



COLORADO
Department of
Transportation

Traffic Noise
February 2015



EXPRESS | **C**
LANES | **470**





Agenda

1. Project Overview
2. Project Schedule
3. Traffic Noise Analysis
4. Traffic Noise Mitigation Recommendations
5. Specific Analysis by Location
6. Next Steps

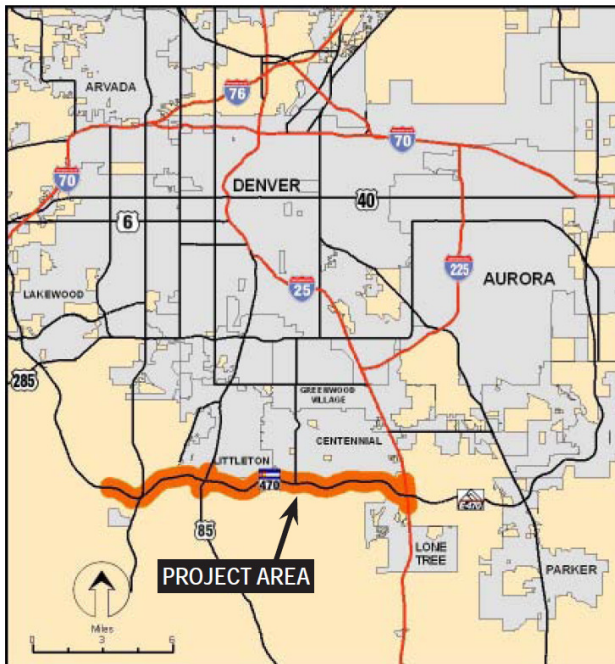




Ultimate Proposed Project Description

The Ultimate Design for 2035 Includes:

- Westbound - two tolled express lanes from I-25 to Lucent; one tolled express lane from Lucent to Kipling
 - Eastbound - one tolled express lane from Kipling to Broadway; two tolled express lanes from Broadway to I-25
 - Auxiliary lanes where warranted in select locations
 - Direct connection ramps from I-25 to the westbound express lanes.
 - Environmental mitigation including noise abatement
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- Reconstruction of:
 - Bridges over the South Platte River
 - Westbound bridge over Wadsworth
 - Realignment of substandard curves
 - C-470 Trail with added grade separations at Quebec and Colorado

