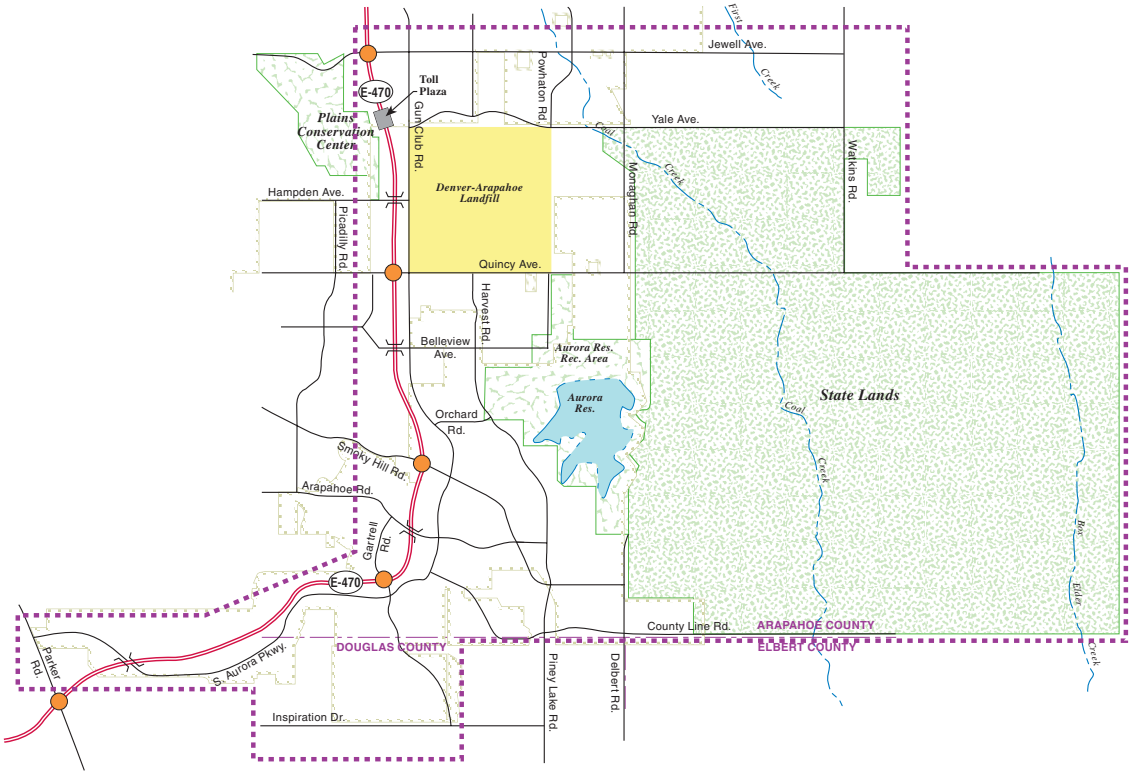
Aurora Southeast Area Transportation Study
2007 UPDATE



FELSBURG HOLT & ULLEVIG

engineering paths to transportation solutions

Aurora Southeast Area Transportation Study

ADOPTION DRAFT

AURORA SOUTHEAST AREA

TRANSPORTATION STUDY

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I. INTRODUCTION

A. Study Purpose

The Aurora Southeast Area Transportation Study (SEATS) 2007 Update is intended to support Aurora's Comprehensive Plan relative to transportation planning and provide more insight to the planning and construction of future facilities. The study covers an area south of Jewell Avenue and east of Picadilly Road, and it serves as an update to the original SEATS document prepared in June 1997 by Carter Burgess. This study was conducted in close coordination with the 2007 update for the Aurora Northeast Transportation Study (NEATS).

The following are addressed in this document:

- **Existing and Future Land Use Projections.** Since 1997, development potential throughout the study area has changed. Data from the Denver Regional Council of Governments (DRCOG) and estimates of future land use developed by City staff have been considered here for the 2030 time-frame.
- **Travel Demand Levels for the 2030 Time-Frame.** Long-term forecasts have been developed using the DRCOG regional travel demand model. This model is a version of DRCOG's model with embellishments to better represent certain elements within the NEATS and SEATS sub-area. A single common model was used in preparation of both the NEATS and SEATS effort.
- **Develop a Multi-Modal Transportation System to Address Roadways, Transit Service, and Trails.** The plan identifies corridors, alignments and interconnections to serve multi-modal needs over the long term.
- **Define the Physical Arterial Roadway Network to Adequately Serve Year 2030 Travel Demands.** This roadway network identifies the appropriate laneage and classifications for the major roads within the SEATS area. As appropriate, priority road improvements are identified.

B. Plan Application/Use

When adopted by the City of Aurora, the transportation system plan becomes an integral part of the City's Comprehensive Plan. The transportation plan will be used to:

- Serve as the basis for the City to request amendments to the Denver Regional Council of Governments (DRCOG) Regional Transportation Plan.
- Support requests for project prioritization and funding through the DRCOG Transportation Improvement Program (TIP).
- Define general public right-of-way needs prior to development. Actual roadway alignments will be subject to City approval in conjunction with site specific development projects through the City's Framework Development Plan process.

- Support required cross-section dimensions for street, bikeway, sidewalk, and landscape elements.

Over time, the City will likely need to continue updating various elements of the transportation system plan. This may occur as major land use changes take place or as the result of changing travel behavior. In any event, plan updates should not be required more frequently than every five years.

C. Report Organization

This report depicts a summary of the recommended transportation plan and the steps that led to it. Subsequent sections of the report include:

- **Existing Conditions** – This section sets the foundation relative to identifying constraints, where development has occurred to-date, and major transportation facilities that are already in place.
- **Future Conditions** – This section presents the future travel demand estimates and land use information that led to the travel estimates.
- **Recommended 2030 Transportation System Plan** – This section depicts the SEATS plan with respect to roadways, interchanges, grade-separated crossings, transits elements, trail corridors, and associated grade-separated crossings.

II. EXISTING CONDITIONS

A. Location

The study area encompasses the southeast part of Aurora including approximately 60 square miles of land. **Figure 1** shows the study area which is roughly bounded by Jewell Avenue on the north, Watkins Road on the east, County Line Road on the south, and Picadilly Road (and Parker Road for the southern reaches) on the west.

B. Constraints

The study area is relatively flat with areas of low rolling hills. Several significant "barriers" exist within the study described as follows:

- **Aurora Reservoir** – This recreation area is approximately 2,500 acres in size and restricts east-west mobility between Quincy Avenue and approximately Arapahoe Road (three miles).
- **Denver-Arapahoe Landfill** – This is also an approximate 2,500 acre facility located northeast of Quincy and Gun Club Road. It restricts north-south travel over a two-mile stretch and east-west travel over a two-mile stretch.
- **E-470** - While this facility provides mobility through the study area, it is also a barrier for east-west roadways.

The combination of these barriers limits the number of major corridors that can be provided within the study area. Currently, Quincy Avenue provides the greatest amount of east-west continuity through the area passing between the Landfill and Aurora Reservoir. North-south, Gun Club Road provides the greatest amount of continuity.

C. Developed Areas

A substantial amount of development has taken place within the SEATS study area since the last SEATS report in 1997. Specifically the following has taken place:

1. **Murphy Creek**. A golf course and residential uses have occurred within this development located east of Gun Club along both sides of Jewell Avenue.

2. **Tollgate Crossing**. This is located on both sides of Belleview Avenue along the east side of Gun Club Road.

3. **Southlands.** Located northeast of the E-470/Smoky Hill Road interchange, Southlands is a regional shopping facility. The "centerpiece" Lifestyle Center opened in November of 2006 representing a near completion of the approximate 1.5 million square foot development.

