hearing things like: the city doesn't have the money? Seriously? Those plans have been in the works, I repeat, since the 1980's. Where is the money?

GOOD ACCESS MANAGEMENT IS GOOD FOR BUSINESS

Preserves property values

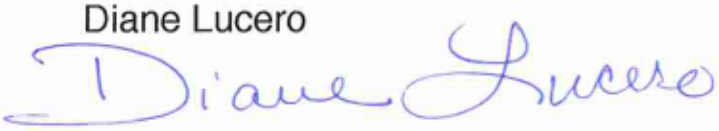
How are property values preserved when access and exiting into a neighborhood is difficult?

Increases roadway efficiency resulting in broader market area

The section of Patterson Road from 12th street to 32 Road is highly residential. In the Mantey Heights area there are 3 nursing homes. A broader market area is not something this residential area needs.

In summary, Mantey Heights has not had any problems with access or exiting the neighborhood and there should be no need to fix something that does not need to be fixed.
Please, I implore you to stop this "Access Control Plan" until the needs of the people who elected you are considered. We live in this area of concern and we know what our needs are, please listen to us.

Thank you for your time.
Diane Lucero



Mayor McDaniel and Councilmembers

Too Extreme

The city paid for another study and this one is for access along Patterson Road. Many comments, from the public, written to city officials clearly explain many shortcomings of the Patterson Access CONTROL Plan, yet it appears the city council members wish to codify the plan with all its apparent flaws as a form of law. The company hired, Stolfus and Associates says the ACP is a living and changeable document, but who has ever had success on changing something that has been codified; the ominous job and cost of providing the burden of proof to get codification changed would be too overwhelming, having to take on all the city departments, elected officials, city attorney and other experts the city would deploy on anyone wanting to make a change to this "living and changeable" document. It seems that if the study has been completed the appropriate city department heads can make good use of any pertinent information as needed. Codifying a plan that has so many people up in arms is too extreme.

Concerned citizen regarding the Patterson Access Control Plan

Gary Lucero

We have attempted to contact you by using the email on the City - City Council website, but we have not had a response from you.

You may also call by telephone if you like. 970-243-9549

Public Comments on the Proposed Patterson Rd Access Control Plan Received on the **April 2021 Draft**

Grand Junction Speaks
Published Comments for May 19, 2021 Patterson Access Control Meeting
Patterson Road Access Control Plan

First, thank you to Trent Prall and others who made time to meet with the MIra Vista neighborhood twice, hear our concerns and make some changes in response to our input! I persist in believing it is a BAD idea to create access 74 onto Patterson Rd where it is a funnel between 26 Rd and Mira Vista. The goal should be to divert traffic AWAY from this area, not bring more in. Any changes should involve traffic flow NE on the proposed extension of Horizon Court to send traffic North or South on 7th St. Some flow might still come back S on 7th to Patterson, then right on Patterson into the 'funnel'. Many would head to F 1/2 or G to go to neighborhoods Northwest and West of Horizon ct. Others who would have proceeded out #74 would likely have headed S on 26 Rd. These parties could still head south, only on 7th street to other areas and avoid the 'funnel'. It is lacking the foresight expected of a long range access plan to do anything that increases traffic on the narrowed stretch from 26 Rd. to Mira Vista.

Closing the Left turn possibility from St. Mary's access 93 sooner rather than later would also help divert traffic from the "funnel". Thank you for your work o this plan and for accepting public input.

Finally, considering a roundabout at Wellington & 7th Street, with pedestrian bridge access to the St. Mary's parking structure would greatly assist in traffic flow through the area, including Patterson and 7th street.

05/11/2021 6:34 pm

Cherlyn Crawford
2551 Mayfair Drive
Grand Junction, 81501

The prospective the city planners have planned for Patterson under the title "Patterson Access Control" is in actuality, not access. Mr. Schram states it well when he said, that if the lights are set correctly, left turns onto and from Patterson are easily accessible as it is. The left turn light on 7th south bound is a super issue. It needs to be set appropriately for the traffic demands.
Another point made is that the argument for safety on turns seems to be mostly at the traffic lights. So, limiting the access to streets with r/i and r/o is not giving us 'safer streets'
All the points Mr. Klesner stated were very true and I agree with them all. Talking to my neighbors they not only don't know about this new project you are proposing, they don't know why. Most agree that all is good now, why mess up a good thing?
Also, the idea that you don't want to put in 7 lanes when it's obvious that at some time that is the route you will go anyways, why do all this? Is this busy work?
This plan is not going to expedite traffic flow, on the contrary, it will cause people to spend more time in their cars and on the roads.
I am opposed to this plan and would like the planners to look at other areas of our streets

that need more attention: 29 Road I-70 access for instance.

05/06/2021 10:10 am

Linda A Lynch
1160 Rood Ave.
GRAND JUNCTION, 81501

I too, am against the plan to limit access on Patterson. Here are the reasons -
1) I know the city feels like they have communicated well about the proposed plans, but I do not feel like this is true. Every (I don't say this lightly) person that I talked with about the proposed plan, that lives off of Patterson did not know about it. I know communication is hard but, in my opinion, people are not informed.
1a) It is hard to keep up with the proposal. Time is a limited commodity. With public hearings changing and moving, We have given up trying to carve out time to attend.
2)I feel the addition of many more right-hand turn lanes would be valuable. This would help slower drivers stay in the right lane and allow better traffic flow. I realize this does not address the left hand accidents but does address the traffic flow.
3) I read "the desire to not have to add additional lanes of traffic to Patterson Road (7 lanes) is paramount." Why is this a bad idea? Is it solely because of land limitations and cost? Starting 7 lanes on Patterson now seems like a logical step that we will eventually head to anyway. So why spend the money on this proposal and then spend more money later in future years?
4) I daily turn left onto and off of Patterson. The limited access will cause frustration by drivers and I would say more accidents. A frustrated driver is a poor driver.
5) Most of all, I am concerned simply about access. To cause drivers to go through neighborhoods, for instance, Spring Valley Circle, will bring down property values and cause problems between residents and businesses. (If I am traveling West on Patterson, and want to turn into Northeast Christian Church, The natural thing would be to go through Spring Valley Circle and come down 271/2, then turning right into the church). I am sure this scenario is repeated many times in the 7 miles of proposed limited access. An alternative route would be to take North Ave or Orchard Ave. Both already being congested roadways. I have not seen, as part of the study, the consequences of the extra strain on these roadways.
In summary, This proposed plan causes extra travel time, confusion by drivers on how to get into business and residents, daily frustration and is only a temporary solution to the problem.
Thank you for allowing this avenue of comments to be used.

05/03/2021 11:51 am

Myron Klesner
2751 Patterson Rd
Grand Junction, 81506

I live in Belhaven Subdivision. RinRout. I work Left. So I will have to go through the neighboring subdivision, lot of children in order to get to work. Or, go way out of my way. Also closing access to the Unity Church at 29 & Patterson. So now those people will have to turn into my subdivision and go into their church, then out through my subdivision, into the neighboring subdivision to leave. This is stupid.

You say there is an access road at the east end of Cascade. Not. Dead end. If you could go through there, you end up in the church's lot. Closed access.
Also, fire dept located at the top of the hill Patterson & 28 3/4 rd. Say there is a fire on Mantey Heights Dr. Oh can't turn left into there, RinRout. Someone's place is on fire and the fire dept has to go a different route. Adds 5- 10 min more burning time. All the dept is a block away!
Seriously people. Think about this. Most accidents that I have seen, and I have lived here in this area for 13 years (Belhaven), in GJ 51 years, happen at the lights!! People running the light because the timer is set for like 3 cars to turn on. Or someone just stupid enough to run the light and the others not paying attention. I have never seen an accident in front of my subdivision, Indian Creek subdivision or the Legends. Top of the hill by the fire dept, yes. Light at 29 & Patterson. Yes.
Obviously, you don't any of you wanting this, live in our areas. Why spend our money on something so stupid as this.

Barb Malone

05/02/2021 2:25 pm

Barbara Malone
585 Belhaven Wat
Grand Junction, 81501

In the area of 29 1/2 Road to 30 Road along Patterson. The proposed changes to the access, on the north side specifically, are not in the best interest of those of us living in that area. I realize that most of us in the area are not inside the city of Grand Junction, and quite frequently it seems like we are forgotten.

In the area of the Oxbow, Trading Post, Little Trio, Single Tree, Aspenwood Meadows, Brookside and Brookwood Subdivisions, there are over 500 homes currently in the area designated to become RIRO only access, and that is without the soon to be subdivision where we were promised Burke Park. The proposal for future medians would force all 500+ homes, some 1000+ vehicles, heading home on East bound Patterson, to make the left turn (north) at 30 Road. Broken Spoke Road alone has over 60 homes, many with multiple vehicles.

Without access to 29 1/2 Road, the subdivisions in that area are not equipped to handle the influx of daily vehicle traffic. And while we are not (yet) inside of the city limits of Grand Junction, this organization may not be aware, but there are no sidewalks, few street lights, and a limited of stop signs within those subdivisions.

For the proposed changes to make functional sense for the area, at a bare minimum F 1/2 Road would need to be connected to 29 1/2 Road. There appears to be new developments in the area of Brett Dr, so additional access at 29 1/2 Road and G Road should be added as well. We would also like to see the City push to connect 29 Road to I-70 to help ease congestion through the middle part of town during peak hours. But ultimately there needs to be a better plan in place for how the City will grow over these proposed 20 years. There are really only 4 main roads that travel west to east; Patterson Road, North Ave, Pitkin/Ute, and Riverside Parkway. Those are all congested during peak times, and without expanding or adding additional thoroughfares the left turn access on Patterson will not be the issue facing the City traffic controllers.

It continues to be frustrating for the City of Grand Junction to make decisions for our area without consulting the people that live in this area. We are nearly completely surrounded by City properties, and yet we have no say in how or when changes are made

05/01/2021 9:42 pm

Rachel Crites
609 Fort Uncompahgre Dr
Grand Junction, 81504

My name is Steve Schram and I currently live at 2720 N 8th Ct. I do have a few issues with your plan as it affects my ingress/egress from N 8th Ct. As long as you do not mess with the light timing on 12th st. there are always gaps allowing for LiLo access from/to N 8th Ct. If you only allow for a RiRo ingress/egress I will be forced to make a rather long detour north on 7th to Horizon, east to the 12th St round about and then south on 12th street to the Patterson-12th st signal light. All just to make a left hand turn onto Patterson to head east. That is too much of an inconvenience if there are presently traffic breaks in the Patterson traffic flow to allow for a left hand turn out of and into N 8th Ct.

Let me make the decision if I want to wait for a break.

As for the light on 7th St., there are issues. There are times when I have to make a left-hand turn from Patterson onto 7th to go south. I can find enough of a traffic break to move across 2 lanes and into the third turn lane. That also tells you that there is enough of a break in traffic to make a left hand turn out of N 8th Ct.

The problem at the 7th st and Patterson turn signal is that there are times the light sequence only gives enough time for a few cars to turn south on 7th. Traffic then backs up down Patterson east of the turn signal until the next left hand signal to turn south on 7th, which can have a longer time. You never know how much time you will get in the turn lane to turn south onto 7th St., it can be aggravatingly short, or long enough to clear the turn lane. You just never know which one you are going to get.

I see the congestion on Patterson and know that something needs to be done. Yet your plan does not address the growing congestion on Patterson. It does not direct traffic off of Patterson, instead it directs traffic onto Patterson. Unless you plan on upping the speed limit to 60 mph or putting in 6 lanes, the number of vehicles moving down Patterson per lane, per minute will develop the same congestion.

A better solution would be to widen Orchard, improve signalling and direct a portion of the traffic off of Patterson onto Orchard.

As an aside, if you want to solve some traffic problems, take the intersection between 1st st,, hiway 6 and 50 and Broadway and put in a round about. What a mess.

04/29/2021 11:12 am

Steve Schram
2720 Nth 8th Ct.
Grand Junction, 81506

David Thornton

From: Rick Dorris
Sent: Friday, May 7, 2021 9:37 AM
To: Prinster, Daniel
Cc: Gara Ross; David Thornton; Heather Rienks; Trenton Prall
Subject: RE: [EXTERNAL EMAIL] Patterson Access Control Plan

Thanks Dan – appreciate the feedback.

You are correct, the pink arrow is identifying a change between different versions of the plan and it is present to show the previous public street at 86A, which would have been near the utility corridor and remove houses, has been deleted.

Thanks,

Rick Dorris, PE, CFM
Development Engineer
City of Grand Junction, CO
970-256-4034
rickdo@gjcity.org

City Hall is currently closed to the public on Tuesdays and Thursdays. City Hall will be open on Mondays, Wednesdays, and Fridays, however, we encourage you to conduct business online, by phone or by appointment as possible. I will be available by email and phone during regular work hours.

