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Appendix 3

Additional comments from ODOT

DRAFT



Kate Brown, Governor

Department of Transportation

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June 14, 2016

MEMORANDUM

File: TGM 1F-14

To: Lori Mastrantonio, Project Manager, Clackamas County
Sumi Malik, Project Manager, CH2Mhill

From: Gail Curtis, Senior Planner and TGM Contract Administrator

Subject: **The Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan,
Recommended Plan Version**

The purpose of this letter is to document ODOT's involvement and response to "The Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan, Recommended Plan Version." The majority of plan concepts are supported by ODOT but additional analysis during implementation will be needed to determine the exact treatments. Outlined below are key considerations for the US26 related projects as they move from concept to implementation.

Background: The need for the plan, including determining if and where pedestrian crossings should occur on US 26 within The Villages was identified as part of the Mt Hood Multi-Modal Plan with Clackamas County as the appropriate lead agency. With state, Transportation Growth Management program funding support the plan was developed in 2015-16. I served as the ODOT planner and TGM contract manager responsible for coordination with the ODOT Region 1 Traffic Unit represented by Kate Freitag, ODOT PE; Region 1 Mobility Unit represented by Tony Coleman; and Region 1, Region Maintenance District 2C represented by Michael Keyes.

Key Considerations: Below is a summary of the key considerations in which ODOT expects to be addressed as part of implementation. See also the attached memo from Kate Freitag, ODOT PE which outlines additional considerations.

- **Safety:** Safety is of paramount importance to ODOT. The area conditions where new, US 26 pedestrian crossing are intended will need to change considerably before ODOT will grant approval of new crossings. Expected area conditions include improvements such as sidewalks, curbs, decorative lighting, a reduction in parking between US26 and the buildings they serve. These measures are needed to help cue drivers that pedestrians can be expected and improve safety for all users.
- **Transit:** The plan area is served by the Mt. Hood Express transit and a local shuttle. Mt. Hood Express transit's short history is proving that the transit service is both popular and effective in providing an alternative to driving between Mt. Hood and the Portland metro area. The transit serves both those wanting to recreate and work on the mountain. There are four Mt. Hood Express transit stops along the US26 corridor with one of the four transit stops located on US 26 in Rhododendron. The Bend Breeze transit has one stop on Mt. Hood and it too is located in Rhododendron allowing a potential ride connection between the two services. The Mt. Hood Express transit stop in Rhododendron is located on the south side of US26 with the majority of

services, including a grocery store on the north side of US26. In order to better serve the transit service and existing village-like features we recommend the implementation of the proposed Rhododendron pedestrian crossing have priority over the potential, Arrah Wanna/US26 ped. crossing. Once implemented, it can serve as a model for the potential, Arrah Wanna crossing.

- **ORS 366.215:** It will be necessary to maintain 26' of horizontal clearance through the US 26 corridor per Tony Coleman, ODOT Region 1 Mobility Coordinator. This consideration applies to the potential pedestrian medians. Maintaining 26' of clearance will allow a 22-foot wide load with 2 feet of buffer on each side. The 26' clear area should be free of sign posts, trees or other obstacles. If less is that 26' is desired, a meeting with the Freight Mobility group can occur to determine if less would be acceptable. If 26' is maintained, no Freight Mobility group meeting would be necessary.
- **New US 26 pedestrian crossings:** In order for ODOT to support the proposed (non-signalized) pedestrian crossings, the character of the intended locations will need to change considerable. The existing character of the proposed crossing locations is insufficient to cue drivers that they have entered a pedestrian-active place. The plan addresses this need in Rhododendron (projects R1 and R3) and the recommended, community plan policy language includes a policy that calls for the existing commercial areas to become more pedestrian in character. Specific county development code changes will be needed to change the private development patterns (over time) to a pedestrian-supportive environment and scale.
- **Snow removal:** ODOT District 2C maintenance staff advises that the proposed pedestrian features, including the pedestrian refuge medians (that ODOT will require) for new US 26 crossings present snow removal challenges. The District 2C staff said the assumption is that the snowplow driver will be familiar with the US26 corridor such that the location of the future, potential pedestrian refuge medians and pedestrian buld-outs can be avoided by the snowplow driver. They also advise that the addition of curbs is desirable to help guide the snowplow blade and avoid roadside damage.
- **Intergovernmental Agreement(s):** Clackamas County (or applicable, public agency) will need to enter into maintenance agreements with ODOT regarding the ongoing maintenance of proposed, project features such as multiuse paths; lighting and replacement of features damaged by snow removal.
- **Additional analysis as part of ODOT State Traffic Engineer approval:** The treatments being proposed require the ODOT State Traffic Engineer approval; and the treatment type/level may change based on the outcome of the traffic investigation/analysis and the approval process. The proposed treatments must either meet ODOT standards or design exceptions be approved.
- **No commitment to funding projects:** There presently is no identified ODOT funding for any of the recommended projects. There are a few state grant programs for which the Clackamas County may wish to seek funding for project development and construction.

