


Orchard Street Realignment Study


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1


Project Team



Brooke Green, PCED
ACHD Project Manager



Steve Thieken, PE, PTOE, AICP
B&N Project Manager



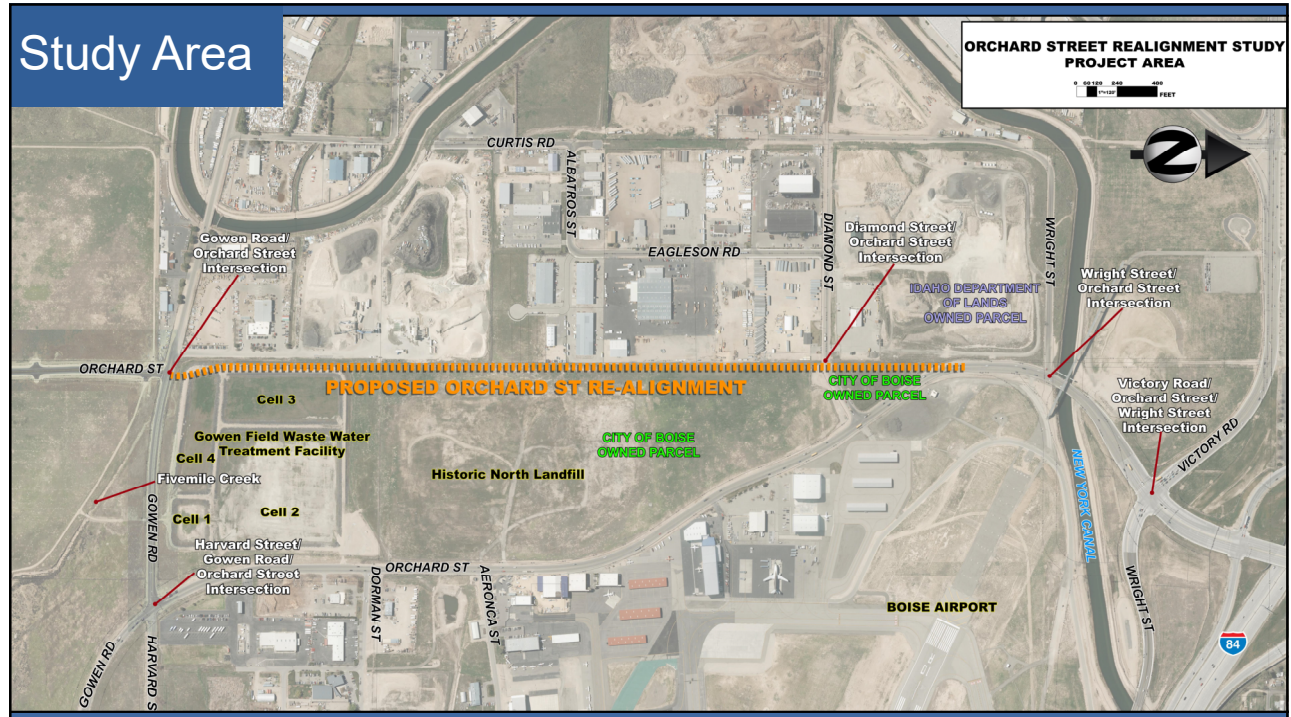
Molly Loucks, PE
B&N Deputy Project Manager

2

Presentation Outline

- Project Overview
- ACHD Goals and Concerns
- Review of the planning process
- Initial Concepts
- Review of Alternatives
- Final Recommended Alternative
- Project Lessons Learned
- Current Status of Project

3



4

Purpose and Objectives - ACHD

- Develop a preferred concept-level design of Orchard Street as a Mobility Arterial between Gowen Road and Victory Road
- Complete a NEPA-compliant analysis of roadway design alternatives



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5

Corridor and Study Components

- Level 3 bicycle facility as identified in ACHD Bike Master Plan
- Pedestrian facilities
- Compare roundabout and signal options at Orchard/Gowen intersection
- Balance access, traffic flow, and safety
- Maintain and improve local roadway connections



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6

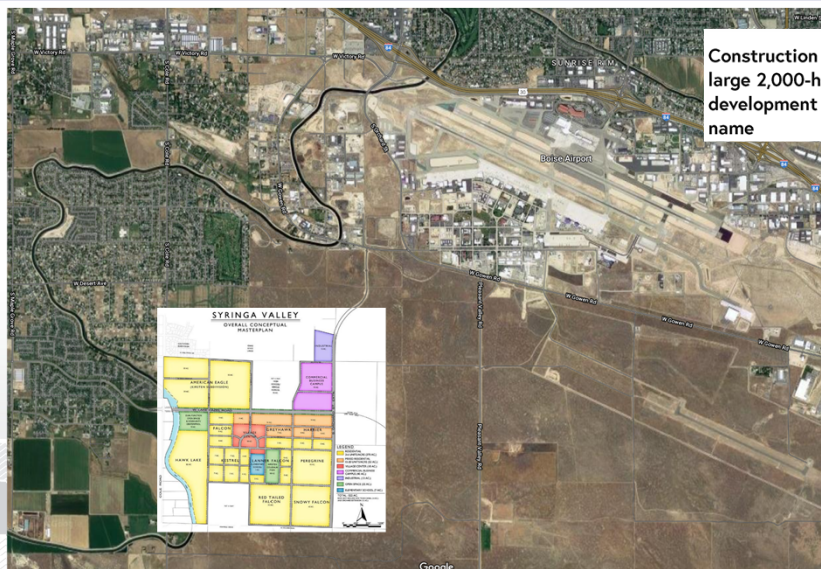
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Corridor Background and Challenges

- Growth and traffic projections
- Recent construction to the south
- Airport Master Plan
- History - previous study/design efforts
- Landfills and abandoned sewer lagoon
- FAA approval needed – Environmental Document

7

Growth is Happening!