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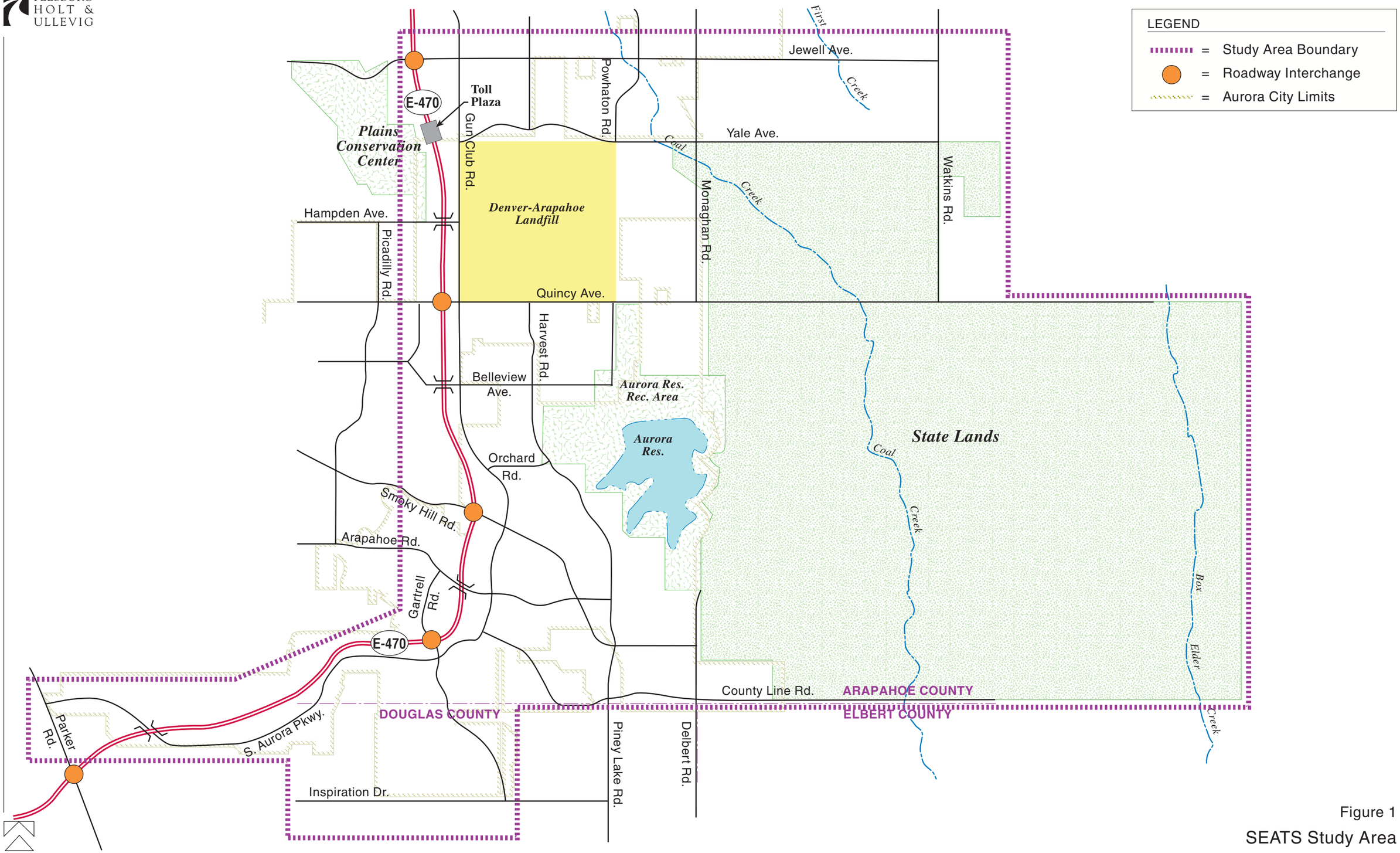

Figure 1
SEATS Study Area

Land located south and west of the Aurora Reservoir has experienced a significant amount of residential development, most of it as single-family detached housing. Developments that are under construction include:

- Wheatlands
- Tallyn's Reach
- Tollgate Crossing
- Heartland
- Sorrel Ranch
- Pomeroy
- Southshore
- High Plains
- Beacon Point

These areas are anticipated to continue to develop as are other development areas within the SEATS study area (see Future Conditions for more information).

D. Transportation Facilities

The major roadway facilities currently in the study area are described as follows:

- **E-470 Tollway** – This is the beltway facility around the eastern half of the Denver Metropolitan area. Within the SEATS Study Area, E-470 aligns north-south in close proximity to Gun Club Road and then curves west near the Douglas County line. The beltway is a toll facility with four through lanes and interchanges at Jewell Avenue, Quincy Avenue, Smoky Hill Road, Gartrell Road and Parker Road.
- **Gun Club Road/South Aurora Parkway –** This north-south arterial road parallels E-470 to its east. From Jewell Avenue, the road provides two through lanes south to a point south of Belleview where it provides four through lanes and eventually six through lanes along the Southlands Development to Smoky Hill Road. Further south, the road provides four through lanes and turns west at approximately Gartrell Road.
- **Quincy Avenue –** This facility provides the greatest level of east-west continuity within the study area. The paved road extends from Parker Road to the west to and through the study area and an additional eight miles.
- **Smoky Hill Road –** This roadway facility is on a diagonal beginning at the Parker Road/Quincy Avenue area and extending southeast to the study area and connecting with County Line Road, Piney Lake Road, and Delbert Road (on the Douglas County/Elbert County boundary).

- **Jewell Avenue** – This facility provides a significant level of continuity to the west extending to Tower Road and becoming Iliff Avenue through Aurora and eventually Evans Avenue through Denver. Within SEATS, Jewell Avenue is unimproved east of Murphy Creek, and it extends as an unimproved roadway to Watkins Road.
- **Watkins Road** – This roadway provides two paved lanes of traffic south from the Watkins area (within the NEATS study area) as far south as Quincy Avenue.

Figure 2 shows the existing conditions for SEATS roadways. Around developed areas, many of the arterial roads have been widened to include four or six through lanes. **Figure 2** also shows daily traffic volumes for roadways where the data are readily available. E-470 carries 30,000 to 40,000 vehicles per day and is by far the heaviest traveled roadway in the study area. Gun Club Road, also SH 30 north of Quincy Avenue, serves 15,000 to 20,000 vehicles per day. With the recent completion of the Lifestyle Center at Southlands, traffic volumes have increased on both Smoky Hill Road and South Aurora Parkway segments near the E-470/Smoky Hill Road interchange; recent data have not yet been collected.

Transit service is relatively scarce within the SEATS study area. The Regional Transportation District (RTD) currently provides two bus routes terminating within the area. One is the route 135 which terminates at Southlands and provides connectivity to the Nine-Mile park-n-Ride located at I-225 and Parker Road. The other route is the 66 which travels along Arapahoe Road and terminates at Cherokee Trail High School, although service to this area is limited to only peak times of the day. Much of the SEATS study area lies outside the current RTD district.

Relative to trails, there are various segments that exist within current developments including Tollgate Crossing and Tallyn's Reach. In addition, a recreation trail exists around the Aurora Reservoir.

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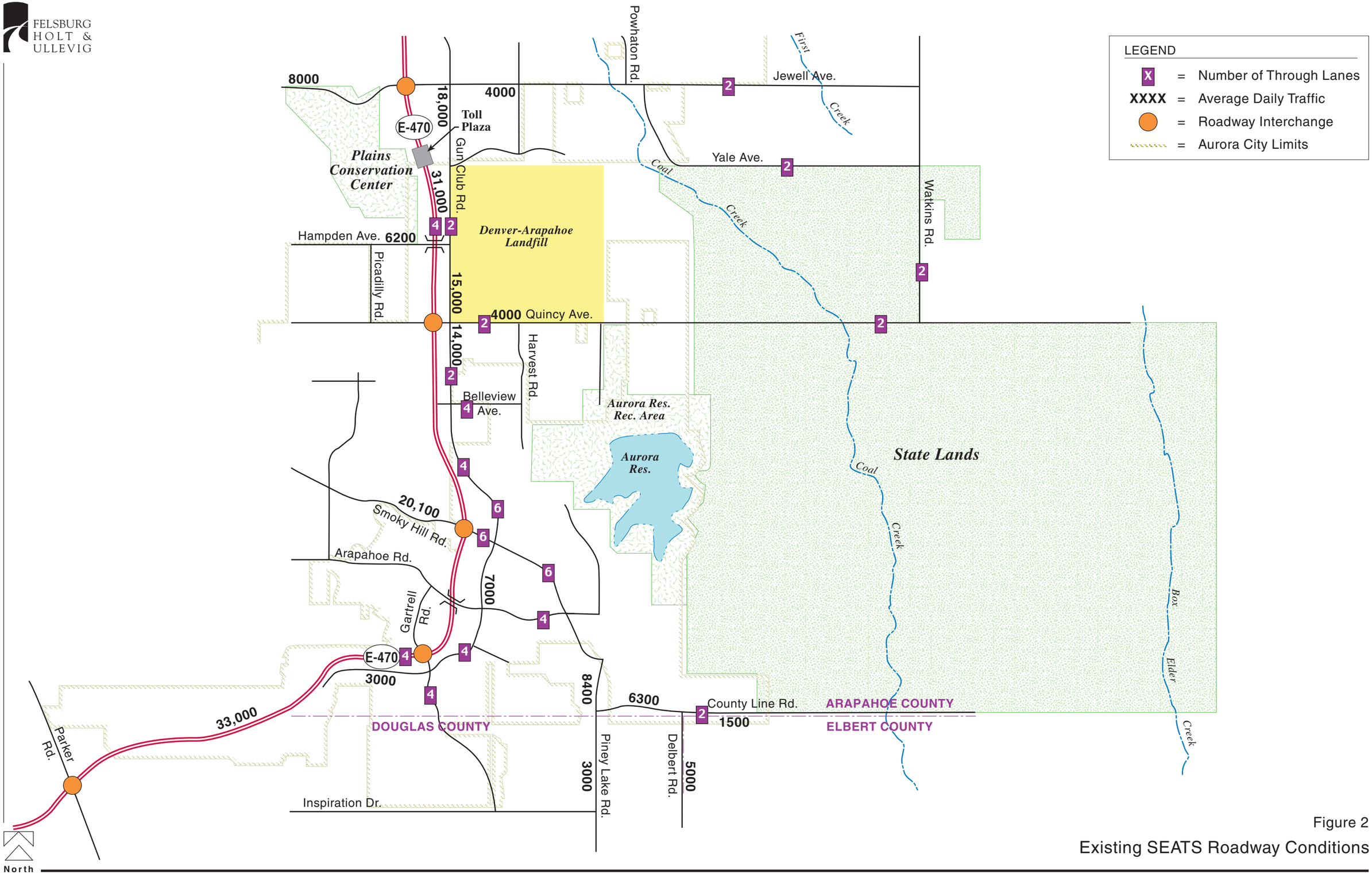

