Note: Anyone wishing to speak at any Transportation Commission meeting is encouraged to do so. If you wish to speak, please rise and, after you have been recognized by the Chair, give your name and complete address for the record. You will then be allowed to speak. Please note the public testimony may be limited by the Chair.

ASHLAND TRANSPORTATION COMMISSION
September 26, 2013
AGENDA

I. CALL TO ORDER: 6:00 PM, Civic Center Council Chambers, 1175 E. Main Street

II. ANNOUNCEMENTS

III. CONSENT AGENDA
- A. Approval of Minutes
  1. August 22, 2013

IV. PUBLIC FORUM

V. ACTION ITEMS
- A. Normal Avenue Neighborhood Plan (45 min.)
- B. Downtown Study Commission Members (20 min.)

VI. NON ACTION ITEMS
- A. Miscellaneous Concrete Project (5 min.)
- B. Walker Ave sidewalk improvements (5 min.)
- C. Miscellaneous Concrete Improvements (5 min.)
- D. Future overlay projects (5 min.)

VII. FOLLOW UP ITEMS
- A. APS homing sound/inconsistencies
- B. Crossing at Ray Lane
- C. Approved TSP online @ http://www.ashland.or.us/Page.asp?NavID=13455

VIII. INFORMATIONAL ITEMS
- A. Action Summary
- B. Traffic Safety Connection August Newsletter
- C. Traffic Crash Summary

IX. COMMISSION OPEN DISCUSSION

X. FUTURE AGENDA TOPICS
- A. Transportation Safety Public Outreach
- B. SOU Multi-Modal Future
- C. Lithia and 3rd Intersection Analysis
- D. Iowa St. 20mph zone

XI. ADJOURNMENT: 8:00 PM

Next Meeting Date: October 24, 2013

CITY OF ASHLAND

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Public Works Office at 488-5587 (TTY phone number 1 800 735 2900). Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to the meeting (28 CFR 35.102-35.104 ADA Title I).

CITY OF
ASHLAND

Transportation Commission

Contact List as of September 2013

Name	Title	Telephone	Mailing Address	E-mail Address	Expiration of Term
Craig Anderson	Commissioner	541-488-0418	575 Elizabeth Avenue	craig.ashland@gmail.com	4/30/2014
David Chapman	Commissioner	541-488-0152	390 Orchard Street	davidchapman@ashlandhome.net	4/30/2016
Joe Graf	Commissioner	541-488-8429	1160 Fern Street	graf@sou.edu	4/30/2015
Vacant	Commissioner				4/30/2014
Shawn Kampmann	Commissioner	541-482-5009	P O Box 459	shawn@polarissurvey.com	4/30/2015
Corinne Vièville	Commissioner 541-488-9300	541-944-9600	805 Glendale Avenue	corinne@mind.net	4/30/2016
David Young	Commissioner	541-488-4188	747 Oak Street	dyoung@jeffnet.org	4/30/2015
Non Voting Ex Officio Membership					
Mike Faught	Director of Public Works	541- 488-5587	20 E. Main Street	faughtm@ashland.or.us	
Carol Voisin	Council Liaison	541-482-3559	20 E. Main Street	carol@council.ashland.or.us	
Brandon Goldman	Planning Dept	541- 488-5305	20 E. Main Street	goldmanb@ashland.or.us	
Steve MacLennan	Police Dept	541- 552-2433	20 E. Main Street	maclenns@ashland.or.us	
Scott Hollingsworth	Fire Dept	541- 552-2932	20 E. Main Street	hollings@ashland.or.us	
Honorè Depew	SOU Student Liaison	503- 422-6723		honoredepew@gmail.com	
VACANT	Ashland Schools				
Dan Dorrell PE	ODOT	541- 774-6354	100 Antelope Rd WC 97503	Dan.w.dorrell@odot.state.or.us	
Nathan Broom	RVTD	541- 608-2411	3200 Crater Lake Av 97504	n.broom@rvtd.org	
VACANT	Ashland Parks		20 E. Main Street		
Jenna Stanke	Jackson County Roads	541- 774-6231	200 Antelope Rd WC 97503	stankeJS@jacksoncounty.org	
David Wolske	Airport Commission			david@davidwolske.com	
Staff Support					
Scott Fleury	Engineering Serv Manager	541- 488-5347	20 E. Main Street	fleurys@ashland.or.us	
Karl Johnson	Associate Engineer	541-552-2415	20 E. Main Street	johnsonk@ashland.or.us	
Tami De Mille-Campos	Public Works Assistant	541-552-2427	20 E. Main Street	campost@ashland.or.us	

ASHLAND TRANSPORTATION COMMISSION
MINUTES
AUGUST 22, 2013

These minutes are pending approval by the Transportation Commission

CALL TO ORDER: Chair David Young called the meeting to order at 6:00 p.m. in the Civic Center Council Chambers, 1175 E. Main Street.

Commissioners Present: Joe Graf, Corinne Viéville, Pam Hammond and David Young
Absent Members: Shawn Kampmann, Craig Anderson, and David Chapman
Ex officio Present: Steve MacLennan
Staff Present: Scott Fleury and Tami De Mille-Campos
Council Liaison Present: Carol Voisin

ANNOUNCEMENTS
The commission welcomed Joe Graf as the newest Commissioner.

CONSENT AGENDA
A. Approval of Minutes, June 27, 2013

The minutes of June 27, 2013 were approved as presented. Graf abstained.

PUBLIC FORUM
No one came forward to speak.

ACTION ITEMS
A. N. Mountain Ave.

Eleanor, resident of 769 N. Mountain Ave. spoke about the visibility issues which are now an increasing problem as the traffic has grown in that area, specifically up and down the hill. She is requesting a 4 way stop at Fair Oaks and N. Mountain to slow down traffic.

Staff Report
Mr. Fleury stated that he had spent a few hours out there during the morning and afternoon and he did notice a high level pedestrian traffic in that area especially when the Nature Center had an activity going on. Staff provides the Commission with a general overview of the area. There is sidewalk, parkrow and a center median with two travel lanes and bike lanes in each direction. The parkrow and center median have trees spaced approximately every 15 feet. There are six crosswalks between Hersey and Fair Oaks.. A speed and count study was conducted drivers are increasing their speed as they head north on Mountain Ave out of town. Staff stood on all crosswalks and in order to verify sight distances for pedestrians crossing. There are a couple crosswalk ramps that provide limited pedestrian visibility for drivers as they approach the crosswalks. One is at the NW Corner of Mountain Meadow Drive & Fair Oaks /North Mountain. If someone is not in the ramp then it is very difficult to see them. Staff also spoke to the planning department regarding the trees that impede sight distance. The accident data shows a majority of the crashes single car fixed object crashes. . There are a few signs in the corridor that you can't see due to the growing vegetation.

Commission Discussion
- Commissioner Graf drove up and down the area. He thought that the majority of the crosswalks were visible during the day but he could see how the hill could cause speed to increase and the signs were visible if you were really looking for them.
- Commissioners thought that a few options would be to request that a few trees and vegetation be removed. Adding stop signs would be a last resort. Rumble strips might be a good option to help slow the traffic (heading up the hill on the rise). Also, adding more pedestrian warning signs.

- Staff stated that they have been switching to bright green pedestrian signs and change crosswalk striping to the continental design. Staff stated that rumble strips could be used in the rise area (about 150' out of the crosswalk) and the rumble strips in that area would provide an advance warning for drivers and last approximately 5 years.
- The Police department stated that they don't generally see much speeding in that area.
- A suggestion was made to look into signs with a senior citizen symbol or a LED lighted sign.
- Staff noted that striping, signage and rumble strips would be the most cost effective solution.

Commissioners Hammond/Viéville m/s to add rumble strip on the uphill side at Fair Oaks, clean vegetation & maintain it, remove a tree where necessary, re-stripe crosswalks to continental crosswalks, change the signs to green for better visibility & add advanced warning signs. Discussion: Fleury stated that Mike Faught will look at the request and determine what is needed and whether it needs further review by our consultant working on the road diet. Voice vote: all AYES. Motion passed.

B. Downtown Study Advisory Committee

Commission Discussion

- Commissioner Hammond is interested in volunteering for the advisory committee.
- Some of the Commissioners see her previous connection to the Chamber of Commerce and downtown businesses as a possible red flag although Commissioner Hammond said that she has the ability to represent the Transportation Commission honestly and fairly as she always has.

Recess at 6:57 pm
Back at 7:07 pm

This action item was tabled to the next meeting. Staff will be sure to get more details for the next meeting on how the group will be made up etc.

NON ACTION ITEMS

A. Audible Pedestrian Signals Update

Mr. Fleury stated that SOU has all of their APS buttons in and ODOT has installed all of the APS buttons that were purchased with the CDBG Grant. The homing sound is now activated. The diagonal crosswalk at Indiana is in. So far 21K has been spent on our buttons and the ODOT installation. There is 7K left to spend by November for the Polera buttons and the ODOT installation of them. He will need to talk to ODOT first and then see how the last of the money can be best spent. Commissioner Viéville will put together a list and get with Mr. Fleury to discuss issues that she has heard about regarding the APS buttons.

B. Miscellaneous Concrete Project

Mr. Fleury reported that the concrete contractors have done all the work on C Street between 6th and 8th street, filled in gaps, and they are working on sections of B Street. They are also on Francis Street right now connecting a new section of the sidewalk and should be done within the next three weeks.. Another miscellaneous concrete project will include the Hargadine fork/Pioneer intersection bumpouts; the engineering design has been completed and is now awaiting the traffic engineer's approval on the design.

C. Attendance Review

The commission reviewed the attendance list per the code.

D. Oak St. Rail Crossing Improvement

Mr. Fleury reported that the project is now back on track. The person in charge of the project with ODOT retired. ODOT stated that CORP is expecting trains to start coming through in 2015 and now they are moving on with the project. Staff expects it being 2014 before CORP gets their work completed. Once the CORP work is completed the City can make the final sidewalk connection.

E. Bollards

Mr. Fleury stated that after the motion was approved to remove the bollards was made Risk talked to Fleury about it and they feel good with the removal of them. If there are issues after the removal then they will need to look at another solution. They most likely will be removed in fall.

FOLLOW UP ITEMS

A. Downtown Study

Mr. Fleury stated that it has been approved by the Council and they are now moving forward with it. U of O is ready to go. Staff is currently working through some issues with the scope and the agreement.

B. Crisping Striping

Mr. Fleury reported that it is there and more visible than before.

C. Crossing at Senior Center and Ray Lane

Mr. Fleury stated that Commissioner Chapman had brought this up at the last meeting but isn't present to speak to it further. Fleury did report that there is no sidewalk there to connect a crosswalk to.

INFORMATIONAL ITEMS

A. Action Summary- No comments
B. Traffic Safety Connection June/July Newsletter- No comments
C. Traffic Crash Summary- No comments
D. Road Diet Analysis- Mr. Fleury stated that this is what was presented at the last Council meeting and there are still 2 more months of analysis to be completed.

A concern was brought up regarding traffic backing up at the turn onto North Main from Valley View. The Commission & staff agreed that it was probably due to the work on the new traffic signal being done by the County.

COMMISSION OPEN DISCUSSION

Concern was voiced about the Ashland Street/Siskiyou crosswalk & if that is going to be enough for over 700 students to cross & how that is going to impact the traffic. The new cafeteria isn't going to be ready yet which means that there will be quite a number of students crossing. It was stated that this is one of the high priorities in the TSP. There is a lot of concern regarding the corridor around SOU and the pedestrian impact on that area.

Officer MacLennan was asked what Oregon's jay walking law is. MacLennan stated that generally pedestrians aren't ticketed in Ashland as long as they aren't impeding traffic. Ashland does have an ordinance that states that you are required to use a crosswalk if it is within a certain distance.

Mr. Fleury stated that Brandon Goldman from our Planning department asked that next month we have an agenda item with public comment for the Normal Ave. neighborhood plan. The commission asked if they could get the information on this agenda item a little ahead of time so they are prepared.

A comment was made that the new Open City Hall tool that is being used for the road diet can be a dangerous tool. Staff stated that the Open City Hall tool isn't scientific and there will be further analysis of the comments by the traffic engineer and staff.

It was requested that staff look into our SOU liaison since they haven't attended in awhile.

A concern was brought up regarding pedestrian issues in the downtown area. There are great concerns with the Lithia/3rd intersection. Concern was also raised regarding the Irvine development and the closure of alleys and sidewalks.

ADJOURNMENT

Meeting adjourned at 8:00 p.m.
Respectfully submitted,
Tami De Mille-Campos, Administrative Assistant

CITY OF
ASHLAND

Memo

Transportation Commission 9/26/2013

TO: Ashland Transportation Commission

FROM: Brandon Goldman, Senior Planner
Brandon.Goldman@ashland.or.us

RE: Normal Avenue Neighborhood Plan

Summary
The City of Ashland is in the process of completing a neighborhood plan for the 94 acre north Normal Avenue area. This neighborhood planning project was funded by the Oregon Transportation Growth Management Program in an effort to implement policies of the City's TSP and to ultimately encourage development of a variety of housing types as well as neighborhood serving businesses. An objective of the planning effort is to efficiently accommodate a concentration of land uses is anticipated to support existing transit along Ashland Street and potentially an additional route along East Main Street. Lastly, the proposed pattern of connected greenways, streets, paths and walkways is designed to offer convenient transportation choices to the area's existing and future residents and neighbors.

Neighborhood planning represents an opportunity to collectively think ahead, determine a vision, and instill a degree of confidence about being prepared for changes, rather than merely being put in a position to react to change. As the area is presently outside the City Limits, but within the Urban Growth Boundary, the future development of any properties within the area to urban densities will require annexation approval and development review. At the time a property owner requests annexation into the City of Ashland, the Normal Avenue Neighborhood Plan is intended to help guide changes to the area in a manner that creates a system of greenways, protects and integrates existing stream corridors and natural wetlands, accommodates future housing, and enhances overall mobility by planning for safe walking, bicycle, and automobile routes while providing convenient access to future bus service.

Upon completion of this project, the adopted Normal Avenue Neighborhood Plan will provide the underlying framework for future area development through adoption of Land Use standards for the overlay area, a multi-modal transportation circulation plan, and a redistribution of housing concentrations through amended Comprehensive Plan designations for the area. Although future development of this area is expected to occur in an incremental way, as individual parcels propose annexation for specific housing developments, with an adopted neighborhood plan in place each individual development proposal can coordinate the provision of streets, pedestrian connections, utilities, storm water management, and open space. Such an approach can ultimately help reduce development costs through appropriate sizing of needed facilities, provision of easements, and secured street access. Additionally a significant benefit of an adopted plan is that there is a clear expectation and understanding regarding the level of development anticipated by both developers and neighboring residents. In this way the development and annexation process for all properties with the plan area is

streamlined while ensuring the City can accommodate its future growth in a systematic and efficient manner.

THE PLAN

Throughout the last year planning and design work has been undertaken in recognition that the project area should be considered as a system where each development decision impacts each part of the whole. For example, the placement of streets throughout the site will ultimately have a direct impact on the function of the sites natural resources as well as the efficiency of the development pattern. Housing types and concentrations have been examined in an effort to meet overall city and regional housing goals while balancing the design needs of the site and need to protect sensitive natural areas.

The working Normal Avenue Neighborhood Plan is designed to provide a environment suitable for traditional neighborhood living, working, and recreation. The Normal Avenue Neighborhood Plan is a blueprint for providing broad flexibility in housing types allowed in each zoning designation to encourage variation in style and type while achieving the intended housing densities. The neighborhood will be served by a connected network of streets and lanes, paths and trails, with direct connection to the natural areas, wetlands, and streams that characterize the district. This network will also connect to the larger network of regional trails, paths, and streets beyond the boundaries of the neighborhood.

Project Guiding Principles and Objective

Throughout the process of developing the Normal Avenue Neighborhood Plan over the course of the last year the Planning Commission, Design Team, resident participants engaged in the process, and Staff have referenced the following objectives to help guide discussions about various plan elements:

- Increase efficiency in the use of land through concentration of housing in a centrally located area within the City UGB planned for future urban development;
- Achieve a development pattern that results in a balanced, multi-modal transportation system and that enhances opportunities for walking, bicycling or using transit in areas planned for transit service;
- Delineate housing, neighborhood serving commercial, open space, public space, and green infrastructure improvements, in a manner that provides for preservation and enhancement of creeks and wetlands;
- Develop new illustrative conceptual architectural and site plans for Project Area consistent with Transportation and Growth Management objectives. Concepts will meet City's and the property owners' development goals and standards.
- Design a local street grid for the Project Area including connections to existing and planned street, pedestrian, and bicycle facilities outside Project Area, to more fully integrate the Project Area into the City transportation system;
- Provide for pedestrian and bicycle routes and facility improvements within the Project Area that will provide safe access to local schools;

- Provide alternatives to, or delay the need for, expansion of the City UGB;
- Reduce emissions that contribute to climate change through changes to transportation or land use plans that reduce expected automobile vehicle miles traveled;
- Provide an implementation strategy that includes supporting Comprehensive Plan and updated TSP amendments, form based codes, and design standards; and
- Present the Plan and documentation necessary to support adoption to City's Planning Commission (PC) and City Council (Council).

The Planned Housing Types and Land Use Designations

The development standards for the Normal Avenue Neighborhood Development Plan will create its own neighborhood character by providing three different residential zones with different densities and development standards. The use regulations and development standards are intended to provide a significant degree of flexibility as to the form and character of individual developments. The Land Use designations NA-01 is intended to provide single family dwellings, accessory residential units, and clustered housing. The NA-02 designation provides housing opportunities for individual households through development of a mix of single-dwelling housing, duplexes, townhomes, accessory residential units, and clustered housing. Clustered housing, commonly referred to as "pocket neighborhoods", are a new housing type envisioned for the plan area where multiple compact detached or attached dwellings occupy a single lot. These dwellings are grouped around common open space and are separated from one another by side yards to provide privacy and single family home-type scale and character. Through the consolidation of common open space and or parking cluster housing developments can often achieve a housing density comparable to attached row houses or low-rise apartments, yet with a lower profile and the appearance of traditional single-family homes. The NA-03 land use designation is intended to address Ashland's housing needs through development of multi-dwelling housing as well as allow for limited neighborhood serving commercial uses such as a coffee shop. Lastly the NA-OS "open-space" land use designation is intended to protect environmentally sensitive water resource lands and provide open space recreational opportunities for individual households throughout the Normal Avenue Neighborhood Development Plan area.

Greenway and Open Space

The Plan's approach to the greenway and open space framework is to maximize protection of the existing natural resource areas and provide usable, connected open space within the plan area. Natural areas, including streams, wetlands, and other environmentally sensitive features contribute significantly to the existing character of the Normal Avenue neighborhood study area and were most cited by neighborhood residents as needing preservation to retain the rural character of the area. The quality of the place is enhanced by these features and the wildlife that they attract. The objective for the open space and greenway component of the plan is to protect and enhance these existing natural areas while also providing connected open space throughout the plan area. Open space will help maintain the neighborhood's distinctive character, promote environmental quality, and provide opportunities for both scenic enjoyment and active recreation.

Protected riparian corridors and wetlands will support native vegetation, provide habitat for wildlife, and promote environmental quality by absorbing, storing, and releasing storm water. Streams and wetlands will be maintained as amenities with access to all area residents due to the carefully considered transportation network that ensures that these areas are not hidden in back yards. Accommodation of the pedestrian, bicycle, and automobile circulation along the edges of the riparian zones provides visual and physical access and increases the buffer zones between pockets of development enhancing the character of openness within the plan area.

Transportation

Walking and cycling, or "active transportation", is fundamental to the Normal Avenue Neighborhood urban design plan. Designing the transportation network in consideration of the experience of a person walking through the neighborhood allows for development and block patterns in which residents more readily relate to their environment, feel safer, and are more comfortable on foot or bike, Despite the inherent boundary conditions that limit connectivity, such as Ashland Middle School and the Central Oregon & Pacific rail line, building the transportation network on a foundation of interconnected streets and walkability makes all modes of travel more efficient and effective. Walkability is supported in the plan by small blocks, however there have been some variations from these block lengths in consideration of natural resource protection areas. Care has been taken to locate pedestrian and bicycle paths adjacent to, or across, these natural areas to enhance the user experience and increase access to these neighborhood amenities.

The Normal Avenue neighborhood's internal street network has largely been designed to keep travel speeds in the range of 20 mph by introducing elements such as a planted median, a small traffic circle, and subtle changes in direction at block intersections. The backbone of the street network is a re-routed Normal Avenue that extends from the southern intersection at the Rail Road Crossing, to East Main Street between Clay Creek and Cemetery Creek. Given the anticipated traffic volumes on this new road being approximately 1000 average daily trips it is not necessary that it be classified as an "Avenue" nut rather a Neighborhood Collector designation would suffice. Neighborhood Collectors are expected to accommodate 1500 to 5000 vehicle trips per day and as such this lesser classification would adequately accommodate expected use.

The Normal Avenue Neighborhood plan also introduces a new street type into the range of Ashland streets: the woonerf. A woonerf is a very low speed street where all of the functions of the transportation system coexist in the same space. There are no individual sidewalks separated from the street surface by curbs and planted medians. There are no bicycle lanes separated from the street by painted lines. The low volumes, low-speeds, and narrow cross-section make it possible for all to safely occupy the street surface by yielding to the slowest and most vulnerable present at a given moment.

The use of rear lane alleys helps to reduce the extent of paved areas, and will support a complete grid of finely-grained urban blocks. These alleys will provide the primary access to garages and backyards. Where cottage cluster housing occurs, alleys are critically important to their function. Elsewhere, as in

those areas zoned NA-03, specific locations for the alley locations within the designated blocks is left to future development needs, subject to the maximum block length and parking access standards.

The proposed multi-use paths throughout the project provide the necessary connections to/from Walker Elementary and Ashland Middle School while creating a more pleasant travel route than using East Main Street. The presence of sidewalks and trails throughout the development are intended to provide convenient and safe pedestrian movement , linking to destinations within the 94 acre plan area as well as to the surrounding area.

The change in designation for the "Normal Avenue" future street to be considered a neighborhood collector, and the codification of the proposed local street and bicycle network within the plan area will require an amendment to the City's recently adopted Transportation System Plan Street Dedication map. Once the final Normal Avenue Neighborhood Plan is approved a TSP amendment will be presented to the Transportation Commission, Planning Commission, and City Council, for consideration.

Draft Future Conditions Report for Normal Avenue Neighborhood Plan
In support of this planning project the traffic engineering firm SCJ Alliance has completed future traffic analysis to evaluate the anticipated traffic volumes and impacts based on the plan's development projections and street layout. The memorandum dated 9/15/2013 and included in the Commissioner's Packet provides a projection of the modeled traffic impacts 25 years from now under two scenarios. The existing Comprehensive Plan for the area builds out with no changes is considered the baseline scenario, and an alternative scenario in which the area is rezoned consistent with the draft Normal Avenue Neighborhood Plan, and builds out as fully within 25 years, is examined to determine what measure of future impacts can be attributed to changes in the land use designations proposed.

The preliminary findings presented in the Draft Future Conditions Report indicate that of the intersections examined for capacity and safety, both scenarios all intersections are expected to meet their applicable mobility standard. However in both the baseline scenario, and the future Normal Avenue Neighborhood Plan build-out scenario the report finds that the intersection of OR 66/Ashland Street and Tolman Creek Road will experience queuing problems as more fully described in the report. As these impacts have been previously been discussed in Ashland's TSP, and are expected to occur independently of the proposed Neighborhood Plan

Staff is still reviewing the Draft Future Conditions Report (dated September 18, 2013) to evaluate the identified traffic impacts internal and external to the project area. Prior to the next meeting of the Transportation Commission on the Normal Avenue Neighborhood Plan staff will have completed our evaluation and a staff report will be provided.

PUBLIC MEETINGS AND OUTREACH

Early in the planning process commissioners, property owners, and neighborhood residents were active in the design of the concept plan itself through participation in a two part public workshop, or '*design charrette*" from October 23-25, 2012. Following the charrette the design team has been developing a more refined layout for the street networks in careful consideration of the natural features, topography, property lines, existing development within the area, and the short and long term phasing of the plan.

Over the planning period the Planning Commission, Housing Commission, and Transportation Commission have each had the opportunity to review the plan during the course of its ongoing development. The Planning Commission specifically has held five study sessions to take public feedback and provide direction to Staff and the design team as versions of the plan have been further refined. To provide opportunities for that effected residents and stakeholders to become familiar with the plan, and make informed contributions to the community discussion regarding the area's future development, the City held two well attended neighborhood meetings, two open-houses, and conducted two site visits open to the public. Additionally City Staff solicited input from property owners within the plan area through a questionnaire, and has attended numerous stakeholder meetings with property owners, neighboring residents, and Homeowner Associations to answer questions and hear concerns about the various drafts of the neighborhood plan.

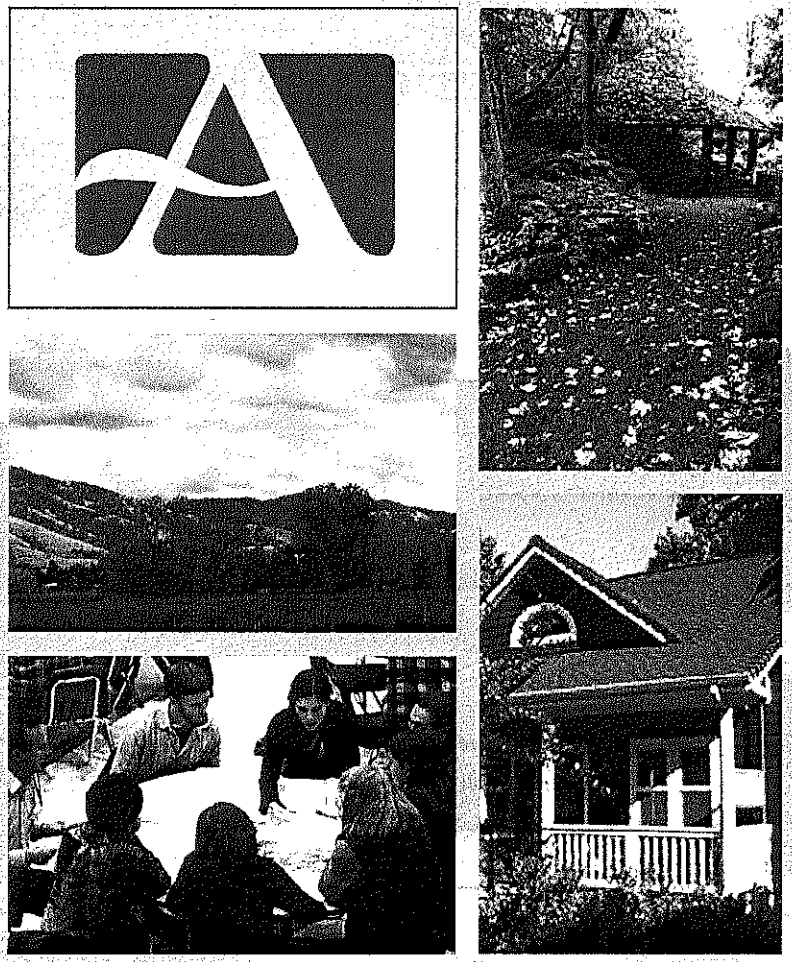
NEXT STEPS

The Planning Commission will hold a final study session on September 24th to review the final draft of the plan before holding their first formal public hearing on October 8th, 2013. The Transportation Commission's Plan review on September 26th, 2013 provides the Transportation Commission with an initial opportunity to review the draft plan, the proposed multimodal transportation framework and street classifications, and provide comments and recommendations regarding the plans transportation elements in advance of the upcoming public hearing.

Staff anticipates following the October 8th Planning Commission review, and receipt of public and commission comments, this item will again be presented at a subsequent meeting of the Transportation Commission to further review any final refinements prior to scheduling a public hearing for adoption of a final plan by the City Council. Ultimately adoption of a neighborhood plan for the area will require amendments to the City's Transportation System Plan's Street Dedication, Existing and Planned Bicycle Network, and Planned Pedestrian Network maps to incorporate the proposed multi-modal transportation network and street classifications. Additionally the establishment of woonerfs as a new street type within the City will necessitate amending the Comprehensive Plan's transportation Element to include a new functional classification.

ATTACHMENTS:

- **Normal Avenue Neighborhood Plan**
  - Draft Final Plan
  - Land Use Zoning Map
  - Street and Open space Network
  - Pedestrian and Bicycle Network
- Draft Future Traffic Conditions Report - Technical Memorandum (SCJ Alliance Consulting)
- Transportation Existing Conditions Memo



Deliverable 7.4 Final Draft

Normal Avenue Neighborhood Plan

Project Team

City of Ashland Brandon Goldman

Oregon Department of Transportation John McDonald

Parametrix Jason Franklin, Derek Chisholm, Anne Sylvester

Urbsworks, Inc Marcy McInelly

Joseph Readdy Architect, Inc Joseph Readdy

Qamar Architecture & Town Planning Laurence Qamar

Leland Consulting Group Brian Vanneman

Nevue Ngan Ben Ngan, Olena Turula, Jason Hirst

Transportation and Growth Management

This project is funded by the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Land Conservation and Development and the Oregon Department of Transportation. This project is funded in part, by federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users ( ), local government, and State of Oregon funds.

The contents of this document do not necessarily reflect the views or policies of the State of Oregon.

FIGURES

INTRODUCTION

Thanks to the active participation of the community and significant support from City staff, this Plan will guide future development for the Normal Avenue neighborhood. The plan emphasizes compact urban form to better accommodate an extensive range of housing types for families of all sizes and incomes. Compact urban form also makes it possible to build upon the abundance of natural features –streams, wetlands, and trees– that support the character of this unique place. By creating a system of greenways, protecting and enhancing existing natural features the plan anticipates a place that welcomes nature in. Despite the challenges to connectivity posed by existing elements, like the Central Oregon & Pacific Railroad tracks, the plan enhances access and mobility while reducing dependance on the automobile: walking and biking will be the attractive first choice for residents of all ages.

Project Objectives

The following project objectives were developed by the City and project partners and have been used to guide the development of this plan.

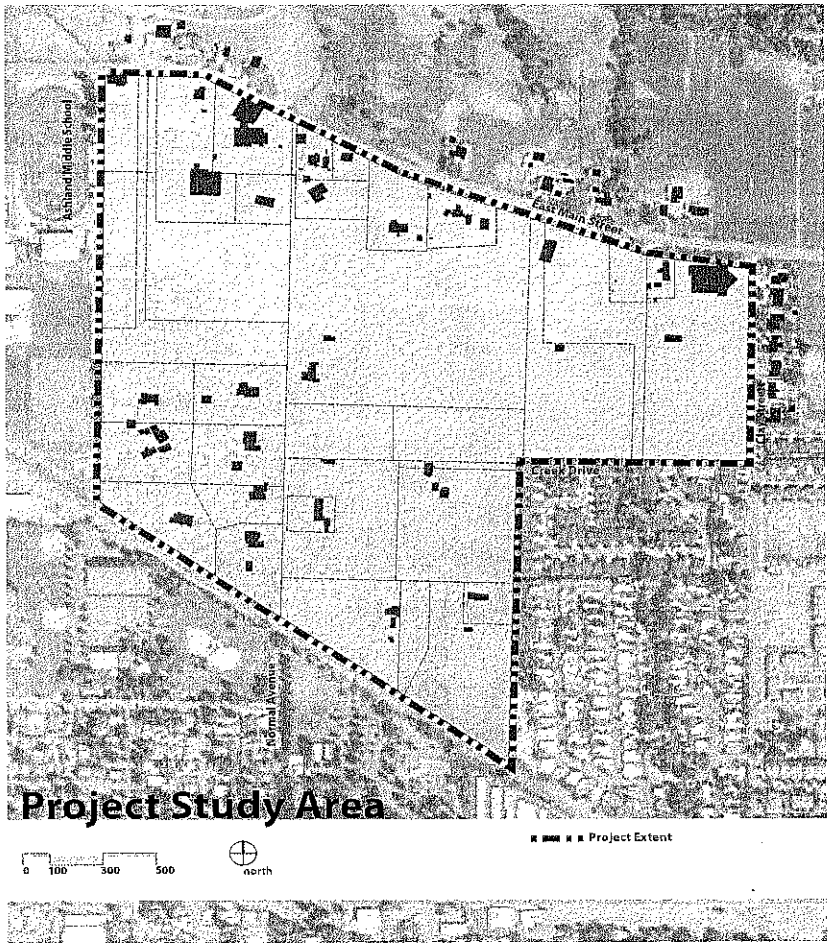
- Maximize land use efficiency by concentrating housing in a strategically located area within the City Urban Growth Boundary.
- Create a development pattern of blocks and streets that supports a balanced, multi-modal transportation system that offers a full range of choices to its occupants and that supports active transportation opportunities like walking, bicycling or using transit in those areas planned for transit service;
- Provide a range of housing choices and a variety of open space, public space, and green infrastructure improvements, in a way that preserves and enhances the area's creeks and wetlands;
- Design a local street grid for the Project Area including connections to existing and planned street, pedestrian, and bicycle facilities beyond the project area that overcome the challenges to connectivity and better integrate the area into the Ashland transportation system;
- Provide for pedestrian and bicycle routes and facility improvements within the plan area that will provide safe access to local schools, activities, neighborhoods, and destinations;
- Apply those principles of low impact development to minimize the extent and initial cost of new infrastructure and to promote the benefits of stormwater management;

- Provide developable alternatives at planned densities that will eliminate the need for expansion of the urban growth boundary; and
- Reduce green-house gas emissions by implementing transportation and land use plans that encourage reductions in vehicle miles traveled.

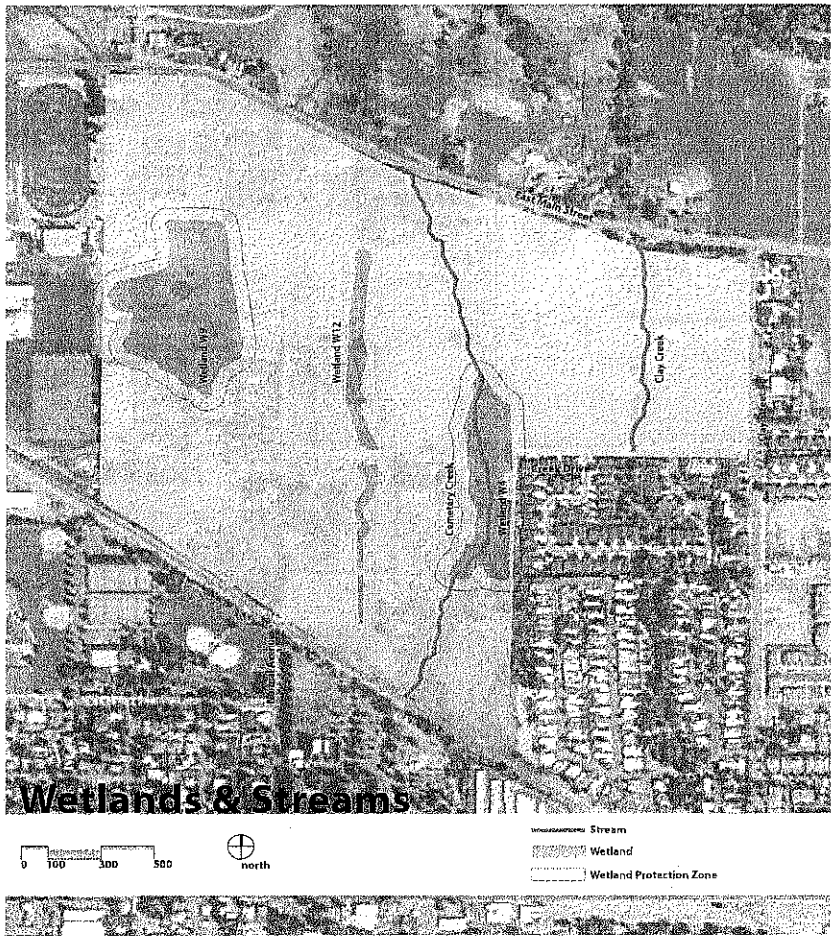
Existing Conditions

Located within the urban growth boundary, but not within the city limits, the site is characterized by its relative isolation from the rest of the City of Ashland. The north boundary of the project study area is East Main Street and there is currently no street connecting from within the project study area to East Main Street. The west boundary of the project study area is Ashland Middle School. Informal path networks through private property provide connection for pedestrians from the study area to the middle school, the ScienceWorks Museum, and other neighborhoods. The south boundary of the project is clearly delineated by the Siskiyou rail line operated by the Central Oregon & Pacific Railroad. An unprotected rail crossing connects Normal Avenue south to to an established residential neighborhood. The character of the Normal Avenue changes dramatically from a neighborhood street to a narrow lane with slow speeds that is shared by pedestrians, bicyclists, and cars. The east boundary of the project study area abuts the Wingspread Mobile Home Park, Creek Drive, and Clay Street.

The relative isolation is widely considered an asset by most residents – most of the time. The inaccessibility provides a high degree of quiet privacy, but emergency responders have had to be occasionally inventive when trains occupy the rail line and access to Normal Avenue is interrupted: residents described an incident where emergency responders had to drive their vehicle over the informal, unpaved trail from Ashland Middle School to Normal Avenue in order to reach a resident in need. The Normal Avenue neighborhood has a mix of Comprehensive Plan designations including single-family residential and suburban residential, but is currently outside the City of Ashland city limits. Development in the plan area has historically been low density, single-dwelling rural residences on large lots – consistent with Jackson County zoning standards.



The Normal Avenue neighborhood currently represents a modest level of development with a diverse range of uses that range from agriculture to single-dwelling residential on large lots to religious institutions. The plan area contains 35 properties ranging in size between 0.38 acres up to 9.96 acres. There are currently two existing land comprehensive plan designations that overlay the 93.3 acre site: Single-Family Low Density and Suburban Residential. The base density of Single-Family Low Density is 4.5 units per acre; the base density of Suburban Residential is 7.2 units per acre. The gross potential for the entire neighborhood under the current comprehensive plan is 560 dwellings.



The plan area includes two creeks and three significant wetland areas. Over time, each of the streams and all of the wetlands have been subject to negative impact from development. None represents a pristine natural condition, but each are considered significant and, once restored or enhanced, capable of making a unique and significant contribution to the quality of the place. The wetlands and riparian areas were investigated in detail and have informed the design of the new Normal Avenue Neighborhood Plan, especially the greenway and open space framework.

The project area constitutes the largest remaining area of residentially designated land that is suitable for medium- to high-density development which is readily redevelopable.

Concept Plan Background and Charrette

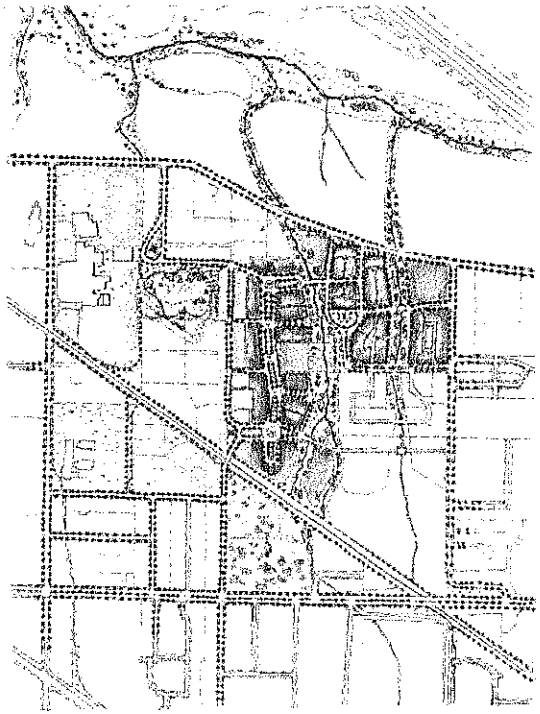
A central part of the development of the Normal Avenue Neighborhood Plan was the multi-day community design charrette that took place in Ashland in October 2012. Prior to the design charrette, however, the project team developed an initial Concept Plan grounded in data provided by the City of Ashland, surveys, and initial interviews with stakeholders. Researching and developing the concept plan gave the project team the opportunity critically consider the existing conditions of the site within the existing context of the city. In preparation for the Charrette, the project team investigated patterns for possible development and market conditions necessary to support development. This initial concept plan was not intended to be the preferred pattern for development but, as just one of many possible development schemes, it was used as the starting place for community discussion at an intensive multi-day planning process in Ashland. During the

four-day design charrette the design team collaborated with City staff, local property owners, their designers, and nearby residents. The charrette concluded with a public presentation of a new draft illustrative plan for future refinement, discussion, development, and implementation. While the initial draft concept plan informed the ultimate Normal Avenue Neighborhood Plan, community input significantly guided the charrette draft plan which incorporated numerous new and specific elements to better address many local issues.

