University of Houston
Transportation Management Plan

TexITE Fall Meeting

Garland, Texas

September 16, 2011

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WALTER P MOORE

Background

- 2006 Framework Plan
- UH Tier 1 Quest
- Cullen Closure
- Proposed LRT Lines
- UH Energy Research Park
- Enrollment Expansion
- More On-Campus Housing

Introduction

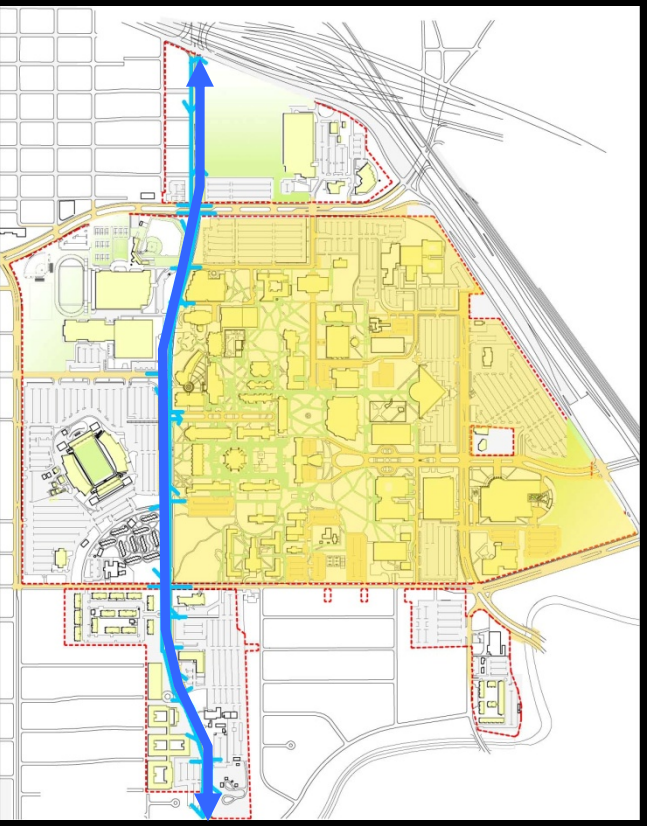
- Evaluated several improvement options from Campus Framework Plan 2006
- Reviewed impact of LRT lines
- Conducted traffic analysis at critical intersections
- Developed phased implementation plan for transportation improvements

Campus Framework Plan 2006

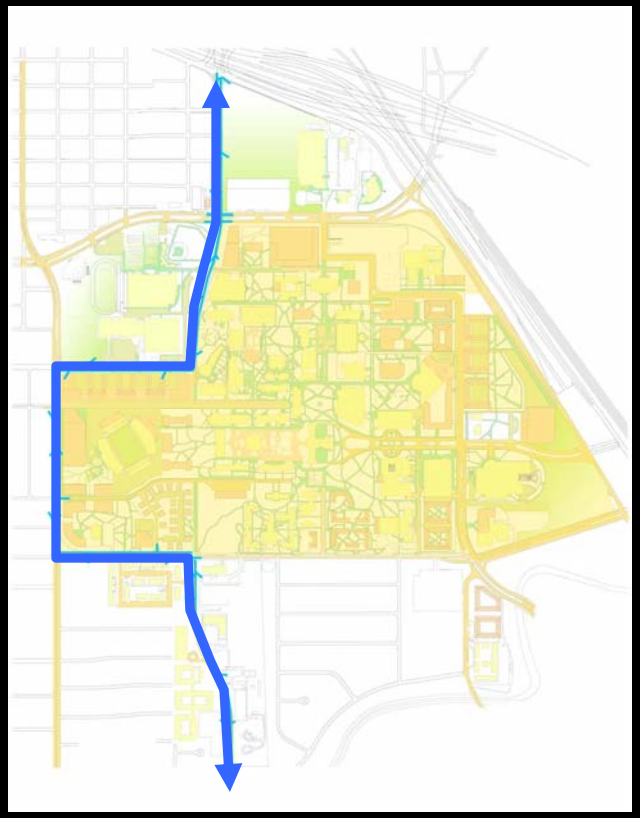
- Transportation Principles
  - Close Cullen Boulevard
  - Develop loop road
  - Create limited access streets
  - Incorporate LRT into campus
  - Provide sufficient parking
  - Strategically locate parking garages

Cullen Closure

(Framework Plan, Cooper, Robertson & Partners, Architects)