From: Prinster, Daniel <dan.prinster@sclhealth.org>
Sent: Friday, May 7, 2021 9:25 AM
To: Rick Dorris <rickdo@gjcity.org>
Cc: Gara Ross <gara.ross@sclhealth.org>; David Thornton <davidth@gjcity.org>; Heather Rienks <heather.rienks@sclhealth.org>
Subject: Re: [EXTERNAL EMAIL] Patterson Access Control Plan

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Rick
Sorry for the late reply. I wanted to confirm that, on behalf of St. Mary's, we can accept the proposed plan. I do want to reiterate that keeping our Patterson entrance (#93 on the image) as multifunctional as possible is our desire. Also, related to entrance 86 and the Mira Vista neighborhood, we are willing to collaborate. But our corporate office (SCL Health) would be opposed to giving away the homes along our property to create a new access road. Finally, I also want to confirm that the pink arrow between 86 and 93 is no longer under consideration. This is a major utility hub and corridor for the hospital and putting an entrance where the arrow is located would be very expensive and disruptive to the hospital.

Good luck with the project. Some of this work has been needed for a while.

Dan

On Wed, Apr 21, 2021 at 10:40 AM Rick Dorris <rickdo@gjcity.org> wrote:

Dan and Gara,

The City is still working on the Access Control Plan we talked to you on months ago. We have increased our public outreach, talked to many people and HOAs, and revised the plan since we last talked. I think it is now more favorable to St. Mary's. The last plan called for a new street between Mira Vista and the St. Mary's access with the existing access being limited to right in right out or possibly right in only. The new plan calls for the existing access to be a conditional 3/4 movement, the Mira Vista access to be a conditional 3/4 movement, and eliminates the new street between the two, see attached map.

The attached table lists the conditions on the movement.

Keep in mind this is a long-range plan and the three conditions that trigger changes are 1) an increase in development that increases traffic by 20%, 2) safety or operational issues arise, or 3) a City funded project occurs. It could be a long time before anything changes from the current situation. If a median project were funded, the City would evaluate to determine if there is enough horizontal room between 7th Street and the existing access to construct back-to-back left turn lanes. If it works, and there are no safety or operational issues, the City will keep the 3/4 movement into the existing access. If it doesn't work, the access would have to be limited to right in right out.

I hope this meets with your approval. Please call or email if you want to discuss. The plan will be presented to City Council on May 19th to discuss and decide what adoption direction to take.

Thanks,

Rick Dorris, PE, CFM
Development Engineer
City of Grand Junction
250 N. 5th Street
Grand Junction, CO 81501
work: 970-256-4034
email: rickdo@gjcity.org

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David Thornton

From: David Thornton
Sent: Monday, May 3, 2021 3:14 PM
To: billcherieanne@bresnan.net
Cc: Trenton Prall; Rick Dorris
Subject: RE: FW: Patterson Rd revised plan

Good afternoon Cheryln,

Thanks for your email and questions and I will try to clarify and answer each question. I know Trent Prall, Public Works Director has set up a meeting for your neighborhood for Tuesday, May 11th at 5:15 pm, we're meeting along the street in front of 306 Belaire Drive.

I will answer each question below and highlight the answers. I have copied Trent Prall and Rick Dorris from the project team to this email. I invite them to add to of better clarify anything I have included here. Thanks, Dave

From: billcherieanne@bresnan.net <billcherieanne@bresnan.net>
Sent: Thursday, April 29, 2021 5:41 PM
To: David Thornton <davidth@gjcity.org>
Subject: RE: FW: Patterson Rd revised plan

Thank you so much for the clarification. I found it!
A few questions:

1) As the owner of 2551 Mayfair Dr., directly south of units 72 & 23 on the Meander to Mira Vista plan, I am wondering if the property owner of 72 & 73 is responsible for paying for these changes, and further, if they or the city is required to do some sort of better fencing between our property to the south or if we would be required to do that (this will create much more activity than the current back yard of one home). Also, how do they get permission to access 2615 Patterson for their driveway? Does this come to pass only if 2615 does more development?

Answer: Changes to accesses 72 and 73 will occur when development occurs Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops and alternate access to Access 73 is available. Cross access agreements required between parcels, and any adjacent properties with same ownership upon redevelopment. Permission to access between parcels would occur with the joint access easement. Fencing/buffering may occur or be required with future redevelopment of these parcels as per the Zoning and Development Code requirements at the time of development.

2) Our neighborhood had suggested St. Mary's access point 93 become only a right out because their flood of traffic as soon as the light stops westbound Patterson traffic is what makes it hard for us to turn Left. I am not clear what a 3/4 access means (because that is what Mira Vista becomes, and we still want to be able to turn left because at many times of the day, we can.

Answer: Movements may be restricted when safety or operational issues occur, or when a public project is funded. Conditions are that movements may be further restricted to Right-In/Right-Out when safety or operational issues occur. Note, allowing ONLY for a right turn out for St Mary's (and NO right turn in) is problematic for the hospital site circulation, ingress for emergency vehicles, etc. Right now Access 93 has full access, but as traffic continues to increase, restrictions may occur and limit traffic to a right in/right out only. These right in/right out conditions are the same for Access 86 at Mira Vista Road.

3) Is the pink blob at the corner of Bel Air and Mira Vista there to signify a change ie, that you are no longer merging the Mira Vista neighborhood access with St. Mary's by removing a house?

Answer: Yes the pink arrow is showing that there was a change made between the January draft Plan and the new proposed April Draft Plan maps. Yes the ACP no longer is recommending closing Mira Vista Road and is not recommending extending Belaire Drive to the east to connect to the Hospital facility's internal road network.

An unrelated note, but one I believe worthy of consideration, is a roundabout at the intersection of Wellington and 7th street. All of this expansion would be on St. Mary's property to accommodate their flow of traffic in and out of the parking garage and help flow IF the access on Patterson did not allow a west bound (left) exit.
Answer: There is no round-about consideration for Wellington Avenue at this time.

I see no acknowledgement that the utility easement between 2551 Mayfair Drive and plan property 72 contains an irrigation ditch which runs from the southwest corner of 2615 Patterson north and west of two duplexes, then back east to enter between the above mentioned properties (as well as power poles). This ditch continues east until it crosses under Patterson Rd at access 80 and continues in a north east trajectory where you have proposed cross accesses north of access 81-90. These are a part of the Fruitridge Ditch system laterals. The slope is almost flat and requires regular cleanout even of those areas that are piped due to low water flow and minimal slope. Burying it all is NOT a workable option unless someone plans to pay for a pressurized system (meaning community tax dollars and not the victims of this traffic management plan).
Answer: Consideration of utility easements and irrigation facilities will be considered at the time of street construction affecting these, it is not part of the Patterson Road Access Control Plan (ACP).

Thank you for your time and clarification.
Cherlyn Crawford

From: "David Thornton"
To: "billcherieanne@bresnan.net"
Cc: "Trenton Prall", "Rick Dorris"
Sent: Thursday April 29 2021 6:20:41PM
Subject: FW: Patterson Rd revised plan

Cherlyn,

You will find the maps as individual map sheets under "Files" as you scroll down on the GJSpeaks.com website past the "Staff Presentation". You will want to click on the Meander Drive to Mira Vista Road file.

David Thornton

From: BRENDA STJOHN - Voicemail box 1450 <voicemail-noreply@jivecommunications.com>
Sent: Monday, May 3, 2021 1:59 PM
To: David Thornton
Subject: Voicemail from BRENDA STJOHN at (970) 433-3321 on May 3 2021 1:59 PM
Attachments: 1620071941-00000bf6.mp3

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You received a new voicemail message

New voicemail message

Time: Monday, May 3 2021 1:59 PM

From: BRENDA STJOHN (970) 433-3321

Duration: 20 seconds

Voicemail box: 1450

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320 Summer St, Boston, MA 02210, United States
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May 4, 2021
Spoke to Brenda St John about Patterson Rd Access near 28 1/4 Road and Mutchett Park. She is good with ACP and its recommendations.

David Thornton

From: Trenton Prall
Sent: Friday, April 23, 2021 5:40 PM
To: Gary Lucero
Cc: Rick Dorris; David Thornton
Subject: Re: Mantey Heights / Patterson Access Control Plan
Attachments: Patterson Rd ACP - Mantey Heights Changes 20210423.pdf

Mr. Lucero,

I really appreciated the March 18 neighborhood meeting and wanted to follow up with you on the changes that have been made since then. For your reference I have attached the revised map and specific text from the plan for each of the access points for your reference. The primary changes are noted with pink arrows on the first page of the exhibits.

Access 156 is now a conditional full motion.
Access 158 is now a right-in/right-out unless safety concerns arise.

Please also note the light pink line that depicts a proposed connection between Camino Del Rey and Rio Grande Dr which will provide the Mantey Heights neighborhood an opportunity to get out to 28 1/4 Road and the signalized intersections there.

We realize that there are some geometrics and landscaping that will need to be addressed within the Mantey Heights before some of the modifications to Patterson access controls could be implemented.

I would also like to schedule another neighborhood meeting the week of May 10th. I am available after 5:00 Monday or after 4:00 on Thursday that week. Please let me know what may work for you and your neighborhood.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384

From: Trenton Prall <trentonp@gjcity.org>
Sent: Thursday, April 22, 2021 9:34 AM
To: Gary Lucero <lindyfever@yahoo.com>
Subject: Re: Mantey Heights

Ms. Lucero,

Here is the latest on the Patterson Road Access Control Plan.

We have received a fair amount of feedback and will be incorporating that into a final draft that will be available on www.GJSpeaks.com early next week. A newsletter will also be sent out to 2600 recipients as well outlining the new time frame. You will be able to provide comments at the website through Monday, May 17th at 5:30 pm. City Council will be discussing the ACP with the Planning Team at the May 19th City Council meeting at 5:30 pm. The tentative schedule for Plan adoption is a public hearing with Planning Commission in June and public hearing before City Council in July.

I will be personally sending you a copy of the revised plans pertaining to the Mantey Heights neighborhood tomorrow.

I would also like to schedule another neighborhood meeting the week of May 10th. I am available after 5:00 Monday and Wednesday or after 4:00 on Thursday that week. Please let me know what may work for you and your neighborhood.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384

From: Gary Lucero <lindyfever@yahoo.com>
Sent: Thursday, April 22, 2021 9:31 AM
To: Trenton Prall <trentonp@gjcity.org>
Subject: Re: Mantey Heights

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Hi Trent.
I have not heard anything from you for three weeks.
Do you have any updates?
Thanks

On Tuesday, March 30, 2021, 4:50:48 PM MDT, Trenton Prall <trentonp@gjcity.org> wrote:

Gary,

The soonest Planning Commission meeting at this point would be May 11 with City Council proposed for June 2.

We will be preparing a new draft of the Access Control Plan for review and will notice everyone as we did a few weeks ago.

Once the draft is available for review, I would like to have another neighborhood meeting in the late April time frame.

In the meantime, if you have any questions please let me know.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384
trentonp@gjcity.org

From: Gary Lucero <lindyfever@yahoo.com>
Sent: Tuesday, March 30, 2021 1:37 PM
To: Trenton Prall <trentonp@gjcity.org>
Subject: Mantey Heights

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Hi Trent.
Please advise as to what the new meeting schedule is with GJ Planning and the GJ Council.

Gary Lucero

p.s. Please confirm that you received this email

PATTERSON ROAD ACP EXHIBIT

LEGEND

- BUS STOP
- BUS STOP - PULL OFF
- CROSS ACCESS - EXISTING
- CROSS ACCESS - PROPOSED
- PARCEL
- TRAIL
- PROPOSED CITY STREET OR PRIVATE CONNECTION
- PLANNED CITY STREET
- PLAN CHANGES SINCE JANUARY ACP PLAN

ACCESS POINT INFORMATION

- SIGNALIZED FULL MOVEMENT
- UNSIGNALIZED FULL MOVEMENT
- 3/4 MOVEMENT
- RIGHT IN - RIGHT OUT
- CLOSE
- SIGNALIZED INTERSECTION
- RIGHT IN ONLY
- RIGHT OUT ONLY
- G GATED ACCESS POINT
- C CONDITIONAL ACCESS POINT
  SEE ACCESS TABLE FOR CONDITIONS. TYPICALLY CLOSES WITH REDEVELOPMENT.
- S CONDITIONAL SAFETY ACCESS POINT

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
152	4.292	RT	2777 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded. Cross access agreements required between parcel no. 2945-121-00-018 and parcel no. 2945-121-00-003 and any adjacent properties with same ownership upon redevelopment.
155	4.356	RT	El Corona Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
156	4.384	RT	Mount View Dr	Unsignalized Full Movement	Conditional Unsignalized Full Movement	Access will be restricted to 3/4 movement when safety or operational issues occur.
157	4.457	RT	Manley Heights Dr	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
158	4.504	RT	Santa Fe Dr	Unsignalized Full Movement	Conditional Safety Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded. If a safety or operational issue develops, the access may be closed - alternate access to E Park Ave available.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

1. Oriented from direction of reference point (W-E)
2. MUTCD - Manual on Uniform Traffic Control Devices
3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
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5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
160	4.558	RT	2801 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.
161	4.584	RT	E Park Ave	Unsignalized Full Movement	Unsignalized 3/4 Movement	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
162	4.620	RT	2811 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will be closed when property redevelops - access via Camino Del Rey Dr or Rio Grande Drive.
165	4.739	RT	2813, 2815, 2825 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.