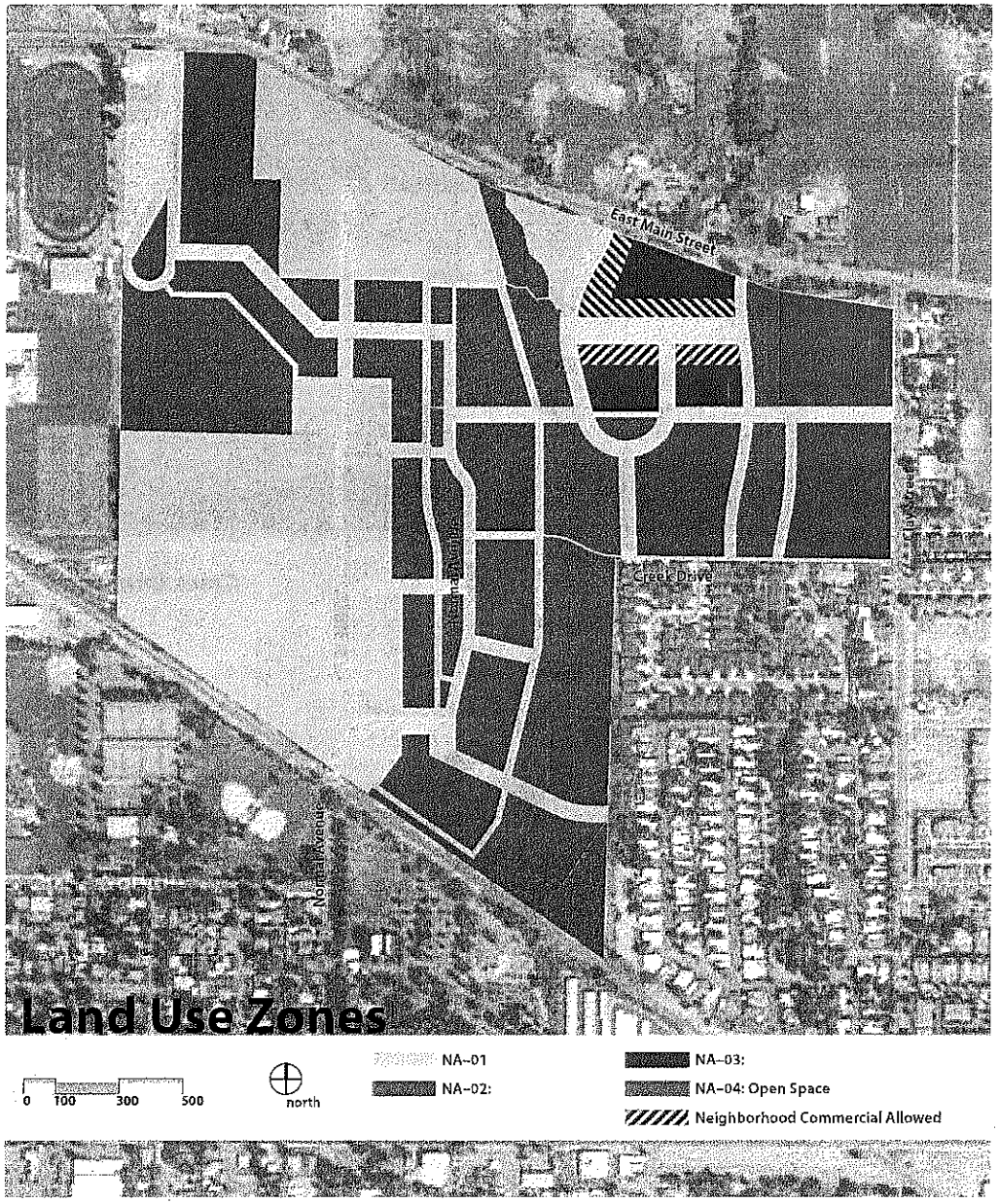
Both the initial discussion plan and this final draft plan were organized by five separate conceptual frameworks intended to guide analysis and investigation of existing conditions, support research and best practices, offer City staff and the public a concrete path for engaging with the plan, and guide the development of the plan.

Five Frameworks

- Housing and Land Use
- Greenway and Open Space
- Mobility
- Infrastructure
- Sustainability



Charrette Illustrative Plan



HOUSING AND LAND USE

The district is designed to provide an environment suitable for traditional neighborhood living, working, and recreation. The Normal Avenue Neighborhood Plan is a blueprint for promoting a variety of housing types while preserving open spaces, stream corridors, wetlands, and other significant natural features. The neighborhood will be characterized by a connected network of streets and lanes, paths and trails, with nodes of access and connection to the natural areas, wetlands, and streams that characterize this place. This network will also connect to the larger network of regional trails, paths, and streets beyond the boundaries of the neighborhood.

Land Uses

Housing Housing makes sense for the Normal Avenue neighborhood because both the population and the number of households in the city are expected to continue to grow in the decades ahead. Ashland remains a very popular choice for families and retirees. The project area is connected to other residential neighborhoods with schools, retail and commercial enterprises, and parks and recreation areas. The site is close to all of Ashland's centers of employment including downtown. Housing is supported by the site's comprehensive plan designations and base zoning. While housing as a land use makes sense from both policy and market perspectives, it should be planned for and developed with an intent to create community. There is a market demand for a wide range of housing including single-family, attached housing such as townhomes, multi-dwelling residential, apartments, pedestrian-oriented cluster housing, senior, student, and affordable housing.

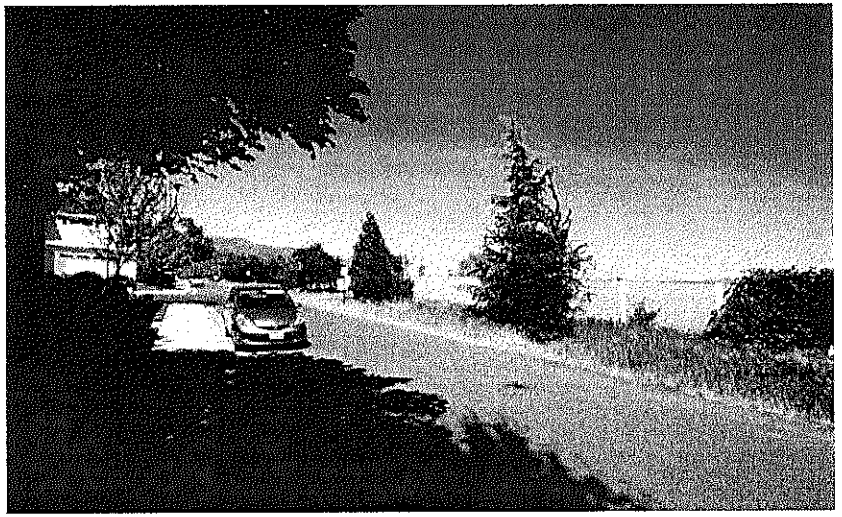
Commercial | Retail A market analysis of the Normal Avenue area shows that it is a weak location for retail. Traffic volumes in the area are currently low and the projections based upon the plan indicate that traffic volumes will continue to be low – even when the neighborhood is fully developed. The the plan shows the potential for 466 dwelling units and around one-thousand residents, so small scale retail and commercial space, such as a coffee shop, café, restaurant, or corner store, is possible.

Office Office space is an unlikely choice for the Normal Avenue neighborhood. Demand for new office space is slow in Ashland and that demand is more likely to be met in more central locations and near existing employment hubs such as the downtown or Southern Oregon University.

Housing Types

There are four distinct zones within the Normal Avenue Neighborhood Plan: NA-01, NA-02, NA-03, and NA-04. The development standards for the Normal Avenue Neighborhood Development Plan will preserve neighborhood character by providing three different zones with different residential densities and development standards. The zones NA-01 and NA-02 are intended to preserve land and open space and provide housing opportunities for individual households through development of single-dwelling housing. The use regulations and development standards are intended to create, maintain and promote single-dwelling neighborhood character. They allow for limited non-household living uses that do not sacrifice the overall image and character of the single-dwelling neighborhood. Zone NA-03 is intended to preserve land and open space and provide housing opportunities for individual households through development of multi-dwelling housing. The use regulations and development standards are intended to create and maintain higher density residential neighborhoods. Zone NA-04 is intended to protect environmentally sensitive water resource lands and provide open space recreational opportunities for individual households throughout the Normal Avenue Neighborhood Development Plan area.

Creek Drive



Creek Drive (NA-02)

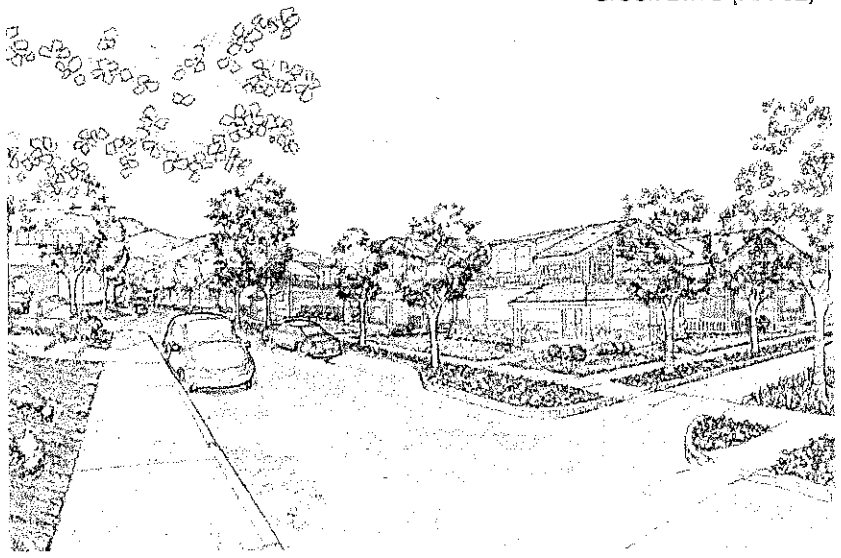


Illustration by Tom Giordano

East Main Street

The Normal Avenue Neighborhood District Plan includes a new building type, Pedestrian-Oriented Clustered Residential Units where multiple compact Dwellings occupy a single lot. Dwellings are grouped around common open space and are separated from one another by side yards to provide privacy and single family home-type scale and character. Building types in the Normal Avenue Neighborhood will include:

Single Dwelling Residential Units A Single Dwelling Residential Unit is a detached residential building that contains a single dwelling with self-contained living facilities on one lot. It is separated from adjacent dwellings by private open space in the form of side yards and backyards, and set back from the public street or common green by a front yard. Auto parking is provided in either a garage or on surface area on the same lot, accessible from the lane. The garage may be detached or attached to the dwelling structure. Single Dwelling Residential Units will be permitted in the NA-01 or NA-02 zoning districts.

East Main Street (NA-03)

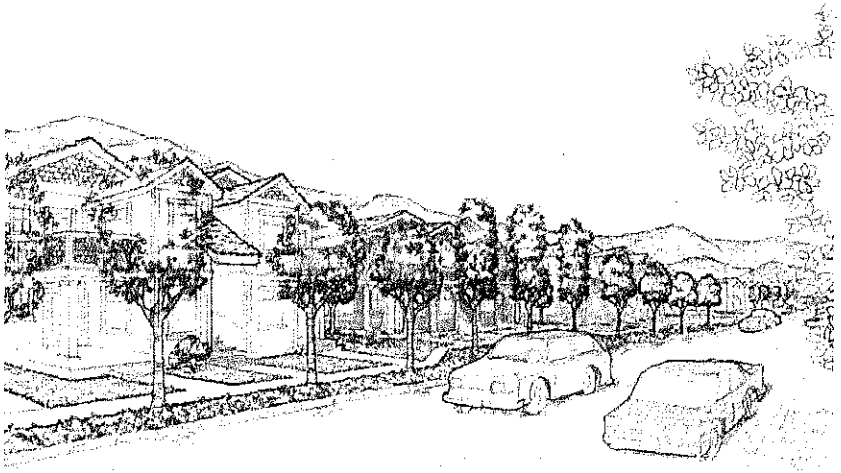
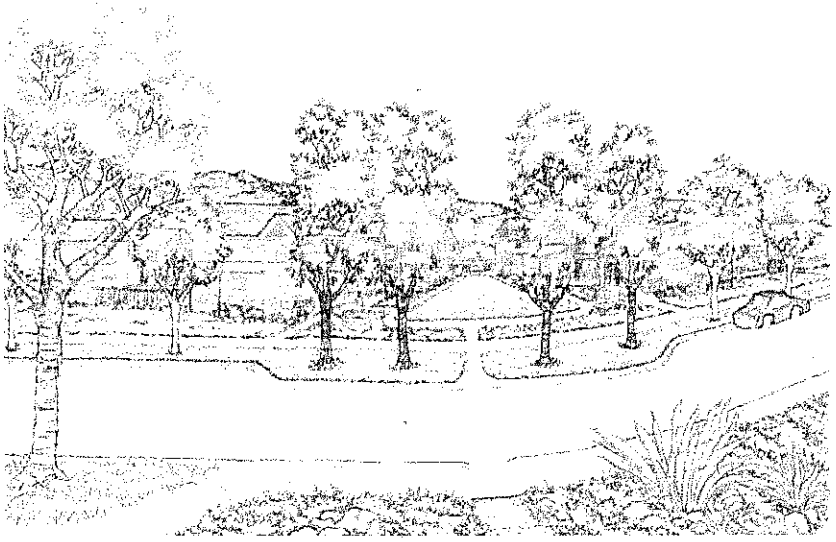


Illustration by Tom Giordano

Double Dwelling Residential Units A Double Dwelling Residential Unit is a residential building that contains two dwellings, each with self-contained living facilities. In appearance, height, massing and lot placement the Double Dwelling Residential Unit is similar or identical to a Single Dwelling Residential Unit. The Double Dwelling Residential Unit is subject to all of the same setbacks, height and parking requirements as single dwellings in the surrounding base zone. Residential units may be arranged side-by-side, like rowhouses, each with its own entrance, or stacked flats with one or more shared entrances. Dwelling units may be sold as condominiums or rented as apartments. Double Dwelling Residential Units will be permitted in the NA-01 or NA-02 zoning districts.

Accessory Residential Units An Accessory Dwelling Residential Unit is a small living unit located on the same lot as a single dwelling residential unit. The Accessory Residential Units may be located within the single-family residential structure or in a separate structure. Accessory Residential Units may be rented. Accessory Residential Units will be permitted in the NA-01 or NA-02 zoning districts.

Pedestrian-Oriented Clustered Residential Units Pedestrian-Oriented Residential Clusters are multiple compact detached dwellings or cottages that occupy a single lot. The cottages are grouped around common open space and are separated from one another by side yards that provide private open space and promote a scale and character that is very compatible with single-family homes. The common open space is managed by the home owners association. Each cottage is typically smaller than 1,000 square feet. Dwelling units may be sold as condominiums, sold as dwellings on individual lots, or rented as apartments. Auto parking is provided in a shared surface lot, or lots, accessible from a rear lane. Pedestrian-Oriented Residential Clusters will be permitted in the NA-01 or NA-02 zoning districts.



Cluster housing around a center green.

Illustration by Tom Giordano

Attached Residential Units Attached Residential Units, or rowhouses, are single dwellings with self-contained living facilities on one lot, attached along one or both sidewalls to an adjacent dwelling unit. Private open space may take the form of front yards, backyards, or upper level terraces. The dwelling unit may be set back from the public street or common green by a front yard. Auto parking is provided in a garage on the same lot, either detached or attached to the dwelling structure, and accessible from the lane. Attached Residential Units will be permitted in the NA-02 in selected locations or NA-03 zoning districts.

Multiple Dwelling Residential Units Multiple Dwelling Residential Units are multiple dwellings that occupy a single building or multiple buildings on a single lot. Dwellings may take the form of attached residential units (like rowhouses) or stacked flats (like apartments) or a combination of attached and stacked units. Dwelling units may be sold as condominiums or rented as apartments. Auto parking is provided in a shared surface area or areas internal to the lot. Multiple Dwelling Residential Units will be permitted in the NA-03 zoning districts.

Development Standards

The development standards will promote desirable residential areas by addressing aesthetically pleasing environments, safety, privacy, energy conservation, and recreational opportunities. The site development standards allow for flexibility of development while maintaining compatibility with the City's various neighborhoods. In

addition, the regulations provide certainty to property owners, developers, and neighbors about the limits of what is allowed. The development standards are generally written for houses on flat, regularly shaped lots. Other situations are addressed through special regulations or exceptions.

Example Multiple-Dwelling Development (NA-03)

Illustration by Tom Giordano

Affordability

Housing in Ashland is not affordable to many of its residents. This plan and code maintain the City's existing density bonuses for affordable housing units. In addition, the land will be zoned to encourage more diversity in housing and increased intensity of development in those areas where the context and capacity for density is most appropriate. The result should be increases in housing supply, housing options, and housing affordability. The plan creates a complete neighborhood, accessible to a full range of ages and abilities. There will be units for sale or rent; small, and large; and attached and detached units.

Certain elements of affordability are better addressed later in the development process. The City could later use the Community Development Block Grant (CDBG) and Housing Trust Fund programs to incentivize affordable housing development in the study area. These funds can help build sidewalks, trails, and other features. Developers and the City can also partner with local affordable homebuilders and Community Development Corporations (CDCs) to build affordable housing. These organizations should be very knowledgeable about developing and managing affordable housing that takes advantage of public and private funding sources such as CDBG, HOME Investment Partnership, Low Income Housing Tax Credits (LIHTC), funding from state agencies such as the Department of Human Services (DHS), HUD sources, and others.

Uses Allowed Within NA-01

BASE DENSITY: 5 DWELLING UNITS PER ACRE

Uses Allowed Within NA-02

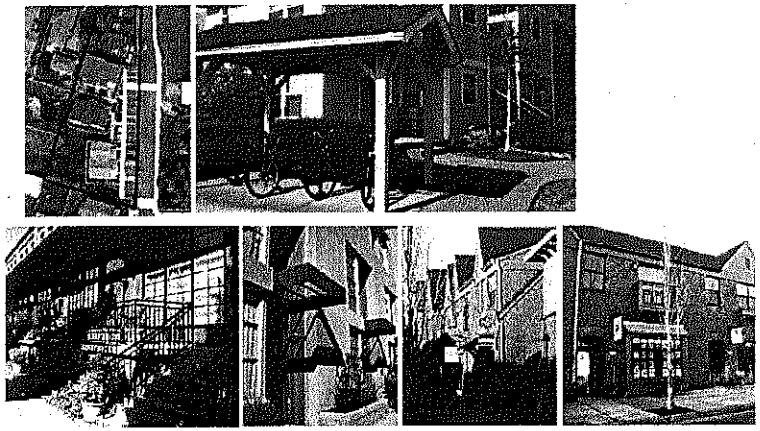
BASE DENSITY: 10 DWELLING UNITS PER ACRE

Use Table

Zone	Single Dwelling Residential Unit	Accessory Dwelling Residential Unit	Double Dwelling Residential Unit	Clustered Residential Units	Attached Residential Unit	Multiple Dwelling Residential Unit
NA-01	■	■	■	■		
NA-02	■	■	■	■	■	
NA-03					■	■
NA-05						

Uses Allowed Within NA-03

BASE DENSITY: 20 DWELLING UNITS PER ACRE



Legend

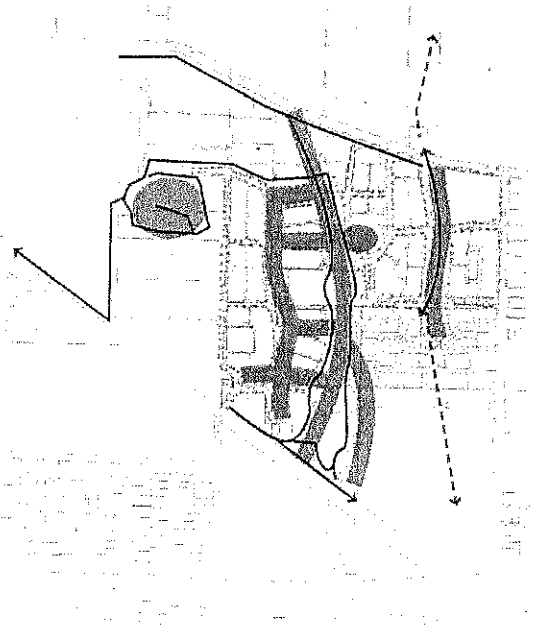
Permitted

Conditional ba

GREENWAY AND OPEN SPACE

The streams, wetlands, and other environmentally sensitive features contribute significantly to the existing character of the Normal Avenue neighborhood. The quality of the place is enhanced by these features and the wildlife that they attract. In addition to protection of these existing natural resource areas, the Plan provides usable, connected open space for neighbors and residents of Ashland. In the context of the greenway and open space system, streams and wetlands are maintained as amenities for all area residents. The open space network will support the neighborhood's distinctive character, promotes environmental quality, and provides opportunities for many forms of recreation including bird-watching, hiking, biking, and exploring. Protected and restored, these riparian corridors and wetlands will support native vegetation, provide habitat for wildlife, and promote environmental quality by absorbing, storing, and releasing stormwater.

In order to offer all residents and visitors an opportunity to engage directly with nature, pedestrian, bicycle, and automobile circulation are accommodated along the edges of the stream beds and wetlands to provide visual and physical access and to increase the buffer zones between pockets of development.



Open Space Diagram Produced at Charrette

Natural Areas

Water Resource Protection Areas (WRPA) are established by the City's Land Use Ordinance. For locally significant wetlands, WRPAs include the wetland plus a 50 foot buffer, and for locally significant streams includes all lands 40' from centerline of stream. Four areas on the site have significant natural resources including three wetlands, and two creeks. These WRPAs are:

- Wetland W9, the large wetland east of Ashland Middle School;
- Wetland W12, an isolated, linear wetland;
- Cemetery Creek and its associated wetland W4, and
- Clay Creek

The Middle School wetland (W9) is 5.38 acres in size and is the largest wetland in Ashland urban growth boundary. It is an isolated wetland with no surface water connection to other water bodies. Wetland W9, the

middle school wetland, is significant to the neighborhood development due to its size and proximity to the school. It provides an opportunity for a large open space area, and potential for outdoor education associated with the school and science learning center west of Walker Ave. It also provides an opportunity for a distinctly imageable destination open space that will anchor the neighborhood at its west end.

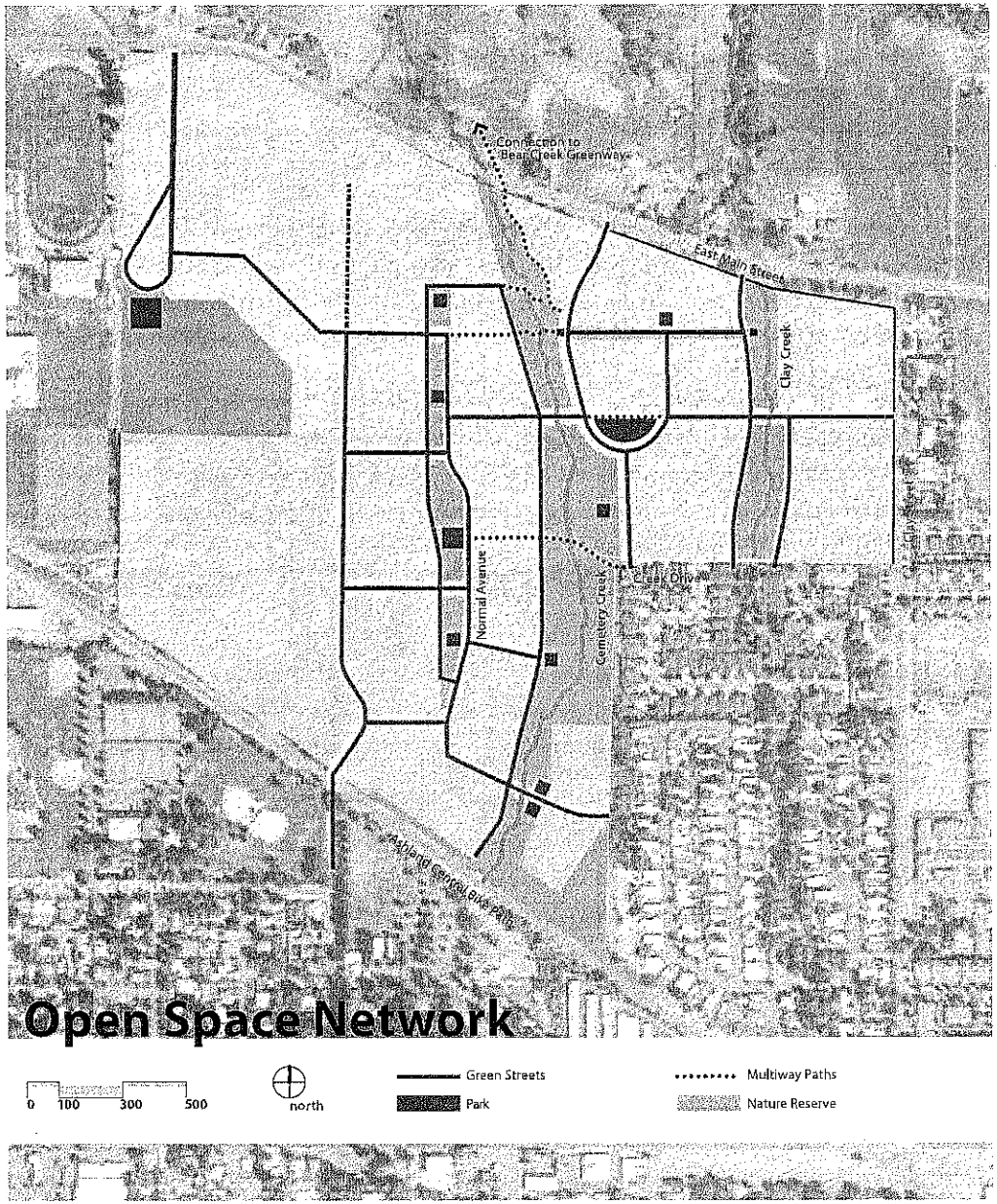
Wetland (W4)is 3.86 acres in size and is associated with Cemetery Creek. Cemetery Creek and its associated wetland will serve as one part of the environmental north-south framework used to guide the pattern of development in the neighborhood. This stream corridor will provide valuable habitat and habitat connectivity as well as a framework for bike and pedestrian connections within the site and beyond the neighborhood.

Although the extent of Clay Creek within the project area is less than that of Cemetery Creek, it still holds the potential to be an amenity for the plan area and the city by providing connectivity. Opportunities for restoration along Clay Creek in the plan area will provide habitat, support habitat connectivity to the north and south, provide recreation opportunities and connect pedestrians and bicyclists to the regional trail system.

The W12 wetland is 1.68 acres is not associated with streams or ponds and may have been created –or intensively modified– by man.

Based upon community input and guidance from City staff, the project emphasizes protection of streams and wetlands first and mitigation with restoration for those degraded areas within the WRPA protection zones to improve their utility for managing stormwater, maximize their value as habitat, and enhance their purpose as a recreational amenity for the community.

Stormwater management is critical to maintaining the health and function of the existing streams and wetlands. When stormwater is not managed it flows into streams too quickly and too hot – degrading the stream as habitat for native species and causing erosion. When stormwater is slowed and cooled by re-infiltration, stream health is restored. While streams and wetlands can function to absorb stormwater, every effort should be made to ensure that stormwater runoff is filtered and slowed before discharging into streams and wetlands. The most effective way to treat stormwater is by managing it as close to its source as possible with small, shallow facilities. Impervious surfaces should be minimized; and green streets, swales and residential surface stormwater management should be maximized. The plan proposes that the required landscape strips between sidewalk and street are designed and managed as stormwater facilities wherever practicable and curb-less street sections be encouraged for those streets that abut a wetland, stream, or natural area. In addition, the Normal Avenue Neighborhood Plan proposes that permeable paving be installed in the parking zones.



Street crossings of wetlands and streams in the east-west direction have been minimized to the extent possible. Where stream crossings are necessary for street network connectivity, we recommend that the bridging of each stream bed be as "light" and narrow as practicable.

In addition to the greenways associated with water resource protection, the plan includes other open space features. A number of pocket parks are proposed which help to frame scenic vistas and provide small gateways into different portions of the plan area. These small parks may include public art or small-scale active recreational opportunities for all ages. The Normal Avenue Neighborhood Plan design for open space orients new improvements in the open space framework east-west for the purpose of creating new connections across the site that support the natural north-south grain of the existing open space. The goal is to provide habitat connectivity between all wetlands and stream corridors.

MOBILITY

Street Network

The site has been considered as an integrated system where each framework element is intended to support every other. The placement of streets was very directly influenced by the natural function of wetlands and creeks and was designed to support the full range of intended housing choices.

The vehicular circulation system for the Normal Avenue Neighborhood must connect to the existing street network. The existing street network includes two functionally-classified city boulevards – Ashland Street and East Main Street. Ashland Street provides two travel lanes in each direction with signals and left turn lanes at key intersections. The Ashland Street cross-section appears to be fully built-out in most locations. East Main Street provides a single through lane in each direction and exhibits a rural character with limited access and curb-less shoulders. The eastbound lane of East Main Street should be improved as the adjacent properties along its south side increase in land use intensity. The westbound side of this street is the current Urban Growth Boundary, so no development is anticipated until such time as the lands to the north are incorporated into the UGB.

The Normal Avenue Neighborhood street network was designed with the following principles in mind:

- Street connectivity through the Normal Avenue plan area will reduce travel demand on the adjacent east-west boulevards: East Main Street and Ashland Street. Connections from the Normal Avenue Neighborhood will extend to the east to Clay Street by way of Creek Drive and other future street connections.
- Walkability is supported by small blocks. The City's street standards recommend that, where possible, block lengths be a maximum of 300 to 400 feet with a maximum perimeter of 1,200 to 1,600 feet to provide good connectivity for all modes of travel. The fabric of blocks in the Normal Avenue Neighborhood Plan were designed to these standards. Although walkability is a major focus of the plan, some variations from these standards may ultimately be required in order to fully protect natural resources.

All streets have been designed to keep travel speeds in the range of 20 mph by introducing elements such as planted medians, traffic circles, and subtle changes in direction at block intersections. Slow speeds and meandering street alignments will contribute to safety for everyone. The Normal Avenue Neighborhood Plan introduces a new street type into the range of Ashland streets: the woonerf. A woonerf is a very low speed street where all modes of transportation coexist in the same space. There are no individual sidewalks separated from the street surface by curbs and planted medians. There are no bicycle lanes separated from the street by painted lines. The low traffic volumes, low-speeds, and narrow cross-section make it possible for all to safely occupy the street surface by yielding to the slowest and most vulnerable present at a given moment.

The use of rear lanes helps to reduce the extent of paved areas, and will support a complete grid of finely-grained urban blocks. These lanes will provide access to garages and backyards. Where cottage clusters occur, rear lanes are critically important to their function. Elsewhere, as in those areas zoned NA-03, specific locations for the street network within the designated blocks is left to future development for definition, subject to the maximum block length and perimeter standards.

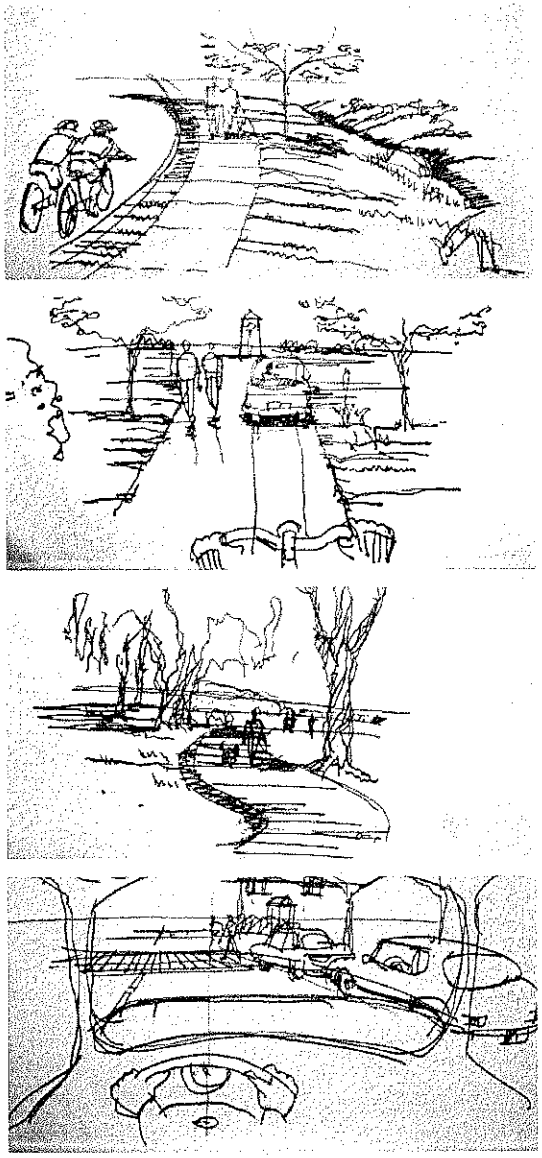
There is a synergy between the design of the street network, the stormwater management system, and the design of parks and open space. Holistic thinking and a multi-disciplinary approach to street network, stormwater, infrastructure, and parks and open space will support a more attractive and desirable neighborhood, reduce infrastructure costs, and maximize land development potential.

Active Transportation

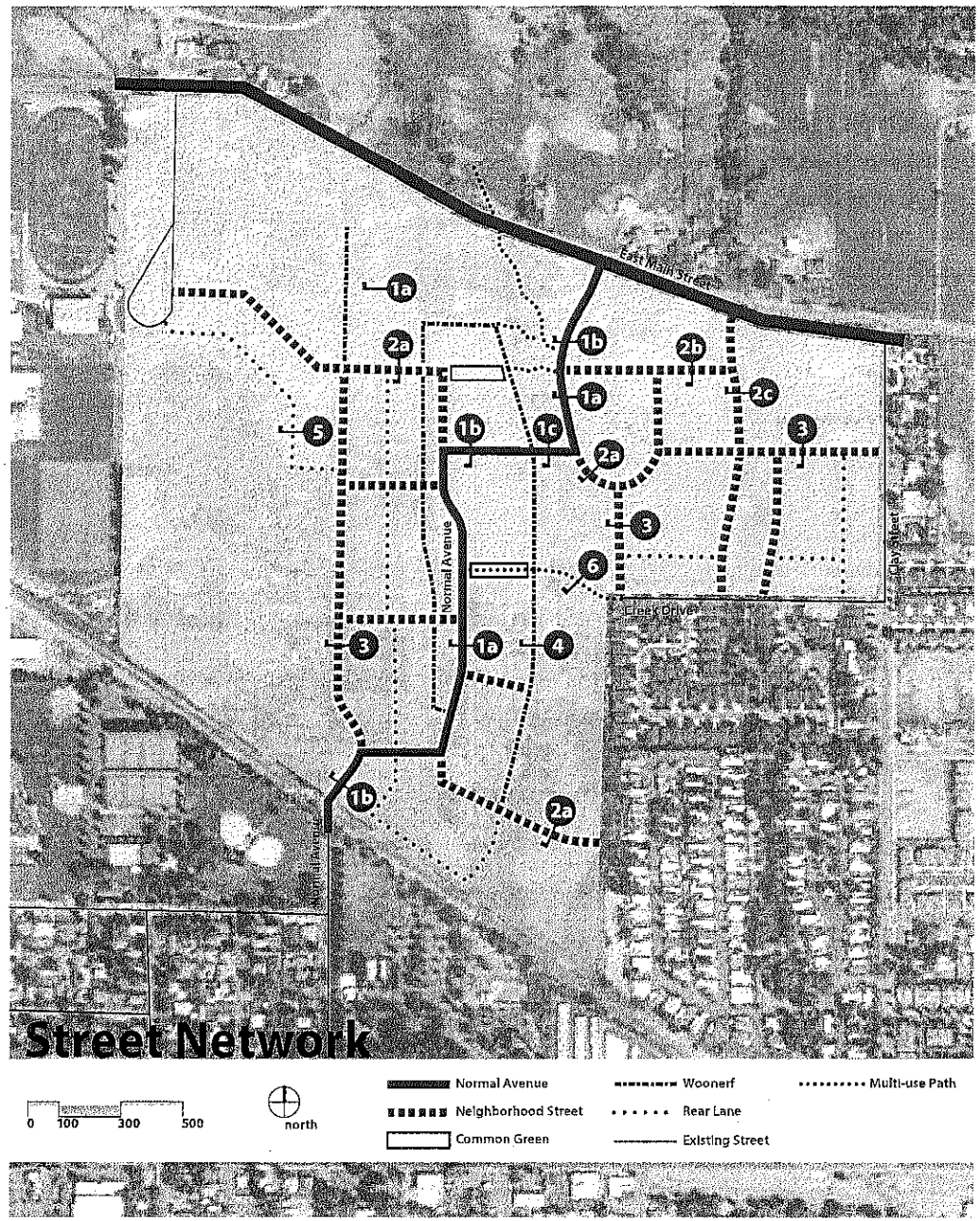
Active transportation is fundamental to the Normal Avenue Neighborhood urban design plan. Active transportation means using human-powered transportation as a convenient choice for many of the activities of daily living. It can also define the critical infrastructure, bike lanes and sidewalks, that communities need to promote safe connections to work, school, businesses, playgrounds and green spaces. The natural act of walking and the urban form that results from making the human scale the fundamental of design are keys to the planning and development pattern. Despite the inherent boundary conditions that limit connectivity, such as Ashland Middle School and the Central Oregon & Pacific rail line, building the transportation network on a foundation of walkability makes all modes of travel more efficient, effective, and safe.

The bicycle and pedestrian circulation systems for the Normal Avenue Neighborhood will build upon the existing network consistent with adopted City plans and code. Existing facilities in the study area include:

- Sidewalks exist along the extent of Ashland Street and Tolman Creek Road, and along portions of Walker Avenue and Clay Street. East Main Street has shoulders which place pedestrians at risk as speeds are posted as 40 mph. East Main Street cannot be considered part of the pedestrian circulation network until improvements to this street include the sidewalks normally associated with urban development.
- Bicycle facilities along all of Ashland Street, Tolman Creek Road and Walker Avenue. The shoulders along East Main Street place bicyclists at risk as speeds are posted as 40 mph. East Main Street cannot be considered part of the bicycle circulation network until improvements to the street include the lower speeds and bicycle lanes normally associated with urban development.
- Existing multi-use trails in the vicinity include the Central Bike Path along the railroad corridor that runs immediately south of the study area. The Bear Creek Greenway runs between Ashland and Central Point, currently terminating at the Ashland Dog Park near the Helman Street/Nevada Street intersection. Trail development and improvements are proposed for the Clay Creek corridor along the eastern boundary of the Normal Avenue Plan area, and the Hamilton Creek Corridor paralleling Tolman Creek Road. Both of these proposed corridors would connect to a future proposed extension of the Bear Creek Greenway that would be located north of the Normal Avenue Plan area.



Mobility sketches produced at charrette



Street Alignment Opportunities to Maximize Solar Exposure

The street alignment maximizes solar orientation and shading opportunities for buildings, consistent with the City's Land Use Code. In particular, the code speaks to incorporating both passive and active solar strategies in the design and orientation of buildings and public spaces. Where the site configuration and locational constraints permit, buildings should be oriented with the long sides facing north and south. Additionally, the code speaks to providing shading for south-facing windows, and exterior shading devices for east and west-facing windows during periods of peak cooling demand.