Construction starts on large 2,000-home Boise development with new name

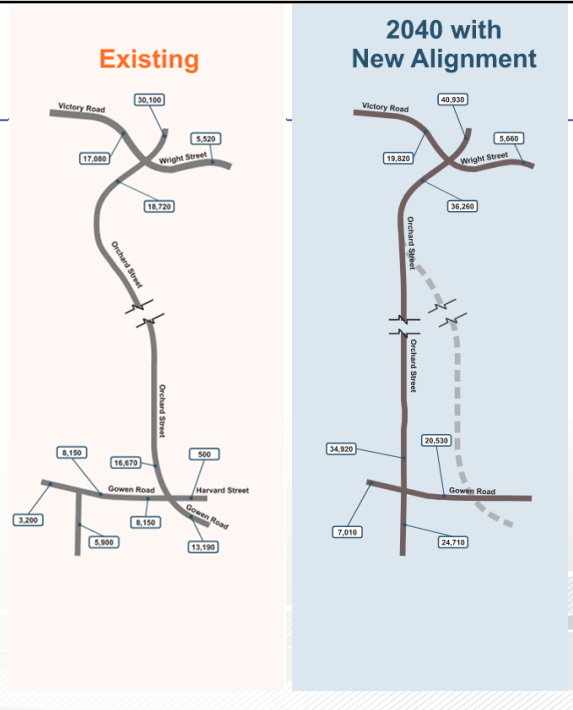


Source: BoseDev

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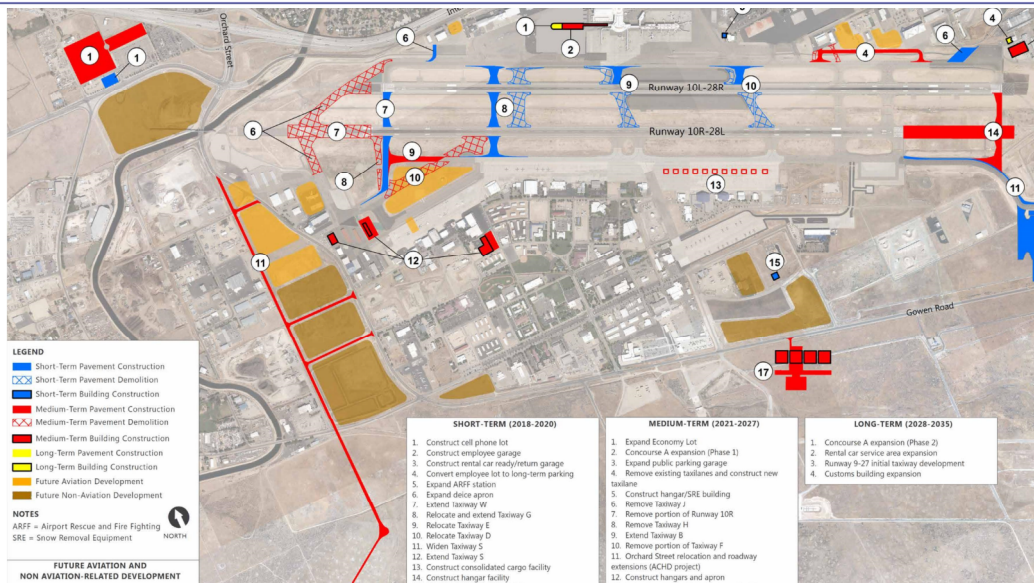
Traffic Volumes

Link	2018 Model Volume	2040 Model Volume	% Change
Orchard Street, south of Victory Road	11,300	27,700	145%
Orchard Street, north of Gowen Road	8,100	24,600	204%
Orchard Street Extension, south of Gowen Road	3,700	19,100	416%



9

Airport Master Plan



10

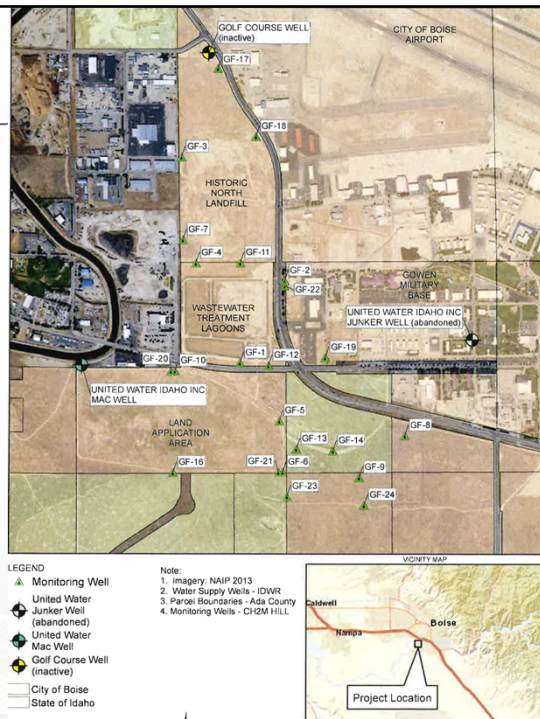
2009 Boise Airport Study and Preliminary Design



11

Environmental and other site issues

- Known hazards in project corridor
 - Landfills
 - Monitoring wells
 - Abandoned sewage lagoons
 - Significant public and private utilities
 - Proximity to airport



12

FAA NEPA Coordination

- Coordination with FAA
- Land Exchange
- Determine NEPA Documentation
 - CAT EX vs EA



ORDER
5050.4B

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

NATIONAL ENVIRONMENTAL POLICY ACT
(NEPA) IMPLEMENTING INSTRUCTIONS
FOR AIRPORT ACTIONS

Effective Date: April 28, 2006

Initiated by: APP-1

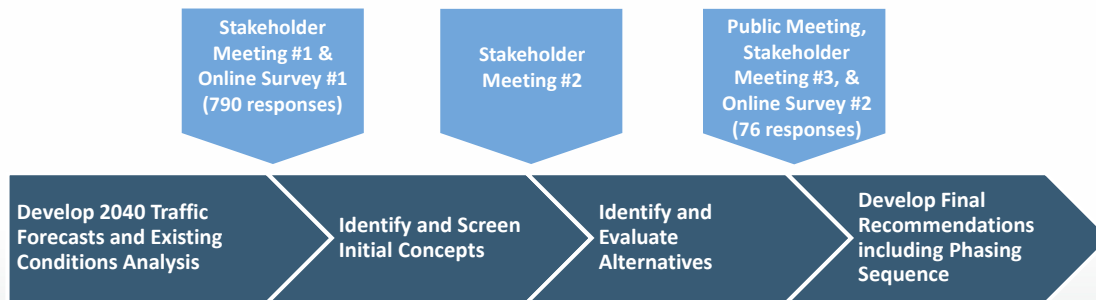
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Audience Survey

- Type your thoughts in the chat:
 - What do you envision the biggest issue(s) will be?
 - What should the primary project goals be?

