Objective

- A “Case Study” of Project Delivery
  - Formation of Technical Team
  - Scheduling
  - Making All The Pieces Fit
- City of San Antonio Efforts
City’s Perspective

- 5-Year, $33 Million Program
- Limited Staff
- Maximize Use of Consultants
  - On-Call
  - MPO Funded
- Formalized “Process” for Traffic Signal Retiming
  - Schedule
  - Coordination with Other Program Activities
  - Specific Deliverables
    - Coordinated, Consistent and Timely Submission of Results
    - Optimize Review of Results and Data Archives

City’s Perspective - Processes

- Program Management
- Procurement
- Engineering Design
- Field Installation
  - Communications
  - Control Equipment
  - Signal Timings
- Testing
- Documentation
City’s Perspective – Use of Consultants

- Knowledgeable
- Experienced
- Depth of Personnel
- Accepts Responsibility

My Perspective

- Traffic Signal Retiming Study IV
- 87 Intersections – Four Systems
- Schedule
- Personnel Requirements
- Coordination of Study Components
- Deliverables
Schedule

- Aggressive
- Data Collection
  - Collection in 3-weeks
  - Delivery of All Compiled Data in 6-weeks
- Field Work and Modeling – 11 Weeks
- Recommendations for Implementation – Week 11 After NTP
DATA COLLECTION

- **Approach Volume** – 24-Hr (28 Loc, 111 Appr)
- **Arterial Counts** – 24-Hr, 7-Day (12 Links)
- **TMC** – 3, 2-Hr Peak Periods (69 Loc, 111 Counts)
- **Intersection Photo** – 2 per Appr (88 Loc, 329 Appr)
- **Intersection Sketch** – 90 Loc
- **Video Logging** – 12 Links, 3 Peaks (481 .mov files)
- **GPS Travel Time** – 12-Links, 3-Peaks, 20-Dir, 5-Runs per Dir (84 Compiled Files)

1,911 Data Files (.xls, .csv, .rdf, .pdf, .jpg)
481 Video Files
21.3 gigabytes
DATA MANAGEMENT

• File Naming Conventions
  ▪ 1_AM_COM_ZAR_TMC_P.xls
• ftp Site for Sharing
• QC/QA

PURPOSES OF DATA

• Input to Synchro models
• Field Assessments
• Archival
OTHER PRIMARY TASKS.....

- Conversion of Existing Signal Timings for Synchro Input (Base Models)
- Basic Interval Timings
- Field Assessment
- Short-Term Improvements
- Cycle Length Assessment

OTHER PRIMARY TASKS

- Synchro Calibration
- Optimization
- On-Screen Review of Optimization
- Preliminary MOE
- Plan Schedule
- Development of Electronic Timing Files
  - 2070 NextPhase
- Phase Layout Sketches
TEMPLATES !!!!

- Maximum Use of Data Templates
  - All Count Data
  - Timing Conversion
  - Basic Interval Timings
  - MOE
  - Weekly Status Reports
  - Phase Layout Sketches
  - Etc.
### BASIC INTERVAL TIMINGS

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<th>Phase</th>
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TestTE – Frisco, TX – January 2010

Management and Delivery of Major Traffic Signal Retiming Projects
DELIVERABLES
• Short-Term Improvements Recommendations

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<tr>
<th>Corridor</th>
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<th>80s cycle</th>
<th>85s cycle</th>
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<td>Laredo</td>
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<td>San Marcos</td>
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DELIVERABLES
• Cycle Length Assessment

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DELIVERABLES

- Phase Sequence and Splits

### PHASE SEQUENCE AND SPLITS - EXAMPLE

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</table>

- Synchro Results – Calibrated and Optimized
DELIVERABLES

- Phase Layout Sketches (w/ Electronic Timing Files)

KEY POINTS

- Entire Process Has Been Developed By City Staff:
  - To Maximize Results (Product and Time)
  - To Minimize Review of Most Important Products
  - To Provide Consistency Across Multiple Projects by Different Consultants
  - To Provide Archival Database for Future Analysis
KEY POINTS

- Consultant:
  - Schedule and actively manage tasks
  - Assure quality of results
  - Assure depth and expertise of technical personnel
  - Communications with City PM
    - Only that which is necessary