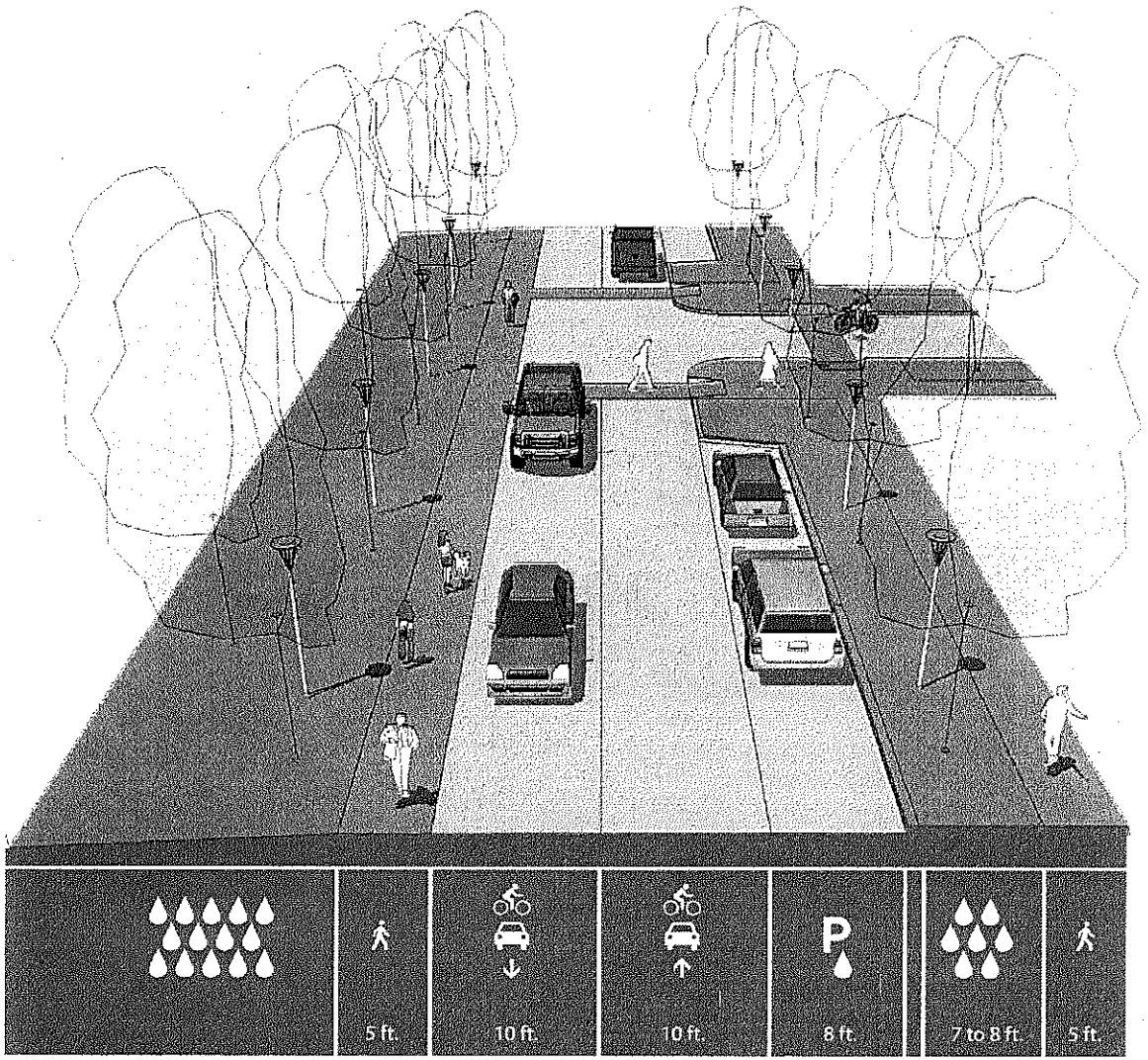
Main and Clay Street Access Points

The Normal Avenue Neighborhood urban design plan identifies three points of access to East Main Street. One of these occurs at the existing street connection serving Ashland Middle School and Ashland Gracepoint Nazarene. The two other new connections to East Main Street occur between Cemetery Creek and Clay Creek. The western-most of these is the extension of Normal Avenue at East Main Street. As East Main Street is a designated city boulevard, its access spacing for streets and driveways is 300 feet. Access spacing along an avenue like Clay Street is 100 feet. However it's appropriate that block length and perimeter standards provide the necessary guidance to the spacing of additional connections to Clay Street.

Transit Service and Transit Stops

Existing transit service is currently provided along Tolman Creek Road to the east of the Normal Avenue plan area,

and along Ashland Street to the south. In both instances, the walking distance between the site and existing transit route alignment is greater than the reasonable transit access walking distance of ¼ mile to a bus stop. At some point in the future, if there is sufficient density along East Main Street and/or in the general vicinity of the Normal Avenue plan are, the City should engage the Rogue Valley Transit District (RVTD) in conversations about providing additionally transit service. Potentially, this service could be oriented toward development of the SOU campus and other school facilities along Walker Avenue and include more intensely developed portions of East Main Street. At a minimum bus stops, in the area should be spaced no more than 1,000 feet apart. Shelters, seating, trash receptacles and waiting areas should conform to City and RVTD standards. Vehicular circulation through the Normal Avenue plan area should not preclude the provision of direct transit service.



1a

Normal Avenue with One-Sided Parking at Wetland

Normal Avenue is the spine of the neighborhood and connects from the south edge of the project area north to East Main Street. It is designed to discourage cut-through traffic and encourage slow speeds that will enhance safety for all modes: cars, bikes, and pedestrians. Speeds will be slow and bicycles will share the travel lanes with cars.

Intersections may be necked-down with bulb-outs to improve safety for pedestrians.

The design of the street network was also influenced by the natural functions of the wetlands and streams. In the center of the plan, Normal Avenue skirts Wetland W12. The street edge abutting this restored wetland may have street edge alternatives to allow stormwater flow to recharge this wetland.

Permeable paving in the parking lanes and flow-through planters in the parkrows reduces the extent of impervious surfaces in the Normal Avenue Neighborhood and supports wetland and stream health.

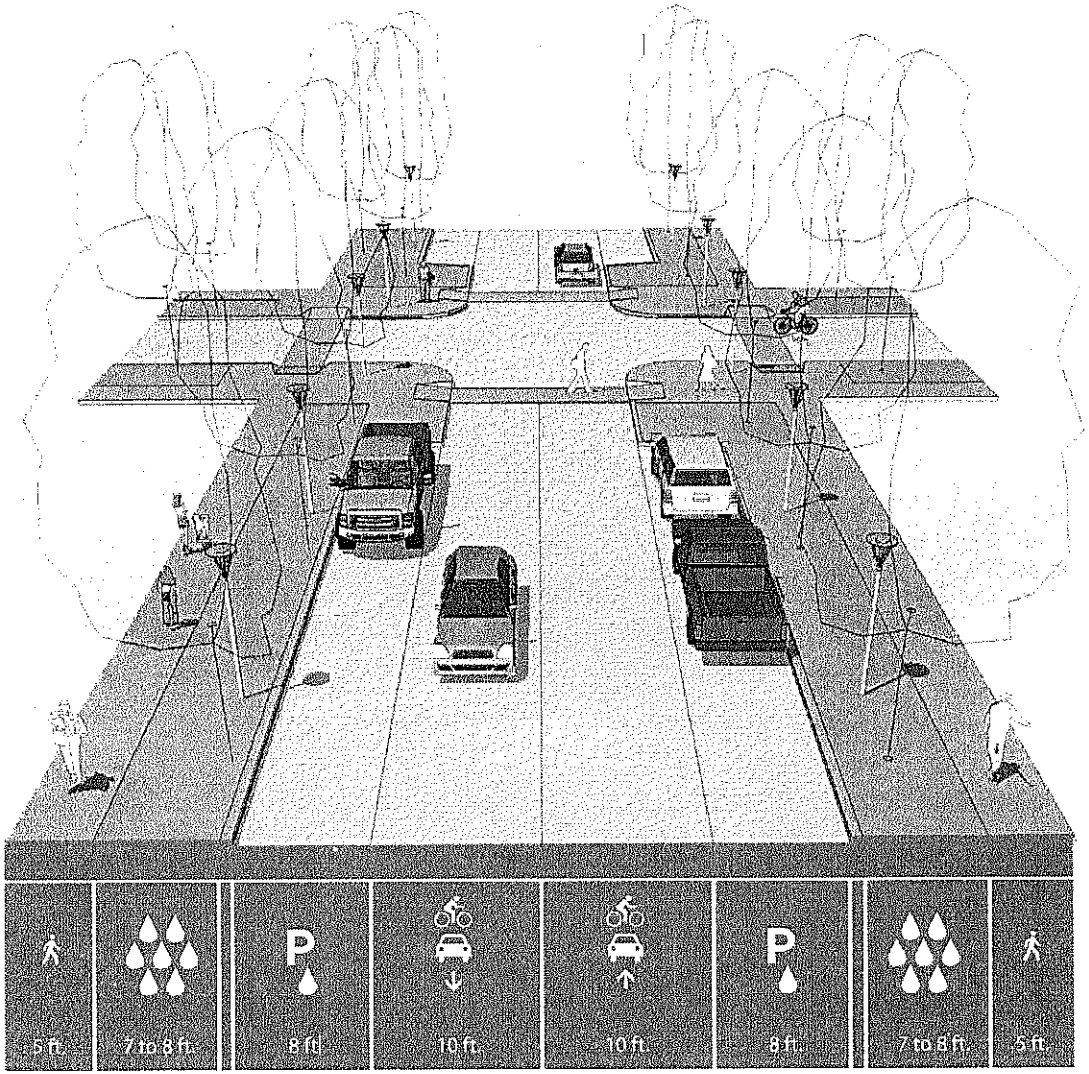
1b

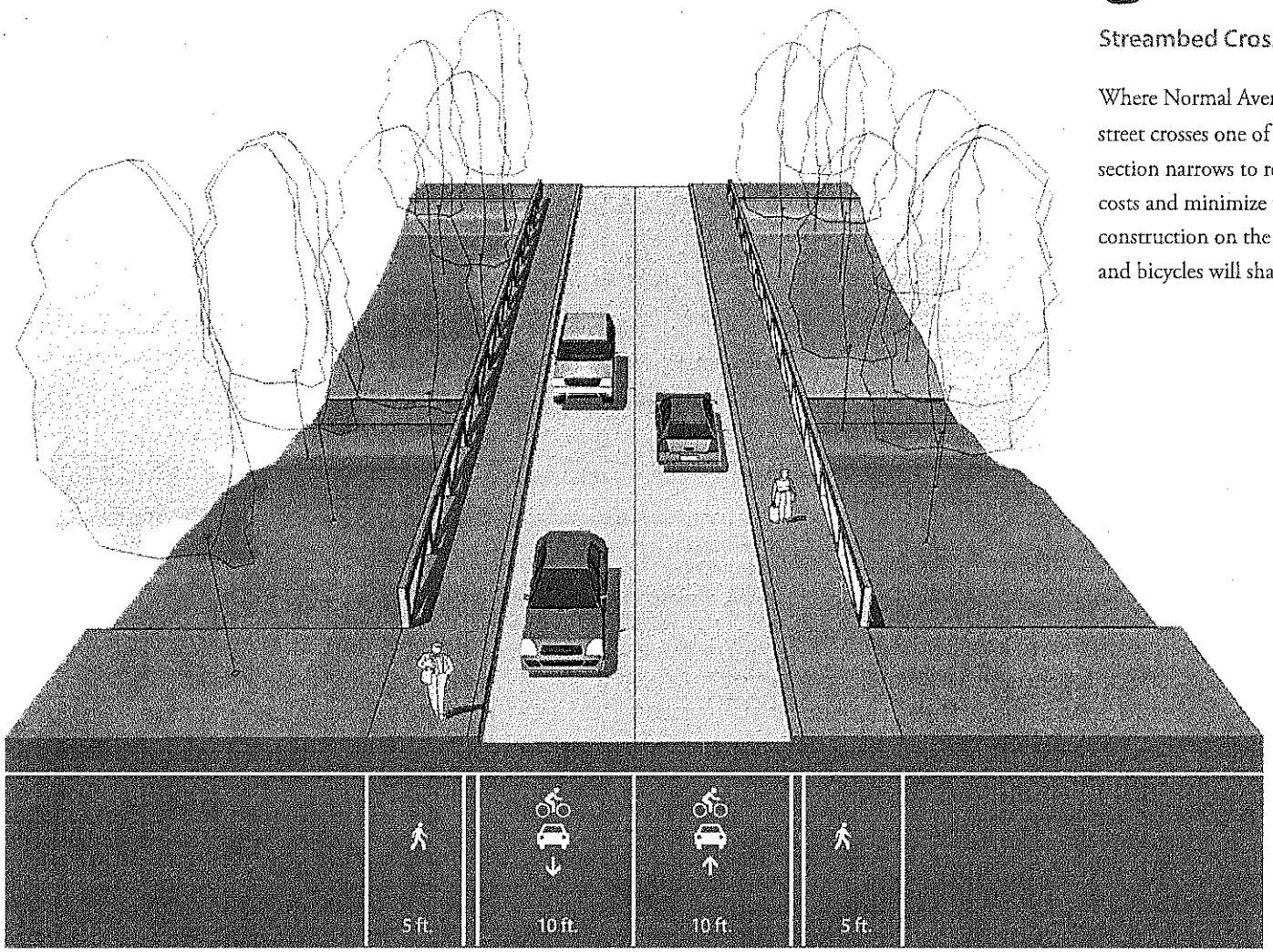
Normal Avenue with Two-Sided Parking

In some areas of the plan, Normal Avenue will have parking on two-sides of the street. Speeds will be slow and bicycles will share the travel lanes with cars.

Intersections may be necked-down with bulb-outs to improve safety for pedestrians.

Permeable paving in the parking lanes and flow-through planters in the parkrows reduces the extent of impervious surfaces in the Normal Avenue Neighborhood and supports wetland and stream health.





1c

Streambed Crossing

Where Normal Avenue or a neighborhood street crosses one of the streambeds, the street section narrows to reduce initial and life-cycle costs and minimize the impact of bridge construction on the creeks. Speeds will be slow and bicycles will share the travel lanes with cars.

Neighborhood Street with Diagonal Parking

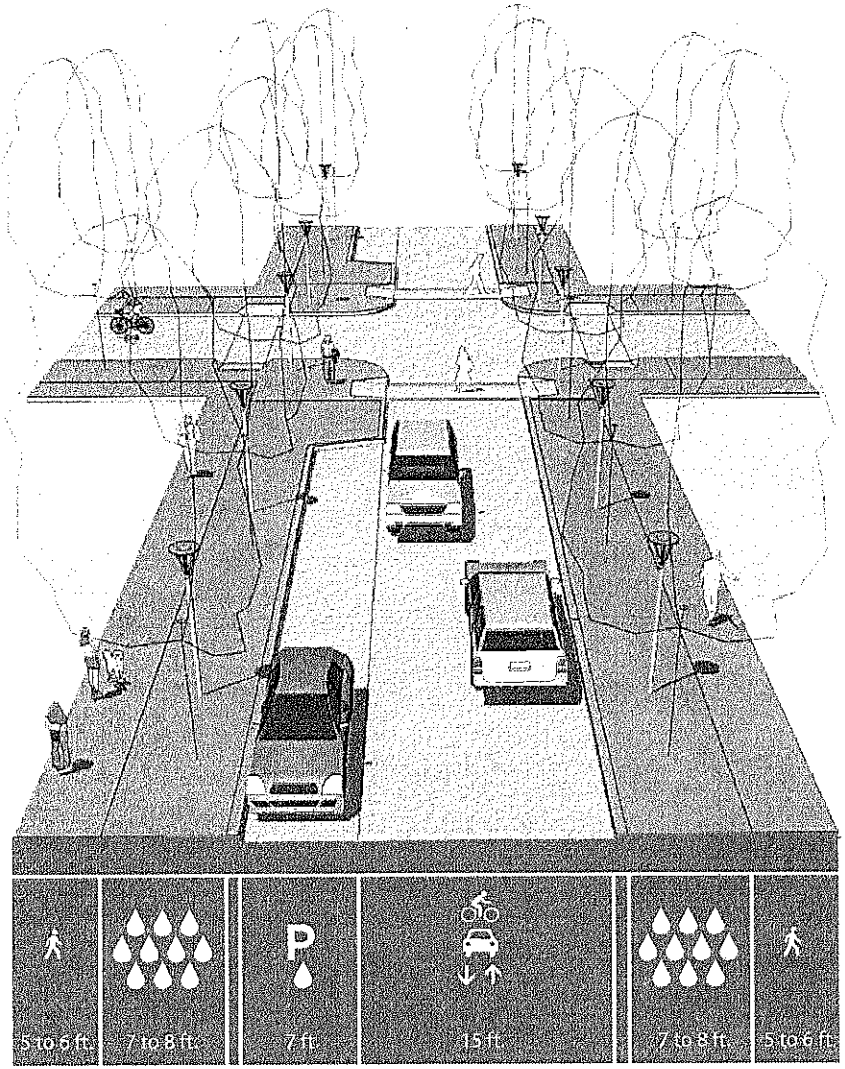
2a

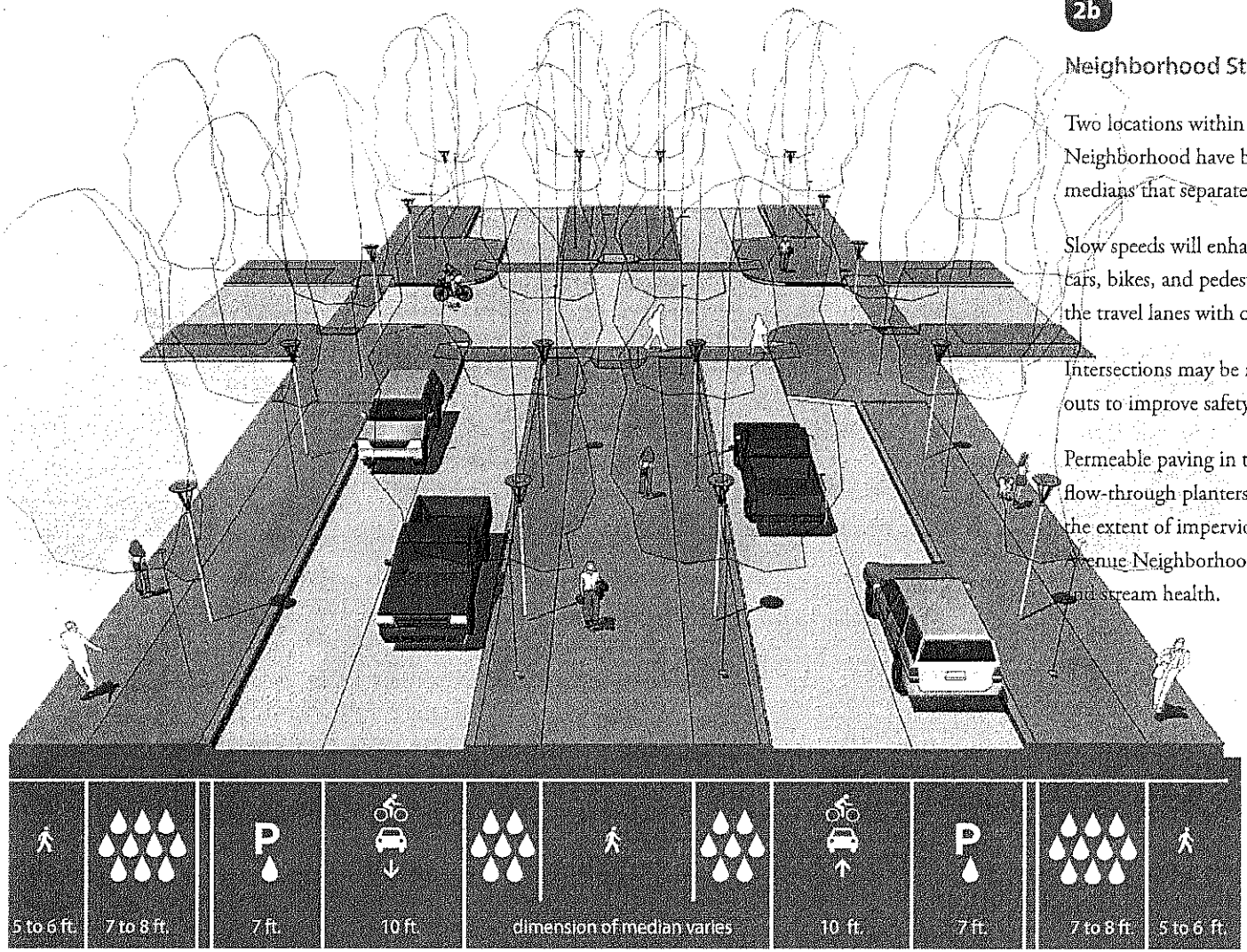
Neighborhood Street

Neighborhood streets are designed to enhance safety for all modes: cars, bikes, and pedestrians. Speeds will be slow and cars meeting each other from opposite directions will slow and yield to one another. Bicycles will share the travel lanes with cars.

Intersections may be necked-down with bulb-outs to improve safety for pedestrians.

Permeable paving in the parking lanes and flow-through planters in the parkrows reduces the extent of impervious surfaces in the Normal Avenue Neighborhood and supports wetland and stream health.





2b

Neighborhood Street with Median

Two locations within the Normal Avenue Neighborhood have been designed with central medians that separate the travel lanes.

Slow speeds will enhance safety for all modes: cars, bikes, and pedestrians. Bicycles will share the travel lanes with cars.

Intersections may be necked-down with bulb-outs to improve safety for pedestrians.

Permeable paving in the parking lanes and flow-through planters in the parkrows reduces the extent of impervious surfaces in the Normal Avenue Neighborhood and supports wetland and stream health.

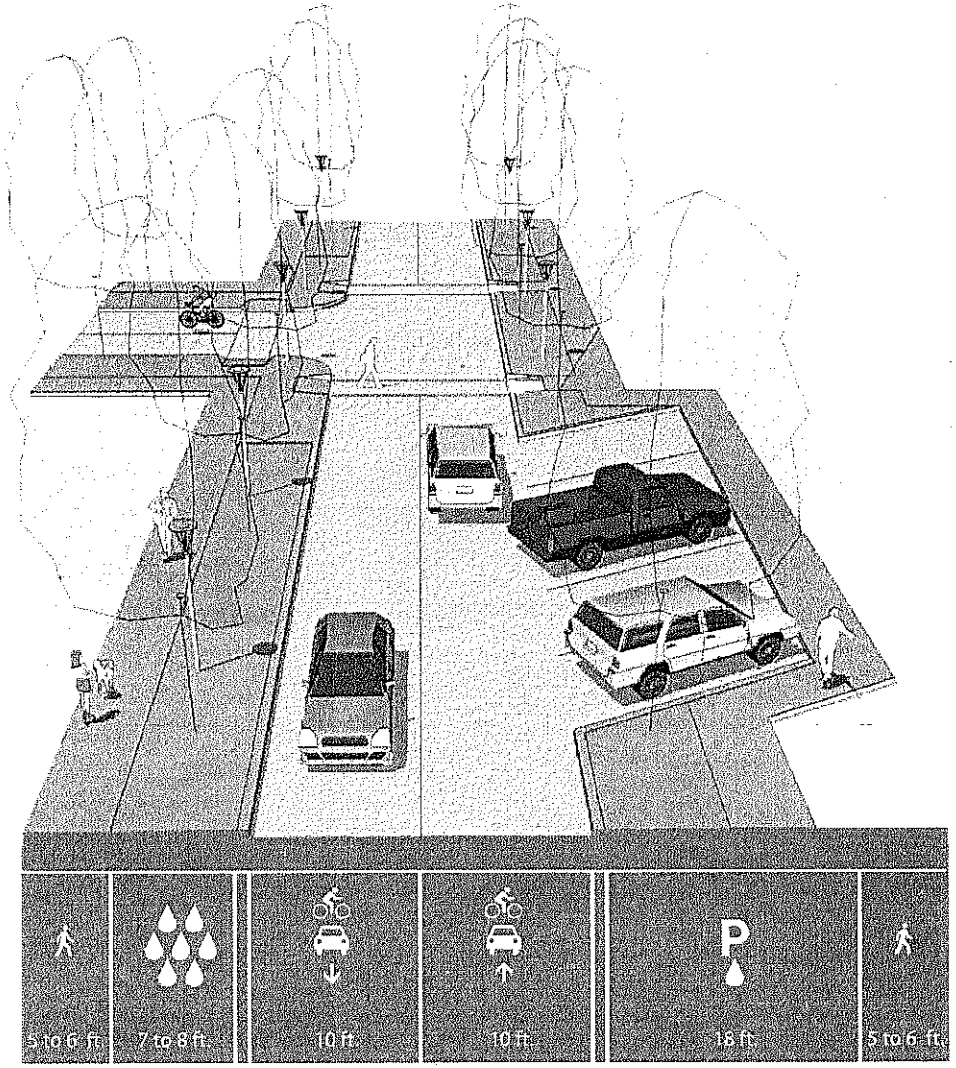
2c

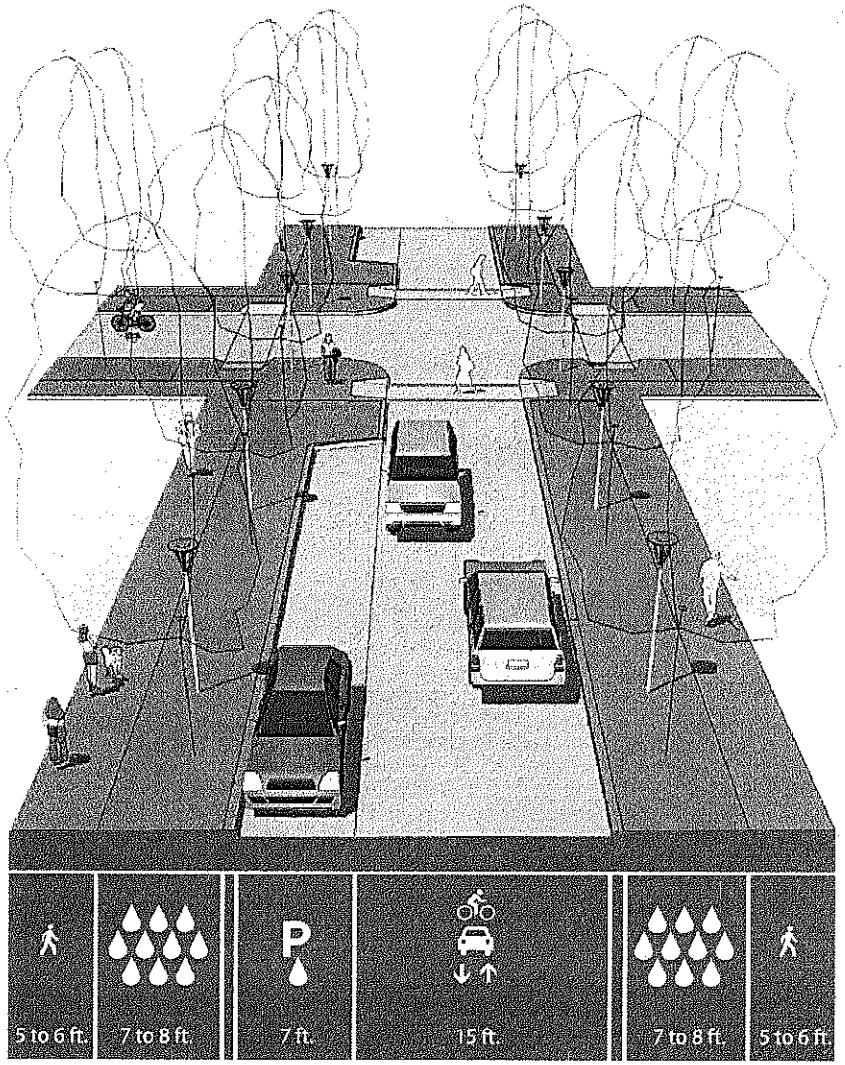
Neighborhood Street with Diagonal Parking

Streets that abut creeks may be locations for an alternative to the Neighborhood Street where diagonal parking is accommodated and encourages residents and citizens to park nearby and visit these natural areas. Traffic volumes will be low and slow speeds will enhance safety for all modes: cars, bikes, and pedestrians. Bicycles will share the travel lanes with cars.

Intersections may be necked-down with bulb-outs to improve safety for pedestrians.

Permeable paving in the parking lanes and flow-through planters in the parkrows reduces the extent of impervious surfaces in the Normal Avenue Neighborhood and supports wetland and stream health.





3

Neighborhood Queuing Street

Neighborhood streets are designed to enhance safety for all modes: cars, bikes, and pedestrians. Speeds will be slow and cars meeting each other from opposite directions will slow and yield to one-another. Bicycles will share the travel lanes with cars.

Intersections may be necked-down with bulb-outs to improve safety for pedestrians.

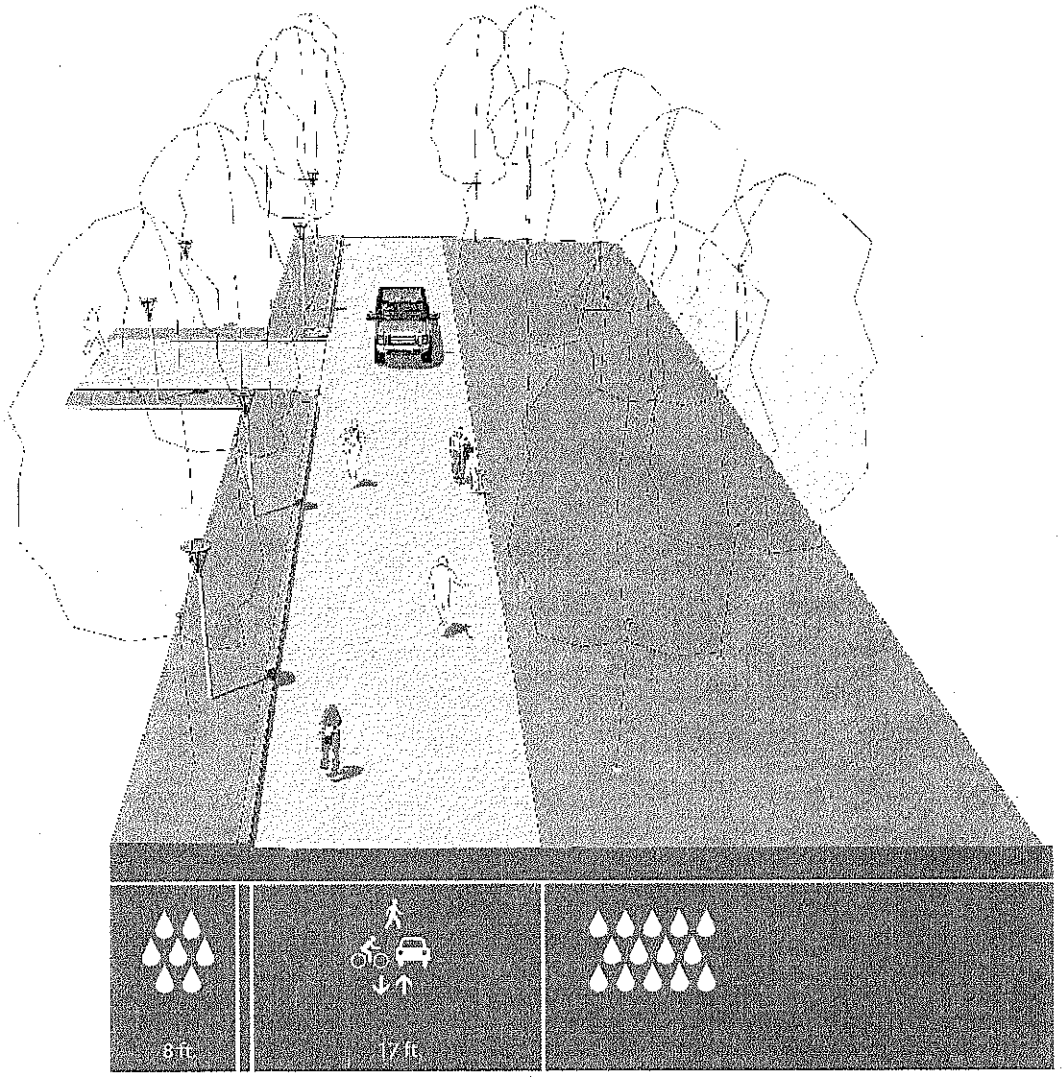
Permeable paving in the parking lanes and flow-through planters in the parkrows reduces the extent of impervious surfaces in the Normal Avenue Neighborhood and supports wetland and stream health.

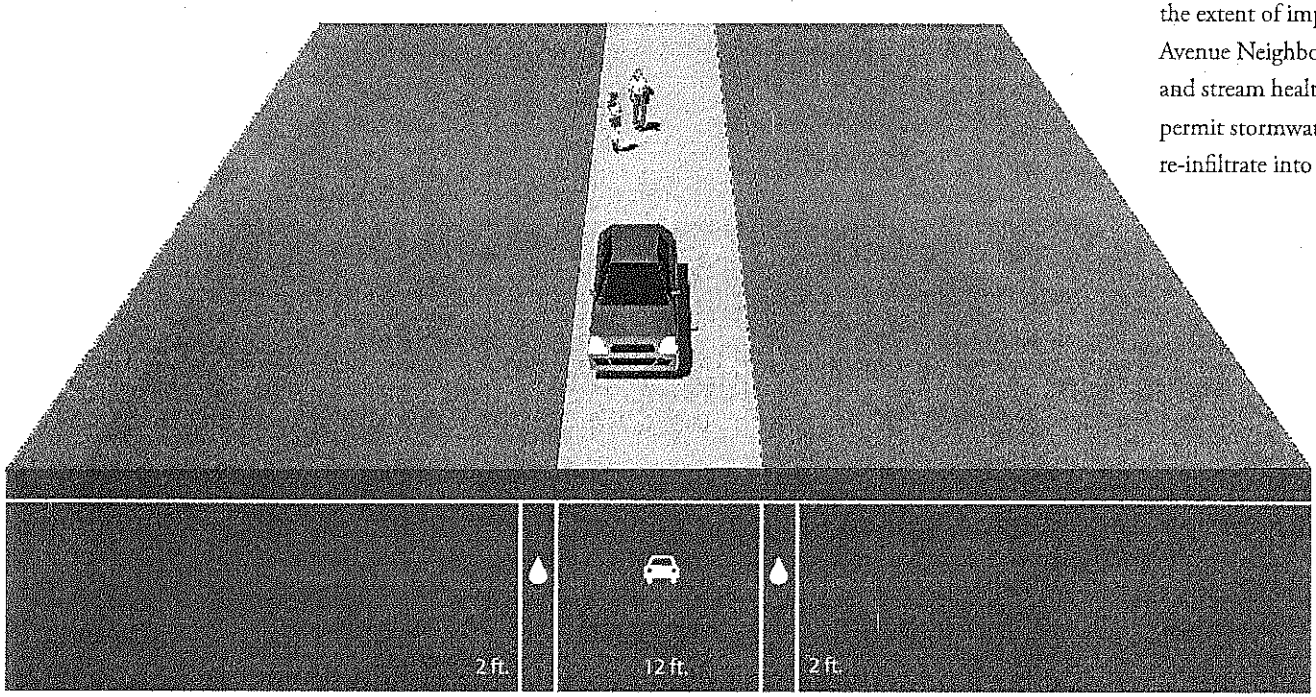
4

Woonerf

Woonerfs are streets designed to support a park-like atmosphere where all modes of traffic share a narrow paved surface. Woonerfs are places for people and the automobile is a guest in this street where space is shared among all modes. The pace of walking dictates the speed of all traffic in a woonerf.

The narrow street section reduces the extent of impervious surfaces in the Normal Avenue Neighborhood and supports wetland and stream health. All of the proposed locations for woonerfs in the Normal Avenue Neighborhood are adjacent to wetlands and stream corridors. Street edge alternatives may permit stormwater flow to re-infiltrate into the ground.





5

Rear Lane

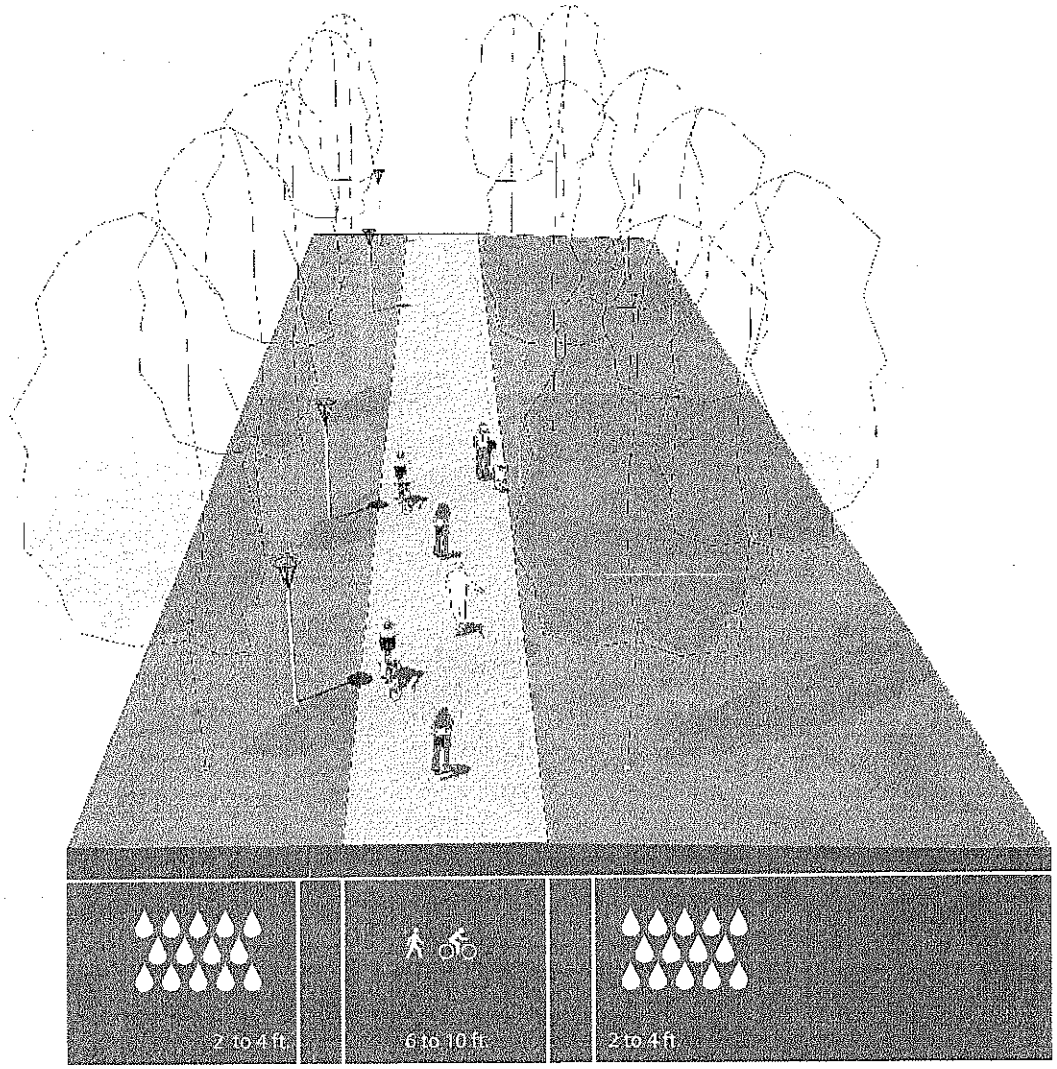
Rear Lanes provide off-street access to homes, parking pads, and garages. Rear lanes are very narrow and the street section is 12-feet wide with a 2-foot green edge on either side. Speeds are very low.

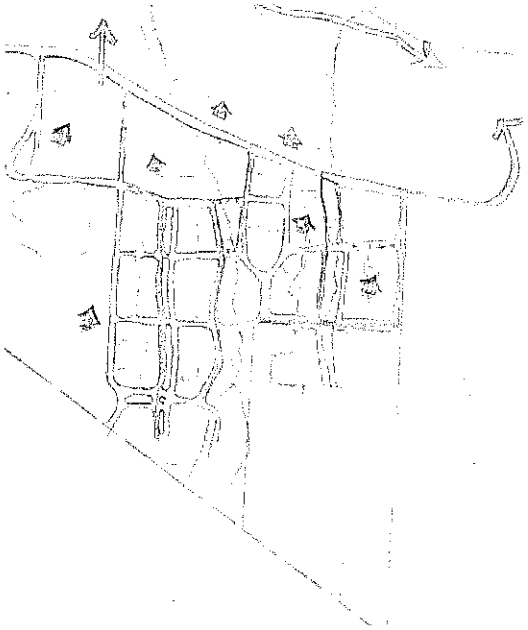
The narrow street section of rear lanes reduces the extent of impervious surfaces in the Normal Avenue Neighborhood and supports wetland and stream health. Rear lanes are curbless and permit stormwater flow from paved areas to re-infiltrate into the ground.

6

Multi-Use Path

Multi-use Paths are car-free and support connectivity for pedestrians and bicycles across the Normal Avenue Neighborhood. Street sections are narrow and may vary to accommodate unique demands of local conditions.





Infrastructure/ Stormwater Diagram
Produced at Charrette

INFRASTRUCTURE

Water

No City of Ashland water services extend to the project area and all existing homes in the project study area get their potable and domestic water from wells. The closest municipal water sources are the Lithia main that runs in the East Main Street alignment and an 8-inch main that runs along the full extent of Creek Drive and part of Clay Street.