14

Study Process



15

Stakeholder Advisory Group

- **Meeting #1 – Listen and learn**
 - Introduction to study process
 - Learn about stakeholder needs, ideas, issues, or concerns that the study team should consider
- **Meeting #2 – Consider options**
 - Review initial concepts
 - Discuss advantages and disadvantages for each concept
 - Discuss/suggest changes or refinements to concepts, or additional concepts
 - Listen and learn some more
- **Meeting #3 – Evaluate options**
 - Review draft evaluation matrix and preliminary recommendations
 - Provide feedback and suggest modifications
 - Listen and learn some more

16

Hands-on Stakeholder Engagement

Orchard Street Realignment Study – Stakeholder Meeting #2
August 18, 2019

Comment Survey

Please provide your suggestions, comments, and ideas. Be as specific as possible. You may use additional sheets as necessary.

What do you like about Concept 1 and why?
Roundabout at Orchard/Gowen allows for better east bound traffic at peak hours. We have concern about east bound traffic backing on the road (primarily east bound/southbound on bus rd).

What do you dislike about Concept 1 and why?
LA roundabout allows for peak flow. Ensure access to business here construction during traffic. Ensure access to Dorman St/Harvard Rd is maintained for 18 months to get on Gowen Field Commercial Gate.

What do you like about Concept 2 and why?
It keeps traffic to Gowen streamlined. Ensure pedestrian/bike traffic corridors in same form to Gowen Main Gate. Prefer this access on Gowen/Harvard for trucks.

What do you dislike about Concept 2 and why?
Single line is too close to traffic. I dislike the light because significant stacking will occur for left turning south bound/east bound moving traffic.

COMMENTS ORCHARD STREET REALIGNMENT STUDY
STAKEHOLDER MEETING
AUGUST 18, 2019

Which alternative do you prefer for the Orchard Street realignment?

Alternative 1 Alternative 2 No Build

Please explain your answer: *SEE BACK FOR COMMENTS. PREFER ALT 1 OVER OTHER FROM ALT 2 ON DORMAN.*

ALT 1: AERONCA AND DORMAN OPTIONS - Which option do you prefer?

Aeronca Street Option A - Signalized Intersection Aeronca Street Option B - Roundabout

Dorman Street - Roundabout None - I do not like any of the options

Please explain your answer: *ADHD CONTRADICTION ON LANDSIDE. WANT LOWER ACCESS TO FLIGHT EXPANSION AT THE AIRPORT.*

ALT 1: GOWEN AND HARVARD OPTIONS - Which option do you prefer?

Option 1 Option 2 Option 3

None - I do not like any of the options

Please explain your answer: *REMOVES INTERSECTION ON GOWEN. I WOULD PREFER SIGNAL. FLOW FOR BUS CONTRADICTION SIGNALS (LEFT TURN) & NEW TRAFFIC. GOWEN WOULD LEFT TURN TURN FROM HARVARD. HIGH VOLUMEN.*

Gowen Road and Orchard Street Options

Please tell us which intersection option you prefer at Gowen Road and Orchard Street for each alternative.

Which Gowen/Orchard intersection option do you prefer for Alternative 1?

Signalized Intersection Roundabout None - I do not like any of the options

Please explain your answer: *SIGNAL. TRAFFIC FLOW FROM GOWEN TO ORCHARD TOP. LIGHT SIGNAL ISSUE. GOWEN ISSUE.*

(OVER)

17

Major Stakeholders - Concerns

- ACHD
- Airport
- City of Boise
- Gowen Field (Airforce National Guard)
- Knife River
- Valley Regional Transit
- Other Private



18

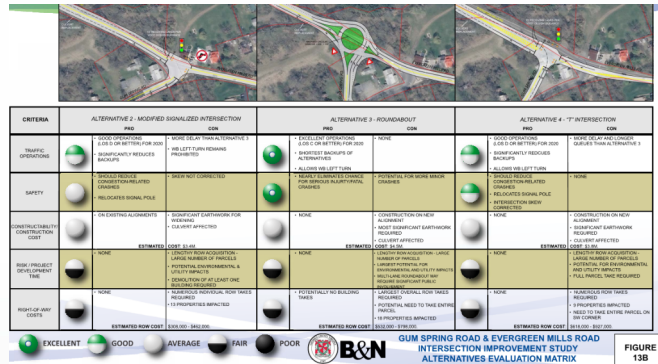
Design Concept Development Evaluation

- Identify **Initial Options**
- **Screen** *Initial Options*
- **Create** *Concepts*
- **Develop and Evaluate** *Alternatives*
- **Refine** *Alternatives into Conceptual Designs*
- **Make Recommendations** based on final evaluation and implementation considerations

19

Design Alternatives Evaluation

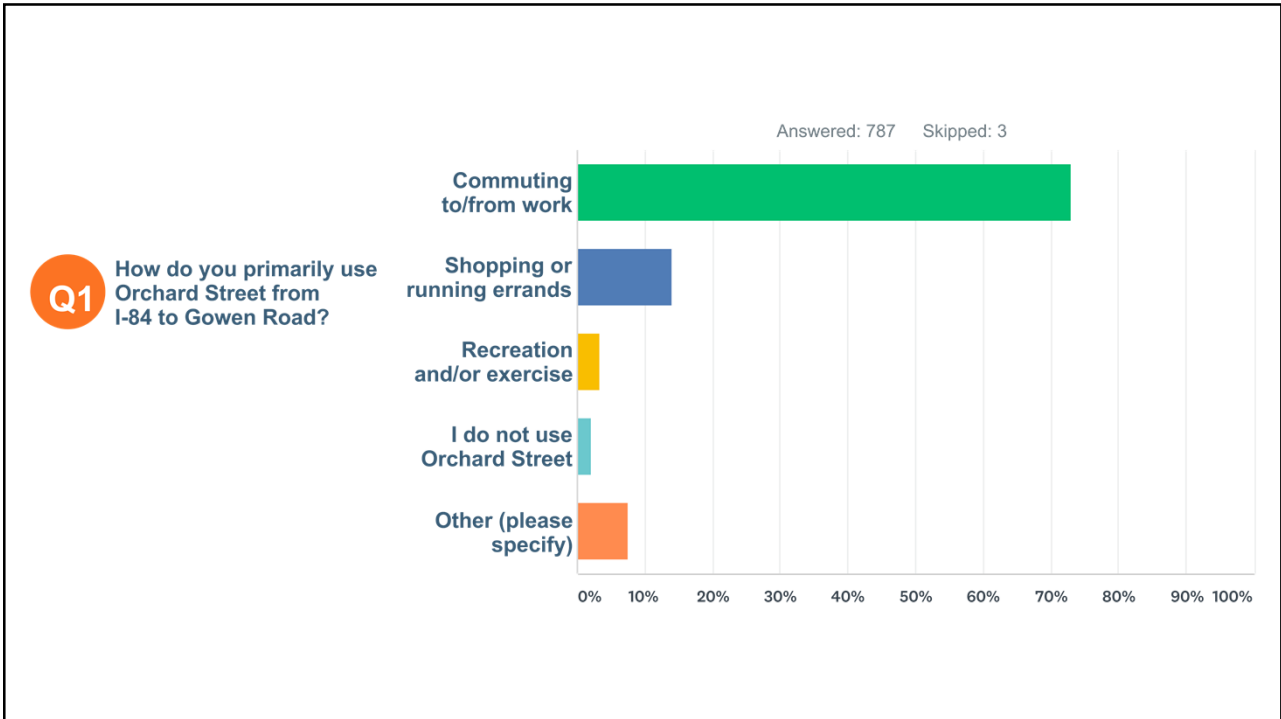
- Potential Criteria (evolved)
 - Traffic operations
 - Non-motorized user performance
 - User safety
 - Design impacts and costs
 - Horizontal
 - Vertical
 - Drainage & Stormwater BMP
 - Right-of-way
 - Environmental impacts
 - Land use/business impacts
 - Others as identified



