ITEM # _40a-c_
DATE: 03-22-16

COUNCIL ACTION FORM

SUBJECT: LINCOLN WAY PEDESTRIAN CROSSING DATA COLLECTION AND ANALYSIS (UNIVERSITY BOULEVARD TO SHELDON AVENUE)

BACKGROUND:

City staff was recently approached by representatives from the ISU administration inquiring about the City's interest in participating in a **Lincoln Way Pedestrian Crossing Data Collection and Analysis** from University Boulevard to Sheldon Avenue. The primary interest in this study is due to the increase in private sector rental units in the Campustown area, in addition to the planned opening of a new ISU residence hall on the south side of Lincoln Way, all of which will lead to a growth in the number of pedestrians crossing Lincoln Way going to and from the main campus. **The primary focus of the study will be on safety by evaluating current non-motorized travel across the streets within the Lincoln Way corridor from University Boulevard to Sheldon Avenue and identifying conflicts that warrant action regarding vehicle, bicycle, and pedestrian flow.**

Under this arrangement, Iowa State University will contract directly with the SRF Consulting Group to perform this study. This firm worked previously with ISU on a project related to pedestrian safety on Campus. The City will be expected to reimburse ISU for one half of the consulting fees. Although not contracting with the consulting firm, City staff will play a major role in this study of City streets since the Traffic Engineer has been named, along with Cathy Brown from ISU, to serve as Project Managers to provide guidance to the consultants.

According to the Scope of Services which is attached for your review, the study will include the following steps:

- Collecting data on the number of people crossing Lincoln Way, the number crossing at north-south streets intersecting Lincoln Way and the physical elements of each crosswalk location.
- Collecting and evaluating current overhead lighting conditions at each of the intersections and along segments between each intersection in the identified study area.
- Inventorying current Lincoln Way and cross street geometrics to provide input information assessing sight distance, traffic operations and access relative to current design standards.
- Identifying and assessing operations and design concepts to improve the pedestrian environment while not substantially impacting traffic operations and safety.

- Working with both the City of Ames and Iowa State University, to identify known future development that will change pedestrian activity or patterns and/or traffic volume or patterns.

- Clearly documenting any current condition deficiencies, potential changes in the corridor development that will influence pedestrian, bicycle, and/or vehicular activity, the range of alternatives that address current and/or future deficiencies, and feasible alternatives to be evaluated in greater detail for implementation in either the short-term or longer-term periods.

- Data to be collected and reviewed as part of the work will include:

    - The number of people crossing Lincoln Way and cross streets intersecting with Lincoln Way from University Boulevard to Sheldon.

    - The number of vehicles (by vehicle classification) passing through each intersection and in/out of key driveways in the study area. Vehicle counts will be completed at three intersections for a 48 hour period and pedestrian counting video will be the source of vehicle data for the peak hour at the six remaining locations. The three 48-hour collection locations will be determined working with City staff. The 48-hour counts will be used as a source of factoring information for revising the peak hour data collected to other analysis periods.

    - The number of people and location of mid-block crossings.

    - Information on the physical design of intersections and segments, with emphasis on pedestrian elements throughout the corridor. Data collection will include north-south cross routes immediately adjacent to Lincoln Way.

    - Corridor lighting levels and light pole locations.

Since the vast majority of pedestrians cross Lincoln Way at signalized crossings, intersections will be the primary focus. However, mid-block crossing activity will also be quantified in the data collection efforts. In addition, the corridor alternatives will include concepts that could reduce mid-block crossings (directing people to signalized intersections) and the screening will include an evaluation of the potential effectiveness of those alternatives.

The study is divided into the following two phases:

- Phase I – During the initial phase, Task 1 will result in the collection and evaluation of physical information as well as vehicle and pedestrian counts for each key intersection and key mid-block locations. If no issues are identified, Phase II will not be conducted.

- Phase II – Tasks 2 through 4 in the second phase will lead to the identification and evaluation of traffic operations and/or physical modifications that address identified issues.

PUBLIC PARTICIPATON:

The Scope of Services includes the following opportunities for interested parties to provide feedback:

- Student Government representatives will be included on the Working Group that will participated with the City staff, ISU staff, and consultants to develop and review alternatives. (Task 2, page 7)
- An on-line survey will be created to solicit from the general public concerns related to traveling across or along the study area and any suggestions for improvement the situation. (Task 1, page 3)
- A public meeting will be scheduled at the ISU Memorial Union to allow the public to review the alternatives that are being contemplated by the consultant before the report goes to the City Council. (Task 3, page 8)
- A public presentation will be made to the City Council regarding the list of alternatives that the consultants believe are technically and financially feasible to correct the deficiencies that have been identified. (Task 5, page 9)

ALTERNATIVES:

1) The City Council can approve:

   a) the attached Scope of Services that is being suggested for the SRF Consulting Group;

   b) the proposal by ISU to share equally in the cost of the study. (The total estimated cost of this study is $100,887, of which $50,444 will be the responsibility of the City should the study progress through the two phases); and

   c) the payment of the City's share of this study from the available balance in the Road Use Tax Fund.

