



ACCESS MANAGEMENT – WHITE PAPER

Date: March 2, 2011 Project #: 10633.07
To: Jim Olson, City of Ashland
Cc: Project Management Team, Planning Commission, Transportation Commission
From: Susan Wright, PE, Diego Arguea and Erin Ferguson
Project: City of Ashland Transportation System Plan Update
Subject: Access Management – White Paper

DIRECTION TO THE PLANNING COMMISSION AND TRANSPORTATION COMMISSION

Five sets of white papers are being produced to present information on tools, opportunities, and potential strategies that could help Ashland become a nationwide leader as a green transportation community. Each white paper will present general information regarding a topic and then provide ideas on where and how that tool, strategy, and/or policy could be used within Ashland.

You will have the opportunity to review the content of each white paper and share your thoughts, concerns, questions, and ideas in a joint Planning Commission/Transportation Commission meeting. Based on discussions at the meeting, the material in the white paper will be: 1) Revised and incorporated into the alternatives analysis for the draft TSP; or 2) Eliminated from consideration and excluded from the alternatives analysis. The overall intent of the white paper series is to explore opportunities for Ashland and increase the opportunities to discuss the many possibilities for Ashland.

WHITE PAPER INTRODUCTION - ACCESS MANAGEMENT

This white paper presents general information on access management as well as ideas for how the City of Ashland can use access management practices to achieve its goals of continuing to develop a transportation system that emphasizes safety and mobility and is inviting to pedestrian, bicyclists and transit. Access management designations are connected to roadway functional classifications which relate to the facility's intended level of mobility versus accessibility. Technical Memorandum #3 presented the functional street classifications for the City of Ashland; Ashland functional classes are defined again below for reference.

- **Boulevard** – 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.
 - Examples include Ashland Street, Siskiyou Boulevard, North Main Street and Lithia Way

- **Avenue** – Provide concentrated pedestrian, bicycle, and motor vehicle access from boulevards to neighborhoods and to neighborhood activity centers.
 - Examples include Walker Avenue, Tolman Creek Road and Oak Street
- **Neighborhood Collector** – Distribute traffic from boulevards or avenues to neighborhood streets.
 - Examples include Crestview Drive, Fordyce Street and Holly Street
- **Neighborhood Street** – Provide access to residential and neighborhood commercial areas.
 - Examples include C Street, Gresham Street and Clinton Street
- **Alley** – A semi-public neighborhood space that provides access to the rear of property; the alley eliminates the need for front yard driveways and provides the opportunity for a more positive front yard streetscape.
 - An example includes Will Dodge Way
- **Multiuse Path** – Off-street facilities used primarily for walking and bicycling; these paths can be relatively short connections between neighborhoods or longer paths adjacent to rivers, creeks, railroad tracks, and open space.
 - An example includes the Bear Creek Greenway

ACCESS MANAGEMENT

Access management is the systematic implementation and control of the locations, spacing, design, and operations of driveways, median openings, interchanges, roundabouts, and street connections to a roadway, according to the Access Management Manual (AMM) (1). It involves roadway design applications, such as median treatments and auxiliary lanes, and the appropriate spacing and design of signalized intersections. Access management strives for a balanced transportation network with appropriate proportions and distributions of freeways, arterials, collectors, and local streets that are integrated with local land use activities.

Access management techniques and strategies help to preserve the transportation system investment, and guard against deteriorations in safety and increased congestion. Land use activities and property parcels are served with appropriate access by access management solutions, while safe and efficient movement of traffic is preserved. An effective access management program would include the following elements, according to the NCHRP Report 548, "A Guidebook for Including Access Management in Transportation Planning" (2):

- Develop and implement an access classification system to apply access standards based on the roadway's functional class;
- Employ the access classification system to plan, design, and maintain the roadway system;

- Define the level of access permitted for each category of the classification;
- Establish spacing criteria for signalized and unsignalized accesses;
- Apply engineering standards of geometric design and traffic engineering to access points or strategies;
- Establish policies, regulations, guidelines, and permitting procedures to implement the access management program; and
- Ensure coordination and support among all agencies that can impact the access and operations of facilities.

