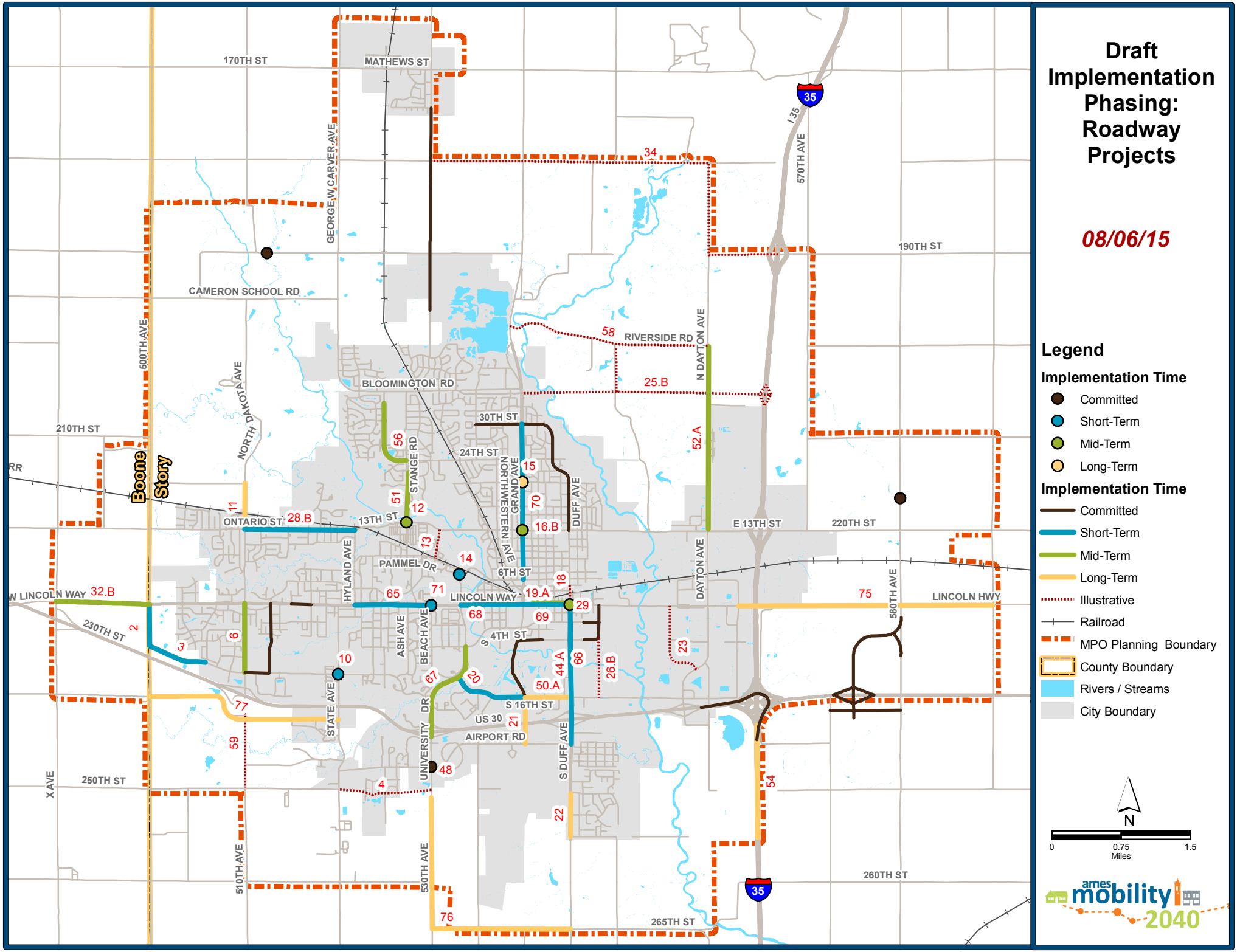
Draft Implementation Phasing: Roadway Projects
08/06/15
Legend
Implementation Time
Committed
Short-Term
Mid-Term
Long-Term
Implementation Time
Committed
Short-Term
Mid-Term
Long-Term
Illustrative
Railroad
MPO Planning Boundary
County Boundary
Rivers / Streams
City Boundary
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1.5
Miles
ames mobility 2040
170TH ST
MATHEWS ST
GEORGE W CARVER AVE
CAMERON SCHOOL RD
500TH AVE
NORTH DAKOTA AVE
BLOOMINGTON RD
210TH ST
Boone
Story
ONTARIO ST
28.B
11
13TH ST
12
STANGE RD
56
51
30TH ST
24TH ST
NORTHWESTERN AVE
GRAND AVE
15
70
DUFF AVE
16.B
RIVERSIDE RD
58
25.B
N DAYTON AVE
52.A
190TH ST
570TH AVE
I-35
35
E 13TH ST
220TH ST
DAYTON AVE
580TH AVE
LINCOLN HWY
75
PAMMEL DR
14
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6TH ST
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19.A
29
LINCOLN WAY
32.B
W LINCOLN WAY
HYLAND AVE
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4TH ST
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ASH AVE
BEACH AVE
230TH ST
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44.A
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26.B
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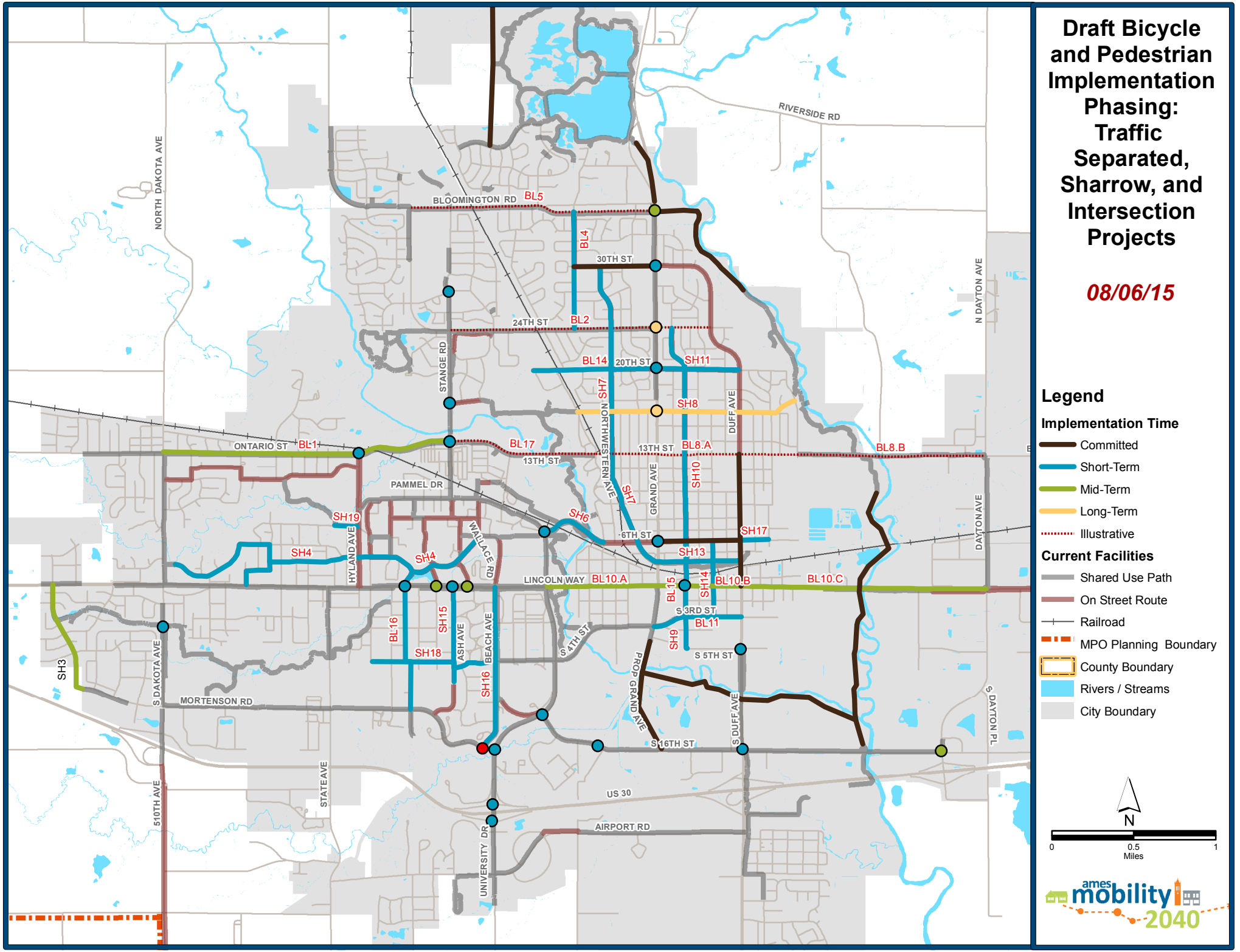
50.A
S 16TH ST
US 30
AIRPORT RD
21
77
59
STATE AVE
UNIVERSITY DR
48
4
S DUFF AVE
54
22
X AVE
250TH ST
510TH AVE
530TH AVE
76
265TH ST
260TH ST

