DEVELOPMENT REVIEW FOR TRANSPORTATION IMPACTS

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Littleton Colorado

OVERVIEW

- Development Review Processes
- Master plans, studies, and projects in development region
- Trip Generation Letter
  - Compares the number of proposed vehicular trips associated with new development against the existing use
- Traffic Impact Study (TIS)
  - Evaluates impacts to site access and nearby intersections
- Traffic Conformance Letter
  - Checks for conformance with TIS as development progresses
- Typical ROW frontage improvements
- Typical intersection improvements

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DEVELOPMENT REVIEW PROCESSES

- Master Development Plan (MDP)
  - Detailed
  - Conceptual
- Site Plan
- Minor Plan Amendment
- Preliminary and Final Plat

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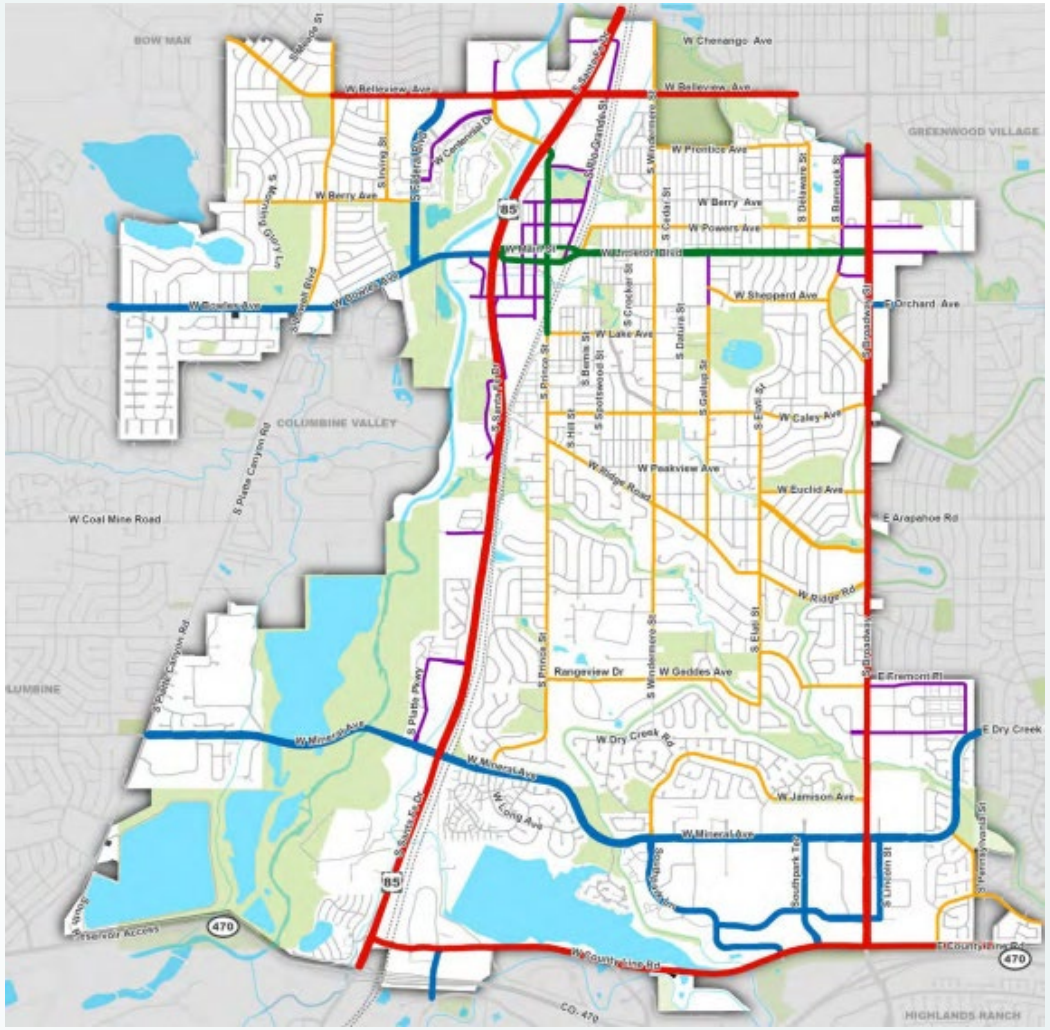
TRANSPORTATION MASTER PLAN



Proposed Street Types

- Commercial Corridor
- Suburban Connector
- Mixed Use/Downtown Main Street
- Mixed Use/Downtown Connector
- Neighborhood Connector
- Local Street

Example - Suburban Connector Characteristics

- ROW width: 80-120’
- Target Speed: 30-40 MPH
- Lanes: 1-2 each direction
- Primary Purpose: Local Mobility
- Bike Facilities: On Street
- Sidewalk: Attached or Detached
- On-Street Parking: Not Typical

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EXAMPLE: CITY PROJECTS AND STUDIES

