

Chemawa Interchange IAMP Evaluation Framework Notes

Goal 1: Mobility

Objective 1.1: Design for the projected 2031 traffic volumes

Evaluation Criteria 1.1.1: Freeways: Mobility of freeway segments with 2031 projected traffic compared to standard of 0.80 V/C.

Note: All alternatives improve v/c on I-5 because they include the auxiliary lane capacity improvements.

Alts 9-13: (3) Improvements on the north end are expected to draw traffic away from the Chemawa congested sections, so they got 3s.

Alt 14: (3) Improvements on the south end are expected to draw traffic away from the Chemawa congested sections, so it got a 3.

Alternative 15 – Keizer road: (2) Does not add any improvements to get traffic off of I-5.

All other alternatives: (2) because they do not add any improvements to get traffic off of I-5.

Evaluation Criteria 1.1.2: Interchange: Mobility of ramps and ramp terminal intersections with 2031 projected traffic compared to standard of 0.80 V/C

Alt 1 – Chemawa Widening: (3) Receives a 3 because this alternative is making large scale capacity improvements.

Alt 2 – Chemawa Parclo A: (1) Doesn't address NB-WB traffic movement

Alt 3 – Chemawa Parclo B: (2) Does address NB-WB traffic movement, but does not add capacity to Chemawa

Alt 4 – Chemawa Flyover Ramp: (2) Does address NB-WB traffic movement, but does not add capacity to Chemawa

Alt 5 – Split Diamond Perkins: (2) Adds more traffic signals, but spreads them out. Could also increase NB traffic

Alt 6 – Split Diamond Radiant: (2) Adds more traffic signals, but spreads them out. Could increase NB traffic

Alt 7 – Chemawa Roundabouts: (1) Doesn't add capacity, just redesigns the capacity. Won't bring v/c less than 1.

Alt 8 – Modified Roundabout: (1) Doesn't add capacity, just redesigns the capacity. Won't bring v/c less than 1.

Alts 9 – 12: Brooks Improvements: (3) All Brooks Alternatives receive a 3 because they are expected to pull significant traffic away from Chemawa.

Alt 13 – Quinaby/Perkins: (3) Is expected to pull traffic away from Chemawa and provide an alternative route to the north

Alt 14 – Verda/Hyacinth: (3) Expected to pull traffic away from Chemawa ramps. This will be a larger effect than just extending Keizer Road.

Alt 15 – Keizer road: (2) Might pull a minor amount of traffic from the Chemawa ramps.

Evaluation Criteria 1.1.3: Chemawa Road/Lockhaven Drive: Mobility of lineal segments and intersections with 2031 projected traffic compared to standard of LOS E

- Alt 1 - Chemawa Widening: (3) LOS D or better
- Alt 2 - Chemawa Parclo A: (1) Doesn't remove traffic from the Chemawa/Lockhaven corridor
- Alt 3 - Chemawa Parclo B: (1) Doesn't remove traffic from the Chemawa/Lockhaven corridor
- Alt 4 - Chemawa Flyover Ramp: (1) Doesn't remove traffic from the Chemawa/Lockhaven corridor
- Alt 5 - Split Diamond Perkins: (2) Doesn't get a 3 because it is uncertain how much traffic will be diverted from Chemawa.
- Alt 6 - Split Diamond Radiant: (2) Doesn't get a 3 because it is uncertain how much traffic will be diverted from Chemawa.
- Alt 7 - Chemawa Roundabouts: (1) Doesn't pull traffic off Chemawa
- Alt 8 - Modified Roundabout: (1) Doesn't pull traffic off Chemawa
- Alts 9 - 12 The Brooks Alternatives: (3) All the Brooks alternatives are expected to pull traffic off the Chemawa corridor.
- Alt 13 - Quinaby/Perkins: (3) Expected to pull traffic off the Chemawa corridor.
- Alt 14 - Verda/Hyacinth: (3) Expected to pull traffic off the Chemawa corridor.
- Alt 15 - Keizer road: (2) Expected to pull only a minor amount of traffic off Chemawa corridor.

Evaluation Criteria 1.1.4: Local circulation system: Mobility of lineal segments and intersections with 2031 projected traffic compared to standard of LOS E in Keizer and Salem and in Marion County compared to standard of LOS E or D or a V/C ratio of 0.85 or 0.90, depending on the configuration of the intersection

Note: In most cases, the secondary project elements that are not integral to the primary project element are not considered in the evaluation. For this criteria, all elements are considered.