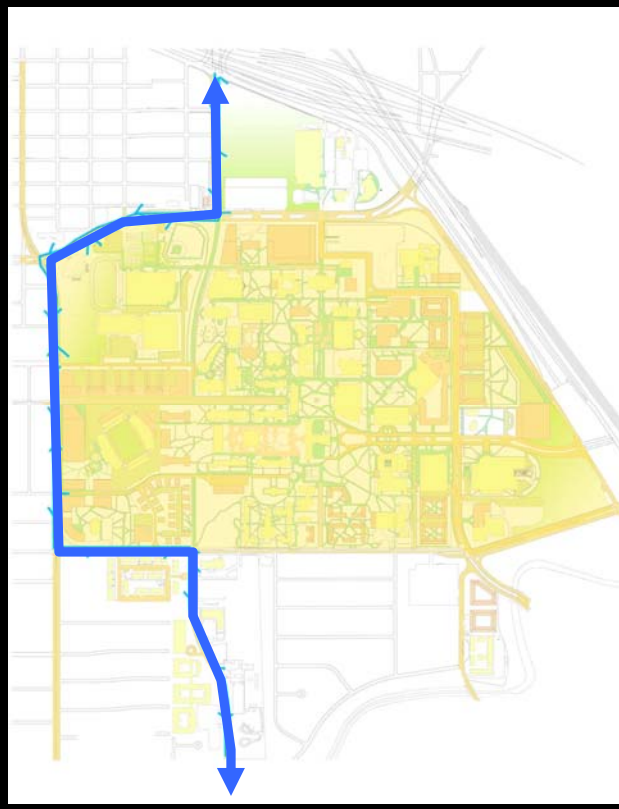


CULLEN TODAY



CULLEN CLOSED

Phase 1



CULLEN CLOSED

Phase 2

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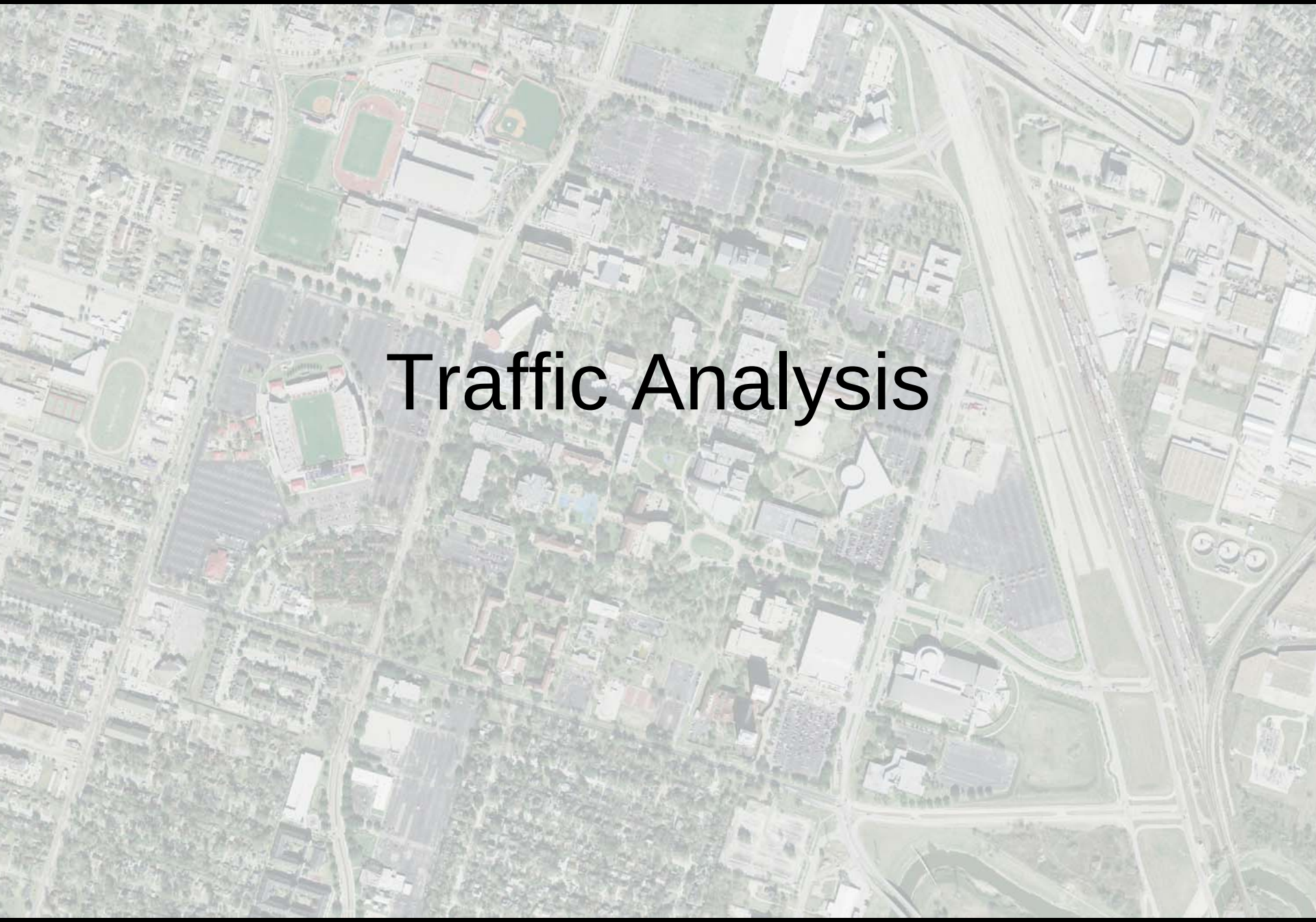
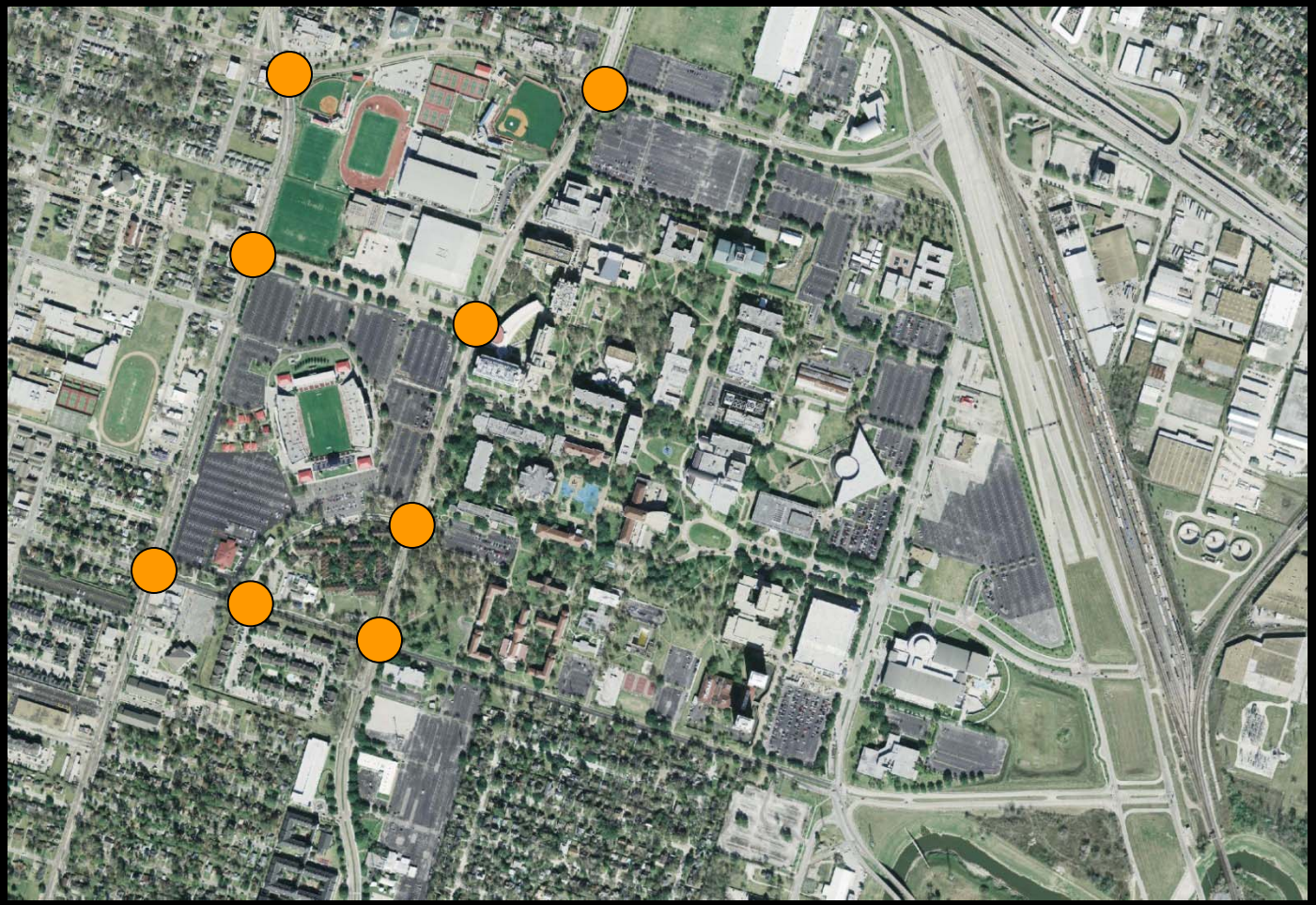