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1. Mineral Station West (Multimodal Safety & Connectivity)
2. Santa Fe & Mineral Improvements (Safety & Capacity)
3. Mineral Station East Mobilityshed (Multimodal Safety & Connectivity)
4. High Line Canal Trail Crossing Feasibility Study (Multimodal Safety & Connectivity)
5. Broadway & Mineral Avenue Intersection Improvements (Safety)
6. County Line Trail Connection (Multimodal Safety & Connectivity)
7. County Line Road Widening (Safety & Capacity)
8. Broadway Corridor Study (Multimodal Safety & Connectivity)

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TRIP GENERATION LETTER

- Compares proposed traffic generated by new development against traffic attributed to existing use of the site
  - Institute of Transportation Engineers (ITE) Trip Generation Manual
  - Empirical formulas based on lot size, dwelling units, building floor area, etc.
  - Primary indicator is peak hour traffic (rush hours)
    - AM
    - PM
    - School hours (afternoon), if nearby
- If the increase in traffic is high enough, or other related concerns are present, require developer to perform Traffic Impact Study

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TRANSPORTATION IMPACT STUDY

- Trips generated by the proposed development
  - Internal capture and pass-by trips
- Trip distribution of each proposed use
- Background growth on surrounding network
  - Denver Regional Council of Governments (DRCOG) growth rates
  - Known Developments within study area
- Incorporates city projects
- Study anticipated completion year (typically 2026-2028) and a future year (2045-2050)
- Intersections studied for delay time and queuing
- Access control
- Signal warrant, and progression analyses
- Analyze bike, ped, and transit access
- Developer responsible for addressing adverse conditions attributed to additional traffic generated by the development

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EXAMPLE TIS STUDY AREA

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TRANSPORTATION CONFORMANCE LETTER

- Similar to a Trip Generation Letter
- Performed as pad lots are proposed within a larger development that already has an approved TIS (Master TIS)
- Compares proposed traffic generated by newly proposed pad site against what was assumed in the TIS
  - Institute of Transportation Engineers (ITE) Trip Generation Manual
  - Peak hour comparison
  - Trip distribution
- If traffic increases, assumed use changes, trip distribution changes, or other related concerns are present, developer may be required to perform a TIS update.

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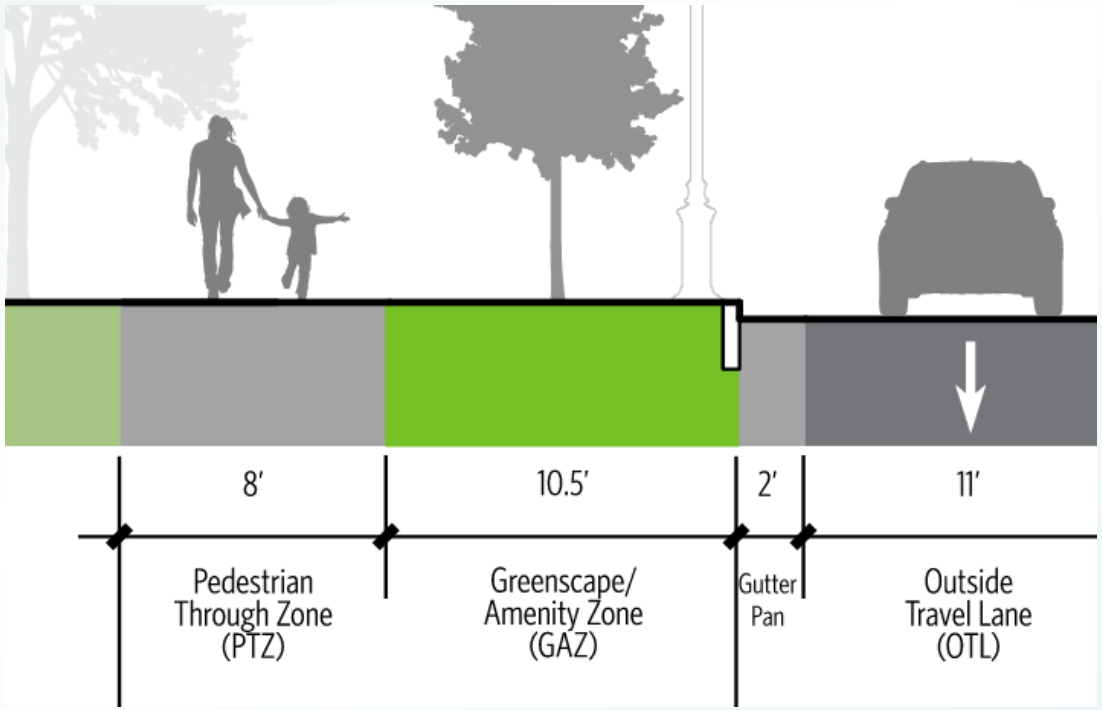
TYPICAL ROW FRONTAGE IMPROVEMENTS



- Consistent with Transportation Master Plan goals and guidance for each roadway classification
- ROW dedication
- Sidewalks
- Bike lanes
- Buffer yards
- Crosswalks
- Transit stop improvements
- ADA compliance

