Cornelius Pass Road Safety Improvements

Cornelius Pass CAC
3-18-14 Agenda

5:40	Sign-in, light supper for CAC
6:00	Welcome and agenda review
6:05	Project update
6:15	Open house findings discussion
6:30	Design team proposal
6:40	Other safety improvement ideas

(continued)

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3-18-14 Agenda

7:00	Public comment
7:15	Small group discussion
7:45	Break
7:55	Safety improvement detailed design package
8:30	Next steps and close

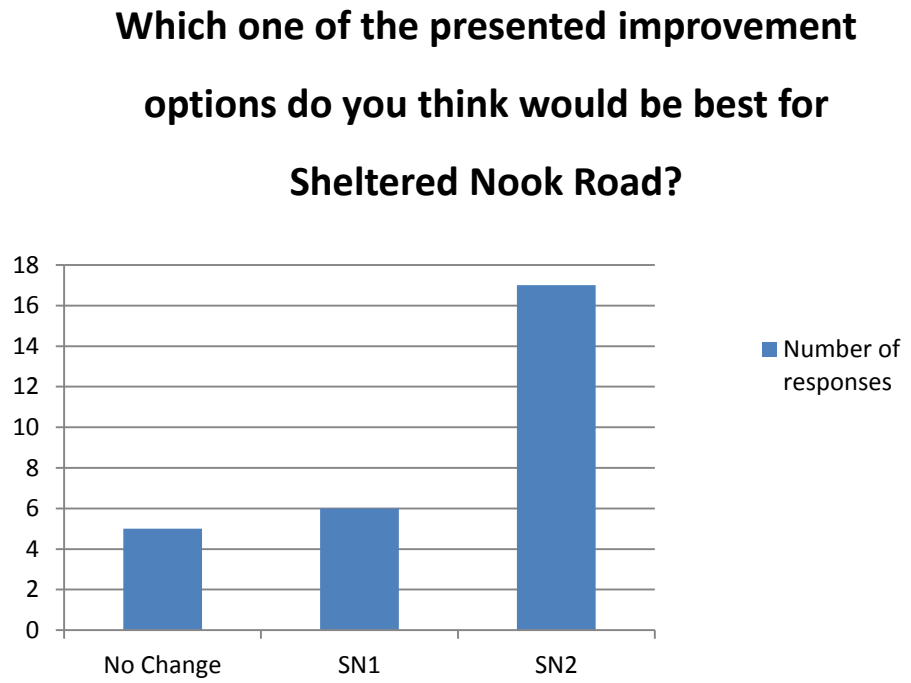
Project Update

- CAC questions and requests
- Other meetings and feedback
- Legislative update

Open House Findings Discussion

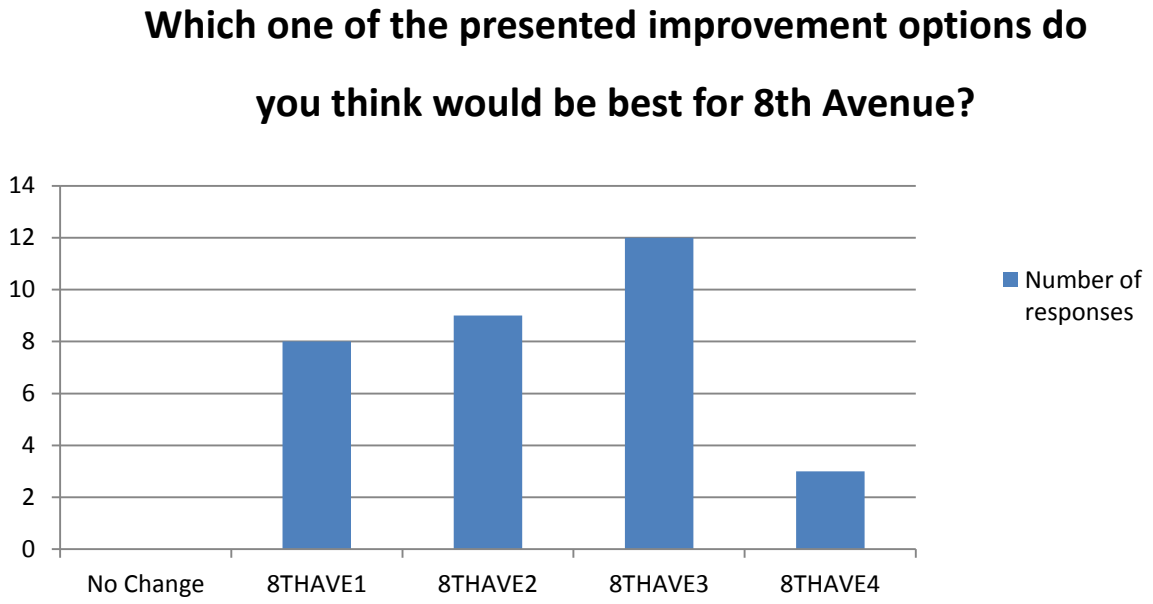
- Tuesday, Feb 18
- 55 people signed in
- 34 comment forms received