   Under this alternative, Iowa State University will contract directly with SRF for the consulting services. The City will then reimburse the University for one half the cost of the consulting work. According to the Scope of Services, if no deficiencies are identified in Phase I, the consultant's work will come to an end with a total payment owed of $31,842.

2) The City Council can decide to contract directly with SRF, or some other firm, to perform the services outlined in the attached scope, and ask Iowa State University to reimburse the City for half the cost of the study.

Under this alternative, the City would be the lead agency in the contract with the consulting firm. This approach could be justified since the improvements, if needed, would be primarily be related to City property.

3) The City Council can reject the request from Iowa State University to share the cost of the Lincoln Way Pedestrian Crossing Data Collection and Analysis.

   Under this alternative, Council could rely on the work of the Lincoln Way Corridor consultants to address safety issues in the Campustown area. However, the scope of their services will not allow for the level of analysis needed to identify appropriate alternatives to address any safety deficiencies that might exist.

MANAGER'S RECOMMENDED ACTION:

It is important to note that hundreds of new rental and dormitory living units have been added to the Campustown Business District. This growth in units has led to an increasing number of pedestrians crossing streets in this corridor, raising questions if the corridor is sufficiently safe to accommodate these movements.

This concern for safety was echoed recently during the initial feedback received from the Lincoln Way Corridor Study participants**. It is important to note that the Lincoln Way Pedestrian Crossing Data Collection and Analysis will allow the SRF consultants to focus solely on this important safety issue, allowing the Corridor Study consultants to focus their attention on land use, economic development, housing, and streetscape issues along the total Lincoln Way Corridor.**

City staff is comfortable allowing Iowa State University to contract with SRF since the City's Traffic Engineer will be named in the consulting contract as a Co-Project Manager to represent the client on this project.

Therefore, it is the recommendation that the City Council support Alternative #1, thereby taking the following actions:

1) Approving the attached Scope of Service for the Lincoln Way Pedestrian Crossing Data Collection and Analysis;

2) Agreeing to pay half the cost of the consulting contract between Iowa State University and SRF, which is currently estimated to total $100,887; and

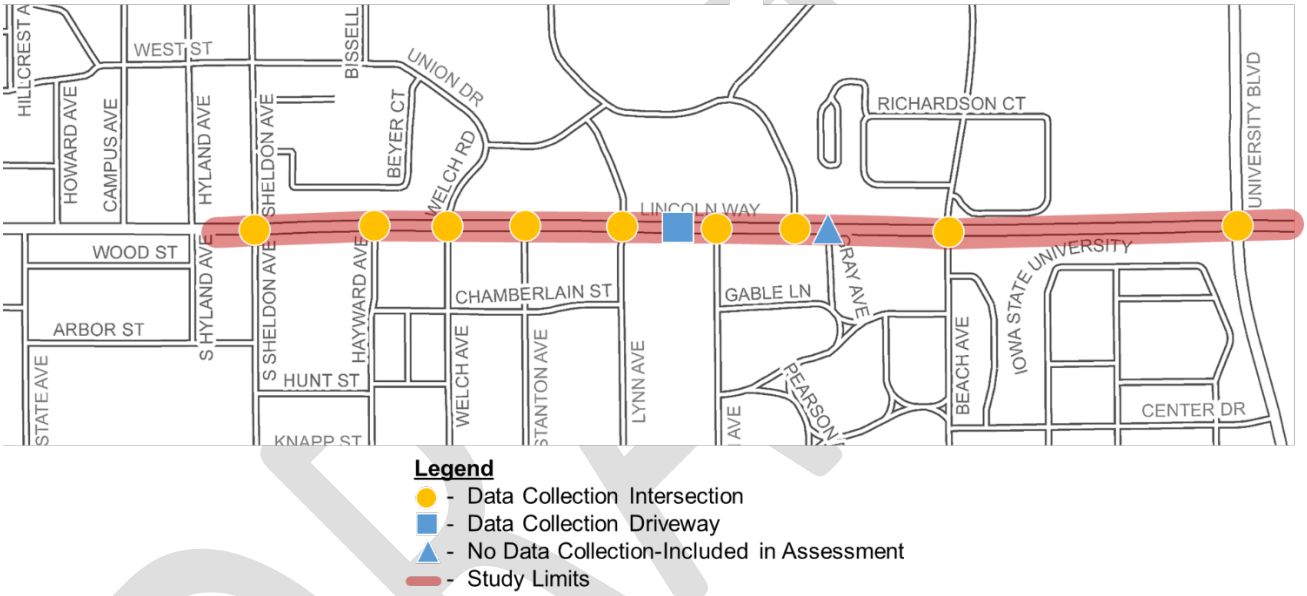
3) Paying for the City's share of this study, which is currently estimated to be $50,444, from the available balance in the Road Use Tax Fund.