- Alt 1 - Chemawa Widening: (3) Accommodates the projected congestion problem and might pull some traffic off the local circulation system.
- Alts 2-14: (3) The primary elements don't do anything to improve the local circulation system, but the secondary improvement elements do add capacity to the local system.
- Alt 15 - Keizer road: (1) Does not have a local improvement package included with the alternative, so it does not address local mobility.

Objective 1.2: Consider impacts of future growth and land use changes

Evaluation Criteria 1.2.1: Degree of consistency of transportation solutions relative to future land use patterns and density

- Alt 1 - Chemawa Widening: (3) Adds capacity - offers future flexibility
- Alts 2-8 - Chemawa Alternatives: (2s) Consistent with plans, but offer less future flexibility
- Alts 9-12 - Brooks Alternatives: (3s) Address inefficiencies. Consistent with plans and offers future flexibility.
- Alt 13 - Quinaby/Perkins: (1) Building a new interchange is inconsistent with

- existing plans.
- Alt 14 – Verda/Hyacinth: (2) Consistent with plans, but does not offer future land use flexibility since the area is largely developed.
- Alt 15 – Keizer road: (1) Creates a connection in an existing neighborhood; not consistent with plans.

Objective 1.3: Minimize congestion and optimize traffic flow in the interchange area

Evaluation Criteria 1.3.1: Number of deviations from mobility and safety standards under 2031 traffic and land use conditions

- Alt 1 – Chemawa Widening: (3) No deviations
- Alts 2–4: (1) The v/c ratio will not improve.
- Alt 5 – Split Diamond Perkins: (1) Major deviations
- Alt 6 – Split Diamond Radiant: (2) Deviations are minor
- Alt 7 – Chemawa Roundabouts: (1) The v/c ratio will not improve.
- Alt 8 – Modified Roundabout: (1) There is no other interchange like this in Oregon. The v/c ratio will not improve.
- Alts 9–12: The Brooks Alternatives: (3) No deviations
- Alts 13–14: (3) No deviations
- Alt 15 – Keizer road: (1) Major deviations

Objective 1.4: Provide transportation improvements that are well connected and effectively serve all travel modes, including but not limited to, bicycles, pedestrians, motor vehicles, freight, transit, commuter rail and freight rail.

Evaluation Criteria 1.4.1 - Degree to which system hierarchy is maintained

Note: Brooklake Road should be upgraded and perhaps reclassified with the Brooks Alternatives.

- Alts 1-4, 7-15: (2) All alternatives (except 5 & 6) received a score of 2 because they maintain the freeway hierarchy and the connection to arterials.
- Alts 5–6 Split Diamonds: (1) Something major would have to be done to keep these alternatives from connecting to local streets.

Evaluation Criteria 1.4.2: Number of impediments to freight travel

Note: For this criterion, the evaluation team decided to look at a combination of the Chemwawa interchange and the Brooks interchange

- Alt 1 – Chemawa Widening: (1) There would still be traffic signals at Chemawa and stop signs at Brooks.
- Alts 2–8 - Chemawa Alternatives: (1) None of these alternatives would remove the stop signs at Brooks.
- Alt 9 – Brooks Diamond Improvement: (2) Would replace stop signs with traffic signals.
- Alt 10 – Brooks Parclo A: (3) The heaviest turning movement would be on a free-flowing loop ramp.
- Alt 11 – Brooks Flyover: (2) The heaviest turning movement would be on a

free-flowing flyover ramp, but the touch-down point would make the route to area destinations more circuitous.

Alt 12 – Brooks SPUI: (2) Would replace stop signs with traffic signals.

Alt 13 – Quinaby/Perkins: (1) Could retain stop sign control and would not be a direct route for freight traffic.

Alt 14 – Verda/Hyacinth: (3) Hyacinth improvements would generate a net benefit for freight by removing potential impediments to free flow (grade separate at railroads and Salem Parkway), but would not remove the stop signs at Brooks.

Alt 15 – Keizer road: (1) Route would be more circuitous for I-5 freight traffic.

Evaluation Criteria 1.4.3: Number of gaps in bicycle and pedestrian system

Note: The evaluation team had to use assumptions until the final designs are completed. The evaluation was based on whether or not bike and pedestrian crossings could occur, not on the difficulty of the crossing.)