Table. Draft Roadway Project Implementation Timing and Draft Cost Estimates: 8-6-15

Project ID and Description		Implementation Timeframe	System Benefit	Draft Planning-Level Cost Estimate	Preliminary Sponsoring Jurisdiction	Implementation / Prioritization Comments
10	State Ave. /Mortensen Rd. Intersection Improvements	Short-Term	High	$740,000 to $1,550,000	City of Ames/ ISU	ISU preference is turn lanes and signal over roundabout/10.A.
14	University Blvd./ 6th Street Intersection Improvements for Bicycles and Pedestrians	Short-Term	High	$1,200,000	City of Ames	Assume innovative approach - potentially a "Dutch Style" junction.
28.B	Ontario St. - Hyland Ave. to N. Dakota Ave.: Remove Parking, Convert to 3-lane	Short-Term	High	$189,000	City of Ames	Overlaps with BL1. Likely requires removal of one side of on-street parking. Public involvement process during implementation is key.
44.A	Provide Restricted Access Control and Safety Improvements along S Duff between S 16th and Lincoln Way (potential medians)	Short-Term	High	$550,000	City of Ames / Iowa DOT (NHS)	Potential safety funding source for this project.
65	Adaptive Traffic Signal Technology: Lincoln Way- Hyland Ave to Beach Ave.	Short-Term	High	$280,000	City of Ames / Iowa DOT (NHS)	
66	Adaptive Traffic Signal Technology: S. Duff Ave- S. 3rd St to Airport Rd.	Short-Term	High	$210,000	City of Ames / Iowa DOT (NHS)	
68	Adaptive Traffic Signal Technology: Lincoln Way- University Dr. to Grand Ave.	Short-Term	High	$140,000	City of Ames / Iowa DOT (NHS)	
69	Adaptive Traffic Signal Technology: Lincoln Way- Grand Ave. to Duff Ave.	Short-Term	High	$140,000	City of Ames / Iowa DOT (NHS)	
70	Adaptive Traffic Signal Technology: Grand Ave- 6th St. to 30th St.	Short-Term	High	$245,000	City of Ames / Iowa DOT (NHS)	
2	500th Avenue Pave and Reconstruct from W. Lincoln Way to Mortensen Road	Short-Term	Medium	$1,560,000	Story County / City of Ames	Developer driven and funded project
3	Extend Mortensen Road from 500th Ave. to Miller Ave.	Short-Term	Medium	$2,940,000	Story County / City of Ames	Developer driven and funded project
20	Widen S. 16th Street to 3 lanes from University Blvd. to Grand Ave. Extension	Short-Term	Medium	$3,630,000	City of Ames/ ISU	ISU- Institutional Road
71	Lincoln Way/ Beach Ave. Traffic Signal Improvement/ Transit Priority	Short-Term	Medium	$35,000	City of Ames / CyRide	Supports Orange Route Improvements - Transit Alternative 3
6	Widen S. Dakota Ave. to 5 Lanes from Lincoln Way to Mortensen Road	Mid-Term	High	$4,170,000	City of Ames	Needs not anticipated until mid-term.
12	Stange Rd./13th Street intersection improvements	Mid-Term	Medium	$950,000 to $2,640,000	City of Ames	Recent signal upgrade makes this a medium-term priority. Requires bridge widening. ISU prefers adding turn lanes over roundabouts.
16.B	Add Turn Lanes at Grand Ave./ 13th Street Intersection	Mid-Term	Medium	$2,930,000	City of Ames / Iowa DOT (NHS)	Right-of-way impacts to adjacent property anticipated.
19.A	Convert Lincoln Way to a 3-lane between Gilcrest Ave. and Duff Ave.	Mid-Term	Medium	$30,000	City of Ames / Iowa DOT (NHS)	Implement following Grand Avenue extension. Overlaps with BL 10. Costs for radar detection included on all bike lane projects.
29	Lincoln Way/ Duff Avenue Intersection Improvements- Restripe for dedicated east-west left-turn lanes	Mid-Term	Medium	$100,000	City of Ames / Iowa DOT (NHS)	Coordinate implementation with project 19.A
32.B	Widen Lincoln Way to 3-lanes plus bike lane - Highway 30 to 500th Ave	Mid-Term	Medium	$4,680,000	Boone County / Iowa DOT (NHS)	
51	Widen Stange Rd to 5 lanes from 20th St to 13th St	Mid-Term	Medium	$4,827,800	City of Ames/ ISU	Majority ISU jurisdiction- clarify limits.
52.A	Add Turn Lanes at Key Intersections along Dayton between 13th and Riverside Rd	Mid-Term	Medium	$1,800,000	City of Ames	Likely partially developer-funded.
56	Add Turn Lanes to George Washington Carver between Stange and Bloomington	Mid-Term	Medium	$1,200,000	City of Ames	Separate turn lanes for benefit of regional through traffic.
67	Adaptive Traffic Signal Technology: University Blvd: S. 4th St to Highway 30	Mid-Term	Medium	$140,000	City of Ames	
11	Widen N. Dakota to 3 lanes with railroad grade separation - Ontario Street to 215th Street	Long-Term	Medium	$5,430,000	Story County / City of Ames	
15	Grand Ave./ 20th Street Intersection Improvements	Long-Term	Medium	$1,540,000	City of Ames / Iowa DOT (NHS)	Due to corridor traffic growth. Potential safety funding?
21	Extend Grand Ave as a 3-lane street from S. 16th to Airport Rd.	Long-Term	Medium	$12,560,000	City of Ames	Likely a longer-term project.
22	Widen S. Duff Ave. to 3 lanes-Jewel Dr. to Ken Maril Rd.	Long-Term	Medium	$2,200,000	City of Ames / Iowa DOT (NHS) / Developer	Identified as community desire during input; traffic operations and safety needs likely long-term. Developer driven
50.A	Widen S 16th to 5-Lanes between Grand and Duff	Long-Term	Medium	$3,670,000	City of Ames	
54	Widen I-35 to 6 Lanes south of US30	Long-Term	Medium	$9,300,000	Iowa DOT (NHS)	Long-Term need. NHPP funding source.