LINCOLN WAY MULTIMODAL CROSSING DATA COLLECTION AND ANALYSIS

University Boulevard to Sheldon Avenue

The focus of the study will be on safety by evaluating current non-motorized travel across the streets within the Lincoln Way corridor from University Boulevard to Sheldon Avenue to identify conflicts that warrant action regarding vehicle, bicycle, and pedestrian flow. Figure 1 displays corridor limits and each of the intersections included.

Figure 1: Study Limits and Key Intersections



Contacts and Project Managers

Project Mangers providing guidance and direction to SRF for the study are Cathy Brown (ISU) and Damion Pregitzer (City of Ames).

The primary SRF team contact is Bill Troe, Principal.

Steps Included in Conducting the Study

Steps is conducting the study include:

- Collecting data on the number of people crossing Lincoln Way, the number crossing at north-south streets intersecting Lincoln Way and the physical elements of each crosswalk location.
- Collecting and evaluating current overhead lighting conditions at each of the intersections and along segments between each intersection in the identified study area.
- Inventorying current Lincoln Way and cross street geometrics to provide input information assessing sight distance, traffic operations and access relative to current design standards.

- Identifying and assessing operations and design concepts to improve the pedestrian environment while not substantially impacting traffic operations and safety.

- Working with both the City of Ames and Iowa State University, identify known future development that will change pedestrian activity or patterns and/or traffic volume or patterns.

- Clearly documenting any current conditions deficiencies, potential changes in the corridor development that will influence pedestrian, bicycle, and/or vehicular activity, the range of alternatives that address current and/or future deficiencies, and technically and economically feasible alternatives to be evaluated in greater detail for implementation in either the short-term or longer-term periods.

Data to be collected and reviewed as part of the work includes:

- The number of people crossing Lincoln Way and cross streets intersecting with Lincoln Way from University Boulevard to Sheldon Avenue.

- The number of vehicles (by vehicle classification) passing through each intersection and in/out of key driveways in the study area. Vehicle counts will be completed at three intersections for a 48 hour period and pedestrian counting video will be the source of vehicle data for the peak hour at the six remaining locations. The three 48-hour collection locations will be determined working with City staff. The 48-hour counts will be used as a source of factoring information for revising the peak hour data collected to other analysis periods.

- The number of people and location of mid-block crossings.

- Information on the physical design of intersections and segments, with emphasis on pedestrian elements, throughout the corridor. Data collection will include north-south cross routes immediately adjacent to Lincoln Way.

- Corridor lighting levels and light pole locations.

As the vast majority of pedestrians cross Lincoln Way at signalized crossings, intersections will be the primary focus, however, mid-block crossing activity will be quantified in the data collection efforts. In addition, the corridor alternatives will include concepts that could reduce mid-block crossings (directing people to signalized intersections) and the screening will include an evaluation of their potential effectiveness.

This study is envisioned to be a collaborative efforts involving the university and the city working toward a common goal of providing a safe environment for all travelers, no matter the chosen mode.

The approach to the study proposes two phases:

- Phase I – Data Collection and Analysis. Through the initial phase physical information as well as vehicle and pedestrian counts for each key intersection and key mid-block locations will be collected and evaluated. If no issues are identified, Phase II will not be conducted. (Phase I comprises Task 1)

- Phase II – Identify and evaluate traffic operations and/or physical modifications that address identified issues. (Tasks 2 through 4 comprise Phase II)

Scope of Work

Documented below is the detailed scope of work for conducting the corridor study. Understanding that each task must be a part of an integrated program of defining corridor needs and developing alternatives to address those needs, a list of deliverables in included with each task.