Figure 2

Existing SEATS Roadway Conditions

III. FUTURE CONDITIONS

A. *Land Use*

One of the key input considerations for the travel demand model includes the magnitude and nature of households and employment by Transportation Analysis Zone (TAZ). Several sources were considered in developing the 2030 land use data to develop travel demand forecasts including:

- Development proposals and known development planning efforts
- Forecasted land use data developed by DRCOG for the regional travel demand model
- Forecasted land use data developed by City staff

All three sources were considered on a TAZ by TAZ basis in developing the SEATS model land use. Most of the data used in this analysis were the DRCOG forecasts with several exceptions including:

- Transport Area (south of Front Range Airport) – DRCOG employment numbers were reallocated between TAZ's in this area, but totals for the area were in-line with anticipated development levels. At build out (which is anticipated to be post 2030). Transport could generate as much as 140,000 vehicle-trips per day.
- Various changes to land use were made to areas within the SEATS study area to reflect actual approved development and master plans such as Sorrel Ranch, Pomeroy, High Plains and Southshore.

The Appendix shows the most recent City-approved master development plan areas. The larger master plan areas within the SEATS study area include:

- Southshore – 2,660 homes
- Tallyn's Reach – 2,890 homes
- Heritage Eagle Bend – 2,500 homes
- Rocking Horse – 1,500 homes
- Wheatlands – 1,550 homes
- Tollgate Crossing – 1,610 homes
- Southlands – 1,100 homes and approximately 1.5 million square feet of retail use.

There are numerous other developments planned in the areas, many under construction. Notable development plans south and west of the Aurora Reservoir include Butterfield Trails, High Plains, Whispering Pines, and Beacon Point.

The TAZ map and the associated land use numbers used in this analysis are presented in the **Appendix**.

B. Roadway Network

A base roadway network was coded into the model, and this is also shown in the appendix. Embellishments beyond DRCOG's regional 2030 model include:

- The addition of County Line Road (as a collector) between Piney Lake Road and South Aurora Parkway.
- Establishing Belleview Avenue as a collector road from Picadilly Street to Harvest Road (including an overpass of E-470).
- Establishing Quincy Avenue as a six-lane major arterial as far east as Monaghan Road.
- Adding Yale Avenue as a four-lane minor arterial facility extending from Gun Club Road to Watkins Road.

The E-470 Tollway is represented in the model as a six-lane freeway with tolls that influence driver decisions on when and where to use the Tollway. Major arterial roads represented in the model include Gun Club Road with four lanes north of Quincy Avenue and six lanes south of Quincy Avenue, Smoky Hill Road with four lanes east of E-470 and six lanes west of E-470, Arapahoe Road with six lanes east of E-470 and six lanes west of E-470 and Powhaton Road with four lanes.

C. Travel Demands

Applying the model with the modifications indicated in the previous sections has produced a set of 2030 daily traffic projections that are presented in **Figure 3**. The model used in support of the *I-70/E-470 Interchange Feasibility Study,* with embellishments previously described, was used in support of this effort. City planning staff administered the application of the model.

Many of the SEATS study area arterial roadways are projected to carry a significant level of traffic. Roadway segments that are anticipated to see a strong concentration of traffic in 2030 include:

- **Quincy Avenue**. Between Gun Club Road and Monaghan Road, between 26,000 and 32,000 vehicles per day are projected to use this facility.
- **Monaghan Road.** This facility is projected to carry 25,000 vehicles per day within the SEATS study area. This roadway is planned to connect to I-70. As such, it can be expected to serve a significant amount of traffic.
- **Jewell Avenue.** Approximately 20,000 to 34,000 vehicles per day will be using Jewell Avenue between Monaghan and E-470.

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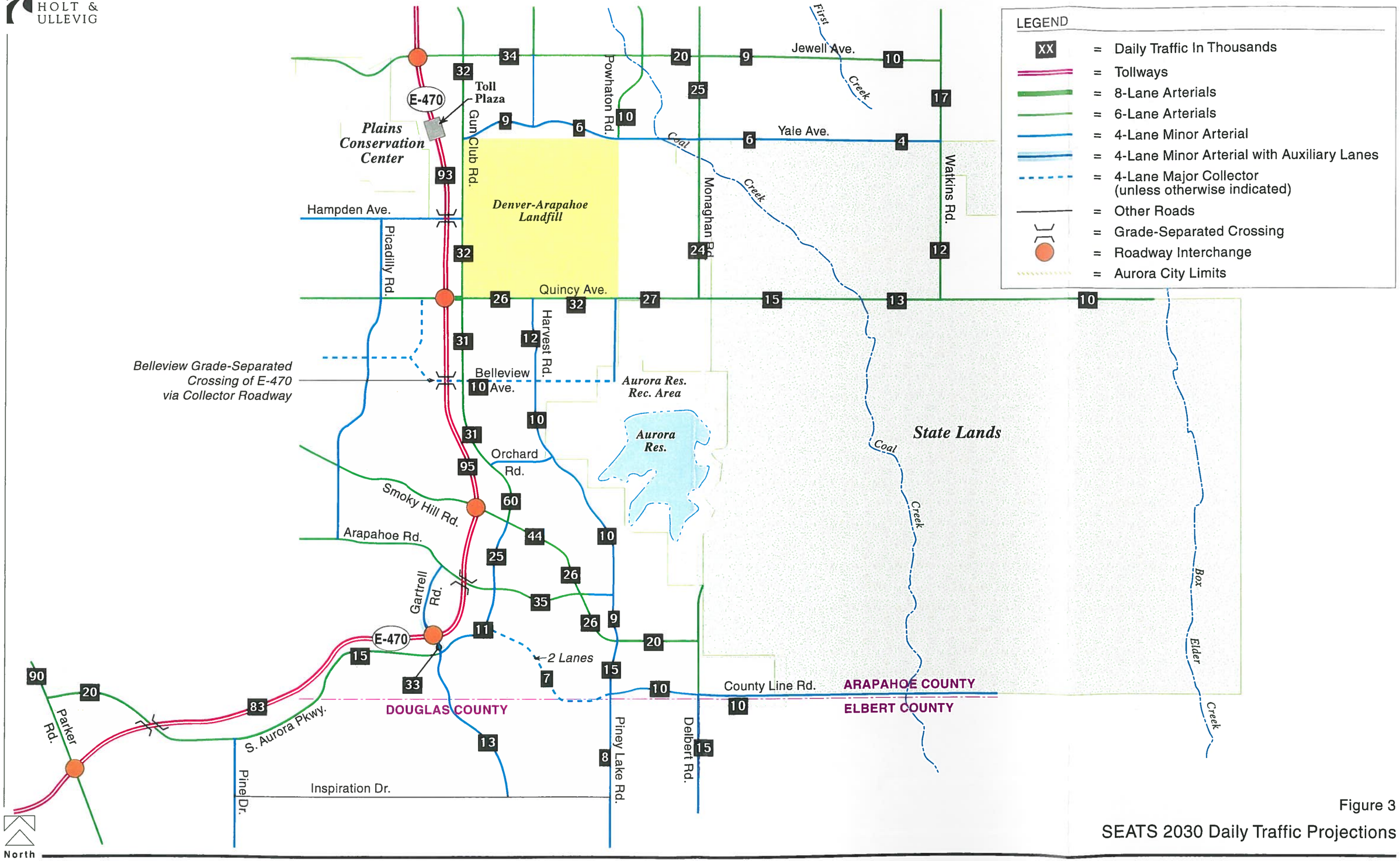

Figure 3

SEATS 2030 Daily Traffic Projections

- **Watkins Road.** Approximately 12,000 to 17,000 vehicles per day are estimated on Watkins Road between Quincy Avenue and I-70.
- **E-470/Smoky Hill Road Area.** Both South Aurora Parkway and Smoky Hill Road are anticipated to carry significant traffic loadings near their intersection due to, (1) their continuity, (2) the interchange at E-470/Smoky Hill Road, and (3) the major attraction of Southlands.

Beyond these high concentration areas, most of the arterial roads are projected to experience traffic levels in-line with urban environments. Between 10,000 vehicles per day and 35,000 vehicles per day are anticipated along most of the arterial network. Beyond the 2030 time frame, traffic volumes have the potential to increase further as the SEATS area reaches build out.

IV. RECOMMENDED 2030 TRANSPORTATION SYSTEM PLAN

This section of the report documents the recommended plan for the Aurora Southeast Area Transportation Study. Three primary elements are addressed: roadways, transit service, and trails. The plan is based on travel demand estimated for the year 2030, but many of the plan's components are intended to also accommodate possible conditions beyond the year 2030. As such, there are roadways shown on the plan that may seem to be over-designed in light of the 2030 traffic projections, but the intent is to preserve the higher-design option for the post-2030 timeframe.