Traffic Analysis

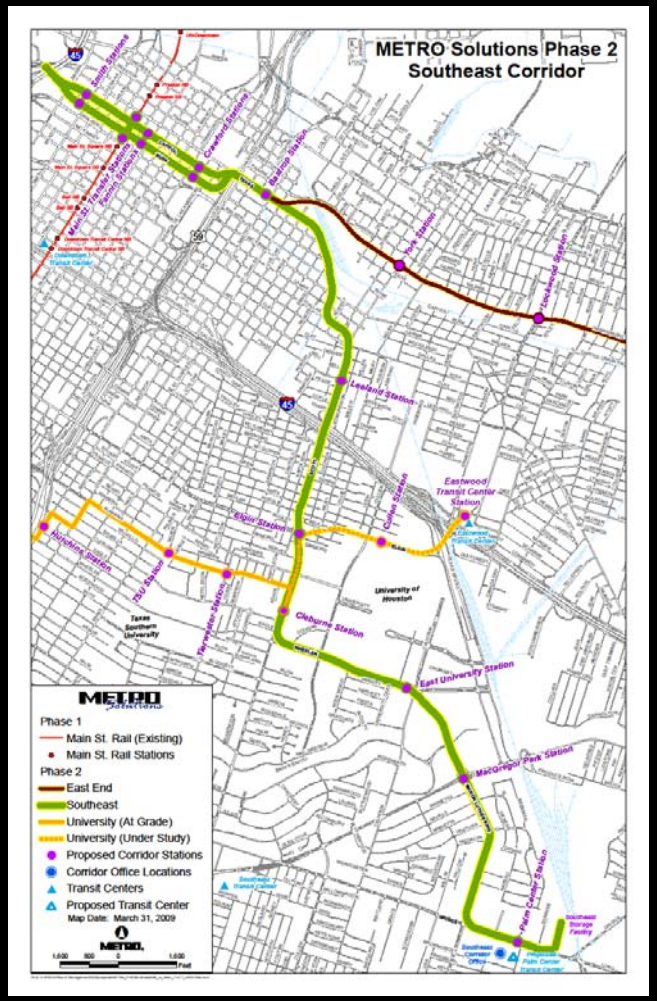
Current Traffic Analysis

- Used traffic data from previous studies
- Eight intersections analyzed
- Eight scenarios analyzed
  - Existing Conditions
  - Future Conditions with variables
    - Campus Framework Plan
      - » Phase 1 (2020 growth)
      - » Phase 2 (2025 growth)
    - LRT
    - Cullen Closure
    - Mobility Improvements