Task 1: Data Collection, Community Input, and Documentation

The following will be completed as part of the data collection task:

- Obtain from the City of Ames historical traffic counts for the Lincoln Way corridor from University Boulevard to Sheldon Avenue. Sheldon Avenue data will be included in the initial data collection and reviewed to determine if pedestrian crossing volume as high as in other more central intersections that connect the university to residential and business areas of Ames. If pedestrian volumes are as high as intersections to the east, SRF will discuss with Project Mangers extending the pedestrian alternatives review west of Sheldon Avenue. University Boulevard has been identified as the eastern terminus of the study, however, traffic and pedestrian data will not be collected or evaluated. The purpose of including University Boulevard as the eastern terminus was to include the segment of Lincoln Way north of the Hilton Coliseum, where mid-block pedestrian crossing following basketball games will be evaluated.

- Develop, administer document an on-line survey regarding corridor concerns and potential actions. SRF will develop a two question online survey (using SurveyMonkey) focusing on the following questions:

  - What are issues/concerns that you have traveling across or along the Lincoln Way corridor?

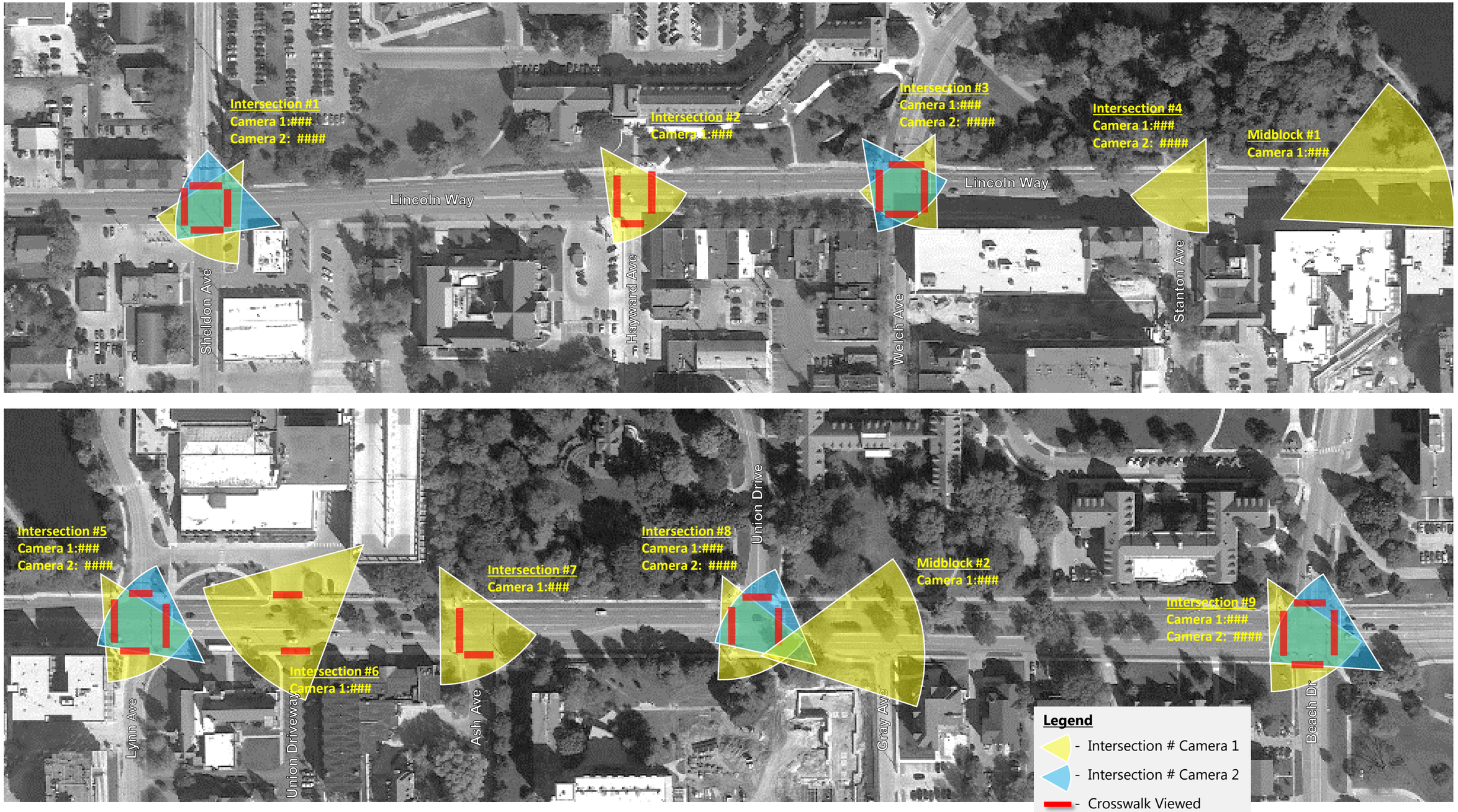
  - What would you suggest to resolve the issues/concerns you have?