Alts 2-4, 10-11 – Chemawa & Brooks Flyovers & Loops: (2) It would be hard to maintain bike/ped connectivity where the ramps join the street.

Alt 7 & 8 – Chemawa Roundabouts: (3) Roundabouts may pose crossing difficulty for bike/ped, but won't create actual crossing gaps.

Alts 1, 5-6, 9, 12-15: (3) All other alternatives received a 3 because no major gaps could be anticipated until the design phase is complete.

Evaluation Criteria 1.4.4: Compatibility with transit service

Alt 1 – Chemawa Widening: (3) Allows more room for bus pulloffs.

All other alternatives received a 2 because they could not be seen to impede or improve transit service. The Flyover options could be mitigated via design.

Objective 1.5: Provide reasonable access to the interchange area businesses

Evaluation Criteria 1.5.1: Change in distance from I-5 ramps to major access points

Alts 1-3, 7-8, 9-10, 12, 14-15: (2) Same distance.

Alt 4 – Chemawa Flyover Ramp: (1) Distance would be longer.

Alt 5 – Split Diamond Perkins: (1) Distance would be longer.

Alt 6 – Split Diamond Radiant: (2) Access would be shorter in one direction, but it would be longer in the other direction. The result would be no net gain.

Alt 11 – Brooks Flyover: (1) Distance would be increased due to touch down point.

Alt 13 – Quinaby/Perkins: (2) Scores a 2, however, it could have shorter distances for future businesses on Quinaby.

Evaluation Criteria 1.5.2: Volume of traffic diverted to residential streets

Notes: Diversion can come from design (split diamond where one end connects to residential streets), insufficient capacity on Chemawa Road, or a change in business access that forces traffic into residential areas. For the purposes this evaluation, interchange area businesses were defined as those in Keizer Station and the properties in the northeast quadrant.

Alt 1 – Chemawa Widening: (3) This alternative would add capacity to Chemawa, likely attract traffic from residential streets, and would not divert business traffic to residential streets.

Alts 5 & 6 Chemawa Split Diamonds: (1) Split diamonds will divert business traffic because one end of the diamond may go through a residential neighborhood.
Alt 15 – Keizer road: (1) Diverts traffic through a residential neighborhood.
All other alternatives: (2) No impact either way.

Objective 1.6: Avoid the situation of Chemawa Interchange being the sole focus of access to I-5 for the study area

Evaluation Criteria 1.6.1: Number of alternative elements that accommodate traffic away from Chemawa Interchange

Note: To score high, the alternative must improve other interchanges and be able to meet 2031 mobility standards at Chemawa Interchange.

Alt 1 – Chemawa Widening: (1) No other routes are improved and the alternative does not diversify I-5 access.

Alts 2-8 - Chemawa Alternatives: (1) 2031 mobility standards will not be met with only these alternatives.

Alt 9-14: (3) All improvements are expected to allow Chemawa Interchange to operate acceptably by making improvements at other locations.

Alt 15 – Keizer Road: (1) It is not expected that this will draw enough traffic from Chemawa Road to allow it to operate acceptably in 2031.

Goal 2: Safety

Objective 2.1: Provide for operational safety for all modes

Evaluation Criteria 2.1.1: Degree of compliance with interchange spacing standards along I-5 and Salem Parkway and access spacing standards along Chemawa Road and Lockhaven Drive

Note: An Access Management Plan is needed to fully address this evaluation criterion. For this round of screening, professional assumptions were made regarding access.

Alts 5 & 6 - Split Diamonds: (1) The north end of the split diamond alternatives are too close to the Brooks Interchange and would violate safety and spacing standards.

Alt 13 – Quinaby/Perkins: (1) This new interchange would violate spacing requirements.

All other alternatives receive 2s, assuming that the existing local access points at Chemawa and Brooks Interchanges, which are closer than standard now, would remain unchanged.

Evaluation Criteria 2.1.2: Number of deviations from mobility and safety standards under 2031 traffic and land use conditions

Note: Same as Goal 1, Objective 3, Evaluation Criteria 1.

Evaluation Criteria 2.1.3: Degree to which signal spacing is optimized

Note: This could be evaluated more fully with more refined design.