Sanitary Sewer

No City of Ashland sanitary sewers extend to the project area; all existing homes in the project study rely on septic systems for disposing of their waste. A single 8-inch service stub connects the Temple Emek Shalom at 1800 East Main Street to the 12-inch sanitary sewer that runs in the Bear Creek Alignment. Other proximate sewer lines include 8-inch sewer lnes that run in the Walker Street, Creek Drive, and Clay Street alignments.

Stormwater

Implementation of stormwater management in the Normal Avenue neighborhood should emphasize low-impact development (LID) techniques focused on controlling stormwater at its source rather than moving stormwater offsite though expensive, engineered conveyance systems. The goals of low-impact development are to lower initial construction and reduce life-cycle costs while maintaining natural ecosystem functions: stormwater retention, infiltration, and release that supports stream health and ecological function. Some of the approaches that should be considered for implementation in the Normal Avenue Neighborhood Plan area include:

- Bio-swales alongside streets slow stormwater runoff, filter it, and allow it to soak into the ground. Swales improve water quality and reduce in-stream erosion by slowing the velocity of stormwater runoff before it enters the stream. They also cost less to install than curbs, storm drain inlets, and piping systems.
- Bio-retention cells, commonly known as rain gardens, are relatively small-scale, landscaped depressions with a soil mixture that absorbs and filters runoff. Bio-retention cells work well in places like the project area with poorly draining soils.

- Stormwater planters, more engineered than rain gardens, stormwater planters are designed to accept stormwater from adjacent surfaces, and infiltrate stormwater through the ground to a pipe connected to a storm sewer or, where practicable, to natural features such as the wetlands, Clay Creek or Cemetery Creek.
- Flow-through planters, within developments with higher floor area ratios, flow-through planters are a sound solution. Flow-through planters do not infiltrate into the ground; they are filled with an engineered mixture of gravel and soil and planted. Flow-though planters store stormwater runoff temporarily, filter sediment and pollutants, and slow the flow of rainfall to storm sewers which can be smaller in size and less costly to engineer and build.
- Cisterns and rain barrels collect rainwater from roofs. They can provide water for garden or lawn irrigation, reducing water bills and conserving municipal water supplies. The City currently provides a rain barrel guide for homeowners and contractors.
- Green roofs are partially or completely covered with plants. Green roofs help mitigate the tendency for urban areas to have higher summer temperatures, and reduce peak stormwater flows. The vegetated cover also protects and insulates the roof, extending its life and reducing energy costs.

Understanding infiltration capacity and rates for stormwater re-infiltration in the study area will be critically important to the design and engineering of future stormmwater systems –conventional and low-impact alike. Preliminary data from the USDA Natural Resources Conservation Service and a Custom Soil Resource Report for Jackson County show that the soils generally drain very poorly. A detailed assessment of soils must be a part of pre-development geotechnical investigations.

SUSTAINABILITY

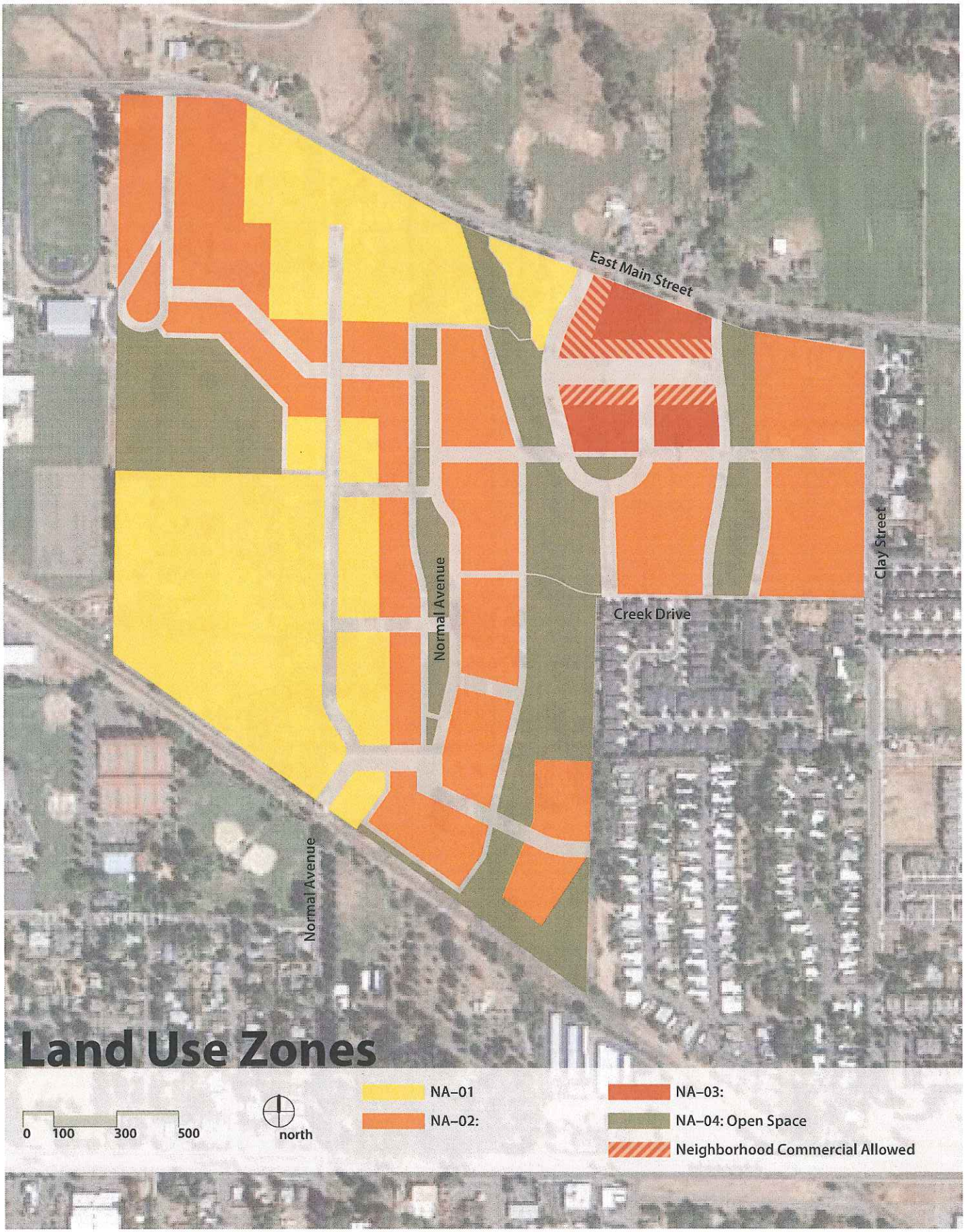
Sustainability is not a discrete element, independent of the preceding framework elements. The most successful strategies for sustainability is to deliberately build them into each framework element of the plan. The wide range of housing types and the mix of permitted land uses is fundamentally sustainable because compact urban form encourages active transportation as a convenient first choice; a range of housing choices means that there is a home in the neighborhood for every stage of life; and protection of wetlands and restoration of the creek habitat brings nature in while it also provides lower impact –and less costly– solutions to infrastructure. The City of Ashland is committed to the development of a vibrant livable community. The design of the Normal Avenue Neighborhood Plan is consistent with the framework of the US Green Building Council LEED Neighborhood Development and the Sustainable Sites Initiative (SITES). Both the LEED ND rating system established USGBC and SITES establish sets of performance standards for certifying the planning and development of neighborhoods. Their intent is to promote healthful, durable, affordable, and environmentally sound practices in building design and construction. Because no rating system for sustainable design and construction will be a prerequisite for development, it is all the more essential that the elements of sustainability are built into each of the frameworks for the Normal Avenue neighborhood: Housing and Land Use; Greenway and Open Space; Mobility; and Infrastructure.

APPENDICES

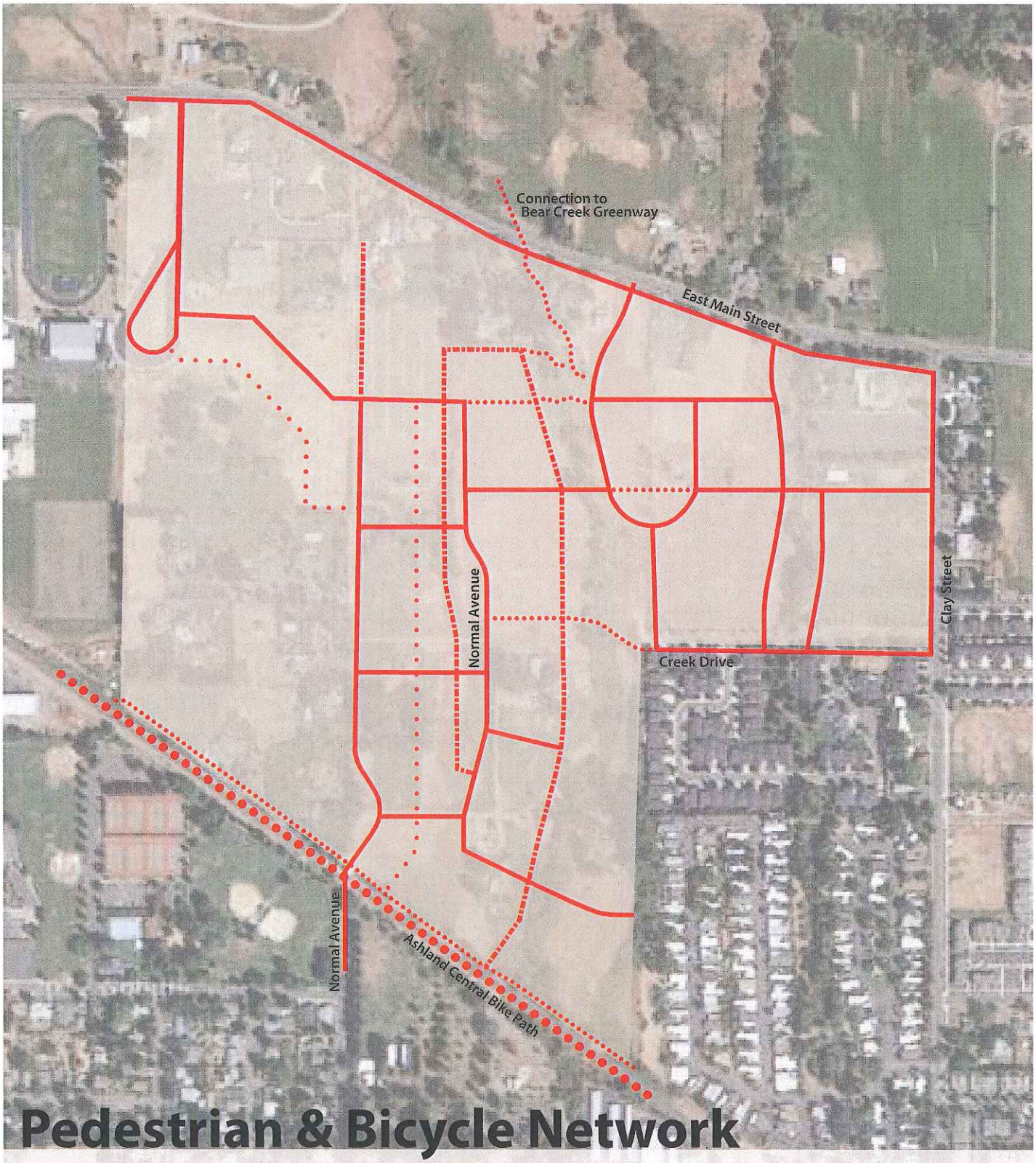
Pre-Charrette Concept Plan

Charrette Report

Density Illustrations Produced for Planning Commission June 2013


East Main Street
Clay Street
Creek Drive
Normal Avenue
Normal Avenue
Land Use Zones
0 100 300 500
north
NA–01
NA–02:
NA–03:
NA–04: Open Space
Neighborhood Commercial Allowed


East Main Street
Normal Avenue
Creek Drive
Clay Street
Normal Avenue
Street & Open Space Network
Streets
Open Space
0 100 300 500
north


Connection to
Bear Creek Greenway
East Main Street
Normal Avenue
Clay Street
Creek Drive
Normal Avenue
Ashland Central Bike Path
Pedestrian & Bicycle Network
Sidewalks & bicycle facilities
Woonerf –shared space street)
Multi-use path
Rear Lane
Ashland Central Bike Path
0
100
300
500
north

SCJ ALLIANCE
CONSULTING SERVICES

TECHNICAL MEMORANDUM

TO:	Brandon Goldman, City of Ashland
FROM:	Anne Sylvester, PTE
DATE:	September 18, 2013
PROJECT #:	0722.01
SUBJECT:	Draft Future Conditions Report for Normal Avenue Neighborhood Plan

1. INTRODUCTION

The purpose of this memo is to summarize the analysis of future 2038 traffic conditions in the Normal Avenue Neighborhood Plan study area. The location of this study area and its surrounding street system is illustrated in Figure 1. Analysis is based on the draft Neighborhood Plan including both recommended land uses, densities and locations, as well as proposed multimodal transportation infrastructure within the study area. Analysis also reflects recommendations in the City's Transportation System Plan (TSP) Update including the extension of Normal Avenue from the existing at-grade rail crossing north and east to intersect East Main Street. The TSP also recommends improvements to active (bicycle and pedestrian) transportation facilities.

This memorandum is built on the analysis of existing transportation facilities and operating conditions that was prepared by myself and documented in a Technical Memorandum dated September 5, 2012. Please refer to that report for a discussion of existing traffic volumes, operating performance for existing streets, intersections, transit, bicycle and pedestrian facilities, and recent multimodal safety experience and considerations.

This memo includes six major sections, as described below:

- Section 1 is this introduction.
- Section 2 describes the existing Normal Avenue Neighborhood Plan study area.
- Section 3 highlights characteristics of the anticipated 2038 baseline transportation system. This baseline transportation system includes development within the Neighborhood Plan area as anticipated under existing Comprehensive Plan designations and includes an extension of Normal Avenue from its current northern terminus to a new intersection with E. Main Street.
- Section 4 focuses on the future traffic conditions associated with Neighborhood Plan development in the study area including proposed land uses and densities, along with the proposed transportation networks for vehicles, bicycles and pedestrians. The section includes key findings and conclusions, and presents recommendations for transportation improvement to maximize operations and enhance safety.

- Section 5 documents the analysis of Multimodal Levels of Service (MMLOS)
- Section 6 presents the analysis of safety benefits associated with a variety of system improvements.

2. STUDY AREA

The study area for evaluating future transportation conditions for the Normal Avenue Neighborhood Plan includes two primary areas of focus. The first is the Normal Avenue Plan area itself, referred to in this report as the project area. This area includes both the alignment of Normal Avenue between the Central Oregon and Pacific Railroad right-of-way and E. Main Street, and all other local streets within the Plan area that provide access to individual properties. The proposed street system for the project area is illustrated in Figure 2. This report documents the analysis of this internal street system focusing on several key questions:

- Whether the proposed street classification and cross-section is consistent with anticipated travel demand as the project area builds out.
- When an enhanced public crossing of the existing limited crossing of the Central Oregon and Pacific Railroad at Normal Avenue will need to be improved. Until such time as this improvement is made traffic circulation to/from the plan area will largely focus on E. Main and Clay Streets.

The second focus area includes six key intersections located on the streets surrounding the project area. Existing traffic control and lane channelization at these intersections is documented in Figure 3. Analysis of these intersections was conducted to identify any potential future 2038 impacts associated with the Plan. These intersections include:

- Ashland Street at Walker Avenue (included in TSP Update)
- Ashland Street at Normal Avenue
- Ashland Street (Oregon Highway 66) at Tolman Creek Road (included in TSP Update)
- East Main Street at Walker Avenue (included in TSP Update)
- East Main Street at Clay Street
- East Main Street at Tolman Creek Road

3. FUTURE TRANSPORTATION ANALYSIS FOR BASELINE CONDITIONS

3.1 2038 Baseline Traffic Volumes

Traffic forecasts for the Normal Avenue study area were developed for 2038 at the six study area intersections and along key streets within the study area. The purpose of these forecasts was to assess roadway improvement needs and functional classification designations for conditions with and without the Neighborhood Plan. Future year traffic volume forecasts were prepared using the following steps and are presented in Figure 4.

- RVCOG and ODOT provided RVMPOv3.1 travel model output for 2038 including daily and PM peak hour trips. This model output represents the latest growth and network assumptions available for the Ashland area. Both 2006 and future 2038 model runs were obtained to assess the traffic volume growth potential on study area streets.

- The expected traffic growth was post-processed using the procedures identified in Analysis Procedures Manual (APM) to develop intersection level turning movement projections. This method uses the existing traffic volumes previously developed as a starting point since these have already been adjusted to reflect the 30th highest hour[1]. Consistent with the analysis conducted for existing conditions, intersection level turning movements and operations analysis have only been conducted for the 2038 PM peak hour.

An assessment of potential traffic volume growth along Normal Avenue was also conducted to form the basis of comparison with build-out of the Neighborhood Plan (discussed in the next section). In the 2038 RVMPO travel model, Normal Avenue is expected to be extended to E. Main Street. However, the model also assumes that Normal Avenue would be a lower order facility than Walker or Clay Streets. Projected traffic volumes along Normal Avenue are expected largely to consist of locally-generated traffic. No significant volume of through traffic was projected.

3.2 Intersection Operational Standards

3.2.1 *ODOT Facilities*

One intersection in the Normal Avenue study area is under the jurisdiction of ODOT – OR 66 (Ashland Street) at Tolman Creek Road. OR 66 is designated as a District Highway from its intersection with Tolman Creek Road eastward through the I-5 interchange.

ODOT uses volume-to-capacity (v/c) ratio standards to assess traffic operations at intersections on state highway facilities. Table 6 of the Oregon Highway Plan (OHP) and Table 10-1 of the Oregon Highway Design Manual (HDM) provide the maximum v/c ratios for all signalized and unsignalized intersections outside of the Portland Metro area. The OHP ratios are used to evaluate existing and future no build conditions, while the HDM ratios are used to evaluate transportation system improvements on state highways. Based on its classification as a District Highway, the signalized intersection of OR 66 at Tolman Creek Road has an OHP v/c standard of 0.95 (based on revisions to the OHP adopted by the Oregon Transportation Commission in December of 2011 which became effective on January 1, 2012)[2]. Its relevant HDM v/c ratio is 0.80.

3.2.2 *City of Ashland Facilities*

The remaining five intersections in the study area are all under the jurisdiction of the City of Ashland. Based on discussion included in the TSP, the following operational standards were used:

- Level of service (LOS) D at signalized and all-way stop-controlled intersections if the v/c ratio is not higher than 1.00 for the sum of critical movements.
- LOS E for the poorest operating approach at two-way stop-controlled intersections. Approaches operating at a LOS F where a traffic signal is not warranted were also identified in the TSP.

A summary of the relevant operational standards for the five City intersections in the Normal Avenue study area is presented in Table 1 below.

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[1] See *"Existing Transportation Conditions Technical Memorandum"*, Parametrix, September 5, 2012.
[2] It should be noted that the TSP used the OHP v/c standards that were in place prior to the OTC's action in December of 2011. Consequently the v/c threshold cited in the TSP is 0.90.

Table 1. Operational Threshold for City Intersections

Intersection	Traffic Control	Threshold	Intersection	Traffic Control	Threshold
E. Main Street @ Walker Avenue *	TWSC	LOS "E"	E .Main Street @ Clay Street	TWSC	LOS "E"
Ashland Street @ Walker Avenue *	Signal	LOS "D"	E. Main Street @ Tolman Creek Road	TWSC	LOS "E"
Ashland Street @ Normal Avenue	TWSC	LOS "E"			

* Intersection included in TSP

3.3 Findings and Conclusions

3.3.1 *Intersection Operations Analysis Results*

Synchro 8 software was used to evaluate the performance of both signalized and unsignalized intersections in the study area. Table 2 summarizes 2038 PM peak hour operational performance for study area intersections assuming Comprehensive Plan land use designations. These results incorporate the intersection geometry and traffic control features illustrated in Figure 3 and the projected 2038 PM peak hour traffic volumes in Figure 4.

As indicated in Table 2, all study area intersections are expected to meet their applicable mobility standard. Detailed traffic operational worksheets can be found in Appendix A.

Table 2. 2038 Baseline PM Peak Hour Operations Analysis Summary

Intersection	Operating Standard	Traffic Control	Worst Movement	PM Peak Hour V/C [1]	PM Peak Hour Delay [2]	PM Peak Hour LOS [3]
Ashland Street at Walker Avenue	LOS D	Signal		0.59	15.1	B
Ashland Street at Normal Avenue	LOS E	Stop	SB	0.44	30.5	D
OR 66/Ashland Street at Tolman Creek Road	V/C= 0.95	Signal		0.95	50.9	D
E. Main Street at Walker Avenue	LOS E	Stop	NB	0.34	22.1	C
E. Main Street at Clay Street	LOS E	Stop	NB	0.34	21.8	C
E. Main Street at Tolman Creek Road	LOS E	Stop	NB	0.36	13.0	B

[1] Volume-to-Capacity ratio of a signalized intersection or Worst Movement of an unsignalized intersection.
[2] LOS = Level-Of-Service using 2000 Highway Capacity Manual (HCM) methodology.
[3] Average Control Delay for an entire signalized intersection or the worst movement of an unsignalized intersection.

3.3.2 *Traffic Queuing Analysis Results*

Table 3 summarizes 2038 baseline PM peak hour traffic queuing analysis results at the two signalized study area intersections. Worksheets are included in Appendix B.

Queuing results for the signalized intersection of Ashland Street at Walker Avenue show that for both left turn movements (eastbound and westbound) along Ashland Street there is sufficient space to meet expected vehicle queuing demand. At the intersection of OR 66/Ashland Street with Tolman Creek Road three of the existing left turn lanes do not have sufficient space to accommodate expected traffic queues during the 2038 PM peak hour without impacting other traffic. In the north and southbound directions, a two to three vehicle spillover into the through lane is expected for certain signal cycles during the PM peak hour. A more significant queuing problem occurs with the westbound left turn lane where queuing demand extends beyond available space in the designated left turn lane, spilling back

into a two-way left turn lane and impacting access to/from existing driveways, particularly along the south side of the street east of Tolman Creek Road.

Table 3. 2038 Baseline PM Peak Hour Intersection Traffic Queuing

Intersection	Movement	Existing Vehicle Storage	PM Peak Hour Vehicle Queue
Ashland Street at Walker Avenue[1]	EB Left	100 ft	75 ft
	WB Left	100 ft	72 ft
OR 66/Ashland Street at Tolman Creek Road[1]	NB Left	100 ft	156 ft
	SB Left	100 ft	154 ft
	EB Left[2]	185 ft	179 ft
	WB Left[3]	225 ft	366 ft

[1] Traffic queuing calculated using Synchro 8 traffic operations software.
[2] Existing storage space includes two-way left turn lane. EB left has only 185 feet to first driveway.
[3] Existing storage space includes two-way left turn lane. WB left has only 225 feet to first driveway.

4. FUTURE TRANSPORTATION ANALYSIS WITH NORMAL AVENUE NEIGHBORHOOD PLAN

4.1 2038 Build Traffic Volumes

Traffic forecasts for the Normal Avenue study area were developed for 2038 "build" conditions at the same six study area intersections and along key streets within the study area. Future year traffic volume forecasts were prepared using the following steps:

- Similar to the development of traffic forecasts for the 2038 baseline conditions, RVCOG and ODOT provided RVMPOv3.1 travel model output for daily and PM peak hour trips. This model run excluded growth in the Transportation Analysis Zones (TAZs) that represent the Normal Avenue Plan area. This allowed creation of a 2038 "Build" assignment to which project-generated traffic could be manually assigned for greater detail and sensitivity.
- The expected traffic growth from the Build condition model was post-processed using the procedures identified in Analysis Procedures Manual (APM) to develop non-project intersection level turning movement projections.
- Normal Avenue Plan trip generation estimates were prepared for AM and PM peak hours and daily conditions using the most recent ITE rates as appropriate for the assumed land use types. Two phases of development were evaluated. An internal trip capture reduction of 5 percent will be assumed and applied to all trips.
- Select zone loads were obtained for the two TAZs (#745 and 750) that cover the Normal Avenue study area. These were used to develop trip distribution assumptions to manually assign project traffic to the surrounding street system.
- AM, PM peak hour and daily project traffic for the two phases were assigned to the internal and surrounding street system to illustrate the potential growth in volumes that could occur on any give street segment during these time periods. These assignments were used in two ways. First to assess the level of traffic expected on internal roads to check consistency with classifications and proposed street cross-sections. Second, to form the base for developing future turning movement projections at the six study area intersections external to the site. For the latter, only PM peak hour volumes were used.

The following sections describe the development of trip generation analysis, document the distribution assumptions for project area trips, and present future traffic volumes for Phases 1 and 2.

4.1.1 *Normal Avenue Neighborhood Plan Trip Generation*

This section summarizes the process used to estimate future auto trips that would use the internal road system in the project area and would impact the surrounding six key study area intersections. Trip generation estimates were developed using rates for comparable land uses as published in the 9th Edition of the *"Trip Generation"* manual by the Institute of Transportation Engineers, an authoritative reference to the travel-making characteristics of a wide variety of land use types throughout the United State. The trip generation rates shown below in Table 4 were chosen as they represented the best fit for the types of land uses that are envisioned in the project area.

Table 4. Normal Avenue Trip Generation Rates

Plan Description	ITE Code	Land Use	Units	Daily		AM Peak		PM Peak	
				In	Out	In	Out	In	Out
NA-01	210	Single Family Residential	dus	4.76	4.76	0.19	0.56	0.63	0.37
NA-02/03	221	Low Density Multi-Family	dus	3.3	3.3	0.12	0.35	0.34	0.24

Source: Trip Generation, 9th Edition, Institute of Transportation Engineers, 2012.
Note: du means dwelling unit.

The trip generation rates illustrated in this table are expressed per individual dwelling unit. These rates are then multiplied by the total number of dwelling units for each land use type and adjusted to reflect the potential that some of the generated trips will remain within the neighborhood and not use the surrounding street system. Table 5 illustrates the total estimated trips for the Normal Avenue Neighborhood study area. A total of 973 daily trips (one-way) could be expected with build-out of Phase 1, with a further 578 daily trips (one-way) with build-out of Phase 2. A total of 1,551 one-way trips per day is estimated with build-out of the entire neighborhood plan.

Table 5. Normal Avenue Trip Generation Estimates

Plan Description	Land Use	Net Acres	Units per Acre	Dwelling Units	Daily		AM Peak		PM Peak	
					In	Out	In	Out	In	Out
Phase 1										
NA-01	Single Family Residential	1.47	5	7	35	35	1	4	5	3
NA-02	Low Density Multi-Family	14.65	10	147	482	482	17	52	48	35
NA-03	High Density Multi-Family	10.28	15	154	508	508	19	54	51	37
Sub-Totals		26.40		308	1,025	1,025	37	110	104	75
				Less Internal (5%)	*(52)*	*(52)*	*(2)*	*(6)*	*(4)*	*(3)*
				Net Trip Ends	**973**	**973**	**35**	**104**	**100**	**72**
Phase 2										
NA-01	Single Family Residential	11.73	5	59	280	280	10	33	37	21
NA-02	Low Density Multi-Family	5.89	10	59	193	193	7	20	20	15
NA-03	High Density Multi-Family	2.73	15	41	135	135	5	14	14	10
Sub-Totals		20.35		159	608	608	22	67	71	46
				Less Internal (5%)	*(30)*	*(30)*	*(0)*	*(2)*	*(3)*	*(2)*
				Net Trip Ends	**578**	**578**	**22**	**65**	**68**	**44**

The generated trips in Table 4 were further disaggregated into specific geographic sub-areas for use in developing a refined estimate of how traffic in the neighborhood would use the available street system. These sub-areas or Transportation Analysis Zones (TAZs) are illustrated in Figure 5. Trip generation estimates for each of the project area TAZs is presented in Appendix C.

4.1.2 *Normal Avenue Neighborhood Plan Trip Distribution*

The next step in the analysis process was to distribute project-related traffic for the two development phases to the internal and surrounding street system. This process was based on the directional distribution of traffic observed in the RVMPO travel demand model for the two analysis zones (#745 and #750) that constitute the Normal Avenue project area. Trip distribution calculations were conducted for each TAZ using the assumptions illustrated in Figure 6.

Using the trip estimates in Table 4 and the trip distribution assumptions in Figure 6, the potential growth in traffic volumes that could occur on any given street segment can be determined. This information will be used in two ways. First, to assess the level of traffic expected on internal roads to check consistency with street classifications and proposed street cross-sections. Second, to form the base for developing future turning movement projections at the six study area intersections external to the site. This information will then be used to determine the project's long-term impact and the potential need for mitigation.

4.1.3 *Phase 1 Traffic Volumes*

The estimates of growth in traffic volume for various street segments in the project area were used to prepare future (2038) PM peak hour turning movement projections at the six study area intersections. Figure 7 illustrates both the assumed land uses for Phase 1 of development and the internal street system expected to be in place. Generally, it is anticipated that the initial development in the Normal Avenue neighborhood will occur within the eastern portions of the property. As illustrated in Figure 7, access will be available both from Clay Street (via two east/west Neighborhood Streets) and from Main Street (via two north/south Neighborhood Streets and the northerly extension of Normal Avenue, a designated city avenue).

Figure 8 presents 2038 intersection turning movement projections for the PM peak hour including both 2038 background traffic growth and Phase 1 of development in the Normal Avenue project area.

4.2 Phase 1 Findings and Conclusions

4.2.1 *Intersection Operations Analysis Results*

Table 6 summarizes 2038 PM peak hour operational performance for study area intersections assuming build-out of Phase 1 of the Normal Avenue Plan. These results incorporate the intersection geometry and traffic control features illustrated in Figure 2 and the projected 2038 PM peak hour traffic volumes in Figure 8.

As indicated in Table 6, all study area intersections are expected to meet their applicable mobility standard. Detailed traffic operational worksheets can be found in Appendix D.

Table 6. 2038 Normal Avenue Plan Phase 1, PM Peak Hour Operations Analysis Summary

Intersection	Operating Standard	Traffic Control	Worst Movement	PM Peak Hour V/C [1]	PM Peak Hour Delay [2]	PM Peak Hour LOS [3]
Ashland Street at Walker Avenue	LOS D	Signal		0.61	16.0	B
Ashland Street at Normal Avenue	LOS E	Stop	SB	0.55	38.2	E
OR 66/Ashland Street at Tolman Creek Road	V/C= 0.95	Signal		0.98	55.8	E
E. Main Street at Walker Avenue	LOS E	Stop	NB	0.38	24.1	C
E. Main Street at Clay Street	LOS E	Stop	NB	0.36	23.2	C
E. Main Street at Tolman Creek Road	LOS E	Stop	NB	0.42	13.5	B

[1] Volume-to-Capacity ratio of a signalized intersection or Worst Movement of an unsignalized intersection.
[2] LOS = Level-Of-Service using 2000 Highway Capacity Manual (HCM) methodology.
[3] Average Control Delay for an entire signalized intersection or the worst movement of an unsignalized intersection.

4.2.2 *Traffic Queuing Analysis Results*

Table 7 summarizes 2038 PM peak hour traffic queuing analysis results for Phase 1 of the Normal Avenue Plan at the two signalized study area intersections. Worksheets are included in Appendix E.

Similar to the results from analysis of the 2038 PM peak baseline condition, queuing results for the signalized intersection of Ashland Street at Walker Avenue show that for both left turn movements (eastbound and westbound) along Ashland Street there is sufficient space to meet expected vehicle queuing demand. At the intersection of OR 66/Ashland Street with Tolman Creek Road three of the existing left turn lanes do not have sufficient space to accommodate expected traffic queues during the 2038 PM peak hour without impacting other traffic. In the north and southbound directions, a two to three vehicle spillover into the through lane is expected for certain signal cycles during the PM peak hour. A more significant queuing problem occurs with the westbound left turn lane where queuing demand extends beyond available space in the designated left turn lane, spilling back into a two-way left turn lane and impacting access to/from existing driveways, particularly along the south side of the street east of Tolman Creek Road.

Table 7. 2038 Normal Avenue Plan Phase 1, PM Peak Hour Intersection Traffic Queuing

Intersection	Movement	Existing Vehicle Storage	PM Peak Hour Vehicle Queue
Ashland Street at Walker Avenue[1]	EB Left	100 ft	82 ft.
	WB Left	100 ft	78 ft.
OR 66/Ashland Street at Tolman Creek Road[1]	NB Left	100 ft	173ft.
	SB Left	100 ft	181 ft.
	EB Left[2]	185 ft	149 ft.
	WB Left[3]	225 ft	321 ft.

[1] Traffic queuing calculated using Synchro 8 traffic operations software.
[2] Existing storage space includes two-way left turn lane. EB left has only 185 feet to first driveway.
[3] Existing storage space includes two-way left turn lane. WB left has only 225 feet to first driveway.

4.2.3 *Mitigation*

With Phase 1 development of the Normal Avenue Neighborhood Plan, the ODOT v/c standard for the intersection of Ashland Street with Tolman Creek Road will be exceeded. Mitigation of this impact could be accomplished with the addition of the northbound right turn lane at the intersection. This would

require acquisition of property on the southeast quadrant of the intersection which is currently used for on-site business parking. It should also be noted that this improvement would benefit existing crash experience at this intersection. Of the 22 crashes recorded from 2000 through 2011, six involved vehicles in the northbound through/right turn lane, and one of those was a rear-end collision between a vehicle turning right and one heading straight. Constructing a separate northbound right-turn lane could be expected to reduce rear-end collisions on the northbound approach and may reduce other collision types involving the northbound through and right-turn movements. Safety benefits associated with this proposed improvement are further discussed later in this report.

Table 8 summarizes expected traffic operational improvements with the addition of the proposed mitigation at the intersection of Ashland Street and Tolman Creek Road.

Table 8. 2038 Normal Avenue Plan Phase 1, PM Peak Hour Mitigation

Intersection	Operating Standard	Traffic Control	Worst Movement	PM Peak Hour V/C [1]	PM Peak Hour Delay [2]	PM Peak Hour LOS [3]
Ashland Street at Tolman Creek Road	V/C= 0.95	Signal		0.89	39.3	D

[1] Volume-to-Capacity ratio of a signalized intersection.
[2] LOS = Level-Of-Service using 2000 Highway Capacity Manual (HCM) methodology.
[3] Average Control Delay for an entire signalized intersection or the worst movement of an unsignalized intersection.

4.2.4 *Evaluation of Internal Streets*

Figures 2, 11 and 12 illustrate the internal street, bicycle and pedestrian systems for the Normal Avenue Neighborhood Plan. As indicated in Figure 2, the internal street system follows an hierarchical structure which uses Normal Avenue as its primary backbone. Normal Avenue would ultimately run north/south, connecting Main Street on the north with Ashland Street on the south. This connection would require approval of a public railroad crossing of the existing CORP rail line.

Normal Avenue is supported by a system of Neighborhood Streets, running both north/south (generally parallel to Normal Avenue) and east/west (connecting Normal Avenue to various subareas in the development and to individual properties). In addition to neighborhood streets, there is also a system of alleyways or "rear lanes" providing back access to properties fronting on public open space, and woonerfs that provide for mixed mode travel with no separation between cars, pedestrians and bicyclists. Woonerfs originated in The Netherlands and are referred to as "living streets" where pedestrians and cyclists have legal priority over motorists with a goal of calming and reducing speeds.

As shown in Figure 11, the bicycle network in the Plan area includes streets with bike lanes (primarily Main Street adjacent to the project), streets without bike lanes (including Normal Avenue and the neighborhood street system), woonerfs, multi-use paths, and the Ashland Central Bike Path. The pedestrian system shown in Figure 12 includes an extensive system of streets with adjacent sidewalks, woonerfs, multi-use paths and the Ashland Central Bike Path. It should be noted that these two figures show the bicycle and pedestrian systems at full build-out. With Phase 1 development, improvements would be largely confined to the eastern portion of the Plan area (see Figure 7).

The Ashland Transportation System Plan designates Normal Avenue as a City Avenue in its functionally classified hierarchy of streets. The City's *"Handbook for Planning and Designing Streets"* defines an Avenue as a street that provides *"concentrated pedestrian, bicycle, transit and motor vehicle access from neighborhoods to neighborhood activity centers and boulevards. Avenues are similar to boulevards, but are designed on a smaller scale... A 2-lane or 3-lane configuration can be used depending on the number*

of trips generated by surrounding existing and future land uses." Avenues are expected to carry between 3,000 and 10,000 daily vehicle trips, speeds would be controlled to 20-25 mph, and bike lanes, on-street parking, planting strips and sidewalks would all be provided.

Traffic volumes for daily and PM peak hourly conditions with Phase 1 development were estimated for Normal Avenue south of Main Street, where the maximum traffic volume on this facility is expected to occur. Traffic volume estimates were based on the trip generation and trip assignment process described above, resulting in an estimate of approximately 90 vehicles during the PM peak hour. Review of travel model output indicates that there would be little demand for cut-through traffic movement on Normal Avenue between Ashland and Main Streets, thus minimizing non-project traffic on the plan area street system if and when a continuous Normal Avenue connection might be made. Approximately 1,000 vehicles were estimated on a daily basis at this same location, representing a low end for the Avenue street classification. Consideration should be given to reclassifying this street as a Neighborhood Collector between Ashland and Main Streets. This classification has a recommended service volume of 1,500 to 5,000 vehicles per day.

It should be noted that the Plan does not propose that bike lanes be included on Normal Avenue which is inconsistent with its existing functional designation, but generally acceptable given the low traffic volumes that this street is expected to carry. A reclassification of the street from Avenue to Neighborhood Collector would eliminate this inconsistency. City standards state that *"bicycle Lanes should be provided on streets designated as neighborhood collectors when the average daily traffic is over 3000, and/or when actual travel speeds exceed 25 mph"*. Since Phase 1 (and full build-out volumes as described later in this report) would generate less than 3,000 vehicles per day along Normal Avenue, consistency with the Neighborhood Collector classification could be achieved. Street design should encourage travel speeds of 25 mph or less.

The proposed multi-use path connection along the east side of an existing street from Normal Avenue to the north edge of the project area will ultimately provide access to the Bear Creek Greenway. When complete, the Greenway will connect to many destinations in central Jackson County. The presence of sidewalks and trails throughout the development provide for convenient and safe pedestrian movement, linking to destinations within the Plan area, as well as outside.

4.2.5 *Access Management Considerations*

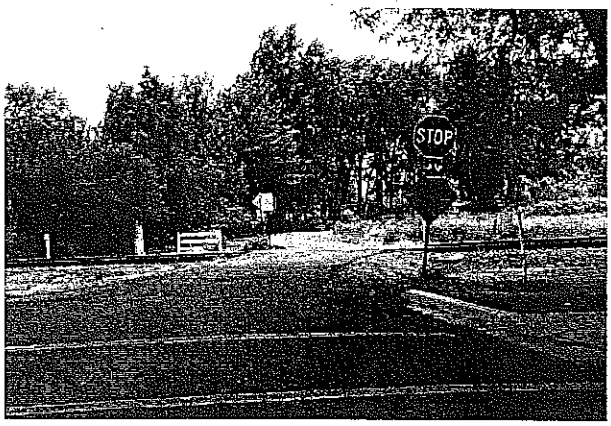
As noted in the TSP, spacing requirements for public roadways and private driveways can have a profound impact on transportation system operations, safety and land development. Access management strategies and implementation require careful consideration to balance the needs for access to developed land with the need to ensure movement of traffic in a safe and efficient manner. Access management generally becomes more stringent as the functional classification level of roadways increases and the corresponding importance of mobility increase.

The City of Ashland has a minimum driveway access spacing of 300 feet for boulevards like Ashland and East Main Streets, 100 feet for avenues like Walker Avenue, Clay Street and Tolman Creek Road, and 75 feet for lower order streets such as those that could be developed internal to the Normal Avenue Neighborhood Plan area. OR 66 east of Tolman Creek Road is under ODOT jurisdiction and state highway access spacing standards apply. ODOT and the City of Ashland have an agreement that OR 66 within the city limits is subject to the minimum spacing standards typically applied to District Highways. OR 66 within the City is subject to a minimum access spacing standard of 300 feet. The public roadway spacing standards is 1 mile for boulevards and ¼ mile for avenues. The City currently does not have minimum public roadway spacing standards for neighborhood collectors or neighborhood streets.

The proposed alignment of Normal Avenue through the Plan area is largely consistent with the ¼ mile (1,320 feet) spacing standard for avenues in relation to the existing alignment of Clay Street which is also a designated avenue. The exception would be at the north end near Main Street where Normal Avenue makes a transition eastward as it approaches Main Street to avoid wetlands and minimize impact to an existing stream. At its proposed Main Street intersection, Normal Avenue would be approximately 1,000 feet west of Clay Street. Neighborhood streets are located roughly 300 to 500 feet apart and are supported by woonerfs and rear lanes.