Traffic Study Area



METRO Southeast Corridor



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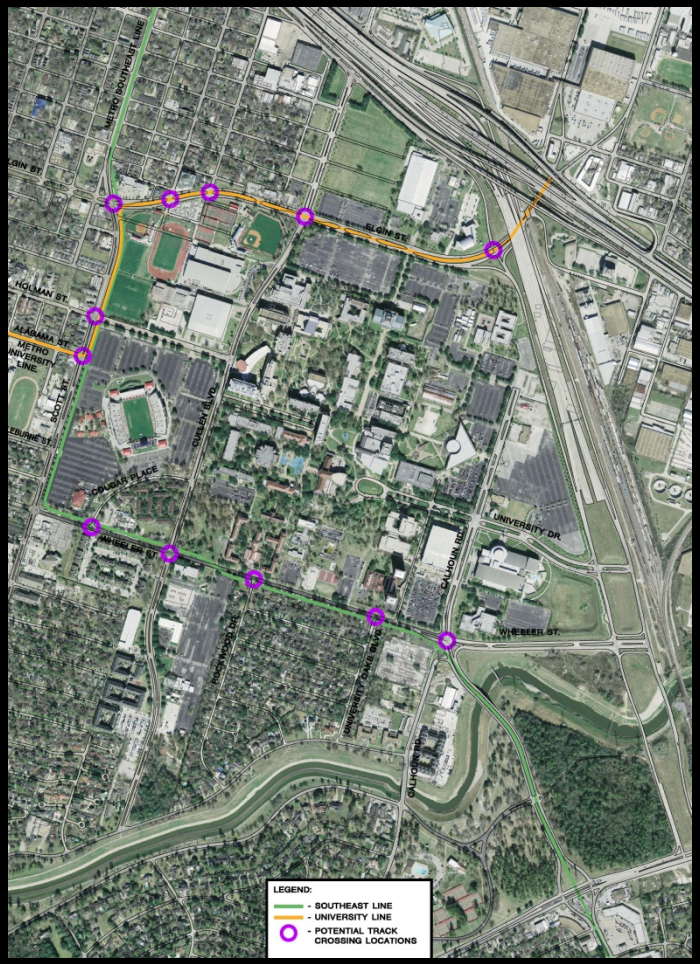
METRO LRT Routes & Intersections



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Results

- With background growth, some decline in LOS at intersections
- With addition of LRT, decline of some intersections to LOS D or LOS E
- With addition of Cullen closure from Holman to Cougar Place, decline of more intersections to LOS D or LOS E
- Proposed mitigation improves all intersections to LOS C or better

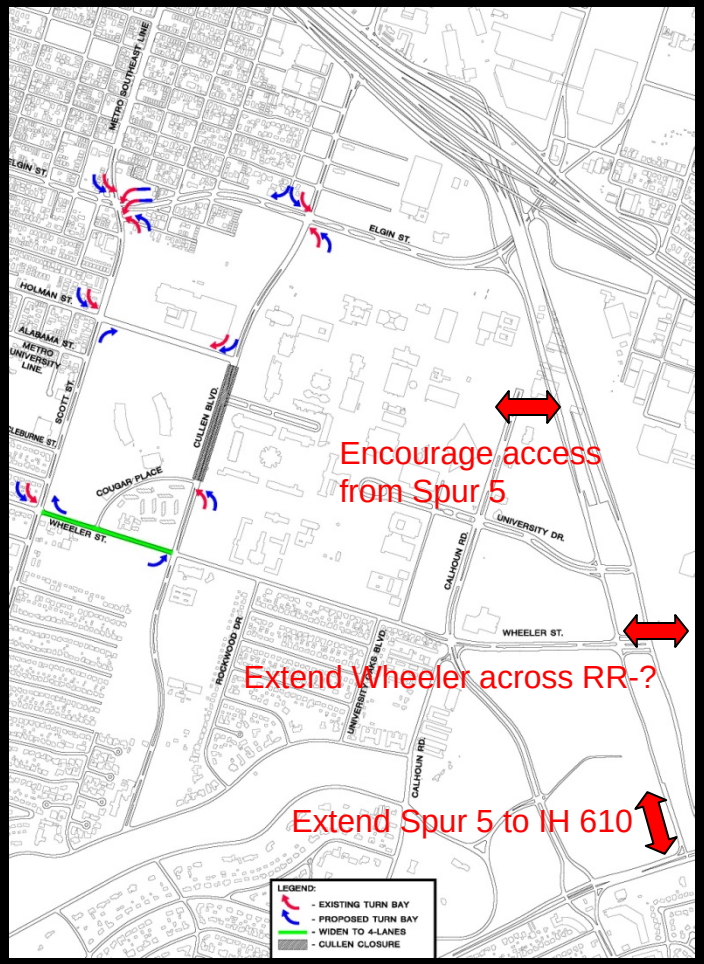
Need for Improvements

- To maintain acceptable levels of mobility
- Growth in campus and neighborhood traffic
- Increasing demand and decreasing capacity due to Cullen closure and LRT
- Desire to create a pedestrian oriented campus

