BOGARD ROAD
EXTENSION EAST

Presentation to

Matanuska-Susitna Borough Planning Commission

January 21, 2008

Background

- April 2, 2007 the Long Range Transportation Plan was adopted by MSB Planning Commission and by the Assembly in June 2007
- Bogard Road East is a "base level project" in the LRTP; expected to be completed by 2025
- The LRTP goes further using ten year growth projections to show that the Bogard Road Extension will need to be completed by 2015
- Other BLPs in the Palmer area include Hemmer Road extension, Felton Road extension, Trunk Road redesign, and Palmer-Wasilla Highway widening.
- April 2006 DOWL selected to provide engineering, environmental, and public involvement services for Bogard Extension East to the Glenn Highway.

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Consultant Services Completed

- Engineering
  - Aerial mapping
  - Traffic counts
  - Traffic modeling
  - Preliminary engineering
    - Soil survey research
    - Hydrology
    - ROW impact analysis
    - Roadway alternative alignment analysis
    - Utility conflict analysis
    - Design Criteria (establishing speed, maximum grade, minimum curve radii etc.)
    - Conceptual plan and profile
  - Cost Estimating
- Environmental
  - Resource agency interaction
  - Wetlands delineation
  - Eagle nest survey
  - Historic preservation mapping and consultation
- Public Involvement
  - Assembled mailing list (2500 names)
  - Created Project Website
  - Three public meetings with more than 100 participants at each
  - Presentation to community councils and community groups
  - Presentation to local government bodies
  - Newsletters
  - Interaction with the print media

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Project Milestones Completed to Date

- Two "build" alternatives developed to a preliminary engineering level from eight original routes
  - Alt. 2 (Red) – southern route, dipping south and then connecting into the alignment with Arctic/Old Glenn highway
  - Alt. 3 (Yellow) – northern route, running along section line and then connecting into Arctic/Old Glenn Highway
- Average daily traffic estimated to be about 8,000 vehicles per day in 2030 (similar to current levels west of Trunk Road)
- Cost of each is approximately $35 to $40 million
- Two year construction period, starting in 2009
- Preliminary Engineering Report recommended Alternative 2 (Red) be advanced forward

Bogard Extension East Planning Charrette

- MSB Planning Commission asked project team to gather more information
- MSB Administration held independent charrette to work through issues with the public and address issues raised by the public
- Charrette facilitated by UAA Resource Solutions staff
- Two major issues/points from charrette
  - Re-evaluate purpose and need (do we need the project)
  - If the project is to be built, consider several issues and concerns to reduce impacts on residents

Charrette Results

Suggestion 1: Select the "no build" and rely on Palmer-Wasilla Highway and Trunk Road/Palmer Fishhook to carry traffic

Analysis:

- Creates significant traffic congestion on Palmer-Wasilla Highway (assumed to be 4-lanes)
  - Trunk and Fishhook are too far away to be a desirable alternative (see traffic diagrams)
  - Current problem with cut-through on residential streets will increase as a result of arterial congestion
  - Traffic past schools with Bogard constructed is only about 20% greater than without Bogard

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Charrette Results

Suggestion 2: Modify "Red" Alignment on West End through Arabian Estates

Analysis:

- Modified route requires acquisition of one additional home
- Expected to cost approximately $500K more than original route
- Sharper curvature of the road requires super-elevation rate of almost 5%; undesirable on a northern climate arterial when icy

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Charrette Results

Suggestion 3: Modify "Red" Alignment to create greater buffer between road and Equestrian Acres

Analysis:

- Increases impact on farm lands
- Increased distance from Equestrian Acres will provide some noise buffer
- Distance alone may not be as effective at reducing noise as other mitigation techniques (berms, walls, planting dense vegetation, etc.)
- Final alignment and buffer amount to be driven by detailed noise modeling performed on the final design alignment

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Charrette Results

Suggestion 4: Modify "Yellow" Alignment such that roadway centerline is on Section Line near Eve's Eye Subdivision

Analysis:

- Increases the cost of the yellow alignment by at least $1.0 – 3.0 million
- Impacts two additional residences
- Reduces farmland impacts by approximately 4 acres

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Charrette Results

Suggestion 5: Discourage Cut Through Traffic in Adjacent Neighborhoods

Analysis:

- There will be limited access to the new Bogard Road (we will try to limit to collector roads)
- Some residential streets may be dead-ended with a cul-de-sac bulb
- We can discourage cut-through with good road networks and good level of service on arterials

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Charrette Questions/Comments

Suggestion 6: Reduce ROW width to be acquired through Palmer and in the urban areas

Analysis:

- Will reduce to 150 feet east of Hemmer Road

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Charrette Results

Suggestion 7: Modify access, egress, parking, lighting, and pedestrian accommodations associated with schools along the route

Analysis:

- Collected traffic and turning movement data and pedestrian counts at schools
- Many of the issues need to be resolved regardless of whether Bogard Road is constructed
- Work with PTA, school administration, transportation company, and principals to resolve issues
- Suggested modifications include:
  - changing driveway access, new parking circulation patterns, restricting specific left-turns, and directing traffic to different access points

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Charrette Results

Suggestion 8: Use acoustic walls, berms, and buffers to reduce impacts on area residents

Analysis:

- MSB will use federal noise standard policy and guidelines to model noise and to select areas for mitigation
- Initial results indicate that some areas may be eligible for noise mitigation
- Noise modeling and analysis is a science that must be done on specific design features; it cannot be done adequately at this point in the design process
- Mitigation and minimization techniques may include walls, berms, vegetation, rubberized asphalt, modifying the grade of the road, and increased buffer

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Charrette Results

Suggestion 9: Consider snowdrifting in the alignment selection process

Analysis:

- Susceptibility to accumulation of drifting snow is based on horizontal and vertical location of road, surrounding terrain and features
- We will select vertical profile of the road to encourage scour
- We will avoid known areas of heavy drifting
- Add flora and man-made features to create the snow-fence effect
- Maintenance of the highway overall is an issue that is considered during design

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Charrette Results

Suggestion 10: Design lighting to focus on the road and to minimize light pollution

Analysis:

- Continuous lighting is planned on this road
- We will design so that lighting will be "low mast" with shades to focus the light on the road
- Adhere to the state/national lighting design standards
- Consider moose and wildlife crossings and motorist safety in selecting lighting levels and locations
- Levels of moose kill on adjacent roads warrants consideration of preventative measures such as lighting and signage.

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Summary

- There is a clear need for Bogard Road even after PWH is upgraded to four lanes
- Trunk and Palmer Fishhook are too far away to provide meaningful congestion relief (Traffic and accidents are already increasing on the Glenn Highway from traffic avoiding the Palmer-Wasilla Highway)
- We can reduce the ROW width east of Hemmer
- Suggested modifications to the "yellow" route add cost and impact more residences
- Suggested modifications to the "red" route that increase the buffer near Equestrian Acres may be helpful
- Realignment of the "red" route through Arabian Estates is geometrically problematic and results in higher costs and increased impacts to residences
- Modify school access and egress and circulation design; must happen with or without Bogard
- Other design suggestions will be added as the project progresses:
  - Noise mitigation
  - Lighting
  - Snow drift minimization

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Recommendations

- Adopt Alternative 2 (Red) as the preferred alternative, with modifications:
  - Increased buffer with Equestrian Acres
  - Decreased ROW width east of Hemmer
  - Application of Federal noise analysis and abatement criteria
  - Continued work with the community throughout the design process
- Work with ADOT&PF and the legislature to secure additional funding to allow construction to begin in 2009.