#### Frequently Asked Questions About Noise

#### Who will benefit from the walls?

The walls are typically designed to mitigate noise for the first and second row of homes adjacent to I-25.

#### What is the current noise level from the highway?

According to the Final Environmental Impact Statement (FEIS), 1998 peak noise levels in these two areas, on average, generally range in decibel levels from the 60s to 70s for the first and second row of homes. It is important to note that existing measured noise levels are not used to predict the future noise levels. They are used to help test the noise models to assure the predictions will be as accurate as possible.

#### What will be the future noise levels from the highway, and how will the walls mitigate that impact?

Based on the models, the future noise levels at the peak hours without walls, on average, will range from decibel levels of the mid-60s to mid-70s. Detailed studies to predict future traffic noise levels are developed using anticipated worst-case traffic volumes in 2020 and the final design of the project corridor. The noise levels do not seem dramatically higher than those referenced above; in order for noise to increase more than three decibels (a level perceptible to humans), the traffic conditions must double. Projections for 2020 show an approximate 25 to 30 percent increase in traffic volume. With walls, noise levels for the majority of impacted residences will average in the mid-60s decibel range.

#### What will the walls look like?

The walls facing the interstate between Broadway and Colorado will be gray concrete, with sculpted wall treatments including tepees, mountains, grasses, swallows and farm fields. A treatment design of native grasses will be included on the neighborhood side of walls facing public streets. Walls facing private property will be smooth concrete.



#### When will these walls be built?

Construction on the walls will begin this year.

## Why is T-REX building walls in the Narrows

#### (from Logan to University)? I heard they might not be effective.

If the T-REX Project strictly followed federal and state policy, only four of the 16 walls planned between Broadway and University would be built. Why? The federal and state guidelines for sound walls use the following criteria: Sound walls should provide a minimum noise reduction of five decibels during peak noise times to qualify as a sound wall. Traffic running along Buchtel Boulevard behind the proposed walls makes it impossible to achieve this standard during peak hours for the vast majority of the walls. However, as a result of listening to public input regarding this issue for the past three years, a decision was made to construct all of the walls, as was previously committed to during the Environmental Impact Statement phase. Instead of just focusing on the federal and state guidelines, T-REX decided to review the impact on people when they are most likely to be in their homes. Walls will provide sound-reduction benefits when traffic on Buchtel Boulevard is minimal – at night, for example. Therefore, T-REX believes the walls will provide a benefit to those affected residents, and the walls will be constructed.

## Did T-REX consider other noise mitigation techniques, such as sound-absorptive materials or wrapping the walls onto the bridges?

The final noise analysis found sound-absorptive materials would not provide any perceptible noise reduction for this specific area. Research on sound-absorptive materials has been inconclusive at best, and without reasonable justification of effectiveness, it would not be a responsible use of taxpayer dollars to spend additional resources on unproven technologies. The final noise analysis also concluded that wrapping walls on bridge overpasses in this area would not offer any significant noise reduction; in fact, it would be less than the one decibel.

#### Frequently Asked Questions About Noise (continued)

#### Where will the walls be built?

From Broadway to University, the walls will be built in between the highway and Buchtel Boulevard in both the north and south directions. Walls will be either directly on top of the retaining walls, or between the retaining wall and Buchtel. Because of safety and traffic issues, T-REX is unable to construct the walls on the neighborhood side of Buchtel.

From University to Evans, the walls will be built directly on top of the retaining walls at the edge of the highway or light rail envelope.

### The art-n-Transit Program

The art-n-Transit Program ... on display soon at Wild Oats Market, 1111 S. Washington.

As part of T-REX, the RTD art-n-Transit program called upon the creative talents of local artists to bring an exciting flair to the Southeast Corridor light rail system.

You're invited to stop by Wild Oats and view the T-REX Movement and Light art project. It will bring new elements of style, color, shape and texture to benches, elevator towers, handrails, canopy pillars and more, adding both a functionality and a source of artistic pride to the T-REX communities and light rail passengers.

For more information about station design, the art-n-Transit Program or noise mitigation, please contact the T-REX Project at 303-357-8600 or www.trexproject.com.



# A Trip Through T-REX North: Broadway to Colorado Boulevard

N E W S L E T T E R



DENVER, CO

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#### T-REX - A Step in the Right Direction

By the end of 2006, in the southeast metro Denver area, light rail transit and highway

improvements will make travel easier. The Transportation Expansion (T-REX) Project will:

- Add 19 miles of double-track light rail, connecting to the existing system at Broadway in Denver, and extending along the west side of I-25 to Lincoln Avenue in Douglas County and in the median of I-225 from I-25 to Parker Road in Aurora;
- Add one through lane in each direction on I-25 from Logan Street to I-225 (for a total of four lanes in each direction);
- Add two through lanes in each direction on I-25 from I-225 to C-470/E-470 interchange (for a total of five lanes in each direction);
- Add one through lane in each direction on I-225 from Parker Road in Aurora to I-25 (for a total of three lanes in each direction); and,
- Reconstruct numerous bridges and interchanges, including the I-25/I-225 interchange, and improve drainage and safety along the corridor.