Project ID and Description		Implementation Timeframe	System Benefit	Draft Planning-Level Cost Estimate	Preliminary Sponsoring Jurisdiction	Implementation / Prioritization Comments
75	Add Turn Lanes to E Lincoln Way between Bell Avenue and MPO Boundary	Long-Term	Medium	$800,000	Story County / Iowa DOT	Developer driven and funded project
76	Pave 265th Street and 530th Avenue for Connectivity	Long-Term	Medium	$8,228,000	Story County / City of Ames	
77	Create Southwest Collector by Paving Existing Gravel Roads south of US 30 between County Line and State Ave	Long-Term	Medium	$8,228,000	Story County / City of Ames	Supports connectivity in longer-term growth area. Likely partially developer-funded. Likely includes bike lanes or paved shoulder.
18	Construct a Duff Ave. Underpass at Union Pacific Railroad	*Illustrative*	Medium	$21,720,000	City of Ames	High cost/ unique connectivity opportunity
34	180th Street- Grant Ave to Dayton, Dayton from 180th to 190th, and 190th from Dayton to I-35: Pave as 2-lane road and paved shoulders and turn lanes at key intersections	*Illustrative*	Medium	$12,200,000	Story County	High dollar project with limited travel demand.
4	Extend Cottonwood from State Ave. to University Blvd.	*Illustrative*	Low	$2,670,000	City of Ames	Developer driven and funded project
13	Haber Rd. Realignment and Widening- Pammel Dr. to 13th Street	*Illustrative*	Low	$16,950,000	City of Ames	Developer driven/ Iowa State participation?
23	Reconstruct and Extend Freel Dr. 2-lane to Dayton Ave.	*Illustrative*	Low	$3,340,000	City of Ames / Developer	High cost for limited demand, developer driven.
25.B	Bloomington Rd. Extension- 2 lane Grand Ave. to new I-35 interchange. Improve Stagecoach Rd from Riverside to Bloomington Rd	*Illustrative*	Low	$22,730,000	Story County / City of Ames / Iowa DOT (NHS)	25.A and B are both low priority; choose 25.B for I-35 access bonus
26.B	Extend Cherry Ave. between S 5th St and S 16th Street through Creek Floodway	*Illustrative*	Low	$6,200,000	City of Ames	Unique connectivity opportunity, likely illustrative.
58	Add turn lanes at key locations on Riverside between Grand and Dayton	*Illustrative*	Low	$1,000,000	Story County	
59	Add Turn Lanes to S Dakota south of US 30 to Zumwalt Station Rd	*Illustrative*	Low	$800,000	Story County	Developer driven and funded project
1	Extend Bloomington Road to 500th Ave. from George W. Carver Ave.	Eliminate	Eliminate	$12,930,000		
5	Zumwalt Station Road/ Oakwood Road Realignment- 510th Ave. to Worle Ln.	Eliminate	Eliminate	$5,220,000		
10.A	Convert the State Ave. /Mortensen Rd. Intersection to a Roundabout	Eliminate	Eliminate	$740,000		Signal and turn lanes (10.B) is local preference.
12.A	Convert Stange Rd./13th Street intersection to a roundabout	Eliminate	Eliminate	$950,000		Local preference is for turn lanes over roundabout.
19.B	Widen Lincoln Way to a 5-lane with a Median at Clark/Walnut intersection	Eliminate	Eliminate	$1,280,000		19.A scores higher. Score likely doesn't reflect high right-of-way negative impacts.
25.A	Extend Bloomington Rd. as a 2-lane from Grand Ave. to 570th Ave. Improve Stagecoach Rd from Riverside to Bloomington Rd	Eliminate	Eliminate	$11,958,000		25.A and B are both low priority; choose 25.B for I-35 access bonus
33	Regional Connection to Gilbert via 500th Ave/Highway 30 to western Gilbert limits (intersection improvements). New interchange at 500th/Hwy 30	Eliminate	Eliminate	$17,484,000		limited demand- already paved
42	Extend Billy Sunday/ S 18th with bridge to Dayton	Eliminate	Eliminate	$5,135,600		High cost/low demand
43	Extend Ken Maril Rd to connect S. Duff to Dayton	Eliminate	Eliminate	$8,027,600		
49	Extend 190th St between Grant Ave and I-35 Interchange	Eliminate	Eliminate	$12,568,000		
52.B	Widen Dayton to 3 Lanes between 13th and Riverside Rd	Eliminate	Eliminate	$9,360,000		52.A selected- similar operations/safety and lower cost
53.A	13th Street- Duff to Dayton- add turn lanes at key intersections	Eliminate	Eliminate	$1,200,000		53.B scores higher
53.B	13th Street- Duff to Meadowlane and Existing Shared Use Path - convert to 3-lane section with bike lanes	Eliminate	Eliminate	$150,000	City of Ames	Not Identified as a roadway need. Corridor serves major vehicle flows / special events. Longer-term bike project, that overlaps with BL 8.
60	Extend University to Bruner/Stange (South of University Village)	Eliminate	Eliminate	$8,748,000		
62	New connection and railroad grade separation- 3 lanes Cameron School Rd to Grant Ave	Eliminate	Eliminate	$5,600,000		High cost for limited demand
72	West Ames to Ankeny High Capacity Corridor	Eliminate	Eliminate	$13,200,000		redundant with I-35/ high cost


Draft Bicycle and Pedestrian Implementation Phasing: Traffic Separated, Sharrow, and Intersection Projects
08/06/15
Legend
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Current Facilities
Shared Use Path
On Street Route
Railroad
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County Boundary
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STANGE RD
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SH7
NORTHWESTERN AVE
SH8
DUFF AVE
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BL8.B
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HYLAND AVE
WALLACE RD
SH13
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BL10.A
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BL10.B
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SH9
S 4TH ST
S 5TH ST
SH3
S DAKOTA AVE
BL16
SH15
ASH AVE
BEACH AVE
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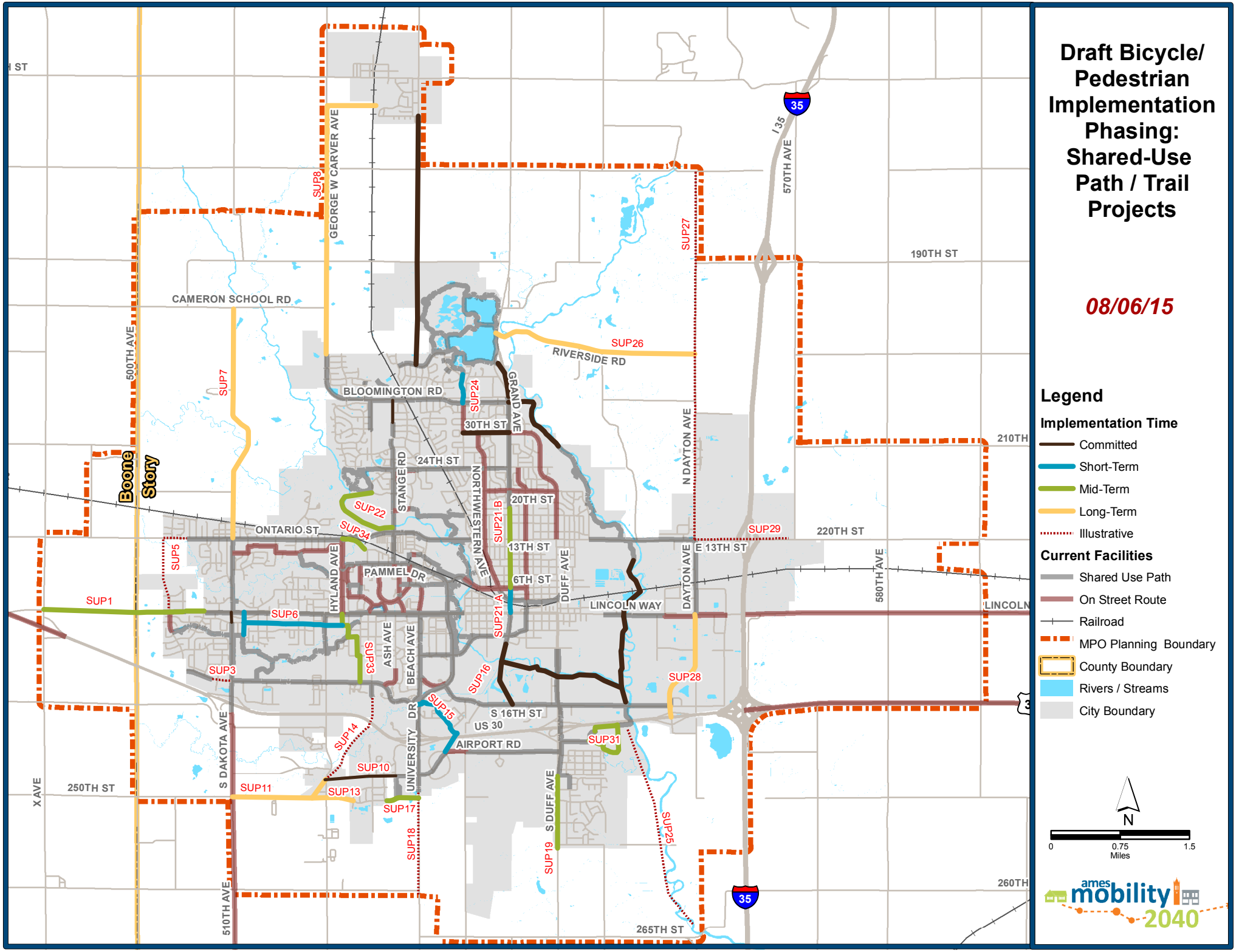
SH16
PROP GRAND AVE
MORTENSON RD
S 16TH ST
S DUFF AVE
S DAYTON PL
STATE AVE
510TH AVE
US 30
AIRPORT RD
UNIVERSITY DR