The steps to effective access management, according to the AMM (1), are:

1. Adopt specific policies, directives, and guidelines;
2. Set access management regulations to dictate the detailed standards to be imposed;
3. Acquire access rights to protect the roadway system;
4. Implement land development regulations at the local level, such as, zoning and subdivision regulations;
5. Undertake development review and impact assessment to determine the consequences of a permitted access or design; and
6. Assure geometric design standards and criteria are compatible with access management objectives.

Well deployed access management strategies can greatly improve travel conditions for pedestrian and bicycles. Eliminating the number of access points on roadways reduces the number of potential interruptions and conflict points between pedestrians, bicyclists, transit vehicles and cars. Access management is typically adopted as a policy in development guidelines. It can be extremely difficult to implement an access management program once properties have been developed along a corridor. Cooperation among and involvement of relevant government agencies, business owners, land developers and the public is necessary to establish an access management plan that benefits all roadway users and businesses.

Access Management Plan Overview

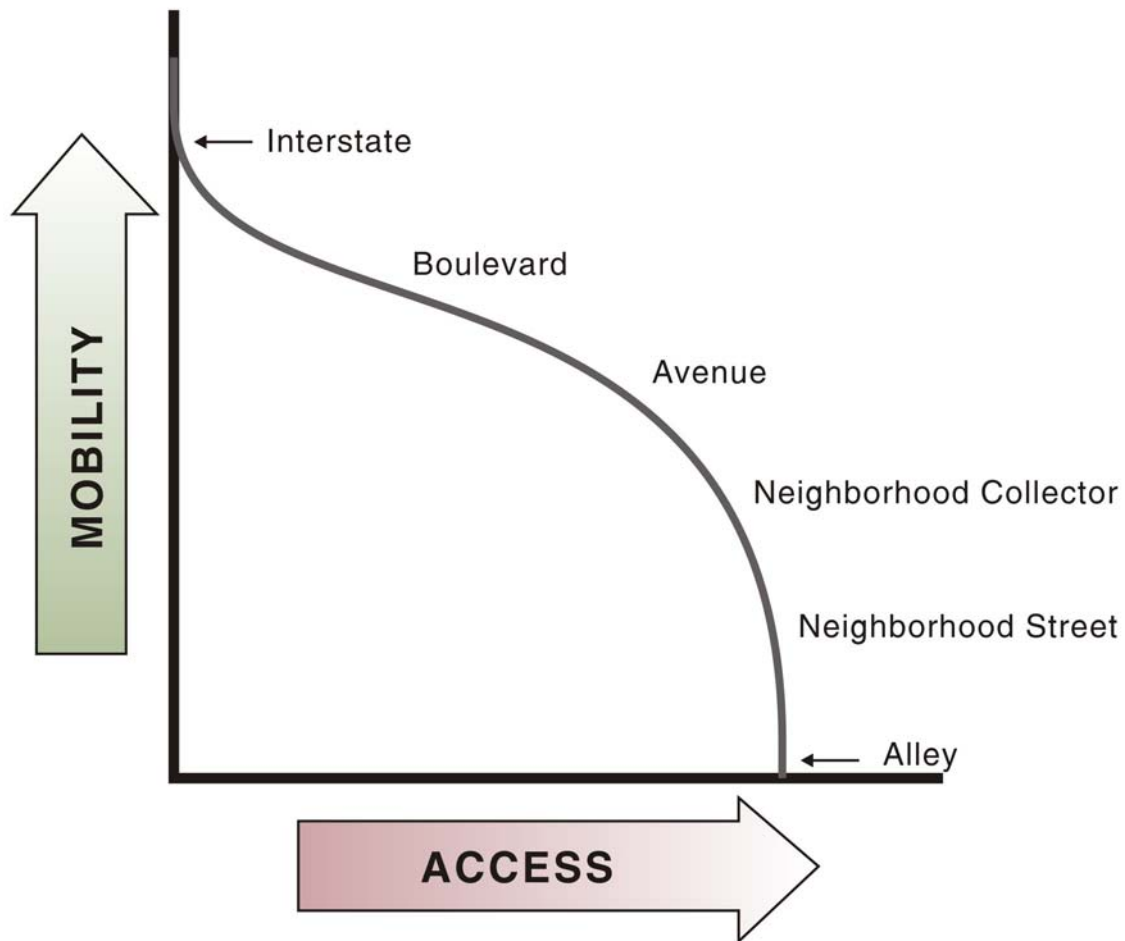
As the City of Ashland continues to grow, its street system will become more heavily traveled. Consequently, it will become increasingly important to manage access on the Boulevard and Avenue street system as new development occurs, in order to preserve those streets' function for carrying through traffic. ODOT has legal authority to regulate access points along state highways within the city's urban growth boundary. The City of Ashland and Jackson County jointly manage several roadways (East Main Street, Tolman Creek Road, and Clay Street) within the City limits to ensure the efficient movement of traffic and enhance safety. The City also independently

