






ALTERNATIVE SOLUTIONS ANALYSIS	
Qualitative Scoring	Level of Support for Evaluation Criteria
	Strongly Supports
	Moderately Supports
	No Significant Change
	Moderately Conflicts
	Strongly Conflicts

ALTERNATIVE SOLUTIONS ANALYSIS: SAFETY

Crash Type	Future (2040) Predicted Crashes Per Year				
	No-Build	Alt. Sol. A	Alt. Sol. B	Alt. Sol. C	Alt. Sol. D
Multiple Vehicle	98.6	45.7	60.0	60.0	45.2
Single Vehicle	9.1	4.2	5.0	5.0	4.2
Pedestrian	3.1	2.5	2.5	2.5	2.5
Bicycle	1.1	0.4	0.7	0.7	0.4
Total	112	53	68	68	52

ALTERNATIVE SOLUTIONS ANALYSIS: SAFETY

Key Safety Findings

- **Raised medians:** largest contributor to improved safety
- **Roundabouts** significantly reduce crashes; could address problematic intersection areas better compared to **signals**.
- **Buffered bike lanes and cycle tracks** increase separation between cars and people biking; can reduce crashes
- **Systemic safety improvements** can reduce some crashes at a low cost.

ALTERNATIVE SOLUTIONS ANALYSIS: SAFETY

Goal	Objectives <i>Identify infrastructure solutions that:</i>	Solutions Evaluation Criteria	Alt. Sol. A	Alt. Sol. B	Alt. Sol. C	Alt. Sol. D
Safety – Increase the safety of Main Street for all users	Have been demonstrated to result in reducing fatalities and serious injury crashes so that Main Street is not on the statewide high crash list	Potential to reduce the number of crashes resulting in fatalities and serious injuries				
		Potential to improve safety for people walking and biking along and across Main Street				
		Potential to reduce vehicle speeds				
		Number of All Road Transportation Safety (ARTS) and Safety Priority Index System (SPIS) locations addressed				
	Have been demonstrated to result in reducing the frequency of all crashes so that Main Street is not on the statewide high crash list	Potential to reduce the number of crashes				
		Number of ARTS and SPIS locations addressed				

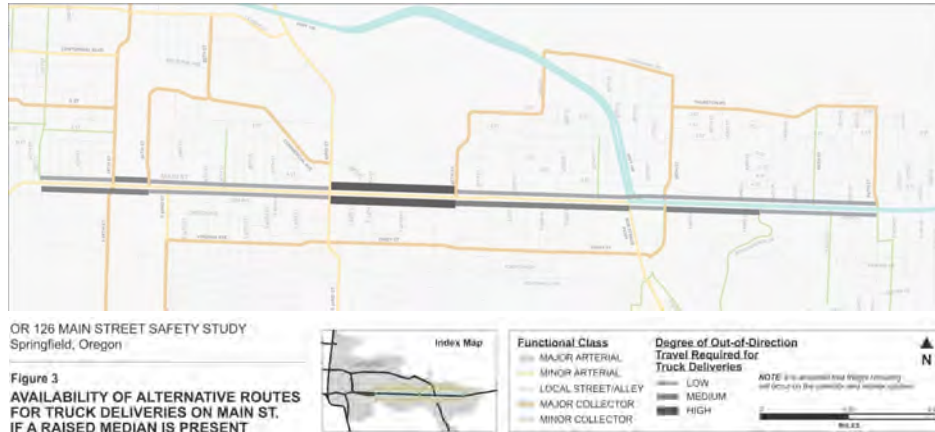
ALTERNATIVE SOLUTIONS ANALYSIS: BUSINESS COMMUNITY

Average Increase in Mid-block Travel Times from Raised Medians

	PM Peak Hour (seconds)	
	Eastbound	Westbound
Alt. Sol. A	88	88
Alt. Sol. B	152	189
Alt. Sol. C	149	164
Alt. Sol. D	56	56

ALTERNATIVE SOLUTIONS ANALYSIS: BUSINESS COMMUNITY

Out-of-Direction Travel for Truck Deliveries



ALTERNATIVE SOLUTIONS ANALYSIS: BUSINESS COMMUNITY

Key Business Community Findings:

- **Maximizing U-turn opportunities** can reduce out-of-direction travel and delay for business access.
- **Roundabouts** improve mid-block travel times and reduce delay to U-turn movements.
- **Roundabouts** allow freight vehicles to make a U-turn at intersections.
- Properly selecting **landscaping** limits impacts to business signing visibility.

