DRAFT MEETING NOTES
KINGWOOD AREA MOBILITY STUDY
STEERING COMMITTEE MEETING # 5

Date: November 18, 2014
Time: 6:00 PM
Location: Kingwood Community Center, Kingwood, TX

STEERING COMMITTEE:
Stan Sarman, Chair  Charlie Dromgoole,  Jeff Nielsen
Katherine Persson  Carol Sutton  Philip Ivy
Corinn Price  Mark Micheletti  Brian Manning

OBSERVERS:
Council Member Dave Martin  Jessica Beemer, North Sector Manager
Jeff Weatherford, City of Houston PWE  Dale Rudick, City of Houston PWE
Dee Price, KSA  Nate Brown, The Observer
Bruce Olson, The Tribune  Residents

GUNDA TEAM:
Ramesh Gunda  Raghu Veturi  Michael Blasdel
Allie Norman  Michael Ereti

MEETING MINUTES:

1. Stan Sarman opened the meeting with a brief description of the meeting agenda and the general purpose of the meeting.
2. GUNDA team presented the following items:
   a. Update on the status of the study
   b. Public Input and Discussion
   c. Next Steps
3. Several questions related to funding were raised during the meeting and Hands-on Exercise session. City of Houston PWE Director Rudick and Deputy Director Weatherford responded to some of the questions related to funding and the process.
4. There was some discussion about signal timing to which Mr. Weatherford responded by saying that “City retimes the intersections in Kingwood Area on a yearly basis.”

5. There was discussion about outdated signal equipment as well. Mr. Weatherford informed that the City will maintain equipment that does allow signal coordination along Kingwood Drive.

HANDS-ON EXERCISE:

The following items were discussed during the exercise session.

1. Steering Committee members scored two additional options “N” and “O” that were not scored in previous meetings.

2. Steering Committee assigned a weighting factor of 30 points for “Public Involvement” component for scoring purposes.

3. Based on the input from the Steering Committee and further discussion, the following priority list was established by the Steering Committee.

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Improvement</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Intersection Improvements</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
<td>6-Laning of Kingwood Drive</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>6-Laning of North Park Drive</td>
<td>3</td>
</tr>
<tr>
<td>J</td>
<td>Woodland Hills Drive Extension to Hamblen Road and Widening Hamblen Road</td>
<td>4</td>
</tr>
<tr>
<td>L</td>
<td>Grade Separation on Kingwood Drive at Loop 494</td>
<td>5</td>
</tr>
<tr>
<td>M</td>
<td>Grade Separation on North Park Drive at Loop 494</td>
<td>6</td>
</tr>
</tbody>
</table>

COMMENTS BY CITIZENS:

The following are comments by Citizens:

1. Based on discussion on public notification process; the Committee agreed that information will be disseminated from Council Members Office to KSA website.
   
   a. **GUNDA Team and Council Members Office agreed to this.**

2. How is the City going to acquire Right-of-Way (ROW) for Hamblen Road improvement? Through eminent domain? If so, will City of Houston provide funding for this project?
   
   a. **GUNDA Team responded by saying that standard City of Houston procedures will be followed for ROW acquisition. Funding for**
Woodland Hills extension to Hamblen Road and widening of Hamblen Road can come from different sources.

3. For Option “C”, widening of Kingwood Drive from US 59 to Woodland Hills Drive; What is the plan on Kingwood Drive east of Woodland Hills Drive?
   a. **GUNDA team responded by saying “the right most lane can be used as an exclusive right-turn only lane in the eastbound direction or the three through lanes can be taken through the intersection and merge the third lane. In the westbound direction of travel. It is a simple lane addition situation after the intersection.”**

4. Can we implement Option “B” Left-Turn Prohibition in the Off-Peak Direction” with other options? This option seems to yield more positive results.
   a. **Mr. Weatherford responded by saying that this improvement can be done. However, the benefits are going to be temporary. There may be higher incidences of left-turn prohibition violations as well. Some of the members, residents expressed concerns about this alternative by saying that this will be confusing.**

**NEXT STEPS:**

1. GUNDA team to post the meeting notes and presentation with attachments on the website by 11/21/14 (Friday)
2. Steering Committee to provide comments on the Draft Report Outline
3. Draft CIP form preparation
4. Agency Coordination
5. Draft Report Preparation
6. Presentation to TIRZ Board
7. Finalize Report

**Attachments**

- Sign-In Sheet
- Agenda
- Copy of Presentation
- Sample CIP Sheet
- Draft Report Outline
# Kingwood Area Mobility Study
## Steering Committee Meeting # 5