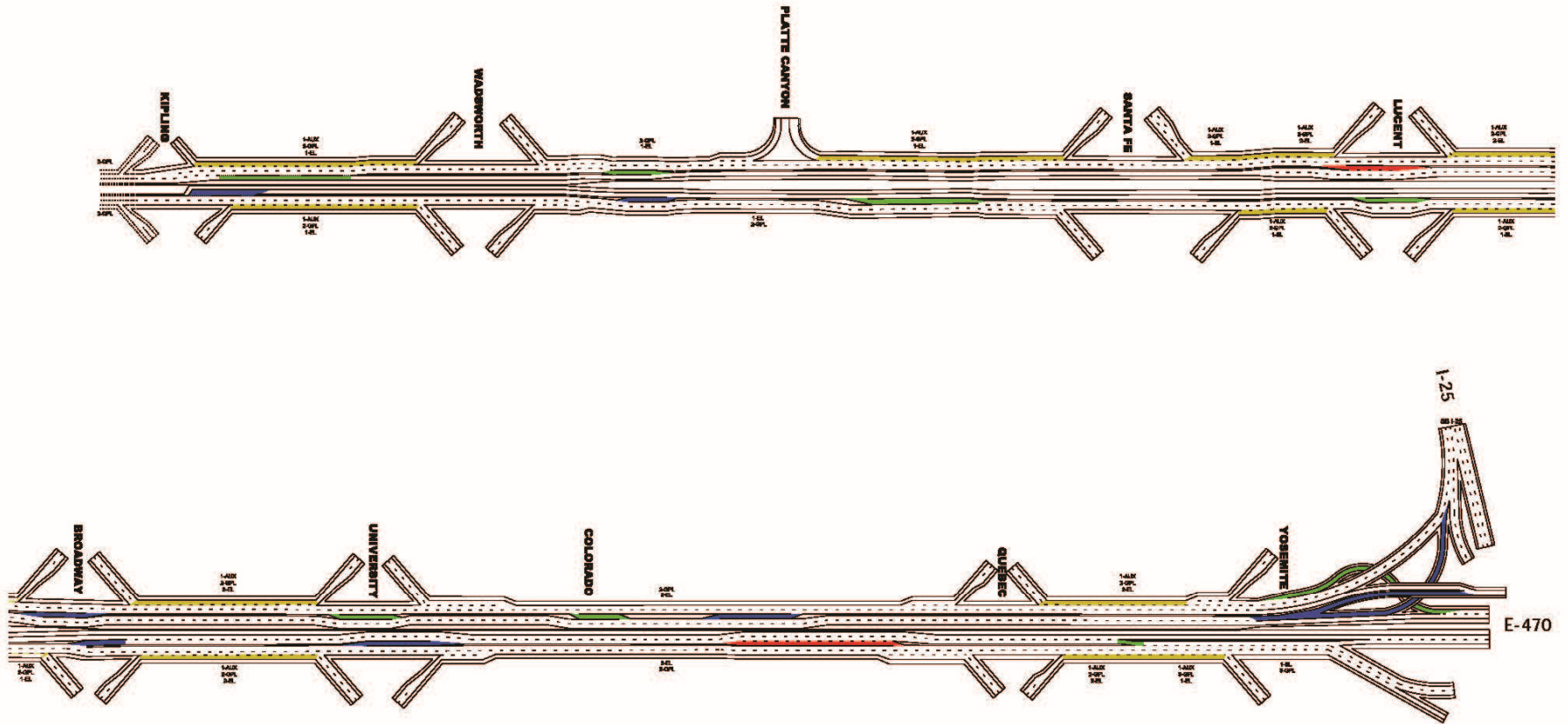


C-470 Corridor Project Area





Ultimate Proposed Project Schematic



Ingress

From these locations vehicles may enter the tolled express lanes from the general purpose lanes

Egress

From these locations vehicles may exit the tolled express lanes to the general purpose lanes

Combined Ingress / Egress

From these locations vehicles may enter or exit the tolled express lanes to/from the general purpose lanes

