Exceedance Level indicates daily maximum eight-hour average ozone concentration. Exceedance Levels are based on Air Quality Index (AQI) thresholds established by the EPA for the revised ozone standard of 70 ppb.

= Additional level orange exceedance days under the revised standard that were not exceedances under the previous 75 ppb standard. (AQI level orange = 71-75 ppb)

^Not a full year of data.
Source: TCEQ, [http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr_monthly.pl](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr_monthly.pl) ppb = parts per billion
Consecutive Three-Year Periods

Design Value (ppb)

1Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the Design Value (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is equal to or less than 70 parts per billion (ppb).

2015 Standard ≤ 70 ppb (TBD; Marginal by 2022)

1997 Standard < 85 ppb (Revoked)

2008 Standard ≤ 75 ppb (by 2017)

As of October 5, 2017

Source: NCTCOG TR Dept

^Not a full year of data.
REGIONAL TRANSPORTATION COUNCIL
TRANSIT CALL FOR PROJECTS

ACTION: PROJECT RECOMMENDATIONS

Regional Transportation Council
October 12, 2017
Sarah Chadderdon
North Central Texas Council of Governments
RTC Funding Process

Federal Transit Administration (FTA) Apportions Funds to the Region

(§5307) Urbanized Area Formula Program, Job Access/Reverse Commute

- Transit Providers
  - Existing Projects
  - New Projects
  - Non-Traditional Providers
    - New and Existing Projects

(§5310) Enhanced Mobility of Seniors and Individuals with Disabilities Program

- Transit Providers
  - Existing Projects

- Non-Traditional Providers
  - New and Existing Projects
Projects must be focused on:

- Dallas-Fort Worth-Arlington Urbanized Area
- Denton-Lewisville (DL) Urbanized Area
Draft Project Recommendations
Dallas-Fort Worth-Arlington Urbanized Area

**Enhanced Mobility Projects: $1.2 M**
- Dallas Area Rapid Transit (DART)
- City of Dallas
- Dallas County Health and Human Services Older Adult Services Program
- City of DeSoto
- Fort Worth Transportation Authority (FWTA)
- City of Lancaster

**Job Access/Reverse Commute Projects: $0.4 M**
- Workforce Solutions of Greater Dallas (Planning)
- Workforce Solutions of Greater Dallas (Vanpool)

See Reference Item 4 for more information, including a summary of the evaluation criteria
Draft Project Recommendations
Denton-Lewisville Urbanized Area

Enhanced Mobility Projects: $0.3 M
Span, Inc. (Flower Mound)
Span, Inc. (Lake Cities)

Job Access/Reverse Commute Projects: $0
No Proposals Received

See Reference Item 4 for more information, including a summary of the evaluation criteria
Estimated Impacts

Dallas Fort Worth-Arlington Urbanized Area

- 83,500 Trips Provided Annually
- 4,500 Seniors, Low-income Individuals, and Persons with Disabilities Served

Denton/Lewisville Urbanized Area

- 3,800 Trips Provided Annually
Schedule

February 27, 2017  Call for Projects Opened
April 7, 2017  Call for Projects Closed
August 25, 2017  STTC: Information Item
Week of September 11, 2017  Public Meetings
September 14, 2017  RTC: Information Item
September 22, 2017  STTC: Action Item
October 12, 2017  RTC: Action Item
October 26, 2017  Executive Board: Agreements
Fall 2017  Submit FTA Grant Applications
Winter 2018  Enter into Agreements
Requested Action

Approve the Job/Access Reverse Commute and Enhanced Mobility projects as shown in Reference Item 4.
Questions

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Karina Maldonado
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Dan Lamers
Senior Program Manager
dlamers@nctcog.org
817-695-9263
2017-2018
CMAQ/STBG* FUNDING:
LOCAL BOND PROGRAM
PARTNERSHIPS

Regional Transportation Council
October 12, 2017

* Congestion Mitigation and Air Quality Improvement Program/
  Surface Transportation Block Grant
# CMAQ/STBG FUNDING PROGRAMS