**GUNDA Project No.** 14004-01  
**Date:** November 18, 2014, 6:00 PM  
**Location:** Kingwood Community Center

### SIGN-IN SHEET

<table>
<thead>
<tr>
<th>NAME</th>
<th>FIRM/AGENCY</th>
<th>E-MAIL</th>
<th>TELEPHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bruce Olson</td>
<td>The Vtx boxe</td>
<td><a href="mailto:beolson@prodigy.net">beolson@prodigy.net</a></td>
<td>713 203 1786</td>
</tr>
<tr>
<td>Stan Sarman</td>
<td>Steering Committee</td>
<td><a href="mailto:stan.sarman@gmail.com">stan.sarman@gmail.com</a></td>
<td>713-204-1641</td>
</tr>
<tr>
<td>Carol S.</td>
<td></td>
<td><a href="mailto:CarolSatter54@gmail.com">CarolSatter54@gmail.com</a></td>
<td>214-795-3567</td>
</tr>
<tr>
<td>Corinne Price</td>
<td></td>
<td><a href="mailto:corinne.pie@ingenuity.com">corinne.pie@ingenuity.com</a></td>
<td>281-348-3095</td>
</tr>
<tr>
<td>Jeff Nielsen</td>
<td>HCA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jessica B.</td>
<td>City of Houston</td>
<td><a href="mailto:jessica.bxemr@houstontx.gov">jessica.bxemr@houstontx.gov</a></td>
<td>832-393-3006</td>
</tr>
<tr>
<td>Mark Micheletti</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charlie Dromgoole</td>
<td>Lake Houston Area C &amp; B C</td>
<td><a href="mailto:cdromgoole@lakehouston.org">cdromgoole@lakehouston.org</a></td>
<td>281-446-2128</td>
</tr>
<tr>
<td>Michael W. Eretti</td>
<td>GUNDA Corp</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6161 Savoy, Suite 550 • Houston, Texas 77036  
(P) 713.541.3530 • www.gundacorp.com
TIRZ 10
LAKE HOUSTON/KINGWOOD AREA MOBILITY PLAN
Steering Committee Meeting # 5

Date: November 18, 2014
Location: Kingwood Community Center, Kingwood, TX
Time: 6:00 PM

Agenda

1. Introduction
2. Remarks by Stan Sarman and Council Member Dave Martin
3. Study Flow Chart
4. Goals & MOE’s - Recap
5. Public Input and Discussion
   a. Emails
   b. Ranking Sheets
6. Hand-On Exercise
   a. Review two additional options
   b. Scoring Criteria (Assign weights)
   c. Finalize Scoring
   d. Review Report Outline
7. Next Steps
   a. Draft CIP Preparation
   b. Draft Report Preparation
   c. Agency Coordination (COH, Montgomery County, TxDOT, Harris County, UPRR)
   d. Presentation to TIRZ Board
8. Questions
Tentative Schedule:

November 18, 2014: Steering Committee Meeting #5
December 2014: Agency Coordination
January 8, 2015: Draft Report
January 2015: Presentation to TIRZ Board
February 5, 2015: Receive Agency Comments
February 19, 2015: Final Report
Kingwood Area Mobility Study
Lake Houston Redevelopment Authority
(TIRZ #10)

Steering Committee Meeting # 5
Date:  November 18, 2014
Introduction

- Introduction
- Remarks by Stan Sarman/Council Member Dave Martin
## GOALS
- Obtain community input
- Improve mobility – short and long term
- Maintain same or better quality of life
- Identify funding sources
  - Educate public regarding funding sources
- Plan for future
- Safety
- Possible transit for aging population
- Pedestrian facilities as part of Street Improvements
- Public transportation
- Trolley system – not typical METRO bus
- Quick fixes

## MOE’S
- Less congestion
- Decrease delay/travel time
- Pedestrian safety/bicycle safety
- Vehicular safety
- Cost effectiveness
- Schedule
- Regulatory impacts
- Environmental impacts including Tree Impacts
Public Input and Discussion

- 173 Emails received as of November 18, 2014
- 169 Ranking Sheets as of November 11, 2014
## Ranking Sheets - Summary