Open House Findings Discussion



- *SN1: Left Turn Lane Installation*
- *SN2: Sight Distance and Vertical Curve Improvement*

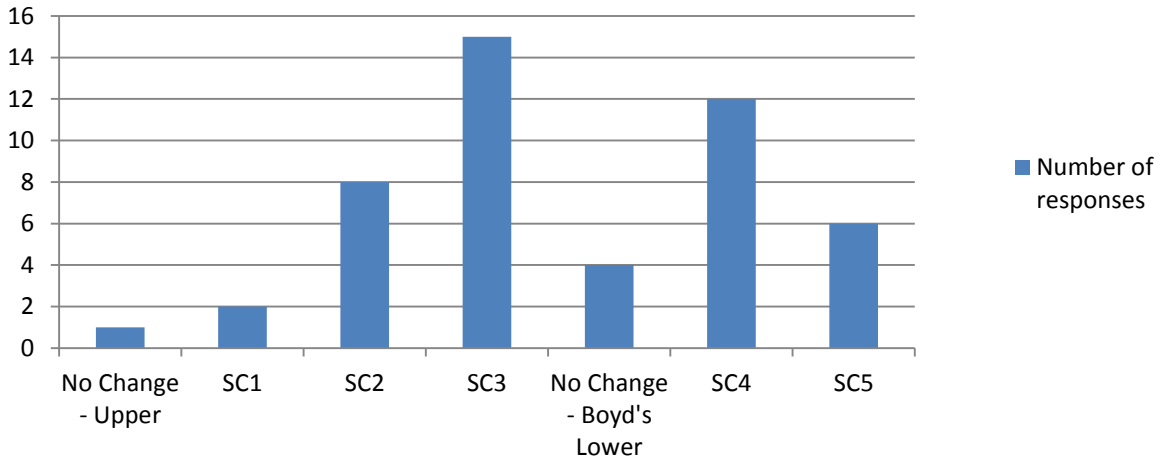
Open House Findings Discussion



- 8THAVE1: Signing improvements and clearing for sight distance, within right-of-way
- 8THAVE2: Signing, additional clearing, beyond right-of-way, and shoulder widening
- 8THAVE3: Minor curve realignment, to 30 MPH, with shoulder widening
- 8THAVE4: Major curve realignment, to 35 MPH, with shoulder widening

Open House Findings Discussion

Which one of the presented improvement options do you think would be best for the S-curves? (Choose one for each area)



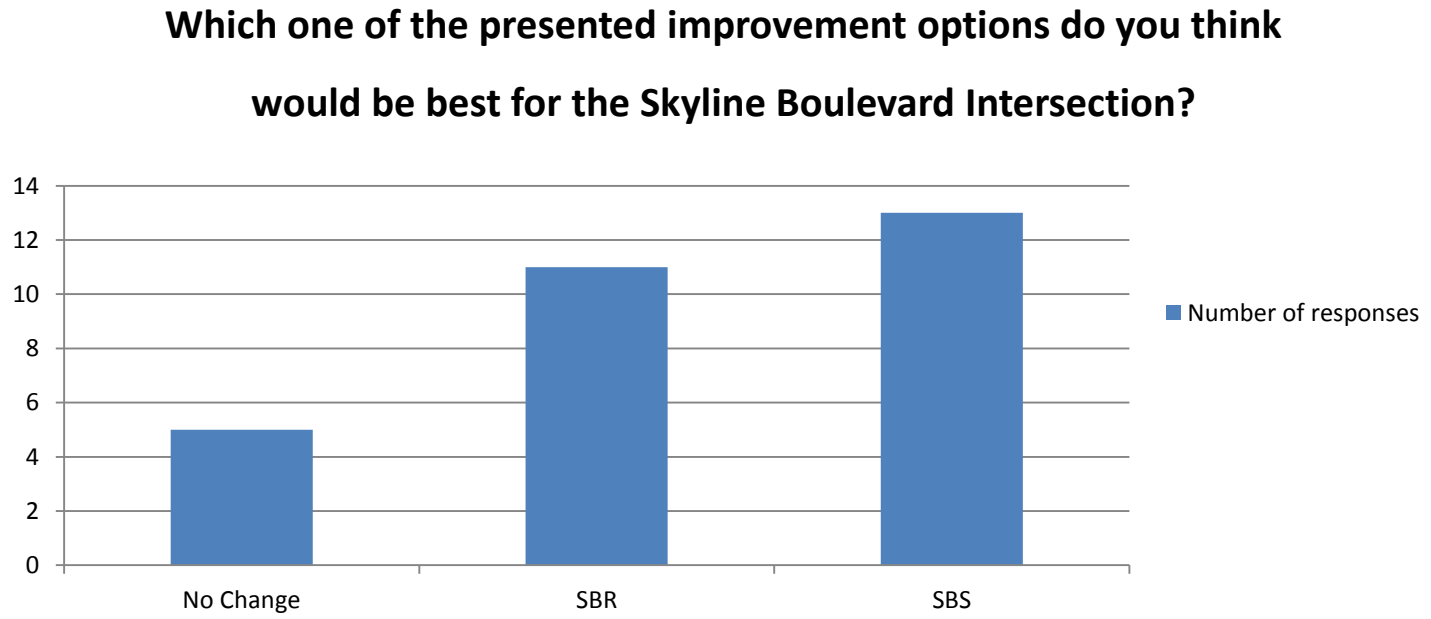
Upper S-curves:

- SC1: Overhead signing
- SC2: Overhead signing, striping for truck off-tracking, drainage, transverse rumble strips, and minor shoulder widening
- SC3: Overhead signing, striping for truck off-tracking, drainage, cross slope correction and minor realignment between “S” curves

Boyd’s Lower Driveway:

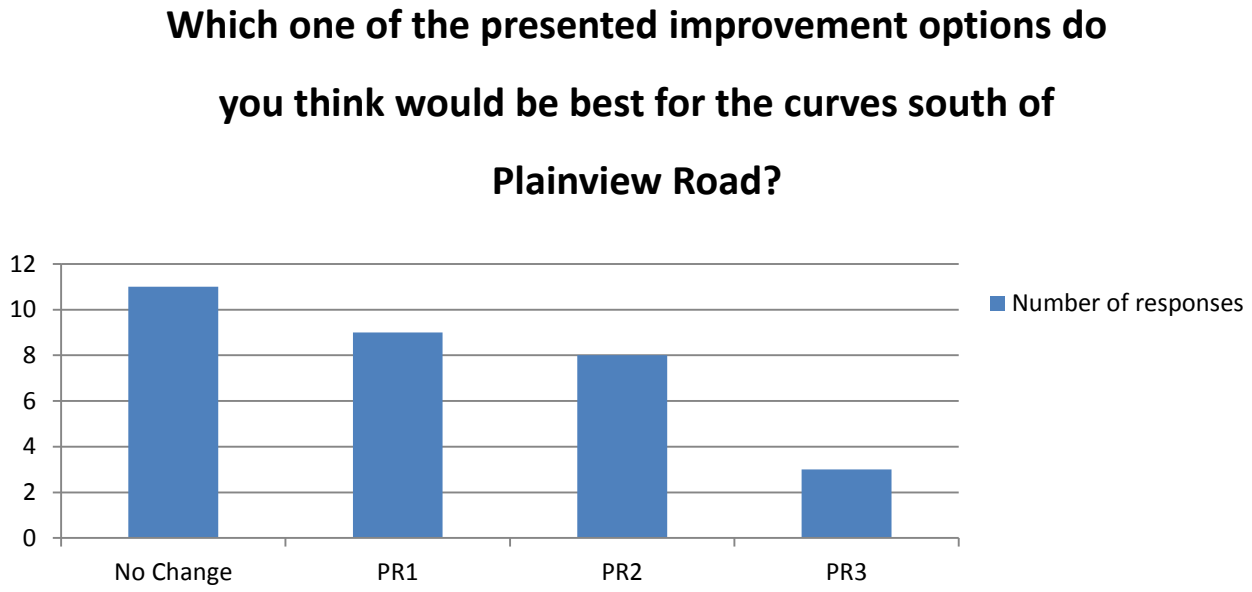
- SC4: Improved curve signing, roadside barrier and shoulder widening on outside of curve
- SC5: Improved curve signing, excavation to improve sight distance and shoulder widening on inside of curve