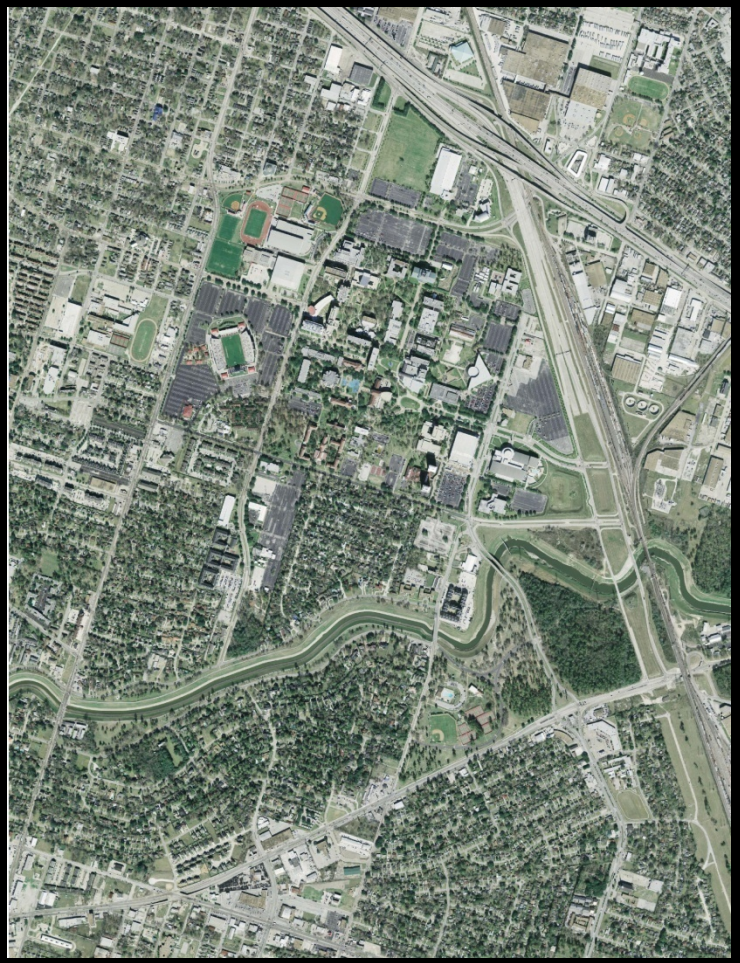
General Recommendations

- Shift trips from cars to transit
- Shift car traffic to Spur 5
  - Improve way-finding on freeways and area roadways
  - Upgrade shuttle bus service
- Implement intersection and roadway mobility improvements
- Work together with local governmental agencies to implement these improvements (METRO, TxDOT, City of Houston)

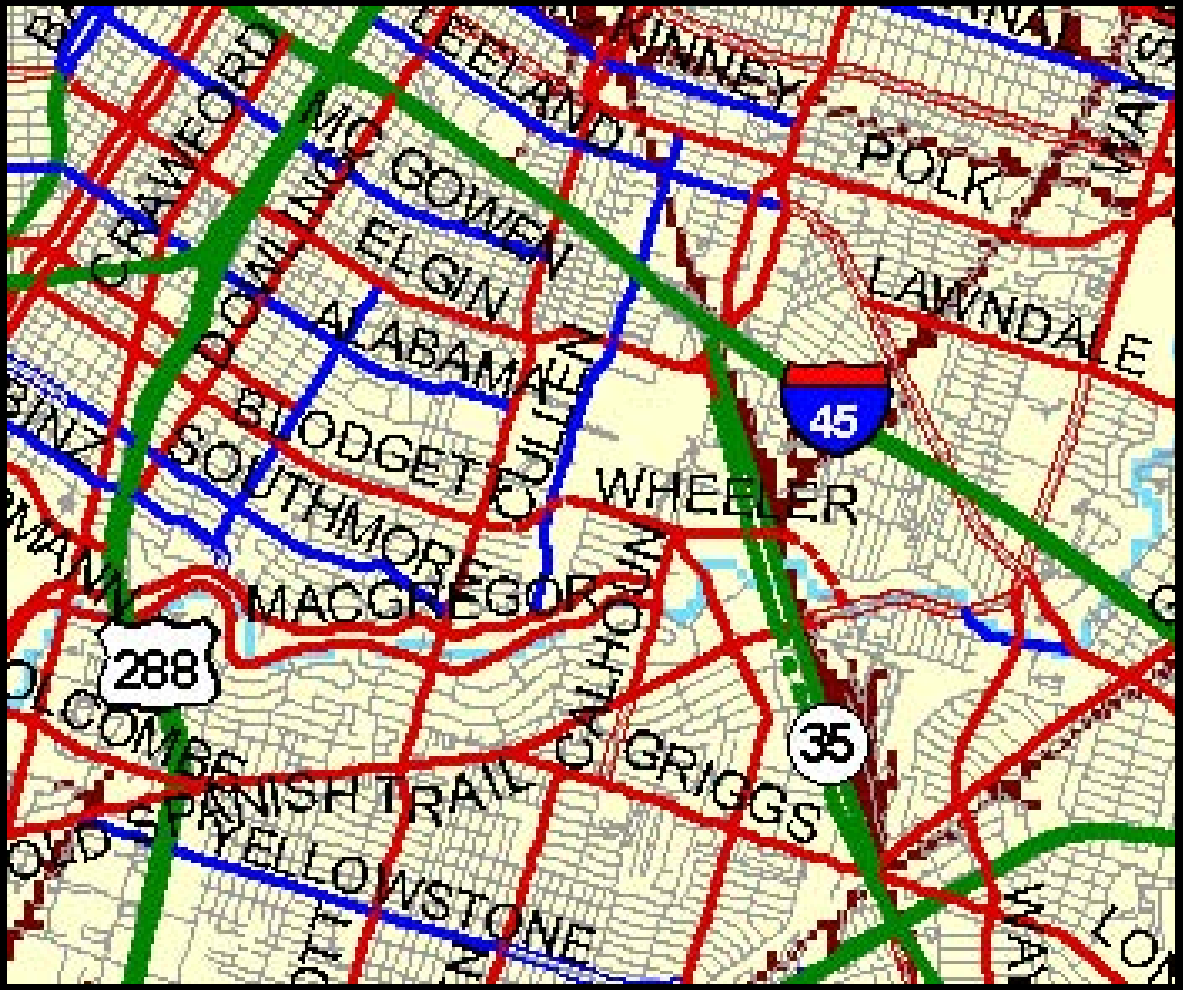
Recommended Local Transportation Improvements