Alt 14 – Verda/Hyacinth: (2) Hyacinth most likely would have two signals at a Salem Parkway Interchange, rather than the one signal at the existing grade

intersection.

Alts 1-6, 9-13, 15: (3) Until more refined design is done, it is assumed that all signal progression can be provided at posted speeds for all directions.

Alts 7 & 8 – Chemawa Roundabouts: Less coordination is because two of the signals are removed.

Evaluation Criteria 2.1.4: Number of gaps in bicycle and pedestrian system

Note: Same as Evaluation Criteria 1.3.1.

Evaluation Criteria 2.1.5: Protection of pedestrian and bicycle crossings

Alts 2-4, 10-11: (1) Flyovers and loops require crossings at locations where the vehicle interface is difficult to manage (unsignalized and potentially unsafe)

Alts 7 & 8 – Chemawa Roundabouts: (2) Roundabouts are safe and un-signalized, but more uncommon than most intersections.

All other alternatives: (3) All crossings are signalized or stop controlled and safe.

Objective 2.2: Provide for emergency response

Evaluation Criteria 2.2.1: Change in response time for emergency vehicles

Note: This is assuming fire stations on Chemawa Road near River Road, on Wheatland Road near Clearlake Road, at Brooks, at Labish Center, at Chemeketa Community College, on Cordon Road near Silvertown Road, and on Fairgrounds Road at Summer Street.

Alt 1 – Chemawa Widening: (3) The wider road is assumed to help emergency vehicles through less congestion and more space for emergency vehicle passing.

Alts 2-4 – Chemawa Loops & Flyover: (2s) No change.

Alts 5-6 – Chemawa Split Diamonds: (1) More than 10% longer than current Conditions because of the configuration.

Alts 7-8 – Chemawa Roundabouts: (2) Roundabouts slow traffic, but the flow is uninterrupted.

Alts 9-13 – Brooks Alternatives: (3) All Brooks improvement options are assumed to improve emergency vehicle access.

Alt 14 – Verda/Hyacinth: (3) Grade separations improve emergency response.

Alt 15 – Keizer road: (2) No change.

Goal 3: Economic Development

Objective 3.1: Serve planned land uses (commercial, industrial, and agricultural)

Evaluation Criteria 3.1.1: Number of businesses displaced or negatively impacted

Note: It is assumed that “Chemawa Widening” would mean one additional lane in each direction from east of Indian School Road to River Road.

Alt 1 – Chemawa Widening: (3) Mostly of the area is residential, no businesses would be displaced.

Alt 2 – Chemawa Parclo A: (1) Would take land from Keizer Station where businesses are established, likely to more than two.

- Alt 3 – Chemawa Parclo B: (2) May property in the northeast quadrant, but that area is not yet master-planned.
- Alt 4 – Chemawa Flyover Ramp: (1) Would likely have significant impact along south side of Keizer Station.
- Alts 5-6 – Chemawa Split Diamonds: (1) Could take businesses for the connecting roadways and could leave businesses with much more congested accesses.
- Alt 7 – Chemawa Roundabouts: (3) Would not require additional right-of-way.
- Alt 8 – Modified Roundabout: (1) Will probably require right-of-way in the northwest and northeast quadrants.
- Alts 9 & 12 – Brooks Diamond Improvement and SPUI: (3) Tight diamond and single point urban designs could probably stay within the existing footprint.
- Alt 10 – Brooks Loop: (3) Would only take farmland on the east side (farm conversion is considered under a separate evaluation criterion) and could probably stay within the existing footprint on the west side.
- Alt 11 – Brooks Flyover: (1) Would likely impact several businesses, either physical impacts or indirect access in the length required for touch down.
- Alt 13 – Quinaby/Perkins: (3) There are no businesses in this area.
- Alt 14 – Verda/Hyacinth: (1) Businesses located near the railroad grade separations would have more indirect access.
- Alt 15 – Keizer Road: (3) No businesses would be impacted.

Evaluation Criteria 3.1.2: Change in distance from 1-5 ramps to major access points

Note: Same as Evaluation Criteria 1.5.1.

Evaluation Criteria 3.1.3: Mobility of access routes compared to standards stated in Goal 1

Note: Same as Evaluation Criteria 1.1.3.

Objective 3.2: Accommodate Freight Movement

Evaluation Criteria 3.2.1: Number of impediments to freight travel

Note: Same as Evaluation Criteria 1.4.2.