- From the historical traffic and pedestrian count data from the City, SRF will determine the peak traffic period, the peak pedestrian period, and the combined peak traffic and pedestrian period.

- Collect video and/or manual pedestrian and vehicle counts for each marked crosswalk and selected mid-block locations along Lincoln Way from University Boulevard to Sheldon Avenue. Vehicle counts will be classification counts. Figure 2 displays the intersections and general camera view angle for the proposed video data collection. Key intersection where video data will be collected are:

  - Beach Road/Avenue
  - Union Drive
  - Ash Avenue
  - Memorial Union parking garage driveway (focus on pedestrians crossing the driveway and vehicles entering)
  - Morrill Road/Lynn Avenue
  - Stanton Avenue
  - Welch Avenue
  - Hayward Avenue
  - Sheldon Avenue

  Gray Avenue was considered in the collection efforts, however, the street is presently closed to traffic due to construction of Buchanan 2. The intent of the study is to provide a set of recommendations that results in a cohesive corridor and consistency addressing pedestrian, motorized vehicle, bicycle and other mode travel. Thus, to develop a concept for Lincoln Way/ Gray Avenue changes (if any) proposed at intersections to the east and west of Gray Avenue will be evaluated relative to their applicability at Gray Avenue consistent with the cohesive corridor concept.



SRF Consulting Group, Inc. | Engineers Planners Designers

Figure 2
Camera Locations and Views

Video cameras will be set up at each intersection to capture vehicle and pedestrian activity crossing Lincoln Way and the north-south cross route for minimum of 24 hours per intersection. In addition to the nine key intersections, camera will be set up at up to four mid-block locations to collect pedestrian crossing activity. Identified mid-block locations include:

- Location #1: East of Stanton Avenue looking to the east.
- Location #2: Gray Avenue looking to the east.
- Location #3: East of Beach Drive through University Boulevard before/after a men's basketball game.

The cost estimate assumes video will be collected once in the corridor and City of Ames staff and equipment will be used. 48-hour vehicle count data will be collected at three intersections by either Snyder or SRF Consulting staff. The study is expected to be started during the winter months. Weather may impact the amount of pedestrian activity and following input from the Working Group, the need for spring or fall data collection will be discussed.

Camera will be placed such that pedestrian activity at each signalized pedestrian crossing regarding compliance using crosswalk phases for Lincoln Way and cross routes can be provided. Cameras will be mounted at each crosswalk marked intersection such that use of the push buttons and compliance with the Walk/Don't Walk signage can be observed.

Video data will be collected at Ash Avenue and mid-block locations east of Union Drive such that pedestrian use of the Buchanan Hall sidewalks can also be quantified. The Buchanan Hall sidewalk data will be used in developing the pedestrian rates to estimate Buchanan 2 generation levels.

- Included in the segments will be the area between Beach Road/Avenue and University Boulevard. This segment will be observed for the period immediately following the end of an Iowa State University men's basketball game. As the game may let out after dark, video may not be available. Thus, counts and notes of the locations will be collected.

- SRF will request from the City of Ames an inventory of the signal equipment used at each intersection in the study area. Included in the request will be cycle timing and phasing information, pedestrian phasing and timing, coordination policies and offsets.

- SRF will request Lincoln Way automated traffic recording (ATR) station speed data available through the City. Data for weekdays and weekend days over the last six months will be requested. The speed data will be used in the sight distance analysis. SRF requests that City staff sample speed data during the video data collection period in order to have a secondary source to confirm ATR speed data.

- SRF will perform basic floating car travel time studies for east/west vehicle flow in the corridor during identified peak hours, and non-peak hour to develop understanding of current speed profiles, stops, delays as a relationship of vehicular ease of movement vs. the pedestrian delays and level of service within the corridor.

- SRF will request from the City of Ames an inventory of all of the overhead light fixtures from University Boulevard through Sheldon Avenue. In the request SRF will ask for information on fixture heights and lamp wattage.

- SRF will review each intersection and identify potential driver/pedestrian obstructions to sight distance.

- SRF will work with FPM staff and city staff to identify future developments located south of Lincoln Way that would result in future increased pedestrian activity crossing Lincoln Way and traffic within

the study area. For residential developments (i.e. Buchanan 2) the number of beds will be requested. For education uses, the number of seats will be requested. For commercial developments the square footage and anticipated general use type (office, retail, service) will be requested.