Area Roadway Network



City of Houston MTFP



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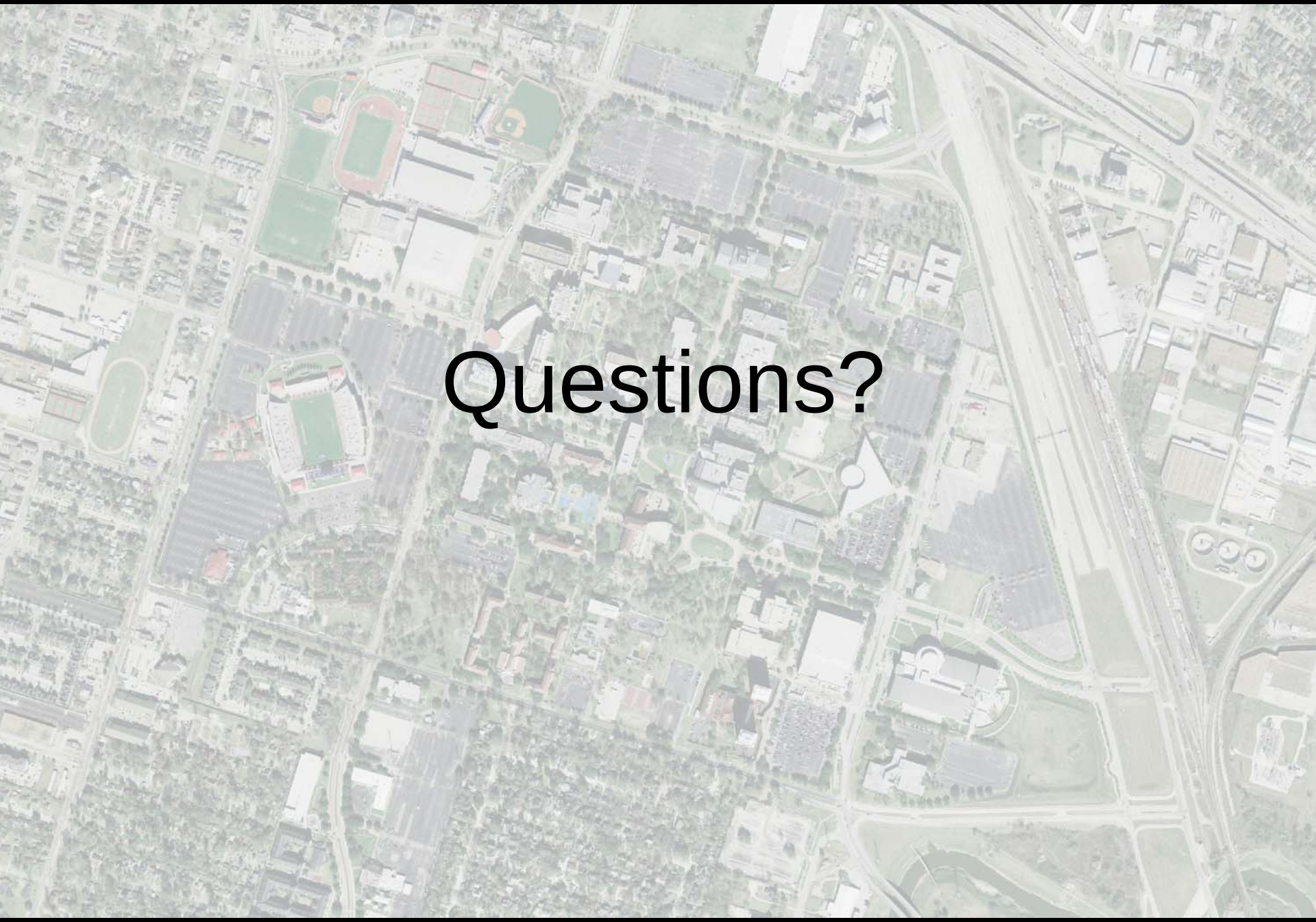

Questions?