Evaluation Criteria 3.2.2: Appropriateness of freight routing

- Alts 5-6 – Split Diamonds (1): Freight traffic may be routed through residential neighborhoods.
- Alt 13 – Quinaby/Perkins: (3) If this alternative materializes the evaluation team assumes Quinaby will be an arterial & freight would not be routed through it.
- Alt 15 – Keizer road: (1) Freight would be routed through neighborhoods
All other alternatives received a score of 3 because they will not route freight through residential neighborhoods
All other alternatives received a score of 3

Objective 3.3: Serve Regional Recreational Attractions

Evaluation Criteria 3.3.1: Number of alternative elements that accommodate major destinations

Note: The evaluation team compared against the current condition. If they were to compare to a future no build, the ratings would change.

Alt 1 – Chemawa Widening (2) All attractions will be served in the same manner as the current condition with comparable congestion

Alts 2-5, 7 & 8: (1) Access to any of the major attractions (provided by Chemawa and Salem parkway) will be more difficult in 2031 than the current condition – because traffic conditions will be worse than they are today

Alt 6 – Split Diamond Radiant: (2) Could isolate Volcanos – Note : The evaluation team was not sure how much weight this has

Alts 9- 13 Brooks Alternatives: (2) All attractions will be served in the same manner as the current condition with comparable congestion

Alt 14 – Verda/Hyacinth: (2) All attractions will be served in the same manner as the current condition with comparable congestion

Alt 15 – Keizer road: (1) Access to any of the major attractions (provided by Chemawa and Salem parkway) will be more difficult in 2031 than the current condition

Goal 4: Livability

Objective 4.1: Consider growth and land use changes over time

Evaluation Criteria 4.1.1: Degree of consistency of transportation solutions relative to future land use patterns and density

Note: Same as Evaluation Criteria 1.2.2

Objective 4.2: Support local and regional goals for mode choices

Evaluation Criteria 4.2.1: Degree to which system hierarchy is maintained

Note: Same as Evaluation Criteria 1.4.1

Evaluation Criteria 4.2.2 Number of gaps in bicycle and pedestrian system

Note: Same as Evaluation Criteria 2.1.4

Evaluation Criteria 4.2.3: Compatibility with transit service

Note: Same as Evaluation Criteria 1.4.4

Objective 4.3: Support existing and planned residential and associated development

Evaluation Criteria 4.3.1: Degree of acceptability of local land use decision by local governments

Alt 1 – Chemawa Widening: (2) No ROW effects – won't modify access, though controversy is expected.

Alt 2 – Chemawa Parclo A: (1) Loop ramp will impact Keizer station

Alt 3 – Chemawa Parclo B: (2) Loop ramp will impact Keizer station & thrust onramp onto annexed land. Impacts to Coleson properties

Alt 4 – Chemawa Flyover Ramp: (1) Will need ROW – not expected to be supported

Alt 5 – Split Diamond Perkins: (1) Changes to land use to north at Perkins – some public controversy expected

- Alt 6 - Split Diamond Radiant: (2) Probably not supported by the public, but has a higher probability of being supported by the PMT and SAC
- Alt 7 - Chemawa Roundabouts: (2) Support expected from SAC and PMT
- Alt 8 - Modified Roundabout: (1) Less support than Alt 7 expected
- Alts 9 & 12 - Brooks Diamond Improvement & SPUI: (3) Will be less controversial because the alternatives stay within their current footprint
- Alt 10 - Brooks Parclo A: (2) Will need some ROW in exclusive farmland
- Alt 11 - Brooks Flyover: (1) Will need some ROW in exclusive farmland and no support is expected from SAC
- Alt 13 - Quinaby/Perkins: (2) Would need a goal exception for purchasing ROW outside of the UGB
- Alt 14 - Verda/Hyacinth: (2) Some public controversy, more traffic on Hyacinth - a local road
- Alt 15 - Keizer road: (1) May not be accepted by SAC & PMT, some public controversy expected

Evaluation Criteria 4.3.2: Degree to which alternatives fit development plans

Note: The scoring is based only on the Keizer Station Development Plan. It is unknown if there are other development plans in the study area.