Draft Bicycle/ Pedestrian Implementation Phasing: Shared-Use Path / Trail Projects
08/06/15
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Short-Term
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Illustrative
Current Facilities
Shared Use Path
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Railroad
MPO Planning Boundary
County Boundary
Rivers / Streams
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SUP34

Table. Draft Bike and Pedestrian Project Implementation Timing and Draft Cost Estimates: 8-6-15

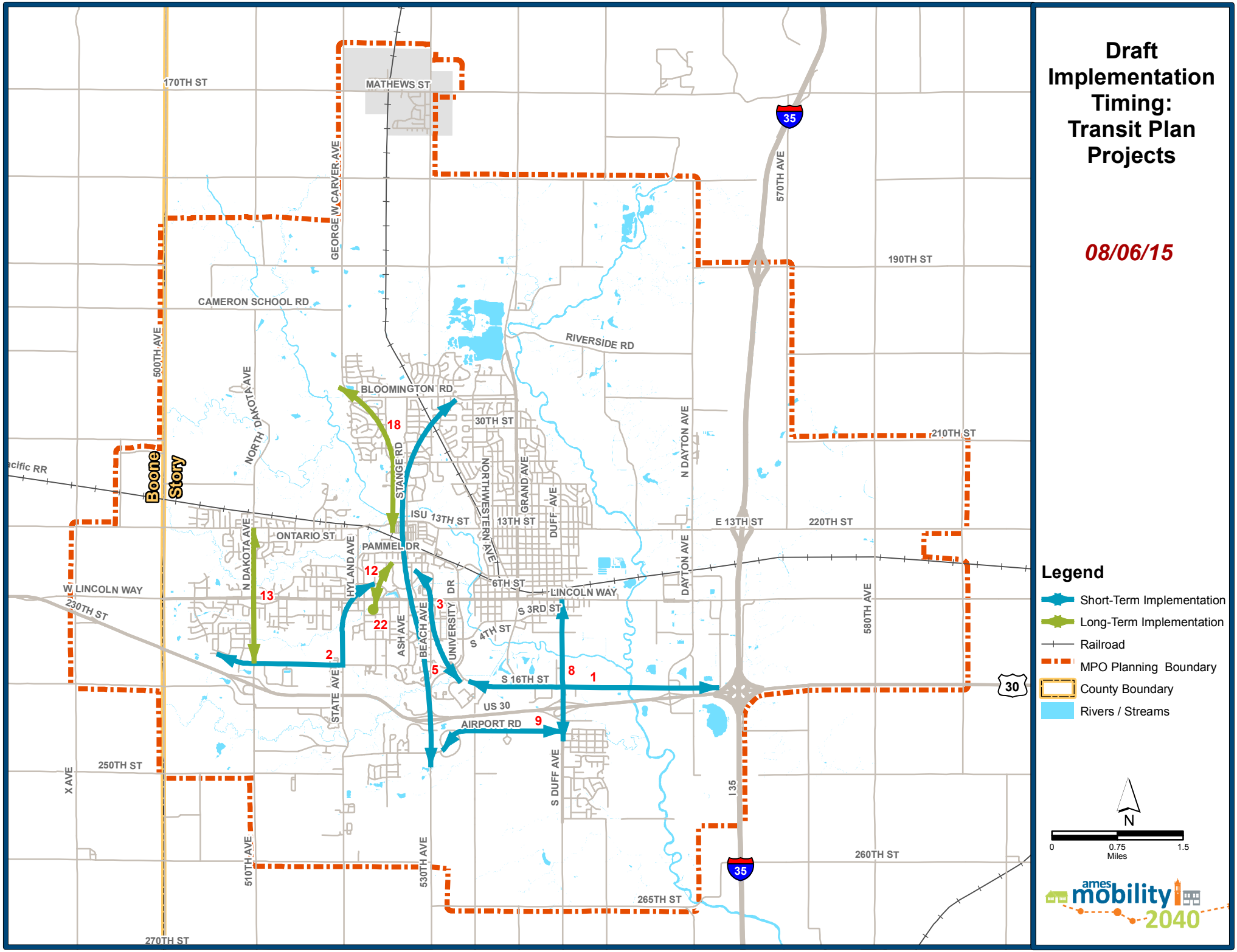
Project ID and Description		Implementation Timeframe	System Benefit	Draft Planning-Level Cost Estimate	Preliminary Sponsoring Jurisdiction	Comments
Traffic Separated Bike Facilities						
BL 6	30th St Bike Lanes, Hoover to Grand	**Committed**	Committed		City of Ames	Not included in LRTP - in current Ames CIP. Assumed to occur by 2019.
BL 7	North Duff Bike Lanes, Lincoln Way to Grand	**Committed**	Committed		City of Ames	Not included in LRTP - in current Ames CIP. Assumed to occur by 2019.
BL 9	6th Street Bike Lanes, Grand to Duff	**Committed**	Committed		City of Ames	Not included in LRTP - in current Ames CIP. Assumed to occur by 2019.
BL 4	Hoover On-Street Bike Treatment, 24th St to Bloomington	Short-Term	High	$66,800	City of Ames	Bike lanes or sharrows. Likely requires removal of one-side of on-street parking.
BL 11	S 3rd St-S 4th St Widen for Bike Lanes, Grand to Duff	Short-Term	High	$555,000	City of Ames	Consider widening road to add bike lanes to maintain existing travel lanes for special events. Identify opportunities to address bus stop / bike lane conflicts. **Eliminated potential on-street connection between Beach and Grand due to existing trail.** Cost reflects widening to incorporate.
BL 14	20th St Bike Lanes, Ames High to Grand	Short-Term	High	$100,000	City of Ames	Likely requires removal of one side of on-street parking. Public involvement process during implementation is key.
BL 15	Clark / Walnut Sharrows, South 3rd to 6th Street	Short-Term	High	$90,000	City of Ames	ABC suggested extension to 6th St, however this would require downtown parallel parking removal. Needs to be sharrows through downtown - no room for bike lanes. South of Main requires conversion to 3-lane from 4-lane.
BL 16	Welch Bike Lanes, Mortensen to Union Drive	Short-Term	Medium	$77,300	City of Ames	Extended to Union Dr instead of Lincoln Way, per suggestion by Bike Coalition. Potential difficult implementation through Campustown and by Towers. Likely mid- or long-term. Cost assumes no major construction / widening. **Pending Campustown pilot project.**
BL 1	Ontario On-Street Bike Treatment, North Dakota to Stange	Mid-Term	High	$189,000	City of Ames	Bike lanes or Sharrows. Bike Lanes likely require removal of one-side of on-street parking. Public involvement process during implementation is key. Same as Roadway Project 28B.
BL 10.A	Lincoln Way Bike Lanes, University Dr to Grand Ave	Mid-Term	Medium	$113,970	City of Ames / Iowa DOT (NHS)	Modify roadway to 1 through lane each way plus center left-turn lane to accommodate bike lanes. Vehicle capacity likely OK through 2040; somewhat higher speeds east of River. Consider buffer between bikes and traffic. Implement after Grand Ave. extension.
BL10.B	Lincoln Way Bike Lanes, Grand Ave to Duff Ave	Mid-Term	Medium	$75,980	City of Ames / Iowa DOT (NHS)	
BL10.C	Lincoln Way Bike Lanes, Duff Ave to Dayton	Mid-Term	Medium	$189,950	City of Ames / Iowa DOT (NHS)	
BL 5	Bloomington On-Street Bike Treatment, George Washington Carver to Grand	*Illustrative*	Medium	$187,100	City of Ames	East of Hoover: sharrows. West of Hoover: bike lane treatment that requires conversion to 3-lane roadway treatment.
BL 8.A	East 13th Street Bike Treatment, Ridgewood Ave to Meadowlane Ave	*Illustrative*	Medium	$528,000	City of Ames	Concerns with event traffic. Identify off-street / bike lane widening facility in this corridor. Subdivided at Meadowlane for trail connection to east. Cost reflects shared use path.
BL 17	13th Street, Stange to Ridgewood Ave	*Illustrative*	Medium	$990,000	City of Ames	Similar to BL 8 - vehicular capacity needed for special events and flood route. Widen roadway option to accommodate bike treatment. Cost reflects roadway widening for buffered bike lane.

