

Results of Value Solutions Workshop of
September 21-24, 2004

Wadsworth / Grandview
Environmental Assessment

For CDOT

DRAFT 9/24/2004

Parsons Brinckerhoff



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SAVE 950501-VESI 01101401

Objective and Agenda

- q Objective: To present the results of the value study to improve value and purposes of the road improvement Wadsworth / Grandview Traffic Congestion Improvement Project (at EA)
- q Agenda:
 1. Background
 2. Team activities
 3. Summary of results
 4. Issues
 5. Proposals
 6. Implementation phase – the path forward



The Team

- 1) Sam Martin, PE, CVS, CVC, Facilitator, SAMI VE LLC
- 2) Carol Landau, QVT, SAMI VE LLC
- 3) Laren Livingston (PB Lead)

- 4) Mark Nord (Bridge)
- 5) Jay Hendrickson, PE (Roadway)
- 6) Alex Kouprievitch (Traffic)
- 7) Jane Hann (Environmental Lead)



The Team's objective

To identify the best available strategies and technologies for minimizing the costs, generating the optimum project and life-cycle costs and/or add significant value for the user:

- 1) Roadway and crossings
- 2) Historical (location and aesthetics)
- 3) Environment and surrounding areas



The results:

- q Generated over 150 ideas
- 1) Consolidated into 50+ area concepts
- 2) Identified 11 concepts for expected optimum proposal development to generate high returns (priority one)
- 3) Identified another 5 priority two concepts
- 4) Proposing up to \$1,800,000 in cost reductions, with potential of added life-cycle savings of maintenance and improved safety to follow



Caveats:

- q Effect of each savings is shown for each proposal
- q Some proposals may be mutually exclusive
- q EA stage cost estimates



1–Sidewalks at roadway grade

q Benefits

- § Eliminates second retaining wall in front of main retaining wall for Wadsworth depressed alignment
- § Within roadway pedestrians more able to escape roadway (e.g., breakdowns)

q Disadvantages

- § Barrier required
- § Less feeling of comfort
- § Trapped debris and snow removal potential
- § Grandview ADA ramp would be longer