manages access on all other Boulevards, Avenues, Neighborhood Collectors, and Neighborhood Streets within its jurisdiction which are not owned by ODOT or Jackson County.

The Oregon Transportation Planning Rule (TPR) defines access management as a set of measures regulating access to streets, roads, and highways, from public roads and private driveways. The TPR requires that new connections to arterials and state highways be consistent with designated access management categories. The current Ashland TSP includes an access management policy that maintains and enhances the integrity (capacity, safety, and level of service) of the city's streets.

Access management standards vary depending on the functional classification and purpose of a given roadway. Roadways on the higher end of the functional classification system (i.e., Boulevards and Avenues) tend to have higher spacing standards, while facilities such as Neighborhood Collectors and Neighborhood Streets allow more closely spaced access points. These standards apply to new development or redevelopment; existing accesses are allowed to remain as long as the land use does not change or safety issues do not arise. As a result, access management is a long-term process in which the desired access spacing to a street slowly evolves over time as redevelopment occurs. Access management generally becomes more stringent as the functional classification level of roadways increases and the corresponding importance of mobility increases. Exhibit 1 illustrates the general relationship between accessibility and mobility.

Exhibit 1 Relationship between Accessibility and Mobility



In implementing access management standards, parcels cannot be land-locked but must have some way of accessing the public street system. This may mean allowing shorter access spacings than would otherwise be allowed (known as a *variance*), but the possibility of providing shared access with a neighboring parcel should also be explored. Where a property has frontage on two roadways, access on the roadway of lower classification is preferred, all other things being equal.

ODOT Access Management Standards

The Oregon Highway Plan (OHP) specifies an access management classification system for state facilities based on a highway classification system. The OHP classifies I-5 as an Interstate Highway and OR 99 and OR 66 in Ashland as District Highways. OR 99 and I-5 also has the designation as a Freight Routes. Table 1 summarizes ODOT's current access management standards for District Highways under the 1999 OHP. However, ODOT and the City of Ashland have an agreement that OR 66 and OR 99 within the City limits are not subject to ODOT's typical minimum spacing standards for District Highways. OR 66 and OR 99 within the City of Ashland are subject to a minimum access spacing standard of 300 feet.

**Table 1
 Access Spacing Standards on District Highways**

Posted Speed	Spacing Standards ¹
50 mph	550 feet
40 & 45 mph	500 feet
30 & 35 mph ³	350 feet
≤ 25 mph ³	350 feet
Ashland – ODOT Agreement for OR 66 and OR 99 ⁴	300 feet

NOTE: Spacing standards obtained from the OHP (OHP). Consult the OHP for updates and addenda.

¹ Measurement of the approach road spacing is from the center on the same side of the roadway.

²Per the OHP, driveways are discouraged in STAs. However, "where driveways are allowed and where land use patterns permit, the minimum access management spacing for driveways is 175 feet or mid-block if the current block is less than 350 feet".