Thank you for the opportunity to comment.

c: Tony Coleman, ODOT Region 1 Mobility Coordinator
Kate Freitag, PE, Region 1, ODOT Traffic Unit
Michael Keyes, ODOT Region 1, District 2C
Jon Makler, ODOT Region 1, Planning Manager

Attachment: Kate Freitag, May 25, 2016 Memo (revised June 9, 2016)



Kate Brown, Governor

Department of Transportation

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May 25, 2016 (revised June 9, 2016)

MEMORANDUM

To: Gail Curtis, TGM Contract Administrator

From: Kate Freitag, PE, ODOT Region 1 Traffic

Subject: **Recommended Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan”
draft**

Please find my comments regarding the “Recommended Villages at Mt. Hood Pedestrian and Bikeway Implementation Plan” draft for Clackamas County’s, the consultant team and interested citizens.

General Comments

- Language should be added to the final plan to indicate that *“The proposed treatments affecting US 26 require ODOT State Traffic Engineer approval. The treatment types and level of improvements may change based on the outcome of the traffic investigation/analysis and approval process.*
- In general, features for any element whether it is signing, striping, pedestrian crossing treatments, multi-use paths, other bicycle facilities, etc. on ODOT right-of-way would need to comply with ODOT Bicycle and Pedestrian Design Guide, MUTCD, ODOT Traffic Manual, and ODOT Signing and Striping manuals as well as any other design requirements not listed here.
- Any pedestrian treatments will require a traffic engineering investigation/analysis to determine what treatments are appropriate based on the existing conditions. ODOT currently uses NCHRP562 to analyze and quantify treatment type. This is based on existing vehicular and pedestrian volumes as well as some other factors, although other factors such as planned use of the facilities can also be taken into account if appropriate. Depending on the treatment type, ODOT Region 1 Traffic Engineer and/or State Traffic Engineer (STE) approval would likely be required (STE approval is required to mark a crosswalk and install a rectangle rapid flashing beacon, (RRFB)).
- ODOT’s preference would be to have the terminology be “enhanced pedestrian crossing treatments” in the report rather than specify installing RRFBs since the treatment type indicated by the engineering analysis may not be an RRFB. Specifying an RRFB in the plan may imply to local citizens and local agency staff that ODOT has approved the treatment proposed, which is not the case.

Specific Comments

Project R2, New Rhododendron ped. crossing: This project proposes a new, marked crosswalk with an RRFB. The posted speed in Rhododendron is 40 mph, which is within the guidance given for RRFB consideration in the ODOT Traffic Manual. Similar concerns exist here in regards to the maintenance issues with the raised medians and snowplowing activities. The roadway and roadside character in Rhododendron already provides visual cues to drivers that they may see pedestrians (more than at E. Salmon Creek Road). Further improvements should be made such as sidewalk and access management to improve pedestrian walkability and indicate to motorists that they should expect to see pedestrians.

