2035 Transportation Plan – Status Update

Construction Advisory Board
October 24, 2012

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Tonight's Discussion

- Updating the 2030 Plan
- Model Development
- Draft Project Cost Estimates
- Draft 2035 Capital Program
- Capital Expansion Fees – Streets
- Outline for 2035 Transportation Plan
- Action Plan Forward

Updating from 2030 Plan

- 2030 Plan is basis for update
  - Data
  - Process
  - Results
- 2035 Plan is a comprehensive update
  - Additional Plans adopted since 2030 Plan:
    - Bike and Pedestrian Plan
    - Transit Plan
  - Growth projections revised
  - Cost estimates redone

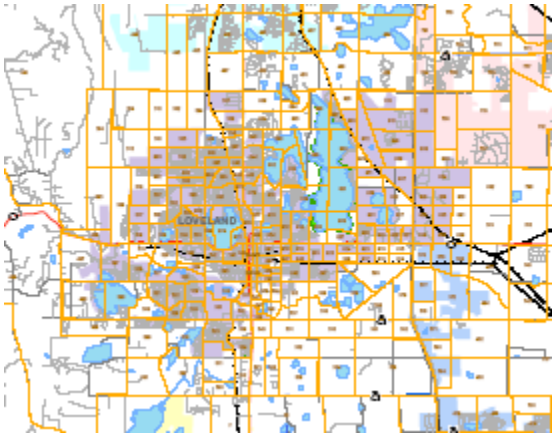
Model Development

- Foundation is critical
- Local and Regional
- Coordination with:
  - Community and Strategic Planning
    - Karl Barton– Key Player
  - North Front Range MPO Staff
    - Balanced local growth with respect for regional projections
      - Control totals

Traffic Analysis Zones (TAZ's)

- Develop Traffic Analysis Zones (TAZ's)
  - Region divided into logical sections in order to input land use information
    - Households
    - Non-Residential Uses
      - Retail/Commercial
      - Office
      - Industrial
    - Current Information
    - Build-out Information
    - Projection made for 2035
      - Trends Likely Development is plan basis

TAZ's (cont.)



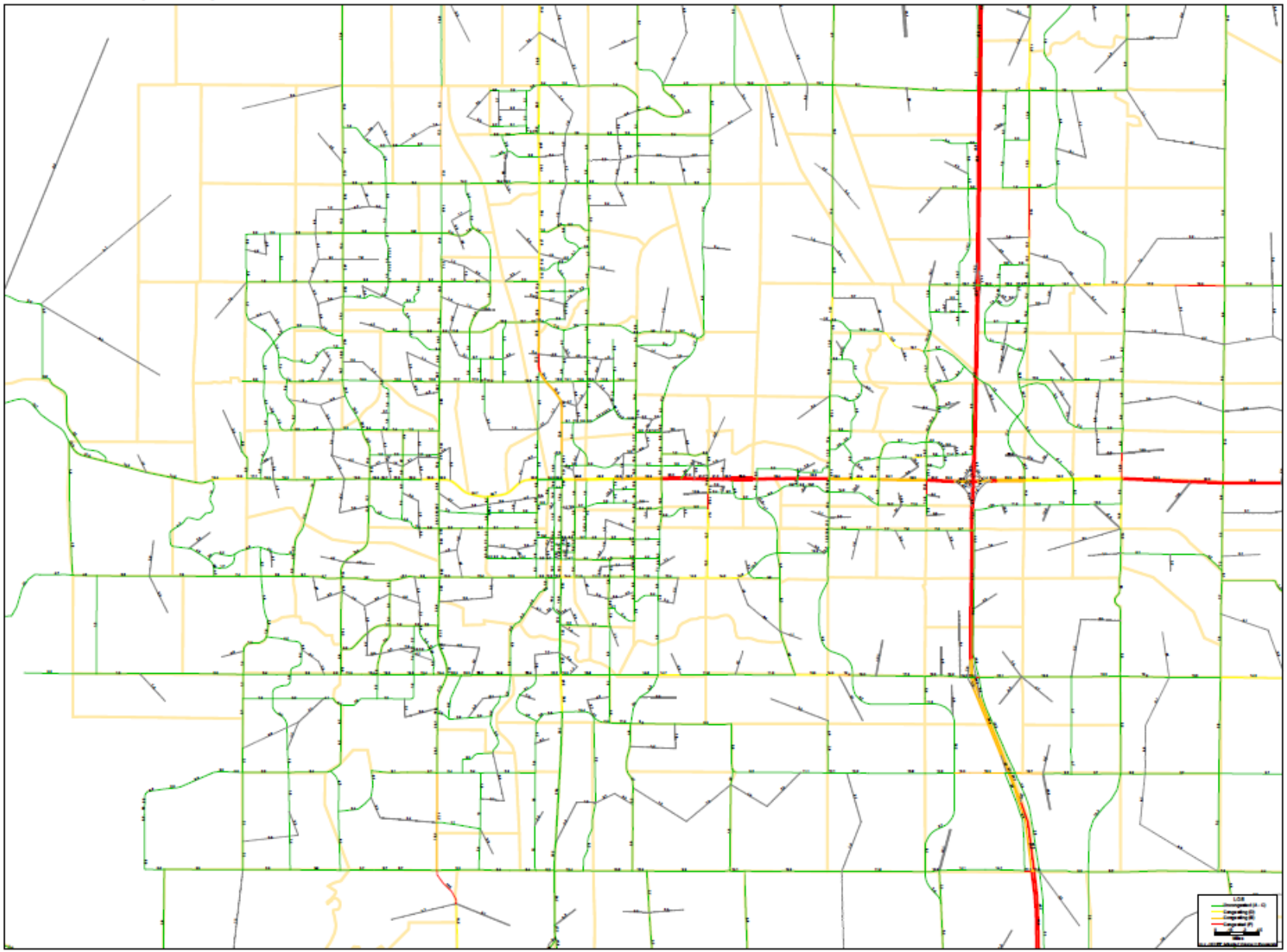
The "Model"