David Thornton

From: Trenton Prall
Sent: Friday, April 23, 2021 5:50 PM
To: Danielle Schuster
Cc: Rick Dorris; David Thornton
Subject: Re: Patterson rd plan- Mira Vista dr.
Attachments: Patterson Rd ACP - Mira Vista Changes 20210423.pdf

Danielle,

I really appreciated the March 18 neighborhood meeting and the input provided. I wanted to follow up with you on the changes that have been made since then. For your reference I have attached the revised map and specific text from the plan for each of the access points for your reference. The primary changes are noted with pink arrows on the first page of the attachment.

Access 86 is now a conditional 3/4 movement.
Access 86a has been deleted. That was the proposed access through St. Mary's for the Belaire Dr / Mira Vista neighborhood which was clearly articulated as undesirable for the neighborhood.
Access 93 is now a 3/4 movement specific to St. Mary's.

Please let me know if you have any comments, questions or concerns but look forward to meeting with you and your neighborhood on Tuesday May 11th at 5:15. I appreciate you setting up another opportunity to discuss the proposed changes.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384

From: Danielle Schuster <dnbschuster@gmail.com>
Sent: Wednesday, April 21, 2021 6:31 AM
To: Trenton Prall <trentonp@gjcity.org>
Subject: Re: Patterson rd plan- Mira Vista dr.

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Trent,
Thank you for the update.
I look forward to seeing the revised plan.

Could we plan for a neighborhood meeting on Tuesday may 11th at 5:15?!

Thanks.

Sent from my iPhone

On Apr 20, 2021, at 17:58, Trenton Prall <trentonp@gjcity.org> wrote:

Ms. Schuster,

Here is the latest on the Patterson Road Access Control Plan.

We have received a fair amount of feedback and will be incorporating that into a final draft that will be available on www.GJSpeaks.com early next week. A newsletter will also be sent out to 2600 recipients as well outlining the new time frame. You will be able to provide comments at the website through Monday, May 17th at 5:30 pm. City Council will be discussing the ACP with the Planning Team at the May 19th City Council meeting at 5:30 pm. The tentative schedule for Plan adoption is a public hearing with Planning Commission in June and public hearing before City Council in July.

I will be personally sending you a copy of the revised plans pertaining to the Mira Vista/Belaire neighborhood by the end of this week.

I would also like to schedule another neighborhood meeting the week of May 10th. I am available after 5:00 Monday through Wednesday or after 4:00 on Thursday that week. Please let me know what may work for you and your neighborhood.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384

<Outlook-vwtjveiy.png>

From: Danielle Schuster <dnbschuster@gmail.com>
Sent: Tuesday, April 20, 2021 9:07 AM
To: Trenton Prall <trentonp@gjcity.org>
Subject: Re: Patterson rd plan- Mira Vista dr.

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Good morning,

As we near the end of April I am checking in to see if we need to schedule a follow-up meeting with the neighborhood. If you team has done any revising to the plans I know we would be interested in that.

As far as the petition, may I give that to you at the next meeting? I have a neighbor or two that are quite elusive and I'd like to give them a chance to sign if they would like.

Thanks Trent!

~Danielle

On Mar 30, 2021, at 5:49 PM, Trenton Prall <trentonp@gjcity.org> wrote:

Danielle,

I appreciate the check-in as well as you taking the lead on representing your neighborhood. I was out last week but yesterday we have had discussions with our consultant regarding your neighborhood and a couple of others along the corridor. We have a follow up meeting scheduled Thursday. We will be preparing a new draft of the Access Control Plan for review and will notice everyone as we did a few weeks ago. The soonest Planning Commission meeting at this point would be May 11 with City Council proposed for June 2.

Once the revised draft is available for review, I would like to have another neighborhood meeting in the late April time frame.

As far as sharing the petition, if you could please scan it and email it to me that would be great. I can pick up a hard copy when we meet later in April.

In the meantime, if you have any questions please let me know.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384
trentonp@gjcity.org

<pastedImagebase640.png>

From: Danielle Schuster <dnbschuster@gmail.com>
Sent: Tuesday, March 30, 2021 9:33 AM
To: Trenton Prall <trentonp@gjcity.org>
Subject: Patterson rd plan- Mira Vista dr.

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Hello Trent,

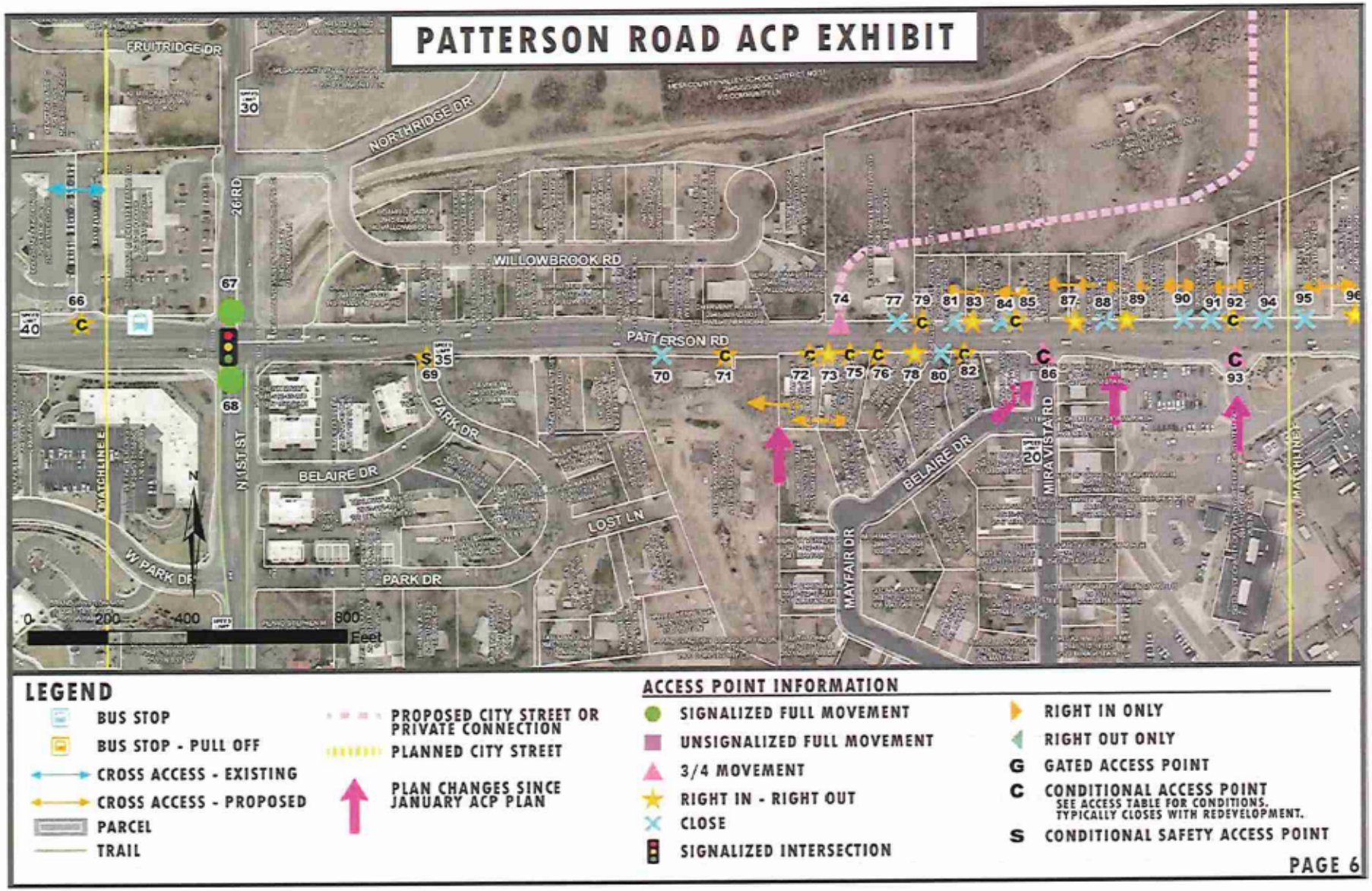
First, Thank you again for your time on the 18th. I know you must have a lot of people bending your ear about these plans and it seems to get people worked up, so I thank you for being so patient and professional.

As the organizer of our neighborhood group I am just checking in with you about the plan for Mira Vista.
Has there been any further conversation or change in plans that I may relate to my neighbors? I understand the next planning commission meeting is April 27th?

I have a petition that has been signed by a majority of the neighborhood asking that the entrance not be modified. I do not know if this document will change anything but we are hoping to make our position known. Can I get this document to you at some time before the 27th? I know it is past the public comment timeframe, however I would like it to be in the record along with our covenants.

Best,

Danielle Schuster
306 Belaire Dr.


PATTERSON ROAD ACP EXHIBIT
FRUITRIDGE DR
NORTHRIDGE DR
26 RD
WILLOWBROOK RD
PATTERSON RD
N 1ST ST
PARK DR
BELAIRE DR
LOST LN
W PARK DR
MAYFAIR DR
MIRAVISTA RD
0
200
400
800
Feet
LEGEND
BUS STOP
BUS STOP - PULL OFF
CROSS ACCESS - EXISTING
CROSS ACCESS - PROPOSED
PARCEL
TRAIL
PROPOSED CITY STREET OR PRIVATE CONNECTION
PLANNED CITY STREET
PLAN CHANGES SINCE JANUARY ACP PLAN
ACCESS POINT INFORMATION
SIGNALIZED FULL MOVEMENT
UNSIGNALIZED FULL MOVEMENT
3/4 MOVEMENT
RIGHT IN - RIGHT OUT
CLOSE
SIGNALIZED INTERSECTION
RIGHT IN ONLY
RIGHT OUT ONLY
G GATED ACCESS POINT
C CONDITIONAL ACCESS POINT
SEE ACCESS TABLE FOR CONDITIONS.
TYPICALLY CLOSES WITH REDEVELOPMENT.
S CONDITIONAL SAFETY ACCESS POINT
PAGE 6

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

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6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
70	2.651	RT	2615 Patterson Rd	Unsignalized Full Movement	Close - Access via Access 71	When property redevelops, safety or operational issues occur, or when a public project is funded.
71	2.674	RT	2615 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via Lost Lane. Cross access agreements required between parcel no. 2945-112-00-004 and parcel no. 2945-112-11-018 and any adjacent properties with same ownership upon redevelopment.
72	2.706	RT	2621 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops and alternate acccess to Access 73 is available. Cross access agreements required between parcel no. 2945-112-11-018, parcel no 2945-112-11-019, parcel no 2945-112-00-004, and any adjacent properties with same ownership upon redevelopment.
73	2.714	RT	2623 Patterson Rd	Unsignalized Full Movement	Shared Right-In/Right-Out	Movements may be restricted when property redevelops, safety or operational issues occur, or when a public project is funded.Cross access agreements required between parcel no. 2945-112-11-018, parcel no 2945-112-11-019, and any adjacent properties with same ownership upon redevelopment.

ACCESS CONTROL PLAN
PATTERSON ROAD
I-70B(MP 0.000) to Lodgepole St (MP 7.349)

* All access points are defined by the approximate reference point (milepost) (in hundredths of a mile) based on GIS.

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3. Full movement intersections and 3/4 movements shall accommodate U-turns for passenger vehicles.
4. Unless otherwise specified, conditions listed refer to proposed configuration.
5. Access closures are conditional upon alternative access to the highway or local street system. Refer to alternative access listed in proposed configuration.
6. Implement with land development, redevelopment or use change
7. If the City of Grand Junction improves Patterson Road or if safety or operational issues develop, access modifications may be implemented as long as reasonable access to the local street
8. Conditional proposed configurations may be further restricted under certain circumstances. Refer to conditions for implementation.
9. Cross Access Easements shall be required between properties upon redevelopment if the plan shows cross access but easements do not exist.