<table>
<thead>
<tr>
<th>STATUS</th>
<th>PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>Federal/Local Funding Exchanges</td>
</tr>
<tr>
<td>✓</td>
<td>Automated Vehicle Program</td>
</tr>
<tr>
<td>✓</td>
<td>Strategic Partnerships</td>
</tr>
<tr>
<td>✓</td>
<td>Planning and Other Studies</td>
</tr>
<tr>
<td>■</td>
<td>10-Year Plan/Proposition 1 Adjustments</td>
</tr>
<tr>
<td>□</td>
<td>Sustainable Development Phase 4: Turnback Program, Context Sensitive, Transit Oriented Development (TOD) Projects</td>
</tr>
<tr>
<td>✓</td>
<td>Transit Program</td>
</tr>
<tr>
<td>□</td>
<td>Assessment Policy Programs/Projects</td>
</tr>
<tr>
<td>■</td>
<td>Local Bond Program Partnerships</td>
</tr>
<tr>
<td>□</td>
<td>Safety, Innovative Construction, and Emergency Projects</td>
</tr>
<tr>
<td>□</td>
<td>Management and Operations (M&amp;O), NCTCOG-Implemented, and Regional/Air Quality Programs</td>
</tr>
</tbody>
</table>

- ✓ = Project Selection Completed
- ■ = Pending STTC/RTC Approval
- ■ = Program Partially Completed
CMAQ/STBG FUNDING PROGRAM: LOCAL BOND PROGRAM

<table>
<thead>
<tr>
<th>Description/ Purpose</th>
<th>To leverage bond funds for projects of strategic importance to local governments and the region.</th>
</tr>
</thead>
</table>
| Current Requests     | • City of Dallas Bond Program (pending bond election decision by City Council)  
                      | • Parker County Bond Program  
                      | • Others? |
## PROPOSED FUNDING BY AGENCY

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>PROPOSED FEDERAL FUNDING&lt;sup&gt;1,2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Dallas</td>
<td>$43,537,487&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td>Hunt County</td>
<td>$16,104,000 $20,748,672&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Parker County</td>
<td>$12,528,000&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>City of Cedar Hill</td>
<td>$280,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$72,449,487 $77,094,159</strong></td>
</tr>
</tbody>
</table>

1: All Regional Transportation Council (RTC) funds would be contingent upon bond program/private sector contributions materializing. Individual projects will not be added to the Transportation Improvement Program (TIP) until the overall agreement about each partnership is executed, if needed.
2: Additional details on the individual projects, funding amounts, and timing can be found in Reference Item 5.1.
3: In addition to this funding, up to $40 million has been approved for the Southern Gateway Pedestrian Plaza through a previous RTC action.
4: The 20 percent State match increases the total construction funding to $20.13 $25.93 million in Hunt County, and $15.66 million in Parker County.
# TIMELINE

<table>
<thead>
<tr>
<th>MEETING/TASK</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>STTC Information</td>
<td>August 25, 2017</td>
</tr>
<tr>
<td>RTC Information</td>
<td>September 14, 2017</td>
</tr>
<tr>
<td>Public Meetings</td>
<td>September 11, 13, and 18, 2017</td>
</tr>
<tr>
<td>STTC Action</td>
<td>September 22, 2017</td>
</tr>
<tr>
<td>RTC Action</td>
<td>October 12, 2017</td>
</tr>
</tbody>
</table>
ACTION REQUESTED

• RTC approval of:
  • The proposed list of projects to fund through the 2017-2018 CMAQ/STBG: Local Bond Program Partnerships Program (Reference Item 5.1)
  • Administratively amending the 2017-2020 Transportation Improvement Program (TIP)/Statewide Transportation Improvement Program (STIP) and other planning/administrative documents to incorporate these changes.
QUESTIONS?