³For roadways designated at Special Transportation Areas (STA), minimum access management spacing for public road approaches is the existing city block spacing or the city block spacing as identified in the local comprehensive plan. Public road connections are preferred over private driveways and in STAs driveways are discouraged. However, where driveways are allowed and where land use patterns permit, the minimum access management spacing for driveways is 175 feet (55meters) or mid-block if the current city block spacing is less than 350 feet (110 meters).

⁴This agreement is discussed further below under the City Roadway Access Standards.

City Roadway Access Standards

Table 2 identifies the minimum public street intersection and private access spacing standards for the City of Ashland roadway network as they relate to new development and redevelopment. County facilities within the city’s UGB are planned and constructed in accordance with these street design standards.

**Table 2
 Access Spacing Standards on City Streets**

Functional Classification	Access Spacing Standard – Distance from Streets (feet) ¹	Access Spacing Standard – Distance between Driveways (feet)
Neighborhood Collectors	35 feet	50 feet
Avenues	50 feet	75 feet
Boulevards	100 feet	100 feet

¹Access standards identified in the OHP supersede this table on all state highways.

The City of Ashland has a minimum driveway access spacing of 100 feet for boulevards, 50 to 75 feet for avenues, and 35 to 50 feet for neighborhood collectors. OR 99 and OR 66 are classified as Boulevards as well as District Highways and therefore are subject to the 300 foot standard within city limits per an agreement with ODOT. The average existing access spacing along Ashland roadways is illustrated graphically in Figure 1, and the access spacing standards described above are illustrated in Figure 2.

The study roadways (i.e., roadways classified as neighborhood collectors or higher) that meet or exceed the applicable driveway access spacing standards (shown in Figure 2) based on average driveway access spacing (shown in Figure 1) are shown graphically in Figure 3. These segments of roadway have also been documented in Technical Memorandum #3.

In general, the average access driveway spacing on neighborhood collectors and avenues tends to meet or exceed the applicable standard by no more than 25 feet. The average access spacing on the boulevard network specifically stretches of Siskiyou Boulevard (OR 99), North Main Street (OR 99), Ashland Street (OR 66), and East Main Street exceeds the applicable standard by 100 to 250 feet. Four segments of these facilities have been selected for further review and are discussed later in this white paper.

VariANCES to Access Spacing Standards

Access spacing variances may be provided to parcels whose highway/street frontage, topography, or location would otherwise preclude issuance of a conforming permit and would either have no reasonable access or cannot obtain reasonable alternate access to the public road system. In such a situation, a conditional access permit may be issued by ODOT or the City of Ashland, as appropriate, for a connection to a property that cannot be accessed in a manner that is consistent with the spacing standards. The permit can carry a condition that the access may be closed at such time that reasonable access becomes available to a local public street. The approval condition might also require a given land owner to work in cooperation with adjacent land owners to provide either joint access points, front and rear cross-over easements, or a rear access upon future redevelopment.

The requirements for obtaining a deviation from ODOT's minimum spacing standards are documented in OAR 734-051. For streets under City jurisdiction, the City may reduce the access spacing standards, at the discretion of the Public Works Director, if the following conditions exist:

1. Joint access driveways and cross access easements are provided in accordance with the standards;
2. The site plan incorporates a unified access and circulation system in accordance with the standards;
3. The property owner enters into a written agreement with the City that pre-existing connections on the site will be closed and eliminated after construction of each side of the joint use driveway; and,
4. The proposed access plan for redevelopment properties moves in the direction of the spacing standards.