Access ID No.	Mile Post **	Side	Description	Existing Configuration	Proposed Configuration [2,3,8]	Conditions for Implementation [2,4,5,6,7,9]
75	2.722	RT	2623 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops and alternate acccess to Access 73 is available.Cross access agreements required between parcel no. 2945-112-11-018, parcel no 2945-112-11-019, and any adjacent properties with same ownership upon redevelopment.
76	2.732	RT	2625 Patterson Rd	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops.
78	2.746	RT	2625 Patterson Rd	Unsignalized Full Movement	Right-In/Right-Out	Movements may be restricted when adjacent properties redevelop, safety or operational issues occur, or when a public project is funded.
80	2.756	RT	326 Belaire Dr	Unsignalized Full Movement	Close - Access via Belaire Dr	When property redevelops, safety or operational issues occur, or when a public project is funded.
82	2.765	RT	336 Belaire Dr	Unsignalized Full Movement	Conditional Right-In/Right-Out	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Access will close when property redevelops - access via Belaire Dr.
86	2.794	RT	Mira Vista Rd	Unsignalized Full Movement	Conditional Unsignalized 3/4 Movement	Movements may be restricted when safety or operational issues occur, or when a public project is funded. Conditions are that movements may be further restricted to Right-In/Right-Out when safety or operational issues occur.

David Thornton

From: Rick Dorris
Sent: Wednesday, April 21, 2021 10:38 AM
To: Gara Ross; dan.prinster@sclhealth.org
Cc: David Thornton
Subject: Patterson Access Control Plan
Attachments: Patterson ACP Access Points Table.pdf; Patterson ACP - 4-16-21 - Maps 6.pdf

Dan and Gara,

The City is still working on the Access Control Plan we talked to you on months ago. We have increased our public outreach, talked to many people and HOAs, and revised the plan since we last talked. I think it is now more favorable to St. Mary's. The last plan called for a new street between Mira Vista and the St. Mary's access with the existing access being limited to right in right out or possibly right in only. The new plan calls for the existing access to be a conditional 3/4 movement, the Mira Vista access to be a conditional 3/4 movement, and eliminates the new street between the two, see attached map.

The attached table lists the conditions on the movement.

Keep in mind this is a long-range plan and the three conditions that trigger changes are 1) an increase in development that increases traffic by 20%, 2) safety or operational issues arise, or 3) a City funded project occurs. It could be a long time before anything changes from the current situation. If a median project were funded, the City would evaluate to determine if there is enough horizontal room between 7th Street and the existing access to construct back-to-back left turn lanes. If it works, and there are no safety or operational issues, the City will keep the 3/4 movement into the existing access. If it doesn't work, the access would have to be limited to right in right out.

I hope this meets with your approval. Please call or email if you want to discuss. The plan will be presented to City Council on May 19th to discuss and decide what adoption direction to take.

Thanks,

Rick Dorris, PE, CFM
Development Engineer
City of Grand Junction
250 N. 5th Street
Grand Junction, CO 81501
work: 970-256-4034
email: rickdo@gjcity.org

David Thornton

From: David Thornton
Sent: Tuesday, April 20, 2021 11:48 AM
To: Ron Gibbs
Cc: Rick Dorris; Trenton Prall
Subject: RE: Village Fair Shopping Center - Patterson Road Access Control plan

Absolutely, I will let you know when Planning Commission will be hearing this item. You can also keep track of the planning process by going to GJSpeaks.com where we will upload the maps and tables soon. The Final Access Control Plan will be available there when its finalized, most likely late May. At GJSpeaks.org you can download documents or print them from your computer directly from the site.

Our current tentative schedule for Planning Commission is late June, but once a date has been finalized, you will be notified.

Thanks for your email and I understand your disappointment.

Dave

From: Ron Gibbs <rongibbs@bresnan.net>
Sent: Tuesday, April 20, 2021 10:41 AM
To: David Thornton <davidth@gjcity.org>
Subject: RE: Village Fair Shopping Center - Patterson Road Access Control plan

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Mr. Thornton,

I am disappointed in the outcome of our meeting given the comments of you and Rick Dorris at that meeting which seemed favorable to a ¾ movement driveway at Access point #116. Will you please advise me of where and when I can get a hard-copy of the April 2021 Access Control Plan.

Also, will you please keep me informed as to when this matter will go before the Planning Commission, and whether I will be able to attend in person to raise my objections. If I will not be able to attend in person, please give me detailed instructions as to how I will be able to attend the Planning Commission remotely and how I will be able to address the Commissioners at that meeting.

Thanks.

Ron Gibbs, President
Village Fair Association, Inc.

Ron Gibbs, Manager
Red Bud, LLC

David Thornton

From: David Thornton
Sent: Monday, April 19, 2021 3:15 PM
To: Ron Gibbs
Cc: Trenton Prall; Rick Dorris; andrew@stolfusandassociates.com; Michelle Hansen
Subject: RE: Village Fair Shopping Center - Patterson Road Access Control plan

Ron,

Thanks for your email. You were on my list to contact early this week on the latest draft changes to the ACP. We just received the revised April draft over the weekend from the City's Consultant team Stolfus & Associates. They have worked with City staff on each public comment received as part of the public review of the January draft Patterson Road ACP. We have fortunately been able to better analyze how accesses are being used today and expected to be used in the future from the public input received, our conversation with you on site was a great help. Looking into the long term needs of properties along Patterson Road and meeting the goals of the Plan to provide the best access possible as traffic grows to higher levels of congestion is very important. In addition, the desire to not have to add additional lanes of traffic to Patterson Road (ie. 7 lanes) is paramount. The new draft ACP has been modified where possible as an April 2021 Final draft. Within next few days, the maps and tables for Patterson Road will be uploaded to GJSpeaks for public review and comment. Please check GJSpeaks.org for these documents. Here is how the April draft Plan affects your properties.

For the Village Fair Shopping Center area these changes include the following.

	Area/Location of Concern / Public Comments	Access Point(s)	Draft Condition (January 2021)	Changes M
	ACCESS # 116 and #117 - Wants 3/4 Movement for west bound Patterson Traffic in to Village Fair Shopping Center @ 12th and Patterson	114/116/117	114-conditional RIRO, 116-RIRO, 117- closed	Change Acc be accomm Change acc

Unfortunately as you see in the note above, the ¾ movement for Access #116 was determined to be too close to 12th Street even after further investigation and analysis. The long term solutions for the Shopping Center when traffic is at it future levels is for Access #114 to be made into a ¾ movement with cross access internally to the shopping center as Rick and I discussed with you when we met. From an engineering perspective that is the best solution. With that said, just as we discussed previously, this is a long range plan and existing access configurations will remain at this time without the trigger of new development occurring, a City project in the works, or a safety concern arising for a need to make changes.

I know this is not everything you were asking for or that Rick and I had hoped the Plan would provided with the further analysis. Not allowing ¾ movement for Access #116 in the future will require westbound Patterson traffic to turn left at 12th Street, then make a right turn into the shopping center. This movement can be made safely.

Please let us know if you have any further questions or would like to meet.

Thanks,

Dave

David Thornton, AICP
Principal Planner
Community Development Department
City of Grand Junction
www.gjcity.org
Phone: 970-244-1450

From: Ron Gibbs <rongibbs@bresnan.net>
Sent: Monday, April 19, 2021 10:12 AM
To: David Thornton <davidth@gjcity.org>
Subject: Village Fair Shopping Center - Patterson Road Access Control plan

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Mr. Thornton,

I did not have an email address for Rick Dorris or I would have included him in this email. Would you please forward a copy of this email to him?

I have not heard from you or Rick since our meeting of March 25, 2021, where we discussed potential changes to the Patterson Road Access Control Plan as it affects the Village Fair Shopping Center at access points 116 and 117. It was my understanding that Rick and you were willing to change the plan so that Access Point # 117 was reflected on the plan as a right in/right out driveway, and Access Point # 116 was reflected on the plan as either a full movement access, or at a minimum was a ¾ movement access, allowing left turns into the Village Fair Shopping Center for west bound Patterson Road traffic at this location.

I just wanted to follow up to see where things stand with regard to this matter.

Thank you.

Ronald W. Gibbs, President
Village Fair Association, Inc.

Ronald W. Gibbs, Manager
Red Bud, LLC
2258 Willow Wood RD
Grand Junction, CO 81507

Phone: (970) 242-5482
Email: rongibbs@bresnan.net

David Thornton

From: Isabella Vaz
Sent: Monday, April 12, 2021 12:12 PM
To: Trenton Prall; Rick Dorris; David Thornton; comdev
Subject: FW: Patterson Road Access Control Plan

Looks like this was originally sent to Trent, as well, but I wanted to forward from ComDev inbox as well.

Thank you,

Isabella Vaz
Planning Technician
City of Grand Junction
isabellav@gjcity.org
970.256.4087

From: w.ellinwood@bresnan.net <w.ellinwood@bresnan.net>
Sent: Monday, April 12, 2021 9:40 AM
To: Trenton Prall <trentonp@gjcity.org>; comdev <comdev@gjcity.org>
Subject: Patterson Road Access Control Plan

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Trent Prall, Director of public Works
Rick Dorris, Development Engineer
Planning Commission

I have been a resident of the Mantey Heights neighborhood just south of Patterson Road for 30 years. I am opposed to the City's plan to close-off Sante Fe Drive and route all traffic in and out of the neighborhood via Mantey Heights Drive.

Routing all traffic through Mantey Heights Dr. would destroy the property values and quality of life for residents along that street. People have a lot invested in their homes. Safety would be an issue too. Mantey Heights Dr. is little more than a one-lane road. Two vehicles can't pass in opposite directions without one moving way over. Also, there is not a good line of sight looking west for a turn onto Patterson due to a cement retaining wall. The City hired a consultant (Stolfus and Associates) to formulate this plan, but I'm certain they did not drive through our neighborhood and no residents were interviewed. I suspect the consultation was done from their desks using maps and traffic volume data.

Of course, Patterson Road is an important east-west transportation corridor in the valley and traffic volumes have increased dramatically over the last 30 years. However, there are still many dozens of residential neighborhoods along this corridor, especially east of 12th street. The City seems to have adopted the philosophy of accommodating the ever increasing traffic volumes at all costs, including at the expense of long-standing residential areas. The City should give some consideration to these neighborhoods, and to safety, by first attempting to mitigate the traffic volume and speed on Patterson Rd.

Completion of the 29 Rd-Interstate interchange that has been talked about for so long would help. Another thought is to reduce the speed limit on Patterson to 35 mph between 1st St and 29 Rd. It's already 35 mph between 1st and 12th. If the interchange were open, many drivers would opt for the Interstate for east-west travel rather than go 35 mph on Patterson. Also, there has been little enforcement of the speed limits on Patterson Rd in recent tears. Many vehicles travel at 50 mph or more with impunity. Vehicles commonly speed-up to run a yellow light, making the intersections at 12th and Patterson and 29 Rd and Patterson dangerous. Accident frequency data bears this out.

I understand that changes are contemplated with safety in mind, but the current proposal would decrease traffic safety with regard to Mantey Heights. Even at current traffic volumes, a safe left or right turn from Sante Fe Dr or Mantey Heights Dr can be made most times of the day. Residents of Mantey Heights know this because we all do it several times every day.

Thank you for your consideration.

Sincerely,

William Ellinwood
130 Carlitos Ave.

April 10, 2021

Mr. Trent Prall, Director of Public Works
Mr. Rick Dorris, City Engineer
Planning Commission
City Council

All:

Thank you for your efforts at making Patterson Road safer.

Here are my comments on improving safety from my perspective after living at Carlitos Ave, about a block and half off Patterson and Santa Fe Drive for 30 years.

- Don't close Santa Fe Dr. completely. A right-hand turn only (outbound) is acceptable. It should remain an option to turn inbound into Santa Fe from Patterson. There are times it is the safest option depending on traffic and speeds. That decision is always made when approaching from either direction. We look to see where traffic gaps or cars are in the turn lane and how closely someone is following. There are times when turning in on Santa Fe is not safe, so we proceed to Mantey Heights Dr. We make these decisions in real time when we are entering our subdivision for our safety and those of cars traveling on Patterson.

- Closing Santa Fe would impact the safety of those who live here and negotiate in and out every day successfully. It would also cause a host of unsafe traffic patterns within our neighborhood itself. We have no sidewalks and narrow, almost one-lane roads. Cars deviating all over to get in or out is dangerous for our neighbors.