Project ID and Description		Implementation Timeframe	System Benefit	Draft Planning-Level Cost Estimate	Preliminary Sponsoring Jurisdiction	Comments
BL 8.B	East 13th Street On-Street Bike Treatment, Meadowlane Ave to Dayton Ave	*Illustrative*	Medium	$1,240,000	City of Ames	Parallel to shared-use path east of Meadowlane. Higher speeds and truck volumes than BL 8.A. Lower priority than BL 8.A. Widen roadway to accommodate bike treatment. Cost reflects roadway widening for buffered bike lane.
BL 2	24th St On-Street Bike Treatment, Stange to Duff	*Illustrative*	Low	$220,600	City of Ames	Likely requires removal of one-side of on-street parking. Lower priority since adjacent to higher priority corridors. Existing trail and higher volumes than BL 14. Public involvement is key.
BL 3	Stange Bike Lanes, 24th St to Bloomington	Eliminate	Eliminate	$101,000		Removal of 1 through lane each way. Eliminate - adjacent SUP exists, higher speeds, higher volumes, site distance. Focus on safe crossings of Stange.
BL 12	5th St Sharrows, Walnut to Duff	Eliminate	Eliminate	$57,700	City of Ames	Redundant project - **City staff indicated bike connections will be provided by Grand Ave extension.**
BL 13	Mortensen Bike Lanes, Welch to University Dr	Eliminate	Eliminate	$89,900		Concerns with speed and vehicle operations on Mortensen. Shared Use Path already present.
Sharrows/Bike Boulevards						
SH 4	Sharrows / Bike Boulevard north of Lincoln Way between North Dakota and Iowa State Campus	Short-Term	High	$124,300	City of Ames	
SH 5	Sharrows along Beach/ Wallace/ University between Lincoln Way and Stange	Short-Term	University Application	$85,600	City of Ames	University facility - not in MPO jurisdiction. However, part of a key regional connection. Bike lanes might be potential alternative.
SH 6	6th St sharrows between campus and downtown bike lanes	Short-Term	High	$20,800	City of Ames	
SH 7	Northwestern Bike Boulevard, Grand to 30th St	Short-Term	High	$139,300	City of Ames	Consider Bike Boulevard concept that accommodates through traffic.
SH 9	S Walnut Bike Boulevard, S 5th to S 3rd	Short-Term	High	$10,000	City of Ames	ABC suggests dedicated bike lanes here. However, narrow pavement width (28') makes the current cross-section very tight for bike lanes even without on-street parking.
SH 10	N Clark On-Street Bike Treatment, 6th St to 24th St	Short-Term	High	$55,000	City of Ames	Sharrows or Bike Boulevard. Continuous, low speed low volume corridor. Identify intersection control improvements to make this more of a through route for N-S bike travel.
SH 11	20th Street Sharrows, Grand to Duff	Short-Term	High	$25,100	City of Ames	
SH 13	Main St Sharrows or Back-in-Angle Parking, Grand Ave to Duff	Short-Term	High	$26,300	City of Ames	ABC suggested back-in-angle parking to supplement sharrows for this corridor. Similar costs for signing / striping.
SH 14	Kellogg Sharrows, S 3rd to 6th St	Short-Term	High	$68,300	City of Ames	
SH 15	Ash Ave Sharrows, current bike lane end to Lincoln Way	Short-Term	High	$28,900	City of Ames	Target for short-term while BL16 implementation plan is developed.
SH 16	Beach Ave Sharrows, Mortensen to Lincoln Way	Short-Term	High	$50,500	City of Ames	Similar corridor as SH 15. Consider Orange Route / Bike interactions during implementation.
SH 17	6th St Sharrows east of Duff	Short-Term	High	$8,700	City of Ames	
SH 18	Cessna St Bike Boulevard	Short-Term	High	$13,100	City of Ames	
SH 19	Oakland St between Trail and Hyland Ave	Short-Term	High	$6,800	City of Ames	
SH 3	Sharrows Along Wilder, Mortensen to Lincoln Way	Mid-Term	Medium	$34,700	City of Ames	
SH 8	16th St Sharrows / Bike Boulevard, trail south of High School to Meadowlane Ave	Long-Term	Low	$157,300	City of Ames	

Project ID and Description		Implementation Timeframe	System Benefit	Draft Planning-Level Cost Estimate	Preliminary Sponsoring Jurisdiction	Comments
SH 1	Sharrows on South State, Mortensen and Lincoln Way	Eliminate	Eliminate	$37,400		Existing trail along State, does not offer additional safety benefit.
SH 12	George Washington Carver Sharrows, 24th to Bloomington	Eliminate	Eliminate	$46,000		Safety concerns due to blind spots, high speeds and curve
SH 2	East-West Bike Boulevard South of Lincoln Way between South Dakota and Campustown	Eliminate	Eliminate	$69,600		Eliminate this only if SUP 6 moves forward. If SUP6 is eliminated, this should be a high priority with SUP4
Shared-use Paths/Trails						
SUP 2	South Dakota Side Path, fill in gap south of Lincoln Way	**Committed**	High	$46,900	City of Ames	In CIP
SUP 10	Oakwood Side Path	**Committed**	Medium	$337,500	City of Ames	
SUP 32	Stange Road trail extension to Bloomington Trail	**Committed**	Developer-Funded	$105,200	City of Ames	This project will occur with development, and will be developer-funded.
SUP 6	Trail connection between Beedle Mortensen and Campustown south of Lincoln Way Intermodal Facility	Short-Term	High	$440,000	City of Ames	Important bike connection identified for either SUP 6 or combo of SUP4+ SH2.
SUP 15	Vet med - University Trail Connection to Airport Rd	Short-Term	High	$631,000	City of Ames / Iowa State University	ISU Project
SUP 21.A	Grand Ave Side Path between Lincoln Way and 6th Street	Short-Term	High	$497,400	City of Ames	*shortened the northern limit to 6th instead of 17th per suggestion from ABC
SUP 24	On-Street Bike connection north of Hoover Ave from Bloomington to Ada Hayden	Short-Term	Medium	$10,000	City of Ames	Modified to on-street sharrow application.
SUP 19	S Duff Side Path or Improved Shoulders for Bikes between Ken Maril and Airport Rd	Mid-Term	High	$764,900	Story County / City of Ames	Limits consistent with roadway project #22.
SUP 1	West Lincoln Way Side Path to MPO Boundary	Mid-Term	Medium	$683,400	Boone County / City of Ames / Iowa DOT (NHS)	Assumed cost break down: 60% Boone, 25% Developer, 15% City of Ames
SUP 17	Cottonwood Trail On-Street Facility, Cedar Lane to University	Mid-Term	Medium	$40,000	Developer	Will be on-street bike lane or sharrow when street is constructed. Developer driven and funded.
SUP 21.B	Grand Ave Side Path between 6th and 17th Street	Mid-Term	Medium	$375,000	City of Ames	Remaining segment from 6th to 17th, may need easements.
SUP 22	Recreational Trail to Veenker Golf Course	Mid-Term	Medium	$440,000	City of Ames	Modified project limits from Veenker Golf clubhouse to Stange.
SUP 31	Skunk River - South Duff Trail Connection	Mid-Term	Medium	$415,700	City of Ames	Potential impacts to Dog Park. Need land acquisition from Hunziker Youth Sports Complex.
SUP 33	Hyland-Hayward South Campus Trail Connection	Mid-Term	Medium	$407,500	City of Ames	
SUP 34	Pammel Woods Recreational Trail	Mid-Term	Medium	$402,300	Iowa State University	
SUP 7	North Dakota Side Path	Long-Term	Medium	$1,423,800	Story County / City of Ames	Costs do not include any additional right-of-way impacts north of 215th.
SUP 8	George Washington Carver Side path to Gilbert	Long-Term	Medium	$1,415,400	Story County / City of Gilbert	Changed to long-term due to Grant Ave trail in near term.
SUP 28	South Dayton Side Path between S 16th St and Lincoln Way	Long-Term	Medium	$545,800	City of Ames	
SUP 11	Zumwalt Station to Oakwood Trail	Long-Term	Low	$490,900	Story County / City of Ames	
SUP 13	Zumwalt to Cottonwood Trail Connection	Long-Term	Low	$197,600	Story County / City of Ames	Coordinate with SUP-17.
SUP 26	Riverside Rd Trail (Paved Shoulder is Alternative)	Long-Term	Low	$1,532,500	Story County / City of Ames	Might be a higher priority from a recreational perspective. Consider quarry trucks.
SUP 3	West Mortensen Side Path, fill in gap west of South Dakota	*Illustrative*	High	$89,800	Developer	Developer driven project.