Phased Implementation Plan

Phased Implementation

- Phase 1: Close Cullen from Holman to Cougar Place
- Phase 2: METRO LRT Lines Completed
- Phase 3: Close Cullen from Cougar Place to Wheeler

Implementation Plan Phase 1

2008-2010

Phase 1

- Expected timeframe: 2008-2010
- Events
  - Close Cullen from Holman to Cougar Place
  - Existing conditions

Phase 1: Close Cullen from Holman to Cougar Place

Phase 1: Mitigation Plan

- Improve IH 45 and Spur 5 signage
- Improve campus wayfinding signage
- Wheeler/Scott
  - Add WB right turn bay
- Holman/Scott
  - Add second SB left turn bay
  - Add NB right turn bay
- Other lower priority improvements if funds are available

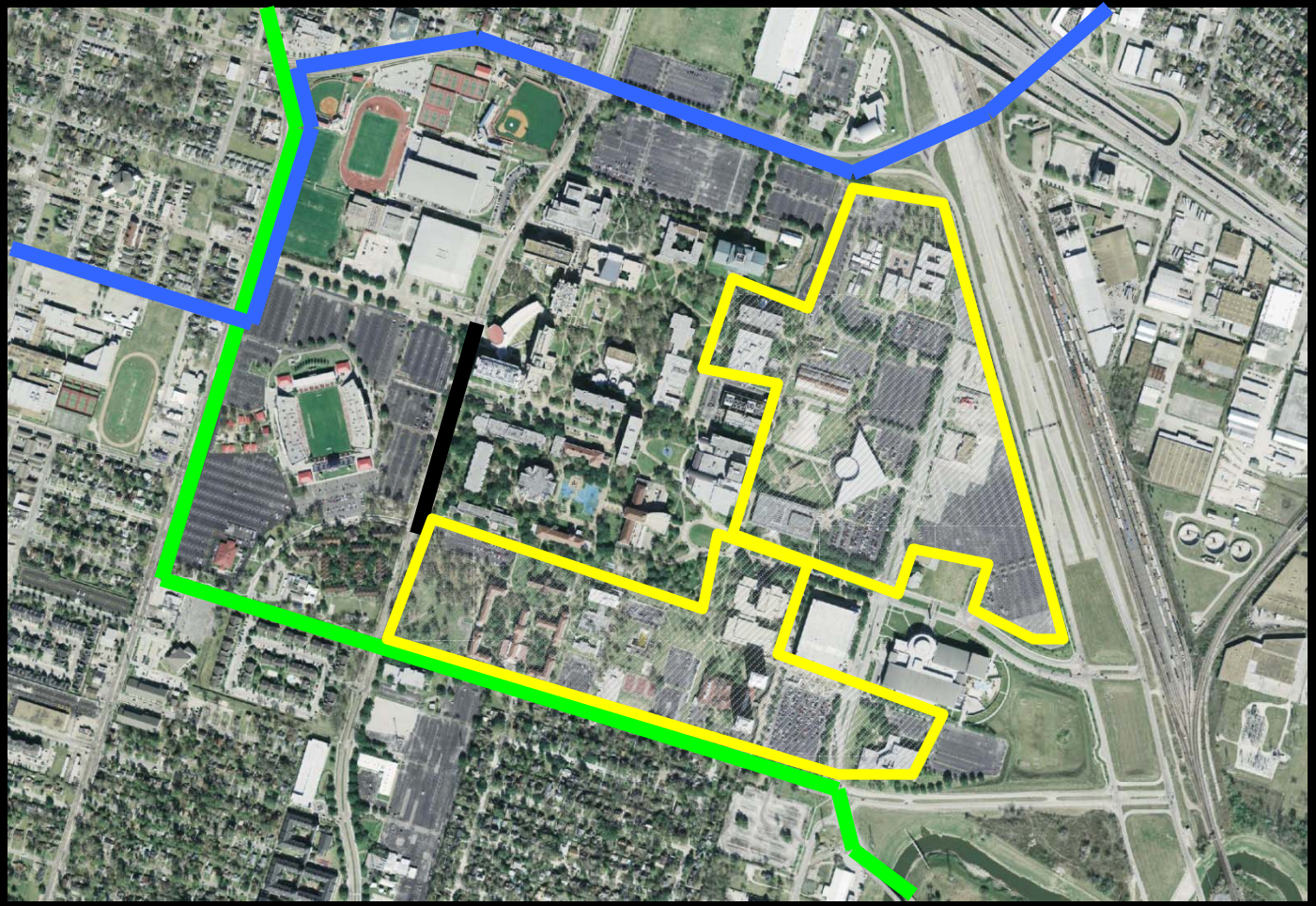
Implementation Plan
Phase 2

2010-2012

Phase 2

- Expected timeframe: 2010-2012
- Events
  - METRO LRT Lines
  - UH Campus Development
    - Professional Zone
    - Wheeler Zone
    - East Garage
  - Improved shuttle system

Phase 2: METRO LRT Lines Completed



Phase 2: Mitigation Plan

- Secure approval of driveway access to Spur 5 frontage road
- Move LRT crossing of Wheeler east of Cullen intersection
- Improve shuttle bus system
- Construct parking garages
- Wheeler/Scott
  - Add second SB left turn bay
  - Widen Wheeler between Scott and Cullen

Phase 2: Mitigation Plan (cont.)