- Turning left onto Patterson is a safety issue. We need at least one street to do this. Mantey Heights would be ok if you took the fence and retaining wall back 10 feet at 105 Mantey Heights, so there is a line of sight, and you could see oncoming traffic. A deceleration lane to turn into Mantey Heights would also be an answer. If you make this the primary ingress/egress, we need small speed humps to keep the speed at 20mph or less on Mantey Heights.

- Mountain View, the street on the west side of our subdivision, is an underused street and one of the safest for turning on and off Patterson at busy times. Two things would make this option safer. Remove the overgrown juniper bushes at the top of the hill, at 124 Mountain View, so that that corner can be navigated safely. You can see these trees on your city GPS application; they consume nearly half of the street. They need to be removed. It is probably a code enforcement issue. The second improvement would be to remove the decorative wall that the subdivision Corona Del Mar was allowed to construct along Patterson. That would improve the line of sight for a left or right turn out of Mountain View.

- Speed enforcement on Patterson must begin. I sensed at the neighborhood meeting you are aware of this and tired of hearing it. The entire corridor should be 35 mph. When traffic is congested, we are moving at 30 mph, and that is adequate flow. It allows us to turn in and out of our subdivision with improved safety. Why are we restricted in and out because those who have made Patterson an aggressive speedway are breaking the law? Speeding motorists need to be cited.

- Of course, the 29 Rd. Interchange is essential to move cars off of Patterson and onto the Interstate. What would be the process to make that a priority for funding?

- Finally, the Patterson Rd intersections at 12th and 29 Rd. are dangerous because people are speeding, running the yellow/red lights. Every light change, every day. Why not cameras and citations? We have a problem on this road, and we need to employ as many solutions as possible.

Thank you for considering these observations.

Sincerely,

Karen Milbank
karen.milbank@gmail.com
130 Carlitos Ave.
Grand Junction, Co 81501
970 712 0465

April 10, 2021

Mr. Trent Prall, Director of Public Works
Mr. Rick Dorris, City Engineer
Planning Commission
City Council

I have been a resident of the Mantey Heights neighborhood for 30 years. I am opposed to the city's plan to close off Santa Fe Drive and route all traffic in and out of the neighborhood via Mantey Heights Drive.

Routing all traffic through Mantey Heights would destroy all the property value and quality of life for those residents. People have a lot invested in their homes. Safety would be an issue too. Mantey Heights Dr. is little more than a one-lane road. Two vehicles can't pass in the opposite direction without one moving over. Also, there is no good line of sight for a turn onto Patterson due to a cement retaining wall.

There are still dozens of residential neighborhoods along Patterson Rd. Corridor, especially east of 12th St. The City seems to have adopted the philosophy of accommodating the increasing traffic volume at costs, including at the expense of long-standing residential areas. The city should give some consideration to these neighborhoods by attempting to mitigate the traffic volumes and speed on Patterson Rd.

Completion of the 29 Rd.interstate interchange that has been talked about for so long would help. Another thought is to reduce the speed limit on Patterson to 35 mph between 1st and 29 Rd. It's already 35cmph between 1st and 12th St. If the interchange were open most drivers would choose the Interstate. There has been little enforcement of the speed limit along Patterson Rd. in recent years. Many vehicles are traveling at 50 mph or more with impunity. Also, cars commonly speed up to run a yellow light, making the intersections at 12th St. and 29 Rd and Patterson dangerous.

I understand that changes are contemplated with safety in mind, but the current plan would decrease safety. Even at current traffic volumes, a safe left or right turn from Santa Fe or Mantey Heights can be made most times of the day. Residents of Mantey Heights know this because we all do it several times each day.

Thank you for your consideration.

Sincerely,

William Ellinwood

David Thornton

From: Trenton Prall
Sent: Friday, April 9, 2021 11:01 AM
To: Carol Beaver
Cc: Rick Dorris; David Thornton; Michelle Hansen; Andrew Amend
Subject: Re: 2626 Patterson Rd.

Good morning Ms. Beaver,

This email is to confirm that the construction of the proposed public street at Access #74 on the proposed Patterson Road Access Control Plan would only occur with redevelopment of the property at 2626 Patterson Road. If the property was redeveloped, the exact alignment/location of the road would be developed at that time. The pink line shown on the access control plan just represents the desired connectivity between Patterson Road, 2626 Patterson Road, 2636 Patterson Road, Community Lane, Horizon Place and ultimately to the signalized intersection at 26 1/2 Rd (aka 7th Street) as shown with the orange dashed line below:

Please let me know if you would like to meet and further discuss while you are in town next week.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384

STAY POSITIVE | TEST NEGATIVE

From: Carol Beaver <caroljbeaver@yahoo.com>
Sent: Friday, April 9, 2021 8:31 AM
To: Trenton Prall <trentonp@gjcity.org>
Subject: 2626 Patterson Rd.

** - EXTERNAL SENDER. Only open links and attachments from known senders. DO NOT provide sensitive information. Check email for threats per risk training. - **

Hi Trent,

Following up on our conversation yesterday regarding proposed road directly through my property at 2626 Patterson. #74 is the indicator on the 'plan.'

I am the new owner of the property, and any conversation the the Merkel Family had with the city is no longer valid or in any way to be construed as such.

I am awaiting your email to reaffirm our conversation regarding no road being developed through that property.

Very sincerely,
Carol Beaver

801-706-1590

Additional Public Comments Received on the Proposed Patterson Rd Access Control Plan on the

January 2021 Draft

Not included in the GJSpeaks – Response to Public Comments

David Thornton

From: Trenton Prall
Sent: Friday, April 2, 2021 2:57 PM
To: Rick Dorris; David Thornton
Subject: Fwd: Voicemail from RANDALL ZMERZLI at (970) 261-8692 on Apr 2 2021 2:49 PM
Attachments: 1617396589-00000571.mp3

Dave, Rick,

Can one of you please call this gentleman back regarding the Patterson Road access control plan? I'm on the road this afternoon and I don't have access to the control plan graphically.

If not, just let me know and I will contact him on Monday.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384

From: RANDALL ZMERZLI - Voicemail box 4047 <voicemail-noreply@jivecommunications.com>
Sent: Friday, April 2, 2021, 2:50 PM
To: Trenton Prall
Subject: Voicemail from RANDALL ZMERZLI at (970) 261-8692 on Apr 2 2021 2:49 PM

** - EXTERNAL SENDER. Only open links and attachments from known senders. DO NOT provide sensitive information. Check email for threats per risk training. - **

4/2/2021
I spoke to Randy About his property And Access points #70 & #71 As well As future Access to Lost LANE that stubs into his property.
Dave T.

GoTo

You received a new voicemail message

New voicemail message

Time: Friday, April 2 2021 2:49 PM

David Thornton

From: Trenton Prall
Sent: Tuesday, March 30, 2021 4:51 PM
To: Gary Lucero
Cc: Rick Dorris; David Thornton; Tamra Allen
Subject: Re: Mantey Heights

Gary,

The soonest Planning Commission meeting at this point would be May 11 with City Council proposed for June 2.

We will be preparing a new draft of the Access Control Plan for review and will notice everyone as we did a few weeks ago.

Once the draft is available for review, I would like to have another neighborhood meeting in the late April time frame.

In the meantime, if you have any questions please let me know.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384
trentonp@gjcity.org

From: Gary Lucero <lindyfever@yahoo.com>
Sent: Tuesday, March 30, 2021 1:37 PM
To: Trenton Prall <trentonp@gjcity.org>
Subject: Mantey Heights

** - EXTERNAL SENDER. Only open links and attachments from known senders. DO NOT provide sensitive information. Check email for threats per risk training. - **

Hi Trent.
Please advise as to what the new meeting schedule is with GJ Planning and the GJ Council.

Gary Lucero

p.s. Please confirm that you received this email

David Thornton

From: Trenton Prall
Sent: Tuesday, March 30, 2021 5:49 PM
To: Danielle Schuster
Cc: Rick Dorris; David Thornton; Tamra Allen
Subject: Re: Patterson rd plan- Mira Vista dr.

Danielle,

I appreciate the check-in as well as you taking the lead on representing your neighborhood. I was out last week but yesterday we have had discussions with our consultant regarding your neighborhood and a couple of others along the corridor. We have a follow up meeting scheduled Thursday. We will be preparing a new draft of the Access Control Plan for review and will notice everyone as we did a few weeks ago. The soonest Planning Commission meeting at this point would be May 11 with City Council proposed for June 2.

Once the revised draft is available for review, I would like to have another neighborhood meeting in the late April time frame.

As far as sharing the petition, if you could please scan it and email it to me that would be great. I can pick up a hard copy when we meet later in April.

In the meantime, if you have any questions please let me know.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384
trentonp@gjcity.org

From: Danielle Schuster <dnbschuster@gmail.com>
Sent: Tuesday, March 30, 2021 9:33 AM
To: Trenton Prall <trentonp@gjcity.org>
Subject: Patterson rd plan- Mira Vista dr.

** - EXTERNAL SENDER. Only open links and attachments from known senders. DO NOT provide sensitive information. Check email for threats per risk training. - **

Hello Trent,

First, Thank you again for your time on the 18th. I know you must have a lot of people bending your ear about these plans and it seems to get people worked up, so I thank you for being so patient and professional.

As the organizer of our neighborhood group I am just checking in with you about the plan for Mira Vista.
Has there been any further conversation or change in plans that I may relate to my neighbors? I understand the next planning commission meeting is April 27th?

I have a petition that has been signed by a majority of the neighborhood asking that the entrance not be modified. I do not know if this document will change anything but we are hoping to make our position known. Can I get this document to you at some time before the 27th? I know it is past the public comment timeframe, however I would like it to be in the record along with our covenants.

Best,

Danielle Schuster
306 Belaire Dr.

We, the undersigned homeowners, are opposed to changing the Mira Vista Rd entrance to Patterson Rd from its present location:

1). 2522 Mira Vista Drive Kenneth B Ford

2). 2527 Mira Vista Drive Nancy G Knipe

3). 2537 Mira Vista Drive Melissa Schroeder

4). 2547 Mira Vista Drive [illegible]

5). 2557 Mira Vista Drive Nahi Ortiz [illegible]

6). 328 Mayfair Drive Dwight Russell

7). 318 Mayfair Drive

8). 308 Mayfair Drive

9). 353 Mayfair Drive [illegible]

10). 343 Mayfair Drive [illegible]

11). 333 Mayfair Drive [illegible]

12). 323 Mayfair Drive [illegible]

13). 313 Mayfair Drive

14). 303 Mayfair Drive

15). 2551 Mayfair Drive Cherlyn Crawford

16). 2541 Mayfair Drive

17). 2531 Mayfair Drive

18). 2521 Mayfair Drive John & Linda Smith

19). 309 Belaire Drive Charley & Geri Miskmash

20). 319 Belaire Drive

21). 306 Belaire Drive Jeffrey Solustri / Dorothea Schwt

22). 316 Belaire Drive

23). 326 Belaire Drive

24). 336 Belaire Drive

25). 346 Belaire Drive M Nicole Cannan

Bill Cannan

From: ANDREW JANSKY - Voicemail box 4082 <voicemail-noreply@jivecommunications.com>
Sent: Monday, March 22, 2021 1:07 PM
To: Gail Howe <gailh@gjcity.org>
Subject: Voicemail from ANDREW JANSKY at (970) 778-5641 on Mar 22 2021 1:05 PM

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You received a new voicemail message

New voicemail message

Time:	Monday, March 22 2021 1:05 PM
From:	ANDREW JANSKY (970) 778-5641
Duration:	1 minute 20 seconds
Voicemail box:	4082

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320 Summer St, Boston, MA 02210, United States
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3/22/21
I Spoke to Andrew About the proposed ACP and answered All of his questions. He does not live on the corridor, nor own a business there, but is a concerned citizen. He was good with the direction the Plan is going.
DAVE T.

David Thornton

From: Isabella Vaz
Sent: Monday, March 22, 2021 11:26 AM
To: Rick Dorris; Trenton Prall; David Thornton
Subject: FW: Input: Patterson Access-Patricia Star:)

All – please see below for the entirety of Ms. Star's comment/question.

Thank you,

Isabella Vaz
Planning Technician
City of Grand Junction
isabellav@gjcity.org
970.256.4087

From: pstarcevic@charter.net <pstarcevic@charter.net>
Sent: Monday, March 22, 2021 11:18 AM
To: Isabella Vaz <isabellav@gjcity.org>
Subject: FW: Input: Patterson Access-Patricia Star:)

** - EXTERNAL SENDER. Only open links and attachments from known senders. DO NOT provide sensitive information. Check email for threats per risk training. - **

Hi Isabella, Thank you for contacting me so soon !