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Brian Dell  
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2017 INFRASTRUCTURE FOR REBUILDING AMERICA (INFRA) GRANT PROJECT SUBMITTAL
• Texas Department of Transportation (TxDOT) has selected the three projects to be submitted by the state:

<table>
<thead>
<tr>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>US 69 widening in the Beaumont District</td>
</tr>
<tr>
<td>SH 225 at Beltway 8 in the Houston District</td>
</tr>
<tr>
<td>IH 35W North Tarrant Express in the Fort Worth District</td>
</tr>
</tbody>
</table>
NCTCOG AND TXDOT COORDINATION

• Staff proposes the following projects for submittal by the Regional Transportation Council (RTC)/North Central Texas Council of Governments (NCTCOG):

<table>
<thead>
<tr>
<th>Project</th>
<th>Proposed INFRA Request Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>IH 635 LBJ East</td>
<td>$165 Million</td>
</tr>
<tr>
<td>DFW Connector at IH 635/SH 114 or SH 121</td>
<td>$65 million</td>
</tr>
<tr>
<td>IH 20 Y-Connection</td>
<td>$100 Million</td>
</tr>
</tbody>
</table>
CONSIDERATIONS FOR PROPOSING PROJECTS

• Select projects in both the East and West
• Put all our “eggs” in one basket (so to speak) to focus on large scale, mega-projects
• Is there an opportunity for “Mega-Leveraging?”
• Is the project large enough?
• Partnership opportunity with TxDOT (we submit our priority projects that they do not choose to submit)
ACTION REQUESTED

RTC approval of:

• Projects proposed for submittal by NCTCOG/RTC for INFRA Funding

• Direction to staff to administratively amend the Transportation Improvement Program (TIP) and Statewide TIP and other planning/administrative documents to include INFRA projects if selected
TIMELINE

July 5       INFRA Grant Notice of Opportunity Announced
August 25    Surface Transportation Technical Committee (STTC) Information
September 14 RTC Information on projects and action on Letters of Support
September 22 STTC Action
October 12   RTC Action
November 2   Applications must be submitted by 7:00pm CST through www.grants.gov
CONTACT INFORMATION

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TxDOT Strategic Partnerships

Need for Big Projects

Interface Connections Between Urban and Rural Areas

TxDOT Staged Projects Begun but with Inadequate Resources to Complete

Strategic Projects with Unique Circumstances
Top 10 Things to Consider

1. Trinity Parkway Response
   Policy P17-03

2. Southeast Connector – The “Y”
   Policy P17-02

3. CityMAP Recommendations

4. Collin County Study and Transit
Top 10 Things to Consider

5. Tunnel Connecting IH 35E to US 75
6. Toll Managed Lane System Policy
7. Revenue Assumptions
8. Public Transportation
9. Performance Measures and Targets
10. Solve Tomorrow’s Problems Today
Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
Collin County Transit-Related Initiatives

Communication Coordination Knowledge Transfer Partnership

Long-Range Plans
Mobility 2045, including McKinney Rail

Corridor Studies
Frisco Rail and People Mover Studies

Near-Term Plans
Access North Texas

Implementation Focus
Transportation Management Association at Legacy

Transit Services
DART and DCTA
Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
Projects Removed
- Under Construction/Complete
- Local Consensus

Projects Revised/Added
- Design Change
- New Projects

Roadway Project Status

DRAFT

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
Collin County Roadway Opportunities

Proposed Roadway Corridors
- West Corridor
- Lake Corridor Frwy
- SH 78/SH 205/John King Corridor
- Collin County Outer Loop Frwy
- Spur 399 Frwy Extension

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
Policies and Programs

Review and Revise Policies and Programs
Response to Legislative Programs
Enhanced Performance-Based Planning
Guaranteed Transit
Role of Technology
Toll Managed Lane System Policy
Possible Technology Policies

Support Open Data Best Practices

Encourage Cooperation on Wireless Communications Infrastructure

Encourage Multi-Occupant Ride Sharing

Support Automated Vehicle Deployment
Toll Managed Lane System Policy Boundary

Cost of Congestion/Delay: $25.3 billion

*Congestion Index is based on a percent increase in travel time.