q Risks

AL2

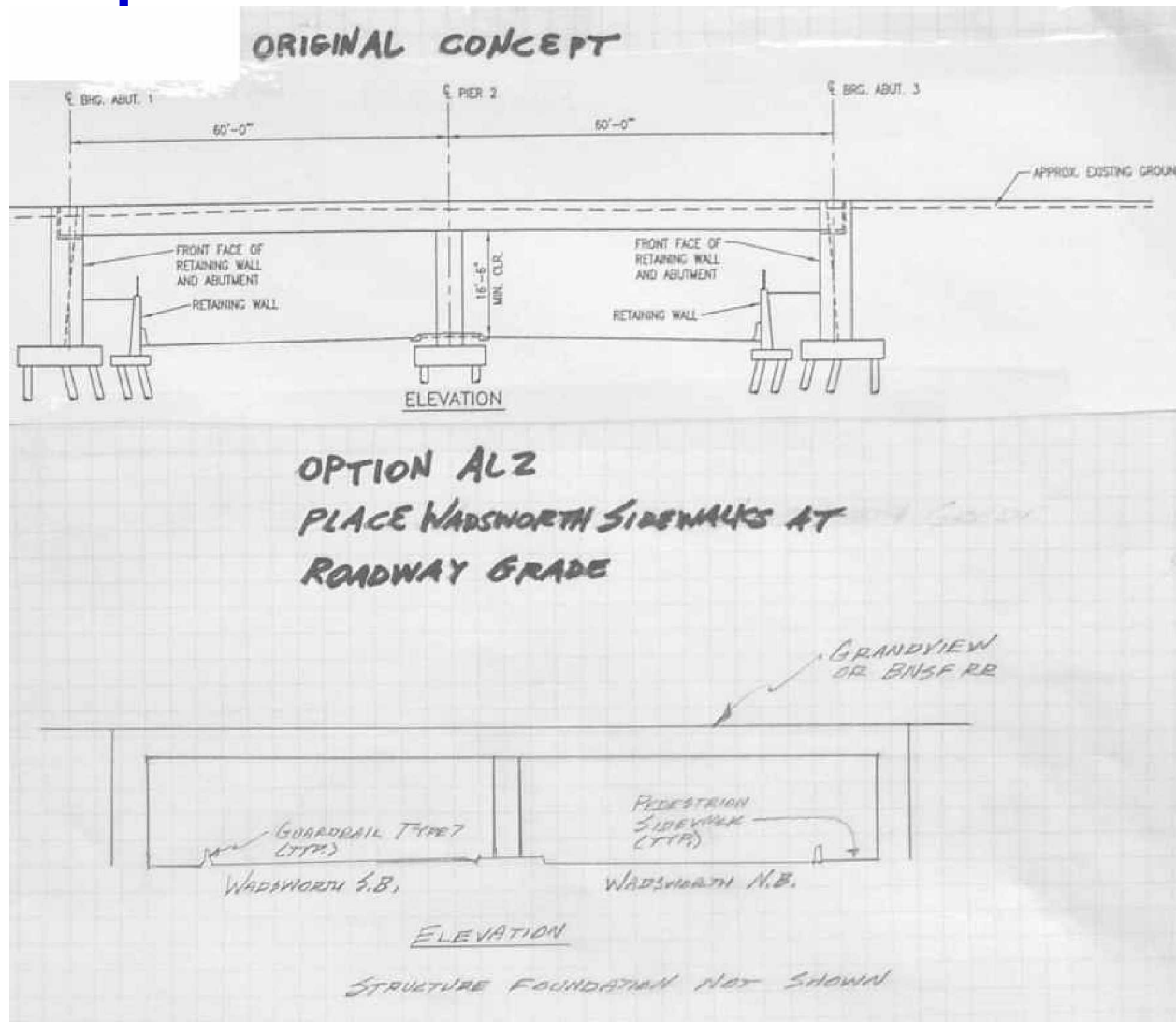
Mark

Instant Savings \$630,000

LCC Savings \$-undet



Proposal 1



2 – Top Down RR Bridge

q Benefits

- § Reduced shoring
- § Eliminates abutment/pier excavation

q Disadvantages

- § Painting and casing required
- § May include limited shoofly shoring
- § Probable periodic painting of steel jacket

q Risks

Instant Savings \$140,000

LCC Savings \$soft

S

Mark



3 – Top Down Retaining Wall

q Benefits

§ ROW impact reductions

§ Possible avoid or minimize of impact to historical

q Disadvantages

§ Added costs to attain value added results

q Risks

Instant Cost \$140,000

LCC \$none

D

Mark



4 – Pedestrian Bridge

q Benefits

- § Aesthetic improvements possible
- § Potential of better views
- § Use versus cost improvements

q Disadvantages

- § Adds third structure over Wadsworth
- § Adds one more bridge design

q Risks

Instant Savings \$360,000 LCC \$minor

AC

Mark



5 – Reduce Plaza Width

q Benefits

- § Better clearance
- § Discourages loitering and vandalism
- § Better Gold Line accommodation