I was impressed with the input from other's regarding needed Law Enforcement of Patterson Road and other Safety issues. I live at Patterson Gardens Townhomes-between 12th Street & 15th Streets. I hear the City is planning on waiting on our Townhomes exits. Regarding Safety issue: I grew up Safety: my Father (still living) worked as a Nationally Certified Safety Supervisor/Director. If one of Patterson Gardens Townhomes exits is closed-Consider just two townhomes on fire or blowing up as on 7th Street(about 7yrs ago) and Only One entrance/exit for emergency personnel and residents trying to enter or exit onto Patterson Road--Chaos with how many possible deaths? I Lived on 7th Street(1730 N 7th St #1) I lived first hand the damage and chaos--Two homes blew up and Thank God the neighbor Boy's escaped. I got a call and I circled back home-the Firemen would not rescue my sweet puppy (like a child to me) I could not get medicine or anything else and slept in my car that first night.
So, we have Senior citizens that live in Patterson Gardens along with family's with small children and some CMU students--how many might lose their lives with Only 'One' entrance/exit ?

Most Sincerely
Patricia Star

March 21, 2021

The Honorable Duke Wortmann, Mayor
Mr. Trent Prall, Director of Public Works
City of Grand Junction
250 North 5th Street
Grand Junction, Colorado

Dear Mayor Wortmann and Mr. Prall;

We are homeowners and residents of the Mantey Heights Neighborhood and write to urge your consideration of our opinions regarding the City's proposed plan for Patterson Road (The Patterson Road Access Study). It is my understanding that you have already heard from our neighbors with similar concerns. We were unfortunately unable to make the neighborhood meeting last week. We do appreciate that you both made time to come visit Mantey Heights and hear from our neighbors and friends.

Patterson Road is no doubt an important and busy thoroughfare for Grand Junction. The closure of Santa Fe Drive will not increase public safety and access to Patterson. We utilize Santa Fe Drive multiple times a day and choose that road as it is much safer than Park Avenue. Park Avenue is situated with very poor westward facing visual access to oncoming eastbound traffic. That is due to both an arc of Patterson between Santa Fe and Park and existing residential fencing. These very factors have led to several traffic accidents at that very intersection. Santa Fe is much safer with much better visibility. We also do not believe that a broad policy, affecting the streets of Mantey Heights, to make left turns illegal ,is well suited. While it is true that making a left turn from the Neighborhood on to Patterson is, at times, nearly impossible due to traffic, there are many times when it is entirely safe to do so due to low-cross traffic volume. We work at Colorado Mesa University and St. Mary's Hospital - both west of the neighborhood. Having to always turn right, head east and utilize 28 ¼ Road and other surface streets would add time, distance and more navigation to our commutes. We urge you to reconsider that proposed policy.

Of a more pressing matter, we strongly urge you to assess and reexamine the presence and policy of traffic control and law enforcement on Patterson Road. We rarely see any police presence enforcing traffic laws on Patterson. On a nearly daily basis we witness the following: speeding, frequent lane changes, tailgating, failure to stop on red lights, failure to stop at stop signs, and occasionally road rage. We cannot recall a single time in the last five years seeing a traffic stop along our section of Patterson. Increasing police presence and enforcement will improve the safety profile of Patterson. This action could be commenced immediately.

Thank you for taking the time consider our opinions and suggested regarding the future of Patterson Road

Sincerely,

Marc A. Burdick *Colin E. Carman*

Marc A. Burdick Colin E. Carman, PhD
114 Camino Del Rey Drive, Grand Junction, CO 81501
Transmitted via electronic mail

PATTERSON ROAD ACCESS CONTROL PLAN

TOPIC: Closure of access points in the Mantey Heights Subdivision.
Presented To: Mayor Duke Wortman, City of Grand Junction
Trent Prall, Director of Public Works, City of Grand Junction
Date: March 18, 2021

Background: Mantey Heights is one of the oldest subdivisions in the city and was here long before Patterson Road was even widened or large commercial and business/hospital developments were implemented. The streets are original within the subdivision and have always had pre-existing access points to Patterson Road.

Issues for the City, Planning Commission, Public Works, and any other Entity.

1. Safety

A) Blocking any access point to and from the subdivision would cause a major safety issue. A house catches on fire, a resident has a heart attack, someone has to be rushed to the hospital due to anaphylactic shock, or stroke, how do the emergency vehicles and residents navigate in a timely manner when minutes and seconds count.

3. Residents of Mantey Heights

A) Those who live in the neighborhood don't have any problem navigating the exiting and entering on and off of Patterson Road. When you choose to live in the Mantey Heights area you except the surrounding for what they are and as far as Patterson Road access is concerned patience and the proper use of the turn lane is one of those aspects which we have all come to be able to navigate with ease. We are opposed to closure of any of our access points.

2. Traffic and Demands on Patterson Road

A) Stop rezoning land on Patterson to commercial and high density multi residential /use from 12Th street East. Those types of development should be allocated to the land west of First toward highway 6&50 there is certainly plenty of land in that area to accommodated any such developments. Examples on this side of 12th are the Corona Del Rey parcel that was changed to R8, and the parcel on the North corner of Patterson and 28&¼ Road was made into a three story apartment/ commercial plat against the rejection of the surrounding neighborhoods. Thank goodness the original design for a gas station on the

corner of that parcel was never built, along with the rejection of a Drive-Through Bank on 27 &½ Road. Stop creating more traffic.

B) Matchett Park a traffic nightmare waiting to happen. Development of the Matchett property into a massive multi use playing field that brings in tournament with hundreds of vehicles which only have Patterson Road to use to enter and exit is unthinkable along with everyday use from school district 51 (Paul Cain Athletic Director), Fire Football Club (Mr. Johnson), and various clubs.
Adversities;

1. Volume of vehicles, including City trucks for maintenance.
2. Noise output to ours and surrounding neighborhoods from events and maintenance.
3. Added air, trash, noise pollution putting a strain on our existing neighborhood.

The City Of Grand Junction has had a long standing problem of long range planning not taking existing neighborhoods and surrounding areas into consideration when it comes to development. We should not be held liable today for the past and or with the implementation of a plan developed by staff and consultants who do not live in this area. No to any closures of access points in Mantey Heights.

Gloria J Deschamp
124 Mount View Drive
Mantey Heights Subdivision
Grand Junction, CO 81501

Meeting Thursday, March 18th, 2021
Meeting Time 3:20pm
Meeting Location: Patterson Road and Santa Fe Drive
Meeting Invitees: Mayor Duke Wortman, Director of Public Works Trent Prall

We the residents of the Mantey Heights neighborhood have serious concerns regarding the Patterson Access Control Plan.

Primary list of concerns:
We strongly disagree that any of the Mantey Heights access streets to Patterson Road be closed, especially Santa Fe Drive because it is presently one of the safest exits to Patterson.

If people could be made to drive slower there would not be a need to redesign Patterson Road in front of Mantey Heights. We would like to see the city reduce speeds before any drastic design measures are taken. Can the city promise that the speed of traffic on Patterson will not increase if a raceway is opened up? What can the city do to reduce traffic speeds on Patterson?

Can you promise new signage and police patrolling to address the speed of traffic along a reworked Patterson raceway? It stands to reason that if Patterson Road carries a major flow of traffic then it should have a major level of speed enforcement.

Can we be assured that there will not be any narrowing to the Patterson Road turn lane width and corresponding striping? Residents of the Mantey Heights neighborhood successfully petitioned to have the center lane of Patterson Road widened to provide for a greater degree of safety for those exiting and entering Mantey Heights.

Some of the residents reside in Mantey Heights to be close to St. Mary's Hospital. Many of us shop at City Market on 12th and Patterson. Can there be road caps placed on Patterson to allow for left hand turns?

Can there be any changes.to a designated intersection to ensure a safe line of site for traffic entering Patterson? e.g. assurance that the turning radius will be clear of vegetation, or building improvements.

Can a designated street be made wide enough to accommodate two vehicles entering and exiting Patterson simultaneously?

Grand Junction City Councilman Kreig Andrews has commented that one size does not fit all and that there are three unique sections along Patterson Road and that each section should be handled independently of the other - roughly from 24 Road to 12th Street, 12th Street to 28 1/4 Road and 28 1/4 Road East.

Comments:

Because this is presented by the city as a Phased Implementation it seems that the drastic measures proposed by the city could be delayed until such time as other traffic routes are completed, such as Ridge Road, F 1/2 Road, G Road and 29 Road to the Interstate.

There is currently poor line of site at some interior Mantey Heights intersections because of vegetation overgrowth and this will become an even greater concern because traffic within the neighborhood will be forced to reroute to a designated exit to Patterson Road.

What the residents of Mantey Heights need is for the exits onto Patterson be more safe with better sight lines, especially because Patterson Road is such a high traffic street. Lines of site should be at a higher standard for those streets accessing a major road.

Some road repair will need to be addressed within Mantey Heights.

There will be increased traffic pressure on other parts of the city if right hand turns are implemented and how will those concerns be addressed? What about the safety of the increased traffic to those other areas that are more pedestrian and bicycle friendly?

Travel times will be increased for all the rerouted traffic. Pollution will increase from all the rerouting of traffic to get around the city. Traffic will gravitate to the next nearest location and then make a left turn across Patterson and then make a "u" turn somewhere to get back onto Patterson. This makes absolutely no sense.

In the recent past city taxes should have been more wisely spent e.g. How many times is 24 Road going to be redesigned and rebuilt? The Riverside Parkway was nearly 100% over budget after it was refinanced for lack of money and multiple whopping change orders and is a mess where it dumps into 25 Road. Hence, until the city can design more wisely and not be so careless with the taxpayers money we are very suspect of any city plans unless we are completely informed and have more than adequate time to address the issues. If the city was more careful with our money many road improvement projects could have already been implemented. Now First Street is being torn up after having been completed last year.

Gary Lucero 3/14/21 Diane Lucero Diane Lucero 3/14/21
Jeffrey N Rust 3/14/21 Joe R M. Perrin 3/15/21
Karen E Perrin 3/15/21
Eric R. Ab 3/14/21 Leonard A Heyl 3/15/2021
3/14/21 Colin Christian 3/15/21
3/14/21 Glen [illegible] 3/15/21
3/14/21 [illegible]
3/14/21 Joyce Mueller
Jean Wright 3/14/21 Peter Mueller
Mike Kostitsch 3-14-2021 John [illegible]
3/14/2021 Shirley Massison + TOD Pace 3/18/21
Edward [illegible] 3/14/2021 Thomas G. Tucker
Christine Gibson 3/14/2021 Mary Tucker 3-18-21
R K Gibson 3/14/2021 Jeanne + George Parkhurst

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3/18/21 124 Mountain View Dr.

Janice Hart & Daniel Hart 3/18/21 110 Mt View Dr.

Will Goemel & John Hume 3/18/21 112 E. Park Ave.

[illegible] 3-18-21 109 SANTA FE DR

William E. Ellenwood 3/18/21 130 Carlitos Ave

Jen Ritter 3/18/21 136 Santa Fe Dr. G.J. 81501

3/18/21 113 MANTEY HTS. DR.

Beth McKee 3/18/21 135 CARLITOS AVE

Tony Taylor 3-18-21 104 Monterey Heights Drive

March 18, 2021

Mayor Wortman, Director of Public Works Trall:

As a Mantey Heights resident, I'm writing to express my concern regarding the Patterson Access Control Plan, as well as the longstanding issues of burgeoning traffic and excessive speeding along Patterson Road.

Our list of concerns in answer to the Access Control Plan has been received by your offices, and we feel united in our effort to resist the proposed changes.

In addition, we have often in the past alerted City officials to the growing danger of drivers speeding along Patterson Road. Speeds well in excess of 60 mph are a common occurrence, and yet rarely has there been a police presence to curb such dangerous infractions of the posted speed limits, which run from 30 to 45 mph. We feel this simply encourages the overt breaking of the law. Many of us have noted the seemingly offset timing of the stoplights along Patterson Road. Are the stoplights timed in conjunction with the posted speed limits? If not, the City could be sued in any serious accident case, further draining the City coffers.

And yet the higher calling of public conscience ought to be focused on the vulnerable drivers who are consistently in the line of fire of the Patterson Road speedsters. Will it take a death within a family to finally alert City officials to the danger of allowing drivers to speed at will?

In comparison to this possibility, the noise level of the traffic along Patterson can seem very dim, and yet many residential neighborhoods bordering Patterson Road are hounded on a 24-hour basis by the accelerating engine racket along this thoroughfare. Due to the lax patrol car presence, drivers prone to excessive speeding appear to know that they can cut in and out of traffic to their hearts' content. Tailgating... no problem.