- SRF will document lighting intensity recommendations for pedestrian and vehicular traffic based on the Lincoln Way roadway classification of the intersection. Requirements will be based criteria published by the Illuminating Engineering Society and agreed upon with the University prior to finalizing this task. SRF will utilize AGI lighting analysis software to determine lighting level status and recommend modifications if needed.

- SRF will prepare an Existing Conditions technical report highlighting methods for collection, the information collected, and deficiencies observed relative to local and industry guidelines. A draft report will be provided to the Project Managers for review and comment. SRF will revise the report based on comments, and provide the final draft to the Project Mangers for distribution. Completion of the Existing Conditions report will represent the end of the first phase in which potential deficiencies or compliance issues will be detailed. If no deficiencies or mitigable conditions are observed, the Existing Conditions report will represent the end of the project.

Task 1 represents Phase I of the study. Deliverables prepared as part of Phase I are:

- Inventory of signal locations and functionality (cycle timing, phases, coordination parameters).

- Number of pedestrians crossing the corridor at each intersection and at mid-block locations in the peak hour.

- Summary of the number of/percentage of signalized crosswalk pedestrian crossings that were accompanied by the pedestrian pressing the actuation button.

- Compliance rate of pedestrians crossing Lincoln Way and cross-street approaches to Walk/ Don't Walk indicators divided into:

  - Pressed actuation (or approached a crossing at the same time someone else pressed the actuation button) and waited for the Walk indicator.

  - Pressed actuation button, but did not wait for the Walk indicator.

  - Did not press actuation button, crossed against the Walk indicator.

- Analysis of sight distance for each approach to each of the intersection in the study area.

- Inventory of obstructions that could interfere with pedestrian sight distance at each intersection crosswalk.

- Analysis of signalized crossing lighting and segment lighting relative to design criteria for the Other Principal Arterial classification of Lincoln Way.

Task 2: Define the Range of Appropriate Safety Improvements

The range of modifications and/or new facilities that focus on reducing conflicts between vehicle and pedestrian/bicycle traffic crossing Lincoln Way is very broad and a number of applications will not likely be cost effective. Through this task, SRF staff will work with the Project Managers to identify and discuss the breadth of alternatives and narrow the range to those likely to be effective based on the local conditions, perceived use of facilities, and cost.

The breadth of alternatives discussed will include:

- Crosswalk improvements focused on increasing the visibility/awareness to motorists.
- Intersection design and physical improvements directed to pedestrians, bicyclists, transit, and motorists.
- Intersection operations modifications to increase the separation between all modes of transportation.
- Alternatives that mitigate mid-block crossings and/or direct people to signalized crosswalks.
- Enhanced education programs aimed at reinforcing safety rules for crossing Lincoln Way.

SRF will be responsible for:

- Working with Project Managers to identify a Working Group comprised of representatives from Iowa State University, Student Leadership, and the City of Ames staff, which is estimated to be approximately ten members. The Working Group will provide feedback on tasks 2 through 4.
- Documenting the full range of alternatives that could be implemented to address pedestrian crossing safety in the corridor. Included in the document will be a description of each alternate concept, conditions under which the alternative is applicable, a review of the concept in the Lincoln Way corridor
- Distributing the alternatives document to the Working Group prior to a meeting/workshop to discuss the range and prepare a list of reasonable/appropriate alternatives.
- Organizing and facilitating a working session(s) in which the conditions observed along Lincoln Way from the pedestrian perspective are discussed, the range of alternatives to addressing conditions are introduced/discussed, and a narrowed group of appropriate alternatives are defined. It is anticipated that a half-day session is required to allow for a reasonable level of discussion.
- Document the information presented and the discussion from the Working Group meeting(s) in a technical memorandum that will provide direction regarding the range of physical and technology alternatives for the corridor.

Task 3: Assess Alternatives and Develop a Plan for Each Intersection and Mid-block Location, and Public Engagement

Using the information and direction gathered through Tasks 1 and 2, SRF will identify warranted modifications for each corridor intersection in the study area and key mid-block areas where higher volumes of pedestrian crossings are observed. For the alternatives at each intersection, SRF will use a matrix format to document:

- Issue to be addressed.
- Description of alternative.
- Advantages and disadvantages of each alternative. Impacts to motor vehicle traffic operations. Traveler safety is a central responsibility of the City and ISU, however, providing acceptable traffic operations in the primary east-west corridor is also critically important. Thus, the performance measures used in evaluating alternatives will include safety and operations-based criteria, as well as costs. An assumption in the study is intersection improvements advanced to implementation cannot

result in adverse traffic operations impacts. Preliminary cost estimates for construction (as appropriate) and/or capital equipment.