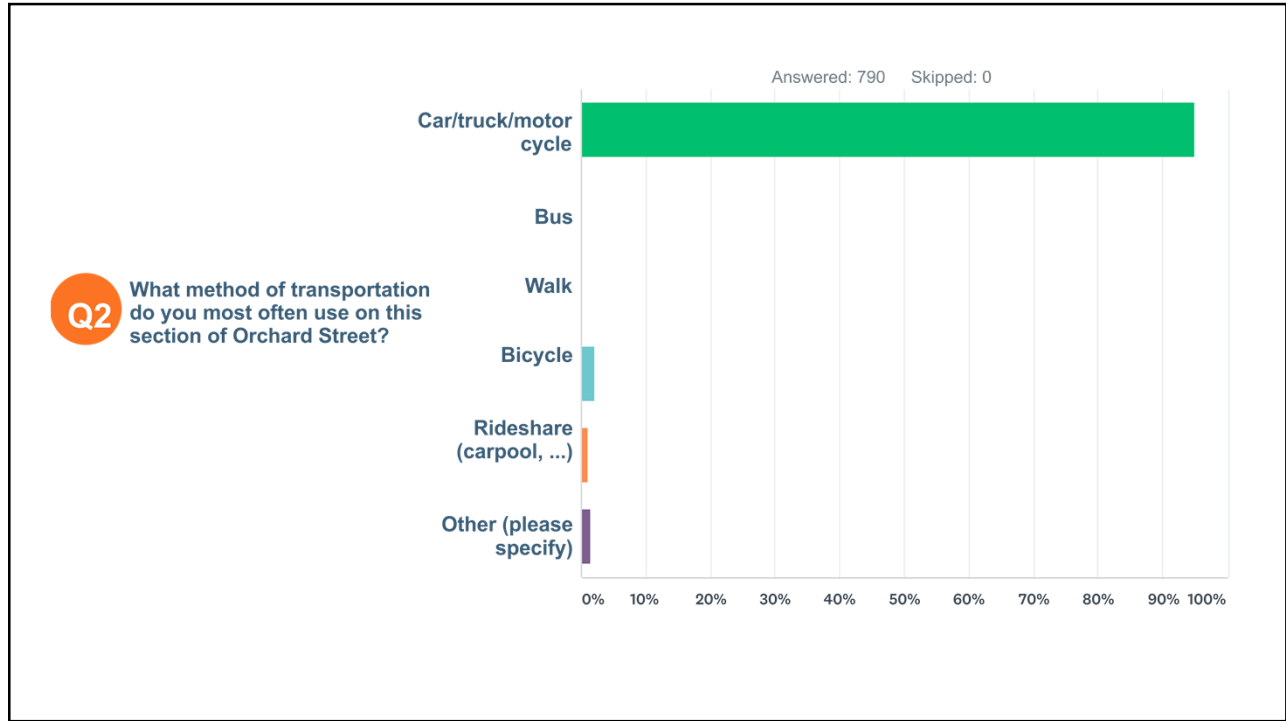
20

Initial Public Outreach

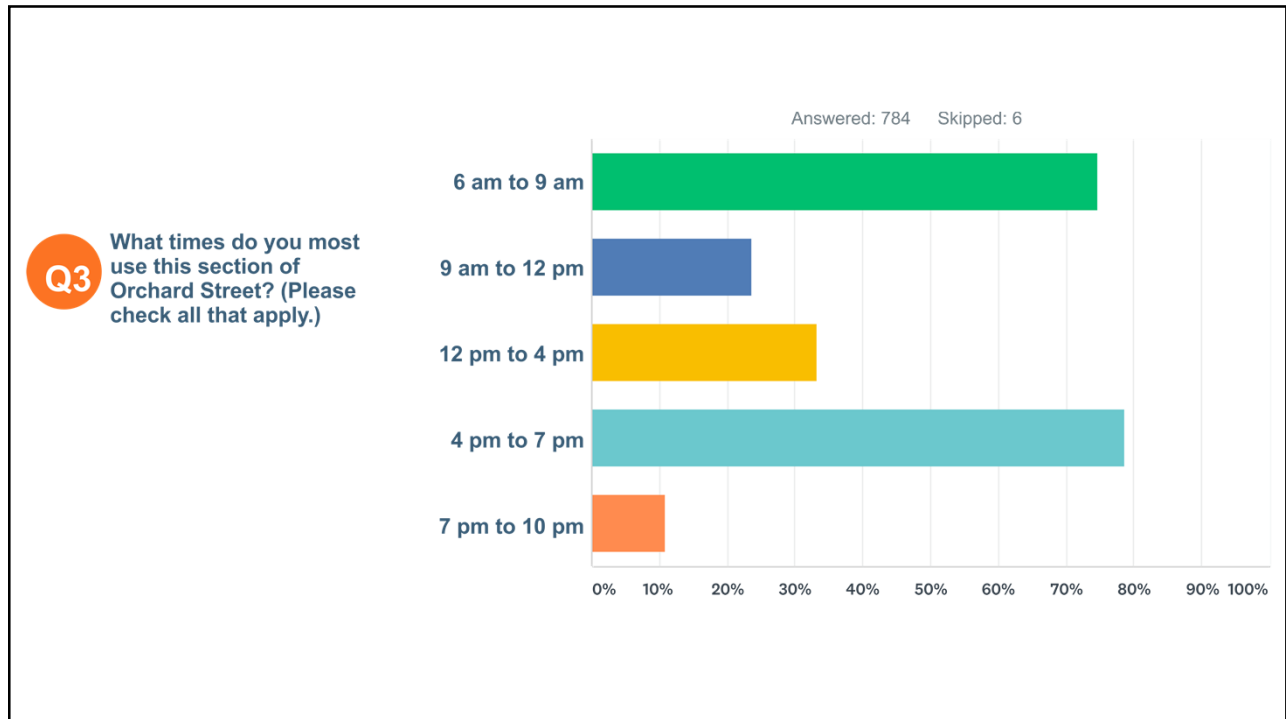
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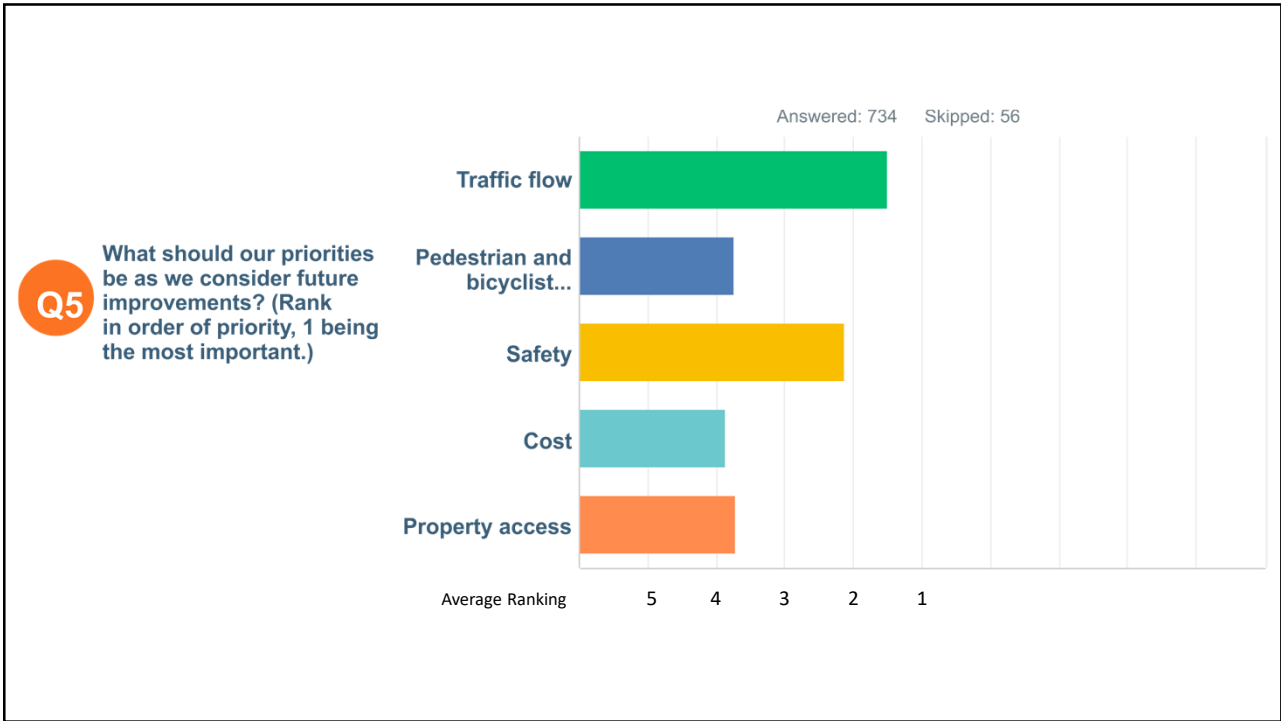


24

Q4 Current issues you're experiencing

- High volume of traffic, congestions, and long travel time down this corridor.
- Speeding in the corridor
- Poorly synced/timed signals
- Dangerous merge section where Orchard tapers from two lanes to one lane.
- No facilities for bikes and pedestrians
- Difficulty turning left at non-signalized intersections during rush hour