<table>
<thead>
<tr>
<th>ALT</th>
<th>IMPROVEMENT</th>
<th>RANK 1</th>
<th>RANK 2</th>
<th>RANK 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Turn Lane &amp; Operational Improvements, Widening of Mills Branch from north of Kingwood Drive to Ford Road, 2.5 miles)</td>
<td>78</td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td>I</td>
<td>6-Lane Kingwood Drive, 6-Lane Northpark Drive, Direct Connector from Kingwood Drive, and Direct Connector from Northpark Drive</td>
<td>35</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>J</td>
<td>Woodland Hills Drive Extension to Hamblen Road and Widening Hamblen Road with Underpass at Loop 494</td>
<td>17</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>N</td>
<td>6-Laning of Kingwood Drive &amp; Underpass at Loop 494</td>
<td>12</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>6-Laning of Kingwood Drive</td>
<td>11</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>G</td>
<td>6-Laning of Kingwood Drive &amp; Direct Connector from Kingwood Drive to US 59 SB</td>
<td>11</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>H</td>
<td>6-Laning of Northpark Drive &amp; Direct Connector from Northpark Drive to US 59 SB</td>
<td>9</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>D</td>
<td>6-Laning of Northpark Drive</td>
<td>8</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>B</td>
<td>Left-Turn Prohibition Off-Peak (12 Locations on Kingwood Drive)</td>
<td>7</td>
<td>17</td>
<td>20</td>
</tr>
<tr>
<td>O</td>
<td>6-Laning of Northpark Drive &amp; Underpass at Loop 494</td>
<td>7</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>K</td>
<td>6-Laning of Kingwood Drive and Northpark Drive</td>
<td>6</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>L</td>
<td>Underpass on Kingwood at Loop 494</td>
<td>6</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>F</td>
<td>Direct Connector from Northpark Drive to US 59 SB</td>
<td>5</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td>No-Build</td>
<td>No-Build</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>M</td>
<td>Underpass on Northpark at Loop 494</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>E</td>
<td>Direct Connector from Kingwood Drive to US 59 SB</td>
<td>4</td>
<td>11</td>
<td>15</td>
</tr>
</tbody>
</table>
Ranking Sheets - Summary

RANKING SUMMARY

- Turn Lane & Operational Improvements, Widening of Mills Branch from north of Kingwood Drive to Ford Road, 2.5 miles
- 6-Lane Kingwood Drive, 6-Lane Northpark Drive, Direct Connector from Kingwood Drive, and Direct Connector from Northpark Drive
- Woodland Hills Drive Extension to Hamblen Road and Widening Hamblen Road with Underpass at Loop 494
- 6-Laning of Kingwood Drive & Underpass at Loop 494
- 6-Laning of Kingwood Drive
- 6-Laning of Northpark Drive & Direct Connector from Northpark Drive to US 59 SB
- 6-Laning of Northpark Drive
- Left-Turn Prohibition Off-Peak (12 Locations on Kingwood Drive)
- 6-Laning of Northpark Drive & Underpass at Loop 494
- 6-Laning of Kingwood Drive and Northpark Drive
- Underpass on Kingwood at Loop 494
- Direct Connector from Northpark Drive to US 59 SB
- No-Build
- Underpass on Northpark at Loop 494
- Direct Connector from Kingwood Drive to US 59 SB
Hands-on Exercise

- Review two (2) additional Options
- Scoring Criteria (Assign Weights)
- Finalize Scoring
- Review Report Outline
### Scoring Criteria

- **Scoring MOE’s**
- **Scoring Goals**
- **Weighting Factors**

<table>
<thead>
<tr>
<th>Improvements/Goals</th>
<th>Category Code</th>
<th>Community Input</th>
<th>Improve Mobility (Short-Term &amp; Long-Term)</th>
<th>Maintain Same or Better Quality of Life</th>
<th>Identify Funding Sources</th>
<th>Safety</th>
<th>Transit</th>
<th>Public Transportation</th>
<th>Pedestrian Facilities</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Plan for Future</td>
<td></td>
<td></td>
<td></td>
<td>Trolley System</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Quick Fixes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Weighting Factor</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TBD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category Code</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>Total Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weighting Factor</strong></td>
<td>30</td>
<td>25</td>
<td>5</td>
<td>30</td>
<td>5</td>
<td>5</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
Next Steps

- Draft CIP Preparation
- Draft Report Preparation
- Agency Coordination
  - City of Houston
  - Montgomery County
  - TxDOT
  - Harris County
  - Union Pacific Rail Road
- Presentation to TIRZ Board
<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steering Committee Meeting #5</td>
<td>November 18, 2014</td>
</tr>
<tr>
<td>Agency Coordination</td>
<td>December 2014</td>
</tr>
<tr>
<td>Draft Report</td>
<td>January 8, 2015</td>
</tr>
<tr>
<td>Presentation to TIRZ Board</td>
<td>January 2015</td>
</tr>
<tr>
<td>Receive Agency Comments</td>
<td>February 5, 2015</td>
</tr>
<tr>
<td>Final Report</td>
<td>February 19, 2015</td>
</tr>
</tbody>
</table>
Questions?
### Project: Widening of Kingwood Drive