- Information entered
  - Roadway Network
  - Classification
    - Arterials (Major and Minor)
    - Collectors
    - Number of Lanes
  - Area Type (Urban, Suburban, Rural)
- Calibration using existing road system and land use information
  - Compared to existing traffic counts

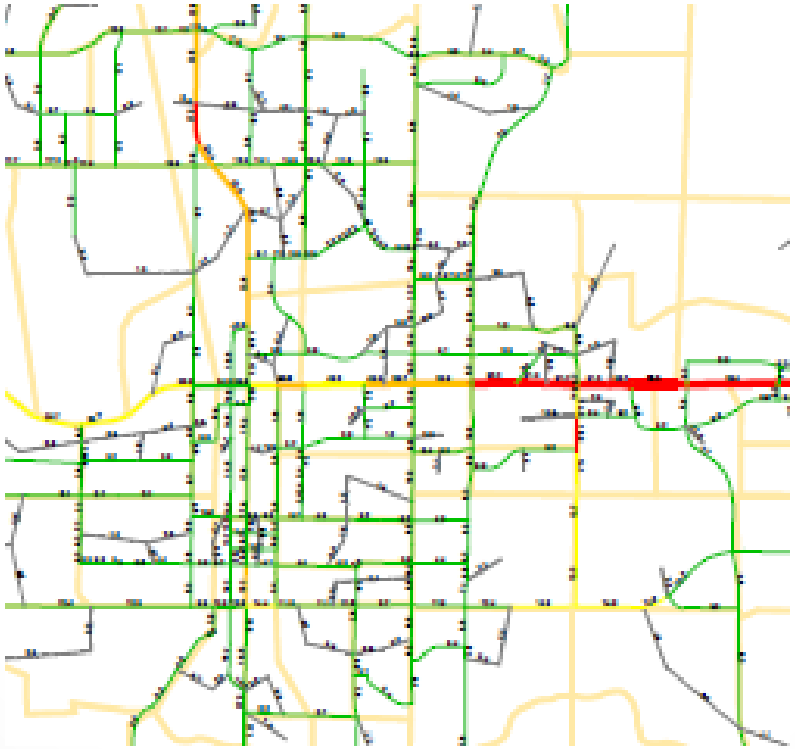
Model (cont.)