A. Roadway Network

The SEATS Roadway Network Plan is shown in **Figure 4**. Several classifications of roadways have been identified ranging from 4-lane collector roads to 8-lane arterials. It is not the intent of this plan to necessarily show all collector roads needed to serve the SEATS area. Current City development standards require collector roads at approximately the half-section lines, so only collectors that are thought to have a role in serving some regional travel needs are shown. All other collector roads would be planned as part of development master plans. Cross-sections for the arterial roads should comply with the latest version of City roadway design standards.

Roadway facilities within the SEATS study area are planned to be a mix of major arterials and minor arterials. Among the most critical is Quincy Avenue which is planned to be a six-lane major arterial through the study area, but an eight lane section is identified for the short stretch between E-470 and Gun Club Road. Quincy Avenue will provide the greatest level of east-west continuity through the study area being located between major land uses (the Landfill and Aurora Reservoir). If the State Land Board property develops, the Quincy Avenue segment between Gun Club and Monaghan Roads will need to be carefully assessed with respect to specific laneage needs (addressed in a more detailed future traffic impact study). The other six-lane major arterial roads identified in the plan include:

- Smoky Hill Road
- South Aurora Parkway west of Gartrell Road
- Arapahoe Road
- Gun Club Road
- Monaghan Road
- Watkins Road
- Jewell Avenue

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Note: This plan does not necessarily show all needed 4-lane collector roads. Aurora will generally require major collectors at the mid-section lines.

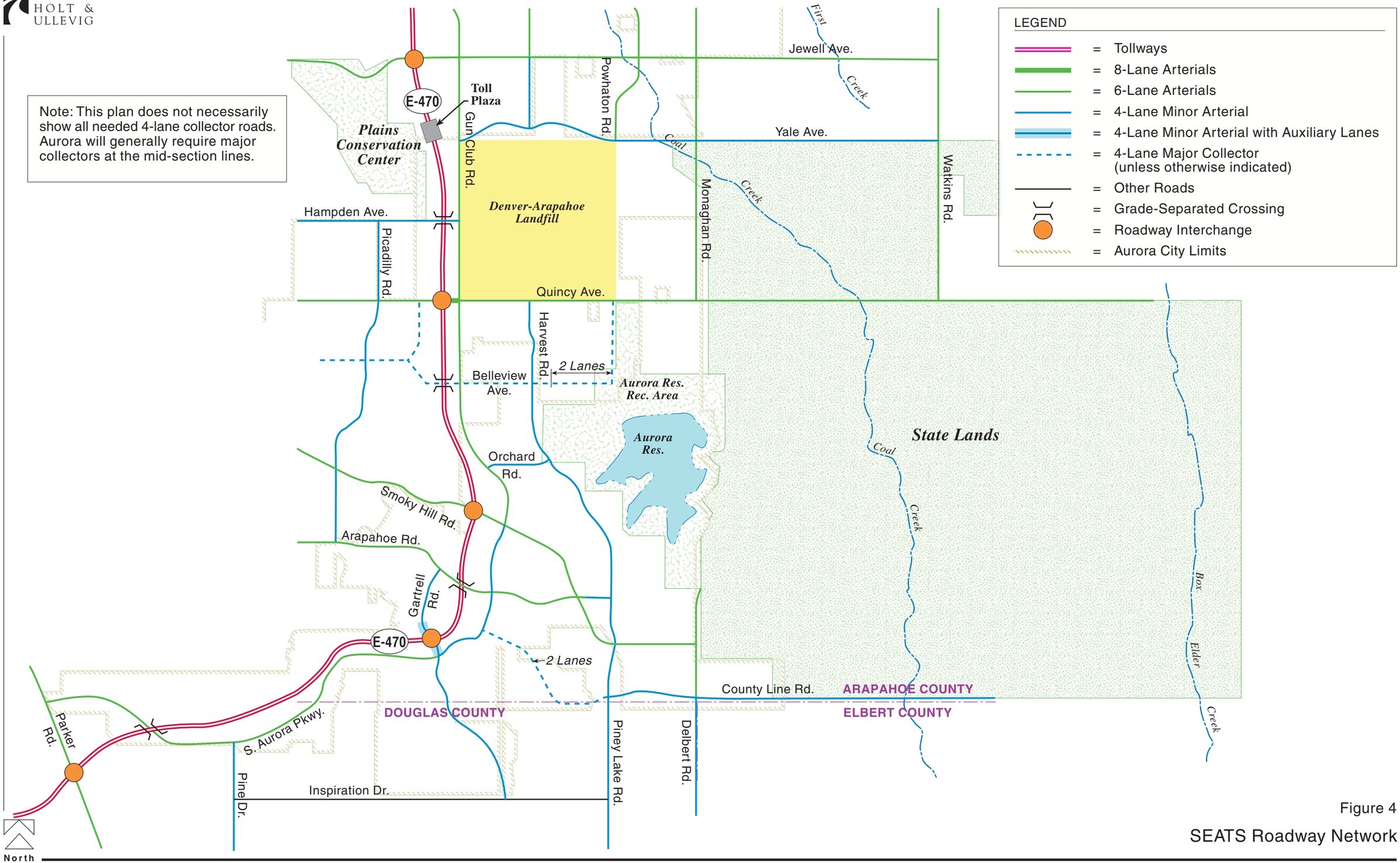

Figure 4

SEATS Roadway Network

County Line Road is planned to be a four-lane minor arterial, but the section between Piney Lake Road and South Aurora Parkway is programmed to be a collector road. Approved development in this area (Whispering Pines) has already established this cross-section. Smoky Hill Road and Arapahoe Road have adequate reserve capacity to accommodate east-west travel in the immediate area.

East of Aurora Reservoir, current plans include maintaining the land, controlled by the State Land Board, as open space. There is the possibility of a future reservoir east of Aurora Reservoir which would likely have access roads built to it, but other roadways or development within the area are not contemplated.

City street cross-sectional standards are shown in the City's Roadway Design and Construction Specifications. The City also recently adopted a set of Urban Street Standards for urban centers and Transit-Oriented Development (TOD) areas. These are not specifically shown in this report, so the reader is referred to the above document. General characteristics of study area cross-sections include:

- **Six-Lane Arterial** – Three through lanes in each direction, a center median area capable of accommodating two lanes (possibly dual left turn lanes), and 10-foot detached sidewalks along both sides of the roadway. The landscape width between the curb and sidewalk is of adequate width that it could accommodate an additional lane (possibly a right turn lane). An eight-lane arterial would be identical with an additional 24 feet of pavement and right-of-way.
- **Four-Lane Arterial** – Two through lanes in each direction, a center median area capable of accommodating one lane (possibly a left turn lane), bike lanes along both sides of the street, and 8-foot detached sidewalks along both sides of the roadway. The landscape width between the curb and sidewalk is of adequate width that it could accommodate an additional lane (possibly a right turn lane).
- **Four-Lane Collector** - Two through lanes in each direction, bike lanes along both sides of the street, and 5-foot detached sidewalks along both sides of the roadway.
- **Two-Lane Collector** - One through lane in each direction, bike lanes along both sides of the street, parking lanes along both sides of the street, and 5-foot detached sidewalks along both sides of the roadway.
- **Local** – There are several versions of Local Streets, but they generally include one moving lane in each direction, parking lanes along both sides of the street, and 5-foot detached sidewalks along both sides of the roadway.