**Description:** Widening of Kingwood Drive from US 59 to Woodland Hills Drive

**Justification:** Increase capacity on Kingwood Drive and relieve congestion, improve travel times

#### Operating and Maintenance Costs: ($ Thousands)

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Supplies</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Svcs. &amp; Chgs.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Capital Outlay</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$</td>
<td>-</td>
<td>$</td>
<td>-</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

### Fiscal Year Planned Expenses

#### Project Allocation

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>-</td>
<td>300,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$</td>
<td>-</td>
<td>$</td>
</tr>
<tr>
<td>Acquisition</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Design</td>
<td>-</td>
<td>1,575,000</td>
<td>1,575,000</td>
<td>1,575,000</td>
<td>-</td>
<td>3,150,000</td>
<td>4,725,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Equipment</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Close-Out</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Other Sub-Total:</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Total Allocations**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$ -</td>
<td>300,000</td>
<td>1,575,000</td>
<td>$</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$ 3,150,000</td>
</tr>
</tbody>
</table>

### Source of Funds

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TIRZ Funds</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3,300,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$ 3,300,000</td>
</tr>
<tr>
<td>City of Houston</td>
<td>-</td>
<td>300,000</td>
<td>-</td>
<td>13,000,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$ 13,000,000</td>
</tr>
<tr>
<td>Grant</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15,000,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$ 15,000,000</td>
</tr>
<tr>
<td><strong>Total Funds</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>31,300,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>$ 31,300,000</td>
</tr>
</tbody>
</table>

*NOTE:*

- Cumulative Total (To Date)
- Widening of Kingwood Drive from US 59 to Woodland Hills Drive
- Increase capacity on Kingwood Drive and relieve congestion, improve travel times
REPORT OUTLINE - DRAFT

EXECUTIVE SUMMARY

1. INTRODUCTION
2. PURPOSE AND SCOPE
3. OVERVIEW OF STUDY AREA
4. STUDY PROCESS
5. GOALS AND OBJECTIVES
6. MEASURES OF EFFECTIVENESS (MOE’S)
7. DEMOGRAPHIC INFORMATION
8. WHAT WE FOUND?
   a. PLANNED DEVELOPMENTS AND INFRASTRUCTURE IMPROVEMENTS
   b. DRAINAGE ISSUES
   c. PAVEMENT CONDITION
   d. CRASH DATA
   e. TRAFFIC OPERATIONAL ISSUES
9. ISSUES, OPPORTUNITIES, AND CONSTRAINTS
10. PUBLIC INVOLVEMENT
11. GOALS EXPLANATION
   a. COMMUNITY INVOLVEMENT
   b. PLANNING FOR FUTURE
   c. LESS CONGESTION
   d. QUICK FIXES
   e. SHORT-TERM IMPROVEMENTS
   f. LONG-TERM IMPROVEMENTS
   g. SAFETY
   h. COST EFFECTIVENESS
12. ALTERNATIVES ANALYSIS
13. SCORING CRITERIA
14. CAPITAL IMPROVEMENT PLAN AND PHASING
15. IMPLEMENTATION
LIST OF APPENDICES

APPENDIX A
FUNDING OPPORTUNITIES

APPENDIX B
COST ESTIMATES

APPENDIX C
TRAFFIC ANALYSIS

APPENDIX D
PUBLIC INVOLVEMENT
  SUPPORTING DOCUMENTATION (CD)
  SURVEY MONKEY RESULTS (CD)
  E-MAIL COMMENTS (CD)
  STEERING COMMITTEE MEETING NOTES (1 to 5) CD
  STAKEHOLDER MEETINGS (1 and 2) CD
  ALTERNATIVES RANKING – PUBLIC INPUT CD
APPENDIX C
TRAFFIC ANALYSIS

1. Executive Summary
2. Project Background and Project Description
3. Measures of Effectiveness
4. Base Conditions
   a. Geometrics and Traffic Control
5. Existing Traffic Data
   a. Volumes
   b. Signal Timing and Phasing
   c. Travel Time Data
   d. Speed Data
   e. Crash Data Review
   f. Traffic Analysis
   g. Results
6. Known Developments
7. Future Planned/Scheduled/Funded Improvements
8. Public Input
9. Future Traffic Projections
   a. Volumes
   b. Traffic Analysis
   c. Results
10. Alternative Analysis
    a. Traffic Volumes and Diversions (if any)
    b. Traffic Analysis
    c. Results (Before and After Delay, Tree Impacts, Safety, Cost, Pros, Cons)
11. Recommendations
12. Conclusions

APPENDIX C.1 Traffic Data CD
APPENDIX C.2 Existing Traffic Analysis Worksheets (Synchro) CD
APPENDIX C.3 Future Traffic Analysis Worksheets (Synchro) CD
APPENDIX C.4 Alternatives Analysis Worksheets (Synchro) CD