- Poor sight distance and heavy congestion at the Orchard/Gowen/Harvard intersection

25



26



**Concerns that should
be considered**

- Consideration of future growth
- Dedicated turn lanes at intersections
- Signal at Diamond intersection to better facilitate left turns
- Finding a way to better accommodate heavy trucks
- Making sure the roadway is safe for pedestrians and cyclists
- Enhanced aesthetics for the corridor (landscaping)

27

Concept Development

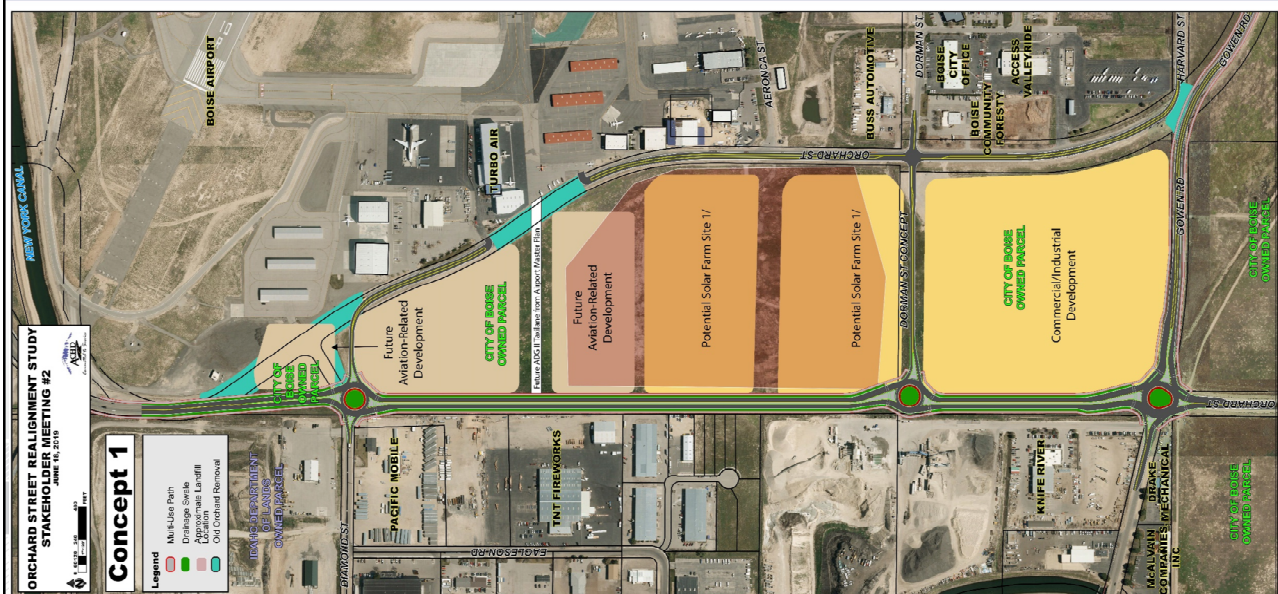
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Concept 1