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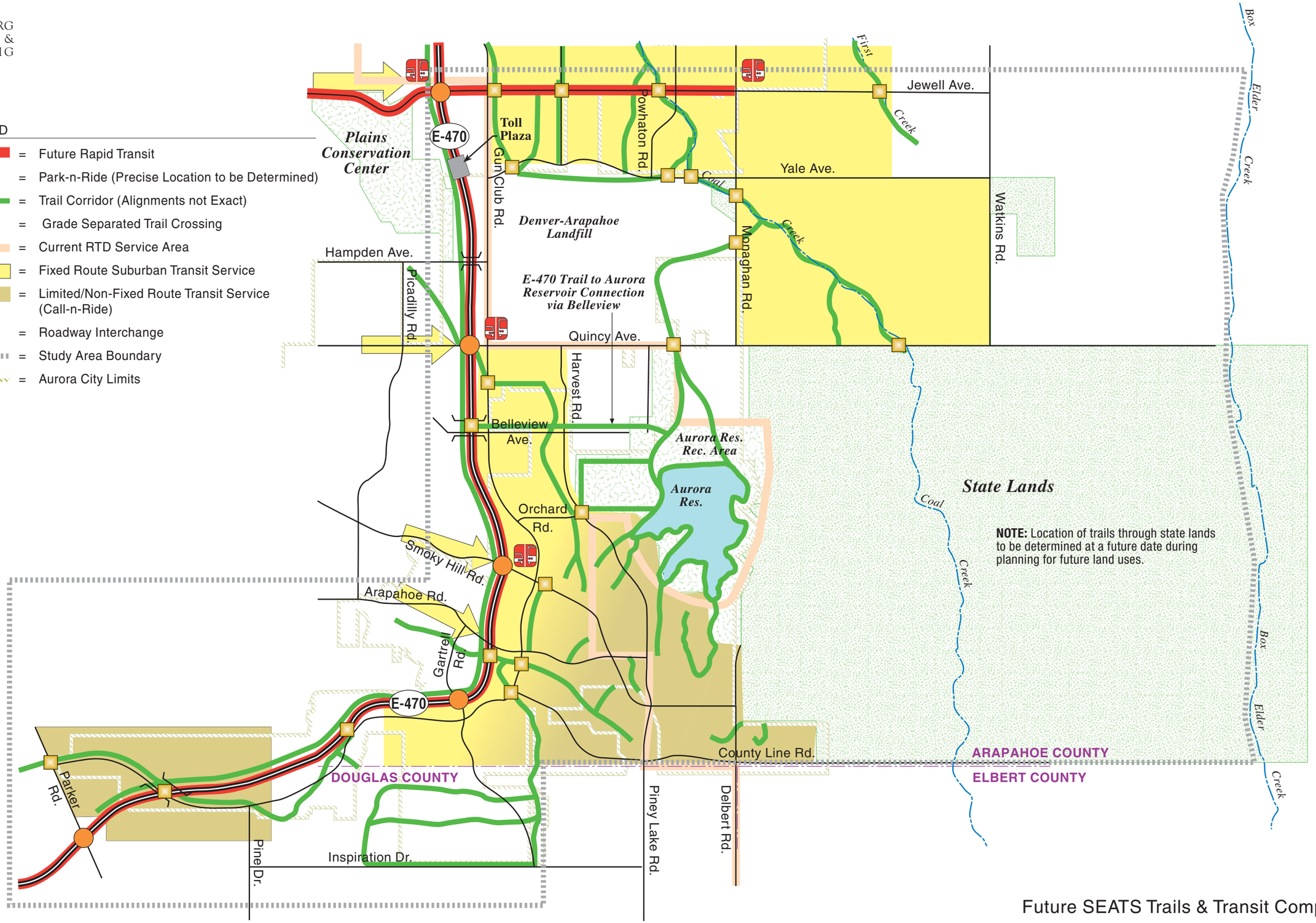
LEGEND

- = Future Rapid Transit
- = Park-n-Ride (Precise Location to be Determined)
- = Trail Corridor (Alignments not Exact)
- = Grade Separated Trail Crossing
- = Current RTD Service Area
- = Fixed Route Suburban Transit Service
- = Limited/Non-Fixed Route Transit Service (Call-n-Ride)
- = Roadway Interchange
- = Study Area Boundary
- = Aurora City Limits



North

Figure 5

Future SEATS Trails & Transit Components

B. *Transit and Trails*

Transit Service

Both the Transit and Trails elements are shown in **Figure 5**. The transit component defines areas where new transit service should be considered as well as the potential for major transit corridors. Basic bus service provided by RTD should be expanded east as development occurs and conditions warrant. Two levels of expansion have been developed, one which entails regular fixed route service extended from current routes today. The fixed-rate "shading" also covers those areas where development levels might be substantial enough to warrant such services. The other level reflects development being on the fringes of the urbanized area and would entail a less-frequent service such as call-n-ride and fixed route peak period service. Potentially, service could also be tied to possible express routes or Sky Ride routes that could utilize E-470. The feasibility of expanding transit service to newly developed areas will need to be determined by RTD on a continuous basis as development occurs.

RTD service to the SEATS Study area will require an expansion of the RTD service area boundary. Currently, a significant amount of Aurora land areas including numerous approved Framework Development Plans, is outside the Regional Transportation District (RTD) boundary. By current state statute, these land areas must go through a petition and election process in order to be annexed into RTD. In addition, only registered electors who reside within the geographic boundaries of the land areas are considered to be "eligible electors" for such an election. Property owners are not eligible to sign the petition or to vote.

The Aurora City Council has supported on-going coordination with developers and property owners to explore the potential of annexing their lands into RTD. Currently, the 2007 State Legislature has approved a bill that amends the state statute regarding the RTD annexation process. House Bill 07-1186 will allow property owners to submit annexation petitions to the RTD Board for joining the RTD and obtaining necessary transit services. This will significantly simplify the process for bringing areas into the RTD service area. The bill was recently signed by the governor.

Park-n-Ride facilities are shown on the plan at strategic cross-street locations including E-470/Smoky Hill Road, E-470/Quincy Avenue, E-470/Jewell, and possibly at Jewell/Monaghan. Exact locations will need to be further assessed by RTD.

Longer-term transit service (post 2030) could potentially include rapid transit. The median within E-470 has been identified for a future rapid transit facility, exact nature unknown at this time. Jewell Avenue has also been identified for possible rapid transit service extending into the NEATS area from the west. RTD is currently in the early stages of identifying a "Fastracks Two" program for consideration that includes these elements. At this time, the City should ensure that these corridors are preserved for the potential of rapid transit service in the future.

Trails

Planning for the trails element was coordinated with the Parks and Open Space Department's preliminary concept for long-term development of a trail system within the study area. Trail facilities are planned along E-470 and along major drainageways. Other facilities are also planned that connect those planned along drainageways. On-street bike lanes and sidewalks are currently incorporated in the City's roadway standards as presented in the previous section. Collector and local roads planned as part of the development will further supplement the trails shown in **Figure 5** via their sidewalk and bike lane components. Updates to the transportation system plan may be warranted as long-range planning for trails in the city continues and the Parks and Open Space Department refines its vision. Readers should consult with the department for the latest plans.

The trails component also shows locations where grade-separated crossings should be provided. These were generally determined through assessing the nature of the trail (regional or local) and the roadway it crosses. With many of the trails following drainage-ways, another consideration in making a determination for a crossing is the nature of the drainageway's crossing of the road. Since the drainage will always cross below the street, a final assessment can be made at the time of design to determine if the marginal costs to also accommodate a trail grade-separation is prudent for a particular location.

C. Plan Improvement Costs

The SEATS Transportation Plan lays out the transportation requirements needed to serve future demands based on forecasted 2030 land uses and beyond. The more significant element of this plan includes the roadway system. Approximated gross unit costs were used and applied to the improvements as a means to develop conceptual-level cost estimates to see the roadway component come to fruition. The following gross unit costs have been used:

- New/widened Arterial Roadways - $1.5 million per lane-mile.
- New/widened Freeway - $3.5 million per lane mile.

Freeway and arterial lane-miles were extracted from the travel demand model for 2005 and for the 2030 time-frames. From this and from the plan shown on Figure 4, the following gross quantities have been estimated:

- 22 new freeway lane-miles (all E-470, see text)
- 217 new arterial lane-miles.

From these estimates, the roadway element of the SEATS plan is estimated to cost approximately $400 million in 2006 dollars. Some of these costs would be invested along E-470 (one interchange and all 22 lane-miles of freeway) which would likely be funded by the E-470 Public Highway Authority. However, there would still be $325 million that would need to be funded by other entities. This estimate does not account for additional collector and local roadways that will also need to be constructed as part of individual developments. County Line

Road (between South Aurora Parkway and Piney Lake Road) and Belleview Avenue, including its overpass of E-470, would add an additional $15 to $20 million to the total SEATS costs.

D. Priorities and Funding

The SEATS Plan elements identified in **Figures 4 and 5** are intended to provide a "target" in terms of the direction the City should take in serving long-term travel demands extended out to the year 2030 and beyond. Seeing the plan come to fruition will take time and a variety of funding sources. Priorities will be governed largely by the pattern of development that takes place within the SEATS study area. The development community should take on a portion of the improvements as development occurs, but the City should also look to acquire funding through the DRCOG Transportation Improvement Program (TIP) process for improvement projects that have a strong potential to qualify for federal funding.

One of the improvement priorities should be the widening of Gun Club Road. With the recent completion of the Southlands Center and on-going development pressures for land parcels along Gun Club Road, this facility is beginning to experience traffic demands that suggest that its ultimate widening should take place sooner rather than later. Potentially, this widening should be pursued within the next five years.

As part of assessing needs, traffic impact studies for individual developments should assess a broader study area than typically analyzed in the past. Typically, these types of studies assess roadways and intersections immediately adjacent to a development. In the interest of gaining understanding of a development's traffic impact to a particular interchange or grade-separated crossing, a traffic study's analysis area should be expanded at the discretion of City staff. For those developments that are taking place in areas where adequate roadway infrastructure is still lacking, the City may want to adopt a policy requiring "off-site" improvements up-front to ensure adequate transportation facilities are in place.

As development proceeds, reimbursement for off-site improvements could be offered to the initial developer. The added role of a traffic study for the more remote development proposals would be to identify these up-front off-site improvement needs and begin to set the stage for a phased sub-area transportation plan and identify appropriate funding and phasing. Improvements like interchanges and grade-separated crossings need to be among the off-site improvements considered as part of this process.