- Alt 1 - Chemawa Widening: (3) Not sure if widening to south would impact Keizer station
- Alt 2 - Chemawa Parclo A: (1) Requires going to the NW quadrant - Keizer Station
- Alt 3 - Chemawa Parclo B: (3) There is a question about whether there is a master plan on the impacted property, though it would not be adopted
- Alt 4 - Chemawa Flyover Ramp: (1) Impacts quite a bit of Keizer station
- Alts 5-6 - Split Diamonds: (1) At the very least, these alternatives would need to rework the main road that runs through the station.
- Alt 7 - Chemawa Roundabouts: (3) No impacts to Keizer station - Can be done within the existing ROW
- Alt 8 - Modified Roundabout: (1) Higher likelihood of not being in compliance with the development plan
- Alts 9-15: (3) Assuming there are no development plans near the Brooks area, Quinaby, and Keizer Road.

Evaluation Criteria 4.3.3: Degree to which alternatives fit comprehensive plan

Note: All alternatives would require updates to TSP and therefore, to the Comp Plan. This does not mean they are out of compliance. The language of the scoring parameter should be changed.

- Alt 1 - Chemawa Widening: (3) No reason it would not be compatible
- Alts 2-4 Chemawa Lops & Flyover: (3) In compliance
- Alt 5 - Split Diamond Perkins: (1) Building new ramps & interchange outside UGB
- Alt 6 - Split Diamond Radiant: (1) Would probably require Tepper to be reclassified
- Alts 7 -8- Chemawa Roundabouts: (3) Note - Look closer at the TSP to see if there is anything about prohibiting Roundabouts on certain road classifications
- Alt 9 & 12: (3) Improvements may be non-compliant with Marion County's Comp Plan. However, the developments may be merited based on the developments around Brooks alone.
- Alts 10-11- Brooks Loop & Flyover: Require taking farmland, which would require a change to Marion County's Comp Plan

Alt 13 – Quinaby/Perkins: (1)

Alts 14-15: (1) May require changing road classifications, which would be out of compliance with the Comp Plan

Objective 4.4: Protect neighborhoods

Evaluation Criteria 4.4.1: Appropriateness of freight routing

Note: Same as Evaluation Criteria 3.2.2

Evaluation Criteria 4.4.2: Number of residences displaced or negatively impacted

Note: The evaluation team chose to score this item based only on the direct impacts of alternatives. They did not consider impacts to 35th.

Alt 1 – Chemawa Widening: (1) Would affect residential houses by taking portions of front lawns and placing them on more high traffic routes.

Alts 2-4 – Chemawa Loops & Flyovers: (3) No residences are expected to be impacted with the possible exception of more traffic on Lockhaven

Alt 5 – Split Diamond Perkins: (1) Several homes along 35th and Perkins may be impacted.

Alt 6 – Split Diamond Radiant: (1) Tepper & McCloud will be more congested.

Alts 7-8 – Chemawa Roundabouts: (3) No residences would be impacted.

Alts 9-12 – Brooks Alternatives: (3) impacts to 35th were not considered

Alt 13 – Quinaby/Perkins: (1) Some residences may be impacted

Alts 14-15: (1) Some residences may be impacted

Evaluation Criteria 4.4.3 Visual impacts (walls, hardscape vs landscaping, lighting, etc.)

Alt 1 – Chemawa Widening: (1) Yards removed on homes

Alts 2-4 – Chemawa Loops and Flyovers: (2) Concentrated in current location

Alt 5 – Split Diamond Perkins: (1) Walls & lighting will create negative visual impacts in residential areas

Alt 6 – Split Diamond Radiant: (1) Will create negative visual impacts in residential areas if Tepper is part of the project

Alts 7 & 8– Chemawa Roundabouts: (2) They are not located in neighborhoods

Alts 9-12 – Brooks Alternatives: (2) Not in neighborhoods

Alt 13 – Quinaby/Perkins: (1) Walls and lighting will be added in rural residential neighborhoods

Alts 14-15: (1) Visual conditions would be worse than current conditions

Evaluation Criteria 4.4.4: Desirability of residential access changes

Alt 1 – Chemawa Widening: (3) Would make it better for homes in the general area, but worse for Chemawa homes (ie less congested, but with more difficult access). Overall the outcome would be better, though a few homes may be more impacted.

Alts 2-4 - Chemawa Loops & Flyover: (2) Would not directly affect homes on Chemawa, but wouldn't fix a lot either

Alts 5-6 - Split Diamonds: (2) Access would be different, but equal. The net effect would be unchanged (ie some residences would be better, others would be worse.)