q Disadvantages

- § Pedestrian capacity reduced, if ever is attained
- § Venue potential reduced

q Risks

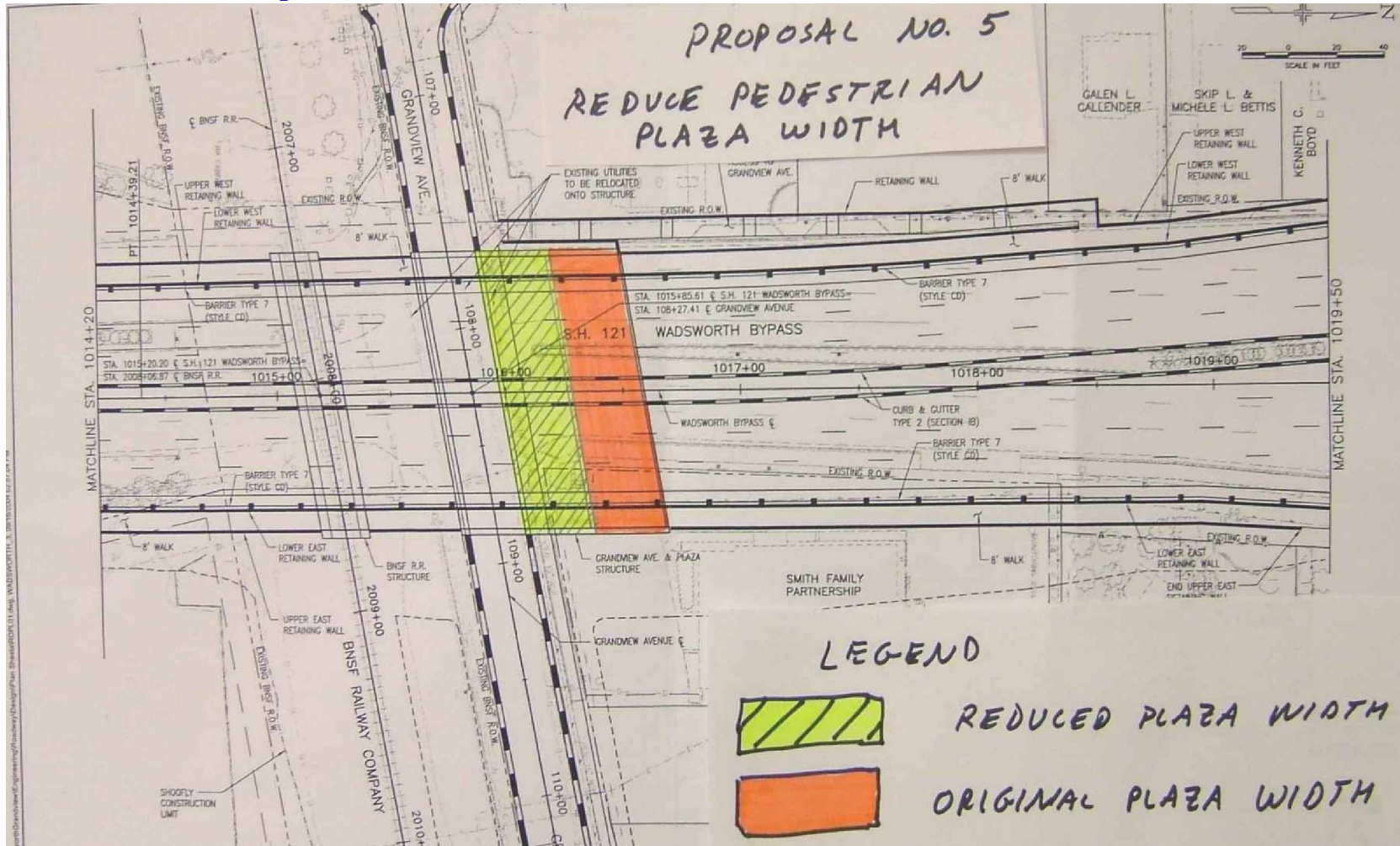
Instant Savings \$400,000 LCC \$minor

AB

Ray



Proposal 5



11 – Plaza Amenities

q Benefits

- § Generates attraction without loitering
- § Connects community
- § Increase public awareness of area features

q Disadvantages

- § Susceptible to vandal damage
- § Requirement maintenance / upkeep
- § Public close to vehicular traffic
- § May not meet city's vision of the plaza