As development plans for the project area become more refined it will be important to ensure that there is adequate spacing between the proposed Normal Avenue intersection with Main Street and the neighborhood street intersection proposed immediately to the east. As shown currently in Figure 2, there is less than 300 feet between these two intersections. A minimum spacing of 300 feet is recommended. Additionally it will be important that adequate intersection and stopping sight distance is provided at each intersection onto Main Street. Consideration should be given to reviewing existing sight distance at the intersection of Main Street with Clay Street to ensure that appropriate distance is available to maximize safety.

4.2.6 *Railroad Crossing*



The existing road crossing of the CORP tracks at Normal Avenue is a stop-controlled, private crossing intended to serve a limited number of single family homes on large lots. In order to connect Normal Avenue as a public street between the Plan area and Ashland Street, a formal rail crossing permit application must be submitted and approved. If approved, then it is likely that enhanced rail crossing protection devices will be required and must be installed as a part of the public street improvement project. This is an expensive undertaking as it is likely that crossing gates with flashers and warning devices would be required. As a part of the Normal Avenue Plan future traffic conditions analysis, the need for a Normal Avenue extension including upgraded rail crossing was evaluated.

The primary factors considered in this evaluation focused on whether there would be a significant degradation of traffic operations along Main or Clay Streets, or at any of the study area intersections that could be avoided by making the proposed road extension. The results of PM peak hour intersection traffic operations analysis indicates that, with one exception, all study area intersections would operate acceptably without the improved rail crossing and Normal Avenue street connection in place. The exception is at the intersection of Ashland Street with Tolman Creek Road where the addition of project development is expected to cause the ODOT performance standard to be exceeded. A redistribution of project traffic to/from this location via a new Normal Avenue extension makes no substantive difference in the overall operating performance of this intersection. Accordingly, developing a public rail crossing as a traffic impact mitigation measure is not necessary. However, it may be desirable to ultimately improve this crossing and connect Normal Avenue to the south to provide for additional circulation connectivity. In the interim, the viability of adding a bicycle and pedestrian connection across the railroad at this location should be explored.

4.3 Phase 2 Findings and Conclusions

Figure 9 illustrates both the assumed land uses for Phase 2 of development and the internal street system expected to be in place. Generally, it is anticipated that build-out of the Normal Avenue neighborhood will occur within the western and southern portions of the property. As illustrated in Figure 9, access will be available both from Clay Street (via two east/west Neighborhood Streets) and from Main Street (via three north/south Neighborhood Streets and the northerly extension of Normal Avenue, a designated city avenue). If a public crossing of the existing CORP rail line is permitted and constructed, access would also be available to/from the south via an improved Normal Avenue connection.

Figure 10 presents 2038 intersection turning movement projections for the PM peak hour including 2038 background traffic growth and both phases of development in the Normal Avenue project area.

4.3.1 *Intersection Operations Analysis Results*

Synchro 8 software was used to evaluate the performance of both signalized and unsignalized intersections in the study area. Table 9 summarizes 2038 PM peak hour operational performance for study area intersections assuming build-out of both Phases 1 and 2 of the Normal Avenue Plan. These results incorporate the intersection geometry and traffic control features illustrated in Figure 2 (with the addition Normal Avenue and other local street connections to Main Street) and the projected 2038 PM peak hour traffic volumes in Figure 10.

As indicated in Table 9, all study area intersections are expected to meet their applicable mobility standard. Detailed traffic operational worksheets can be found in Appendix F.

Table 9. 2038 Normal Avenue Plan Phase 2, PM Peak Hour Operations Analysis Summary

Intersection	Operating Standard	Traffic Control	Worst Movement	PM Peak Hour V/C [1]	PM Peak Hour Delay [2]	PM Peak Hour LOS [3]
Ashland Street at Walker Avenue	LOS D	Signal		0.63	17.0	B
Ashland Street at Normal Avenue	LOS E	Stop	SB	0.55	38.3	E
OR 66/Ashland Street at Tolman Creek Road	V/C= 0.95	Signal		0.99	58.7	E
E. Main Street at Walker Avenue	LOS E	Stop	NB	0.41	25.3	D
E. Main Street at Clay Street	LOS E	Stop	NB	0.39	25.1	D
E. Main Street at Tolman Creek Road	LOS E	Stop	NB	0.46	14.2	B

[1] Volume-to-Capacity ratio of a signalized intersection or Worst Movement of an unsignalized intersection.
[2] LOS = Level-Of-Service using 2000 Highway Capacity Manual (HCM) methodology.
[3] Average Control Delay for an entire signalized intersection or the worst movement of an unsignalized intersection.

4.3.2 *Traffic Queuing Analysis Results*

Table 10 summarizes 2038 PM peak hour traffic queuing analysis results for Phase 2 of the Normal Avenue Plan at the two signalized study area intersections. Worksheets are included in Appendix G.

Similar to the results from analysis of the 2038 PM peak baseline condition, queuing results for the signalized intersection of Ashland Street at Walker Avenue show that for both left turn movements (eastbound and westbound) along Ashland Street there is sufficient space to meet expected vehicle queuing demand. At the intersection of OR 66/Ashland Street with Tolman Creek Road none of the existing left turn lanes has sufficient space to accommodate expected traffic queues during the 2038 PM peak hour without impacting other traffic. In the north, south and eastbound directions, a two to three

vehicle spillover into the through lane is expected for certain signal cycles during the PM peak hour. A more significant queuing problem occurs with the westbound left turn lane where queuing demand extends beyond available space in the designated left turn lane, spilling back into a two-way left turn lane and impacting access to/from existing driveways, particularly along the south side of the street east of Tolman Creek Road.

Table 10. 2038 Normal Avenue Plan Phase 2, PM Peak Hour Intersection Traffic Queuing

Intersection	Movement	Existing Vehicle Storage	PM Peak Hour Vehicle Queue
Ashland Street at Walker Avenue[1]	EB Left	100 ft	90 ft.
	WB Left	100 ft	78 ft.
OR 66/Ashland Street at Tolman Creek Road[1]	NB Left	100 ft	166 ft.
	SB Left	100 ft	192 ft.
	EB Left[2]	185 ft	190 ft.
	WB Left[3]	225 ft	321 ft.

[1] Traffic queuing calculated using Synchro 8 traffic operations software.
[2] Existing storage space includes two-way left turn lane. EB left has only 185 feet to first driveway.
[3] Existing storage space includes two-way left turn lane. WB left has only 225 feet to first driveway.

4.3.3 *Mitigation*

With build-out of Phases 1 and 2 of the Normal Avenue Neighborhood Plan, the ODOT v/c standard for the intersection of Ashland Street with Tolman Creek Road will be exceeded. Mitigation of this impact could be accomplished with the addition of the northbound right turn lane at the intersection. This would require acquisition of property on the southeast quadrant of the intersection which is currently used for on-site business parking. Table 11 summarizes expected traffic operational improvements with the addition of the proposed mitigation at the intersection of Ashland Street and Tolman Creek Road.

Table 11. 2038 Normal Avenue Plan Phase 2, PM Peak Hour Mitigation

Intersection	Operating Standard	Traffic Control	Worst Movement	PM Peak Hour V/C [1]	PM Peak Hour Delay [2]	PM Peak Hour LOS [3]
Ashland Street at Tolman Creek Road	V/C= 0.95	Signal		0.89	40.0	D

[1] Volume-to-Capacity ratio of a signalized intersection.
[2] LOS = Level-Of-Service using 2000 Highway Capacity Manual (HCM) methodology.
[3] Average Control Delay for an entire signalized intersection or the worst movement of an unsignalized intersection.

4.3.4 *Evaluation of Internal Streets*

Full build-out of the Plan area would occur with Phase 2 development. This development is largely focused on the western portion of the study area (see Figure 9 for the additional streets that would serve Phase 2 land development).

Traffic volumes for daily and PM peak hourly conditions with both Phases 1 and 2 were estimated for Normal Avenue south of Main Street. Based on the estimate of trip-making with this additional development, an estimate of approximately 110 vehicles during the PM peak hour would use Normal Avenue near Main Street. This equates to approximately 1,200 daily vehicles at the same location, representing a low end for the Avenue street classification. It should also be noted that the Normal Avenue Neighborhood Plan does not propose that bike lanes be included on Normal Avenue which is inconsistent with its functional designation, but generally acceptable given the low traffic volumes that this street is expected to carry. However, as discussed under the evaluation of Phase 1 traffic,

reclassification of Normal Avenue as a Neighborhood Collector should be considered. This reclassification would be consistent with the daily traffic volumes projected for the street and would not require bicycle lanes.

A proposed multi-use path provides necessary connections to/from the schools located west of the project area along Walker Avenue, offering a safer and more pleasant travel route for young people than using the proposed Main Street bike lanes. The presence of sidewalks and trails throughout the development provide for convenient and safe pedestrian movement, linking to destinations within the Plan area, as well as outside.

4.3.5 *Access Management*

With development of the Phase 2 street system another neighborhood street connection to Main Street is proposed at the western edge of the project area. Based on the street alignment illustrated in Figure 2, there does not appear to be any spacing conflicts with other nearby street connections including both Walker Avenue to the west and Normal Avenue to the east. As development plans for this area become more refined it will be important to ensure that adequate intersection and stopping sight distance is provided at Main Street.

4.3.6 *Railroad Crossing*

The findings, conclusions and recommendations presented under the Phase 1 discussion would not change with the addition of Phase 2 traffic.

5. MULTIMODAL LEVEL OF SERVICE ANALYSIS

This section summarizes a qualitative multimodal level of service analysis that was conducted for the streets in the study area based on procedures recently developed by ODOT[3]. This analysis differs from the quantitative assessment conducted for the City's Transportation System Plan and updated for the Normal Avenue Plan existing conditions analysis. For the qualitative analysis data was collected to gain an understanding of both the existing and proposed multimodal transportation system and its performance for pedestrians, bicyclists, transit users and motorists.

The results of multimodal level of service analysis for roadway segments is shown in Table 12 and summarized below. Analysis results for intersections is shown in Table 13, and back-up documentation of data used in both assessments is included in Appendix I. In addition to this analysis, it should be noted that the City's Central Bike Path runs east/west through the project area along the south side of the existing CORP rail tracks between Tolman Creek Road and A Street. This path is a significant component of the City's non-motorized transportation system, connecting the Normal Avenue Neighborhood to the broader community and significantly enhancing opportunities for the use of active transportation modes in the study area.

As indicated in Table 12, existing pedestrian facilities vary considerably throughout the study area ranging from excellent along Walker Avenue in the vicinity of the existing schools to very poor along Main Street where is there is limited shoulder space and relatively high speeds. Bicycle facilities also vary considerably throughout the study area ranging from poor on Main and Clay Streets where no facilities are present and shoulder widths are narrow, to excellent along the northern part of Walker Avenue where there are existing bicycle lanes. Transit service is currently provided only along Ashland

[3] Oregon Department of Transportation, *"Qualitative Multimodal Level of Service Supplement"*, January 2013.

Street and Tolman Creek Road (RVTD Route 10). Service is provided on a half-hourly basis and transit amenities are minimal. Pedestrian access along Ashland Street is very good, but limited along Tolman Creek Road. Overall the transit level of service was rated as fair. Auto levels of service are largely derived from the intersection traffic operations analysis that is documented earlier in this report. Generally, operations are good except for the intersection of Ashland Street with Tolman Creek Road where growing traffic volumes will cause LOS to significantly degrade over time.

With development of the Normal Avenue Neighborhood Plan, it is anticipated that urban scale improvements would be made to Main Street. Consistent with the Boulevard designation in the City's *"Handbook for Planning and Designing Streets"* it is anticipated that Main Street would be constructed to include: two 11-foot travel lanes, one 12-foot median, two 6-foot bike lanes, two 5 to 8-foot planting strips on either side of the street to buffer the sidewalk from vehicular traffic, and two 6 to 10-foot sidewalks. It is also anticipated that the City will seek a speed reduction from the existing 40 mph designation to a 25 to 30 mph range consistent with the City's street standards. These changes would improve the multimodal LOS analysis results for Main Street for bicycle and pedestrian facilities to excellent. A more detailed discussion of the rating process and results is presented on the following pages.

Table 12. Summary of Qualitative Multimodal Level of Service Analysis for Street Segments

Street Segments	Travel Mode			
	Pedestrian	Bicycle	Transit	Auto
Existing and 2038 Baseline				
Ashland Street				
Walker Avenue to Tolman Ck Road	Fair	Good	Fair	Good [1]
Main Street				
Walker Avenue to Tolman Ck Road	Very Poor	Poor	N/A	Excellent
Walker Avenue				
Main Street to Iowa Street	Excellent	Excellent	N/A	Excellent
Iowa Street to Ashland Street	Good	Good	N/A	Excellent
Clay Street				
Main Street to Ashland Street	Fair	Poor	N/A	Good [2]
Tolman Creek Road				
Main Street to Ashland Street	Good	Good	N/A	Good [1]
2038 with Neighborhood Plan				
Ashland Street				
Walker Avenue to Tolman Ck Road	Fair	Good	Fair	Good [1]
Main Street				
Walker Avenue to Tolman Ck Road	**Excellent**	**Excellent**	N/A	Excellent
Walker Avenue				
Main Street to Iowa Street	Excellent	Excellent	N/A	Excellent
Iowa Street to Ashland Street	Good	Good	N/A	Excellent
Clay Street				
Main Street to Ashland Street	Fair	Poor	N/A	Good [2]
Tolman Creek Road				
Main Street to Ashland Street	Good	Good	N/A	Good [1]

[1] Significant congestion at intersection of Ashland Street and Tolman Creek Road. Intersection also exceeds signalized critical crash rate.

[2] No crash data but perception of hazard on Clay at Main due to speed.

Table 13 presents a summary of the results of qualitative multimodal level of service analysis for intersections. As indicated in the table, existing pedestrian and bicycle crossings of side streets along Ashland Street are rated as Good due to existing traffic control and the presence of crosswalks. Existing crossings of side streets along Main Street are rated as Good at Walker Avenue and the future Normal Avenue due to the presence (or likely future presence) of stop-sign traffic control and crosswalks. The intersections with Clay Street and Tolman Creek Road were rated as Fair due to the lack of crosswalks.

Crossings of Ashland Street were rated as Fair at Walker Avenue and Tolman Creek Road due to the presence of traffic signal control with pedestrian buttons and signal heads (which is positive) and the long crossing distance (which is negative). Crossings of Ashland Street at Normal Avenue and Clay Street were rated as Poor since there are no traffic control devices, crosswalks or median refuges.

Table 13. Summary of Qualitative Multimodal Level of Service Analysis for Intersections

	Along Ashland Street at Side Street Crossings of:			
Travel Mode	**Walker**	**Normal**	**Clay**	**Tolman Creek**
	Existing and 2038 Baseline			
Pedestrian Facilities	Good	Good	Good	Good
Bicycle Facilities	Good	Good	Good	Good
	2038 with Neighborhood Plan			
Pedestrian Facilities	Good	Good	Good	Good
Bicycle Facilities	Good	Good	Good	Good
	Along Main Street at Side Street Crossings of:			
	Walker	**Normal**	**Clay**	**Tolman Creek**
	Existing and 2038 Baseline			
Pedestrian Facilities	Good	N/A	Fair	Fair
Bicycle Facilities	Good	N/A	Fair	Fair
	2038 with Neighborhood Plan			
Pedestrian Facilities	Good	Good	Fair	Fair
Bicycle Facilities	Good	Good	Fair	Fair
	Crossings of Ashland Street at:			
	Walker	**Normal**	**Clay**	**Tolman Creek**
	Existing and 2038 Baseline			
Pedestrian Facilities	Fair	Poor	Poor	Fair
Bicycle Facilities	Fair	Poor	Poor	Fair
	2038 with Neighborhood Plan			
Pedestrian Facilities	Fair	Poor	Poor	Fair
Bicycle Facilities	Fair	Poor	Poor	Fair

5.1 Data Sources

For the Ashland Street, Main Street and Tolman Creek Road segments, the data was taken exclusively appendices and support memoranda prepared for the recently adopted Transportation System Plan (TSP). This data was spot checked on Google Earth to ensure that it was both current and accurate. Data was updated where necessary.

For the Clay Street and Walker Avenue segments, Google Earth and other resources were used to determine the values needed to populate the tables. The TSP indicated that there is no transit on these

roads and this was confirmed b a check on the RVTD website. To determine pavement conditions, the pavement as viewed on Google Earth supplemented by photos of roadway segments earlier in the project, was compared to locations where a pavement rating was provided. Where pavement condition seemed similar based on visual inspection, a location was scored the same as the other roadways. It should be noted that all of the roadways with a pavement rating in the TSP had the same score.

For the intersection table, crossing width was assumed to be the number of lanes on the cross street. The analysis addresses both travel along Ashland and Main Streets, as well as crossings of Ashland Street.

5.2 Determining the Multimodal Assessment for Segments

5.2.1 *Pedestrian System*

Factors incorporated into the evaluation were abstracted from ODOT qualitative multimodal level of service guidance and include the following:

- *"Outside travel lane width: Wider travel lanes are rated better than narrower travel lanes because of the increased separation between pedestrians and motorized vehicles.*
- *Bicycle lane/shoulder width: The presence of bicycle lanes or shoulders creates a buffer between traffic and wider facilities are rated better than narrower or nonexistent facilities.*
- *Presence of buffers (landscape or other): The presence of buffers that separate pedestrians from traffic result in an improved rating. Wider buffers are rated better than narrower or nonexistent buffers.*
- *Sidewalk/path presence and effective width: The presence of sidewalks/paths versus shoulders or no facilities is a significant consideration with wider facilities rated better than narrow or nonexistent facilities.*
- *Volume and speed of motorized traffic in the adjacent travel lane: The speed and volume of motorized traffic in the adjacent travel lane affect the pedestrian experience with lower volumes and slower travel speeds rated better than higher volumes and faster travel speeds."*

Evaluation findings and conclusions:

- Ashland Street – was given a score of Fair because it has sidewalks with bike lane/shoulder to serve as a buffer but no planter buffer and fairly high vehicle volumes and speeds in the outside lane.
- Main Street – was given a score of Very Poor because it has no sidewalks and very little shoulder space with high speeds and volumes. With the Normal Avenue Neighborhood Plan, pedestrian amenities would be significantly improved along Main Street resulting in an excellent rating.
- Walker Avenue (Main to Iowa) – was given a valuation of Excellent because it has sidewalks, bike/shoulder space and some areas with planter buffers. It also has low speeds.
- Walker Avenue (Iowa to Ashland) – was given a score of Good because it has sidewalks with bike /shoulder space and low speeds. It did not receive an excellent because the southbound sidewalk/path is an unimproved area that has been turned into a trail by common usage.
- Clay Street – was given an assessment of Fair because it has partial sidewalks with planter buffer and low speeds, but it also has areas without sidewalks and has only partial (and narrow) bike/shoulder width.
- Tolman Creek Road – was given a valuation of Good because it has a southbound sidewalk and decent bicycle/shoulder space in both directions along with relatively low speeds. However, it

does not provide a northbound sidewalk or path area along much of the length of this roadway. However, the portions of the road without sidewalks are currently undeveloped which mitigated the overall rating given to the road.

5.2.2 *Bicycle System*

Factors incorporated into the evaluation included:

- *"Bicycle lane presence and effective width: The presence of bike lanes is a significant consideration, with wider facilities rated better than narrow or nonexistent facilities.*
- *Shoulder presence and width: Shoulders serve bicyclists in the absence of bike lanes, and wider facilities are rated better than narrower or nonexistent facilities.*
- *Outside travel lane width: Wider outside travel lanes are rated better than narrower travel lanes because of the increased separation between bicyclists and motorized vehicles.*
- *Pavement Condition: Poor pavement conditions or obstacles such as sewer grates affect the bicycling experience with good quality pavement rated better than poor pavement conditions.*
- *On Street Parking: The presence and utilization of on-street parking affects the bicyclist experience, with no parking or low utilization rated better than high utilization and turnover rates.*
- *Volume, type, and speed of motorized traffic in the adjacent travel lane: The volume and type of motorized vehicles (i.e., more or less large trucks) in the adjacent travel lane affect the bicycling experience as do travel speeds. Conditions with lower volumes, fewer trucks, and slower travel speeds are rated better than higher volumes, more trucks, and faster travel speeds."*

Evaluation findings and conclusions:

- Ashland Street – received a score of Good because it had 6-foot bike lanes with wide outside travel lanes, a good pavement score and very low truck percentage. It does not score as excellent because it has fairly high vehicle volumes and speeds.
- Main Street – received a score of Poor because it has no official bike lanes (only a relatively narrow shoulder), moderate vehicle volumes and relatively high speeds. It also has a high truck percentage (7 percent). It did not warrant a Very Poor designation because there are 4-foot shoulders and fairly wide travel lanes, with a good pavement conditions. With the Normal Avenue Neighborhood Plan, bicycle amenities would be significantly improved along Main Street resulting in an excellent rating.
- Walker Avenue (Main to Iowa) – was given an assessment of Excellent because it has bike lanes, low travel speeds, and good pavement conditions.
- Walker Avenue (Iowa to Ashland) – was given a score of Good because it has bike lanes, low travel speeds and good pavement condition, but has heavily utilized on-street parking along the west side of the street.
- Clay Street – this received an assessment of Poor because it has no bike lanes and does have areas of on street parking that conflict with bike movement, as well as areas with little or no paved shoulder space. However, it does have low travel speeds and some areas with shoulders.
- Tolman Creek Road – was given a score of Good because it has 6-foot bike lanes with low travel speeds and a low truck percentage with a good pavement condition. The volume is fairly high, which kept it from being assessed as excellent.

5.2.3 *Transit System*

Factors incorporated into the evaluation included:

- *"Service frequency and reliability: Shorter headways and arrival reliability are rated better than longer headways and unreliable arrival times.*
- *Bus speed/travel times: Faster average speeds and shorter travel times are rated better than slower speeds and longer travel times.*
- *Bus stop features: The presence of shelters, benches, and lighting is rated better than stops with no amenities.*
- *Pedestrian network: The quality of the pedestrian facilities serving transit stops affects the transit user's experiences. Bus stops connected to a network of streets with sidewalks are rated better than those with no pedestrian facilities."*

Within the study area only Ashland Street and Tolman Creek Road currently have transit service. Based on the data from the TSP (and verified on RVTD's website), the transit service on each street appears essentially the same and is provided on half-hourly headways. Most stops are designated by signs only, although there is a shelter with bench on the east (northbound) side of Tolman Creek Road at Abbott Street with a crosswalk to connect it with the residential development on the west side of the street. Service is provided on a half-hourly basis. Existing transit service was rated as Fair.

Main, Walker and Clay have no transit service and, accordingly, were not evaluated.

5.2.4 *Auto System*

Factors incorporated into the evaluation included:

- *"Volume-to-capacity (v/c) ratios: The prime consideration for the auto mode is based on the quantitative evaluation of demand (volume) versus roadway capacity with lower v/c ratios rated better than higher v/c ratios.*
- *Delay: Primarily considered at unsignalized locations with high side-street delays, shorter delays are rated better than longer delays.*
- *Safety: Roadway conditions that provide for a decreased likelihood of crashes were rated better than conditions with an increased likelihood of crashes."*

Generally, traffic operations within the study area range from good to excellent with minimal delays and no significant safety problems. One exception is the intersection of Ashland Street with Tolman Creek Road which currently exceeds the citywide critical crash rate for signalized intersections. While existing traffic levels of service (expressed as volume-to-capacity ratios and average vehicle delay) are good, the Ashland/Tolman intersection will worsen substantially in the future and exceed the ODOT operational standard.

5.3 Determining the Multimodal Assessment for Intersections

Multimodal level of service evaluation at intersections focused largely on pedestrian and bicycle movement. Key factors that were incorporated into the evaluation include: the presence and type of traffic control, crossing width and whether a median island was present to serve as a refuge. Each of these criteria was assessed as follows:

5.3.1 *Pedestrian Facilities*

Factors incorporated into the evaluation included:

- *"Traffic control: The presence of a traffic signal or all-way STOP control stops pedestrians by stopping traffic. Intersections with a traffic signal or all-way STOP control with crosswalks are rated better than locations with only two-way STOP control, and/or locations without crosswalks.*
- *Crossing width: The number of approach lanes at an intersection determines the amount of pedestrian exposure and the intersection crossing time. Fewer travel lanes to be crossed is rated better than more travel lanes because it reduces pedestrian exposure and crossing time.*
- *Median islands: The presence of a median island is rated better than no islands because it reduces crossing time and allows two-stage crossings at unsignalized locations."*

Evaluation findings and conclusions:

- Crossings of Side Streets along Ashland Street – Generally rated as Good as all locations include either signals or side-street stop signs which require traffic to stop before proceeding. Both types of traffic control devices provide protection for pedestrian crossings. Additionally, all intersections along Ashland Street presently include crosswalks.
- Crossings of Side Streets along Main Street – Generally rated as Good at Walker Avenue which includes a side-street stop sign and a crosswalk. Generally Fair at Clay and Tolman Creek Road since there are stop signs but there are no existing crosswalks. In the future when Normal Avenue is extended to intersect with Main Street, it is assumed that this location will be stop controlled with a crosswalk. Accordingly, it is given a Good rating.
- Crossings of Ashland Street – The crossings of Ashland Street at both Walker Avenue and Tolman Creek Road are controlled by traffic signals which provide a relatively safe pedestrian environment. However the crossing distance is long (five vehicular travel lanes plus bicycle lanes which resulted in an overall rating of Fair. The crossings at Normal Avenue and Clay Streets have no protection or pedestrian refuge. Accordingly, they are rated as Poor.

5.3.2 *Bicycle Facilities*

Factors incorporated into the evaluation included:

- *"Traffic control: The presence of a traffic signal or all-way STOP control benefits bicyclists trying to cross the major roadway by stopping traffic. Signalized or all-way STOP traffic control is rated better than crossings with only two-way STOP control.*
- *Crossing width: Fewer travel lanes to be crossed is rated better than more travel lanes because it reduces bicyclist exposure and crossing time. "*

Since the evaluation factors for bicycle crossings are virtually the same as for pedestrians, the results are also the same.

6. SAFETY ANALYSIS

This section focuses on an assessment of potential crash reductions that could be associated with proposed intersection or roadway segment improvements on the street system surrounding the Plan area where existing crash data is available. The assessment included the following steps: collecting relevant data for segments and intersections, evaluating potential improvements for their crash reduction capabilities, and preparing a summary of analysis results. As requested by the City, all Crash Modification Factors (CMFs) are given a star rating of 3 or better from the Highway Safety Manual (HSM) CMF Clearinghouse. Traffic volumes and other parameters used in this analysis are consistent with the

remainder of the described in either this analysis or the previously documented existing conditions analysis.

Within the study area, only the intersection of Ashland Street (OR 66) with Tolman Creek Road has been identified as having a collision history that exceeds the City's critical crash rate for signalized locations. This is also the only intersection predicted to experience capacity-related deficiency based on the 2038 PM peak hour analysis with Phase 1 or Phase 2 traffic.

Based on the analysis described previously in this report, construction of a northbound to eastbound right turn lane is proposed for this location to mitigate the adverse traffic impact. This improvement will allow the intersection to operate at an acceptable level of service through the 2038 analysis horizon year. The improvement will also offer some geometric benefit to help ameliorate the elevated crash rate observed over the last twelve years (2000 through 2011).

Review of the crash history presented in the Normal Avenue Neighborhood Plan *"Existing Traffic Conditions Report"* identified the following trends at the OR 66/Tolman Creek Road intersection:

- Crashes tend to be rear end, angle or turning collisions.
- The majority of rear end crashes occurred when motorists failed to stop or were following too close to the vehicle in front of them.
- The majority of turning crashes occurred when motorists turned from the wrong lane.
- The majority of angle crashes occurred when motorists disregarded the traffic signal control and/or were distracted or inattentive.

Of the 22 crashes recorded from 2000 through 2011[4], six involved vehicles in the northbound through-right lane, and one of those was a rear end collision between a vehicle turning right and one heading straight. Constructing a separate northbound right-turn lane at this location could be expected to reduce rear-end collisions on the northbound approach and may reduce other collision types involving the northbound through and right-turn movements.

6.1 Crash Modification Factor Analysis

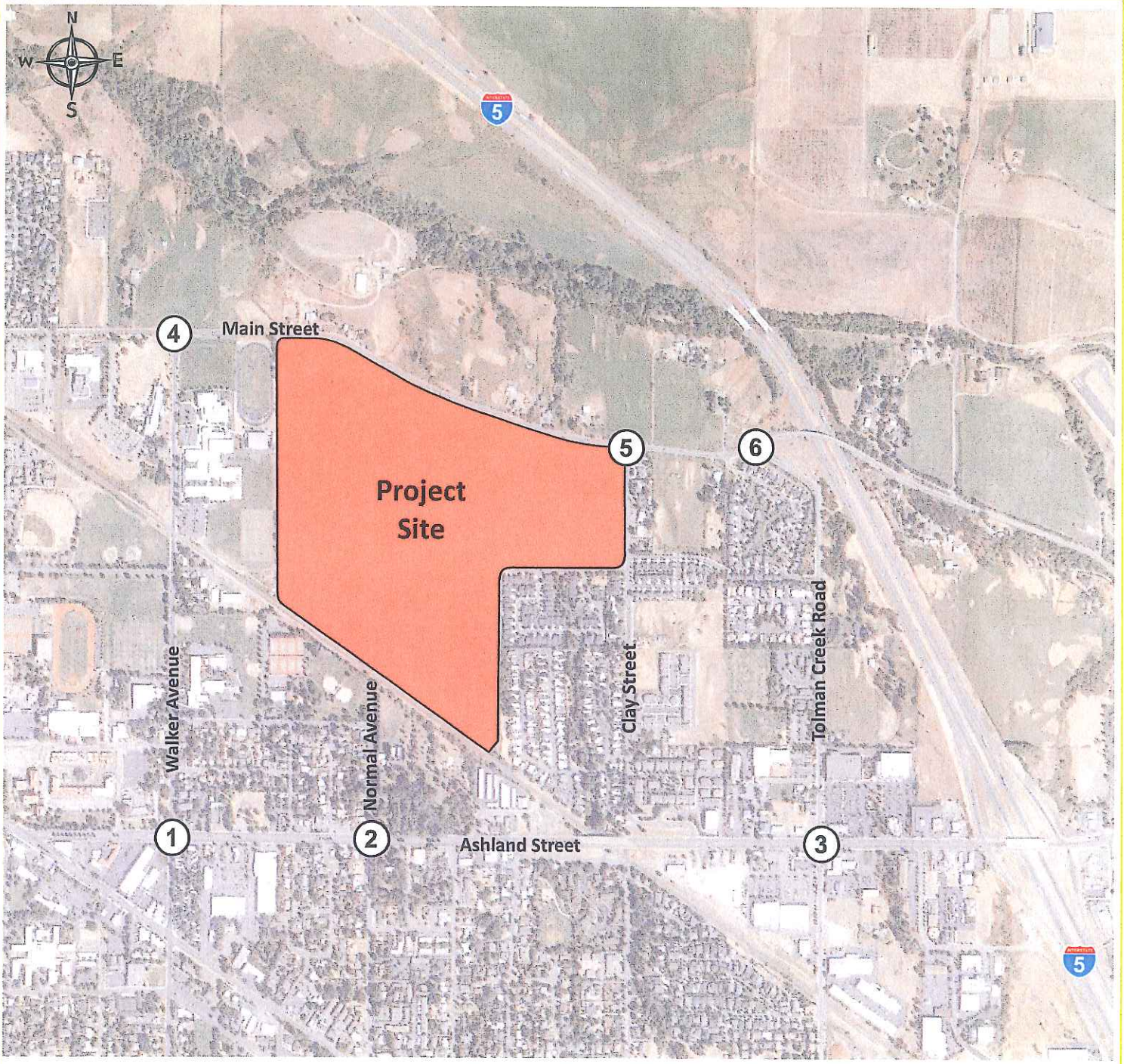
The HSM has published data that summarizes the effect of certain roadway conditions on crash rates. The report provides a listing of CMFs. A CMF is defined as *"an index of how much crash experience is expected to change following a modification in design or traffic control"*. A CMF is presented as a ratio between the number of crashes expected after a design modification is implemented compared to the number of crashes expected if the change doesn't take place. If a CMF is greater than one (>1.0), it indicates the design modification would result in more crashes. If it is less than one (<1.0) it indicates that a reduction in crashes could be expected.

Table 12-26 in the HSM provides a CMF for adding right-turn lanes to signalized urban and suburban intersections. Adding one right-turn lane to a signalized intersection that has no such lanes has a crash modification factor of 0.96. This indicates that constructing the proposed NB to EB exclusive right-turn lane could be expected to reduce the crash rate at this intersection by approximately 4 percent.

---

[4] The critical crash rate calculation shown in the City TSP (and cited in the Normal Avenue Neighborhood Plan Existing Traffic Conditions report) was based the crash history from 2000 through 2009. In this study, more recent crash reports (from 2010 through 2011) have also been considered in the crash review.

The Ashland TSP mentions another potential countermeasure to the existing crash experience at this intersection which could involve installation of red-light running cameras to reduce exposure to this type of hazard. Information in the HSM indicates that installing red-light cameras will reduce right-angle collisions (CMF of 0.74), but it will also increase rear-end collisions (CMF of 1.18). The City should continue to monitor this intersection to determine if the frequency and severity of right-angle crashes warrants implementation of a red-light camera in the future.



LEGEND

- Normal Avenue Neighborhood
- (X) Study Area Intersection

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Figure 1
Study Area
Normal Avenue Neighborhood Plan

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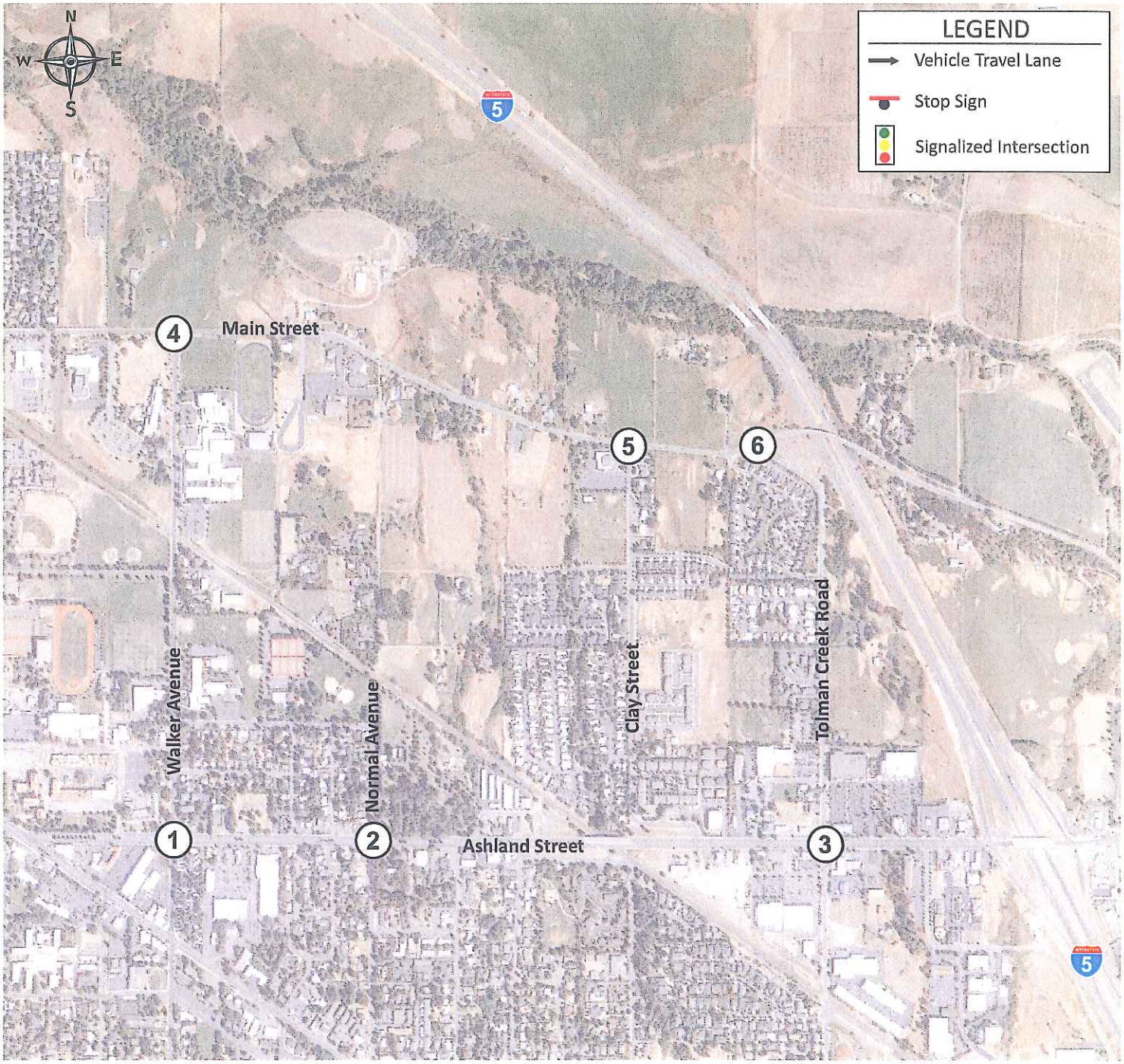
Figure 2
Street Network in Project Area
Normal Avenue Neighborhood Plan



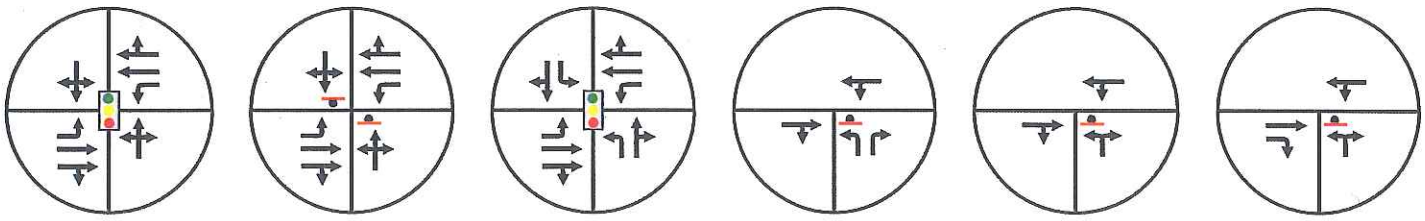


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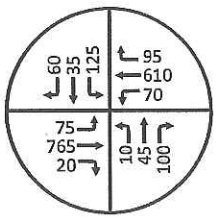
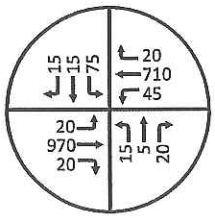
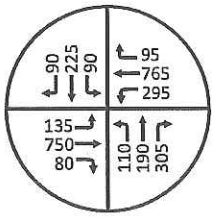
Figure 3
Existing Lane Configuration and Traffic Control
Normal Avenue Neighborhood Plan



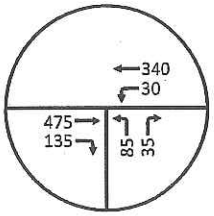
1) Ashland St at Walker Ave



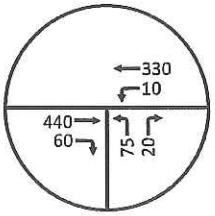
2) Ashland St at Normal Ave



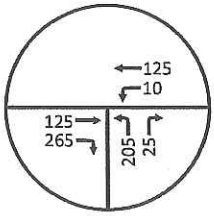
3) Ashland St at Tolman Creek Rd



4) Main St at Walker Ave



5) Main St at Clay St



6) Main St at Tolman Creek Rd

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Figure 4
2038 PM Peak Hour Traffic Volumes
Base Conditions
Normal Avenue Neighborhood Plan