The Public Works Director may modify or waive the access spacing standards for streets under City jurisdiction where the physical site characteristics or layout of abutting properties would make a development of a unified or shared access and circulation system impractical and would make meeting the access standards infeasible, subject to the following:

1. The application of the location of access standard will result in the degradation of operational and safety integrity of the transportation system.
2. The granting of the variance shall meet the purpose and intent of these standards and shall not be considered until every feasible option for meeting access standards is explored.
3. Applicants for variance from these standards must provide proof of unique or special conditions that make strict application of the standards impractical. Applicants shall include proof that:
 - a. Indirect or restricted access cannot be obtained;
 - b. No engineering or construction solutions can be applied to mitigate the condition; and,
 - c. No alternative access is available from a road with a lower functional classification than the primary roadway.
4. No variance shall be granted where such hardship is self-created.

Access Management Measures

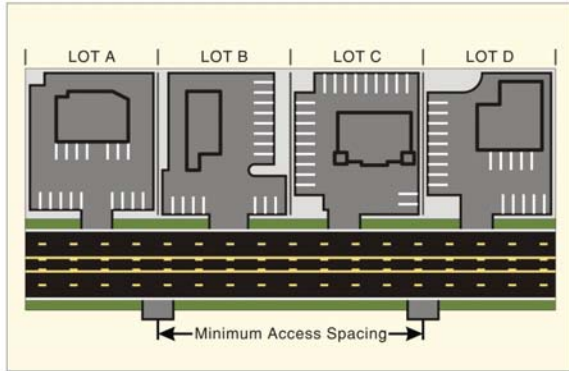
From an operational perspective, access management measures limit new or consolidate the existing number of redundant access points along roadways. This enhances roadway capacity and benefits circulation. Enforcement of the access spacing standards should be complemented with the provision of alternative access points. Purchasing right-of-way and closing driveways without a parallel road system and/or other local access could seriously affect the viability of the impacted properties. Thus, if an access management measure is applied, alternative access should be developed to avoid “land-locking” a given property.

As part of every land use action, the City of Ashland may want to consider evaluating the potential need for conditioning a given development proposal with the following items in order to maintain and/or improve traffic operations and safety along the arterial and collector roadways.

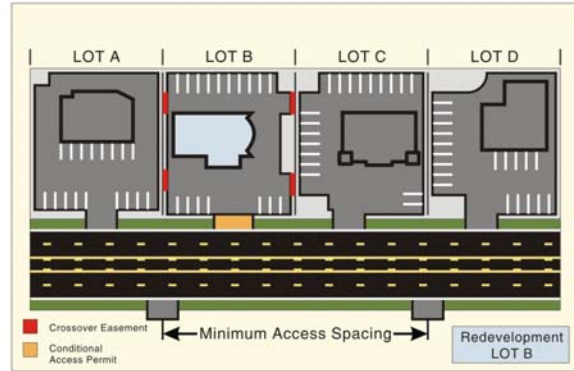
- Crossover easements on compatible parcels (considering topography, access, and land use) may be created to facilitate future access between adjoining parcels;
- Conditional access permits may be issued to developments having proposed access points that do not meet the designated access spacing policy and/or have the ability to align with opposing driveways.
- Right-of-way dedications may be provided to facilitate the future planned roadway system in the vicinity of proposed developments.
- Half-street improvements (sidewalks, curb and gutter, bike lanes/paths, and/or travel lanes) may be provided along site frontages that do not have full build-out improvements in place at the time of development.

Exhibit 2 on the following page illustrates the application of cross-over easements and conditional access permits over time to achieve the desired access management objectives. The individual steps are described in Table 4, following Exhibit 1. As illustrated in the figure and supporting table, using these guidelines, all driveways along highways will eventually move in the overall direction of the access spacing standards as development and redevelopment occur along a given street.

