Summary Findings and Recommendations

Downtown/Riverfront Redevelopment
Traffic Circulation & Parking Study

January 4, 2006

RIZZO ASSOCIATES
A TETRA TECH COMPANY
Recommendations

**LEGEND:**
- Short Term
- Long Term
Upper Square
Existing Conditions

Issues

- Conflicting movements
- High traffic volumes
- Wide pedestrian crossings
- High crash incidence
- Unusable median
Benefits

- Improve access to downtown from Portland Avenue
- Reduce congestion at Main Street
- Simplify circulation
- Improve safety
- Create usable plaza space
- Enable 3rd Street to Central Avenue NB connection
Broadway/ St. John Street/ Winter Street
Existing Conditions

Issues
• Confusing roadway alignment
• Excessive pavement
Broadway/ St. John Street/ Winter Street
Short-Term Recommendation

Benefits
- Less driver confusion
- Fewer conflict points
- Opportunity for plaza
Central Ave / Chestnut St / 6th St
Existing Conditions

Issues

- Significant congestion, especially from Chestnut St NB left turn onto Central Ave
- Chestnut St NB approach on steep grade – sight distance and acceleration issues
- Three closely spaced conflict points
Central Ave / Chestnut St / 6th St
Short-Term Recommendations

Benefits
- Reduce congestion
- Improve safety by eliminating sight distance issue, addressing acceleration issue
- Reduce queues at Chestnut Street and Sixth Street
Downtown Loop
Existing Conditions

Issues

- High capacity and high speeds
- Induced through traffic
- Limits pass-by traffic for retailers
- High volume left turn on Washington Street at bridge
Downtown Loop
Long-Term Alternative

Benefits

- Direct and intuitive access to downtown
- Easier access and improved visibility for Central Avenue merchants
- Reduced traffic speeds and safer pedestrian crossings
- Easier access to Riverfront (Economic Development)
Henry Law Avenue
Existing Conditions

Issues

- Traffic congestion in Lower Square
- Turning/safety conflicts in Lower Square
- High demand for on-street parking
Henry Law Avenue
Long-Term Recommendations

Benefits

- Fewer traffic conflicts in Lower Square
- Increased on-street parking supply (12 spaces)
- Easier access to on-street parking

Convert to One-Way Operation

Convert Parallel to Angle Parking
Oak Street Bridge Reconstruction

Issues
- Weight limit on Oak Street bridge
- Trucks passing through downtown loop

Benefits
- Creates downtown bypass
- Removes 100 to 200 trucks per day from downtown loop
Parking Structure Recommendations

Issues
- Limited convenient short-term and employee parking for Central Avenue merchants
- Limited off-street parking to support employee growth in the mill complex

Benefits
- Potential for future growth and development

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3 levels
Parking Structure Recommendations

Issues
- Limited convenient short-term and employee parking for Central Avenue merchants
- Limited off-street parking to support employee growth in the mill complex

Benefits
- Potential for future growth and development

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Study Scope

- Motor vehicle traffic
- Truck traffic
- Parking supply and demand
- Public transit
- Pedestrians
- Bicycles
- Riverfront Development
Study Goals

- Traffic. Reduce traffic congestion, enhance traffic safety, and improve access to and from downtown Dover.

- Parking. Optimize parking supply, demand, and utilization.

- Economic Development. Improve the transportation system to support economic development, in the existing downtown and at the Riverfront Development.
Downtown Loop
Existing Conditions

Issues
- High capacity and high speeds
- Indirect through traffic
- Limits pass-by for retailers
- High volume left turn on Washington Street at bridge
One-Way Loop

Disadvantages

- Indirect, confusing circulation
- High speeds, esp. at Main St / Washington St
- Reduces traffic through main commercial corridor
Lower Square
Short-Term Recommendation

- Northbound:
  - Right turn
  - Shared left turn / right turn
- Southbound: Reduced to 3 lanes
  - 2 through-lanes
  - 1 left turn lane
    (Washington St, Henry Law Ave turns share lane)
- NB and SB major movements:
  2 lanes
PM Peak Hour Truck Traffic
Off-Street Parking Utilization – Morning

ZONE 1: 50.8% OF 248
ZONE 2: 61.2% OF 646
ZONE 3: 71.3% OF 404
ZONE 4: 48.4% OF 603
ZONE 5: 47.7% OF 170
ZONE 6: 46.3% OF 257
ZONE 7: 48.8% OF 209
ZONE 8: 61.5% OF 413
ZONE 9: 68% OF 186
Off-Street Parking Utilization – Afternoon
Parking
Utilization and Management Issues

• Central Avenue parking
  – Central Avenue businesses need short-term parking
  – Fairly high utilization
  – Short-term spaces taken up by "shuffling" of long-term parking

• Orchard Street parking lot
  – High demand, utilization
  – Metered spaces taken up by permit holders

• Cocheco Falls Mill parking needs
  – Mill 60% full – potential for 500 additional employees
  – Mill parking near Dover Transportation Center has low utilization
Parking – Short-Term Recommendations To Improve Utilization and Management

• Central Avenue parking
  – Review regulations governing parking limits, “shuffling”
  – Outreach and education to discourage shuffling through downtown employers (mills, Central Avenue businesses)

• Orchard Street parking lot
  – Provide meters for all public spaces in lot ("master meters"?)
  – Increase supply of permits

• Cocheco Falls Mill parking needs
  – Improve pedestrian connections to parking lots – Transportation Center (signal at Chestnut/2nd, crosswalks), Portland Avenue municipal lot (new sidewalk)
  – Investigate daytime leasing of vacant private spaces (NH State Liquor Store)
Long-Term Recommendations

• Schedule: 5 – 10 years
• Ensure downtown growth, vitality
• Provide access for Riverfront development
• Motor vehicle traffic
  – Unified circulation plan
  – Improve downtown circulation, access to businesses
  – Reduce traffic congestion
  – Accommodate Riverfront access
• Parking
  – Increased parking supply
    • Storefront businesses
    • Downtown employees
    • Riverfront
  – Structured parking
Long-Term Recommendations

- Motor vehicle traffic
  - 2-way Washington St
  - 2-way Central Ave
  - 1-way SB Main St
- Parking
  - Orchard St: Parking deck
  - Water St: Parking garage
- Riverfront Development
Long-Term Recommendations

- Riverfront Development
- Motor vehicle traffic
  - 2-way Washington St
  - 2-way Central Ave
  - 1-way SB Main St
- Parking
  - Orchard St: Parking deck
  - Water St: Parking garage
Washington Street Bridge, 2-Way Washington St.

- Existing 1-way circulation focuses traffic at Washington St. to Main St. left turn
- High traffic volume cannot accommodate opposing traffic

1,750 vehicles PM peak hour
Central Avenue Retail Corridor

On-Street Parking

Long-Term Preferred Alternative

Total On-Street Spaces – 141

Upper Square
- 26 spaces
- 4 spaces

Upper End
- 54 spaces
- 15 spaces

Lower End
- 32 spaces
- 7 spaces

Washington Street – 29 spaces
- 14 spaces
Alternative Parking Locations –

Parking Garage or Parking Decks
Alternative Parking Locations –

Parking Garage or Parking Decks
## Parking Structure Alternatives

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