Kalispell Courthouse Couplet
UPN E012000

Appendix F PRESENTATION TO ELECTED OFFICIALS



Courthouse Couplet -Kalispell Traffic Engineering Study

February 13, 2017

AT DEC

Background

- 1994 US Highway 93
 Somers to Whitefish
 West EIS
- Remaining portion between 13th Street and 7th Street
 - Preferred alternative of two northbound and two southbound lanes
- Traffic Study prior to design



US Highway 93 • Somers to WhitefishWest

FINAL Environmental Impact Statement and FINAL Section 4(f) Statement

VOLUME I

US Department of Transportation Federal Highway Administration

Traffic Engineering Study

- Identify possible lane configurations
- Identify traffic operational and safety issues
- Project future conditions
- Impact of full bypass
- Collaborate with local officials and the public
- Not design details



Work to Date

- Data Collection
- Land Use Workshop
 - Assign future growth
 - With City, County, and MDT
- Travel Demand Modeling
 - Existing Conditions
 - Future E+C (2040)
 - Alternative Scenarios
- Public Outreach
- Draft Traffic Engineering Report



Kalispell Courthouse Couplet

Traffic Engineering Report UPN E012000

October 26, 2016

DRAFT

Prepared for:

TRANSPORTATION HEIENA, MT







Existing and Projected Traffic Conditions



Existing and Projected Conditions

- TMC at 6 intersections
 - Average day (April)
 - Peak summer (August)

Existing Level of Service



Existing AADT (2015)



2015 AADT (Heavy Truck Percentage)

Historic Traffic (1996-2015)



Historic Traffic and Growth Rates

HISTORIC GROWTH

- Past 20 years (1996-2015)
 0.81%
- Past 10 years (2006-2015)
 -1.06%
- Prior to Partial Bypass (1996-2010)
 - 1.77%
- After Partial Bypass (2011-2015)
 - 1.36%

TRAVEL DEMAND MODEL

- Existing Configuration (Two-lane)
 - 0.40%
 - Restricted growth along corridor due to capacity constraints
 - Impacts of full bypass
- Increased Capacity (Four-lane)
 - 1.62%
 - More reflective of actual demand

Growth rate used for future corridor projections:

• 1.00%

Projected (2040)Level of Service



Projected AADT (2040)



Using 1.0% AAGR

Safety Trend Analysis

- 83 total crashes over five years
- No fatal, two incapacitating injury crashes
- 87% during the work week
- 50% between June and September
- No noted trends related to poor weather or roadway conditions
- 89% involved multiple vehicles
- 2/3 were rear-end crashes
- Characteristics generally reflective of an urban area with high traffic density



Alternative Scenarios

8 IMPROVEMENT OPTIONS CONSIDERED

Options Considered

Alt 1 – Baseline

Full bypass, no additional changes

Alt 2 – Two Travel Lanes with TWLTL / Left-turn lanes

Between 13th Street E and Center St

Alt 3 – Four Travel Lanes with TWLTL / Left-turn lanes

Between 13th Street E and Center St

Alt 4 – One-way Couplet (A)

- US 93 2 travel lanes with TWLTL / left-turn lanes
- 1st Ave E one-way NB
- 1st Ave W one-way SB
- Improvements to Center St and 12th St E

Alt 5 – One-way Couplet (B)

- US 93 one-way SB
- 1st Ave E one-way NB
- Improvements to Center St

Alt 6 – One-way Couplet (C)

- US 93 one-way NB
- 1st Ave W one-way SB
- Improvements to Center St and 12th St E

Alt 7 – Willow Glen Upgrade

• 2-lane with TWLTL / left-turn lanes

Alt 8 – Two Travel Lanes with TWLTL / Left-turn Lanes and Willow Glen Upgrade

Combined Alt 2 and Alt 7

Public Involvement

- Meeting held in Summer 2016
- 30-day public comment period
- Website, news release, interactive story map
- 16 written comments received
 - Eight supporting two-lane
 - Three supporting four-lane
 - General desire to improve Willow Glen Drive, with one exception
 - Concern about increased traffic to nearby neighborhoods as projected with two-lane
 - Desire to make downtown and couplet more bike/ped friendly
 - Concern about increased downtown traffic and US 2 intersection