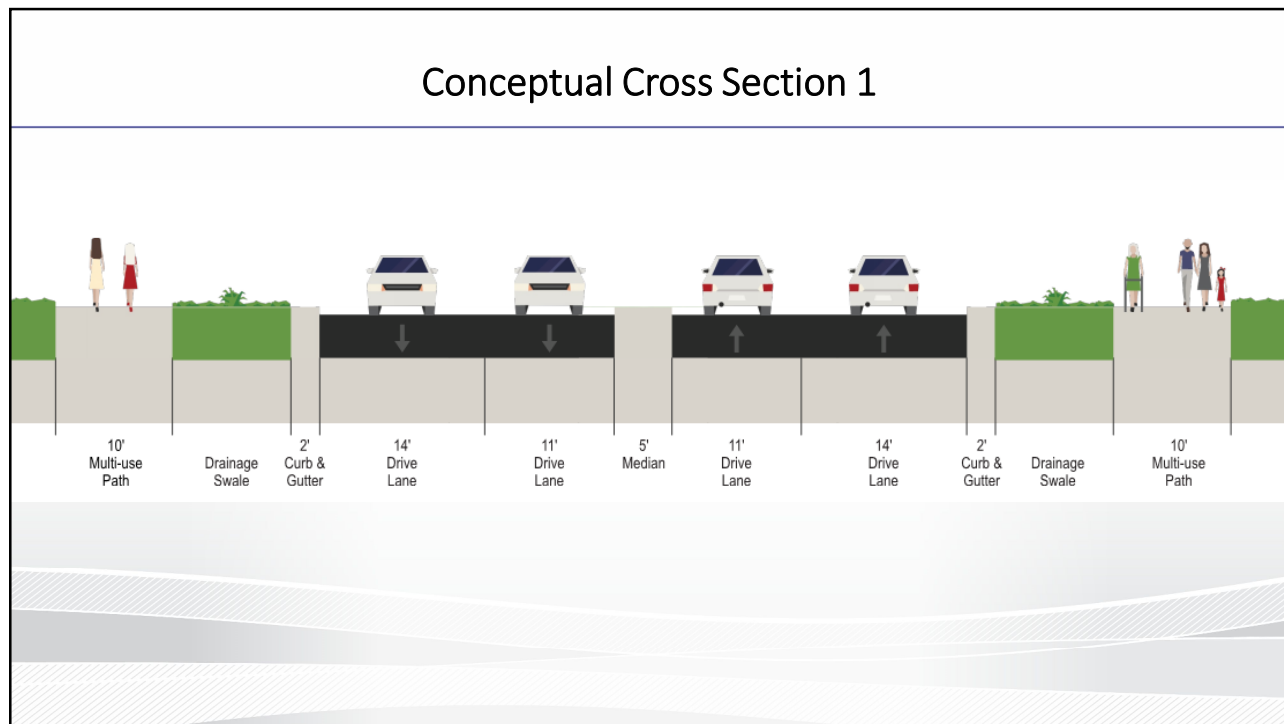
- Roundabout control at major access points
- Left turn access to properties fronting Orchard St limited to roundabouts
- Limited Access. Limited right-in/right-out only access granted
- Connection to existing Orchard St via Diamond St (north); Dorman St (south)
- Gowen Rd disconnected from existing Orchard Rd and Harvard St
- Gowen Rd realigned
- Harvard St connected to existing Orchard St