Alts 7-9 - Chemawa Roundabouts: (2) Isolated

Alts 9-12 - Brooks Alternatives: (2) Note: Where capacity is being added, it could be argued that residential capacity is also being added

Alt 13 – Quinaby/Perkins: (3) Access would be improved for anyone along the

corridor in rural neighborhoods

Alt 14 – Verda/Hyacinth: (3) As a new gateway to Keizer, this alternative would improve access.

Alt 15 – Keizer road: (3) Improves access

Evaluation Criteria 4.4.5: Change in noise impacts on residential areas

Alt 1 – Chemawa Widening: (1) Noise would increase

Alts 2-4 - Chemawa Loops & Flyover: (2) For these alternatives, there would be more traffic on Lockwood, however the evaluation team choose to not score based on secondary noise levels.

Alts 5-6 - Split Diamonds: (1) New traffic would be introduced to residential areas.

Alts 7-8 - Chemawa Roundabouts: (2) No change for residential areas

Alts 9-12 - Brooks Alternatives: (2) No change for residential areas

Alt 13 – Quinaby/Perkins: (1) Traffic would be created in areas where it doesn't currently exist.

Alts 14 -15: (1) Traffic would increase along Verda

Objective 4.5: Provide for appropriate land use policy that seeks to maintain interchange functionality over time

Evaluation Criteria 4.5.1: Degree of acceptability of recommended land use management actions by local governments

Note: Same as Evaluation Criteria 4.3.1

Goal 5: Environmental

Objective 5.1: Protect high quality adjacent farm land

Evaluation Criteria 5.1.1: Number of farm land acres required for right-of-way

Alts 1-4: (3) Won't need much farmland

Alt 5 – Split Diamond Perkins: (1) Could need more than 10 acres of farm land

Alt 6 – Split Diamond Radiant: (2) New onramp may extend into farmland, though it would probably not take more than 10 acres.

Alts 7-8 – Chemawa Roundabouts: (3) No farm land would be required

Alts 9-12 - Brooks Alternatives: (2) Could do tight diamonds, but some farmland may be taken anyhow.

Alt 13 – Quinaby/Perkins: (1) Takes farm land

Alts 14-15 - Verda/Hyacinth: (3) Not in farm land

Evaluation Criteria 5.1.2: Degree of acceptability of recommended land use management actions by agricultural community

Note: The evaluation team noted that in many cases, it is better to assume controversy than not. Input from the Farm Bureau stakeholder is needed to further clarify scores.

Alts 1-4: (3) No impacts to the agricultural community are expected

Alt 5 – Split Diamond Perkins: (1) Better to assume controversy than not.

Alt 6 – Split Diamond Radiant: (1) Good soil quality in the area could incite controversy

Alts 7-8 – Chemawa Roundabouts: (3) No controversy expected

Alts 9-13: (1) Could be controversial

Alts 14 & 15: (3) Not in farm land – no controversy expected.

Objective 5.2: Avoid impacting cultural sites and resources where practicable

Evaluation Criteria 5.2.1: Number of historical sites impacted

Alt 2 – Chemawa Parclo A: (1) The loopramp in the south east quadrant may impact historical property

All other alternatives received 3s and were determined to have no impact to historical sites.

Evaluation Criteria 5.2.2: Number of archaeological sites impacted

Note: Rick will check to ensure that the cemetery property does not extend to the highway

All alternatives were assumed not to impact archeological sites, pending Rick's inquiry.

Objective 5.3: Avoid or minimize impacts to habitat systems, including streams and water bodies, riparian zones, and wetlands

Evaluation Criteria 5.3.1: Number of acres and quality of habitat impacted

Alt 1 – Chemawa Widening: (3)

Alt 2 – Chemawa Parclo A: (2)

Alt 3 – Chemawa Parclo B: (3)

Alt 4 – Chemawa Flyover Ramp: (2)

Alt 5 – Split Diamond Perkins: (1)

Alt 6 – Split Diamond Radiant: (1)

Alt 7 – Chemawa Roundabouts: (3)

Alt 8 – Modified Roundabout: (3)

Alt 9 – Brooks Diamond Improvement: (2)

Alt 10 – Brooks Parclo A: (1)

Alt 11 – Brooks Flyover: (1)

Alt 12 – Brooks SPUI: (2)