Project W4, E. Salmon River ped. crossing of US 26 – This location has a posted speed of 45 mph, the maximum at which the proposed, rectangular rapid flashing beacon (RRFB) will be considered for approval. A raised pedestrian refuge island with an RRFB sign assembly would be required based on best practices if an RRFB was to be installed at this location. Median islands may be a concern for maintenance, particularly snow plowing. In addition, RRFBs may be problematic along the side of the roadway due to the force of the snow being thrown off the side of the highway during plowing activities. A traffic analysis/investigation including pedestrian volumes, turning movement and highway through volumes, and NCHRP 562 analysis will be required as part of the request to the State Traffic Engineer. Approval for pedestrian crossing treatments such as marked crosswalks and RRFBs require State Traffic Engineer approval.

Project W3, Arrah Wanna crossing of US26: This location has a posted speed of 45 mph, the maximum at which a rectangular rapid flashing beacon (RRFB) will be considered for approval. A raised pedestrian refuge island with an RRFB sign assembly would be required if an RRFB was to be installed at this location. Due to this being a 4-legged intersection, installation of a median island would likely necessitate eliminating left-turn movements into either the driveway or the side street, necessitating prohibition of the affected left-turn movement. Median islands would likely be a concern for maintenance, particularly snow plowing. In addition, RRFBs may be problematic along the side of the roadway due to the force of the snow being thrown off the side of the highway during plowing activities. A traffic analysis/investigation including pedestrian volumes, turning movement and highway through volumes, and NCHRP 562 analysis will be required as part of the request to the State Traffic Engineer. Approval for pedestrian crossing treatments such as marked crosswalks and RRFBs require State Traffic Engineer approval.

ODOT has concerns with specifying an exact treatment type for a pedestrian crossing without having a completed engineering analysis that documents why a certain treatment is preferred over another. Those details are typically worked through the State Traffic Engineer approval process, which includes the engineering analysis of a specific location. Indicating in a plan what treatment “should be” installed without having the State Traffic Engineer approval for that installation could be problematic at the time when a project is undertaken. *This same comment applies to all proposed pedestrian crossings of US26.*

US26 is a ORS366 reduction route which may require specific assessment of the design of any features that would restrict the width of US26. Tony Coleman, Region 1 Mobility Coordinator, would need to provide guidance regarding the allowable minimum width of the traversable roadway that would need to be retained. That is true for this location as well as any other location within the study area where bulbouts, curb & sidewalk, and median islands are proposed that would reduce the existing width of the roadway.

Project W1S & WIN, multiuse path along US26: A multiuse path along US26 would need to meet ODOT standards or obtain a design exception. Consideration for safety concerns should be made where

there are driveways or local streets that cross the proposed path before accessing US26. On page 2-22, pedestrian lighting is brought up as an element of the improvement. That may be appropriate in certain isolated areas where there are ped crossings or moderate/high volume roadways or driveways crossing the path, but linear illumination is unlikely in a rural area. An IGA assigning responsibility for the maintenance and operation (including cost) of the illumination would likely be required between ODOT and Clackamas County.

The same comments apply to the proposed path on both sides of the highway.

Projects B7 & B8, Wayfinding and transit stop signs: Wayfinding and transit stop signs in ODOT right-of-way will require approval from ODOT Region 1 Traffic Section for sign type, size, location, etc. Permits or an IGA may also be required for these types of signing.

Project W11, Welches Road Park and Ride: The access into the park & ride parking lot should be located as far south on Welches Road from US26 as possible to reduce potential operational or safety impacts on US26 due to vehicles turning into/out of the parking lot. In general, ODOT Traffic is supportive of improving this park & ride lot since it is at a signalized access with US26.

Project R2, Crossing of US26 in Rhododendron with Rapid Flash Beacons: As proposed, this would be a new marked crosswalk with an RRFB. The posted speed in Rhododendron is 40 mph, which is within the guidance given for RRFB consideration in the ODOT Traffic Manual. Similar concerns exist here in regards to the maintenance issues with the raised medians and snowplowing activities. The roadway and roadside character in Rhododendron has some existing visual cues to drivers that they may see pedestrians (more than at E. Salmon Creek Road). Further area improvements prior to the crosswalk should be made such as sidewalk and access management to improve pedestrian walkability and indicate to motorists that they should expect to see pedestrians.