29

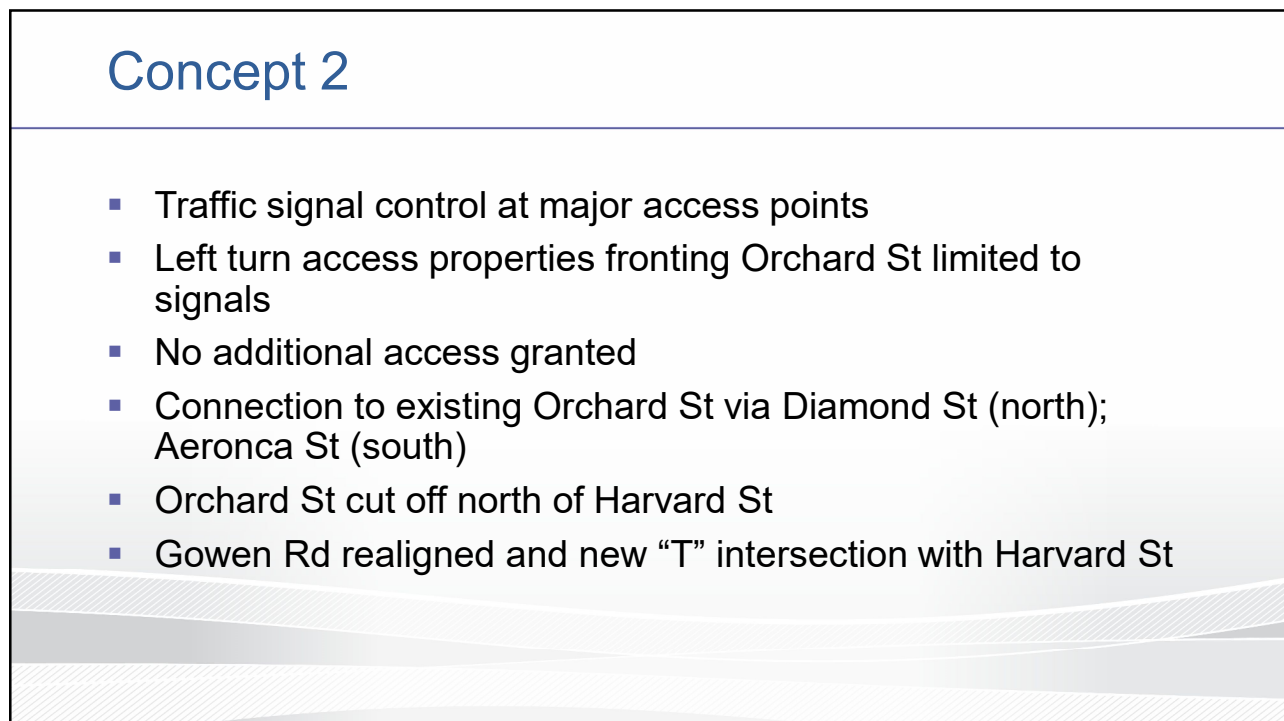
Concept 1 - layout



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31



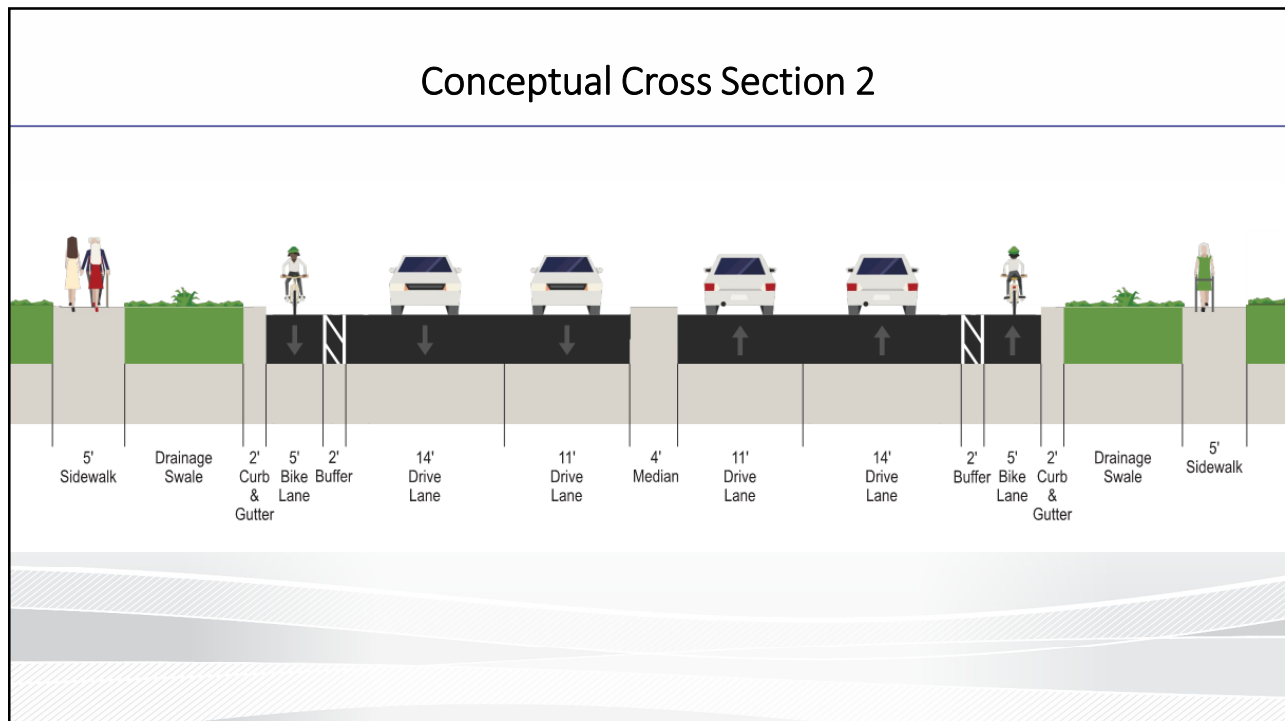
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Concept 2 - layout



33

Conceptual Cross Section 2



34

Stakeholder Meeting #2

- Reviewed Concepts
- Feedback
 - Like roundabouts for easy left turn access and less delay
 - Concern about access to Gowen Field, Valley Regional Transit, and Airport Parcel
 - Preferred multiuse path vs bike lanes
 - Preferred narrower lanes (closer to 12')

35

Evolution of ACHD Concerns

- NEPA – not the biggest concern
- Oversized Overweight Loads
- Stakeholder Coordination
- Multiple landfills, environmental concerns

36

Alternative Development

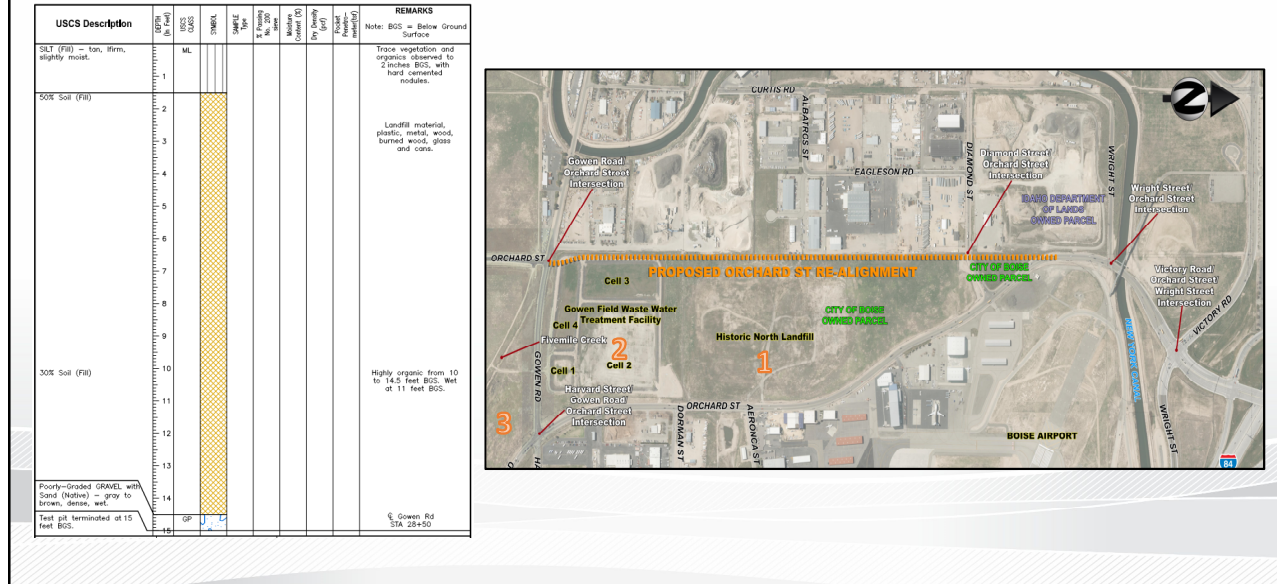
37

Project Challenges

- Existing landfills
- Coordination with partner agencies
- Pedestrian access over New York Canal
- Oversized overweight vehicles
- Boise Airport Runway Protection Zone
- Significant Utilities
- Complex Drainage

38

Multiple Landfills



39

Coordination with Partner Agencies and Stakeholders



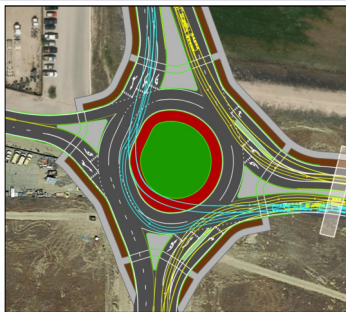
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Pedestrian Access over New York Canal