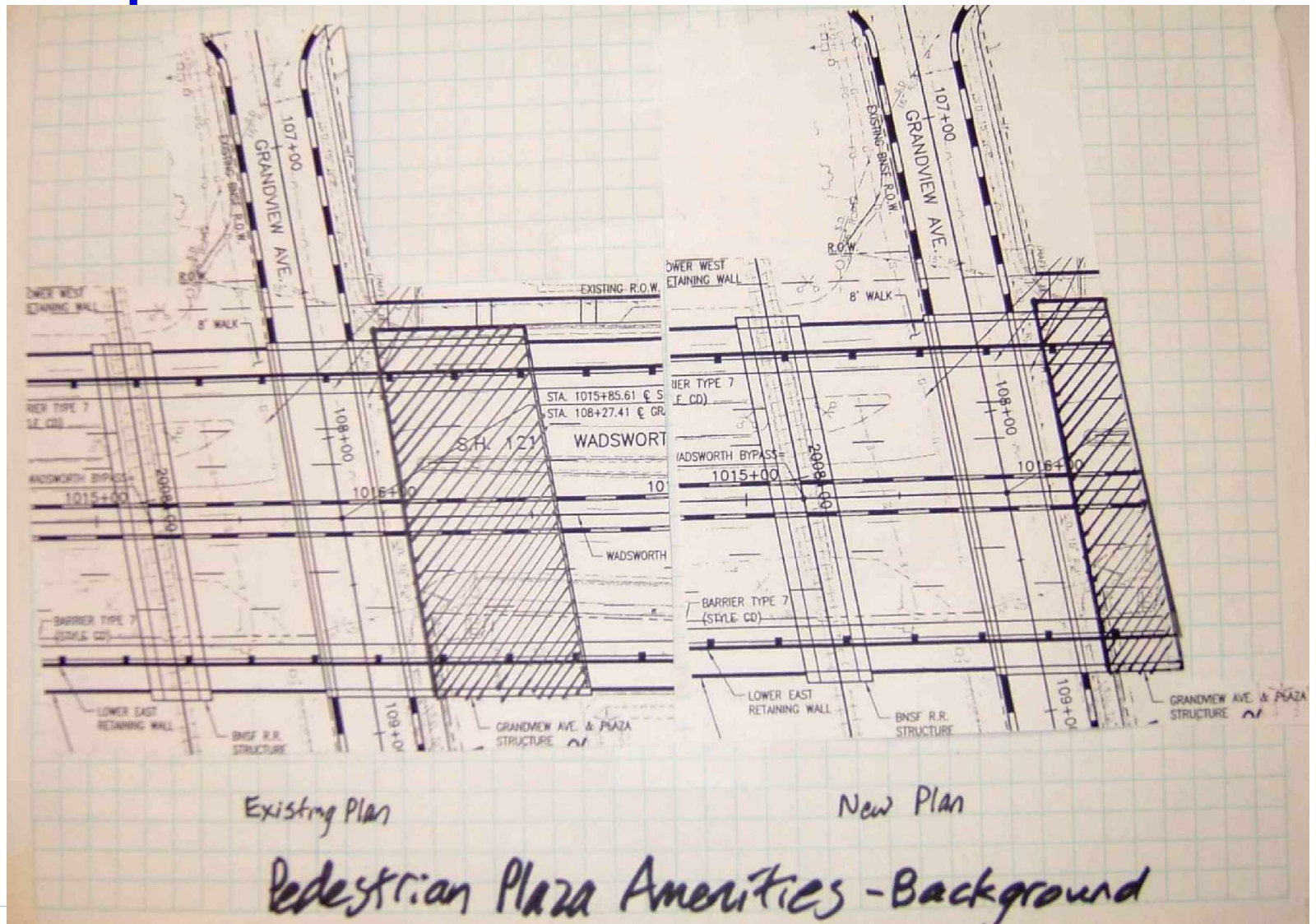
q Risks

AA

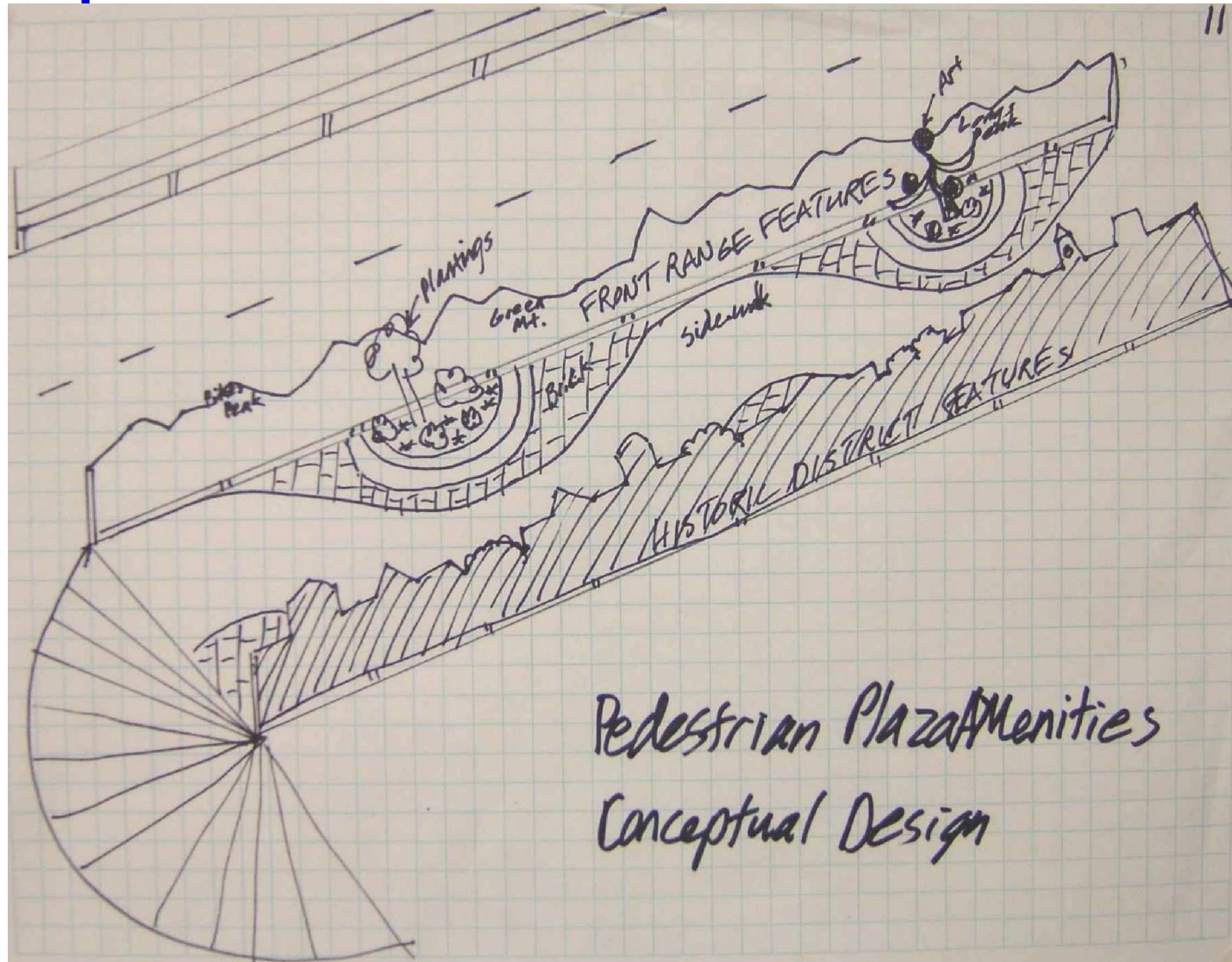
Jane



Proposal 11



Proposal 11



6 – Detour Fill Reductions

q Benefits

- § Less wetlands impact
- § Avoids utilities better
- § Reduces construction activities required (trucks)