In addition, the City has commissioned the Development Cost Study, which will focus in part on identifying development related infrastructure needs and associated funding alternatives. This too could be a part of the solution relative to identifying funding sources for needed transportation projects. Another funding source includes Arapahoe County's Regional Transportation Infrastructure Fee Program which has identified several SEATS roadways eligible for funding or partial funding (in unincorporated areas only). These include:

- Gun Club Road
- Belleview Overpass of E-470

APPENDIX

APPROVAL STATUS OF MASTER PLANNED AREAS & FUTURE RESIDENTIAL GROWTH AREAS, APRIL 2007
TRANSPORTATION ANALYSIS ZONE MAP
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MONAGHAN ROAD PLAN & PROFILE

Total Potential Dwelling Units, Population and Land Area for Master Planned/Future Residential Growth Areas:

Potential Dwelling Units: 83,513
Population: 216,019
FDP Acres: 25,203

Future Residential Acres north of I-70 and Industrial Acres around Front Range Airport = 12,276

Combined Total Acreage = 31,232

HIGH POINTE AT DIA
1.609 ACRES MIXED USE
2,490 DWELLINGS

PAINTED PRAIRIE
640 ACRES
3,076 DWELLINGS

WINDLER HOMESTEAD
872 ACRES MIXED USE
2,171 DWELLINGS

SAGEBRUSH FARMS
315 ACRES
989 DWELLINGS

FUTURE RESIDENTIAL
415 ACRES

SINGLE TREE
141 ACRES
643 DWELLINGS

GREEN VALLEY RANCH EAST
2,505 ACRES
9,958 DWELLINGS

FITZSIMONS BIOSCIENCE
236 ACRES

HORIZON CITY CENTER
414 ACRES MIXED USE
2,853 DWELLINGS

TRADITIONS
290 ACRES
1,064 DWELLINGS

ADONEA
321 ACRES
1,192 DWELLINGS

FITZSIMONS VILLAGE
35 ACRES
644 DWELLINGS

ABILENE STATION TOD
14 ACRES MIXED USE
939 DWELLINGS

CROSS CREEK
218 ACRES MIXED USE
1,070 DWELLINGS

WATERSTONE
240 ACRES
780 DWELLINGS

SUN MEADOW
318 ACRES
1,350 DWELLINGS

INDUSTRIAL
5,656 ACRES

STARFALL
320 ACRES
1,211 DWELLINGS

CENTREPOINT
129 ACRES MIXED USE
500 DWELLINGS

TRAILS AT FIRST CREEK
316 ACRES
1,140 DWELLINGS

MURPHY CREEK
1,106 ACRES
3,839 DWELLINGS

SAND CREEK RANCH
480 ACRES
1,499 DWELLINGS

JEWELL COMMONS
INDUSTRIAL/RETAIL

EASTERN HILLS
3,300 ACRES
15,000 DWELLINGS

THE GARDENS AT HAVANA
64 ACRES MIXED USE
424 DWELLINGS

THE LANDINGS AT JEWELL
LIGHT INDUSTRIAL

COTTONWOOD CREEK
684 ACRES
2,000 DWELLINGS

CONSERVATORY
490 ACRES
1,425 DWELLINGS

VILLAGES AT MURPHY CREEK
208 ACRES
800 DWELLINGS

MURPHY CREEK EAST
171 ACRES
896 DWELLINGS

TOLLGATE CROSSING
441 ACRES
1,613 DWELLINGS

SORREL RANCH
213 ACRES
980 DWELLINGS

POMEROY
63 ACRES
730 DWELLINGS

SOUTHLANDS
231 ACRES 1,100 DU
W/ COMMERCIAL DEV.

BEACON POINT
337 ACRES
900 DWELLINGS

TALLYN'S REACH NORTH
296 ACRES
1,031 DWELLINGS

SOUTHSHORE
813 ACRES
2,656 DWELLINGS

SADDLE ROCK SOUTH
323 ACRES
566 DWELLINGS

TALLYN'S REACH
650 ACRES
2,888 DWELLINGS

KINGS POINT NORTH
944 ACRES
1,816 DWELLINGS

HIGH PLAINS
637 ACRES
900 DWELLINGS

KINGS POINT SOUTH MOORE
211 ACRES
625 DWELLINGS

BUTTERFIELD TRAILS
371 ACRES
881 DWELLINGS

WHISPERING PINES
200 ACRES
455 DWELLINGS

SERENITY RIDGE
225 ACRES
450 DWELLINGS

KINGS POINT SOUTH PRUSSE
FUTURE RESIDENTIAL

HERITAGE EAGLE BEND
1,018 ACRES
2,501 DWELLINGS

ROCKINGHORSE
1,031 ACRES
1,500 DWELLINGS

RANNEY PROPERTY
34 ACRES
86 DWELLINGS

TALLYNS REACH SOUTH
34 ACRES
86 DWELLINGS

AREAS CORRESPONDING TO MAP NUMBERS

1. SADDLE ROCK NORTH
   229 ACRES
   220 DWELLINGS
2. SADDLE ROCK EAST
   295 ACRES
   1,185 DWELLINGS
3. FOREST TRACE
   76 ACRES
   174 DWELLINGS
4. WHEATLANDS
   487 ACRES
   1,553 DWELLINGS
5. CHEROKEE TRAIL HIGH SCHOOL (CCSD)
6. EAGLE'S NEST COMMERCIAL

Approval Status of Master Planned Areas and Future Residential Growth Areas

April 2007

Legend

- AURORA
- OUTSIDE CITY LIMIT
- FDP APPROVED 22,248 ACRES
- FDP IN PROCESS 2,955 ACRES
- GDP APPROVED 4,552 ACRES
- APPLICATIONS ANTICIPATED 968 ACRES
- GDP IN PROCESS 99 ACRES
- FUTURE RESIDENTIAL GROWTH AREAS*

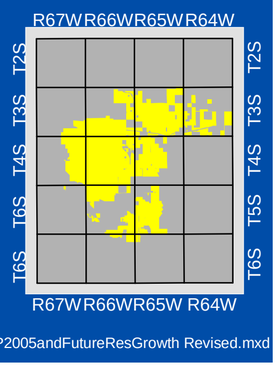
* Future Residential Growth Areas reflect a combination of "applications approved", "applications in process" and/or "anticipated" residential development. Actual residential build-out numbers my vary from those shown and would likely decrease.

Miles 0 1 2 4

Projection: Lambert Conic Conformal

Coordinate System: State Plane, Colorado Central

Datum: North American Datum (NAD) 1983 (Feet)



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DATE: 02.02.05 FILE: I:/GIS/ARC 9 MXDs/PLANNING/DEVELOPMENT/FDP2005andFutureResGrowth Revised.mxd

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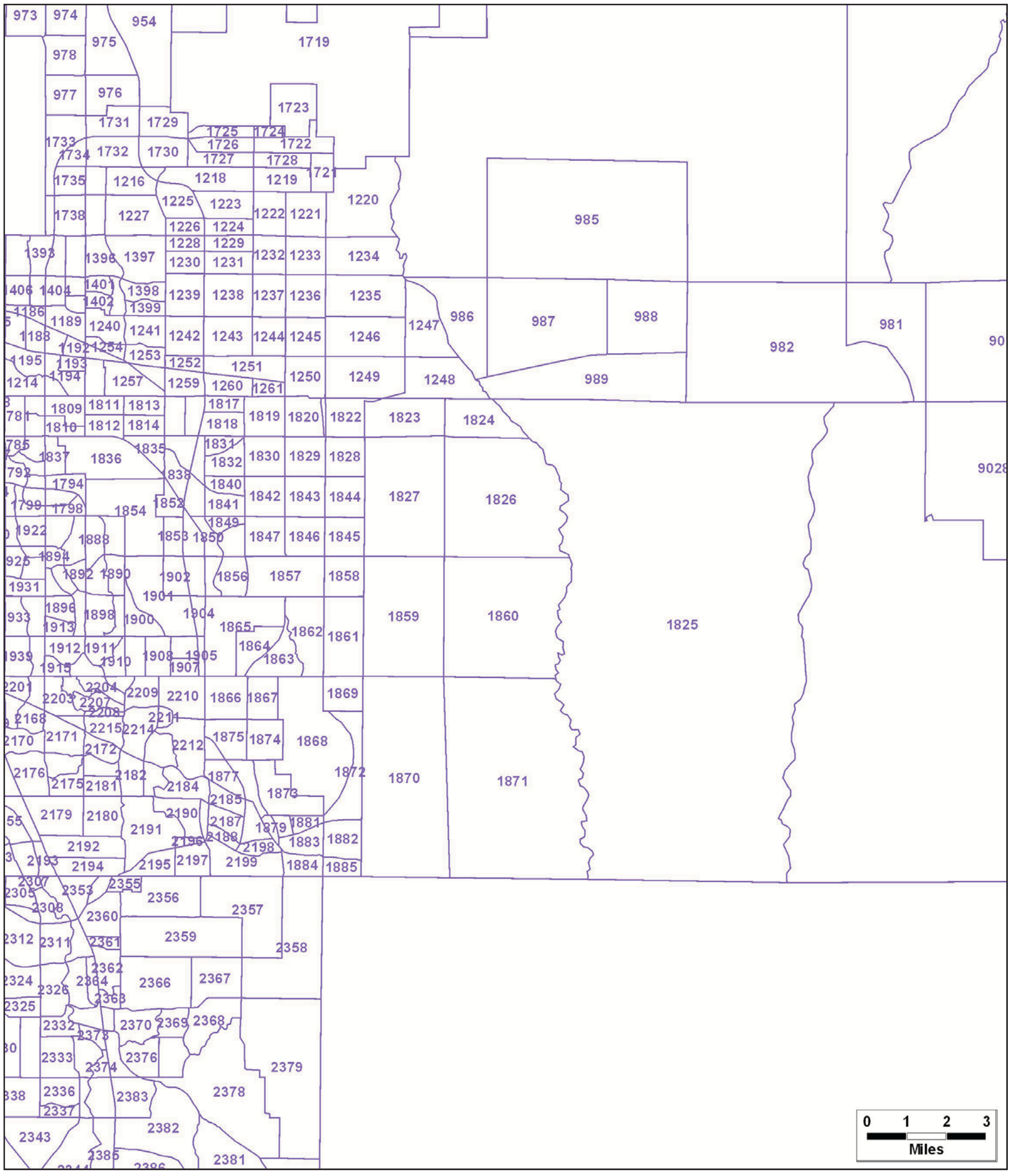