Project ID and Description		Implementation Timeframe	System Benefit	Draft Planning-Level Cost Estimate	Preliminary Sponsoring Jurisdiction	Comments
SUP 5	Wilder-Ontario Side Path Connection	*Illustrative*	High	$745,600	Developer	Potentially Mid-Term, depending on development timing. Consider developer funding source. Bridge required. City doesn't control this land- developer driven.
SUP 14	Worrell Creek Trail with US 30 Crossing (Identify Grade Separation)	*Illustrative*	Medium	$2,070,000	Story County / City of Ames	High cost due to crossing at US 30. Consider illustrative due to construction / cost issues. Right-of-way costs not included.
SUP 18	S University Side Path to MPO Boundary	*Illustrative*	Medium	$488,100	Story County / City of Ames	Based on Research Park Phasing.
SUP 25	South Skunk River Trail extension to MPO Boundary	*Illustrative*	Medium	$998,200	Story County / City of Ames	
SUP 27	Dayton Trail or Improved Shoulders north of 13th Street	*Illustrative*	Medium	$1,752,300	Story County / City of Ames	Longer-term project for future development. Consider some developer funding
SUP 29	E 13th St Trail or Paved Shoulders for Bikes Extension past I-35	*Illustrative*	Medium	$448,100	Developer	Developer driven and funded.
SUP 4	Paths to connect roadway gaps south of Lincoln Way	Eliminate	Eliminate	$72,700		Eliminate this only if SUP 6 moves forward. If SUP6 is eliminated, this should be a high priority with SH2
SUP 9	S Dakota Side Path, MPO boundary to US 30 (Paved Shoulder is Alternative)	Eliminate	Eliminate	$1,148,300	Story County / City of Ames	Lowest Score. Bike lanes already present.
SUP 12	S State St Side Path between Oakwood and Mortensen	Eliminate	Eliminate	$897,500	City of Ames	Construction issues due to terrain.
SUP 16	Pave existing gravel trail between South 4th St to SUP 15	Eliminate	Eliminate	$1,137,800	City of Ames	Eliminated due to feedback received on Grand Avenue project. Support to maintain as gravel.
SUP 20	S Duff Side Path between S 5th Street and Lincoln Way	Eliminate	Eliminate	$166,700		Bike Coalition noted concerns with pedestrian and cyclist safety due to high access density. Other alternatives should be considered first.
SUP 23	Recreational Trail near aquatic center	Eliminate	Eliminate	$175,900	City of Ames	Redundant connection with existing trail. Lower need.
SUP 30	Lincoln Way Trail to MPO Boundary	Eliminate	Eliminate	$1,428,600	Story County / City of Ames / Iowa DOT (NHS)	Bike lanes exist here to Nevada.
Intersection/Crossing Improvements						
Intersection	University / Mortensen - Improve visibility / safety at Mortensen	Short-Term	High	$145,000	City of Ames	Look at Leading Pedestrian Interval signal treatment for bike / pedestrian safety at intersection.
Intersection	University / S 16th St - Consider median crossing or pedestrian refuge	Short-Term	High	$50,000	City of Ames	
Intersection	Duff / S 16th St - Improve crossing visibility, median refuge	Short-Term	High	$150,000	City of Ames / Iowa DOT (NHS)	
Intersection	Duff / S 5th - Improve crossing visibility of Duff and 5th	Short-Term	High	$150,000	City of Ames / Iowa DOT (NHS)	
Intersection	Grand / 6th St - Improve crossing visibility of Grand	Short-Term	High	$100,000	City of Ames / Iowa DOT (NHS)	
Intersection	Lincoln Way / Clark - Improve crossing visibility	Short-Term	High	$100,000	City of Ames / Iowa DOT (NHS)	
Intersection	Grand / 30th St - Crossing Visibility / Signal improvements	Short-Term	High	$100,000	City of Ames / Iowa DOT (NHS)	
Intersection	Stange / 13th St - Visibility Crossing improvements for trail	Short-Term	High	$145,000	City of Ames	

Project ID and Description		Implementation Timeframe	System Benefit	Draft Planning-Level Cost Estimate	Preliminary Sponsoring Jurisdiction	Comments
Intersection	US 30 / University South Ramp - Crossing Visibility / Signal improvements	Short-Term	High	$100,000	City of Ames / Iowa DOT (NHS)	
Intersection	US 30 / University North Ramp - Crossing Visibility / Signal improvements	Short-Term	High	$100,000	City of Ames / Iowa DOT (NHS)	
Intersection	Lincoln Way / Welch - Improve crossing visibility	Short-Term	High	$145,000	City of Ames / Iowa DOT (NHS)	
Intersection	Hyland / Ontario - Improve crossing visibility	Short-Term	High	$145,000	City of Ames	
Intersection	13th St/ Clark Ave- Improve crossing visibility	Short-Term	High	$145,000	City of Ames	added per suggestion of ABC- along with SH 10
Intersection	20th / Grand - Crossing / Signal Improvements	Short-Term	High	$145,000	City of Ames / Iowa DOT (NHS)	Added to compliment BL 14.
Mid-Block Crossing	S 16th midblock trail crossing near Vet Med - High visibility treatment for trail cross - over	Short-Term	High	$50,000	City of Ames	
Mid-Block Crossing	South Dakota midblock trail crossing north of Clemons - Improve crossing visibility	Short-Term	High	$50,000	City of Ames	
Mid-Block Crossing	Stange at Bruner Dr Midblock - Improve crossing visibility / consider crossing signal	Short-Term	High	$50,000	City of Ames	
Mid-Block Crossing	Stange at Somerset - Midblock crossing improvements for visibility / consider crossing signal	Short-Term	High	$50,000	City of Ames	
Intersection	Dayton / S 16th - Improve visibility for crossing	Mid-Term	Medium	$100,000	City of Ames	
Intersection	Lincoln Way / Lynn - Improve crossing visibility	Mid-Term	Medium	$150,000	City of Ames / Iowa DOT (NHS)	
Intersection	Grand / Bloomington Rd - Crossing Visibility / Signal improvements	Mid-Term	Medium	$100,000	City of Ames / Iowa DOT (NHS)	
Intersection	Lincoln Way / Ash - Improve crossing visibility	Mid-Term	Medium	$100,000	City of Ames / Iowa DOT (NHS)	
Intersection	Lincoln Way / Knoll - Improve crossing visibility	Mid-Term	Medium	$100,000	City of Ames / Iowa DOT (NHS)	
Intersection	Grand / (N) 16th St - Bike Boulevard treatment / consider restricting through Traffic	Long-Term	Medium	$145,000	City of Ames / Iowa DOT (NHS)	Consider impacts to Grand traffic flow and coordination in implementation.
Intersection	Grand / 24th St - Improve crossing visibility	Long-Term	Medium	$100,000	City of Ames / Iowa DOT (NHS)	
Mid-Block Crossing	Beach / Mortensen crossing to provide safer crossing than University / Mortensen.	*Illustrative*	Low	$80,000	City of Ames	Likely little use - requires out-of-distance travel. BL 13 would be only reason to implement. Requires trail extension for 350' on south side of Mortensen to connect to University Dr.