Open House Findings Discussion



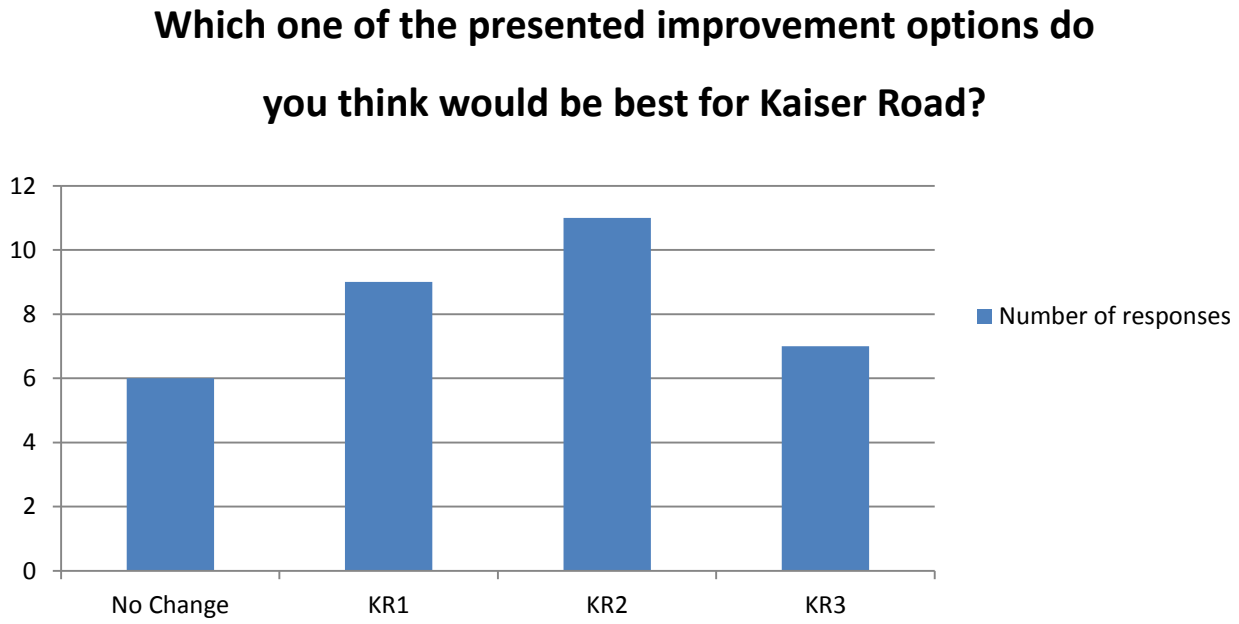
- SBR: 2-Lane Roundabout
- SBS: Signalized Intersection

Open House Findings Discussion



- PR1: Improved curve signing and clearing for sight distance PR2: Improved curve signing, shoulder widening and guardrail upgrades
- PR3: Curve realignment to 40 MPH and shoulder widening

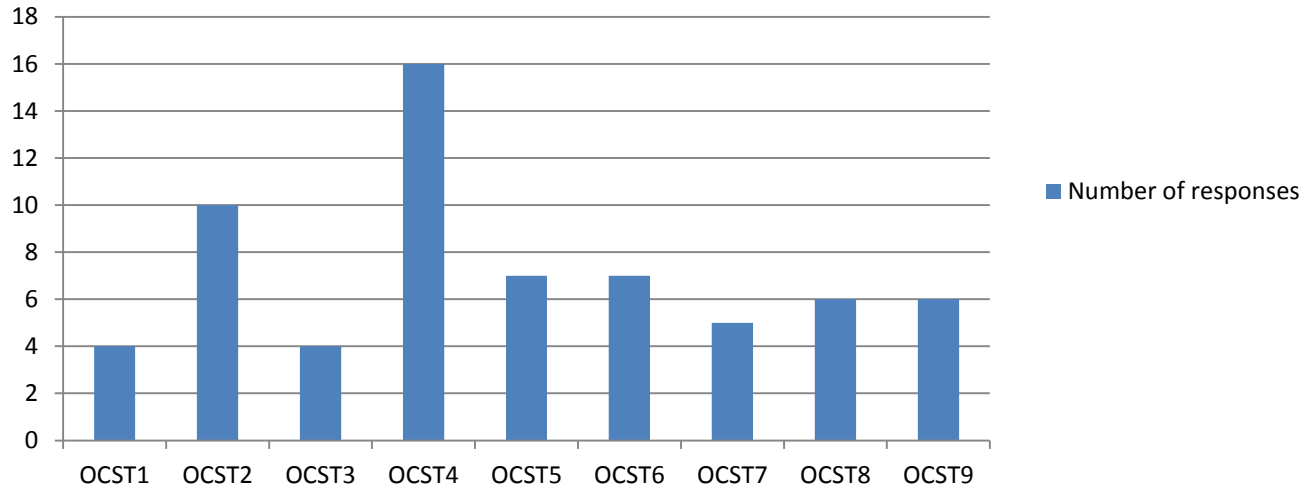
Open House Findings Discussion



- KR1: Improved signing and clearing for sight distance
- KR2: Vehicle-activated flashing beacon, similar to Sheltered Nook
- KR3: Right turn lane installation