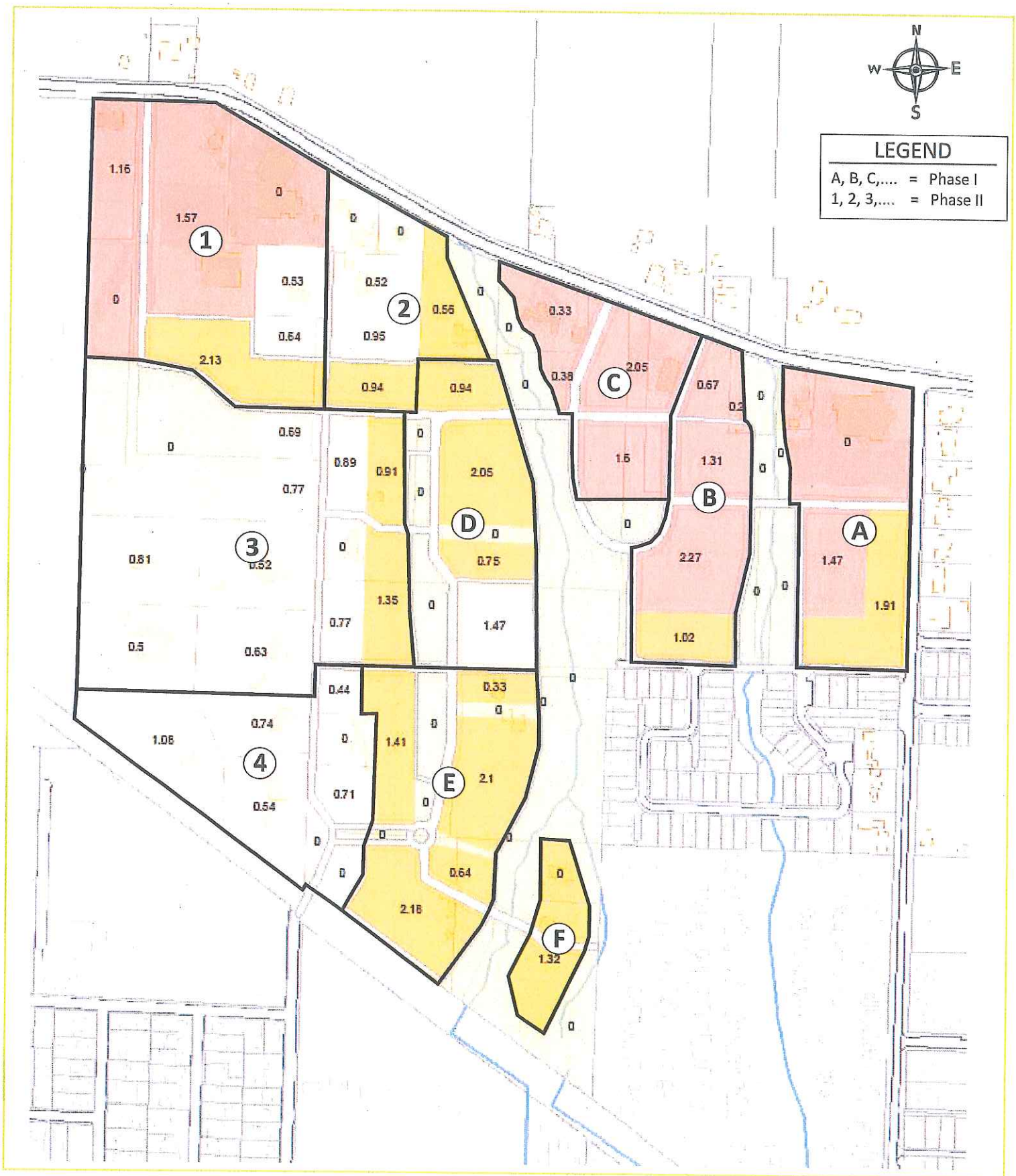

Figure 5
Transportation Analysis Zones
Normal Avenue Neighborhood Plan

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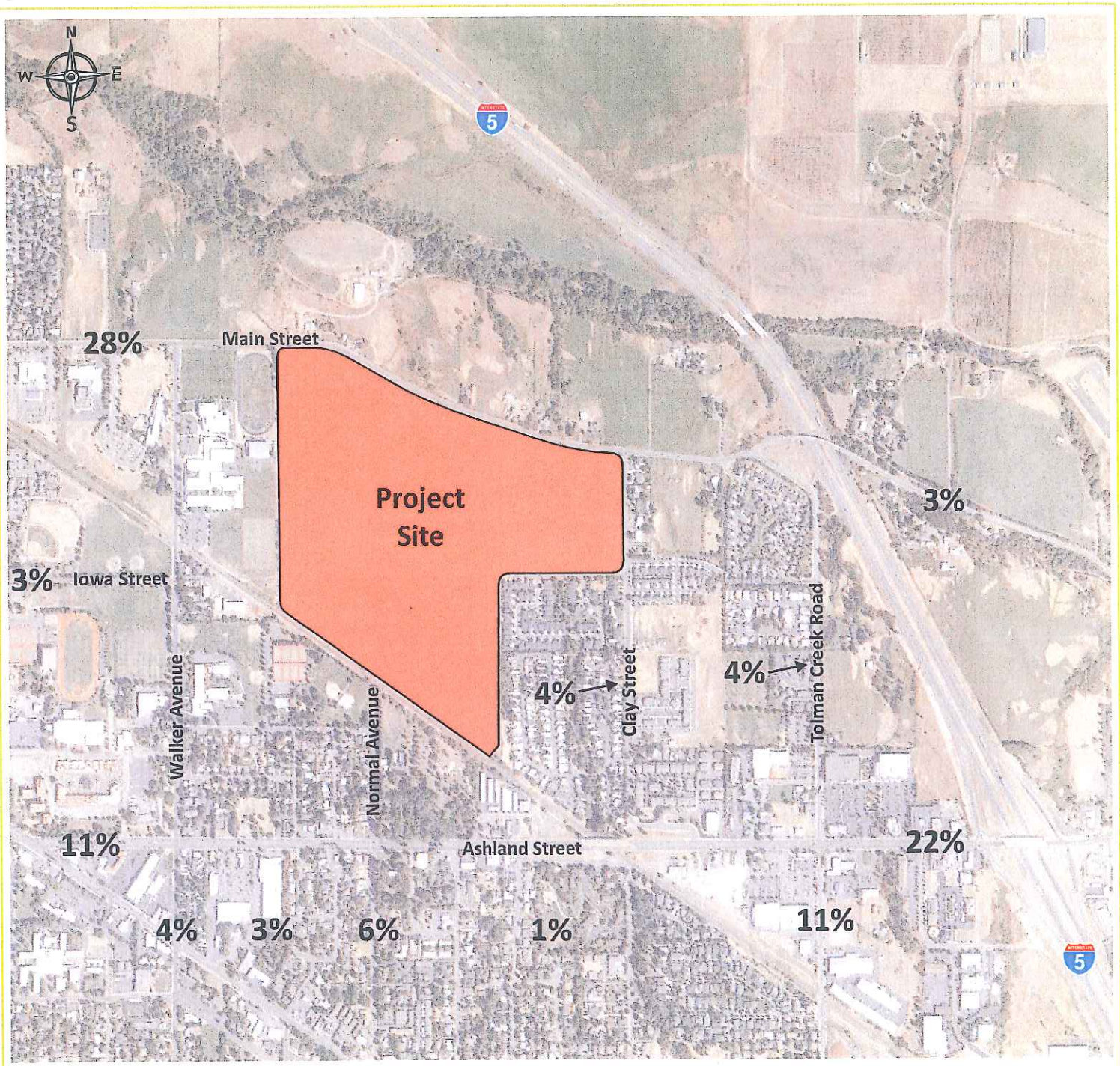

LEGEND

Normal Avenue Neighborhood

XX% Trip Distribution Percentage

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Figure 6

Trip Distribution Assumptions

Normal Avenue Neighborhood Plan

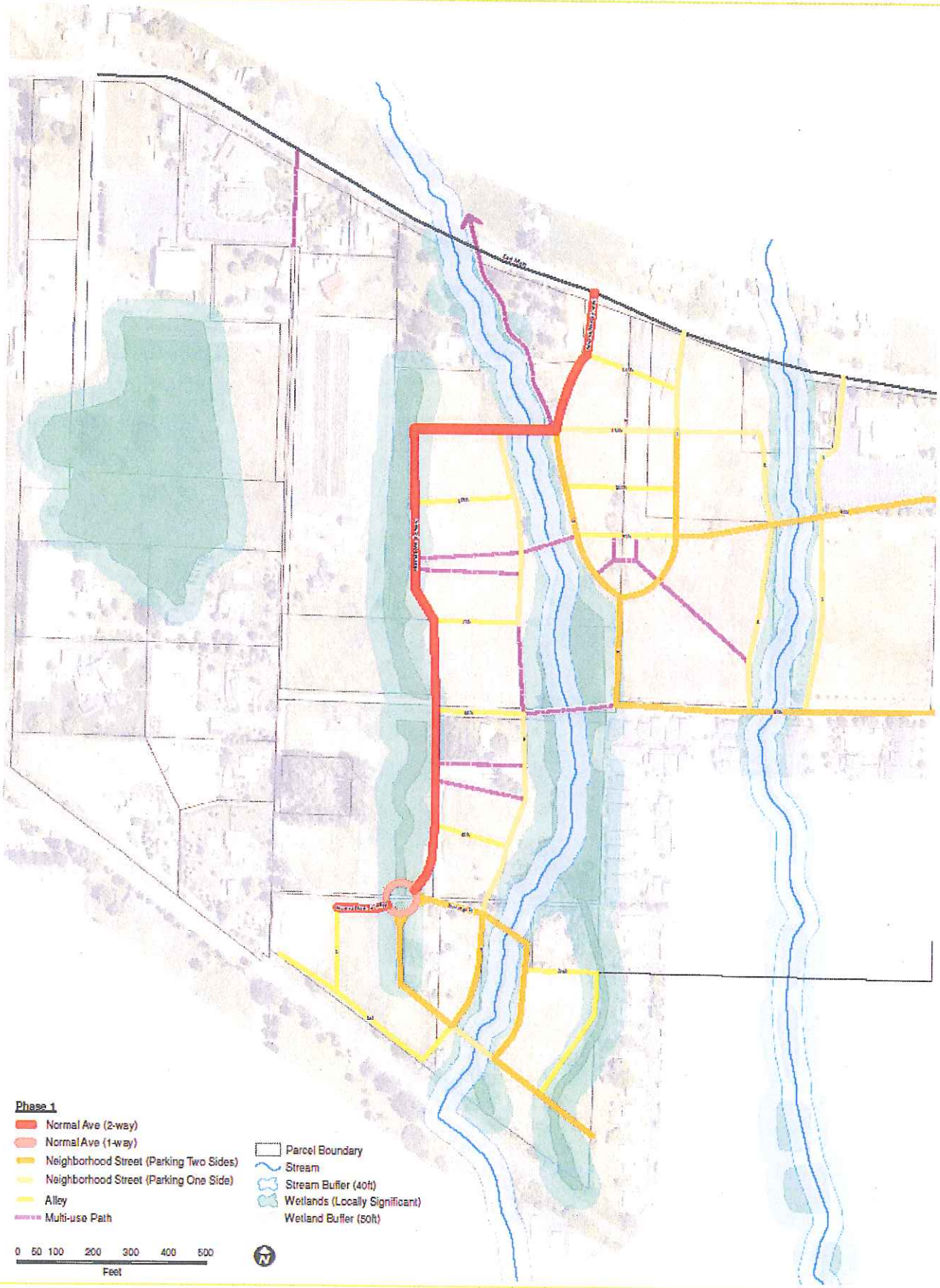

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Figure 7
Phase 1 Street System
Normal Avenue Neighborhood Plan

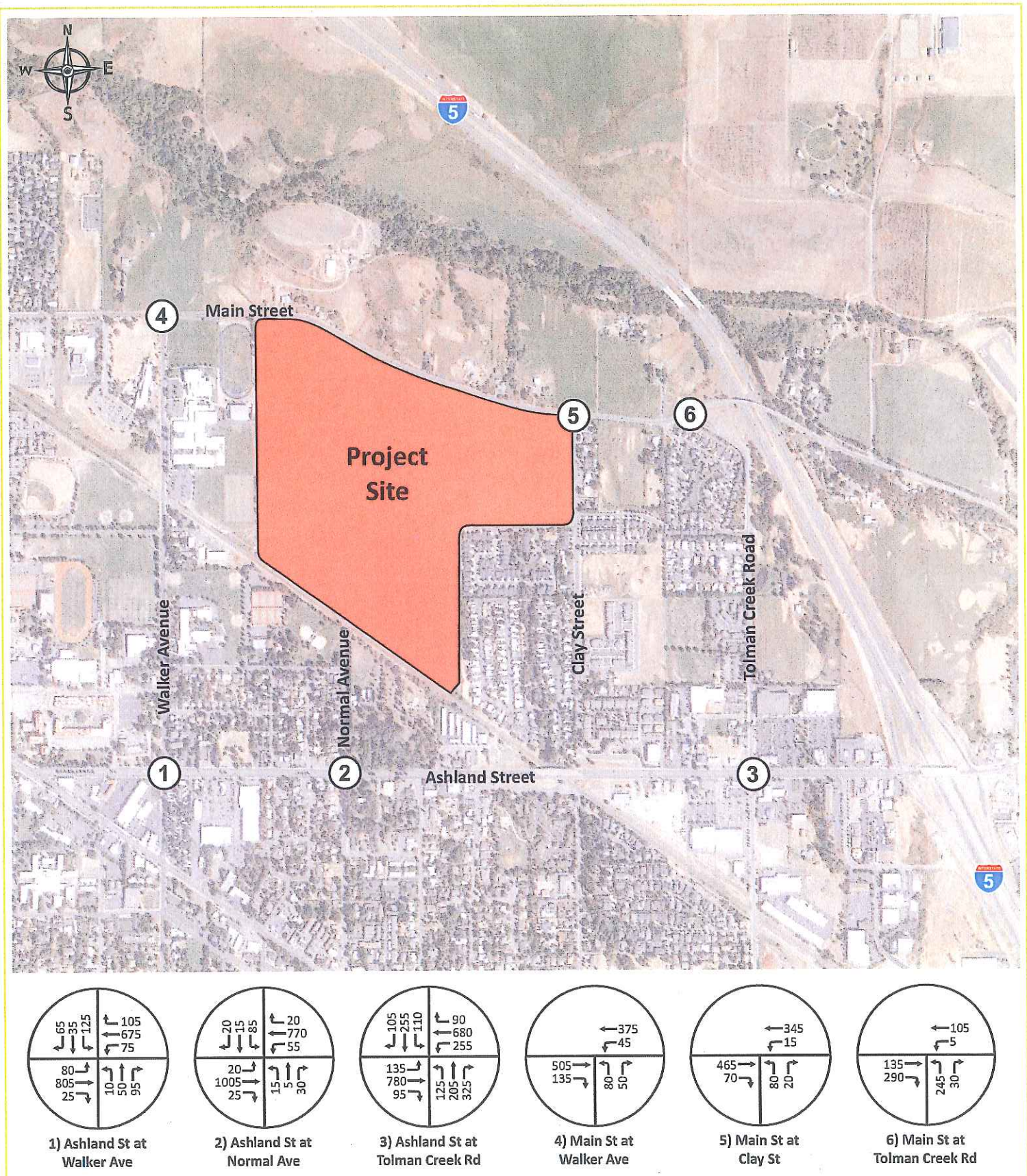

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Figure 8
2038 PM Peak Hour
Traffic Volumes - Phase 1
Normal Avenue Neighborhood Plan

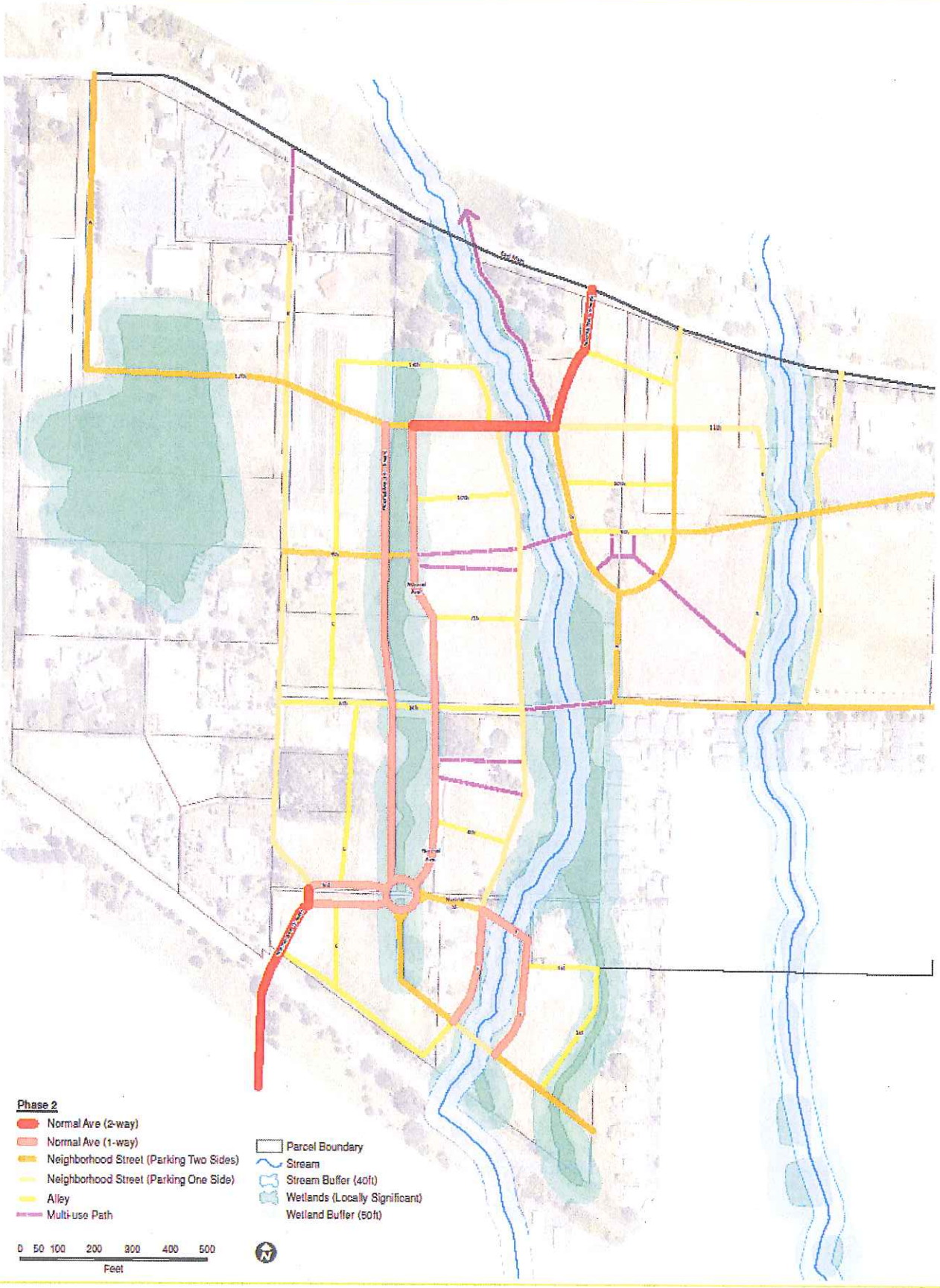

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Figure 9
Phase 2 Street System
Normal Avenue Neighborhood Plan

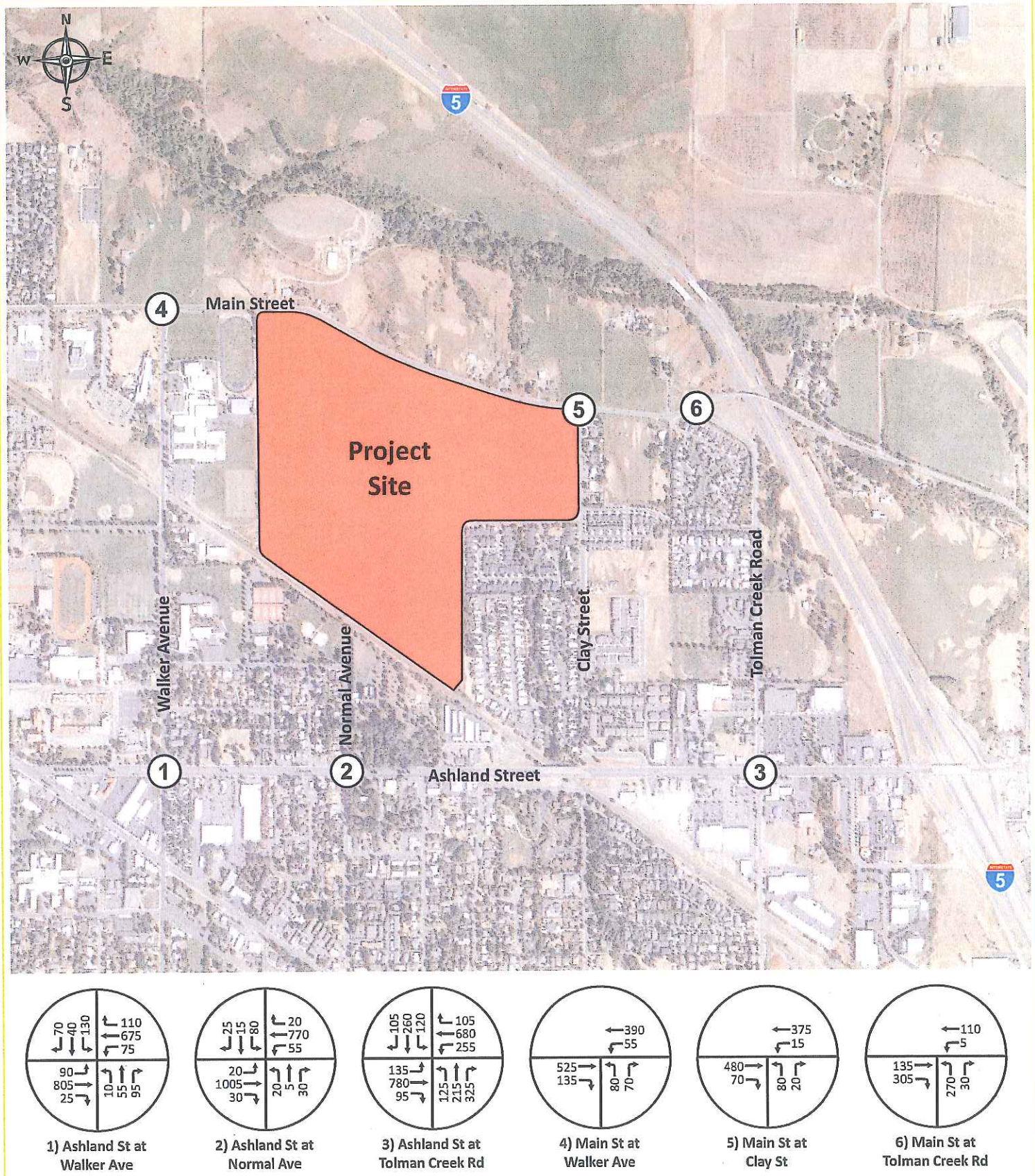

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Figure 10
2038 PM Peak Hour
Traffic Volumes - Phase 2
Normal Avenue Neighborhood Plan

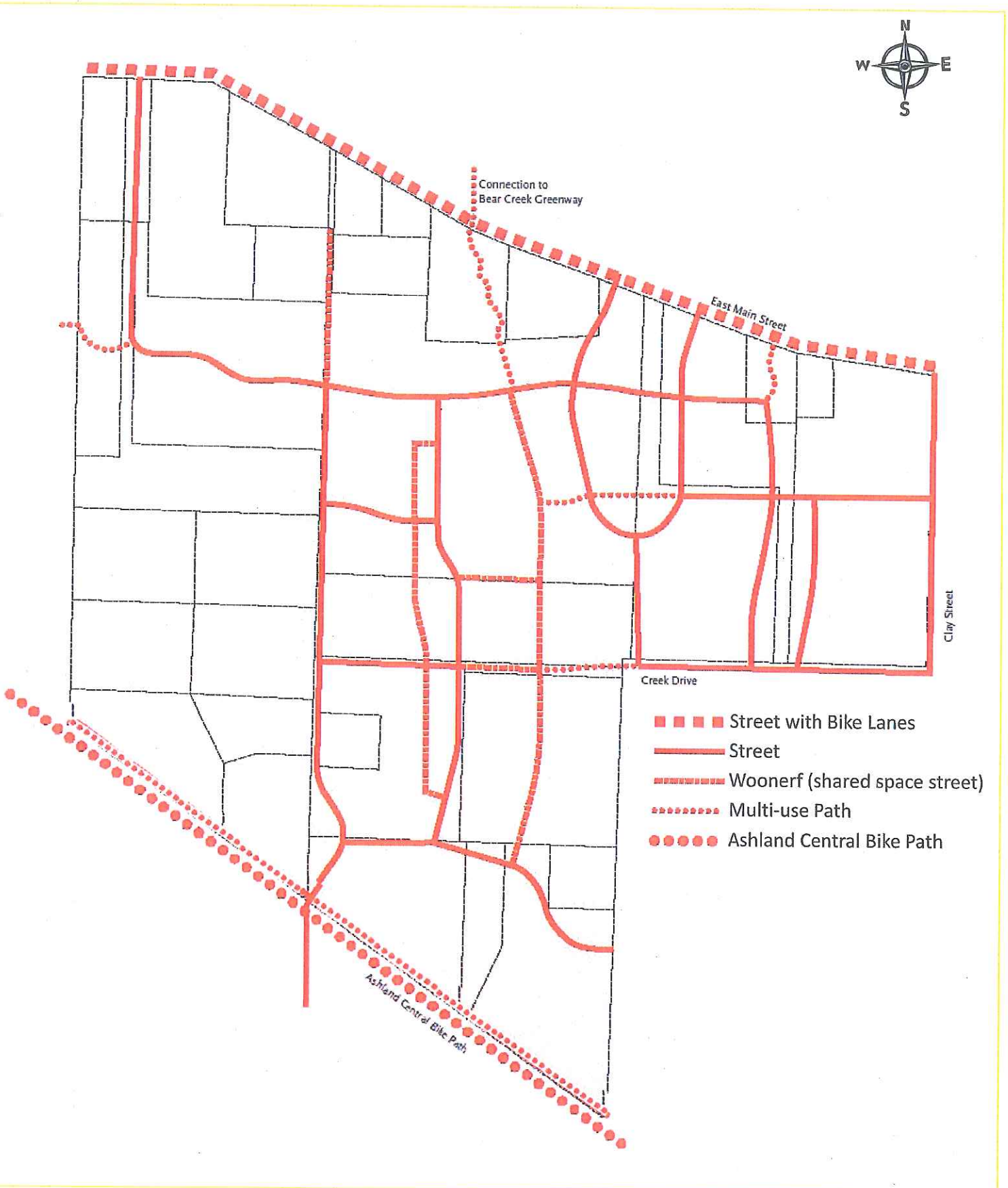

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Figure 11
Bicycle Network in Project Area
Normal Avenue Neighborhood Plan

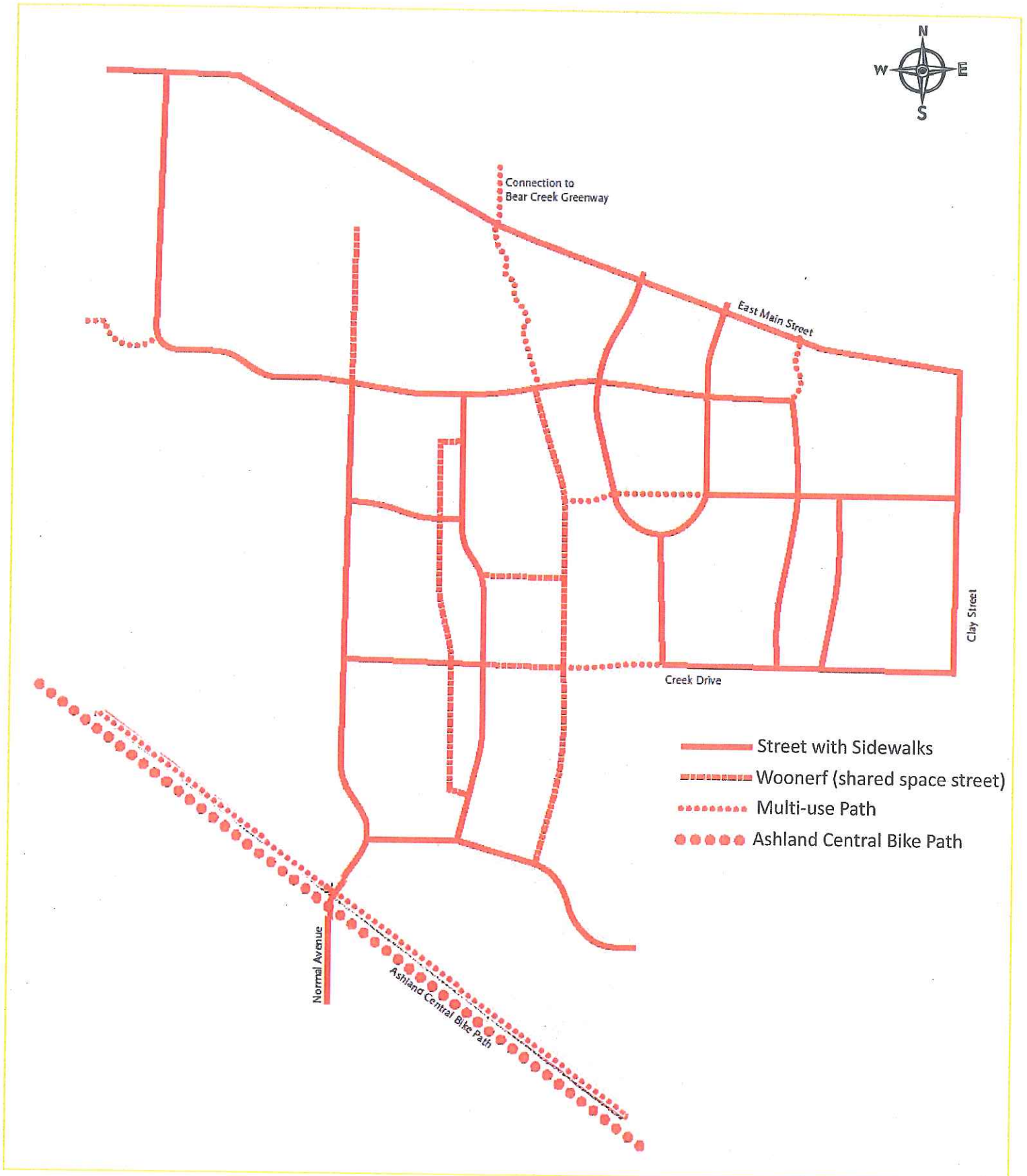

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Figure 12
Pedestrian Network in Project Area
Normal Avenue Neighborhood Plan

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MEMORANDUM

Date:	September 5, 2012
To:	Brandon Goldman, City of Ashland John McDonald, ODOT Region 3
From:	Anne Sylvester
Subject:	Existing Traffic Conditions
cc:	Jason Franklin
Project Number:	277-2395-082
Project Name:	Normal Avenue Neighborhood Plan

INTRODUCTION

The purpose of this memo is to summarize the analysis of existing traffic conditions in the Normal Avenue Neighborhood Plan study area is intended to supplement a memo prepared by City staff documenting existing land use, environmental, housing and transportation system characteristics for the project. Transportation characteristics that were described in the City's memo largely reflect recommendations in the City's Transportation System Plan (TSP) Update including the extension of Normal Avenue from the existing at-grade rail crossing north and east to intersect East Main Street, and the planned bicycle network and street classification system in the study area. The City's memo also provides a brief discussion of the existing Central Oregon and Pacific Railroad alignment in the study area and at-grade crossing with Normal Avenue, as well as existing transit service and traffic counts.

This memo includes four major sections, the first of which is this introduction. The second section describes the existing Normal Avenue Neighborhood Plan study area, while the third section describes characteristics of the existing transportation system including intersection layout, traffic control and traffic volumes. The fourth section presents traffic analysis methods and assumptions, along with key findings and conclusions.

The analysis documented in this memo focuses on:

- Analysis of existing traffic volumes and operational deficiencies at six study area intersections
- Volumes, patterns of use and safety concerns for non-automobile transportation including multi-modal levels of service
- Assessment of recent crash history at six study area intersections and along primary roadway segments

STUDY AREA

The study area for evaluating existing traffic conditions for the Normal Avenue Neighborhood Plan includes the area generally bounded by East Main Street on the north, Tolman Creek Road on the east, Ashland Street/Oregon Highway 66 on the south, and Walker Avenue on the west. The study area includes six primary intersections:

- Ashland Street at Walker Avenue (included in TSP Update)
- Ashland Street at Normal Avenue
- Ashland Street (Oregon Highway 66) at Tolman Creek Road (included in TSP Update)

- East Main Street at Walker Avenue (included in TSP Update)
- East Main Street at Clay Street
- East Main Street at Tolman Creek Road

EXISTING TRANSPORTATION SYSTEM

The existing transportation system in the study area includes two boulevards and four avenues as classified in the City's TSP Update. Boulevards include: East Main Street and Ashland Street. By definition "*boulevards provide access to major urban activity centers for pedestrians, bicyclists, transit users and motor vehicle users, and provide connections to regional traffic ways such as Interstate 5*". Ashland Street is a state highway (OR 66) from its intersection with Tolman Creek Road east through the I-5 interchange, and a city street to the west. It serves as one of the primary east/west connectors within Ashland. East Main Street also serves as an east/west connector road and abuts the edge of the Ashland Urban Growth Boundary along its northern frontage.

Avenues include: Walker Avenue, Normal Avenue, Clay Street and Tolman Creek Road. By definition "*avenues provide concentrated pedestrian, bicycle, and motor vehicle access from boulevards to neighborhoods, and to neighborhoods activity centers*".

Existing Intersections

As illustrated in Figure 1, the intersections of Ashland Street with Walker Avenue and Tolman Creek Road are currently signalized and have two east/west through lanes in each direction with left turn channelization. Tolman Creek Road has a single north/south through lane in each direction with left turn channelization at Ashland Street. Walker Street has a single north/south lane approach in each direction.

The intersection of Ashland Street with Normal Avenue has two through lanes and left turn channelization in the east/west (Ashland Street) direction. Normal Avenue has a single north/south approach lane in each direction. Normal Avenue is stop sign-controlled at its intersection with Ashland Street.

The intersections of East Main Street with Walker Avenue, Clay Street and Tolman Creek Road all have single lane approaches in each direction. East Main Street is a 40 mph through street without stop signs through the study area. Each of the side streets (Walker, Clay and Tolman Creek) is stop sign-controlled.

Existing Traffic Volumes

Figure 2 presents a summary of existing PM peak hour traffic volumes that have been seasonally adjusted to represent to 30th highest hourly volume for the year in which data was collected. Data for the intersections that were included in the TSP Update was obtained during September and October of 2009, while data for the other intersections in the study area was obtained during September of 2011 and April of 2012. Table 1 below summarizes intersection traffic data collection including jurisdiction, date of each count and the time period or duration covered by the count. With one exception, all counts were taken for 16 hours between 6 AM and 10 PM with data stratified into 15-minute increments during the morning and afternoon peak periods as noted below.

Table 1. Existing Intersection Traffic Count Data

Intersection	Included in TSP Update?	Jurisdiction	Date of Count	Duration of Count	Estimated Daily Volume
Ashland Street @ Walker Avenue	Yes	City	10/5/2009	4 hour	13,600[1]
Ashland Street @ Normal Avenue	No	City	9/26/2011	16 hour	13,400[2]
Ashland Street @ Tolman Creek Road	Yes	ODOT	9/16/2009	16 hour	12,600[3]
Main Street @ Walker Avenue	Yes	City	10/7/2009	16 hour	8,500[4]
Main Street @ Clay Street	No	City	4/4/2012	16 hour	7,200[5]
Main Street @ Tolman Creek Road	No	City	4/4/2012	16 hour	6,500[6]

[1] Along Ashland Street east of Walker Avenue, estimated from PM peak hour counts
[2] Along Ashland Street east of Normal Avenue
[3] Along Ashland Street west of Tolman Creek Road
[4] Along East Main Street west of Walker Street
[5] Along East Main Street west of Clay Street
[6] Along East Main Street west of Tolman Creek Road

During preparation of the TSP Update, an areawide PM peak hour was identified (4:15 to 5:15 PM) and all data in this table represents this time period. All intersection traffic counts included vehicular turning movements, pedestrian movements (with or without marked crosswalks), bicycles, and wheeled pedestrians (wheelchairs, skateboards, etc.). Traffic count data is presented in Appendix A, while calculations for seasonal adjustments are included in Appendix B.

Intersection Operational Standards

ODOT Facilities

One intersection in the Normal Avenue study area is under the jurisdiction of ODOT – OR 66 (Ashland Street) at Tolman Creek Road. OR 66 is designated as a District Highway from its intersection with Tolman Creek Road eastward through the I-5 interchange.

ODOT uses volume-to-capacity (v/c) ratio standards to assess traffic operations at intersections on state highway facilities. Table 6 of the Oregon Highway Plan (OHP) and Table 10-1 of the Oregon Highway Design Manual (HDM) provide the maximum v/c ratios for all signalized and unsignalized intersections outside of the Portland Metro area. The OHP ratios are used to evaluate existing and future no build conditions, while the HDM ratios are used to evaluate transportation system improvements on state highways. Based on its classification as a District Highway, the signalized intersection of OR 66 at Tolman Creek Road has an OHP v/c standard of 0.95 (based on revisions to the OHP adopted by the Oregon Transportation Commission in December of 2011 which became effective on January 1, 2012)[1]. Its relevant HDM v/c ratio is 0.80.

City of Ashland Facilities

The remaining five intersections in the study area are all under the jurisdiction of the City of Ashland. Based on discussion included in the TSP, the following operational standards were used:

- Level of service (LOS) D at signalized and all-way stop-controlled intersections if the v/c ratio is not higher than 1.00 for the sum of critical movements.
- LOS E for the poorest operating approach at two-way stop-controlled intersections. Approaches operating at a LOS F where a traffic signal is not warranted were also identified in the TSP.

A summary of the relevant operational standards for the five City intersections in the Normal Avenue study area is presented in Table 2 below.

Table 2. Operational Threshold for City Intersections

Intersection	Traffic Control	Threshold	Intersection	Traffic Control	Threshold
E. Main Street @ Walker Avenue *	TWSC	LOS "E"	E .Main Street @ Clay Street	TWSC	LOS "E"
Ashland Street @ Walker Avenue *	Signal	LOS "D"	E. Main Street @ Tolman Creek Road	TWSC	LOS "E"
Ashland @ Normal Avenue	TWSC	LOS "E"			

* Intersection included in TSP

Access Management Considerations

As noted in the TSP, spacing requirements for public roadways and private driveways can have a profound impact on transportation system operations, safety and land development. Access management strategies and implementation require careful consideration to balance the needs for access to developed land with the need to ensure movement of traffic in a safe and efficient manner. Access management generally becomes more stringent as the functional classification level of roadways increases and the corresponding importance of mobility increase.

[1] It should be noted that the TSP used the OHP v/c standards that were in place prior to the OTC's action in December of 2011. Consequently the v/c threshold cited in the TSP is 0.90.

The City of Ashland has a minimum driveway access spacing of 300 feet for boulevards like Ashland and East Main Streets, 100 feet for avenues like Walker Avenue, Clay Street and Tolman Creek Road, and 75 feet for lower order streets such as those that could be developed internal to the Normal Avenue Neighborhood Plan area. OR 66 east of Tolman Creek Road is under ODOT jurisdiction and state highway access spacing standards apply. ODOT and the City of Ashland have an agreement that OR 66 within the city limits is subject to the minimum spacing standards typically applied to District Highways. OR 66 within the City is subject to a minimum access spacing standard of 300 feet.

FINDINGS AND CONCLUSIONS

Intersection Operations Analysis Results

For consistency with the operations analysis conducted in for the Ashland TSP, Synchro 7 software was used to evaluate the performance of both signalized and unsignalized intersections in the study area. Table 3 summarizes existing PM peak hour operational performance for study area intersections. These results incorporate the intersection geometry and traffic control features illustrated in Figure 1 and the traffic volumes in Figure 2.

As indicated in Table 3, all study area intersections are expected to meet their applicable mobility standard. Detailed traffic operational worksheets can be found in Appendix C.

Table 3. Existing PM Peak Hour Operations Analysis Summary

Intersection	Operating Standard	Traffic Control	Worst Movement	PM Peak Hour V/C [3]	PM Peak Hour Delay [2]	PM Peak Hour LOS [1]
Ashland Street at Walker Avenue	LOS D	Signal		0.45	12.4	B
Ashland Street at Normal Avenue	LOS E	Stop	SB	0.11	16.6	C
OR 66/Ashland Street at Tolman Creek Road	V/C= 0.95	Signal		0.63	29.2	C
E. Main Street at Walker Avenue	LOS E	Stop	NB	0.24	17.1	C
E. Main Street at Clay Street	LOS E	Stop	NB	0.16	15.9	C
E. Main Street at Tolman Creek Road	LOS E	Stop	NB	0.31	11.7	B

1. LOS = Level-Of-Service using 2000 Highway Capacity Manual (HCM) methodology.
2. Average Control Delay for an entire signalized intersection or the worst movement of an unsignalized intersection.
3. Volume-to-Capacity ratio of a signalized intersection or Worst Movement of an unsignalized intersection.