Transportation Analysis Zone Map

2030 Land Use Data

NEATS/SEATS UPDATE

Land Use Comparison

		DRCOG LU		2000-2030 Growth*			NEATS/SEATS Modelling Effort	
TAZ	ID	EMP	HH	EMP	HH	Comments	EMP	HH
979	30501	300	417				300	417
980	30502	82	197				82	197
981	30505	101	108				101	108
982	30506	1604	4875			Bennett - County capacity	1604	4875
985	30509	416	603				416	603
987	30511	1690	2	4614.4	0	Front Range Airport	1690	2
988	30512	2657	0	1271	0	Front Range Airport	2657	0
989	30513	2315	124	1022.4	13.4	Front Range Airport	2315	124
1218	31303	577	0	518.8	168.2	Too Close to DIA for HH's?	577	0
1220	31305	478	0				478	0
1221	31306	31	0	19.7	0		31	0
1222	31307	708	0	144.7	0		708	0
1223	31308	1565	88	951.3	308.5	High Pointe at DIA	1565	300
1224	31309	792	548	993.5	318.9		792	548
1229	31314	2052	741	1469.9	492	Windler Homestead	2052	741
1231	31316	831	760	908.1	392.8	Windler Homestead	831	760
1232	31317	3297	1248	251.6	72.1	Sagebrush	3297	1248
1233	31318	77	26	5.7	1.5		77	26
1234	31319	279	3				279	3
1235	31320	40	544				40	544
1236	31321	19	59	1.4	3.4		19	59
1237	31322	361	2868	26.6	165.7		361	2868
1238	31323	52	1427	723	1328.5	Green Valley Ranch East	700	1427
1243	31328	58	765	78.1	485.6		58	765
1244	31329	322	2631	24.3	152.2	Green Valley Ranch East	322	2631
1245	31330	74	48	2.7	2.8		74	48
1246	31331	7	0	0	0		7	0
1249	31334	152	547	49.7	145.3		152	547
1250	31335	151	0	44.7	0		151	0
1251	31336	2738	143	3069.1	13		2738	143
1260	31345	1380	225	766.6	0	Prologis	1380	225
1261	31346	189	3	5.2	0	Blue Spruce	189	3
1721	41304	276	0				276	0
1722	41305	6673	0				6673	0
1726	41309	1040	0				1040	0
1727	41310	0	1				0	1
1728	41311	53	1				53	1
1730	41313	0	0				0	0
1817	50409	1150	482				1150	482
1818	50410	2244	1388	1675.5	941.9		2244	1388
1819	50411	116	1749	13.3	463.5		116	1749
1820	50412	85	1219	1.8	194.1	Sky Ranch	85	1219
1821	50413	0	2	0	0.2	Sky Ranch	0	2
1822	50414	0	302	0	75.1	Sky Ranch	0	302
1823	50415	2	23	0	5.8		2	23
1824	50416	35	55				35	55
1825	50417	393	2467			Big TAZ; Centroids.	393	2467
1826	50422	31	73				31	73
1827	50423	32	189	3.9	16.7		32	189
1828	50424	29	524	19.5	84.1		29	524
1829	50425	83	1772	69.2	297.6	Starfall	83	1772
1830	50426	74	1679	66.8	288.1	Traditions and Adonea	74	1649
1831	50427	1480	740	938.3	418.3	Cross Creek	1480	740
1832	50428	71	221	30.9	80.1		71	221
1833	50429	662	238	296.5	179.9		662	238
1839	50435	19	1	7.6	0		19	1
1840	50436	8	31				8	31
1841	50437	9	66	0.1	20.3		9	66
1842	50438	77	1736	79.6	1465.3		77	1736
1843	50439	79	1790	82.2	1511.6	Eastern Hills, Sand Creek Ranch	79	1790
1844	50440	398	3278	81.4	1497.6	Eastern Hills, Trails at 1st Cr.	398	3278
1845	50441	380	3130	77.7	1429.2	Eastern Hills	380	3130
1846	50442	74	1679	77	1416.7	Eastern Hills	74	1679
1847	50443	95	1870	80.2	1477.8	Eastern Hills	95	1870
1848	50444	87	1191	63.3	417	Murphy Creek	87	1191
1849	50445	1	1075	0.6	130.5	Murphy Creek	1	1075
1850	50446	486	597	216.8	286.5	Murphy Creek	486	597
1851	50447	1141	620	497.6	432.9	Jewell Commons	1141	620
1855	50451	670	157	484.6	123.9		670	157
1856	50452	32	1262	24.6	953.8		32	1262
1857	50453	151	3033	106.5	2315.6		151	3033
1858	50454	79	279				79	279
1859	50455	103	1566			State Land Board	103	1566
1860	50456	76	123				76	123
1861	50457	123	333			State Land Board	2378	12800
1862	50459	987	291				987	291
1864	50460	55	146				55	146
1865	50461	60	0	0.1	0		60	0
1866	50462	14	192				14	1150
1867	50463	14	216				14	216
1868	50464	99	1531			Aurora Reservoir	99	1531
1869	50465	56	148			North of Aurora Reservoir	56	148
1870	50466	0	2				0	2
1871	50467	5	0				5	0
1872	50468	81	225			State Land?	81	225
1873	50469	154	1520	478.2	2051.1	Beacon Point, Southshore	154	1520
1874	50470	30	148	11.9	72.1		30	148
1875	50471	146	860	457.7	907.8	Sorrel Ranch, Pomeroy	458	1700
1876	50472	76	262	208.7	256.2	Sorrel Ranch, Pomeroy	208	262
1878	50473	381	1004	3419.7	1502.4	Wheatlands	381	1200
1879	50474	13	137	1403.4	1295.2	Southshore	95	1295
1880	50476	133	212	411.7	279.1	Southshore	412	280
1881	50477	39	250	126.6	344.6	Southshore	127	345
1882	50478	56	153			State Land?	56	153
1883	50479	51	767	144.7	990.8	Southshore, High Plains	51	991
1884	50480	64	466	156.2	523.6	High Plains	64	466
1885	50481	0	2	0.5	1.6	Butterfield Trails	0	1443
1901	50516	21	462	12.6	172.2	Plains Conservation	21	462
1903	50518	2309	670	789.9	410.7		2309	670
2185	51421	112	987	125	981.1	Tallyns Reach North	112	987
2186	51422	208	1403	346.9	752	Tallyns Reach	208	1403
2187	51423	50	1352	116.6	855.7	Tallyns Reach	50	1352
2188	51424	51	315	128.7	154.3		51	315
2198	51434	9	55	0.5	40.3		9	55
2199	51435	39	910	38.6	109.1	Whisper Pines and Eagle Bend	39	910
2209		23	1110			Copperleaf	23	1110
2210		355	1729			Copperleaf	355	1729
2356		170	964	90	861	From Douglas Co	170	964
2357		278	1084	44	1397	From Douglas Co	278	1397
2358		289	419	52	1005	From Douglas Co	289	1005
2359		260	687	90	471	From Douglas Co	260	687

3/15/2006

* From City's land use estimation efforts, unless otherwise indicated.

