Pennsylvania Community Transportation Initiative (PCTI)
Oakland/CMU Pedestrian Safety Mobility Study

Scope of Work

Issue Defined:

The Oakland community has the highest concentration of academic and medical institutions in the region and state. It has a daytime population of over 100,000 workers, students and visitors mingling with over 60,000 automobiles passing through on its two main arterials – Fifth Avenue and Forbes Avenue. The Oakland Transportation Management Association (OTMA) and Carnegie Mellon University (CMU) recognize that a smart transportation system should consider the infrastructure necessary to support multi-modal access, including walking, bicycling, transit, and private automobiles. Safety and mobility for all pedestrians, motorists, transit users and bikers have been constant concerns in the Oakland community.

Scope of the Project:

1. Review and analyze Accident data
    a. PennDOT will supply 5 year accident data for GAI.
    (As Fifth Avenue is a city road and Forbes Avenue is a state road; PennDOT will request both city and state data).
    b. KAI will analyze the accident data and document patterns and trends, and identify target locations for potential modifications. GAI will review and confirm findings.
    c. GAI will submit information to add to the PCTI public comment website to solicit information from students, employees, and other interested parties regarding potential improvement locations and pedestrian needs within the study area.
2. Inventory University parking supply (number of spaces)document needs
    a. Carnegie Mellon University Parking and Transportation will provide an inventory of all on campus parking lots and spaces.
    b. The Pittsburgh Parking Authority will provide an inventory of on street metered parking spaces in the study area.
    c. GAI will identify all on-street non metered parking and restrictions in the study area (see the attached map). GAI will not identify legally and illegally parked vehicles, but GAI will identify locations where parked vehicles interfere with traffic flow of any mode.
    d. GAI will provide analysis of the current parking capacity and demand within the study area. Parking occupancy counts will be taken midday between 10 AM and 2 PM. CMU will provide commuting population figures for all undergraduate and graduate full time and part time enrolments.
    e. GAI will provide parking management recommendations for the approved future growth scenario provided by Ayers Saint Gross, the CMU master planning consulting team.

3. Identify campus destinations and bike/pedestrian corridors
    a. GAI and KAI will meet with University and Ayers Saint Gross to identify current pedestrian and bicycle corridors.
    b. GAI and KAI will interview members of the steering committee including CMU, OTMA and City of Pittsburgh staff to establish campus and community planning trends and land use patterns.
    c. GAI will provide an urban design analysis and will provide a land use analysis for the study area corridors.
4. Concept designs
    a. GAI will provide conceptual diagrams, in both plan and section, of possible Complete Street configurations within existing Rights-of way.
    b. GAI and KAI will create options and make recommendations on the configurations.
    c. GAI and KAI will provide analysis of impacts on capacity of recommended options.
    d. GAI will create detailed concept designs for improvements at each intersection, and typical "Complete Streets" sections for all connecting streets.
5. Counts and Data Gathering
    a. TWE will collect pedestrian and cyclist, through traffic and turning movement counts at the ten (10) intersections in the study area (see map).
    b. Counts will be made during peak hours (7:00am – 10:00am and 3:00pm – 6:00pm).
    c. Counts will be conducted on regular business days (Tuesday, Wednesday and Thursday).
    d. Counts will be conducted while classes are in session – the 2010/2011 school year begins on August 30, 2010.
    e. Counts will be summarized every 15min.
    f. CMU will explore the option of working with graduate level Civil and Environmental Engineering students to assist in conducting manual counts.
    g. KAI will provide capacity analysis and signal phasing and timing changes for the entire study area.
    h. GAI will obtain details on the recently completed bicycle plan component of the "Pittsburgh Plan" Comprehensive Plan, currently underway.
    i. GAI will obtain current Port Authority Bus routings and stops and planned changes to routings due in June and September of 2010, as available.
    j. GAI will document typical street cross sections within the ten (10) intersection study areas.
    k. GAI will identify existing ADA ramps and traffic signal related components within the ten (10) study area intersections only, which obviously do not comply with current standards and guidelines.

6. Meetings and Presentations
    a. GAI will attend bi-weekly with the Steering Committee provide progress updates and to gather input and authorization on next steps from the Committee, KAI will attend via phone.
    b. GAI and KAI will meet with Ayers Saint Gross on June 3, 2010 regarding coordination with the University's Master Plan
    c. GAI and KAI will conduct one half-day open workshop (date and time to be determined) for members of the campus and city community to participate in the planning process
    d. GAI and KAI will interview up to 10 individuals as identified by the steering committee
    e. GAI will present all findings and recommendations to the steering committee before November 30, 2010

Deliverables:

1. **Phase 1: A macro level report** to be used as an Appendix to the Carnegie Mellon University Institutional Master Plan 2010. This report will accomplish the following:
    a. Identify the major transportation, safety and mobility issues in the study area.
    b. Graphically represent accidents in the study corridor that provide detail about the type of accident, location and time of day.
    c. Provide a needs / demands assessment that includes an inventory of parking lots, number of spaces and overall capacity of the University's parking reservoir.
    d. Analyze current parking utilization and provide recommendations for future parking management and development strategies.
    e. Identify pedestrian and bicycle corridors and desired destinations.
    f. Provide an urban design and land use analysis for the study area that assesses the relationship between planning and transportation issues.
    g. Provide Draft concept designs and schematics for potential improvements. throughout the study area utilizing "Complete Streets" design theories and best practices.

DUE DATE: October 5, 2010.

2. **Phase 2: A micro level report** to be used to guide future design and construction activities and to pursue funding for physical infrastructure improvements by the Oakland Transportation Management Association. This report will include the following items:
    a. Pedestrian and cyclist counts at each intersection and throughout the study area.
    b. Traffic counts at each intersection and throughout the corridors.
    c. Turning movements at each intersection.
    d. Capacity analysis and cycle changes of roadways.
    e. Options for corridor improvements to enhance safety, movement and aesthetics.
    f. Options for pedestrian enhancements.
    g. Options for improved bicycle facilities.
    h. Options for bus stop relocations or eliminations.
    i. Recommendations on proposed options and feasibility of options on two or three key project initiatives.
    j. Refine Concept designs and schematics for the two or three recommended improvements.

DUE DATE: December 3, 2010.

Schedule