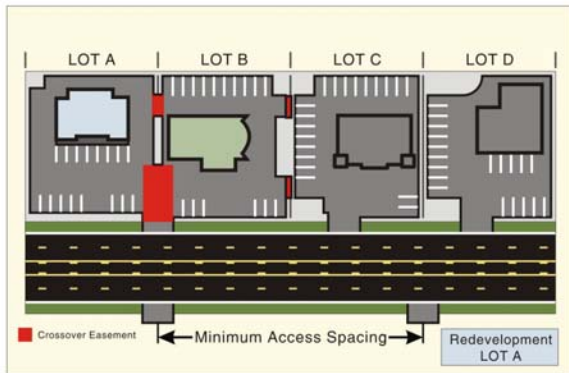
Exhibit 2 Example of Cross-over Easement/Indenture/Consolidation/Conditional Access Process



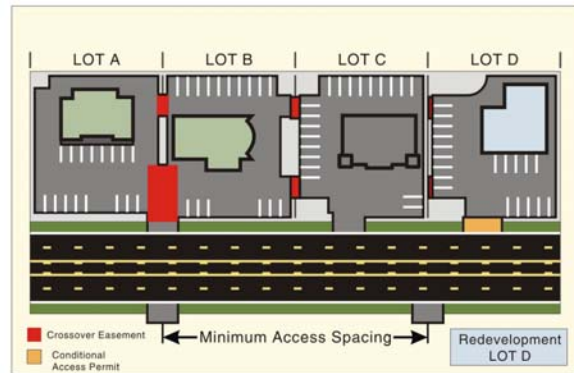
EXISTING CONDITIONS



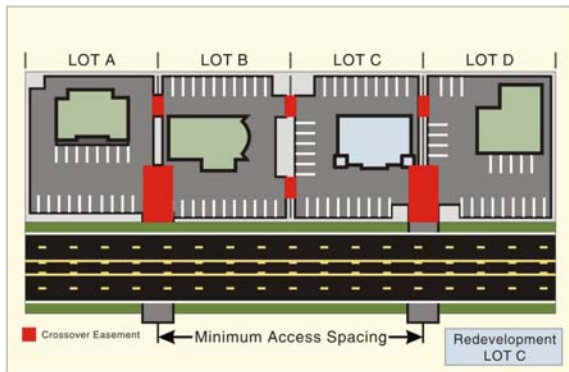
STEP 1
REDEVELOPMENT OF LOT B



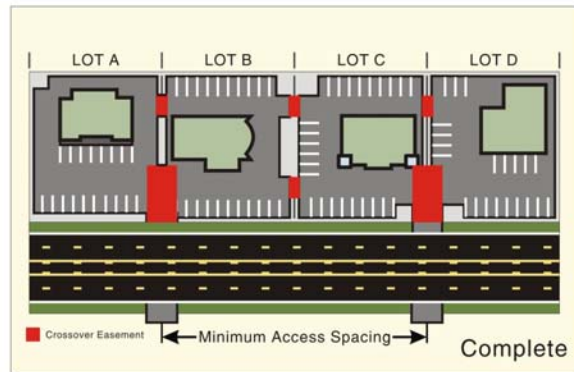
STEP 2



STEP 3



STEP 4



STEP 5

**Table 3
 Example of Crossover Easement/Indenture/Consolidation - Conditional Access Process**

Step	Process
1	EXISTING – Currently Lots A, B, C, and D have site-access driveways that neither meet the access spacing criteria of 300 feet nor align with driveways or access points on the opposite side of the highway. Under these conditions motorists are into situations of potential conflict (conflicting left turns) with opposing traffic. Additionally, the number of side-street (or site-access driveway) intersections decreases the operation and safety of the highway
2	REDEVELOPMENT OF LOT B – At the time that Lot B redevelops, the City would review the proposed site plan and make recommendations to ensure that the site could promote future crossover or consolidated access. Next, the City would issue conditional permits for the development to provide crossover easements with Lots A and C, and ODOT/City would grant a conditional access permit to the lot. After evaluating the land use action, ODOT/City would determine that LOT B does not have either alternative access, nor can an access point be aligned with an opposing access point, nor can the available lot frontage provide an access point that meets the access spacing criteria set forth for segment of highway.
3	REDEVELOPMENT OF LOT A – At the time Lot A redevelops, the City/ODOT would undertake the same review process as with the redevelopment of LOT B (see Step 2); however, under this scenario ODOT and the city would use the previously obtained cross-over easement at Lot B consolidate the access points of Lots A and B. ODOT/City would then relocate the conditional access of Lot B to align with the opposing access point and provide and efficient access to both Lots A and B. The consolidation of site-access driveways for Lots A and B will not only reduce the number of driveways accessing the highway, but will also eliminate the conflicting left-turn movements the highway by the alignment with the opposing access point.
4	REDEVELOPMENT OF LOT D – The redevelopment of Lot D will be handled in same manner as the redevelopment of Lot B (see Step 2)
5	REDEVELOPMENT OF LOT C – The redevelopment of Lot C will be reviewed once again to ensure that the site will accommodate crossover and/or consolidated access. Using the crossover agreements with Lots B and D, Lot C would share a consolidated access point with Lot D and will also have alternative frontage access the shared site-access driveway of Lots A and B. By using the crossover agreement and conditional access permit process, the City and ODOT be able to eliminate another access point and provide the alignment with the opposing access points.
6	COMPLETE – After Lots A, B, C, and D redevelop over time, the number of access points will be reduced and aligned, and the remaining access points will meet the access spacing standard.