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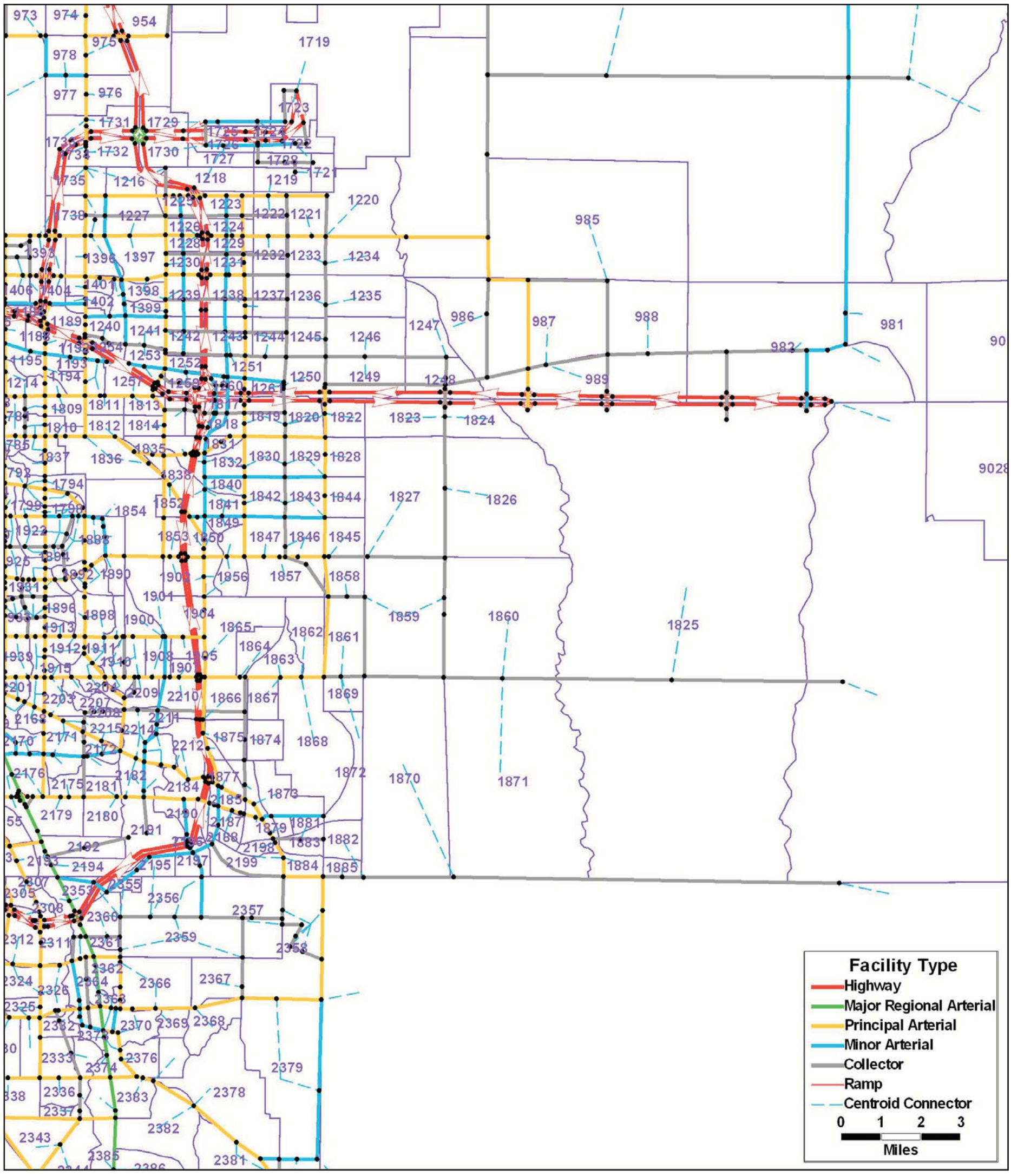
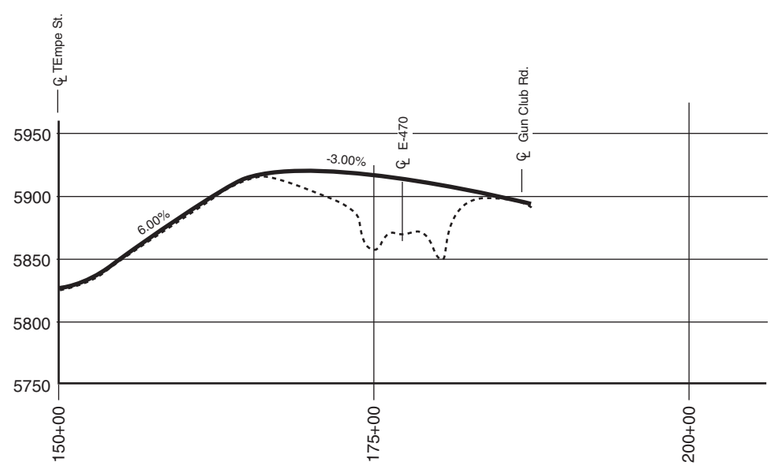


2030 Model Roadway Network

NEATS and SEATS Raw Model Network Lane-Miles

	NEATS		SEATS	
	2005	2030	2005	2030
Facility Type	**Lane-Miles**	**Lane-Miles**	**Lane-Miles**	**Lane-Miles**
Highway	99.66	120.3	43.44	64.83
Major Regional Arterial	4.18	0	15.72	15.72
Principal Arterial	0	479.86	5.62	228.04
Minor Arterial	67.52	111.7	40.84	35.58
Collector	108.44	83.6	82.58	74.02
Ramp	5.3	13.33	1.89	1.91
Centroid Connector	112.64	119.76	90.7	88.22

6/21/2007



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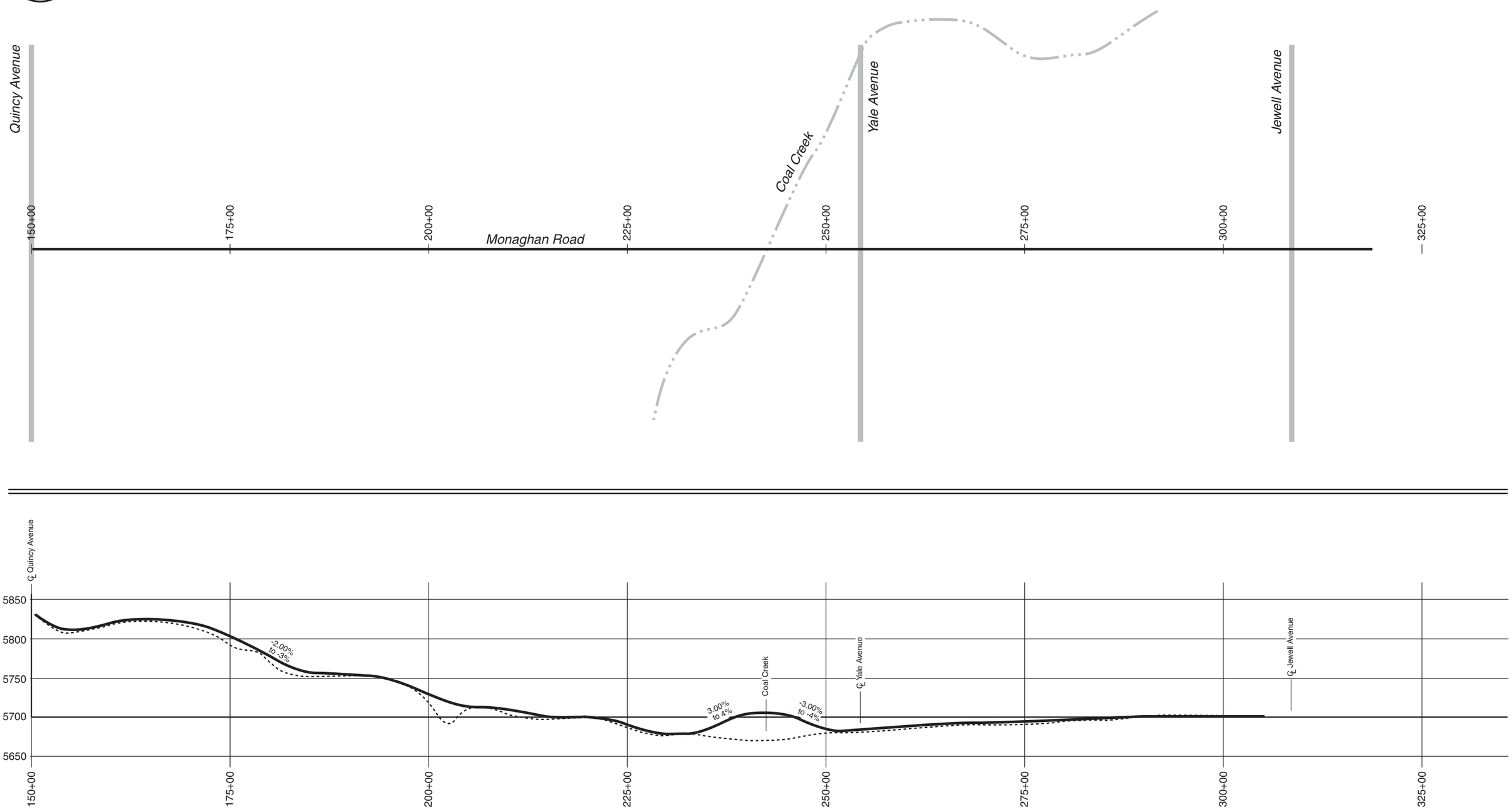
05-270 May 7, 2007

North

APPROXIMATE SCALE: 1" = 1200'

Belleview Avenue - Plan & Profile



FELSBURG HOLT & ULLEVIG

05-270 May 7, 2007

North

APPROXIMATE SCALE: 1" = 1200'

Monaghan Road - Plan & Profile

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