Traffic Queuing Analysis Results

Table 4 summarizes existing PM peak hour traffic queuing analysis results at the two signalized study area intersections. This information was extracted from the Ashland TSP. Worksheets are included in Appendix D.

Queuing results for the signalized intersection of Ashland Street at Walker Avenue show that for both left turn movements (eastbound and westbound) along Ashland Street there is sufficient space to meet vehicle queuing demand. At the intersection of OR 66/Ashland Street with Tolman Creek Road both the northbound and southbound left turn lanes generally can accommodate most PM peak hour vehicular demand. For the eastbound left turn lane on Ashland Street, a one or two vehicle spillover into the through lane is experienced for certain signal cycles during the PM peak hour. A more significant queuing problem occurs with the westbound left turn lane where queuing demand is more than double the available storage space.

Table 4. Existing PM Peak Hour Intersection Traffic Queuing

Intersection	Movement	Existing Vehicle Storage	PM Peak Hour Vehicle Queue
Ashland Street at Walker Avenue[1]	EB Left	100 ft	51 ft
	WB Left	100 ft	57 ft
OR 66/Ashland Street at Tolman Creek Road[1]	NB Left	100 ft	106 ft
	SB Left	100 ft	97 ft
	EB Left	100 ft	129 ft
	WB Left	100 ft	224 ft

1. Traffic queuing calculated using Synchro traffic operations software.

Multi-modal Levels of Service

A multi-modal level-of-service (MMLOS) analysis was conducted as part of the TSP in six major corridors in the city. Of relevance to the Normal Avenue Neighborhood Plan was the analysis conducted along: OR 66/Ashland Street, East Main Street, Walker Avenue and Tolman Creek Road. For this analysis, each corridor was divided into several short segments based on the location of major study intersections and changes in the roadway cross-section (e.g., the presence of sidewalks or bike lanes). The analysis was conducted in accordance with the methodology described in the National Cooperative Highway Research Program Report (NCHRP) 3-70 which has been included in the 2010 Highway Capacity Manual.

NCHRP 3-70 provides guidance in assessing traveler perceptions of the quality of service and performance of various travel modes along urban streets. The Ashland TSP includes results of MMLOS analysis under both existing and future no build conditions for auto, transit, bicycle, and pedestrian facilities by direction of travel. Graphics are provided in the TSP that illustrate key findings. Level-of-service differences along roadway corridors are typically attributable to such factors as the presence of a sidewalk or bike lane, or high traffic volumes at unsignalized side streets or driveways. Key findings from the TSP analysis are described below for the three corridors that are relevant to the Normal Avenue Neighborhood Plan. MMLOS worksheets are included in Appendix E. Analysis results are presented in Table 5.

Table 5. Multi-Modal Level-of-Service Analysis Results for Selected Corridors

				Multi-Modal Level-of-Service Results			
Street/Limits	Limits	Direction	LOS Type	Auto	Transit	Bicycle	Pedestrian
E. Main Street	Walker to Tolman	East	Segment	B	N/A	B	E
			Intersection			C	B
	Tolman to Walker	West	Segment	B	N/A	B	E
			Intersection			B	A
OR 66/Ashland Street	Walker to Tolman	East	Segment	B	C	A	C
			Intersection			B	B
	Tolman to Walker	West	Segment	B	C	A	C
			Intersection			B	B
Walker Street	Ashland to Iowa	North	Segment	B	C	A	B
			Intersection			A	B
	Iowa to Ashland	South	Segment	B	C	A	C
			Intersection			A	B
Walker Street	Iowa to E. Main	North	Segment	N	N/A	A	A
			Intersection			A	B
	E. Main to Iowa	South	Segment	B	N/A	A	B
			Intersection			A	A
Tolman Creek Road	Ashland to Main	North	Segment	B	C	A	D
			Intersection			A	C
	Main to Ashland	South	Segment	B	C	A	C
			Intersection			B	B

Auto

Auto level of service is primarily measured by the average speed over the length of the corridor and the average number of stops per mile. Traffic volume, heavy vehicle percentages, turning percentages, and peak hour factors area all inputs to the auto level of service, along with signal timing at signalized intersection and saturation flow rates. Auto level of service along the three major corridors in the vicinity of the Normal Avenue Neighborhood is LOS B.

Transit

The three primary performance measures that influence transit LOS results include access, wait time, and ride experience. Access is represented by the pedestrian level of service score and pedestrian access to bus stops along the corridor. Wait time and ride experience are affected by headways (e.g., frequency of transit service), and passenger per seat ratings. Analysis of transit LOS in the study area has been updated from the TSP to reflect more recent changes in RVTD service. Transit service is currently provided along Ashland Street, and Tolman Creek Road, but not along either Walker Avenue or East Main Street in the study area (service is provided to the

east of Tolman Creek Road). However, transit service is provided within one-quarter mile of the southern section of Walker Avenue so the results in Table 5 reflect this proximity. It should be noted that the transit LOS is biased towards the weekday PM peak hour when service is available. It does not take into account that service is not provided in the later evenings or on Sundays.

Pedestrians

There are two basic performance measures that influence the pedestrian LOS results within the MMLOS methodology. One is the feeling of security and quality of experience a pedestrian has walking alongside a roadway facility (e.g., presence and width of sidewalks). The second is the ability pedestrians have to safety and efficiently cross a major roadway. For the corridors in the study area, MMLOS results generally indicate that pedestrians would feel safe walking along Ashland Street, Tolman Creek Road, and Walker Avenue. There is a gap in the sidewalk along portions of Walker Avenue, but generally this road provides some accommodation for pedestrians. The narrowness of East Main Street and relatively high travel speeds make this corridor less attractive to pedestrians. MMLOS for pedestrians at the intersections of East Main Street with Tolman Creek Road and Walker Avenue are considered higher due to the limited crossing opportunities (north/south side streets only) and the fact that the side streets are stop-controlled. Opportunities to improve pedestrian LOS include adding sidewalks or pathways, providing landscape strips between sidewalks and adjacent roadways, increasing the width of existing sidewalks, and providing additional opportunities for pedestrians to safety and efficiently cross major roadways.

Bicyclists

Similar to the pedestrian LOS, there are two basic performance measures that influence the bicycle LOS results within the MMLOS analysis. One is the feeling of security and quality of experience a bicyclist has riding on a roadway facility (e.g., presence and width of bicycle lanes). The second is the frequency of conflicts with vehicle cross traffic (e.g., frequency of driveways or unsignalized intersections). MMLOS results for bicycle facilities indicate that bicycling along the key roadways in the study area is generally considered comfortable. There are existing bicycle lanes along Ashland Street, Tolman Creek Road and Walker Street, while East Main Street has a narrow roadway shoulder. Opportunities to improve LOS for bicyclists would be to add a wider shoulder and/or bike lanes along East Main Street, to buffer existing bicycle lanes from traffic, and/or to consolidate driveways wherever possible to reduce bike/auto conflicts.

Non-Automobile Transportation Analysis

This section summarizes key features of the active (largely bicycle and pedestrian) transportation system in the study area. Key destinations for these travel modes in the study area include Ashland Middle School and Walker Elementary School on the east side of Walker Avenue. There are also commercial shopping and business destinations along Ashland Street.

The following paragraphs present a summary of information abstracted from the TSP and supplemented by data collected for the Normal Avenue Neighborhood Plan. This information includes a discussion of pedestrian and bicycle activity in the study area, an assessment of existing risk for these modes including a discussion of crash experience, and network considerations in developing a well-connected and safe bicycle and pedestrian system.

Pedestrian System

Pedestrian Volumes

Based on data presented in the TSP, there is a relatively high level of pedestrian activity in the study area along Walker Avenue in the vicinity of Iowa Street. This activity is likely associated with the middle and elementary schools in the vicinity. A moderate level of pedestrian activity was also observed in the vicinity of Ashland Street near both Walker Avenue and Tolman Creek Road. Traffic counts taken for the Normal Avenue Plan indicate that there is a moderate level of pedestrian activity on Ashland Street at Normal Avenue, while light levels of pedestrian activity were observed along East Main Street.

Pedestrian Risk Analysis

The TSP included segment analysis of OR 66/Ashland Street. Along with OR 99, these two corridors showed a heavy concentration of crashes involving pedestrians. Table 6 summaries the findings of pedestrian-related crash

analysis along Ashland Street. This data permits a comparison of the pedestrian-involved crash rate with environmental factors including vehicular traffic volumes, sidewalk coverage, and signalized crossing density and coverage.

Table 6.Pedestrian Analysis of Ashland Street in Study Area

Segment			Crashes Involving Pedestrians	Traffic Volume[1]	Sidewalk Coverage[2]	Signalized Crossing Density	Signal Coverage
Road	To	From	(crashes/mi/year)	(vph)	(%)	(cr/mi)	(sig/mi)
OR 66 (Ashland St)	Siskiyou Blvd	Clay St	0.6	1,100	80%	1.0	20%
OR 66 (Ashland St)	Clay St	Boundary	1.0	1,250	65%	1.7	7%

[1] Weekday PM peak hour traffic volumes (3:15-4:15 PM) collected in September/October 2009.
[2] Sidewalk coverage calculation determined by presence of sidewalks of both sides of the street.

While the pedestrian crash experience along Ashland Street in and near the study area is less than the rate experienced along sections of Siskiyou Boulevard, the eastern portion of the study area still experienced a rate of one crash involving a pedestrian per mile for each of the ten years included in the crash analysis. A review of data indicated that there appears to be a concentration of pedestrian-related crashes near the intersection of Ashland Street with Tolman Creek Road and along the section of roadway east of Normal Avenue.

Pedestrian Network

As a part of the TSP, network and locational deficiencies in the pedestrian network was assessed through a desktop inspection of the existing roadway system. This assessment determined that there are a number of gaps in the pedestrian system along the City's major streets. Of particular significance to the Normal Avenue Plan study area are existing gaps along Walker Avenue, Clay Street and on the Ashland Street crossing over I-5.

Bicycle System

Bicycle Volumes

Based on data presented in the TSP, there is a relatively high level of bicycle activity in the study area along Walker Avenue in the vicinity of East Main Street and of Iowa Street. This activity is likely associated with the middle and elementary schools in the vicinity. A moderate level of pedestrian activity was also observed in the vicinity of Ashland Street near Walker Avenue. Traffic counts taken for the Normal Avenue Plan indicate that there is very little bicycle activity along Ashland Street near Normal Avenue or along East Main Street.

Bicycle Risk Analysis

The TSP also included segment analysis of OR 66/Ashland Street. Along with OR 99, these two corridors showed a heavy concentration of crashes involving bicyclists. Table 7 summaries the findings of bicyclist-related crash analysis along Ashland Street. This data permits a comparison of the bicyclist-involved crash rate with bicycle traffic volumes, vehicular traffic volumes, bike lane coverage (this does not include shared use roadways), and signalized crossing density and coverage.

Table 7. Bicycle Analysis of Ashland Street in Study Area

Segment			Crashes Involving Cyclists	Bike Volume[1]	Traffic Volume[1]	Bike Lane Coverage	Signalized Crossing Density	Signal Coverage
Road	To	From	(crashes/mi/year)	(bph)	(vph)	(%)	(cr/mi)	(sig/mi)
OR 66 (Ashland St)	Siskiyou Blvd	Clay St	1.1	14	1,100	100%	1.0	20%
OR 66 (Ashland St)	Clay St	Boundary	1.0	3	1,250	50%	1.7	7%

[1] Weekday PM peak hour traffic volumes (3:15-4:15 PM) collected in September/October 2009.

While the bicyclist crash experience along Ashland Street in and near the study area is less than the rate experienced along sections of Siskiyou Boulevard, the study area still experienced a rate of at least one crash involving a bicyclist per mile for each of the ten years included in the crash analysis. A review of data indicated

that there appears to be a concentration of bicyclist-related crashes near the intersection of Ashland Street with Walker Avenue, along the section of roadway east of Normal Avenue, and near Tolman Creek Road.

Bicycle Network

The bicycling network in Ashland largely relies on the existing street system which provides both east/west and north/south mobility through and connecting to the study area. In addition, approximately 23 percent of the citywide cycling system includes shared use paths or greenway trails. The shared use path adjacent to the rail corridor between Tolman Creek Road and 6th Street provides a backbone for the bicycle network in and through the study area. In addition, there are on-street bike lanes on East Main Street (roadway shoulders), OR 66/Ashland Street, Tolman Creek Road, and Walker Avenue.

Crash Analysis

Crash analysis was conducted using data from the Ashland TSP, augmented by data from ODOT and the City's GIS files. Within the Normal Avenue Neighborhood Plan study area, the TSP includes roadway segment crash analysis for two boulevards (OR 66/Ashland Street and East Main Street) and one avenue (Walker Street). The TSP also includes intersection analysis at three of the six intersections evaluated in the study area. The remaining three intersections were studied based on data provided by the City. Key findings and conclusions are summarized below.

Roadway Segment Crash Analysis

In the TSP, roadway crash analysis for the two boulevards - Ashland and East Main Streets – was organized into discrete segments of varying lengths based on where the roadway cross-section and/or character changed. Within the study area only one segment for each boulevard is relevant. For avenues such as Walker Street, the TSP considered only a single segment because the cross-section and character of these streets changed minimally over their length. Table 8 summarizes the crash types for the study area street segments, while Table 9 presents crash rates. Roadway segment crash rates were calculated as crashes per million vehicle miles traveled (MVMT). Appendix F presents segment crash analysis results.

Table 8. Crash Severity Statistics for Segment Crash Data Analysis

Roadway	Extents	Length (miles)	Fatal	Injury	PDO	Unknown	Total
Boulevards							
OR 66 (Ashland Street)	OR 99 to Tolman Creek Road	1.04	0	11	36	0	47
E. Main Street	Walker Avenue to OR 66	1.78	0	2	6	0	8
Avenue							
Walker Avenue	Entire	1.13	0	5	28	1	34

Note 1: PDO means Property Damage Only
Note 2: Crash statistics above include crashes involving pedestrians and bicycles, if applicable.

As noted in the TSP, typically segments with the highest frequency of crashes are those generally known to carry the most vehicular traffic and/or are segments of longer lengths. For example, the frequency of crashes on OR 66/Ashland Street is noticeably higher than the frequency of crashes on East Main Street. The frequency of crashes along Walker Avenue is high in comparison to its volume.

Table 9. Roadway Segment Crash Rates

Roadway	Extents	Length (miles)	Daily Volume	Crash Rate (Crashes/MVMT[1]) Segment Specific	Crash Rate (Crashes/MVMT[1]) ODOT Facility by Type[2]
Boulevards					
OR 66 (Ashland Street)	OR 99 to Tolman Creek Road	1.04	12,000	0.86	2.02
E. Main Street	Walker Avenue to OR 66	1.78	3,500	0.29	2.27
Avenue					
Walker Avenue	Entire	1.13	3,100	2.22	1.56

[1] Crash statistics above include crashes involving pedestrians and bicycles, if applicable.
[2] ODOT crash rates by facility type are the 2009 Crash Rates by Jurisdiction and Function Classifications. The crash rates shown above are those occurring on an urban highway system for Principal Arterials (2.02), and Minor Arterials (2.27).

In the instance of both Ashland Street and East Main Street, the specific crash rates were less than the ODOT statewide crash types for the facility type. This indicates that these segments are performing better than their statewide peer facilities in terms of frequency of crashes relative to the traffic volume their carry.

Based on systemwide analysis in the TSP, the most common crash type reported is rear-end collisions. On avenues, the most common crash type reported is collisions with parked cars. The majority of segment crashes on the selected boulevards and avenues studied in the TSP are property-damage only crashes (80.6 percent on boulevards and 90.2 percent on selected higher crash avenues). Walker Avenue has a crash rate higher than the statewide average for facilities of its type which indicates that it has a potential to reduce crashes. 82 percent of the crashes reported along Walker Avenue are property damage only crashes with the most common crash type being a collision with a parked vehicle.

Intersection Crash Data Analysis

Crash analysis was performed for the six study area intersections, three of which had been analyzed as part of the TSP. The critical rate method was used in this analysis. This method involves a comparison between the crash rate calculated for an intersection and its critical crash rate. Crash rates for intersections were calculated on an annualized basis per million entering vehicles (MEV). Critical crash rates for an intersection are calculated using a weighted value for all similar intersections in the city. The comparison of intersection crash rates with their critical crash rates can then be used the identify locations where further safety analysis should be conducted. For purposes of this analysis, citywide critical crash rates for signalized and two-way stop controlled intersections from the TSP were used in developing intersection-specific critical crash rates. The observed crash rate and critical crash rate for each study area intersection is summarized in Table 10.

Table 10. Study Intersection Crash Rates and Critical Crash Rates

Study Intersection	Crash Rate	Critical Crash Rate	Exceeds Critical Rate?
Ashland Street at Walker Avenue	0.15	0.30	--
Ashland Street at Normal Avenue	0.16	0.40	--
OR 66'/Ashland Street at Tolman Creek Road	0.29	0.28	Yes
E. Main Street at Walker Avenue	0.12	0.43	--
E. Main Street at Clay Street	0.00	0.45	--
E. Main Street at Tolman Creek Road	0.08	0.47	--

As shown in Table 10, the intersection of OR 66/Ashland Street with Tolman Creek Road exceeds its critical crash rate. A more detailed review of the reported crashes at this intersection was conducted for the TSP to determine potential contributing factors, as well as potential countermeasures for reducing crashes.

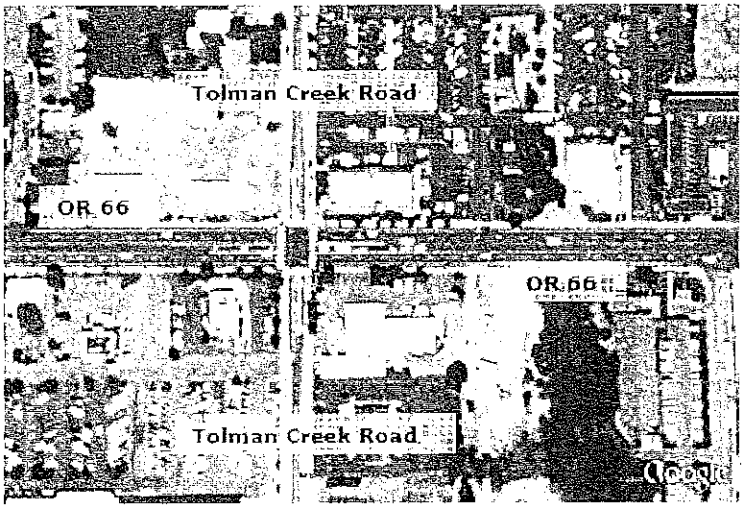
OR 66 at Tolman Creek Road is a signalized intersection. The physical characteristics of the intersection, trends from ODOT crash data and potential countermeasures were discussed in the TSP and are reiterated below.

The basic physical characteristics of the intersection are:

- OR 66 has a five-lane basic cross-section on approach to the intersection.
- There are exclusive left-turn lanes on all four approaches at the intersection.
- Right-turns are served by shared through/right turn lanes on all four approaches.
- Marked crosswalks are present on all four approaches.

The exhibit below is an aerial view of the intersection from Google Earth illustrating the physical characteristics noted above. This exhibit was extracted from the TSP.

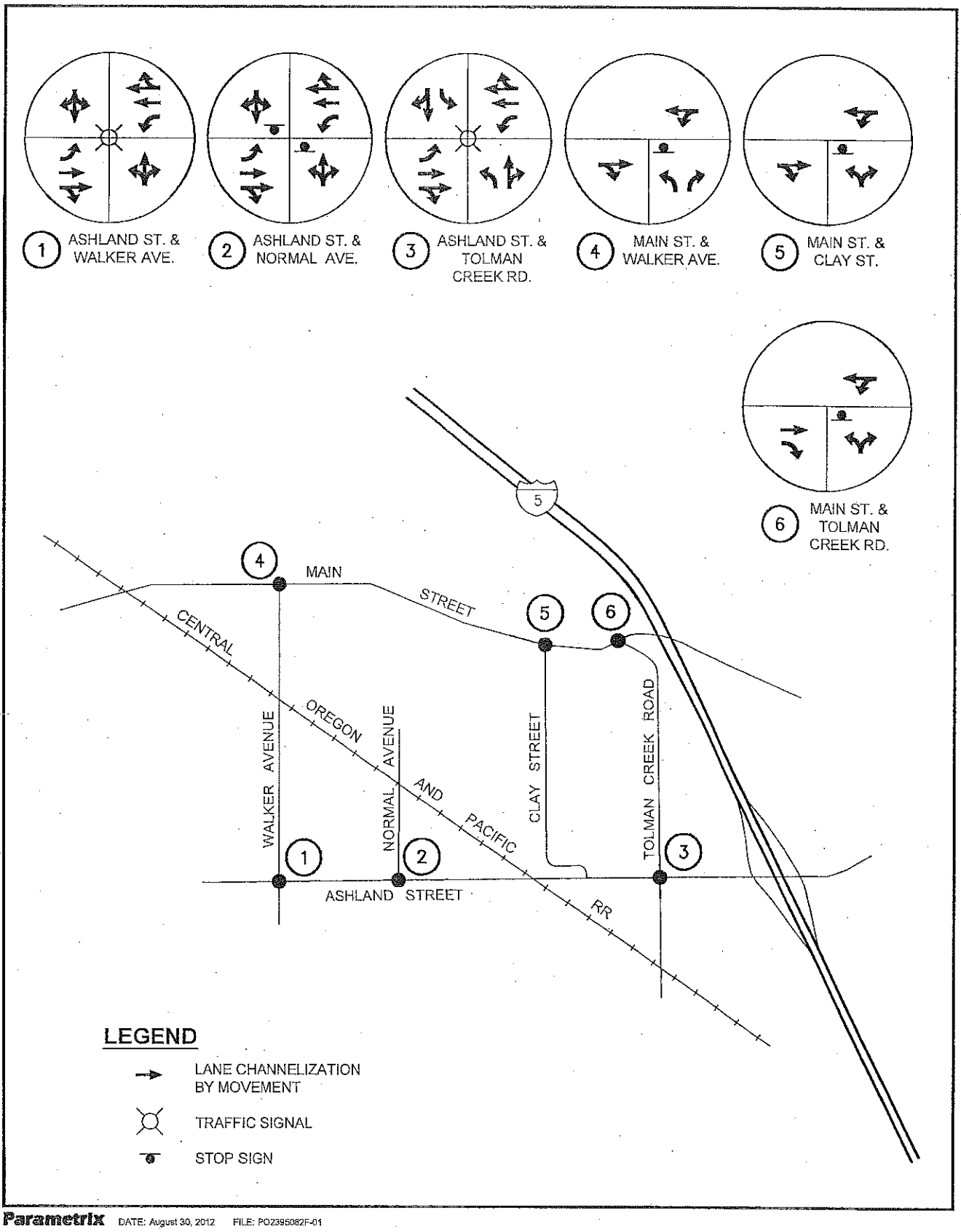
OR 66/Tolman Creek Road



In reviewing the ODOT crash data in more detail, the following trends were identified:

- Crashes tended to be rear end, angle or turning collisions.
- The majority of rear end crashes occurred when motorists failed to stop or were following too close to vehicles in front of them.
- The majority of turning crashes occurred when motorists turned from the wrong lane.
- The majority of angle crashes occurred when motorists disregarded the traffic signal control and/or were distracted or inattentive.

According to the TSP, the existing intersection layout does not exhibit obvious opportunities for improvement. The types of crashes reported for the intersection tend to be consistent with the types expected to occur at signalized intersections. One potential countermeasure would be to install automated enforcement such as red-light running cameras, which tend to reduce crashes associated with disregarding traffic signals. However, red light enforcement cameras have also been found to increase rear end crashes. Therefore, additional information regarding why motorists are currently failing (and historically have failed) to stop to avoid other stopped vehicles would be helpful in determining whether or not red-light enforcement cameras would be appropriate for this intersection, as well as what other countermeasures could be considered.

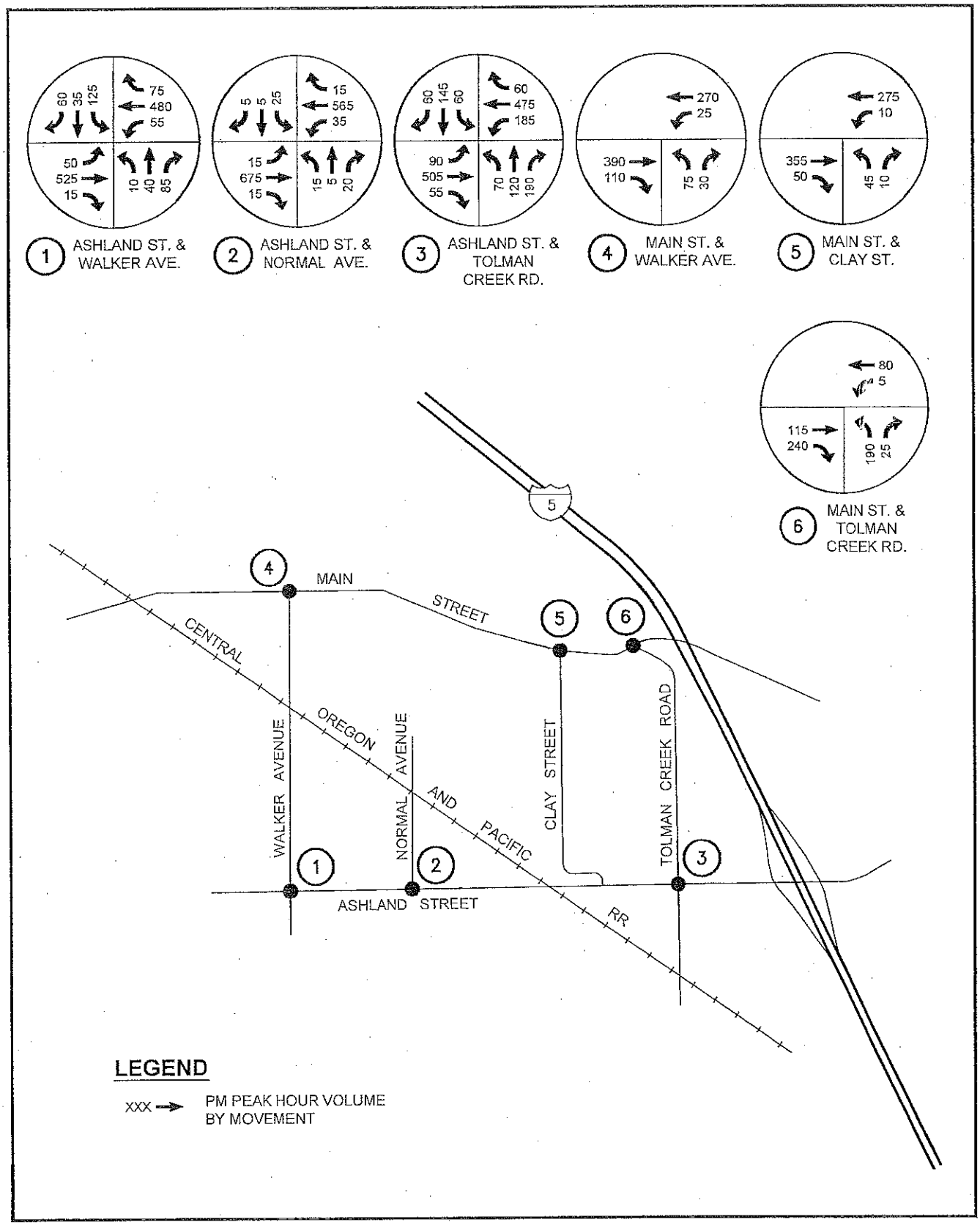


Parametrix DATE: August 30, 2012 FILE: P02395082F-01

N

NOT TO SCALE

Figure 1
Existing Lane Configuration and Traffic Control
NORMAL AVENUE NEIGHBORHOOD PLAN



Parametrix DATE: August 30, 2012 FILE: P02395082F-02

N

NOT TO SCALE

Figure 2
Existing Weekday PM Peak Hour Traffic Volumes
NORMAL AVENUE NEIGHBORHOOD PLAN

APPENDIX A

Existing Intersection Turning Movement Counts

Transportation Development Division
Transportation System Monitoring Unit
Vehicular Volume

Time settings

Date: 10/5/2009
Hours: 2:00 PM-6:00 PM
Weather: Clear

Source

Site Number: 15332009
Vehicle Type: Vehicles
Crossing Flow: Pedestrians

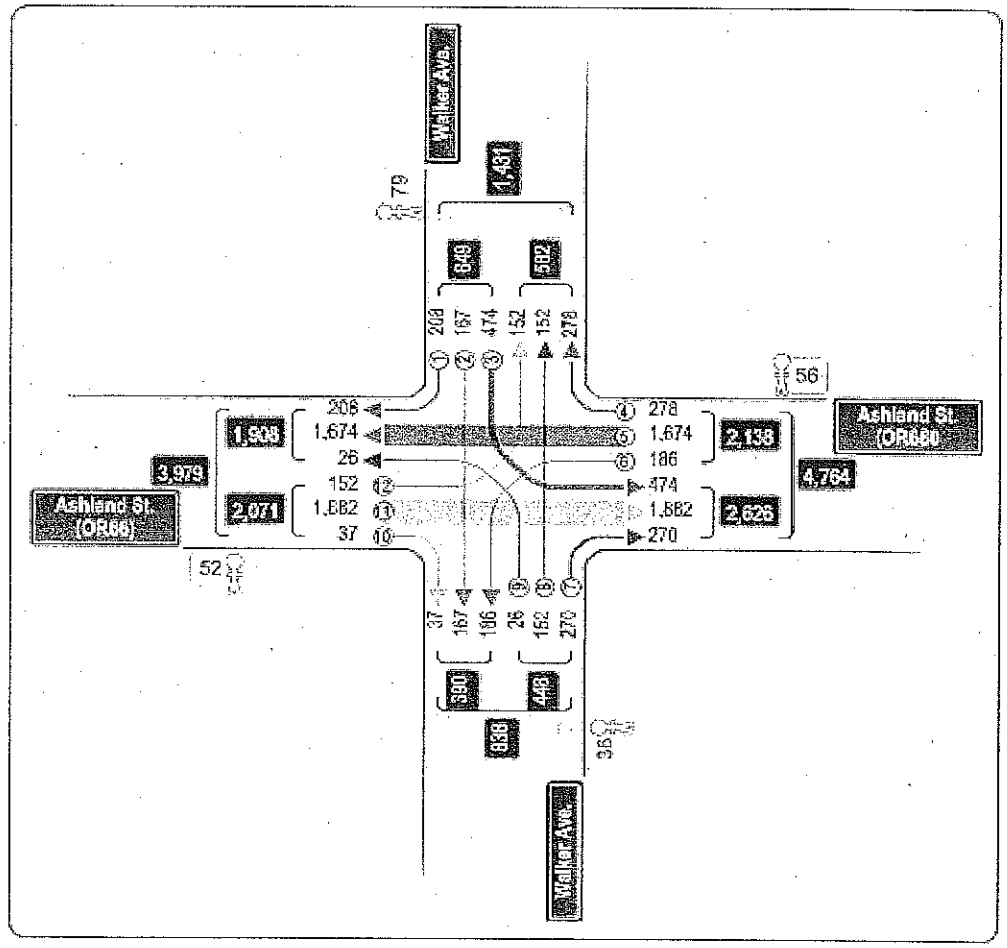
Source Description

Location Description: Ashland St.(OR66) @ Walker Ave.

4hr count 2-6P

32 bicyclists with helmets

County: Jackson
City: Ashland



Transportation Development Division
Transportation System Monitoring Unit
Vehicular Volume

Time settings

Date: 9/26/2011
Hours: 6:00 AM-10:00 PM
Weather: Clear

Source

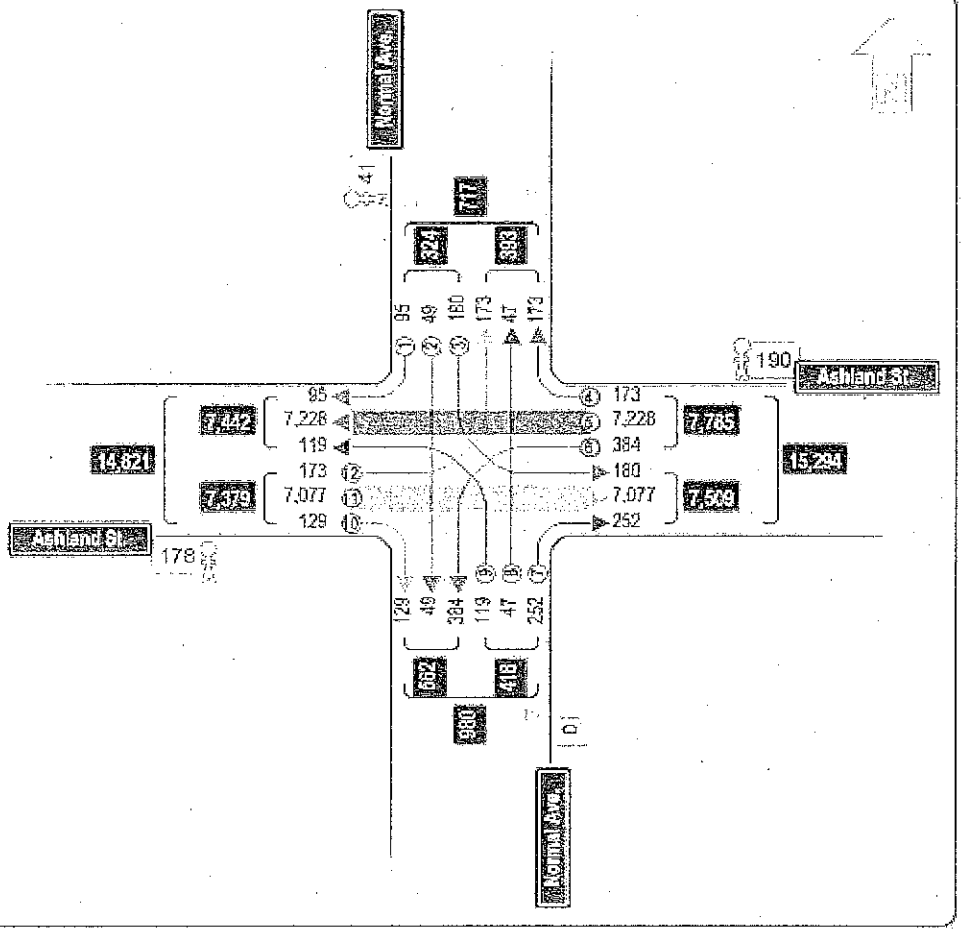
Site Number: 15082011
Street Number: 8059
Vehicle Type: Vehicles
Crossing Flow: Pedestrians

Source Description

Location Description: Ashland St. @ Normal Ave

bicyclists with helmets =
north leg = 12
east leg = 58
south leg = 18
west leg = 44

County: Jackson
City: Ashland



Transportation Development Division
Transportation System Monitoring Unit
Vehicular Volume

Time settings

Date: 9/16/2009
Hours: 6:00 AM-10:00 PM
Weather: Clear

Source

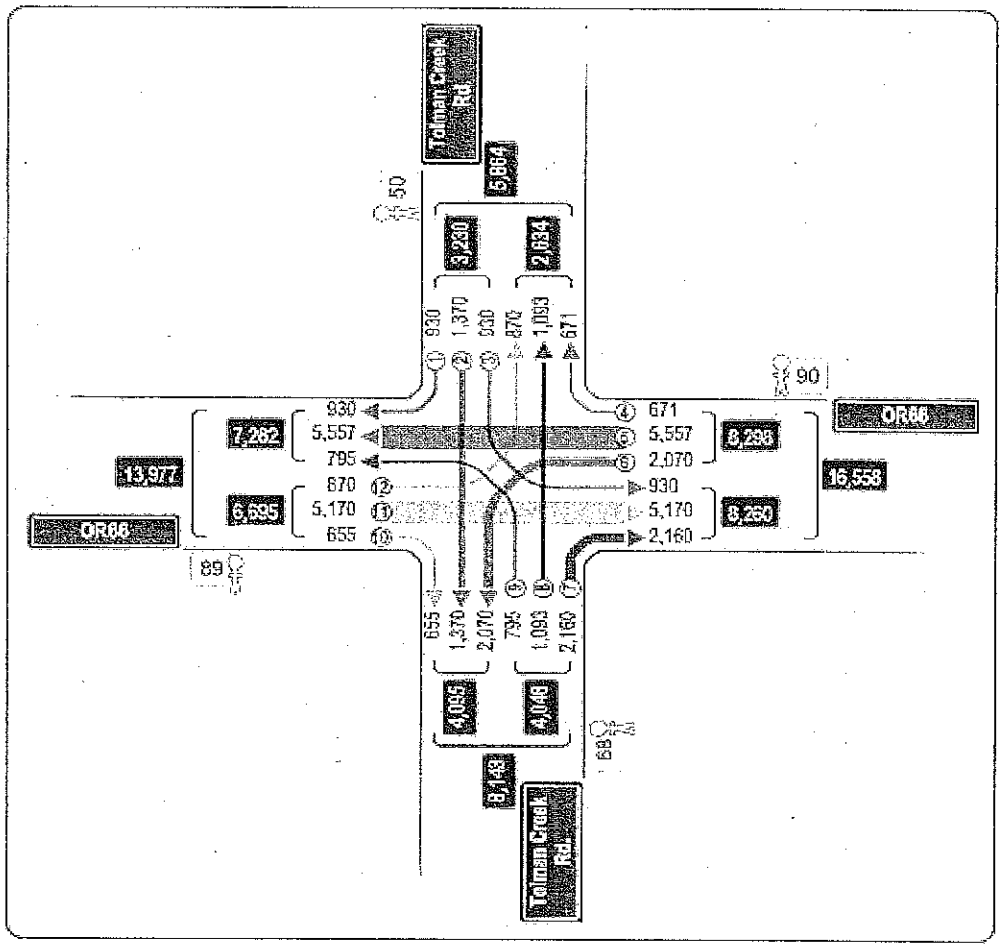
Site Number: 15112009
Mile Point: 1.04
Street Number: 021
Vehicle Type: Vehicles
Crossing Flow: Pedestrians

Source Description

Location Description: OR66 @ Tolman Creek Rd.

site 1601-west leg
91 bicyclists with helmets

County: Jackson
City: Ashland



Transportation Development Division
Transportation System Monitoring Unit
Vehicular Volume

Time settings

Date: 10/7/2009
Hours: 6:00 AM-10:00 PM
Weather: Clear

Source

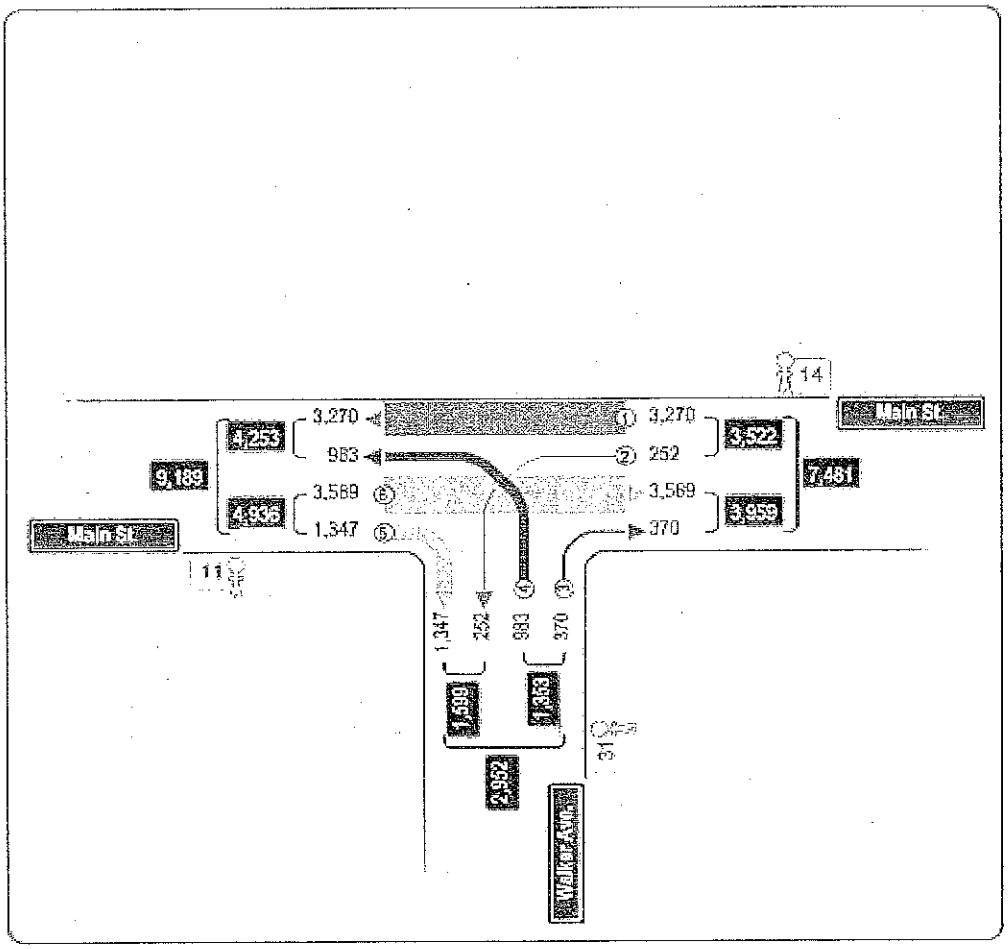
Site Number: 15022009
Vehicle Type: Vehicles
Crossing Flow: Pedestrians