- Anticipated future road network is entered
- TAZ land use information is entered
- Model Runs
  - Gravity Model
    - Productions and Attractions (Origins and Destinations)
  - Iterative model
    - Runs through processes until all trips are accounted for

Loveland (2035) Alternative 2 Level of Service



Model Output – Zoomed In



Completing the Model

- Model is revised
  - Network, Classification, Lanes
  - TAZ Information
    - reviewed to look for inconsistencies or data entry errors
    - TAZ's may be split (to provide localized sensitivity)
  - Model is re-run
  - Results are reviewed
  - Recommendations are developed

Model Findings

- Started with 2030 Transportation Plan improvements
  - Not all were required based on revised land use
    - Extend life of existing County road sections at perimeter of City
    - Delay widening of existing roads
      - Examples
        - US 287 from 4 to 6 lanes north of 29th Street
        - SH 402
          - 4 lanes still necessary from US 287 to St. Louis and LCR 9 to I-25
          - 2 lanes with turn lanes and intersection improvements acceptable from St. Louis to LCR 9

Model Findings (cont.)

- Results were tested (sensitivity analysis)
  - Some critical questions:
    - Were we on the edge of needing more improvements?
    - What about longer term?
  - Looked at additional scenarios:
    - With support from Community and Strategic Planning and our regional partners
    - Added 10% growth to entire region
      - Proposed network still worked
    - Looked at "build-out" (City and region fully developed per plans and long term growth projections)
      - Ultimate street network was adequate

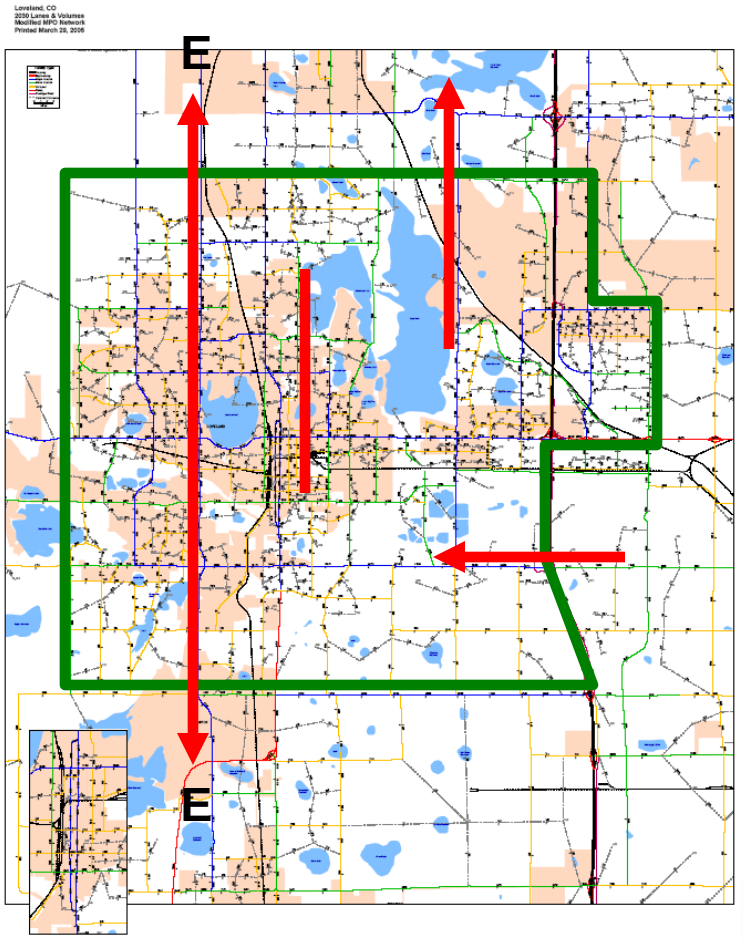
Project Cost Estimates

- 2035 Plan Cost Estimates
  - From 2030 Plan – recalculate with future plan updates
    - Interim years – adjust per Colorado Construction Cost Index
  - Roadway Sections
    - Recalculated
  - Intersections
    - Recalculated
  - Signals
    - Updated to reflect current costs