Open House Findings Discussion

Which *three* of the overall corridor improvement options do you think would be best?



- OCST1: Corridor wide signing upgrades
- OCST2: Vehicle pullouts (speed enforcement) – pave 10 existing wide gravel areas; assumes no earthwork, wall or guardrail
- OCST3: Slow moving vehicle turnouts – northbound and southbound directions; 500 foot length, assumes significant cut/fill, widening and right-of-way impacts
- OCST4: Corridor wide roadway delineation, including: Reflective pavement markers, Delineators, and Durable striping
- OCST5: Improve pavement friction at 8th Ave curves, S-curves, and curves south of Plainview Road
- OCST6: Corridor wide clear zone upgrades
- OCST7: Illumination at key cluster locations
- OCST8: Mailbox service turnouts
- OCST9: Wildlife crossings

Design Team Proposal

- **Sheltered Nook Road-** SN-2 (Sight Distance and Vertical Curve Realignment) proposed as second tier - $560K
- **8th Ave –** 8THAVE-3 (Minor Curve Realignment) - $490K
- **“S” curves –** SC-3 (Reconstruction and Realignment of the Tangent Between Curves 6 and 7) - $770K
- **“S” curves: Boyd’s Lower Driveway –** SC-4 (Signing, Roadside Barrier and Shoulder Widening on Outside of Curve 8) proposed as second tier - $340K

Design Team Proposal

- **Skyline Blvd. –** SBI-2 (Roundabout) - $4.6M
- **Curves south of Plainview –** PR-1 (Signage and sight distance improvements) - $30K
- **Kaiser Road –** KR-1 (Signage and sight distance improvements) and KR-2 (vehicle activated signage) - $50K combined

Design Team Proposal

- **Overall Corridor Safety Treatment Options**
  - OCST-1 (Corridor Signing Upgrades) - $270K
  - OCST-2 (Vehicle Pullouts) - $200K
  - OCST-4 (Roadway Delineation) – Second Tier Only - $300K
  - OCST-6 (Corridor-wide clear zone and barrier analysis) - $300K
  - OCST-7 (Illumination) - $130K
  - OCST-8 (Wildlife Crossings)
  - OCST-9 (Reduce Pavement Drop-offs) - $50K
  - OCST-10 (Variable Message Signs) - $400K

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Other Safety Improvement Ideas

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CAC Member Input

CAC Member Input

Road Closures Get Worse

- 11,000 vehicles detoured per closure day
- Longer detours for 1,500 trucks
- (additional data courtesy Tim Love, Carson Oil)
- Road closures doubling every two years

  (Multnomah County data courtesy Mike Pullen)
- Two closures at Tunnel Curves past year
- More closures at 8th Avenue
- New benefit ratio based on US DOT costs

CAC Member Input

What about Skyline ?

Roundabout

- Already well vetted

Traffic signal

- Community preference
- Trucking industry support
- Traffic bursts – easier driveway access ?
- Easier bicycle crossing ?
- Considered phased construction
  - Lower initial cost
  - Additional capacity later

CAC Member Input

Which Budget ?

Project	Cost	Basic Benefit	Proposed Benefit
8th Ave major realign	$1.1M	6.65	14.85
Tunnel Curve realign	$6.0M	0.62	2.12
Skyline Phase 1 ?	$2.0M	0.12	0.12
Easy projects	$0.8M	13.32	13.32
Proposed Phase 1	$9.9M	(15% over JTA)	
Full Project	**$11.6M**	(33% over JTA)	

SC-1 and SC-2 CRF* 6% to 15% ; SC-3.1 CRF* up to 60%

SC-1 and SC-2 worst radius 70 feet ; SC-3.1 up to 116 feet, smooth

* Individual counter-measure crash reduction factors from design team technical memo

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Public Comment

Small Group Exercise

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Safety Improvement
Detailed Design Package

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Next Steps