Alternatives that involve construction will be developed to a conceptual stage and depicted graphically using an aerial photo base for plan views and in cross sections, as appropriate. SRF will request aerial mapping, contour data, above and below ground utility information, and existing conditions drawings in a digital format from the City of Ames.

Alternatives will be documented in a technical memorandum that will be provided to the Project Managers in a draft form for comment prior to distribution to the Working Group. Alternatives involving construction will be displayed on an aerial base of the corridor segment and/or intersection.

SRF will present recommendations for each intersection and/or mid-block location to the Project Managers for comment. Revised recommendations will be presented to the Working Group as part of a working session. Through this working session, SRF will lead the Working Group through the details of each recommendation to address current needs and anticipated future conditions in the corridor.

Concepts advanced through the screening to be a corridor recommendation will be documented in a technical memorandum, including developing costs and a priority of the need to address the identified issues. Costs will be limited to construction costs, excluding right-of-way. Estimates of the increment of right-of-way needed to accommodate the modification will be provided.

A public information meeting will be held at the Memorial Union to review the alternatives.

Task 4: Documentation

SRF will prepare a Draft Corridor Report highlighting each of the primary steps (inventory, identified deficiencies, potential actions and advanced alternatives). The draft will be distributed to Project Managers and the Working Group for comment. Based on comments received, SRF will revise the Draft report and distribute the Final report to Project Managers for distribution.

Deliverables for Phase II are a document containing the following:

- Description of the range of alternatives with the potential to positively impact observed conflicts, compliance issues, deficiencies in the corridor. Included with each alternative will be the potential for impacts to traffic operations.
- Description/diagram of specific alternatives for each respective intersection and mid-block location that the Working Group and SRF believe to have potential to address needs in the corridor based upon the issues and goals identified during the study.
- As appropriate the following:
  - List and description of geometric, signal operations, landscape alternatives for specific intersections and segments that have potential to reduce/resolve identified safety issues in the corridor.
  - Drawings of mid-block and intersection concepts that would reduce/resolve pedestrian crossing issues identified in Task 1.
  - Comparative matrix of geometric modifications, signal operations changes, landscaping enhancements with the potential to reduce/eliminate safety issues. SRF will work with the Project Managers to develop a methodology to characterize the benefits of the alternatives relative to the estimated construction cost.

  - Updated signal timing and coordination plans for the corridor from Sheldon Avenue through University Boulevard reflective of current traffic levels.

  - Concept diagrams of intersection and segment geometric changes for alternatives determined to be financially and technically feasible.

- Findings of the lighting analysis, including recommendations for upgraded lights.

- Construction cost estimates for the technically feasible alternatives developed through the analysis and workshops.

- Corridor reports – Both draft and final reports.

Task 5.0 Final Presentations and Final Report

SRF will prepare a presentation appropriate for use with Iowa State University Administration, City Council, and/or Student Government audiences. The cost estimate assumes one presentation will be made to Iowa State University Administration, the Ames city Council, and Student Government over a two day period, with one staff trip. SRF will be responsible for incorporating comments received through each of the listed presentations into the final corridor study report.

Hours and Cost Estimate

Table 1 documents the estimated hours and direct expenses associated with completing the proposed scope of work. Table 2 divides the hours and direct expenses into Phase I and Phase II tasks. The hours and direct costs are provided as estimates and SRF would appreciate the opportunity to discuss with university and city staff the assumptions employed.