Alt 13 – Quinaby/Perkins: (3)

Alt 14 – Verda/Hyacinth: (3)

Alt 15 – Keizer road: (2)

Evaluation Criteria 5.3.2: Surface waterways impacted

Alt 1 – Chemawa Widening: (3)

Alt 2 – Chemawa Parclo A: (2)

Alt 3 – Chemawa Parclo B: (3)

Alt 4 – Chemawa Flyover Ramp: (2)

Alts 5 & 6 – Split Diamonds: (1)

Alts 7-14: (3)

Alt 15 – Keizer road: (2)

Evaluation Criteria 5.3.3: Floodways impacted

All alternatives will have no impact to floodways.

Objective 5.4: Provide strong environmental stewardship for the built environment (noise, air quality, socioeconomics, etc)

Evaluation Criteria 5.4.1: Number of residences displaced or negatively impacted

Note: Same as Evaluation Criteria 4.4.2

Evaluation Criteria 5.4.2: Change in noise impacts on residential areas

Note: Same as Evaluation Criteria 4.4.5

Evaluation Criteria 5.4.3: Change in air quality condition

Note: Further modeling information is needed before these scores can be determined.

Evaluation Criteria 5.4.4: Effect on greenhouse gases

Note: Further modeling information is needed before these scores can be determined.

Evaluation Criteria 5.4.5: Degree to which minority or Title 6 populations are impacted

Alt 1 – Chemawa Widening: (2)

Alt 14 – Verda/Hyacinth: (2)

Alt 15 – Keizer road: (1)

All other alternatives were received a score of 3 and were determined to have no impact on minority of Title 6 populations.

Goal 6: Cost

Objective 6.1: Provide fundable solutions

Evaluation Criteria 6.1.1: Cost of the project (\$)

Note: The 1-5 auxiliary lane could be \$50 million by itself, so was not included in the overall scoring of alternatives

Alt 1 – Chemawa Widening: (2)

Alt 2 – Chemawa Parclo A: (2)

Alt 3 – Chemawa Parclo B: (2)

Alt 4 – Chemawa Flyover Ramp: (1)

Alts 5-6 Split Diamonds: (1) Would cost over \$50 million

Alt 7 – Chemawa Roundabouts: (3) Would be the cheapest option

Alt 8 – Modified Roundabout:

Alts 9-12 - Brooks Alternatives: (2) Would probably cost around \$40 million, though they could go higher

Alt 13 – Quinaby/Perkins: (1) Couldn't build it and not hook it up to stuff, so it would be costly

Alt 14 – Verda/Hyacinth: (1) Would cost over \$50 million

Alt 15 – Keizer road: (2) Would cost between \$10 – \$50 million

Evaluation Criteria 6.1.2: Ability to be constructed in phases

Note: The 1-5 auxiliary lanes have not been included in the scoring in order to see the distinctions between each alternative.

Alt 1 – Chemawa Widening: (3) Could be completed in phases

Alt 2 – Chemawa Parclo A: (2) Could be phased, but complete construction would be desirable

Alts 3-4: (1) Could not be phased – you either have to build the ramp or not.

Alts 5-6 – Split Diamonds: (2) Could be phased, but complete construction would be desirable

Alt 7 – Chemawa Roundabouts: (2) Could build 2 roundabouts in phases

Alt 8 – Modified Roundabout: (1) Either need to build it or not

Alt 9 – Brooks Diamond Improvement: (2) Could be phased

Alts 10-12: (1) Either needs to be built or not

Alts 13 – Quinaby/Perkins: (2) Could be staged

Alt 14 – Verda/Hyacinth: (3) There would be a benefit by doing it in pieces

Alt 15 – Keizer road: (1) The bridges must be built, otherwise the alternative would not go anywhere

Objective 6.2: Provide a timely and cost-effective project solution that performs as designed throughout its expected design life

Evaluation Criteria 6.2.1: Cost/Benefit ratio

Note: Further information is needed before these scores can be determined

Objective 6.3: Demonstrate equitable distribution of responsibility for identified transportation improvements

Evaluation Criteria 6.3.1: The transportation solution is properly balanced between both sides of I-5

Note: This criterion is pre-emptive. We cannot know how the financial responsibility will be distributed within each alternative at this phase. All alternatives are assumed to be equitable, unless inequalities are revealed.