Advanced Alternatives

Alternative 2

 Two Travel Lanes with TWLTL / Leftturn lanes

Alternative 3

 Four Travel Lanes with TWLTL / Leftturn lanes

Alternative 8

 Two Travel Lanes with TWLTL / Leftturn Lanes and Willow Glen Upgrade

Location	2015 AADT	2040 Projected ⁽ⁱ⁾	2040 Model (Alt 2)	2040 Model (Alt 3)	2040 Model (Alt 8)
South of 12 th Street	19,090	24,480	24,980	31,270	24,410
South of 7th Street	16,570	21,250	18,410	28,390	18,240
North of 4 th Street	16,650	21,350	16,070	22,870	15,750
Between Airport Road and US 93	4,300	5,510	12,300	12,010	11,720
Between Meridian Rd and Airport Rd	6,590	8,450	15,570	15,280	15,140
South of Reserve Drive	-	-	17,570 ⁽ⁱⁱ⁾	17,250 ⁽ⁱⁱ⁾	17,240 ⁽ⁱⁱ⁾
South of 8th Street	3,430	4,400	4,710	3,390	3,910
North of 9th Street	4,440	5,690	4,820	3,640	4,450
North of 4 th Street	4,700	6,030	5,750	4,800	5,200
West of 2 nd Avenue East	5,630	7,220	11,420	11,470	11,090
South of 4 th Street	4,270	5,480	6,000	5,290	5,480
North of US 93	4,480	5,750	9,110	9,180	11,830
North of Woodland Avenue	5,410	6,940	9,050	9,110	14,030
South of Conway Drive	26,780	34,340	34,730	34,830	34,270
East of Flathead Drive	25,530	32,740	34,240	34,090	30,020
West of Meridian Road	18,520	23,750	19,020	18,890	19,060
	Location South of 12 th Street South of 7 th Street South of 7 th Street North of 4 th Street Between Airport Road and US 93 Between Meridian Rd and Airport Rd South of Reserve Drive South of 8 th Street North of 9 th Street North of 9 th Street South of 4 th Street South of 4 th Street North of US 93 North of US 93 North of Conway Drive East of Flathead Drive	Location2015 AADTSouth of 12th Street19,090South of 7th Street16,570North of 4th Street16,650Between Airport Road and US 934,300Between Meridian Rd and Airport Rd6,590South of Reserve Drive-South of 8th Street3,430North of 9th Street3,430North of 9th Street4,440North of 9th Street4,700West of 2nd Avenue East5,630South of US 934,480North of US 934,480North of Conway Drive5,410South of Flathead Drive25,530West of Meridian Road18,520	Location2015 AADT2040 Projected®South of 12th Street19,09024,480South of 7th Street16,57021,250North of 4th Street16,65021,350Between Airport Road and US 934,3005,510Between Meridian Rd and Airport Rd6,5908,450South of Reserve DriveSouth of 8th Street3,4304,400North of 9th Street4,4405,690North of 9th Street4,4005,690North of 9th Street4,7006,030West of 2nd Avenue East5,6307,220South of LS 934,4805,750North of US 934,4805,750North of Conway Drive26,78034,340East of Flathead Drive25,53032,740West of Meridian Road18,52023,750	Location2015 AADT2040 Projected()2040 Model (Alt 2)South of 12th Street19,09024,48024,980South of 7th Street16,57021,25018,410North of 4th Street16,65021,35016,070Between Airport Road and US 934,3005,51012,300Between Meridian Rd and Airport Rd6,5908,45015,570South of Reserve Drive17,570(%)South of 8th Street3,4304,4004,710North of 9th Street4,4405,6904,820North of 9th Street4,7006,0305,750West of 2nd Avenue East5,6307,22011,420South of 4th Street4,2705,4806,000North of US 934,4805,7509,110North of Woodland Avenue5,4106,9409,050South of Conway Drive26,78034,34034,730East of Flathead Drive25,53032,74034,240West of Meridian Road18,52023,75019,020	Location2015 AADT2040 Projected®2040 Model (Alt 2)2040 Model (Alt 3)South of 12th Street19,09024,48024,98031,270South of 7th Street16,57021,25018,41028,390North of 4th Street16,65021,35016,07022,870Between Airport Road and US 934,3005,51012,30012,010Between Meridian Rd and Airport Rd6,5908,45015,57015,280South of Reserve Drive17,570®3,390North of 9th Street3,4304,4004,7103,390North of 9th Street4,4405,6904,8203,640North of 9th Street4,7006,0305,7504,800North of 4th Street4,7005,4806,0005,290North of 1US 934,4805,7509,1109,180North of Voodland Avenue5,4106,9409,0509,110South of Conway Drive26,78034,34034,73034,630Kest of Flathead Drive25,53032,74034,24034,090Kest of Meridian Road18,52023,75019,02018,890