Table 1 – Study Staff Hours and Cost Estimate

Task Description	Hours by Employee Classification					TOTALS
	Principal	Senior Planner/ Engineer	Planner/ Engineer	Technician	Clerical	
Task 1 - Data Collection and Documentation	**12**	**22**	**88**	**156**	**12**	**290**
Mapping and Utilities			2	6	2	**10**
Pedestrian Counts and Compliance (Field Work by City)	4	12		4	2	**22**
Vehicle Counts (3 locations - 48 Hour Counts)		2		16	2	**20**
Compile/Reduce Video	2		16	120	2	**140**
Sight Distance Analysis		2	18	2		**22**
Lighting Analysis		4	40	4		**48**
Prepare Draft Document/Address Comments	6	2	12	4	4	**28**
Task 2 - Define Range of Appropriate Safety Improvements	**14**	**20**	**12**	**20**	**6**	**72**
Organize/Document Universe for Discussion	2	4	8	16	2	**32**
Working Group Session	8	8		2	2	**20**
Working Group Session Summary/Documentation	4	8	4	2	2	**20**
Task 3 - Assess Alternatives/Develop Action Plan	**51**	**76**	**154**	**68**	**26**	**375**
Pedestrian Focused Alternatives						
Intersections (Assume 5 Need Action)	5	10	20	6	2	**43**
Segments Pedestrian Concepts (Assume 2 Concepts for Each of 4 Segments)	4	8	24	12	2	**50**
Parallel Sidewalk Lighting	2	4	6	4	2	**18**
Vehicle Focused Alternatives						
Geometric Alternatives - Segments	6	12	16	16	8	**58**
Update Signal Timing	8	12	80	24	6	**130**
Workshops/Documents						
Working Group Meetings (Assume 4)	24	24	2	2	2	**54**
Document Each Meeting		6		2	2	**10**
Prepare Summary Presentation	2		6	2	2	**12**
Task 4 - Documentation	**4**	**6**	**18**	**4**	**4**	**36**
Draft	2	4	12	2	2	**22**
Address Comments and Prepare Final	2	2	6	2	2	**14**
Task 5 - Engagement Plan	**12**	**12**	**6**	**2**	**4**	**36**
Prepare Public Meeting Annoucement			2			**2**
Prepare Meeting Material	2		4	2	2	**10**
Facilitate 1 Public Meeting (2 People Attend)	8	8				**16**
Document Meeting Material and Input	2	4			2	**8**
TOTALS	**93**	**136**	**278**	**250**	**52**	**72**
Hourly Rate	$215	$160	$110	$90	$70	
Labor Cost	**$19,995**	**$21,760**	**$30,580**	**$22,500**	**$3,640**	**$98,475**
Direct Costs						
Travel:						
- Data Collection Trip (3 Nights and Per Diem @ $130/Day)						$390
- Data Collection Mileage (One Vehicle from MSP - 450 Miles @$0.54/Mile)						$243
- Working Group Meetings (4 Omaha Trips @ 350 Miles @ $0.54/Mile)						$756
- Working Group Meetings (3 MSP Trips @ 450 Miles @ $0.54/Mile)						$729
- Snyder Staff Travel (6 Trips @ 60 Miles @ $0.54/Mile)						$194
Printing/Meeting Material						$100
Direct Cost Subtotal						**$2,412**
Project Total						**$100,887**

Table 2 – Estimated Hours and Cost by Phase

Task Description	Hours by Employee Classification					TOTALS
	Principal	Senior Planner/ Engineer	Planner/ Engineer	Technician	Clerical	
Phase I - Labor Hours	**12**	**22**	**88**	**156**	**12**	**290**
Hourly Rate	$215	$160	$110	$90	$70	
Labor Cost	**$2,580**	**$3,520**	**$9,680**	**$14,040**	**$840**	**$30,660**
Direct Costs						
Travel:						
- Data Collection Trip (3 Nights and Per Diem @ $130/Day)						$390
- Data Collection Mileage (One Vehicle from MSP - 450 Miles @$0.54/Mile)						$243
- Working Group Meetings (1 Omaha Trips @ 350 Miles @ $0.54/Mile)						$189
- Working Group Meetings (1 MSP Trips @ 450 Miles @ $0.54/Mile)						$243
- Snyder Staff Travel (1 Trips @ 60 Miles @ $0.54/Mile)						$97
Printing/Meeting Material						$20
Direct Cost Subtotal						**$1,182**
PHASE I SUBTOTAL						**$31,842**
Phase II - Labor Hours	**81**	**114**	**190**	**94**	**40**	**519**
Task 2 - Define Range of Appropriate Safety Improvements	**14**	**20**	**12**	**20**	**6**	**72**
Task 3 - Assess Alternatives/Develop Action Plan	**51**	**76**	**154**	**68**	**26**	**375**
Task 4 - Documentation	**4**	**6**	**18**	**4**	**4**	**36**
Task 5 - Engagement Plan	**12**	**12**	**6**	**2**	**4**	**36**
Hourly Rate	$215	$160	$110	$90	$70	
Phase II Labor Cost Subtotal	**$17,415**	**$18,240**	**$20,900**	**$8,460**	**$2,800**	**$67,815**
Direct Costs						
Travel:						
- Working Group Meetings (3 Omaha Trips @ 350 Miles @ $0.54/Mile)						$567
- Working Group Meetings (3 MSP Trips @ 450 Miles @ $0.54/Mile)						$486
- Snyder Staff Travel (6 Trips @ 60 Miles @ $0.54/Mile)						$97
Printing/Meeting Material						$80
Phase II Direct Cost Subtotal						**$1,230**
PHASE II SUBTOTAL						**$69,045**
PROJECT TOTAL						**$100,887**