q Disadvantages

- § Design speed may be impacted

q Risks

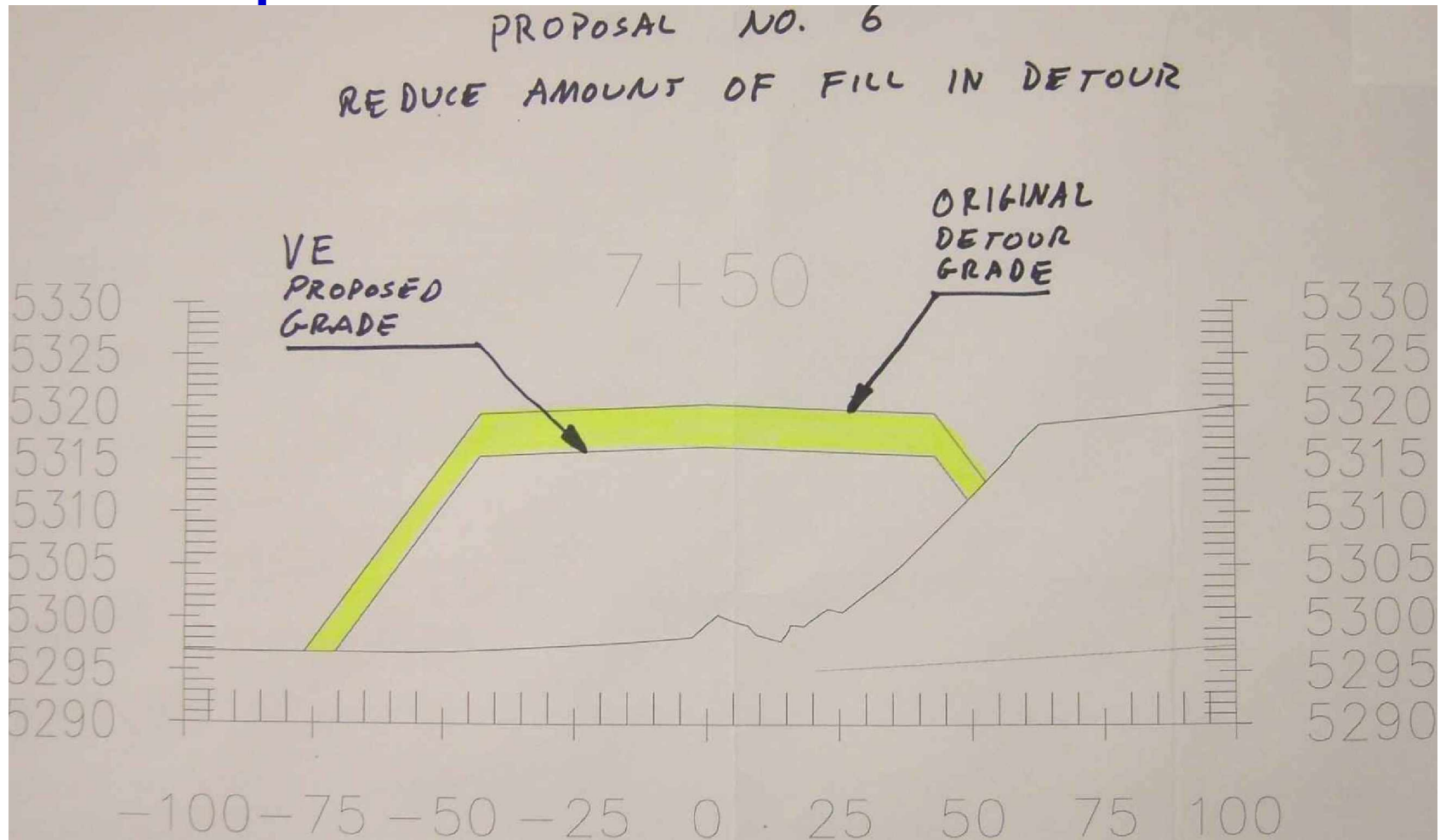
Instant Savings \$100,000 LCC \$minor

AE

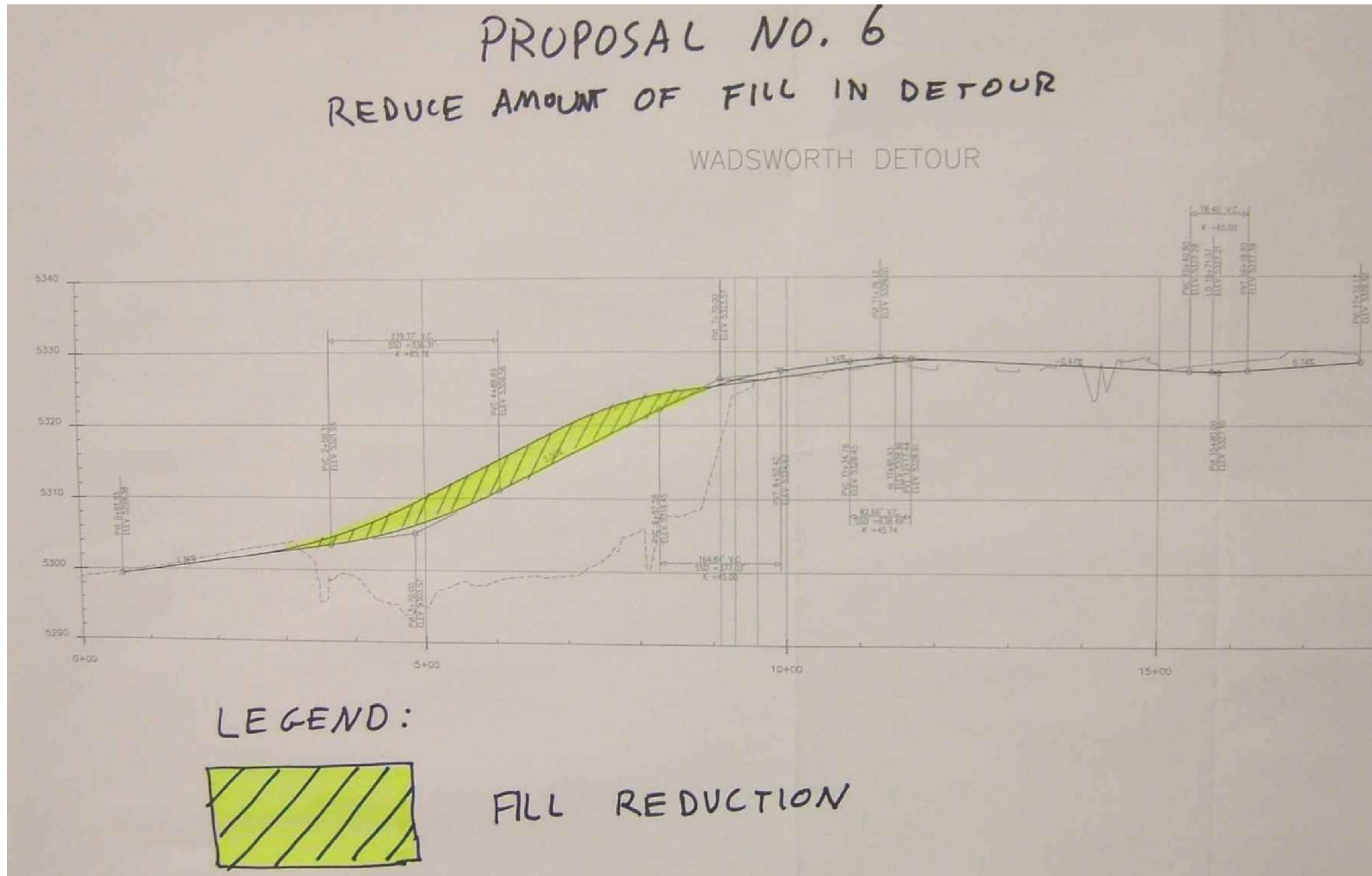
Jay



Proposal 6



Proposal 6



7 – Concrete Pavement Option

q Benefits

- § Less maintenance and traffic delays
- § Overlay effects reduced
- § Reduces worker exposure
- § Longer life-cycle
- § Removes resurfacing and related traffic delays

q Disadvantages

- § Hard to repair, ride surface, length issue

q Risks

Instant Cost \$300,000

LCC \$8,500,000

AP

Jay



8 – Shoofly Option

q Benefits

- § Avoids need to build significant shoofly embankment
- § Removes construction traffic
- § Allows more detour profile modifications
- § Avoids probable loose fill area