(ii) Model volume used

Selection of Preferred Alternative

Alternative 2: Two Travel Lanes with TWLTL/Left-turn Lanes

- Least impactful alternative
- Projected volumes exceed capacity
- Results in increased volumes along adjacent roadways
- Significant departure from preferred alternative in EIS
- Not consistent with purpose and need in EIS
- Does not provide the same NHS performance as adjoining sections of US 93



Selection of Preferred Alternative

Alternative 3: Four Travel Lanes with TWLTL/Left-turn Lanes

- Matches the preferred alternative in EIS
- Continuous four-lane roadway between Somers and Whitefish
- Adequate capacity to accommodate existing and projected demand
- Meets the purpose and needs identified in the EIS
- Meets the objectives of the NHS for US 93
- Still faces implementation challenges



Selection of Preferred Alternative

- Alternative 8: Two Travel Lanes with TWLTL/Left-turn Lanes and Willow Glen Upgrade
 - Projected volumes exceed capacity
 - Results in increased volumes along adjacent roadways
 - Increased volumes along Willow Glen Drive
 - Improvements would be outside of the scope to develop a project along the couplet
 - Funding and implementation challenges
 - Significant departure from preferred alternative in EIS
 - Not consistent with purpose and need in EIS
 - Does not provide the same NHS performance as adjoining sections of US 93



Additional Considerations

Future Growth and Network Changes

- Impacts of full US 93 Bypass
- Future development

• Safety

- · Trend of multi-vehicle and rear-end crashes
- Concentration of crashes at 10th and 11th Street intersections

Non-motorized

- Safe and appropriate accommodations with any project
- Evaluation during project development

• Funding

- <u>National Highway System</u> ~ \$14.0M to \$20.0M per year for Missoula District (currently obligated past year 2020)
- <u>Urban Funds</u> (Willow Glen) ~ \$718k per year for Kalispell (\$222k current balance)

Environmental

- NEPA/MEPA Reevaluation
- Courthouse Historic District
- Section 4(f) / 6(f)



Conclusion and Next Steps

Conclusion

- Alternative 3 Identified as Preferred
- Based on Review of Traffic Conditions
- Challenges to Implementation
 - Funding
 - Local support
 - Environmental considerations
 - NEPA/MEPA Reevaluation
 - Courthouse Historic District
 - Section 4(f) / 6(f)
 - Right-of-way acquisition



Next Steps

Preliminary Design

- Environmental
- Impacts
- Survey
- Conceptual layouts
- Identify needs and concerns

Working Group

- City
- County
- MDT
- FHWA
- Stakeholders
- Public

Design to Alignment and Grade





- (406) 523-5830
- sstack@mt.gov



- RPA Project Manager
- (406) 447-5005
- <u>scottr@rpa-hln.com</u>