#### Light Rail Stations in T-REX North

When the Regional Transportation District's (RTD) existing light rail line is extended southeast from the Broadway Station, residents along the southeast corridor will have quick access to central downtown, lower downtown and the metro area's southwest suburbs. The southeast light rail line, being built as part of T-REX, includes 13 new light rail stations and 12 park-n-Rides. Three stations and two park-n-Rides will be constructed between Broadway and Colorado Boulevard as part of T-REX North.

Each of the stations includes elements that provide passengers comfort, safety, wheelchair accessibility and protection from the weather. Light rail station elements in T-REX North include four benches per platform, glass-enclosed elevator towers, where appropriate, and gabled platform canopies. The canopy surface will be an opaque, weather-resistant material that will diffuse daylight and filter station lights at night. Each station also will have lockers for bicycles. Closed-circuit television cameras will be provided at key locations at the stations for enhanced security.



#### Louisiana Station

The first light rail station south of the rebuilt Broadway station is Louisiana. While this station does not include a park-n-Ride facility, the Louisiana station will include a kiss-n-Ride passenger drop-off area and an area to accommodate transferring bus passengers. The Louisiana station will be located on the west side and at the same level as I-25. Light rail passengers will access the train platform from street level via stairs or elevators located on either side of Louisiana.



#### **University Station**

The University Station will include a parking structure. With parking for more than 500 vehicles, the five-level parking facility also could include office and retail space on the ground level. The University Station, like all the new light rail stations, will include areas for RTD buses providing service from surrounding areas. In addition, some design elements from the nearby University of Denver campus are being incorporated, such as copper on the parking structure and university colors on the site furnishings.



### Light Rail Stations in T-REX North (continued)

#### Colorado Station

The Colorado Station will be below street level and will be south of the Colorado Center complex, near the site of the former Bell Plumbing and Heating and Pier 1 buildings. Passengers access the platform from street level by stairs or elevators. The Colorado Station park-n-Ride will accommodate more than 350 vehicles on a surface lot.



#### RTD/T-REX art-n-Transit Program

In addition to the benefits that three new light rail stations will bring to the north T-REX neighborhoods, art will be an important element incorporated as part of RTD's art-n-Transit program. The RTD/T-REX Art Advisory Committee, a volunteer panel formed in late 2001 and composed of neighborhood representatives, local art professionals, RTD and T-REX staff, is working hard to ensure that art is a distinctive component of the T-REX project. Art will help provide a connection between neighborhoods and transit and add value to the thousands of commuters, tourists and residents who will use the line beginning in late 2006. When selecting art, the committee considers aesthetics in relation to the community's identity and values, the existing architecture and the artwork's potential for legacy in the Denver region.

Since early 2002, two local Colorado artists have worked to define an overall theme for the station enhancements on the T-REX corridor. Their concept is simple: Movement and Light. Their objective is to place station users in environments surrounded by light, shadow, color and movement in a constantly changing and interactive way. Those themes are depicted by nature, weather and time applied to common station elements such as support pillars, windscreens, elevator towers, railings and concrete. Should funding permit, RTD/T-REX is considering the addition of commissioned, stand-alone art pieces at individual stations along the corridor.

The following are examples of artwork elements and the themes selected by the RTD/T-REX Art Advisory Committee for each of the North T-REX light rail stations.



#### Louisiana - Moving People Theme

Windscreen Bench – The windscreen benches are six feet tall and 12 feet long. They will protect travelers from the elements and provide a place to rest while waiting for the next train. The designs will vary from station to station. This design depicts the movement of people, chosen because Louisiana is primarily a pedestrian station.



#### University - Academics/Orbits Theme

The bench windscreens will reflect the academics/orbits art theme.



#### Colorado - Activities Coming Together Theme

The iron railings will be designed with different patterns. The convergence theme at Colorado signifies the coming together of many things such as retail and residential districts.



#### Other Elements

Other enhanced station elements could include cut-out designs in the support pillars above the station canopy and elevator towers. Typical elevator towers are glass enclosed, but the enhancements add color panels for a more engaging experience.





#### Noise After Construction

The T-REX Project will be constructing permanent walls along I-25 from Broadway to Colorado Boulevard to mitigate the impact of traffic noise from I-25. Essentially, where there are residences adjacent to the highway, there will be walls. These walls are designed to be most effective for the first and second row of homes adjacent to the corridor and range in height from eight to 16 feet. To view the height and location of the walls nearest you, please refer to the map.