Funding Sources

- Capital Expansion Fees
  - Cost of Trips anticipated due to new growth
- Street Equivalent
  - Collector
    - Developer responsible for up to collector width for interior streets and ½ Collector width for adjacent perimeter streets
- Other
  - Funds from Outside Sources (CDOT, Federal Government)
- General Fund
  - City's Share for existing traffic, Street Equivalent for land already developed, and Pass Through or External to External Traffic (E-E)
- Centerra Metro District
  - Per Master Finance Agreement (MFA)

E–E Explanation

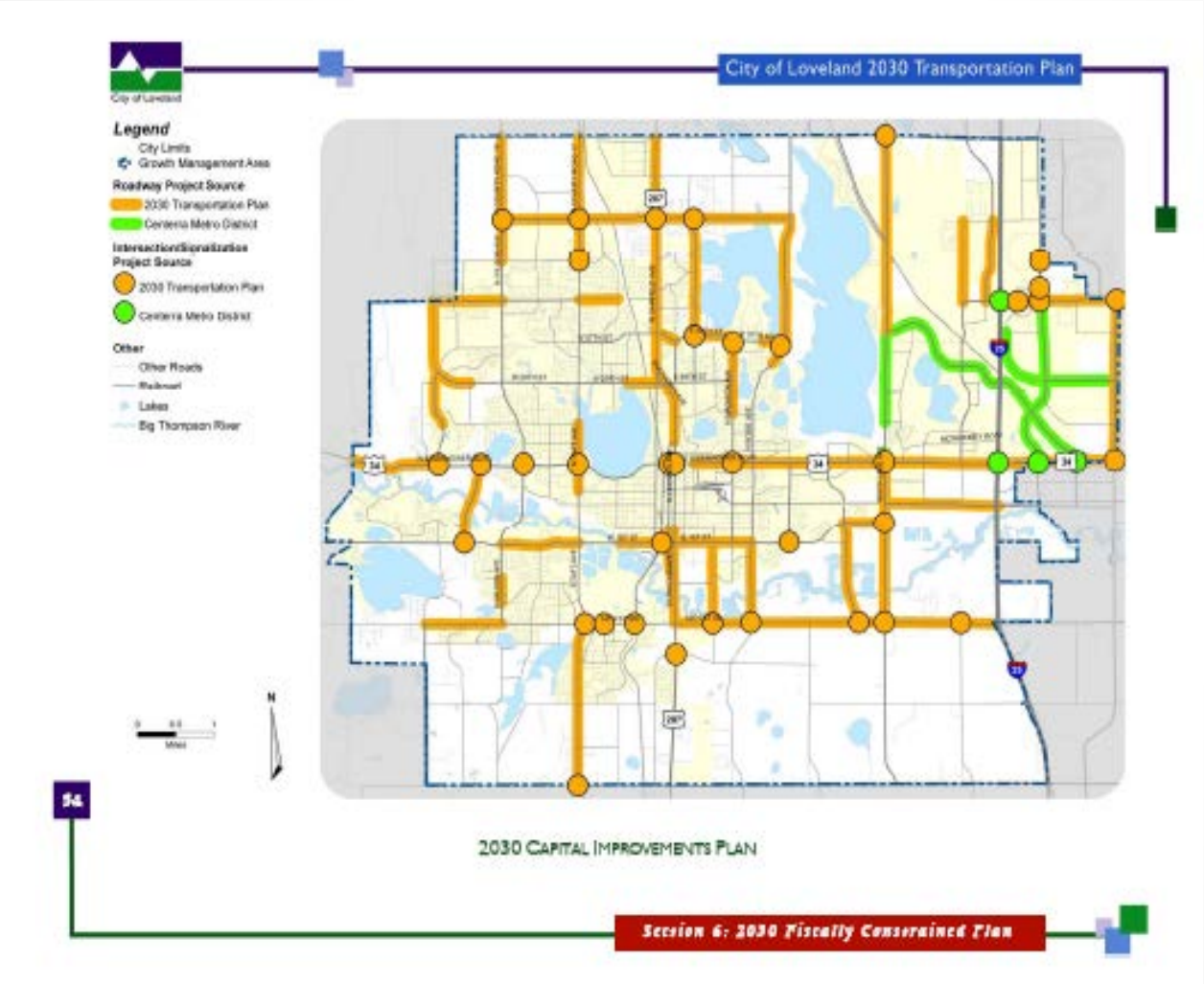


Review

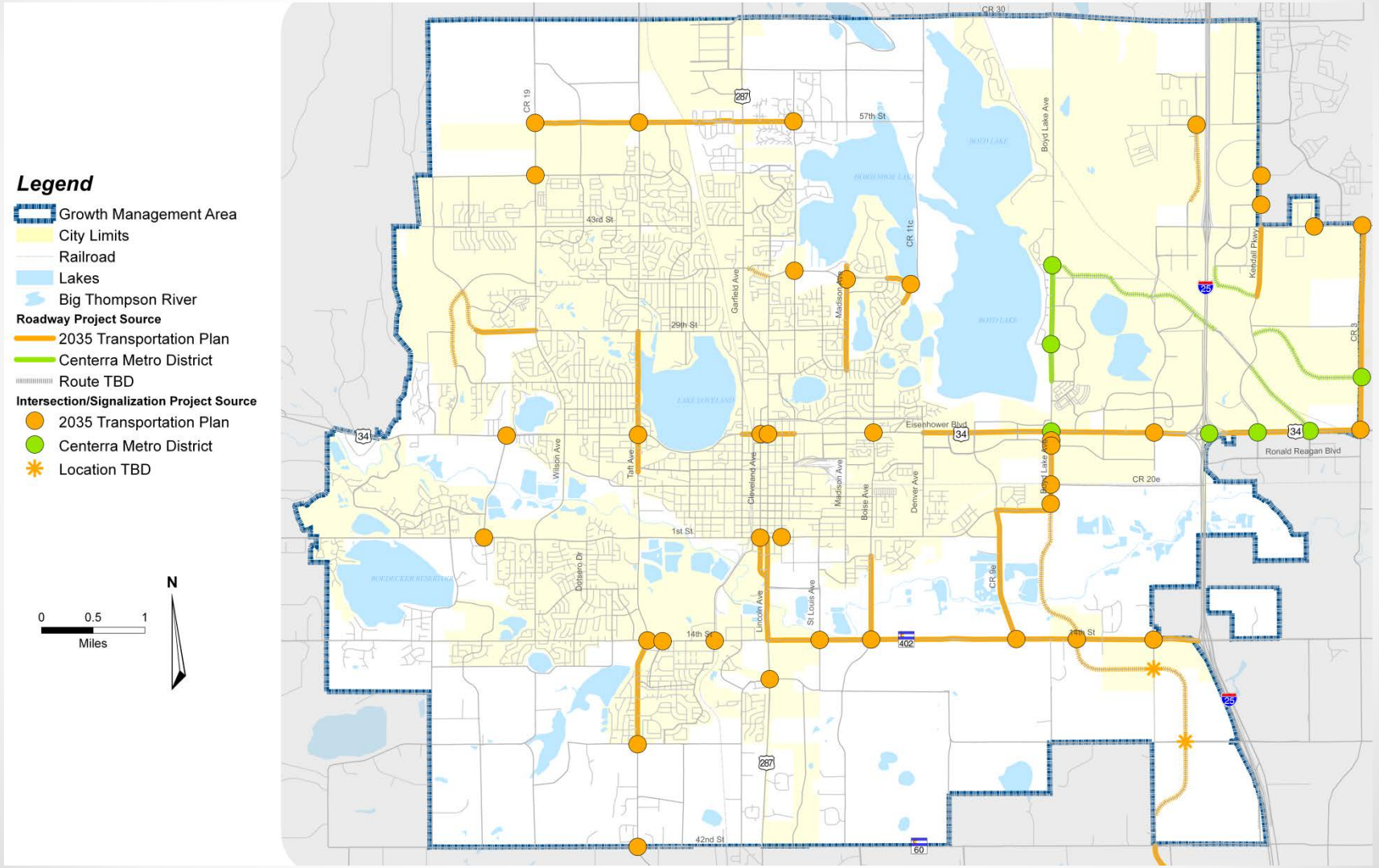
- Land Use Component
- Model Run
- Cost Estimates
- Funding Sources

Based on the information, so what should we build by 2035?