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TYPICAL INTERSECTION IMPROVEMENTS

- Additional turn lanes
- Increase storage of existing turn lanes
- Signalization
- Timing/Phasing adjustments to existing signals
- Roundabouts

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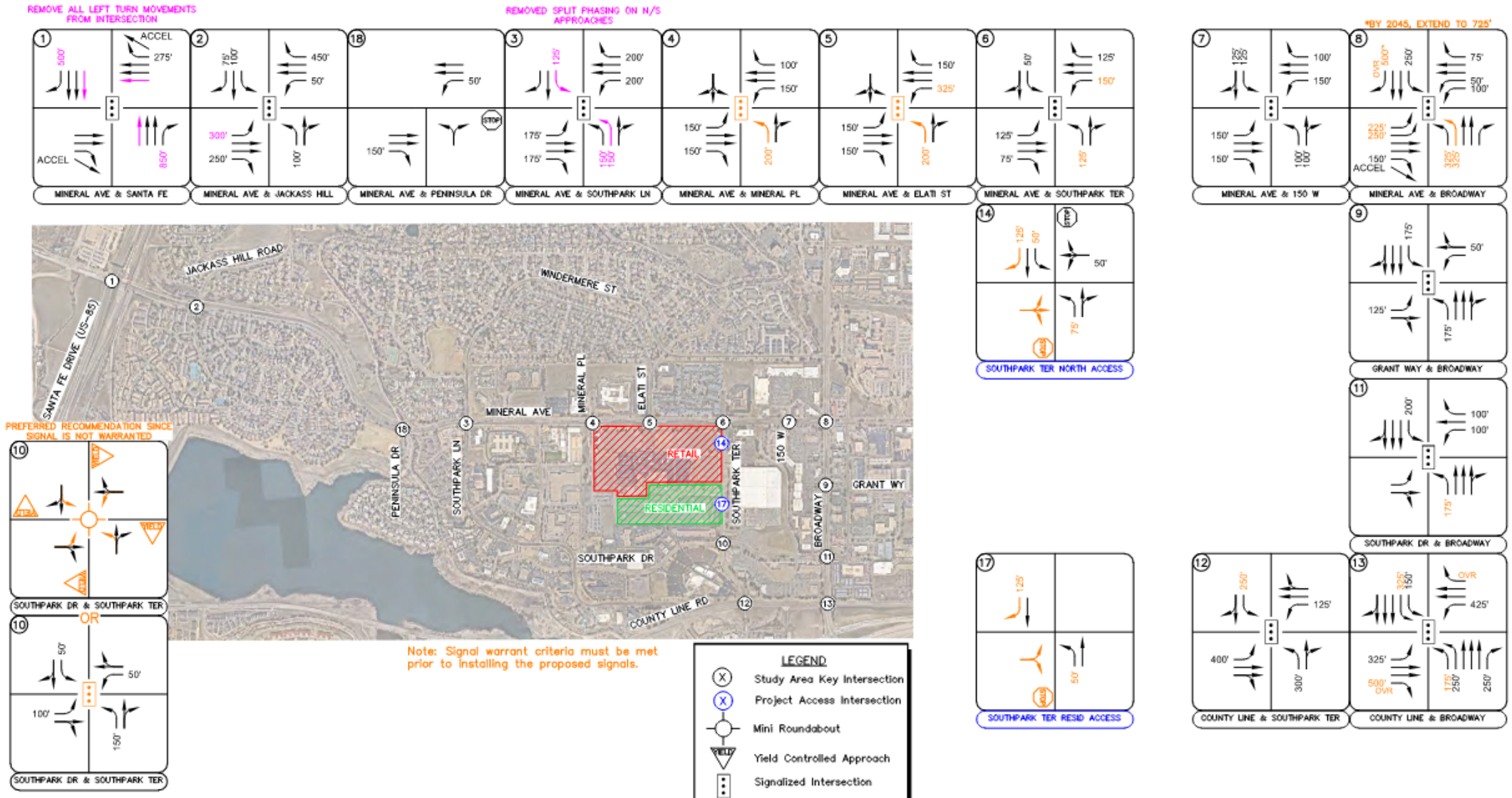

FIGURE 16
MINERAL PLACE
LITTLETON, COLORADO
RECOMMENDED GEOMETRY AND CONTROL

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TYPICAL INTERSECTION IMPROVEMENTS

- Review layout for usability, safety, constructability and maintenance
  - Horizontal and Vertical alignment
  - Sight distance
  - Ped crossing distances
  - Signing and striping
  - Accessibility
- ADA PROWAG, AASHTO, MUTCD

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COMING SOON

- Roadway design requirements within Littleton Engineering Design Standards (LEDS)
  - Q1 2025
- Traffic Impact Study Design Guidelines
  - To be published alongside LEDS
  - Clear triggers for requirement of full studies, and letters
  - Bike and ped connectivity/safety analysis
  - Crash data analysis
  - Formatting requirements for streamlined reviews
- Traffic Calming Toolbox
  - Treatment guidance and criteria
  - Q1 2025

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