Source Description

Location Description: Main St. @ Walker Ave.

bicyclists waering helmets = 70

County: Jackson
City: Ashland



Transportation Development Division
Transportation System Monitoring Unit
Vehicular Volume

Time settings

Date: 4/4/2012
Hours: 6:00 AM-10:00 PM
Weather: Cloudy

Source

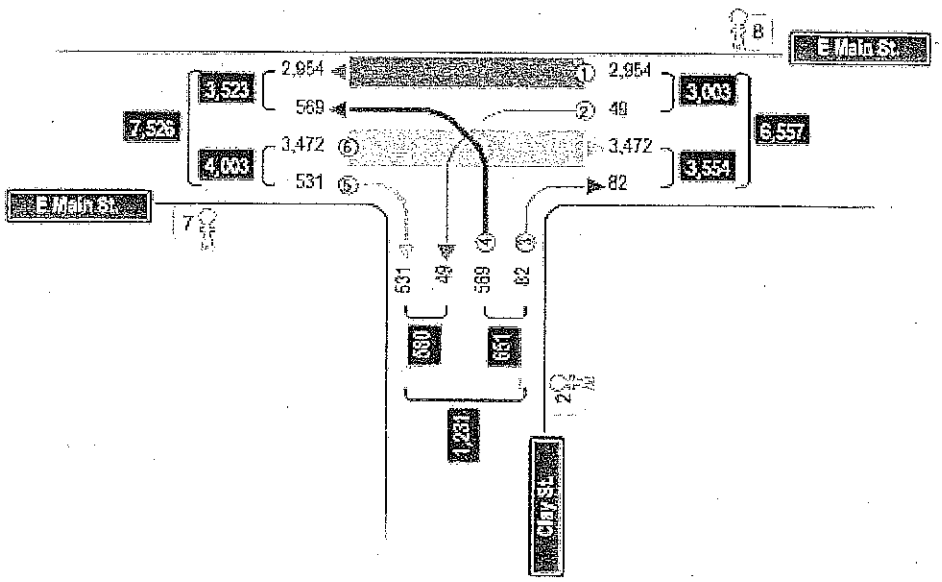
Site Number: 15022012
Street Number: 3758
Vehicle Type: Vehicles
Crossing Flow: Pedestrians

Source Description

Location Description: E Main St. @ Clay St.
expanded 6-10A 2-7P

bicyclists with helmets
east leg = 8
west leg = 8

County: Jackson
City: Ashland



Transportation Development Division
Transportation System Monitoring Unit
Vehicular Volume

Time settings

Date: 4/4/2012
Hours: 6:00 AM-10:00 PM
Weather: Cloudy

Source

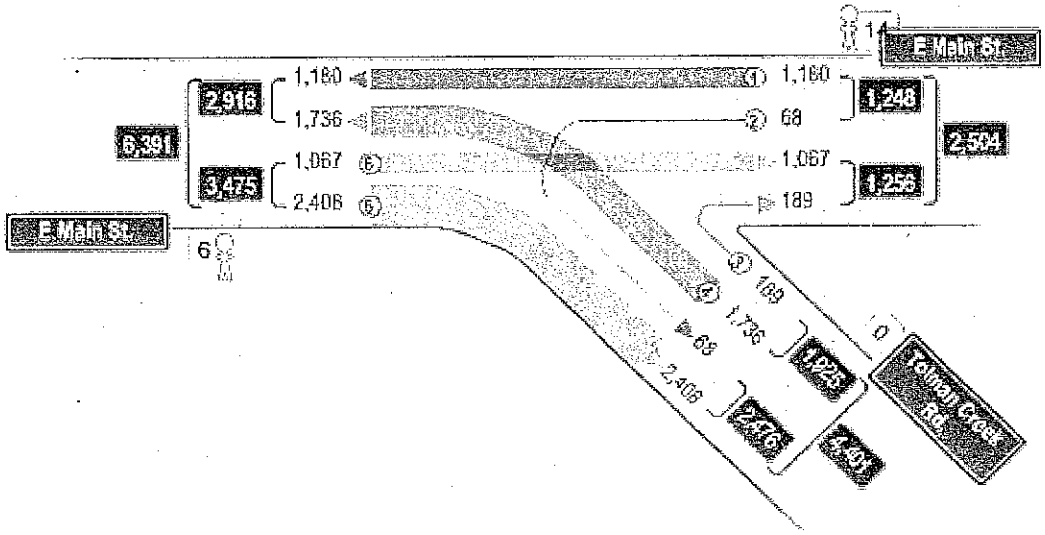
Site Number: 15012012
Street Number: 3758
Vehicle Type: Vehicles
Crossing Flow: Pedestrians

Source Description

Location Description: E Main St. @ Tolman Creek Rd.

bicyclists with helmets =
west leg = 10
east leg = 10
volume only when dark

County: Jackson
City: Ashland



Memo

CITY OF ASHLAND

Date: September 19, 2013
From: Scott A. Fleury
To: Transportation Commission
RE: Downtown Study Representation

BACKGROUND:
The City Council has approved moving forward with the University of Oregon to complete the downtown parking and circulation study. This was a direct recommendation of the recently completed and adopted Transportation System Plan (TSP).

As part of the project a Committee is to be selected to participate in development of the study. The Transportation Commission has been asked to provide two members to be directly involved with the downtown parking study.

Additional members of the Committee will be made up of, Planning Commission (2), non-chambered downtown business owners (2), downtown residents (2), and a trucking industry representative (1). Ex Officio membership will include a City Councilor, Public Works Director, Community Development Director, Finance Director, and Chamber staff members Sandra Slattery and Katherine Flanagan.

Once the Planning Commission and Transportation Commission members are selected they will go before Council for final approval along with all other members selected by the Mayor. The study is expected take last for approximately one year.

BID SCHEDULE
2012 STREET SLURRY SEAL PROJECT
Project No. 2012-08

NO	DESCRIPTION	QTY.	UNIT	UNIT PRICE (FIGURES)	AMOUNT
SECTION 00200 TEMPORARY FEATURES & APPURTENANCES					
1	Mobilization for_____Dollars	1	LS	$	$
SECTION 00220 – ACCOMMODATIONS FOR PUBLIC TRAFFIC					
2	Temporary Work Zone & Traffic Control, Complete for_____Dollars	1	LS	$	$
SECTION 00280 – EROSION AND SEDIMENT CONTROL					
3	For_____Dollars	1	LS	$	$
SECTION 00700 – WEARING SURFACES					
SECTION 00706 – EMULSIFIED ASPHALT SLURRY SEAL SURFACING (TYPE III)					
4	Sec 7-13 Woodland Dr – Pinecrest Tr to Indiana for_____Dollars	3,217.29	SQ YD	$	$
5	Sec 7-60 Pinecrest Tr – Starlite Pl to end of pavement for_____Dollars	1,155.83	SQ YD	$	$
6	Sec 8-2 Walker Av - Pinecrest Tr to Windsor St. for_____Dollars	5,534.13	SQ YD	$	$
7	Sec 7-17 Penny Dr – Woodland Dr to end of cul de sac for_____Dollars	1,105.80	SQ YD	$	$
8	Sec 7-48 Palmer Rd – Woodland Dr to Oregon St for_____Dollars	2,884.81	SQ YD	$	$
9	Sec 7-59 – Pinecrest Tr – end of road to Woodland Dr for_____Dollars	1,401.00	SQ YD	$	$
10	Sec 7-20 Indiana St – Madrone St to Woodland Dr for_____Dollars	4,207.50	SQ YD	$	$
11	Sec 8-1 Canyon Park Dr – End of cul de sac to Clay St for_____Dollars	967.09	SQ YD	$	$

NO	DESCRIPTION	QTY.	UNIT	UNIT PRICE (FIGURES)	AMOUNT
12	Sec 7-25 Windsor St – Palmer Rd to Indiana St For _____Dollars	983.86	SQ YD	$	$
13	Sec 6-46 Clarence Ln – End of cul de sac to Liberty St For _____Dollars	681.11	SQ YD	$	$
14	Sec 6-30 Liberty St – End of road to Ashland St For _____Dollars	2,474.24	SQ YD	$	$
15	Sec 6-63 Ashland St – Beach Av to Morton St For _____Dollars	2,305.22	SQ YD	$	$
16	Sec6-79 S Mountain Av – End of cul de sac to Prospect St For _____Dollars	4,147.88	SQ YD	$	$
17	Sec 6-89 Roca St – Emma St to Prospect St For _____Dollars	1,956.00	SQ YD	$	$
18	Sec 6-96 Emma St – Elkader to Roca For _____Dollars	1,088.02	SQ YD	$	$
19	Sec 6-97 Emma St – S Mountain Av to Elkader St For _____Dollars	1157.23	SQ YD	$	$
20	Sec 6-98 Emma St – End of road to S Mountain Ave For _____Dollars	1,184.51	SQ YD	$	$
21	Sec 6-99 Ivy Ln – S. Mountain Av to Elkader St	1,103.74	SQ YD	$	$
22	Sec 6-100 Ivy Ln – End of road to S Mountain Av	1,498.30	SQ YD	$	$
23	Sec 7-44 Leonard St – Woodland Dr to Madrone St	4,389.48	SQ YD	$	$
24	Sec 7-38 – Monroe St – Oregon St to Madrone St	1,265.08	SQ YD	$	$
		Total Bid	**$**		

Transportation Commission

Action Summary

as of September 2013

Month Year	Item Description	Status	Date Complete
August 26 TC	N. Mountain Ave Improvements		
May 23 TC	Bike Path Signage	TR13-08	
May 23 TC	Plaza Parking Prohibition	TR13-09	
February 28 TC	Main St. Parking Restriction	TR13-07	4/13
February 28 TC	Fair Oaks No Parking Restriction	TR13-03	4/13
February 28 TC	East Main Crosswalk Signage	TR 13-04	4/13
October 12 TC	B St. and Eighth St. sight distance	Approved, TR 2012-04	
October 12 TC	B St. and Second crosswalk sight distance	Approved, TR 2012-05	
September 12 TC	B St. and Second sight distance analysis	Staff report complete	
September 12 TC	Lithia/First Intesection Analysis	Traffic Engineer under contract to perform services	
August 12 TC	Centerline marking on Takelma Way	Approved, TR 2012-03	9/12
March 12	Sharrow markings on Maple St.	approved, TR 2012-01	10/12
March 12	Centerline marking on Crispin St.	approved, TR 2012-02	10/12
March 12	Loading zone on Lithia Way	not approved	
November 11 TC	Parking prohibitions on Highwood Dr.	approved, TR 2011-09	2/26/12
October 11 TC	Crosswalk on A Street	approved TR 2011-08	12/1/11
August 11 TC	Parking prohibitions on Almond	approved TR 2011-07	✓
August 11 TC	Stop sign at 4th and A Streets	not approved	
Jul 11 TC	Parking Prohibitions on E. Nevada	approved;TR 2011-04	3/6/12
Jul 11 TC	Stop Sign at Starflower	approved yield; TR 2011-05	11/17/11
Jul 11 TC	A' Shared Road	approved; TR 2011-06	10/28/11
June 11 TC	N. Main Road Diet	TC recommend implementation asap, approved 8/2/11	
June 11 TC	Parking prohibition on Central	TR 2011-03, install painted centerline, only	✓
May 11 TC	Stop sign on Homes	Stop sign not approved, other improvements implemented.	
May 11 TC	Stop sign on Pinecrest	not approved	
May 11 TC	Left turn signal at Wightman	recommended review by traffic engineer	
May 11 TC	Memorial Sign Request	recommended development of a policy, approved by Legal/Planning. Approved by Council	1/27/12
Apr 11 TC	N. Main Road Diet Pilot	Approved by Council 8/2/11	
Feb 11 TC	Parking Prohibitions Meadowbrook	TR 2011-02 order sent to Street Div.	✓
Feb 11 TC	Parking Prohibitions on Liberty St	TR 2011-01 order sent to Street Div.	✓
Feb 11 TC	Bike Corral on Third Street	Completed & installed	✓
Dec 10 TC	Petition for ped. rail crossing	referred to TSP process	
Dec 10 TC	Siskiyou Blvd x-walk at Frances	no action required	12/16/10
Nov 10 TC	S Mountain Mid Block Crosswalk	Approved to be installed in cooperation with SOU	
Nov 10 TC	E Main @ RR Crosswalk Review	Commission asked stop sign replaced	
Oct 10 TC	A St Sharrow Designation	Commission asked for Kittleson review	
Oct 10 TSC	Safety Sleeve for Bollard @ RR Park	replaced	✓
Oct 10 TSC	Storm Drain on Bike Path @ N Mtn	staff is researching	
Oct 10 TSC	Additional Vehicle Parking Downtown	Contacted ODOT	
Oct 10 TSC	Crosswalk at Lithia and E Main	TR 2010-06, order sent to Street Division	✓
Oct 10 TSC	Stop Sign at Helman & Nevada	not approved	✓
Oct 10 TSC	Stop Sign on 'B' @ Third	not approved	✓
Oct 10 TSC	Crosswalk on Siskiyou @ Morton	not approved	✓
Aug 10 TSC	Grandview/Sunnyview/Orchard/ Wrights	vegetation clearance referred to street dept for implementation	
Aug 10 TSC	15 Minute Parking on A Street	TR 2010-05, order sent to Street Division	
Aug 10 TSC	First St Parking Prohibition Change	TR 2010-04, order sent to Street Division	
Aug 10 TSC	Granite St Parking Prohibition Change	not approved, Swales will resubmit request	✓
Aug 10 TSC	Hargadine St Parking Prohibition Change	review as part of TSP update	
Aug 10 TC Jul 10 TSC	Bridge Street Parking Prohibition Change	Memo received from Fire Dept recommending against change	✓
Aug 10 TC	Truck Route Ordinance Review	Staff researching, Nov 2010 agenda item	
Jun 10 TC	2 Year Project List Goal Setting	3 goals selected	✓
Jul 10 TC	Audible Crosswalk Signals for Downtown	Vieville working w/staff to develop priority list for $27K budget	
Jul 10 TC	Shared Road Policy	review as part of TSP update	
Mar 10 TSC	Yield Sign at Terrace @ Holly	TR 2010-02	✓
Mar 10 TSC	Ashland St @ YMCA Crosswalk	not approved by ODOT	✓
Mar 10 TSC	Oak St Crosswalk at A St	included in Misc Concrete Project; bids due 11/17/10	
Jul 09 TC	Additional Downtown Bike Parking	Implementation list complete, will be installed as budget permits	
Nov 09 TC & TSC	Crosswalk for East Main @ Campus Way	Staff applying for funding through grant application	
Nov 09 TC & TSC	Grandview Shared Road Improvements	TR 2010-03, other improvements likely in future	
Aug 09 TC	Oak Street Sharrows	TR 2010-01	✓
Jul 09 TC	Will Dodge Way Improvements	Complete	9/2010
Apr 09 TC	Siskiyou Bv Pedestrian Improvements	complete	✓
Aug 09 TSC	Union/Allison and Fairview Intersection	not approved	✓
Nov 09 TSC	Yield Sign at Palmer Rd	not approved	✓
Nov 09 TSC	Stop Sign at Indiana St	not approved	✓
Dec 09 TSC	Terrace St Traffic Calming	not approved	✓
Dec 09 TSC	Ashland Village Traffic Calming	not approved	✓

Traffic Safety Connection

ACTS OREGON

August

Connecting Oregon's Community Traffic & Child Passenger Safety Advocates

Volume 11, Number 8

DOT Unveils New Tools to Help Keep Pedestrians Safe

U.S. Transportation Secretary Anthony Foxx today announced a new set of tools to help communities combat the rising number of pedestrian deaths that have occurred over the last two years. As part of the campaign, NHTSA is making $2 million in pedestrian safety grants available to cities with the highest rate of pedestrian deaths, and along with the Federal Highway Administration (FHWA), is launching a one-stop shop website called *Everyone is a Pedestrian* with safety tips and resources for local leaders, city planners, parents and others involved in improving pedestrian safety.

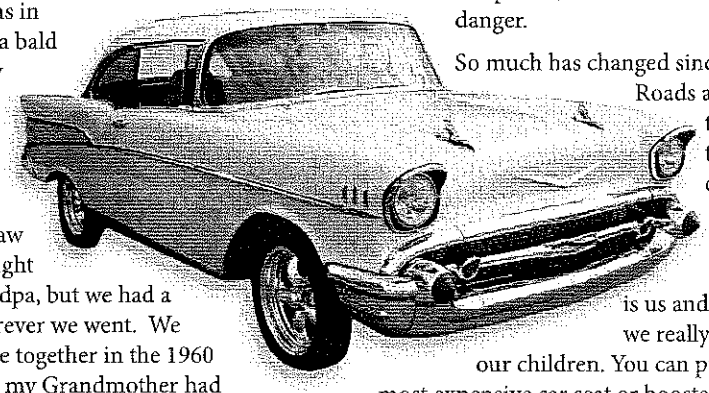
"Whether you live in a city or a small town, and whether you drive a car, take the bus or ride a train, at some point in the day, everyone is a pedestrian," said Secretary Foxx. "We all have a reason to support pedestrian safety, and now, everyone has new tools to help make a difference."

States have until August 30th to apply for a total of $2 million that can be used for education and enforcement initiatives in 22 focus cities where pedestrian deaths are greater than the national average. The new website pulls pedestrian safety information from both NHTSA maximized field of

Continued on page 4

Precious Cargo

My Dad was the greatest man that I ever knew and I absolutely worshiped him. I was his first child, born when he was midway into his 50's. I believe I was referred to as a "surprise" or a 'blessing" depending of course on who you were having the conversation with. He started to go grey when he was in college and had a bald spot accented by a half-full head of white hair by the time I came along.



Everyone who saw us together thought he was my Grandpa, but we had a grand time wherever we went. We had the best time together in the 1960 Oldsmobile that my Grandmother had given us when she stopped driving. I thought that it was coolest thing I had ever laid eyes on. It was painted a color called *Iridescent Golden Mist*. The name alone makes you think of mother of pearl swirling with bits of fine gold on a fluffy cloud.

It was pink.

Call it whatever you want but that car was *pink*. Sparkly pink that would bounce big shiny rays of pink light at you when the sun hit that paint job just right. I knew he felt silly driving it around but you didn't turn down a free ride (even a pink one) when it was offered to you. My Dad would get in the driver's seat and I would climb into the back and ride standing up behind my Dad with my arms wrapped around his neck. If you witnessed this today you would whip out your cell phone, call 911 and report a child in danger.

So much has changed since that time. Roads and how we travel on them, vehicles, distractions and impairments. What has not changed is us and how fragile we really are-especially our children. You can purchase the most expensive car seat or booster, but if it is not installed and used correctly your child could still be injured.

Your support of ACTS Oregon helps us reach out to drivers and make sure they are transporting their precious cargo in the safest manner possible. Please check out our website at *www.ChildSafetySeatResourceCenter.org* for more information on how to have your car seat checked to make sure it is installed properly.

Safe Travels, *Janelle Lawrence*

National Child Passenger Safety (CPS) Week is September 15 - 21

Motor vehicle crashes are the leading cause of death for children age 1 through 12 years old. Based on NHTSA crash data in 2010, almost an average of 2 children (age 12 and younger in a passenger vehicle) were killed and 325 were injured each day. This fatality rate could be reduced by about half if the correct child safety seat were always used.

General market research has found that the target audience (parents and caregivers of children 0-12 years old) is overconfident and thinks its kids are safe in the car. Parents constantly worry about their children's safety but car crashes aren't even on their radar as a real danger. Hispanics are likely to move their children out of car seats and booster seats sooner because many are unaware of the extra steps they can take to better protect their children. For many, car restraint use is a learned behavior in the United States and was not a cultural norm "back home."

The goal of National CPS Week is to make sure all parents and caregivers are properly securing their children (ages 0-12) in the best car restraint (rear-

Continued on page 3

ACTS Oregon

STAFF

Janelle Lawrence
Executive Director
Janelle@ACTSOregon.org

Sandy Holt
Child Passenger Safety Training & Certification Program Coordinator
SandyH@ACTSOregon.org

Yvonne McNeil
Community Traffic Safety Program Coordinator
Yvonne@ACTSOregon.org

Amber Husted
Administrative Assistant
Safety@ACTSOregon.org

Walker King
Project Assistant
Walker@ACTSOregon.org

BOARD MEMBERS

Funded through a grant from ODOT Transportation Safety Division.

NETS Workplace Campaign Features Holistic Approach to Safe Driving

Taking a systematic approach to safe driving that includes the roles of the mind, body and vehicle, the Network of Employers for Traffic Safety (NETS), today launched a free comprehensive online toolkit to help employers improve the safety of employees, employee family members and their communities.

The 2013 Drive Safely Work Week (DSWW) toolkit was developed by NETS, a partnership of private-sector companies and the federal government. The campaign theme this year is "Gear up for safe driving: Mind - Body - Vehicle." Campaign materials illustrate how maintenance of mind, body and vehicle are all connected and essential components to being a safe driver. Actionable steps are provided to help drivers be at their best behind the wheel.

The campaign was developed using the expertise of NETS' member companies, collectively representing a fleet of more than half a million vehicles that travel in excess of 10 billion miles globally each year.

"Driving is a physical task that requires mental focus," said Sandra Lee, Director of Worldwide Fleet Safety for Johnson & Johnson and chairperson of NETS. "A driver's mind and body in combination with the vehicle work together as a system. This year's campaign outlines simple steps that anyone can take to ensure every component of that system is well cared for and that drivers are at their best behind the wheel."

The DSWW campaign focuses on the importance of issues that include:

- Regular vision screening
- Being well-rested and properly fueled
- Keeping your vehicle healthy through preventative maintenance
- Getting the right fit to your vehicle for vision and sustained energy.

The free DSWW toolkit provides easy-to-use Web-based resources, including facts and tips on each of the issue areas, downloadable graphics, and activities tailored for each day of the campaign week.

Drive Safely Work Week 2013 toolkits available now at no cost at the following website: *http://www.trafficsafety.org/drivesafelyworkweek*

Take Action to Prevent Heatstroke

Every 10 days, across the United States, a child dies from being left in a hot car. It only takes a few minutes for a car to heat up and become deadly to a child inside. As summer temperatures rise, more kids are at risk. Help stop these tragedies from happening. We can prevent heatstroke with your help.

Reduce the number of deaths from heatstroke by remembering to ACT.

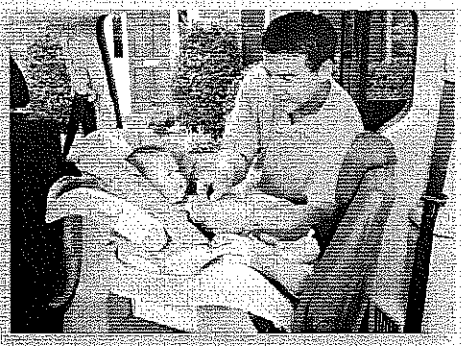
A: Avoid heatstroke-related injury and death by never leaving your child alone in a car, not even for a minute. And make sure to keep your car locked when you're not in it so kids don't get in on their own.

C: Create reminders by putting something in the back of your car next to your child such as a briefcase, a purse or a cell phone that is needed at your final destination. This is especially important if you're not following your normal routine.

T: Take action. If you see a child alone in a car, call 911. Emergency personnel want you to call. They are trained to respond to these situations. One call could save a life.

Additional Tips: Create a calendar reminder for your electronic devices to make sure you dropped your child off at daycare.

Develop a plan with your daycare so that if your child is late, you'll be called within a few minutes. Be especially careful if you change your routine for dropping off children at daycare.



Teach Kids Not to Play in Cars

Make sure to lock your vehicle, including doors and trunk, when you're not using it. Keep keys and remote entry fobs out of children's sight and reach.

Teach kids that trunks are for transporting cargo and are not safe places to play. If your child is missing, get help and check swimming pools, vehicles and trunks.

If your children are locked in a car, get them out as quickly as possible and dial 911 immediately. Emergency personnel are trained to evaluate and check for signs of heatstroke.

National CPS Technician Training in Brookings

Brookings Police and Fire Departments hosted July's CPS Certification class on the beautiful Southern Oregon coast. Curry County is pleased to add seven additional CPS Technicians where only two have been serving the entire county until now.

Congratulations to Oregon's newest CPS Technicians: Diane Justason – Bernie Bishop Mazda, James Watson, Jeff Lee and Andrew Stubbs – **Brookings Fire**, Robert Johnson – **Brookings Police,** Bobby Johnson – **Curry Health Network,** and Tom Burdett – **Gold Beach Police.**

A big appreciation goes out to the instructor team – Scott Downing - **Jackson County Fire District #3**, Gregg Magnus - **Eugene Police Department,** Sandy Holt - **ACTS Oregon** and Technician Assistant, Rosalee Senger - **ODOT TSD Region 3.**

And a special thank you to Sgt. Kelby McCrae - **Brookings Police** for all your behind the scenes work to make this class happen!

CPS Week

Continued from page 1

facing, forward-facing, booster, seat belt) for their age and size.

Did You Know?

- In 2010, 655 children were killed in motor vehicle traffic crashes, 64% of whom were restrained.
- Also in 2010, an estimated 119,000 children were injured in motor vehicle traffic crashes.
- In 2009, 161 Hispanic children were killed in motor vehicle traffic crashes in the 50 States, the District of Columbia, and Puerto Rico.
- 3 out of 4 kids are not as secure in the car as they should be because their car seats are not being used correctly.
- Using the correct restraints reduces infants' and toddlers' chances for fatal injury by 71% and 54% in passenger cars respectively.

How Can You Help?

- Encourage families to attend a car seat checkup event. It is free, and knowing all of their children are riding safely is worth the effort.
- Share the link to the Child Safety Seat Resource Center calendar of events at *www.actsoregon.org/calendar.html*
- Download educational flyers at: *www.actsoregon.org/educationMaterial.html*
- Donate to the Child Safety Seat Resource Center to support their important services. To donate visit: *http://www.actsoregon.org/*
- Add a link on your website to *www.childsafetyseat.org*
- Find more information at: *http://www.trafficsafetymarketing.gov/cps*

Welcome Walker!

ACTS Oregon is pleased to introduce Walker King, our new project assistant. This summer, Walker is travelling to and participating in events throughout Oregon to promote child passenger safety.

Walker is a graduate of Clackamas High School. He lives in Clackamas when he isn't at college at the University of Chicago, where he is a sophomore. Walker is also an Eagle Scout. He came to work for ACTS Oregon because he felt it would be a rewarding and helpful thing to do over the summer.

National CPS Technician Training in Hermiston

Hermiston Fire hosted the most recent CPS Technician Certification class resulting in 12 CPS Technicians who will serve Eastern Oregon.

Thank you to **Hermiston Fire, Good Shepherd Health Care Systems** and **WalMart** for your hospitality in hosting this class.

Congratulations to Oregon's newest CPS Technicians: Brianna Young – **DHS Child Welfare Services**, Joh Cabrera and Jessica Oster – **Good Shepard Health Care Systems**, Tamie Norris – **Hermiston Fire,** Lisa Cate, Larry Parvin, Anna Zarbrick, Jerrie Keely and Janna Hughitt – **Mid-Columbia Bus Company**, Joe Dezso – **Oregon State Police**, Tabitha Woodie – **Umatilla Morrow County Head Start**, and Jessica Holben – **Yellowhawk Tribal Health Center.**

Thank you Instructor Team! Sandy Holt – **ACTS Oregon**, Robert Tibbetts – **La Grande Fire**, and Doris Girt - **Clark County Safe Kids**. And a special thank you to Kathy Thomas - Good Shepherd Health Care Systems, for all your behind the scene work to make this class happen!

Child Safety Seat Resource Center — Check Up Events and Fitting Stations

Visit www.ChildSafetySeat.org/calendar.html for updated listings.

Date	City	Location	Address	Time
8/15/13	Madras	Jefferson County Fire	765 SE Adams Dr	11am - 1pm
8/17/13	Beaverton	Kuni Auto Center	3725 SW Cedar Hills Blvd	9 am - 12:00 pm
8/17/13	Portland - Gateway	Kohl's	10010 NE Halsey	10 am - 1 pm
8/17/13	Salem	Salem Hospital	Corner of Mission/Capitol SE	12:30 pm - 2 pm
8/21/13	Redmond	Redmond Fire	341 Dogwood Ave	2 pm - 4 pm
8/28/13	Bend	Bend Fire	1212 SW Simpson	10 am - 1 pm
8/28/13	Forest Grove	Forest Grove Fire	1919 Ash St	3 pm - 5 pm
8/29/13	Eugene	Eugene Fire	1725 W 2nd Ave	5 pm - 7 pm
8/31/13	Beaverton	Beaverton PD	4755 SW Griffith Dr	9am - 12:30 pm
9/4/13	Coos Bay	Coos Bay Fire	450 Elrod Ave	11 am - 1 pm
9/5/13	Redmond	Redmond Fire	341 Dogwood Ave	11 am - 2 pm
9/7/13	Tualatin	Tualatin PD	8650 SW Tualatin Rd	9 am - 12 pm
9/7/13	Newberg	Springbrook Fire	3100 Middlebrook Rd	9 am - 11 am
9/7/13	Gresham	Mt. Hood Medical Ctr	24800 SE Stark St	10 am - 2 pm
9/12/13	Ontario	Ontario Fire	444 SW 4th St	4 pm - 6 pm

LE Safety Belt Overtime Applications Open

Application forms for safety belt overtime by Oregon police departments for the 2013-2014 grant year (October 1 through September 30) are now available on the safety belt program webpage under the "Click It or Ticket" heading: *http://www.oregon.gov/ODOT/TS/safetybelts.shtml*

The work required under these grants is the same as in past years except that routine pre and post blitz 100-car surveys of belt use are being discontinued. Please use your most recent 100-car use rate where requested on the application. If you do not have a recent survey rate, use the form for that purpose on the webpage.

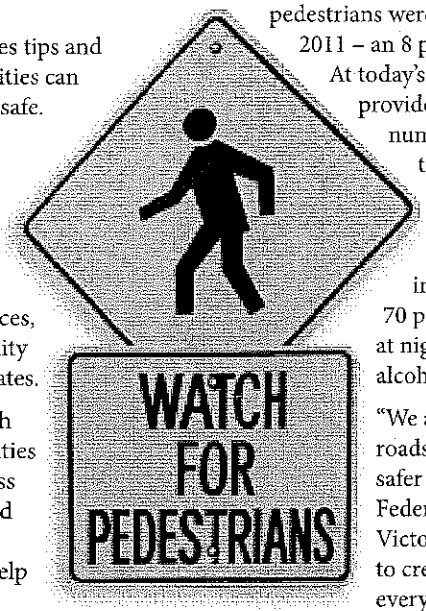
In addition to the FY 2014 Police Department Pre-Application for Safety Belt Overtime, please reveiw the 2014 Schedule of Events (blitz schedule), FY 2014 Police Department Overtime Policies, Officer Report Form, and Summary Report Form.

Applications are due to Transportation Safety Division by September 13, 2013.

DOT Unveils New Tools to Help Keep Pedestrians Safe

Continued from page 1

and FHWA, and provides tips and resources that communities can use to keep pedestrians safe. These resources include information for parents on teaching children about safe walking, reports on effective pedestrian projects for state highway safety offices, and guides for community pedestrian safety advocates.



"We continue to see high rates of pedestrian fatalities in major cities and across every demographic," said NHTSA Administrator David Strickland. "To help stop the recent increase in deaths and injuries, we need everyone to play a role in pedestrian safety. Working with partners on the federal, state, local and individual level, we hope to turn this concerning trend around."

According to NHTSA data, 4,432 pedestrians were killed in traffic crashes in 2011 – an 8 percent increase since 2009. At today's press conference, NHTSA provided a breakdown of those numbers, which showed that three out of four pedestrian deaths occurred in urban areas and 70 percent of those killed were at non-intersections. In addition, 70 percent of deaths occurred at night and many involved alcohol.

"We are committed to making roads, highways and bridges safer for pedestrians," said Federal Highway Administrator Victor Mendez. "We're working to create safer environments for everyone, whether it's getting proven safety measures onto roads and at intersections or sharing online resources with schools, teachers, and parents that teach kids pedestrian safety."

Since 2009, FHWA has committed more than $3.8 billion to more than 11,000 projects that make it safer for pedestrians and bicyclists. The agency provides resources and expertise to improve walking routes and infrastructure, such as offering technical assistance to cities and states with the highest pedestrian fatalities and tools such as Pedsafe, an online toolbox that communities can use to improve pedestrian safety in their area.

Additional information on the new pedestrian data can be found in NHTSA's latest issue of SAFETY 1N NUM3ERS, an online monthly newsletter on hot topics in auto safety – including problem identification, people at risk, and recommended practices and solutions to mitigate injury and death on our nation's roadways.

For more information, check out NHTSA's new website with pedestrian safety resources *www.nhtsa.gov/everyoneisapedestrian*

MOTOR VEHICLE CRASH SUMMARY

MONTH: JULY, 2013 NO. OF ACCIDENTS: 11

DATE	TIME	DAY	LOCATION	NO. VEH	PED INV.	BIKE INV.	INJ.	DUII	CITED	PROP DAM.	HIT/ RUN	CITY VEH.	CAUSE - DRIVER ERROR
1	16:33	Mon	W Nevada east of Glendower	2	N	N	N	N	Y	Y	N	N	dv1 did a uturn and struck parked car on side of road. Driver cited for cellphone use, driving uninsured, and referred to DMV for eval.
1	22:25	Mon	Crowson Rd near Oak Knoll Dr	1	N	N	N	Y	Y	Y	N	N	driver ended up in ditch while trying to make a uturn. Was found to be impaired and cited DUII-Controlled Substance.
2	14:38	Tue	Ashland St at Faith Av	2	N	N	P	N	Y	Y	N	N	dv1 struck v2 as v2 was turning left from Faith onto Ashland St. DV2 cited for Failure to obey Traffic Control device
3	21:00	Wed	Van Ness Av west of Oak St	1	N	N	Y	N	N	Y	N	N	Kickstand of moped dropped, causing vehicle to skid throwing driver. Driver transported due to head and neck injuries. No citation.
5	06:53	Fri	Ashland St east of Tolman Creek Rd	2	N	N	N	N	N	Y	N	N	dv1 merging into traffic sideswiped veh 2 that was headed straight through. Dv1 at fault. No citation.
15	15:14	Mon	Lithia Way at Oak St	2	Y	N	Y	N	Y	Y	N	N	driver motorcycle rearended vehicle that stopped for peds crossing. Cited for following too closely.
18	15:05	Thur	E Main St west of Second	2	N	N	N	N	N	Y	N	N	dv1, parallel parked, opened driver door into traffic causing RVTD bus to strike it bending door backwards. No citation.
19	19:09	Fri	Hargadine St, east of S First	2	N	N	N	N	Y	Y	N	N	dv 1 & 2 attemped to pass on narrow street. Sideswiped each other. Both drivers a fault Citation issued to one driver for expired reg.
25	12:22	Thr	N Main St east of Bush	2	N	N	N	N	N	Y	N	N	dv1 rearended v2 (OSP veh) due to inexperience. No citation. Exchange of info.
27	19:35	Sat	Lithia Way at Oak St	2	Y	N	N	N	Y	Y	N	N	2 drivers were stopped on Lithia Way at Oak waiting for ped to clear intersection. Veh on Oak crossed to north side while cars were waiting. Another veh passed on right in bike lane striking veh crossing Oak. Driver cited for unsafe passing on right and DWS.

MOTOR VEHICLE CRASH SUMMARY

MONTH: JULY, 2013 NO. OF ACCIDENTS: 11

DATE	TIME	DAY	LOCATION	NO. VEH	PED INV.	BIKE INV.	INJ.	DUII	CITED	PROP DAM.	HIT/ RUN	CITY VEH.	CAUSE - DRIVER ERROR
1	16:33	Mon	W Nevada east of Glendower	2	N	N	N	N	Y	Y	N	N	dv1 did a uturn and struck parked car on side of road. Driver cited for cellphone use, driving uninsured, and referred to DMV for eval.
1	22:25	Mon	Crowson Rd near Oak Knoll Dr	1	N	N	N	Y	Y	Y	N	N	driver ended up in ditch while trying to make a uturn. Was found to be impaired and cited DUII-Controlled Substance.
2	14:38	Tue	Ashland St at Faith Av	2	N	N	P	N	Y	Y	N	N	dv1 struck v2 as v2 was turning left from Faith onto Ashland St. DV2 cited for Failure to obey Traffic Control device
3	21:00	Wed	Van Ness Av west of Oak St	1	N	N	Y	N	N	Y	N	N	Kickstand of moped dropped, causing vehicle to skid throwing driver. Driver transported due to head and neck injuries. No citation.
5	06:53	Fri	Ashland St east of Tolman Creek Rd	2	N	N	N	N	N	Y	N	N	dv1 merging into traffic sideswiped veh 2 that was headed straight through. Dv1 at fault. No citation.
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19	19:09	Fri	Hargadine St, east of S First	2	N	N	N	N	Y	Y	N	N	dv 1 & 2 attemped to pass on narrow street. Sideswiped each other. Both drivers a fault Citation issued to one driver for expired reg.
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27	19:35	Sat	Lithia Way at Oak St	2	Y	N	N	N	Y	Y	N	N	2 drivers were stopped on Lithia Way at Oak waiting for ped to clear intersection. Veh on Oak crossed to north side while cars were waiting. Another veh passed on right in bike lane striking veh crossing Oak. Driver cited for unsafe passing on right and DWS.

MOTOR VEHICLE CRASH SUMMARY

MONTH: AUGUST, 2013 NO. OF ACCIDENTS: 9

DATE	TIME	DAY	LOCATION	NO. VEH	PED INV.	BIKE INV.	INJ.	DUII	CITED	PROP DAM.	HIT/ RUN	CITY VEH.	CAUSE - DRIVER ERROR
1	15:659	Thur	Second St and B St	2	N	N	P	N	N	Y	N	N	V1 and v2 collided in intersection. Conflicting stories. Fault could not be determined. No citations issued.
3	12:05	Tues	E Main St at Garfield	2	N	N	P	N	Y	Y	N	N	Dv1 waiting to turn left from E Main onto Garfield was rearended by v2. Dv2 cited for following too close.
7	11:54	Wed	E Main St at N Mountain	2	N	N	N	N	Y	Y	N	N	Dv1 changed lanes from the turning lane back into the travel lane and struck v2. Dv1 cited for unsafe lane change.
9	10:32	Fri	Siskiyuou near Harrison	2	Y	N	N	N	Y	Y	N	N	Dv1 travelling west on Siskiyou stopped for peds crossing in crosswalk and was rearended by v2. No citations.
13	09:18	Tues	Crowson Rd near Benson Wy	2	N	N	Y	Y	Y	Y	N	N	Car was in ditch. Injury. DUII-drugs, reckless driving, reckless endangerment.
15	09:58	Thur	Iowa St near Garfield	2	N	N	N	N	Y	Y	N	N	Dv1 strucked a parked vehicle causing damage. Was cited for careless driving.
17	12:40	Sat	Clay St north of Siskiyou	2	N	N	N	Y	Y	Y	Y	N	Dv1 backed into a parked car and attempted to leave. Was stopped and cited DUII, Hit and Run, Criminal Mischief, Careless Driving.
19	23:20	Mon	Linda Av near Mohawk St	2	N	N	N	Y	Y	Y	Y	N	Minor crashed and was arrested for no operator's license, DUII and hit and run.
21	09:38	Wed	Church St near N Main St	2	N	N	N	N	N	Y	N	N	Dv1 struck a parked veh while being pulled over for a traffic stop. Info exchanged, no citation.