We in the neighborhoods bordering Patterson also suffer from this behavior by watching the devaluation of our homes. Neighborhoods which were constructed in the earliest days of Grand Junction's development seem to be put at the lowest level of the City Planning totem pole, in the name of Hurry-up Growth. Long-treasured communities are told to get with the new programs.

Of course, the real issue began when Patterson Road was allowed to replace I-70, for drivers who preferred zipping along without using the highway. We've allowed those coming to and through town to forget what highways are made for. There are entire contingents of workers, shoppers and bar-hoppers coming from Clifton and points west who think nothing of jetting along Patterson instead of using the highway.

Enforcing the current speed limits along Patterson would put a real pause on this behavior. Certainly complaints would flood your desks downtown, but eventually the idea would dawn on the speeders. Something like, Hey, maybe putting lives at risk is no longer okay.

I hope to hear from you soon about these issues.

Beth McKee
135 Carlitos Ave
970-260-4642
bathwings@gmail.com

David Thornton

From: Trenton Prall
Sent: Wednesday, March 17, 2021 6:43 PM
To: Rick Dorris; David Thornton
Cc: Tamra Allen; Michelle Hansen
Subject: Fw: Access Control Plan - Cris-Mar Subdivision Neighborhood Meeting notes

Meeting started at 4:00 3/17. There were approximately 11 attendees representing 8 properties.

I provided a brief overview of the Access Control Plan and addressed some of the concerns shared at the 2/23 Planning Commission Meeting by other residents of Cris-Mar subdivision such as connectivity of Bonito through Penny Lane to 29 1/2 Road and the Bonito width concerns closer to 29 Road.

David Scanga - would like note added that connection from Bonito through Penny Lane to 29 1/2 Road be constructed prior to implementation of access control plan at Partee (208), Crismar (211) and 29 3/8 (221) are implemented.

Linda Barker - wanted more information on the plan.

Ray and Wilma - 92 yrs old - just listening but asked about timing of implementation of access control as well as 29 Road construction. I shared that we were at least 4-5 years out on 29 Road Interchange. Access control would most likely be further out than that.

Richard and Cheryl - Bonito access concerns along with all of the growth and development to the north will need improvements to 29 Road and 29 1/2 Road. The City and County will need to work on improvements to both corridors to handle the new growth.

Jim - Bonito access to 29 Road is narrow. I agreed that improvements would be needed over time. Linda Barker asked if sidewalks would be part of the improvements and I shared that would be likely on at least one side as we have done in many other streets of the community developed in the 1940's-1950's when sidewalks were not required of developers.

Ken Frederick - 3/4 at Cris-Mar (211) would be great. I shared that it was considered but that 29 3/8 was preferred from a spacing standpoint. None-the-less, I ensured that I would ask the question about the possibility.

Carl Lengyel - No accidents seen at access points, so why this plan. I shared that the plan is a long term vision and that implementation for the entire corridor is over many years. Most of the implementation will happen with redevelopment, as safety concerns emerge, or as part of City project which for the Patterson Rd corridor would most likely be at signalized intersections for many years.

Aldis and Rachel
- When 29 Road is constructed, will trucks be allowed to come through the neighborhoods? Trucks will be allowed but still need to look at the demand for truck access. Most will stick to state highways to get to Patterson Road and North Ave and would not be likely to frequently use this corridor.

- Bonito access to 29 Road and 29 1/2 Road increasing traffic with people "short cutting" 29 Rd and Patterson Rd Intersection. I shared that could already happen today with 29 3/8. The connection of Bonito to Penny Lane to 29 1/2 Road would be fairly circuitous and short cutting there would be unlikely.
- "U-Turns are unsafe" - statistically they are safer than lefts out.
- Need right turn lanes all over town. Fall 2019 Ballot Initiative for Road Expansion projects there is money for 5 additional right turn lanes on Patterson Road.
- For access control will medians or other access control on the sides of Patterson Road be used? "Pork chops" such as at the Maverick are not as effective as medians. Therefore medians are recommended to ensure compliance.
- Bike Lane concerns - especially Patterson Road but also 29 Road are not that great due to traffic and that this plan should also address bikes, ped, and transit. I shared the City will be working on a bike/ped plan.
- Timing of west bound Patterson left turn to southbound 29 Road and requested signal timing be included in this plan. Signal is extremely short...at most 3 cars. I committed to investigate. Signal timing would be part of a separate transportation study and not included in this access control plan.

Carl Lengyel - plan is reliant on development of two vacant properties. I shared Mr. Scanga's request for a note to be added that access control for access to Crismar would be contingent on the connection to 29 1/2 Road be constructed before implementation of the plan.

I shared that Planning Commission is currently scheduled for March 23 and City Council for April 7, however will most likely move back into April and May respectively due to ensuring more opportunities for the community to participate.

Meeting ended at 5:05.

Thank you,

Trent Prall, PE
Public Works Director
City of Grand Junction
970-256-4047 / 970-201-6384

From: David M. Scanga <dscanga@hfak.com>
Sent: Wednesday, March 17, 2021 5:09 PM
To: Trenton Prall <trentonp@gjcity.org>
Subject: Access Control Plan

** - EXTERNAL SENDER. Only open links and attachments from known senders. DO NOT provide sensitive information. Check email for threats per risk training. - **

Trent-- Thank you for taking the time to come out and meet in person and then having a one hour video conference call with people in our subdivision on the access control plan. Your willingness to discuss issues in a frank manner and listen to the concerns of homeowners is greatly appreciated. The background and information you provided was informative and helpful. Thank you for the work you are doing to help our community.

March 16, 2021

Trent Prall

Public Works Director

City of Grand Junction

Patterson Road

Access Study

Dear Sir:

I have some questions about the change of access for access number 86 (Mira Vista Rd).

First, it looks like the access plan is treating our neighborhood with 32 houses in it and only one entrance and exit the same way as a single house driveway is at other locations on Patterson Road. I know this is a narrow section of Patterson, but our 32 houses should get the same courtesy as one of the single house driveways that are keeping their access, though it be a right-in right-out.

Second, the access at Mira Vista Road will be a conditional right-in right-out access, which is Fine, but this access will be closed when the access 86a is built on St. Mary's property. When is that construction planned for?

Third, when this does occur, it looks like our neighborhood will be a private subdivision of St. Marys. St. Marys already owns eight or more of the houses on the east side of the neighborhood and I am concerned that St. Marys will want to expand in the future by taking up the neighborhood, similar to what CMU is doing to the nearby neighborhoods next to them.

Finally, I am surprised that St. Marys is willing to take out one of their houses to provide a new entrance to our neighborhood. Why would they do that? I don't see any other location where the plan is to take out one of the houses to provide a new access. Did St. Marys offer this property up? I would be surprised to hear that Stolfus told them that they would need to lose a property in order to build a new access. Just a little suspicious of St. Marys motives.

Sincerely

Bill Crawford

Bill Crawford

2551 Mayfair Drive

Grand Junction, CO 81501

3-10-21

Dear City Staff: Community Development,

We have received your mailing re access management on Patterson Rd.

We live in Mantey Heights on Santa Fe Dr. Your plan will do nothing but increase traffic on Patterson and will punish all residents of Mantey Heights. Roads are there to give access to homes and business and not as you say provide "smoother traffic flow". Traffic flow would be controlled if you control the speed limit. The majority of people drive over the limit and tail gate so no one is safe making a right hand or left hand turn. We moved here in September and have been dismayed at the rude drivers who want to use Patterson as a speed way for where ever they are going.

Patterson and Santa Fe Dr are access to our home and we have a right to use our street and to make a left had turn to the middle lane to get to services with out having to travel the wrong direction, make crazy turns just to get to daily services ie grocery store.

It is our experience that traffic always increases when you make it easier to travel fast. This is not a free way, a major highway and it is not a race track. It is our home. Follow the law and ticket for speeding and tailgating.

Also the roads into Mantey heights are not two way . We care about our neighbors and we do not want to damage their property if we have only one road in. Mantey Heights is an old , lovey, neighborhood that deserves access without stress.

Sincerely,

Jeanne and George Parkhurst.

2-28-2021

To: Grand Junction Traffic Control
RE: Traffic on Patterson Rd in City Limits

My husband and I saw on the news your idea to make concrete left turn lanes in the new continuous middle lane of Patterson Rd.

We would like to present some feedback and ideas. #1. Instead of spending all that money on construction and disrupting traffic for the duration of said construction, use the money to hire a couple of police officers to just patrol Patterson and keep speed under control. Speed is a big factor. We are careful to control our speed. It is common for us to be constantly passed by speeders on Patterson.

#2. Since speeding is so common, it might be a good idea to put up more speed limit signs with blinking lights to catch people's attention. The drivers starting in Clifton on Patterson and heading west seem to think 45 mph applies all the way thru to the mall area. The 35 mph section from 12th Street to 1st Street is completely ignored.

Thanks for taking time to read and consider our ideas and observations.

Roger + Linda Jarboe
588½ Gerken Rd.
Grand Junction, CO
81504

Roger Jarboe
Linda Jarboe

P.S. →

We have lived in Grand Junction 9 years. We traverse Patterson daily.* In those 9 years, we have seen G.J. Police cars maybe a total of 6 times - 3 of these times were at accidents.

* at varied times.

NOTICE OF PUBLIC HEARING

An application for the following request has been received and tentatively scheduled for public hearings, in the City Hall Auditorium, 250 North 5th Street, on the dates indicated below.

Options for attending and submitting public comment for Planning Commission are:

- Attend the meeting at City Hall, 250 N 5th Street.
- Provide comment in advance at www.GJSpeaks.org by 5:30 PM on June 7, 2021. Meeting information and presentation will be available online by 5 PM on June 1, 2021.
- Comment by phone by calling 970-609-9688 and dialing **6910**
- Attend the meeting virtually. Register for the meeting online: https://bit.ly/2SbP5Ia

Attend the City Council hearing or for more information on how to participate visit the City's website at www.gjcity.org/129/Agendas-Minutes or call 970-244-1509.

AVISO DE AUDIENCIA PÚBLICA

Se recibió un trámite para la siguiente solicitud y se programó tentativamente para audiencias públicas, en el Auditorio del Ayuntamiento, 250 North 5th Street, en las fechas indicadas a continuación.

Las opciones para asistir y enviar comentarios públicos a la Comisión de Planificación son:

- Asista a la reunión en el Ayuntamiento, 250 N 5th Street.
- Proporcione comentarios por adelantado en www.GJSpeaks.org antes de las 5:30 pm el 7 de junio de 2021. La información y la presentación de la reunión estarán disponibles en línea a las 5 PM el 1 de junio de 2021.
- Comenta por teléfono, llamando al 970-609-9688 y marcando **6910**
- Asista a la reunión virtualmente. Regístrese para la reunión en línea: https://bit.ly/2SbP5Ia

Asista a la audiencia del Concejo Municipal o para obtener más información sobre cómo participar, visite el sitio web de la Ciudad en www.gjcity.org/129/Agendas-Minutes or call 970-244-1509.

PLANNING COMMISSION: Tuesday, June 8, 2021 at 5:30 PM

CITY COUNCIL: Wednesday, July 7, 2021 at 5:30 PM

COMISIÓN DE PLANIFICACIÓN: Martes, 8 de junio de 2021 a las 5:30 PM

AYUNTAMIENTO: Miércoles, 7 de julio de 2021 a las 5:30 PM

CPA-2021-17 – Patterson Road Access Control Plan - PATTERSON ROAD FROM HWY 6&50 TO LODGEPOLE STREET

Consider a request by the City of Grand Junction to adopt the Patterson Road Access Control Plan (ACP), an element of the City's Comprehensive Plan as Title 38, Volume III, of the Municipal Code.

CPA-2021-17 – Plan de control de acceso de la calle Patterson – PATTERSON ROAD DESDE HWY 6 & 50 HASTA LODGEPOLE

Consideración de una solicitud de la Ciudad de Grand Junction para adoptar el Plan de Control de Acceso Vial (ACP) de Patterson, un elemento del Plan Integral de la Ciudad como Título 38, Volumen III, del Código Municipal.