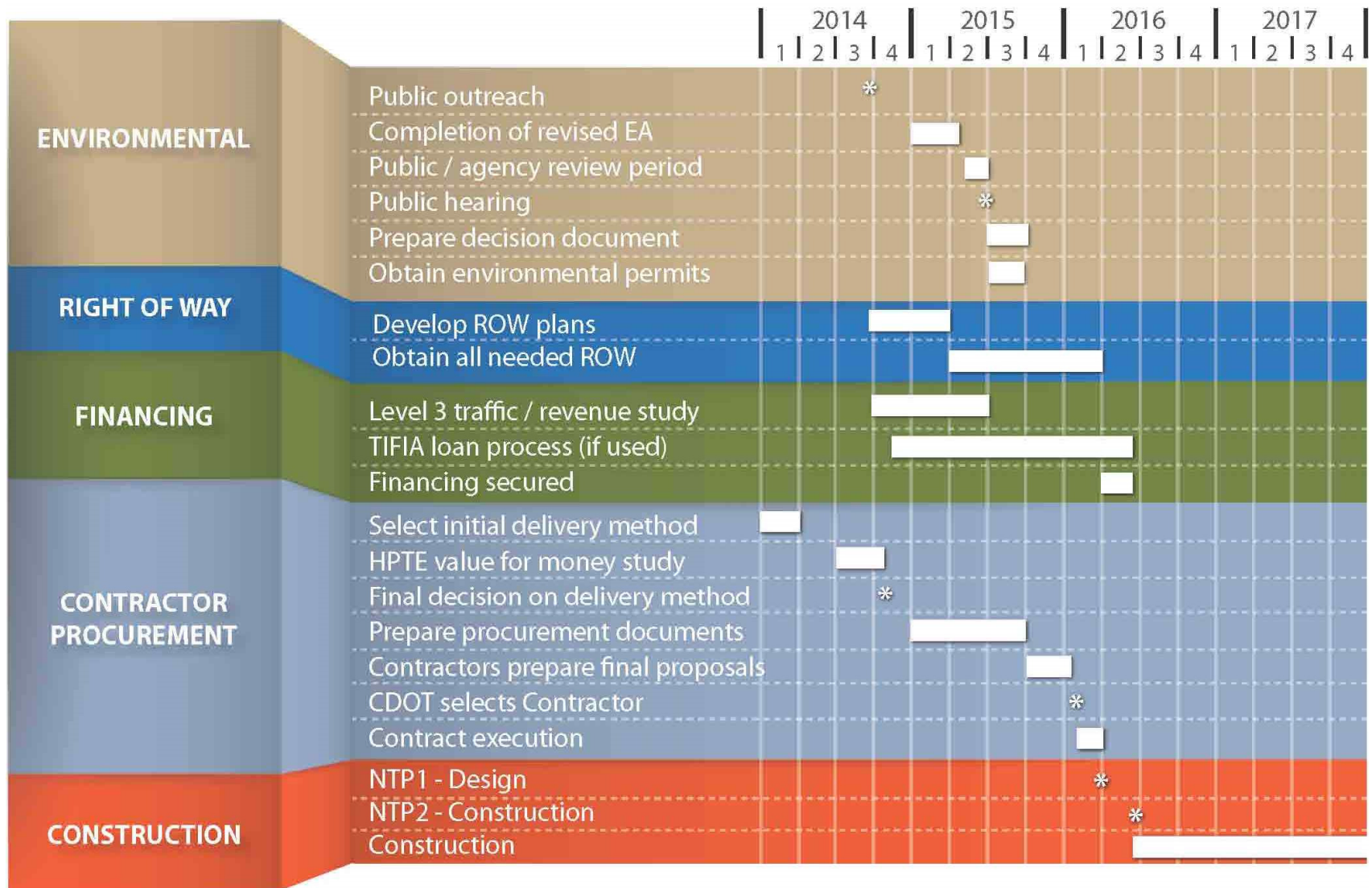
Auxiliary Lanes

Additional lanes that are continuous from one interchange on-ramp to the next interchange off-ramp



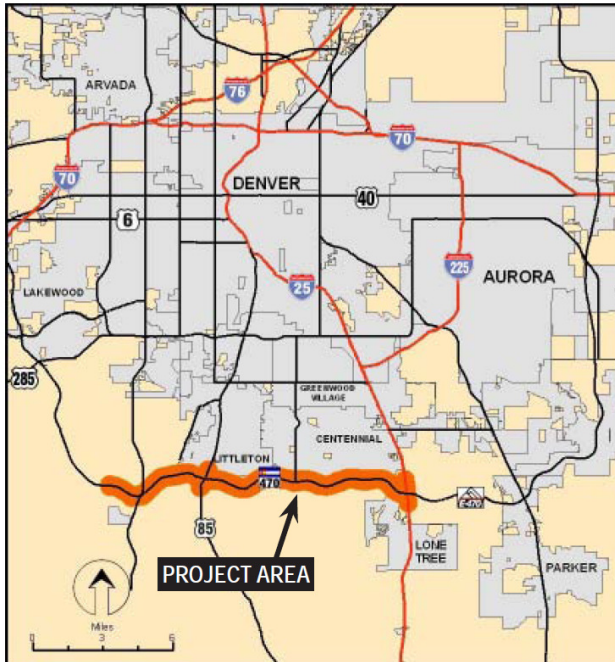


Project Schedule Overview





Traffic Noise – Impact Analysis



C-470 Corridor Project Area



Traffic Noise Modeling:

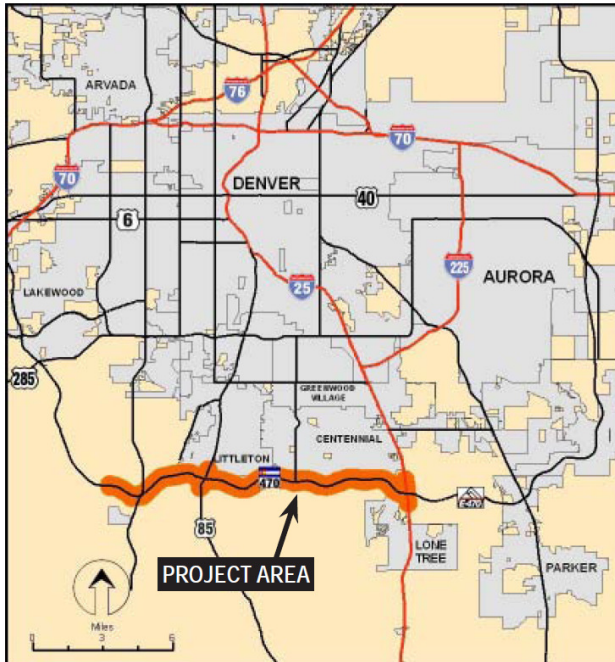
- Measured existing traffic noise.
- Developed noise model for the Proposed Project based on measured noise and future conditions.
- Noise model predicts future noise levels at receptors with the Proposed Project.

Traffic Noise Impacts:

- Do future noise levels increase by 10 decibels or more with the Proposed Project?
- Do future noise levels equal or exceed 66 decibels with the Proposed Project?
- Mitigation analysis is only performed for impacted properties.



Traffic Noise – Mitigation Analysis



C-470 Corridor Project Area

Traffic Noise Mitigation Criteria:

- Is mitigation feasible?
- Is mitigation reasonable?
- Does the community want it?