- Cougar Place/Cullen
  - Improve parking lot access off of Cougar Place
- Scott/Elgin
  - Extend WB left turn bays
  - Add second SB and NB left turn bays

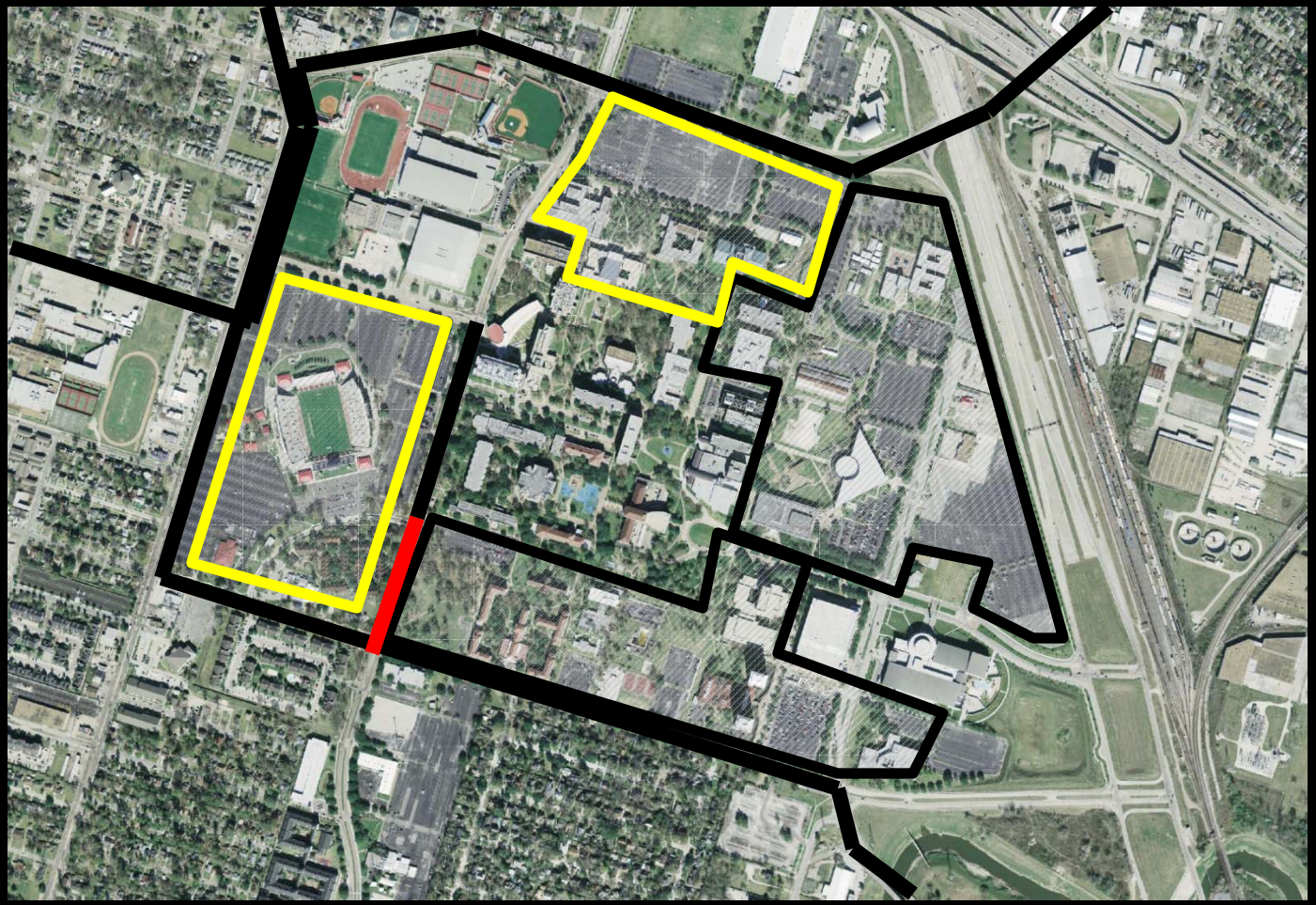
Implementation Plan
Phase 3

2012-2014

Phase 3

- Expected timeframe: 2012-2014
- Events
  - Close Cullen from Cougar Place to Wheeler
  - UH Campus Development
    - Stadium Zone
    - Arts Zone
    - West/North Garages
  - Transit Oriented Development

Phase 3: Close Cullen from Cougar Place to Wheeler



Phase 3: Mitigation Plan

- Extend Spur 5 to IH 610
- Increase transit ridership

Next Steps

Next Steps

- Develop proposal packages for local governmental agencies
- Provide input to METRO regarding rail alignment, station locations, and intersection crossings

Previous Traffic Analysis

- October 2001 (TEI)
  - Cullen closure from Holman to Wheeler
  - Redesign Calhoun
  - Direct roadway betw/ Entrances 16 & 19
  - Roundabout at University/Calhoun
- March 2006 (Walker)
  - Cullen closure from Holman to Wheeler
- July 2007 (Gunda)
  - Cullen closure from Holman to Wheeler
- None of the studies covered full campus area

Scenarios

Conditions	Design Year	Student Population	LRT	Road Improvements
Existing with Existing Signal Timing	2008	35,400	No	No
Existing with Optimized Signal Timing	2008	35,400	No	No
Campus Framework Plan Phase 1 Base	2020	41,000	No	No
Campus Framework Plan Phase 2 Base	2025	45,000	No	No
Campus Framework Plan Phase 1 LRT	2020	41,000	Yes	No
Campus Framework Plan Phase 2 LRT	2025	45,000	Yes	No
Campus Framework Plan Phase 1 Cullen Closure	2020	41,000	Yes	No
Campus Framework Plan Phase 1 Cullen Closure	2020	41,000	Yes	Yes