ALTERNATIVE SOLUTIONS ANALYSIS: BUSINESS COMMUNITY

Goal	Objectives <i>Identify infrastructure solutions that:</i>	Solutions Evaluation Criteria	Alt. Sol. A	Alt. Sol. B	Alt. Sol. C	Alt. Sol. D
Business Community – Support the viability of existing and future businesses Support the visibility and economic viability of Main Street businesses Support the visibility and economic viability of Main Street businesses; Support the potential for future businesses to locate on Main Street	Provide viable ways for customers and deliveries to patronize/serve businesses along Main Street corridor	Change in travel time to access businesses by customers driving, walking, biking, and busing to Main Street businesses				
	Availability of routes to businesses that are appropriate for truck traffic	Potential impacts on business signing visibility				
	Potential to maintain or enhance property values or economic potential of sites along Main Street					

ALTERNATIVE SOLUTIONS ANALYSIS: MOBILITY

Mobility Results:

- **Roundabouts** significantly reduce overall delay (25-35% reduction in corridor through travel time)
- **Signals** will have slightly increase delays compared to No Build (< 5% increase in corridor through travel time)
- Adding more **U-turn opportunities** can reduce pressure on traffic signals/roundabouts
- Mountable **medians** can limit the impact to emergency vehicle travel times

ALTERNATIVE SOLUTIONS ANALYSIS: MOBILITY

Alternative Solution Impacts on Ability to Accommodate Over-Dimension Loads

	Typical Minimum Curb-to-Curb Width on Main Street East of Bob Straub Parkway
No-Build	31 feet
Alternative Solution A	32 feet
Alternative Solution B	29 feet
Alternative Solution C	32 feet
Alternative Solution D	26 feet

ALTERNATIVE SOLUTIONS ANALYSIS: MOBILITY

Key Mobility Findings:

- **Roundabouts** reduce delay; meet ODOT mobility targets at nearly all intersections on Main Street.
- **Signalized intersections** can experience more delay; can perform better by allowing more **U-turn opportunities** along the corridor.
- A different **cross section** should be considered east of Bob Straub Parkway.

ALTERNATIVE SOLUTIONS ANALYSIS: MOBILITY

Goal	Objectives <i>Identify infrastructure solutions that:</i>	Solutions Evaluation Criteria	Alt. Sol. A	Alt. Sol. B	Alt. Sol. C	Alt. Sol. D
Mobility – Ensure people and goods travel efficiently and reliably through the corridor	Maintain or improve the efficiency and reliability of passenger vehicle and transit operations through the corridor; Maintain or improve emergency response times for police, fire and life safety operations	Intersection delay				
	Maintain or improve emergency response times for police, fire and life safety operations	Average corridor travel time				
		Travel time reliability				
	Meet ODOT's freight vehicle mobility standards along Main Street	Delay caused by traversable and non-traversable obstructions				
	Meet Main Street's functional classifications in the Springfield Transportation System Plan	Potential to meet vehicle-carrying capacity requirements for a Reduction Review Route (east of Bob Straub Pkwy) ^A				
		Consistency with the functional classification of major arterial east of Bob Straub Pkwy and minor arterial west of Bob Straub Pkwy				

ALTERNATIVE SOLUTIONS ANALYSIS: TRANSPORTATION CHOICES

Key Transportation Choices Findings:

- **Buffered bike lanes** or a **cycle track** are needed to make any significant changes to the level of traffic stress experienced by people biking;
- **Landscaped buffers** help reduce traffic stress for people walking.
- **Raised medians** improve the ability to create enhanced pedestrian and bicycle crossings along Main Street between intersections.
- **Enhanced Corridor transit** in each of the alternative solutions is consistent with LTD's planned transit service improvements.