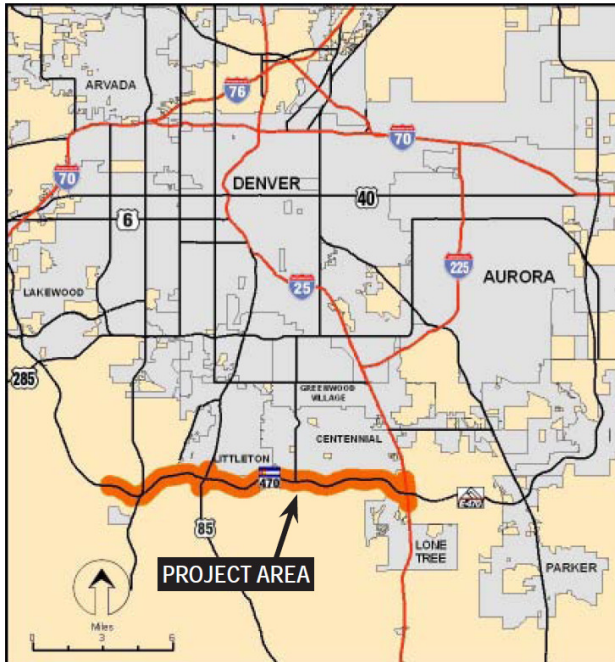
Is it Feasible:

- Future noise reduced by 5 decibels?
- Maximum height 20 feet?
- Fatal flaws related to drainage, terrain, maintenance, or safety?





Traffic Noise – Mitigation Analysis



C-470 Corridor Project Area

Is it Reasonable:

- Is the mitigation cost at or below CDOT cost benefit index?
- Does at least one receptor benefit by at least 7 decibel reduction?

* This is where we are today.

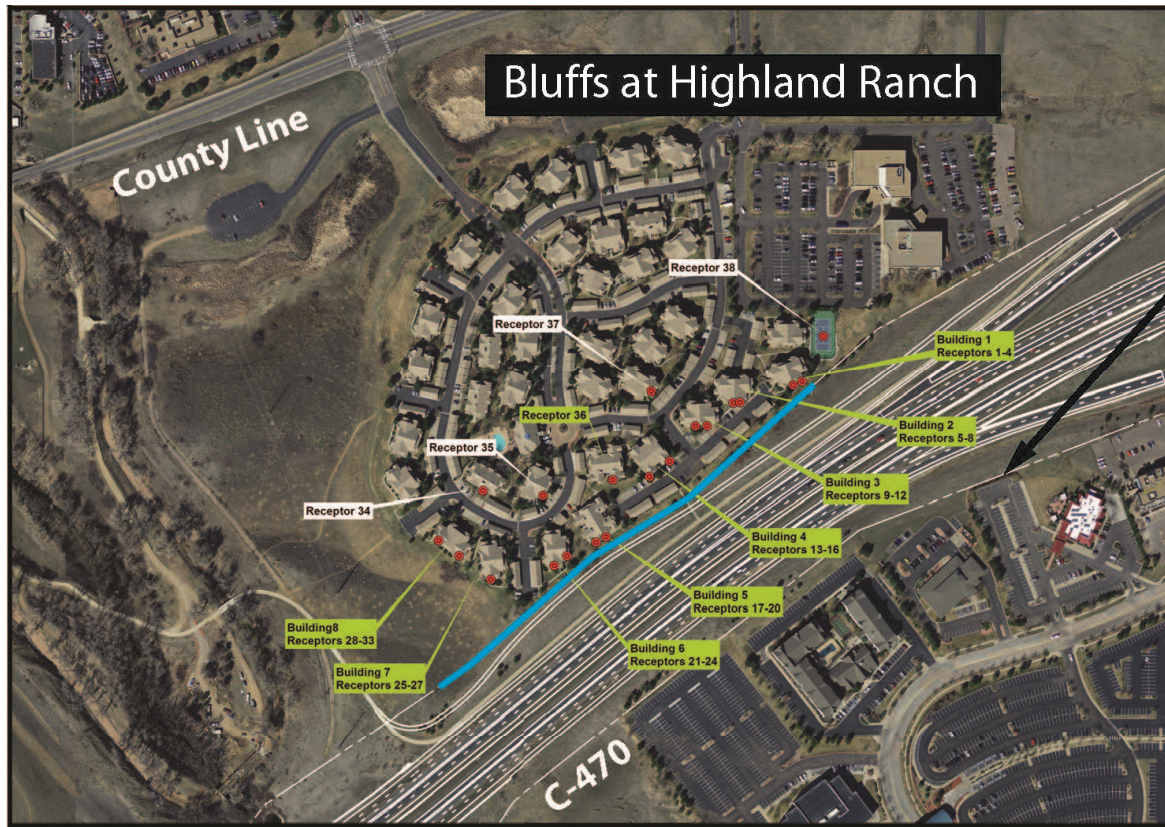
Does the community want mitigation:

- Benefitted receptor preference survey
- >50% vote of benefitted properties





Traffic Noise – Location Example

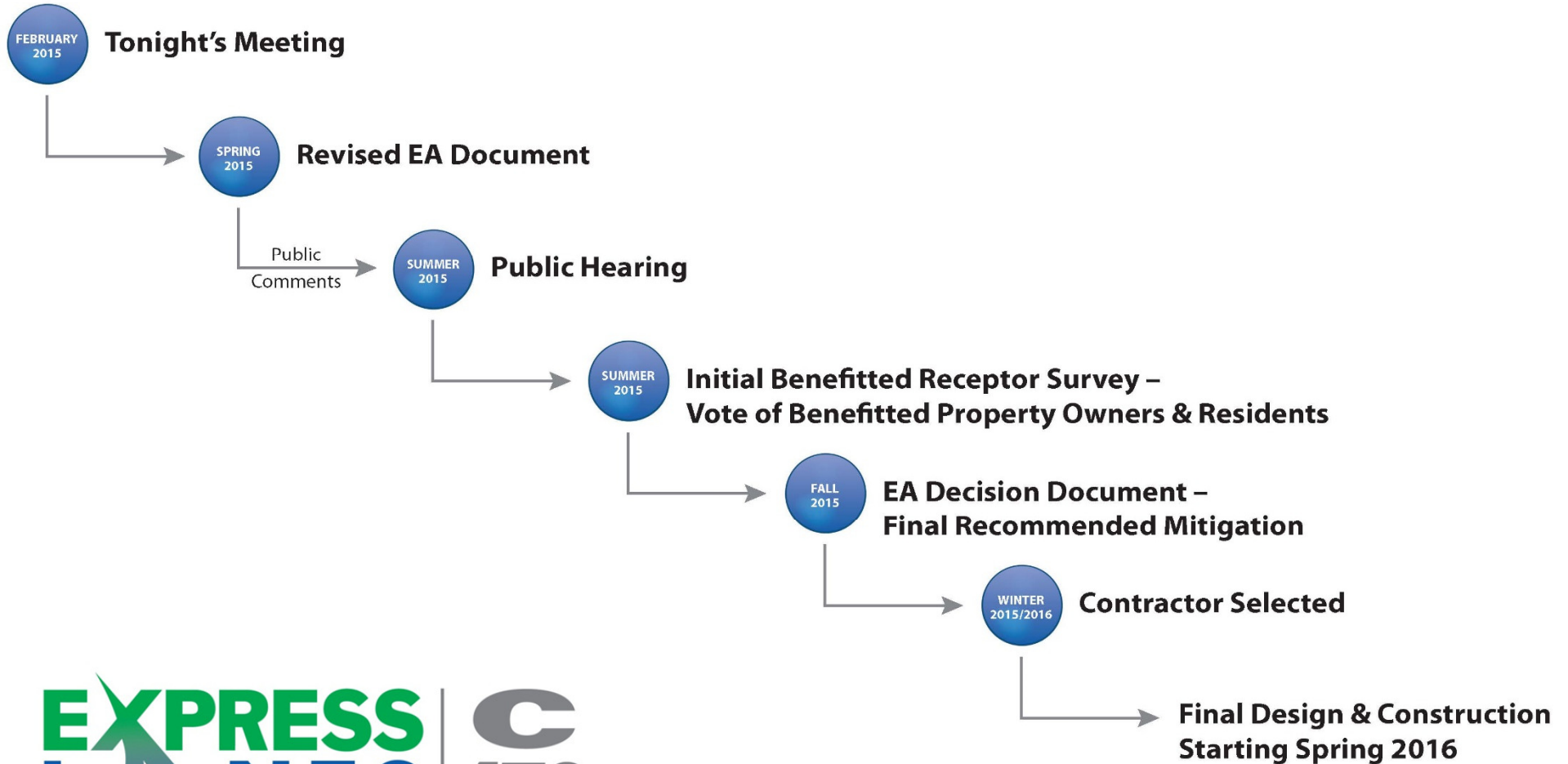


Noise Wall

Approximate	Length	1,200 ft
	Height	Min. 16 ft Max. 20 ft Avg. 17.5 ft



Traffic Noise – Next Steps





Thank you!

Please fill out a Comment Form