OPPORTUNITIES FOR ACCESS MANAGEMENT IN ASHLAND

The following corridor segments were identified as potential areas to explore access management opportunities and potentially implement access management measures as part of future redevelopment and/or capital improvement projects within the City of Ashland.

- North Main Street (OR 99) from Helman Street to Sheridan Street
- East Main Street from Siskiyou Boulevard (OR 99) to Wightman Street
- Siskiyou Boulevard (OR 99) from E Main Street to Walker Avenue
- Siskiyou Boulevard (OR 99) from Walker Avenue to Tolman Creek Road
- Ashland Street (OR 66) from Siskiyou Boulevard (OR 99) to Tolman Creek Road
- Ashland Street (OR 66) from Tolman Creek Road to East Main Street-Oak Knoll Road

North Main Street – Helman Street to Sheridan Street

North Main Street (OR 99) provides a connection into and out of Ashland and helps to establish the character for the downtown area between Sheridan and Helman Street. Surrounded by residential land uses, this segment of roadway could benefit from access management to improve safety at several unsignalized intersections. For example, the Wimer-Hersey Street/North Main Street intersection has been identified as a safety focus intersection due to its relatively high crash rate. This intersection would benefit from a right-in/right-out treatment or a right-in/right-out/left-in treatment that would allow left-turns from North Main Street (OR 99) onto Hersey Street. This would serve to eliminate vehicular conflict points, potentially eliminating further crashes while improving mobility through this section of North Main Street and maintaining full access to Hersey Street.

Improving access management along North Main Street is also critical for the success of the potential road diet the City is currently exploring along North Main Street. Restricting movements at closely spaced unsignalized intersection along North Main Street, such as Wimer-Hersey Street, Van Ness Avenue, and Glenn Street would help to improve operations and reduce crashes on North Main Street. Restricting movements at unsignalized intersections will redirect the most difficult and crash prone movements (e.g., left-turns and crossing movements) to signal controlled intersections where they can be accommodated with less risk to road users. North Main Street (OR 99)/Maple Street is the closest signalized intersection north of the streets noted above and North Main Street (OR 99)/Laurel Street is the closest signalized intersection to the south.

East Main Street – Siskiyou Boulevard (OR 99) to Wightman Street

The segment between Siskiyou Boulevard (OR 99) and Wightman Street serves primarily residential land uses with some commercial. This segment of East Main Street can benefit from long-term access management planning, as there is currently no urgent need based on safety and operations analyses. As this area continues to evolve, the City should work to maintain and enforce the adopted access management standards, taking opportunities to consolidate driveways as parcels redevelop.

Siskiyou Boulevard (OR 99) – East Main Street to Walker Avenue

This segment of Siskiyou Boulevard (OR 99) primarily serves commercial and institutional land uses. While it has noticeably higher average access spacing than the applicable standard, there is a raised median, which helps reduce conflicts by restricting many driveways to right-in/right-out movements and also provides a refuge for pedestrians crossing Siskiyou Boulevard. Given the relatively built-up environment along this stretch of roadway improving access management will likely be a gradual process. In the long-term, the City should work to maintain and enforce the adopted access management standards, taking opportunities to consolidate driveways as parcels redevelop.