North Central Texas Council of Governments
March 2016
## Schedule

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous Public Involvement</td>
<td>Through March 2018</td>
</tr>
<tr>
<td>Mobility 2045 Draft (RTC Action)</td>
<td>April 12, 2018</td>
</tr>
<tr>
<td>Official Public Meetings</td>
<td>April 9, 2018</td>
</tr>
<tr>
<td>Mobility 2045 and AQ Conformity (RTC Action)</td>
<td>June 14, 2018</td>
</tr>
<tr>
<td>Air Quality Conformity DOT Determination Deadline</td>
<td>November 23, 2018</td>
</tr>
</tbody>
</table>
Next Steps

Continue Partner Coordination
Finalize Partner Projects – Nov. 15
Provide Monthly RTC Updates
Finalize Financial Forecast
Conduct Public Meetings

October and January
Questions

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Program Manager
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mobilityplan@nctcog.org
TOLL MANAGED LANE DATA MONITORING

Regional Transportation Council

October 12, 2017

Dan Lamers, P.E.
TOLL MANAGED LANE
DATA MONITORING

Cumulative December 2013 – June 2017

For how much HOV 2+ Subsidy has the RTC been responsible?
$1,507,756 as of June 2017

For how much of the Vanpool Toll reimbursement has the RTC been responsible?
$3,266 from October 2014 – June 2017

How long can the RTC keep the HOV policy at 2+?
For now, it remains 2+ and it will continue to be monitored quarterly

Have there been any additional NTTA customer service needs?
No, minimal impact

Have the speeds on the Toll Managed Lane facilities dropped below 35 mph?
No
## TOLL MANAGED LANE DATA MONITORING

### Cumulative December 2013 – June 2017

<table>
<thead>
<tr>
<th>Facility</th>
<th>HOV 2+ Subsidy Costs</th>
<th>NTTA Customer Service (Additional Needs)</th>
<th>Project Performance Events (Speeds &lt; 35 mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Tarrant Express</td>
<td>$654,411</td>
<td>Negligible</td>
<td>0</td>
</tr>
<tr>
<td>SH 183/121 from IH 35W to SH 121</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LBJ Express</td>
<td>$853,345</td>
<td>Negligible</td>
<td>0</td>
</tr>
<tr>
<td>• IH 635 from Preston Road to Greenville Avenue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• IH 35E from Loop 12 to IH 635</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DFW Connector</td>
<td>N/A</td>
<td>Negligible</td>
<td>0</td>
</tr>
<tr>
<td>SH 114 from Kimball Avenue to Freeport Parkway</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IH 30 Managed Lanes</td>
<td>N/A</td>
<td>Negligible</td>
<td>0</td>
</tr>
<tr>
<td>IH 30 from SH 161 to Westmoreland Road</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IH 35E Managed Lanes</td>
<td>N/A</td>
<td>Negligible</td>
<td>0</td>
</tr>
<tr>
<td>IH 35E from FM 2181 (Teasley) to LBJ</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Auto Occupancy Detection and Verification Technology Update

REGIONAL TRANSPORTATION COUNCIL

OCTOBER 12, 2017

Dan Lamers, Sr. Program Manager
Project History

2012 – NCTCOG
Technology Approaches to HOV Occupancy Declaration and Verification (Texas A&M Transportation Institute)

2012 – NCTCOG
Request for Information (RFI) for IH 30 Managed Lane Technology
- Occupancy detection and verification
- Dynamic tracking of vehicles

2013 – NCTCOG
Re-issue RFI with demonstration component

2014 – NCTCOG
TTI Update to white paper and proof of concept testing of in-vehicle technology

2015 – TxDOT/NCTCOG
Request for Offer - Automated Vehicle Occupancy Detection Solution

2016 – NCTCOG/TxDOT
Request for Proposals for Auto Occupancy Detection and Verification Technology
Why Mobile Occupancy Verification?