This section of the plan speaks to the need for developing a pedestrian-oriented streetscape that would provide better cues to drivers that they are entering an area where they should expect to see pedestrians crossing. Providing those cues would likely improve stopping compliance at an enhanced crosswalk and driver compliance with the posted speeds.

Project R3, Rhododendron Gateway Sign: Installation of gateway signs (similar to the Linnton sign shown in Figure 14) would have to be outside ODOT right-of-way and would be subject to any rules and conditions of the Oregon Outdoor Advertising Sign Program. Here is a link to the website with information regarding that program:

<http://www.oregon.gov/ODOT/HWY/SIGNPROGRAM/pages/index.aspx>

Project R4, Ped. Accommodation along US26 in Rhododendron: Similar to comments for Project R1, ODOT Traffic is generally in favor of the improvements proposed in this section. Medians and bulbouts will need to be reviewed and considered as they relate to any requirements for US26 related to the OR366 reduction route which may impact the ability to install features that would restrict the width available for freight vehicles.

Consideration also needs to be made for snowplowing and other maintenance activities, since the introduction of medians and curbs also introduces potential issues with snow removal and the ability of maintenance vehicles to work around those raised features. This is true for any feature such as a median or curbs within the study area, not just those included in this potential recommended improvement.

Project R1, Consolidate and Define Driveways in Rhododendron: In general, ODOT is in favor of consolidating and defining driveways in Rhododendron, particularly if those improvements were in conjunction with installing curb and sidewalk improvements for pedestrian safety/comfort. Driveway locations, widths, etc. should be designed using a full access management plan that takes into consideration use of the property, design vehicle, and potential conflicts with adjacent driveways and local streets. Project R1, access management should be combined with Project R4 pedestrian accommodation such as curbs, sidewalk, etc. in order to most effectively achieve access management goals.

Project R5, Bicycle Facility for trail connection: An 8' wide shared lane that includes contra-flow cycling facilities (approximately 4' wide for each direction) does not meet ODOT minimum standards and would not likely be approved even with a design exception. Additional right-of-way should be obtained to meet ODOT minimum standards, which are based on best safety practices and nationally accepted design parameters. ODOT's Bicycle and Pedestrian Design Guide provides appropriate guidance for designs on ODOT facilities and should be followed and ODOT Roadway Design engineers should be consulted for issues regarding roadway widths, including bike features and multiuse paths. The minimum standard is 10' with 2' of total of compacted shoulders. Wider may be appropriate due to levels of use.

Project R7, Multiuse Path between Lolo Pass Road and Rhododendron: The design of a multi-use path will need to consider potential conflicts with accesses and local street connections to US26. There is some concern that having the path set back from US26 may introduce a safety issue with drivers destined for US26 conflicting with pedestrians and cyclists due to them being set far back from the highway and drivers being focused on accessing the highway. Designs will need to take into account sight distance and sight triangles, including potential issues with vegetation that can grow up and obscure visibility of cyclists/pedestrians for vehicles approaching the multi-use path crossing. Special signing or striping may be necessary to mitigate for safety concerns.

A multi-use path located in ODOT right-of-way will need to meet ODOT standards for path widths, signing, striping, etc.

Other Comments

Project W17: It is unclear what "Temporary Speed Monitors" refer to. I assume that these are the radar-activated driver feedback ("Your Speed Is") signs. Those signs are currently under design by ODOT.

Project W2: ODOT has no concerns with proposal to modify push buttons for ADA compliance, add sidewalk, and install pedestrian countdown heads.

Project W17: Temporary Speed Monitors: This section of the draft plan goes back and forth between referring to permanently mounted speed monitors (technical term is "driver feedback signs"). ODOT has already approved and designed two driver feedback signs in the vicinity of Rhododendron. The eastbound sign will be installed at/near MP 38.6 and the westbound sign will be installed at/near MP 44.39.

Please let me know if you have any questions or need clarification of anything I have stated here.

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