ALTERNATIVE SOLUTIONS ANALYSIS: TRANSPORTATION CHOICES

Goal	Objectives <i>Identify infrastructure solutions that:</i>	Solutions Evaluation Criteria	Alt. Sol. A	Alt. Sol. B	Alt. Sol. C	Alt. Sol. D
Transportation Choices – Create a multimodal environment that connects people and destinations	Ensure access to services and destinations along Main Street for all members of the community	Frequency of enhanced pedestrian crossing opportunities of Main Street	🟢	🟢	🟢	🟢
		Frequency of enhanced bicycle crossing opportunities of Main Street	🟡	🟢	🟢	🟡
		Continuity of pedestrian and bicycle facilities along Main Street	🟢	🟢	🟢	🟢
	Create safe, comfortable, efficient, and continuous pedestrian and bicycle travel and access along Main Street	Pedestrian level of traffic stress along Main Street	🟡	🟡	🟡	🟢
		Bicycle level of traffic stress along Main Street	🟡	🟡	🟡	🟡
		Opportunity to relocate obstructions (e.g., utility poles, signposts) out of the walkway	🟡	🟡	🟡	🟢
	Support existing transit service and provide flexibility to accommodate Enhanced Corridor transit service in the future	Compatibility with existing and potential future transit service	🟢	🟢	🟢	🟢

ALTERNATIVE SOLUTIONS ANALYSIS: VITAL COMMUNITY

Key Vital Community Findings:

- **Landscaping** has the potential to improve the streetscape; can manage storm water runoff.
- **Roundabouts** can significantly reduce vehicle speeds at intersections. Vertical elements in landscaping or narrower travel lanes may also reduce speed.
- **Raised medians** allow for enhanced crossings and connect people walking and biking to Main Street destinations and services.
- **Median breaks** that allow left-turn access onto Main Street from local streets create more direct routes for people driving to Main Street destinations.

ALTERNATIVE SOLUTIONS ANALYSIS: VITAL COMMUNITY

Goal	Objectives <i>Identify infrastructure solutions that:</i>	Solutions Evaluation Criteria	Alt. Sol. A	Alt. Sol. B	Alt. Sol. C	Alt. Sol. D
Vital Community – Support the vitality of the community and its vision for Main Street	Enhance the built and natural environment and stimulate implementation of the Main Street Vision Plan to make it a vibrant place for those who live, work, shop and travel through the corridor	Potential for streetscape improvements to be incorporated into the corridor, such as landscaping, stormwater planters, inviting bus stop amenities and other distinctive amenities				
		Potential to reduce vehicle speeds				
	Connect neighborhood residents to Main Street destinations and services; and transportation options to access the broader region	Alignment of enhanced pedestrian and bicycle crossings with active transportation travel routes to neighborhoods to the north and south				
		Continuity of pedestrian and bicycle facilities along Main Street				
		Directness of routes (for motor vehicles) between neighborhoods and Main Street destinations and services				

ALTERNATIVE SOLUTIONS ANALYSIS: FEASIBILITY

Planning Level Cost Estimate (2019 dollars)	
Alternative Solution A	\$105 million (approx. \$22 million per mile)
Alternative Solution B	\$40 million (approx. \$8.5 million per mile)
Alternative Solution C	\$75 million (approx. \$16 million per mile)
Alternative Solution D	\$135 million (approx. \$28 million per mile)

Note: No Build ADA

ALTERNATIVE SOLUTIONS ANALYSIS: FEASIBILITY

Key Feasibility Findings:

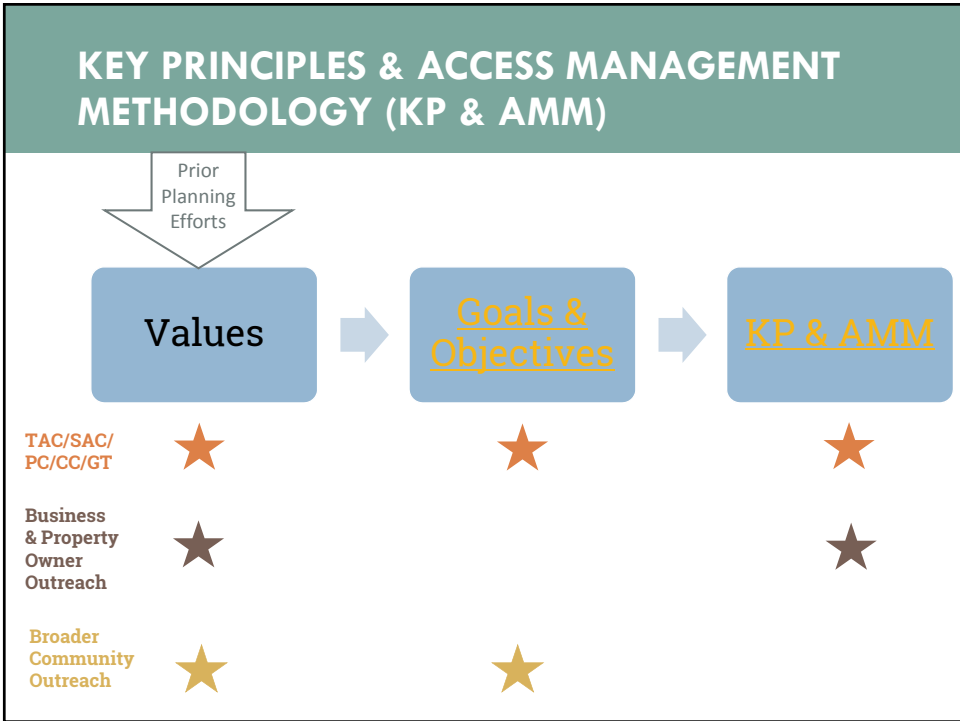
- The **raised median** safety benefit significantly outweighs the cost.
- The cost of **roundabouts** are substantial.
- Wider **cross sections** will be more expensive due to larger ROW impacts on adjacent properties.
- A different **cross section** east of Bob Straub Parkway should be considered.
- **Landscaping** may be more expensive to maintain in the buffers and medians than other treatments.

ALTERNATIVE SOLUTIONS ANALYSIS FEASIBILITY

Goal	Objectives <i>Identify infrastructure solutions that:</i>	Solutions Evaluation Criteria	Alt. Sol. A	Alt. Sol. B	Alt. Sol. C	Alt. Sol. D
Feasibility – Develop a plan with a clear and achievable approach to implementation	Can be implemented starting within five years of Facility Plan	Degree to which recommendations can be implemented				
	acknowledgement and maintained with foreseeable resources	Consistency with Springfield's TSP and LTD's Community Investment Plan.				
		Ability to maintain improvements with reasonably anticipated resources				
	Can be implemented incrementally as funding is secured	Potential for initial phases to be eligible for ODOT transportation safety funding (All Roads Transportation Safety), or other funding sources that may become available				
	Ensure the cost-effective use of resources	Benefit/Cost ratio of safety-focused improvements				

ALTERNATIVE SOLUTIONS ANALYSIS

Questions?



KP & AMM

Senate Bill 408 (2013)

Clarifies process for decisions affecting access to state highways

- Opportunity for local government and property owners to engage
- Streamlines management of access onto state highways from private driveways & local streets
- Procedures for modifying, relocating or closing driveways

KP & AMM

Key Principles

To evaluate how properties abutting highway retain or obtain access to highway

Must balance:

- economic development objectives of adjacent properties
- transportation safety
- access management objectives
- mobility of the corridor

Be consistent with state and local plans

KP & AMM

Access Management Methodology

Applies Key Principles to planning process as it relates to access decisions

Criteria to be used when determining which private driveways can be considered for modification, relocation, or closure.

NEXT STEPS / NEXT MEETINGS

Nov-Jan

Community Engagement

Spring

SAC #5: Refined Alternative Solutions and Analysis