2030 Capital Improvements



Draft 2035 Capital Improvements



2035 Transportation Plan Costs

- $463,598,630 Total
  - $129,226,011 Capital Expansion Fees
  - $ 37,784,700 General Fund
  - $ 44,009,280 Collector Street Equivalent
  - $ 37,784,700 Other (CDOT, FHWA, outside sources)
  - $244,954,000 Sub-Total

  - $218,644,630 Centerra MFA
    - Remaining Costs of Transportation Infrastructure to be Constructed by Centerra per MFA (no part of City funding)
      - $117,144,630 Local Improvements (adjusted to 2012)
      - $101,500,000 Remaining Regional Improvements (adjusted to 2012)
- Projects include:
  - Roadway Sections
  - Intersections

2035 Transportation CIP Areas

City Streets	$106,893,000
CDOT Roadways	$ 63,719,000
Other Projects	$ 74,342,000
Pedestrian and Bicycle Improvements	$ 8,700,000
Signal System Inter-Connects	$ 2,000,000
Intersection and Traffic Signal Improvements	$ 49,100,000
Eisenhower @ Lincoln and Cleveland	$ 7,000,000
Bridge replacements due to structural deficiency	$ 6,542,000
Professional Services for Transportation Planning	$ 1,000,000
Centerra Metro District Projects	$218,644,630

Adopted Impact Fee Approach

- "Proportionate Share" - based on Traffic Added By Individual Project
  - Fee for each use based on anticipated Average Daily Traffic (portion of anticipated new Daily Trips added between today and 2035)
  - Rationale
    - What part of 545,248 new daily trips will your project use?
      - If growth happens as predicted, estimated funds will be collected and anticipated road improvements will be completed
      - If less growth happens, less roads will be necessary to coincide with less funding
      - If more growth happens, more roads will be necessary to coincide with more funding

Basis for Fees

- Total Capital Expansion Fees estimated to construct necessary road infrastructure in 2035: $129,226,011
- Total New Daily Trip Ends estimated due to new growth in 2035: 545,248
- Cost Per Trip = CEF Fees / Trip Ends = $129,226,011 / 545,248 = $237.00 per trip end (4.54% increase - Current: $226.71)
- "Proportionate Share" Impact Fee
  = ADT x % Primary Trips x $237.00 per Trip End
    - ADT from ITE – 9th Edition
    - % Primary Trips from ITE - 9th Edition
- Project must be included in 2035 costs to be eligible for reimbursement

Proposed Street CEF Examples

Category	Unit or 1000 Sq. Feet	ITE ADT	Primary Trip %	Adjusted Trips	Fee Per Unit or SF
Single Family Detached	Unit	9.57	100%	9.57	$2,268.11
Multi-Family	Unit	6.72	100%	6.72	$1,592.65
Free Standing Discount Store	Square Foot	57.24	48%	27.47	$6.52
Fast Food with Drive In	Square Foot	496.12	30%	148.84	$35.27
Bank with Drive In	Square Foot	148.15	27%	40.00	$9.48
50,000 Square Foot Office Building	Square Foot	15.65	100%	15.65	$3.71
Medical / Dental Office	Square Foot	36.13	100%	36.13	$8.57
Warehouse	Square Foot	3.56	100%	3.56	$0.84
General Light Industrial	Square Foot	6.97	100%	6.97	$1.65

Draft Outline of 2035 Plan

- Major Components
  - Executive Summary
  - Purpose and Process
  - Sustainability
  - Existing System
  - Change: 2000 - 2012
  - 2035 Analysis and Projections
  - Fiscally Constrained Plan / Plan Implementation
  - Performance Measurement for Plan Success
  - Recommendations for Change
  - Technical Appendices

Action Plan Forward

- September 25th – Council Study Session
- October 1st – TAB Discussion (Draft Document)
- Staff Adjustments based on Council / TAB input
- October 17th – Open House
- October 22nd – Planning Commission Study Session
- Today - October 24th – Construction Advisory Board Study Session
- November 5th – TAB – Report on other meetings
- Additional Plan Revisions by Staff
- November 26th – Planning Commission Public Hearing and Recommendation to Council
- November 27th – Council Study Session
- December 3rd – TAB – Final Document / Recommendation to Council
- December 18th - Council Public Hearing and Adoption

Questions?