Draft Implementation Timing: Transit Plan Projects
08/06/15
Legend
Short-Term Implementation
Long-Term Implementation
Railroad
MPO Planning Boundary
County Boundary
Rivers / Streams
N
0
0.75
1.5
Miles
ames mobility 2040
170TH ST
MATHEWS ST
GEORGE W CARVER AVE
570TH AVE
190TH ST
CAMERON SCHOOL RD
RIVERSIDE RD
500TH AVE
NORTH DAKOTA AVE
BLOOMINGTON RD
30TH ST
210TH ST
Boone
Story
STANGE RD
NORTHWESTERN AVE
GRAND AVE
DUFF AVE
N DAYTON AVE
ISU
13TH ST
E 13TH ST
220TH ST
ONTARIO ST
PAMMEL DR
DAYTON AVE
W LINCOLN WAY
230TH ST
HYLAND AVE
N DAKOTA AVE
6TH ST
LINCOLN WAY
S 3RD ST
S 4TH ST
ASH AVE
BEACH AVE
UNIVERSITY DR
580TH AVE
S 16TH ST
US 30
AIRPORT RD
STATE AVE
250TH ST
X AVE
S DUFF AVE
I 35
510TH AVE
530TH AVE
260TH ST
265TH ST
270TH ST
18
12
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22
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8
1
9
35
30

Table. Draft Transit Project Implementation Timing: 08-06-15

Alternative Number			Implementation Timeframe	System Benefit	Preliminary Sponsoring Jurisdiction	Notes
1	Alternative 1	South 16th Corridor Service Improvements	Short-Term	High	CyRide	
2	Alternative 2	Mortensen / State Street Corridor Service Improvements	Short-Term	High	CyRide	
3	Alternative 3	Orange Route Corridor Service Improvements	Short-Term	High	CyRide	
4	Alternative 4	Automatic Passenger Counters	Short-Term	High	CyRide	Capital projects difficult to score with our criteria - high benefit to agency.
5	Alternative 5	Brown Route North / South Corridor Service Improvements	Short-Term	High	CyRide	
6	Alternative 6	Buses (Expansion/ Replacement)	Short-Term	High	CyRide	Difficult to score with our criteria. Replacing rolling stock essential.
7	Alternative 7	Bus stop improvements	Short-Term	High	CyRide	Capital projects difficult to score with our criteria - high benefit to community.
8	Alternative 8	S. Duff Corridor Service Improvements	Short-Term	High	CyRide	
9	Alternative 9	Airport Road Corridor Service Improvements	Short-Term	High	CyRide	
10	Alternative 10	CyRide Facility Expansion	Short-Term	High	CyRide	Capital projects difficult to score with our criteria - high benefit to agency.
11	Alternative 11	Farebox system	Long-Term	Medium	CyRide	Capital projects difficult to score with our criteria - high benefit to agency.
12	Alternative 12	Intermodal Circulator	Long-Term	Medium	CyRide	
13	Alternative 13	North / South Dakota Corridor Service Improvements	Long-Term	Medium	CyRide	
18	Alternative 18	New transit service between North Ridge / Somerset/ Valley View via Stange Rd / Bloomington Rd / GW Carver Ave	Long-Term	Medium	CyRide	
22	Alternative 22	Intermodal facility Improvements	Long-Term	Medium	CyRide	Capital projects difficult to score with our criteria - high benefit to community.
23	Alternative 23	Automatic Vehicle Location Technology	Long-Term	Medium	CyRide	Capital projects difficult to score with our criteria - high benefit to agency.
24	Alternative 24	Regional commuter study (North Ames, Nevada, Gilbert, Boone, etc.)	Regional	Low	Other	Outside of CyRide service area.
27	Alternative 27	Des Moines to Ames Transit Corridor Improvements	Regional	Low	Other	Outside of CyRide service area.
28	Alternative 28	Bus Thruway- Ames to Amtrak in Osceola	Regional	Low	Other	Outside of CyRide service area.

Table 4. Project Performance Objectives and Scoring Approach

LRTP Project Performance Objective	Performance Method	Candidate Project Scoring Approach				Scoring Discussion
		2	1	0	-2	
		Very Good	Good	Neutral	Poor	
Goal 1: Provide a connected transportation system that offers efficient and reliable mobility options for all modes of travel.						
1A. Create and enhance multimodal access and connections between bicycle, pedestrian, transit, and private vehicle travel.	Multimodal Connectivity Ranking	Enhances access and connections between at least two modes. Or, a project that improves mobility for two or more modes.	Enhances access and connections for bicycle, pedestrian, or transit travel.	No significant impact on multimodal access or connectivity.	Creates barrier to multimodal connections.	Intermodal projects and those that have multiple modes score highest here. Projects improving bicycle, pedestrian, or transit mobility are assumed "good", as automobile travel already accounts for over 90% of regional travel. Complete streets projects score "Very Good".
1B. Reduce the incidence of roadway congestion.	Vehicular Level of Service	Improves vehicular level of service to "D" or better for a location that would be "E" or worse otherwise, or improves LOS on NHS route.	Improves vehicular level of service.	No significant impact on traffic operations.	Degrades vehicular level of service a letter grade or worse.	LOS for existing or 2040 conditions - intersections and segments where appropriate. Assumes that target is LOS D or better. Minor drops of less than 1 LOS letter grade are not negatively scored. Alternate measure: +2 scoring for LOS improvements on NHS routes (per MAP-21), and +1 for non-NHS routes.
1C. Enhance the efficiency of the existing transportation system through system management and demand management approaches.	Transportation Management Assessment	Improves existing facility or transit route mobility. OR a project that adjusts travel demand to better fit on existing system.	-	No significant impact on system or demand management.	Degrades the service levels of an existing facility or route, or increases peak demand on the system.	Assess Transportation System Management and Demand Management - potentially new transit services that degrade demand on an existing route, or alternatives that somehow increase peak hour demands.
1D. Improve system connectivity through improved multimodal network connections and reduced network gaps.	System Connectivity Assessment	New multimodal network connection where a gap of 1/2 mile or more existed before. **(1/2 mile from adjacent, parallel facilities)**	Provides a new connection between two existing modal facilities, or an extension of an existing facility.	No change facility connectivity.	Reduces facility connectivity.	Scored for all modes separately. Determine distance of new facility to nearest existing facility as measured to parallel facilities. Must connect to existing facilities. Roadways considered should be arterial or higher for a +2.
1E. Plan for and address transportation system impacts and sufficiency when considering new developments.	No way to measure and compare in LRTP on an alternative basis.					

Table 4. Project Performance Objectives and Scoring Approach (continued)

LRTP Project Performance Objective	Performance Method	Candidate Project Scoring Approach				Scoring Discussion
		2	1	0	-2	
		Very Good	Good	Neutral	Poor	
Goal 2: Provide a safe transportation system.						
2A. Reduce the rate and number of serious injury and fatal crashes.	Safety Assessment	Results in likely safety benefits or reduced crash severity in one of the top vehicular or bicycle/pedestrian safety issue areas.	Improves vehicular or bicycle / pedestrian safety non-safety issue area; or improves safety through traffic diversion from a safety issue corridor.	No effect on vehicular or bicycle / pedestrian safety.	Increases safety concerns at an identified vehicular or bicycle/pedestrian safety issue area.	Issue areas defined in LRTP as highest-crash frequency intersections, or public-identified safety concern locations. May be assessed through crash modification factors. Addresses HSIP proposed rulemaking and 2013 Iowa Strategic Highway Safety Plan.
2B. Consider the safety of all travel modes when considering changes to the transportation system.	Multimodal Safety Assessment	Provides anticipated safety benefits to two or more modes of travel.	Provides anticipated safety benefits to one mode with no anticipated negative safety impacts on other modes.	No anticipated change in safety for any modes.	Anticipated negative impact on any mode.	Addresses the input regarding multi-modal safety when considering projects. Projects where literature / studies suggest the improvement would enhance two or more modes' safety highest ranked here.
2C. Enhance transportation security by collaborating with the appropriate agencies and emergency responders.	Qualitative Security Assessment	Provides improved communications, emergency response coordination, secures critical asset or otherwise improves transportation security.	-	No anticipated change to security.	Negative impact on communications, emergency response coordination, critical assets, or overall transportation security.	Addresses security - many alternatives will be security neutral. No "Good", either improves security or doesn't.
Goal 3: Consider and mitigate the impacts of the transportation system on the natural and built environment.						
3A. Minimize the transportation system's impacts on the natural and built environment.	Environmental Screening	Reduces the natural / built environmental impacts of current and future transportation system.	-	Neutral effect on transportation system impacts on natural / built environment.	Overall increase transportation system impacts to natural / built environment.	Look at several factors: right-of-way impacts (acres), potential acquisitions (number), noise potential (yes/no), threatened and endangered species habitat (yes/no), wetlands and floodway impacts (acres).
3B. Identify transportation system projects and programs that can improve regional air quality.	VMT / VHT Estimation	Provides significant reduction to regional VMT and VHT.	Provides significant reduction to either VMT or VHT; no significant growth in either measure.	No significant change in regional VMT or VHT.	Project would increase both VMT and VHT.	Use model / analysis to estimate when possible. MOVES air quality model evaluates VMT at various travel speeds, with higher emissions rates coming at low urban speeds / idling. Thus, VMT and VHT declines infer improved air quality. Define "significant" in relative terms by comparing alternatives' impacts.