Verification

No Additional Roadside Infrastructure
• No right-of-way for HOV declaration-ramps of law enforcement
• No special lights or law enforcement technologies
• Work with existing toll infrastructure

Reliability
• Works 24 hours per day x 365 days per year
• Covers 100% of your road network
• Invulnerable to variance in weather, traffic, vehicles

Privacy
• Opt-in by users, no peering inside vehicles
• No PII data: toll tag plus verified occupancy

Network Benefits
• Leakage reductions, optional occupancy perks
• Performance measures, planning data

Big Data Analytics
• Big Data analysis identifies non-compliant behaviors
• Agency policies define automated warnings
• Data aggregation of traffic patterns, travel times and origin / destination maps

Enforcement

No Messy Legal Issues
• Manual enforcement is often sporadic and ineffective
• No law enforcement officers needed to issue tickets
• Does not tie-up court system
• Flexible “fraud detection” program
• Charge the right toll
• Willing to live with small level of “violators” in lieu of costly manual enforcement
Drive on TEXPRESS Application

- Activate My HOV Status Now
- Current Vehicle: Ford Explo
  - Next HOV Period: Mon, Jan 12 03:00 PM
  - Next Scheduled Activation: -

- HOV Schedule
- My Vehicles
- Express Routes
- Discounts
- Messages
- History
- TEXPRESS
- Assistance

Schedule For Vehicle

- My Vehicle
  - Nissa Rouge 2011 - BVT4079

- Schedule:
  - July 30, 2011:
    - 07:00 AM
    - 09:00 AM
    - 01:00 PM
    - 03:00 PM
  - All Day

- Schedule:
  - October 30, 2011:
    - HOV ON
  - October 31, 2011:
    - HOV ON
  - November 1, 2011:
    - HOV ON
  - November 2, 2011:
    - HOV ON
  - November 3, 2011:
    - HOV ON
Current HOV Enforcement
Technology Overview
How Carma’s solution works


2. Number of occupants recorded within app.

3. Tolltag is read at gantry.

4. Occupancy info time-stamped within app.
Customer Process

Place car beacon in glove box
• Or other out of the way location in vehicle

Download app
• Runs in background once installed
• Bluetooth turned on
• Low energy/battery usage
• Pickup a friend and want to carpool? Just use the app to send an invite before you drive.

Register Tolltag to car beacon
• Occupants do not need to register to tolltag

Place optional occupant beacon in diaper bag or backpack
• In lieu of app for occupants without phone

Detection/Verification Process

Occupancy automatically detected
• When occupant with app enters vehicle
• Optional occupant beacons also counted
• Occupant count transmitted to Carma server via cellular network
• Carma server transmits timestamped occupancy data to toll back office

Occupant data timestamped at toll gantry
• Carma occupant data matched with toll transaction

Customer gets charged correct toll!

Fraud detection
• System monitors proximity of phones/beacons periodically
• Region to develop potential fraud messaging and response
## Overall Schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick-off Meeting with Partners</td>
<td>August 2017</td>
</tr>
<tr>
<td>Surface Transportation Technical Committee/Regional Transportation Council/Public Meetings</td>
<td>September/October 2017</td>
</tr>
<tr>
<td>Pilot on DFW Connector Corridor</td>
<td>October/November 2017</td>
</tr>
<tr>
<td>Share Pilot Results to Partner Agencies</td>
<td>December 2017</td>
</tr>
<tr>
<td>Surface Transportation Technical Committee/Regional Transportation Council/Public Meetings</td>
<td>January/February 2018</td>
</tr>
<tr>
<td>Partner Integration</td>
<td>March 2018</td>
</tr>
<tr>
<td>System-Wide Deployment</td>
<td>May 2018</td>
</tr>
<tr>
<td>Transition to Incentive Program</td>
<td>??</td>
</tr>
</tbody>
</table>