Planner/Planificador: Dave Thornton, Phone/Teléfono: 970-244-1450, Email/Correo electrónico: davidth@gjcity.org

PATTERSON ROAD ACCESS CONTROL PLAN

PUBLIC COMMENT BEING ACCEPTED ON WWW.GJSPEAKS.ORG UNTIL MARCH 22 AT 5:30PM

PATTERSON ROAD ACCESS CONTROL PLAN

«OWNER»
«JOINT_OWNER»
«MAILING_ADDRESS»
«MAILING_CITY» «MAILING_STATE»
«MAILING_ZIP»

CONTACT CITY STAFF

COMDEV@GJCITY.ORG
970-244-1430

CITY OF Grand Junction COLORADO
COMMUNITY DEVELOPMENT

PATTERSON ROAD ACCESS CONTROL PLAN

You have received this mailing because you live or own property or a business near Patterson Road. The City has been conducting an Access Control Plan (ACP) study of the Patterson Road corridor between I-70 Business Loop on the West and Lodgepole Street on the east. The study is currently a final draft and is being considered by the City Planning Commission before it goes to City Council. After hearing public testimony of the need for more public engagement, the Planning Commission tabled their decision to provide time for additional public input. At the March 23rd public hearing, Planning Commission will provide a recommendation to City Council who will consider the plan on April 7, 2021.

The Planning Team, made up of City staff and the City's consultant, Stolfus and Associates, has already met with business owners and residents and received great input that has shaped the ACP. Review the plan on www.gjspeaks.org and contact City staff with any comments or suggestions.

Thank you for engaging with us in this important long-range plan that seeks to protect an important east-west transportation corridor in our community. The draft Patterson Road Access Control Plan study can be viewed at www.gjspeaks.org. You can provide comments at the website through Monday, March 22, 2021 at 5:30pm.

WHAT IS ACCESS MANAGEMENT?

The systematic control of the location, spacing, design, and operation of driveays, median openings, and street connections to a roadway

SAFETY

- Reduces number of conflict points and potential crashes
- Provides safe access to businesses and residents

INCREASED ABILITY TO ACCOMOMODATE TRAFFIC DEMANDS

- Decreases travel times and provides smoother traffic flow
- Results in less air pollution

GOOD ACCESS MANAGEMENT IS GOOD FOR BUSINESS

- Preserves property values
- Increases roadway efficiency resulting in a broader market area

PHASED IMPLEMENTATION

The Plan will be implemented in phases as changes occur in the corridor which generate the need.

CONSTRUCTION OF IMPROVEMENTS MAY BE PUBLICLY AND/OR PRIVATELY FUNDED.

PORTIONS OF THE PLAN WILL BE IMPLEMENTED BASED ON THE FOLLOWING TRIGGERS:

- Redevelopment that increases traffic greater than 20%
- Planned publicly funded projects
- Safety or operational issues develop

THE PLAN IS A LIVING DOCUMENT THAT CAN CHANGE.

CONTACT CITY STAFF

COMDEV@GJCITY.ORG
970-244-1430

PATTERSON ROAD ACCESS CONTROL PLAN

PUBLIC COMMENT BEING ACCEPTED ON WWW.GJSPEAKS.ORG UNTIL MAY 17 AT 5:30PM

PATTERSON ROAD ACCESS CONTROL PLAN

CONTACT CITY STAFF

COMDEV@GJCITY.ORG
970-244-1430

CITY OF Grand Junction COLORADO
COMMUNITY DEVELOPMENT

«OWNER»
«JOINT_OWNER»
«MAILING_ADDRESS»
«MAILING_CITY» «MAILING_STATE»
«MAILING_ZIP»

PATTERSON ROAD ACCESS CONTROL PLAN

You have received this mailing because you live or own property or a business near Patterson Road. The City has been conducting an Access Control Plan (ACP) study of the Patterson Road corridor between I-70 Business Loop on the West and Lodgepole Street on the East. The City is inviting the public to review the current draft of the project, provide input and ideas, and review edits that have already been suggested by the public. New input received has been invaluable in shaping the latest draft of the ACP to be a Plan that benefits the entire community.

Proposed changes to the January draft ACP have been made to the maps and tables that will be included in the final April 2021 draft Plan document. The maps and tables for Patterson Road have been uploaded to www.GJSpeaks.org for public review and comment. Community members can provide comments at the website through Monday, May 17th at 5:30 pm. City Council will be discussing the ACP at their May 19th meeting at 5:30 pm. The tentative schedule for Plan adoption is a public hearing with Planning Commission in June and public hearing before City Council in July.

Thank you for engaging with us in this important long-range plan that seeks to protect an important east-west transportation corridor in our community.

WHAT IS ACCESS MANAGEMENT?

The systematic control of the location, spacing, design, and operation of driveays, median openings, and street connections to a roadway

SAFETY

- Reduces number of conflict points and potential crashes
- Provides safe access to businesses and residents

INCREASED ABILITY TO ACCOMOMODATE TRAFFIC DEMANDS

- Decreases travel times and provides smoother traffic flow
- Postpones the need for additional lanes for traffic

GOOD ACCESS MANAGEMENT IS GOOD FOR BUSINESS

- Preserves property values
- Increases roadway efficiency resulting in a broader market area

PHASED IMPLEMENTATION

The Plan will be implemented in phases as changes occur in the corridor which generate the need.

CONSTRUCTION OF IMPROVEMENTS MAY BE PUBLICLY AND/OR PRIVATELY FUNDED.

PORTIONS OF THE PLAN WILL BE IMPLEMENTED BASED ON THE FOLLOWING TRIGGERS:

- Redevelopment that increases traffic greater than 20%
- Planned publicly funded projects
- Safety or operational issues develop

THE PLAN IS A LIVING DOCUMENT THAT CAN CHANGE.

CONTACT CITY STAFF

COMDEV@GJCITY.ORG
970-244-1430

PATTERSON ROAD ACCESS CONTROL PLAN
ANSWERS TO FREQUENTLY ASKED QUESTIONS

What is an Access?

An access, as related to roadways, is a location where vehicles, bicycles, or pedestrians may enter and/or exit a roadway. Access may be public, such as a street, or private, such as a driveway to a business or residence. Every property owner has the right of reasonable access to the general street system.

Why is access management beneficial?

Access management benefits communities by preserving and improving traffic operations along the most critical roadways. Efficiently managing existing roadways so that they are operating to their fullest capacity costs less than investing in new roadways. Applying access management techniques can increase roadway capacity by 20% to 40%. Access management also has tremendous safety benefits. Studies have shown a 30% to 60% reduction in crashes on roadways where access management techniques are implemented.

The reduction in vehicle conflicts has the added benefit of improving traffic flow, reducing travel times, increasing fuel efficiency and contributing less to air pollution. Access management is also good for business, providing safe access to customers and retaining more of a community's original market area.

What is an Access Control Plan?

An Access Control Plan (ACP) provides a unified vision of the future access needs for a particular roadway corridor. The goals are to define safe, effective, and efficient access to support the economic viability of the corridor, utilize existing right of way, allow for smooth passage of through traffic on the roadway, maintain compatibility with local planning efforts and the existing and proposed street network connections and circulations, provide a plan that can be implemented in phases, and support alternative modal choices.

An ACP defines existing and future access locations with consideration for spacing, traffic movements, circulation, and alternative access opportunities. The ACP does not define specific roadway improvements or funding sources. It is a long-range planning document that identifies access conditions that will be implemented as roadway and land-use characteristics change.

Why is adopting an ACP beneficial?

An ACP allows Grand Junction to make decisions about access that are more consistent with the local vision, land use, and the local transportation system as a whole. In addition, the ACP addresses access on a corridor-wide basis rather than an individual, first-come, first-serve basis. An ACP considers how adjacent access points impact each other and provides property owners with security in the planned access for their property. Recommendations of the ACP consider adjacent land use, corridor specific conditions and local plans for future improvements. Closer access spacing and increased level of access may also be recommended where technical analyses can demonstrate adequate traffic safety and operations.

How is the ACP implemented?

The ACP will be implemented in phases as changes and growth occur around the City. Portions of the plan will be implemented based on the following triggers:

1. Redevelopment that increases traffic
2. Planned publicly funded project
3. Safety or operational issue

What area does the ACP include?

The ACP study area covers approximately 7.1 miles of Patterson Road from US 6/US 50 to Lodgepole Street.

How long will it take to complete the Access Plan?

The ACP study began in January 2020 and is expected to be completed in the summer of 2021.

Patterson Road Access Control Plan **File # CPA-2021-17**

Agenda item can be viewed online here at 44:25

Consider a request by the City of Grand Junction to adopt the Patterson Road Access Control Plan (ACP), an element of the City's Comprehensive Plan as Title 38, Volume III, of the Municipal Code.

Staff Presentation

Dave Thornton, Principal Planner, introduced exhibits into the record.

Trent Prall, Public Works Director, Michelle Hansen, Stolfus and Associates, and Rick Dorris, Development Engineer, gave a presentation regarding the request.

Questions for Staff

Commissioner Gatseos asked a question regarding clarification on what safety or operational issue scenarios would trigger construction and implementation of the Plan.

Commissioner Gatseos asked if there were any publicly funded projects slated for Patterson Road.

Commissioner Scissors asked a question regarding non-motorized transportation along the Patterson corridor.

Commissioner Gatseos asked a question regarding how much Staff time has been spent with concerned citizens to explain the Plan.

Commissioner Ehlers asked a question regarding questions that came up in the public comment.

Public Hearing

The public hearing was opened at 5 p.m. on Tuesday, February 2, 2021 via www.GJSpeaks.org.

Comments from Lois Dunn, Ruth Kinnett, Nova Turner, Peter Firmin, William Ferguson, Heather Pool, Merton Fisher, Virginia Brown, John Edwards, Tim Kubat, Patricia Johns, KJ Kraich, Seth Thomas, and Robert Garrison were submitted via GJSpeaks regarding the request.

David Scanga, Jeff Tipton, Marie Frederick, Rachel Strautins, Tom Parish, Virginia Brown, and Karen Newell all spoke regarding the request.

The public hearing was closed at 7:47 p.m. on February 23, 2021.

DRAFT

Staff Response
Trent Prall and Michelle Hansen provided response to citizen comment.

Questions for Staff
Commissioner Teske had a question regarding the differences between the Patterson Road corridor and the North Avenue corridor.

Commissioner Teske asked a question regarding cross-access.

Discussion
Commissioner Gatseos made a comment regarding the request.

Commissioner Susuras made a comment opposing the request.

Commissioner Scissors made a comment regarding the request.

Commissioner Haitz made a comment regarding the request.

Commissioner Ehlers made a comment regarding the request.

Commissioner Gatseos made a comment regarding the request.

Motion and Vote
Commissioner Ehlers made the following motion, "Mr. Chairman, on the Patterson Road Access Control Plan, CPA-2021-17, I move that Planning Commission continue this item for the March 23rd meeting."

Commissioner Susuras seconded the motion. The motion carried 6-0.

DRAFT

CITY OF GRAND JUNCTION, COLORADO

ORDINANCE NO.

AN ORDINANCE ADOPTING THE PATTERSON ROAD ACCESS CONTROL PLAN AS VOLUME III, TITLE 38 OF THE MUNICIPAL CODE

THE ACCESS CONTROL PLAN IS FOR APPROXIMATELY SEVEN MILES OF PATTERSON ROAD BETWEEN I-70 B (23.75 RD) AND LODGE POLE STREET (30.75 RD)

Recitals

The City of Grand Junction staff and Stolfus and Associates as a planning team have diligently worked jointly to prepare an Access Control Plan (ACP) Study for the Patterson Road corridor within the city limits of Grand Junction. This action follows public meetings and virtual and in-person open houses during the planning process where members of the public attended and participated.

After sixteen months of public outreach and deliberation by the planning team, public notice and a public hearing, by the City Planning Commission, the Planning Commission forwards its recommendation of adoption of the Access Control Plan for the future of the Patterson Road corridor.

The City Council finds that the proposed Patterson Road Access Control Plan is consistent with the City's overall vision, implements the 2020 One Grand Junction Comprehensive Plan, and overall manages the Patterson Road corridor to not only preserve the transportation functions of the corridor, but also helps to preserve property values and the economic viability of abutting developments. It optimizes the performance of the roadway to improve the level of safety, reduction of traffic congestion and is key in minimizing the need to add additional lanes of traffic that would have a much greater impact to the corridor and adjacent properties.

Further, the City Council finds that the ACP will afford maximum opportunity, consistent with the sound need and plans of the municipality as a whole, for the development or redevelopment of the corridor.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION THAT:

The Patterson Road Access Control Plan (ACP), City of Grand Junction, Colorado, in the form of the document attached hereto, and as recommended for adoption by the City Planning Commission is hereby adopted.

The full text of this Ordinance, including the text of the Patterson Road Access Control Plan, in accordance with paragraph 51 of the Charter of the city of Grand Junction, shall be published in pamphlet form with notice published in accordance with the Charter.

INTRODUCED on first reading the _____ day of _____, 2021 and ordered published in pamphlet form.

ADOPTED on second reading the _____ day of _____, 2021 and ordered published in pamphlet form.

ATTEST:

_____
Chuck McDaniel
President of the Council

_____
Wanda Winkelmann
City Clerk