Table 4. Project Performance Objectives and Scoring Approach (continued)

LRTP Project Performance Objective	Performance Method	Candidate Project Scoring Approach				Scoring Discussion
		2	1	0	-2	
		Very Good	Good	Neutral	Poor	
Goal 3: Consider and mitigate the impacts of the transportation system on the natural and built environment (continued).						
3C. Coordinate with environmental agencies during project planning.	No way to measure and compare in LRTP on an alternative basis. Coordination is part of overall LRTP, and becomes more focused during project planning and development.					
Goal 4: Provide an accessible transportation system that fits within the context of its surroundings and preserves community character.						
4A. Plan and design transportation facilities that fit within their physical and social setting.	CSS Assessment	Alternative is generally more consistent with neighborhood context than current transportation facilities.	-	No real impact on neighborhood context.	Alternative is generally inconsistent with neighborhood context.	Qualitative assessment. Consider how the project fits aesthetically, how it enhances / conflicts with neighborhood's modal orientation, affects on-street parking where it's needed, or residents' perception of the project (if applicable). No "Good" score.
4B. Plan for transit, bicycle, and pedestrian access in new urban developments.	Bicycle / Pedestrian / Transit Screening	Provides bicycle, pedestrian, or transit access in neighborhoods / subareas that previously had none.	Expands bicycle, pedestrian, or transit access in neighborhoods / subareas that previously had access to that mode.	No change in bicycle, pedestrian, or transit access to neighborhood / subarea.	Reduces bicycle, pedestrian, or transit access to neighborhood / subarea.	Define neighborhoods as existing subdivisions, or those subareas with homogenous land uses that are bounded by arterial streets (including commercial nodes / industrial areas). Develop new streets with complete street concepts. Consider how appropriate the mode is for that corridor.
4C. Provide balanced transportation access to both environmental justice and non-environmental justice communities.	Environmental Justice Assessment		**Directly improves mobility for EJ populations.**	Limited direct effect on EJ population mobility.	Project degrades mobility for EJ populations.	Use the defined EJ areas. No "Very Good" score.
4D. Promote active transportation projects and programs.	Active Transportation Screening	Likely enhances walking, biking and recreational opportunities compared to current conditions.	-	Limited effect on walking, biking and recreational opportunities.	Likely reduces walking, biking and recreational opportunities compared to current conditions.	Bicycle / pedestrian projects where demand likely exists and programs that encourage biking and walking and include complete streets will score +2.
4E. Provide transit service to areas with high density or mix of land uses.	Transity Density Screening	Other subareas of similar land use mix and density have above-average ridership.		No comparative transity density.	Other subareas of similar land use mix and density have lower than-average ridership.	Qualatative assessment, considering development density and mix of land uses to guage if appropriate for transit service.

Table 4. Project Performance Objectives and Scoring Approach (continued)

LRTP Project Performance Objective	Performance Method	Candidate Project Scoring Approach				Scoring Discussion
		2	1	0	-2	
		Very Good	Good	Neutral	Poor	
Goal 5: Provide a transportation system that supports the regional economy and efficiently moves goods.						
5A. Promote the efficient and safe movement of freight and goods.	Freight Route Assessment	Improves capacity, safety, or travel reliability on freight corridors through Ames area.	-	No effect on capacity, safety, or travel reliability on freight corridors through Ames area.	Decreases capacity, safety, or travel reliability on freight corridors through Ames area.	Evaluate alternatives according to whether or not they could potentially enhance mobility or safety in defined freight corridors. Work with MPO to define freight corridors.
5B. Identify projects and programs that maintain the current high levels of freight mobility on Interstate 35 through the Ames area.	I-35 Freight Assessment	Improves capacity, safety, or travel reliability on I-35 through Ames area.	-	No effect on capacity, safety, or travel reliability on I-35 through Ames area.	Decreases capacity, safety, or travel reliability on I-35 through Ames area.	Specific to I-35 only to address MAP-21 Freight National Performance Goals / Draft Rules - anticipated to only relate to Interstate Highway System.
5C. Identify multimodal transportation projects and programs that enhance the area's economy.	Employment / Retail Connectivity Assessment	New multimodal connection directly to employment or retail areas.	Provides improved, but indirect multimodal access / mobility to employment or retail area.	Neutral effect on connectivity to employment or retail areas.	Reduces multimodal connectivity to employment or retail areas.	Review TAZ data for employment areas and determine if project expands access or enhances mobility to those areas. New direct access gets +2, enhanced access gets +1.
5D. Identify multimodal transportation projects and programs that enhance access to K-12 schools.	K-12 School Connectivity Assessment	New multimodal connection directly to school.	Provides improved, but indirect multimodal access / mobility to school.	No effect on connectivity to school.	Reduces multimodal connectivity to school.	Performance objective added to reflect input regarding concerns on K-12 school access. New direct access gets +2, enhanced access gets +1.
5E. Reduce project delivery delays	No way to measure for LRTP alternatives. LRTP will discuss processes that can help streamline project development.					
5F. Provide a financially-sustainable transportation system.	Travel Benefits per Dollar Spent	Highest ranking tier of benefits / dollar spent.	Next tier of benefits / dollar spent.	Limited benefits / dollar spent OR cannot measure.	Negative VMT / VHT benefits.	Compare VMT and VHT reductions to projects cost. Rank projects against one another. Cannot measure smaller projects that aren't modeled. Transit projects to consider operational efficiency and cost savings.

Table 4. Project Performance Objectives and Scoring Approach (continued)

LRTP Project Performance Objective	Performance Method	Candidate Project Scoring Approach				Scoring Discussion
		2	1	0	-2	
		Very Good	Good	Neutral	Poor	
Goal 6: Maintain transportation infrastructure in a state-of-good-repair.						
6A. Allocate resources to maintain pavement conditions at sufficient levels.	PCI	Improves pavement in a corridor with pavement considered deficient.		No impact to pavement condition.		Use PCI data from existing conditions report. Addresses NHPP proposed rulemaking.
6B. Allocate resources to maintain bridge conditions at sufficient levels.	NBI Ratings	Improves a bridge considered deficient.		No impact to bridge condition.		Use National Bridge Inventory (NBI) functional and structural ratings. Addresses NHPP proposed rulemaking.
6C. Allocate resources to maintain transit fleet in state of good repair	Average Fleet Age	Improves average fleet age.		No impact to average fleet age.		Evaluate alternatives that affect the average fleet age.

Table 5. Fatal Flaws for Selected Performance Measures

LRTP Project Performance Objective	Potential Alternative Fatal Flaw
1A. Create and enhance multimodal access and connections between bicycle, pedestrian, transit, and private vehicle travel.	Alternative that removes bicycles or pedestrians from a corridor.
1B. Reduce the incidence of roadway congestion.	Alternatives that degrade traffic operations to LOS E / F on the NHS system.
2A. Reduce the rate and number of serious injury and fatal crashes per strategies outlined in the 2013 Iowa Strategic Highway Safety Plan.	Alternative increases likelihood of fatal or severe injury crashes for any mode, measured through crash modification factors.
3A. Minimize the transportation system's impacts on the natural and built environment.	Alternative has potential for significant impact on floodplain.
5A. Promote the efficient and safe movement of freight and goods.	If a designated freight corridor, alternative reduces the mobility of heavy commercial vehicles.