Siskiyou Boulevard (OR 99) – Walker Avenue to Tolman Creek Road

The segment of Siskiyou Boulevard (OR 99) from Walker Avenue to Tolman Creek Road may also benefit from access management planning as the community continues to grow. The surrounding land uses include residential zoning with room to grow and develop, with the potential for commercial rezoning on existing residentially zoned land. The existing roadway cross-section is two lanes with partial shoulders and no median. As such, driveways and other access points should be carefully planned so that safety is not compromised and mobility is maintained through the segment. The benefits of access management will also be realized at the Tolman Creek Road intersection which has been identified to have a high crash rate. As summarized in Technical Memorandum #4 (Table 13), this intersection would benefit from prohibiting on-street parking and speed-reduction treatments.

Ashland Street (OR 66) – Siskiyou Boulevard (OR 99) to Tolman Creek Road

The segment of Ashland Street from Siskiyou Boulevard (OR 99) to Tolman Creek Road would benefit from long-term access management as land uses redevelop. This segment of Ashland Street near the intersection of Siskiyou Boulevard is lined with primarily commercial land uses and then transitions to public street access to residential areas before crossing over the railroad tracks. The area is generally established therefore improving access management will need to be a gradual process looking for opportunities to consolidate driveways and/or develop cross easements when parcels redevelop.

Ashland Street (OR 66) – Tolman Creek Road to East Main Street

The section of Ashland Street from Tolman Creek Road over the I-5 interchange to the intersection of East Main Street is currently under full evaluation as part of an in-process interchange area management plan (IAMP) at this location. The IAMP proposes a median from Washington Street to Clover Lane concurrent with interchange improvements and a full median from Tolman Creek Road to Sutton Place, once certain volume warrants are met, as well as other access management treatments, such as consolidation of existing accesses and planning for shared access easements between commercial developments and businesses over time. Currently, the City is discussing modifications to the IAMP with ODOT to review the following:

- Keeping Washington Street as a left-in/right-in/right-out access in the long-term because it would:
 - reduce the u-turn demand at Tolman Creek Road;
 - provide more capacity for standard left-turns at Tolman Creek Road;
 - reduce the long-term infrastructure needs at the Ashland/Tolman Creek intersection; and
 - enhance local property access while still addressing the primary safety issues with the intersection (i.e., the minor street through and left-turn egress movements).

- Review the design vehicle that will be accommodated for westbound u-turns in the near-term at Washington Street and in the long-term at Tolman Creek Road (assuming the existing configuration) and develop a plan for eastbound u-turns for the in the near- and long-term access management plans that accommodate appropriate design vehicles for an interstate interchange.

NEXT STEPS

Applying access management to Ashland corridors is one method to improve safety and mobility through key areas of the city. Specific application of access management measures can be identified for each corridor incrementally as the surrounding land uses develop. These future access management projects can be identified as part of the TSP update process, if the concept is supported by the project stakeholders. Based on safety and operational issues identified in previous technical memoranda, the roadway segments below are suggested for focused, improved access management through either future land use actions and/or capital improvement projects.

- North Main Street (OR 99) from Helman Street to Sheridan Street
- Siskiyou Boulevard (OR 99) from East Main Street to Walker Avenue
- Siskiyou Boulevard (OR 99) from Walker Avenue to Tolman Creek Road
- Ashland Street (OR 66) from Siskiyou Boulevard (OR 99) to Tolman Creek Road
- East Main Street from Siskiyou Boulevard (OR 99) to Wightman Street

REFERENCES

1. Transportation Research Board. *Access Management Manual*. Washington D.C., 2003.
2. Transportation Research Board. *NCHRP Report 548: A Guidebook for Including Access Management in Transportation Planning*. Washington D.C., 2005.