q Disadvantages

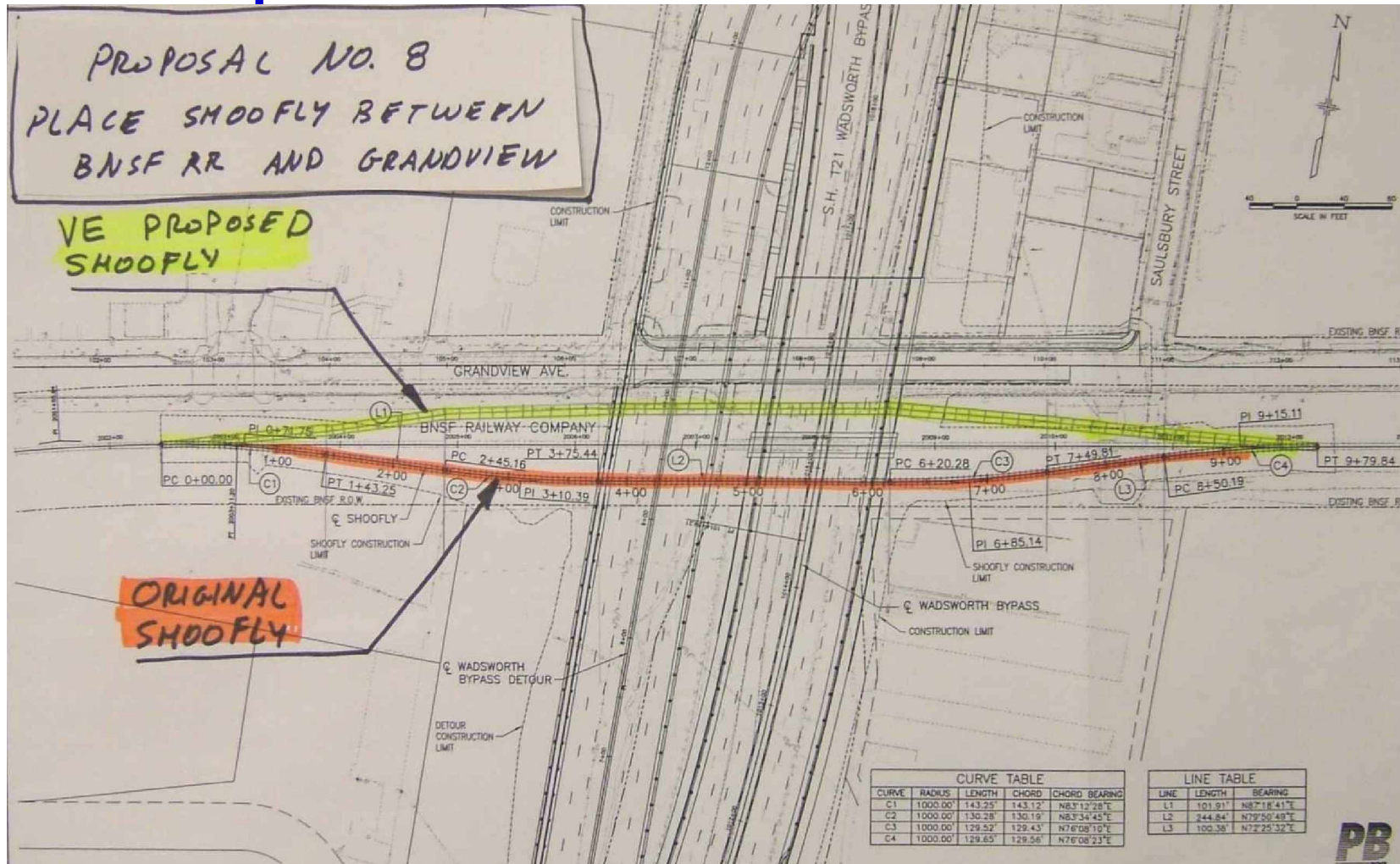
- § Noise addition, closer to urban area
- § Grandview bridge must be staged or will require more sheet pile if construct at same time

q Risks

P2 Jay Instant Savings \$100,000 LCC \$none



Proposal 8



9 – Regional Signage

q Benefits

- § Less congestion in construction zone
- § Less public inconvenience
- § Minimizes delay potential to motorists
- § Possible environments impact reduction

q Disadvantages

- § Need more approvals
- § Signs maintenance

q Risks

Instant Savings \$100,000 LCC \$none

C

Alex



Proposal 9



10 – Signal Timing

q Benefits

- § Minimum delay to motorists
- § Inexpensive given the potential benefit
- § More green time for construction zone

q Disadvantages

- § May not handle traffic problems
- § May generate Ralston Road traffic delays

q Risks

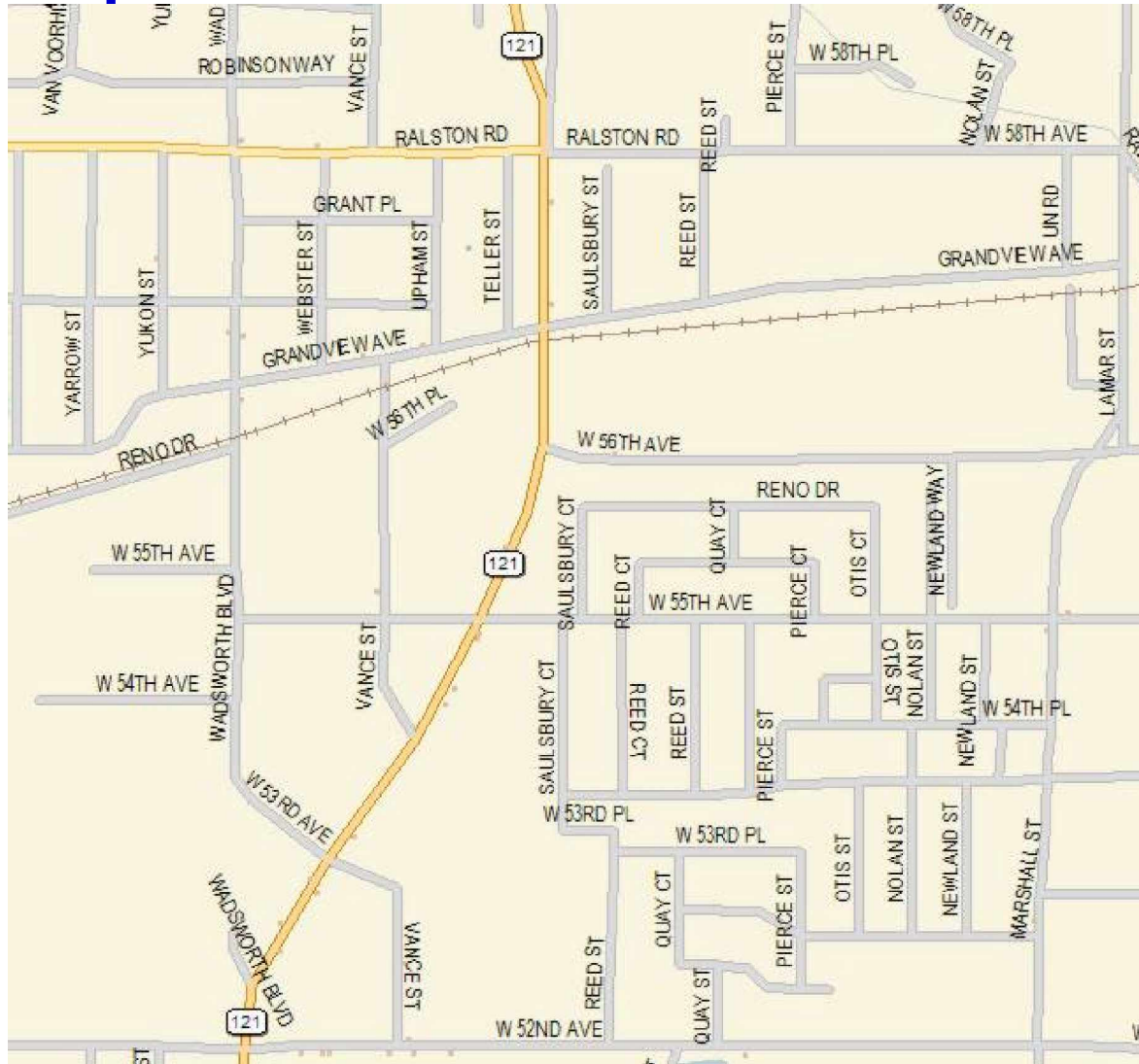
Instant Savings \$90,000 LCC \$undet

AG

Alex



Proposal 10



Other concepts for further consideration

- q Defined as worthy of consideration but not fully developed by team due to time, simplicity, or other issues
 - § More than 15 are suggested
 - § Please review written report for more details



Total Savings

- q Maximum potential identified at this time is:
 - § Nearly \$1,800,000 total estimated potential savings (10% of available)
 - § Many value added features
 - § Reduced risk to environment, construction, time to construct, and cost issues
 - § Reduced time to construct potential
 - § Some long term life cycle reductions
 - § Additional savings possible

Draft report

- q Supporting features in report
 - § Briefing attendance logs
 - § Consultation logs
 - § Documents logs
 - § Economic analyses
 - § Telephone and other records
 - § Other activity logs

The path forward

- q Consider the team's recommendations and determine the areas that warrant further action in the interest of all involved
 - § Provide feedback to John Schwab at 303-370-2040 or John.Schwab@dot.state.co.us (SAMI's vereporting.com options will also be available)
- q Engineering, stakeholders, and others will develop, with others input, an implementation plan to ensure all achieve the proposed results



Feedback for FHWA report

- q Take the credit
- q Reports can be posted online for reporting purposes
- q Report and other materials available at:
verereporting.com/reports/gov/us-co/dot-wads-grandview/



Thanks

Questions?

q May we have your questions please