41

Oversized Overweight Truck Analysis



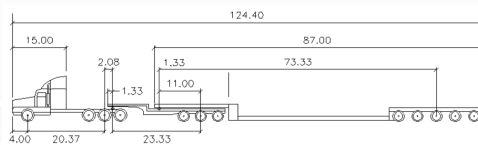
OSOW Accommodations at Three Lane Gowen Road/Orchard Street



OSOW Accommodations at Orchard Street/Diamond Street and Orchard Street/Dorman Street or Aeronca Street

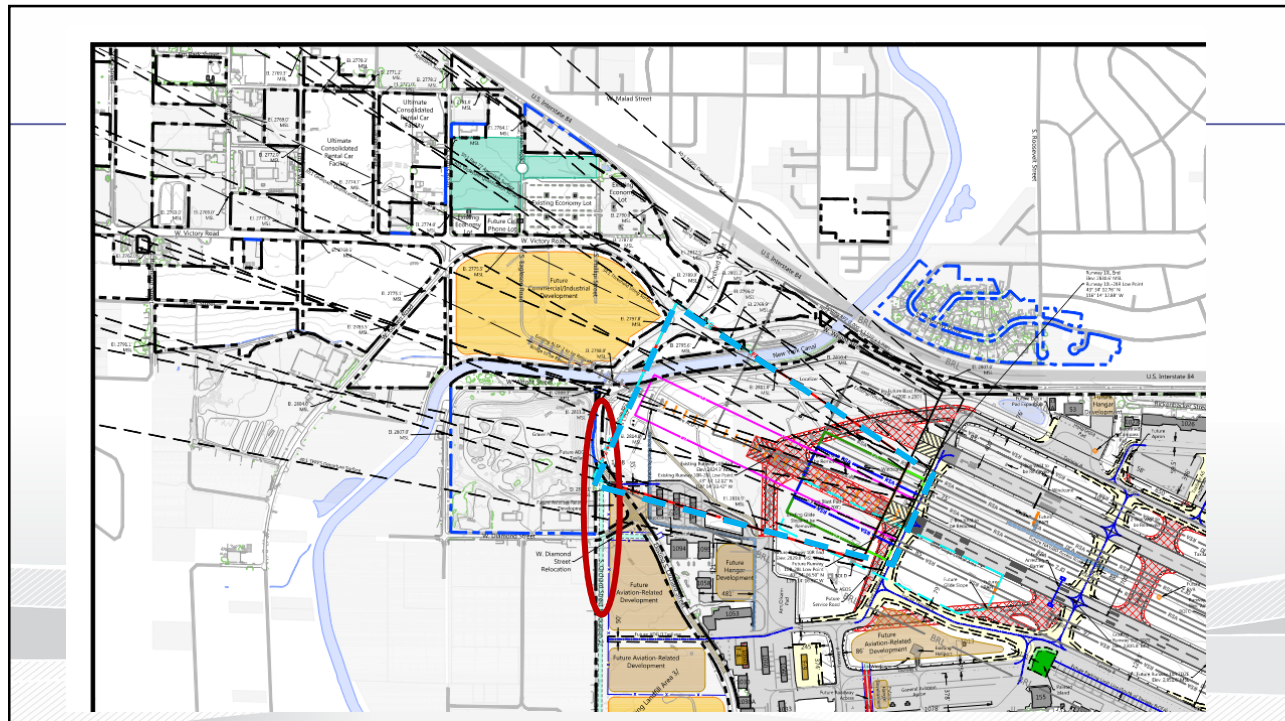


OSOW Accommodations at Signalized Gowen Road/Orchard Street



Overall Length 124.40 ft
Overall Width 12.50 ft
Min. Track Width 10.00 ft
Min. Body Ground Clearance 5.0 Inches

42



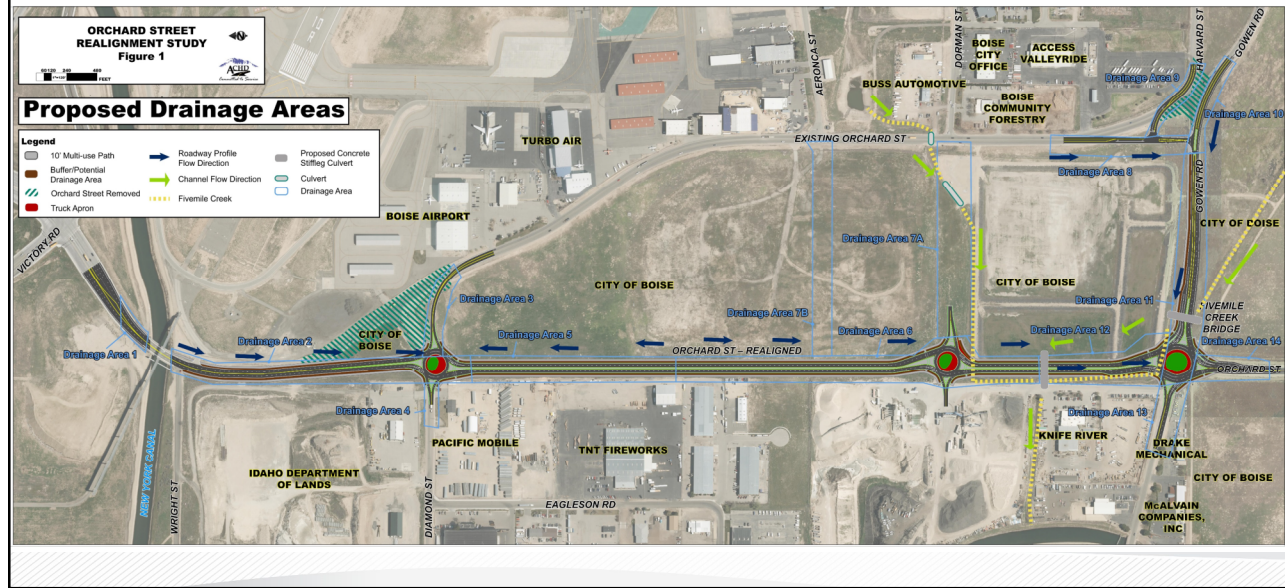
43

Utilities

- Ten major utilities within project area
- Utilities within the Existing Orchard Street Corridor to remain unless utility owner plans to relocate themselves
- Coordination with City of Boise on Sewer extension/relocation
- Monitoring well relocations
- Potential impacts to Intermountain Gas fire training facility at Dorman

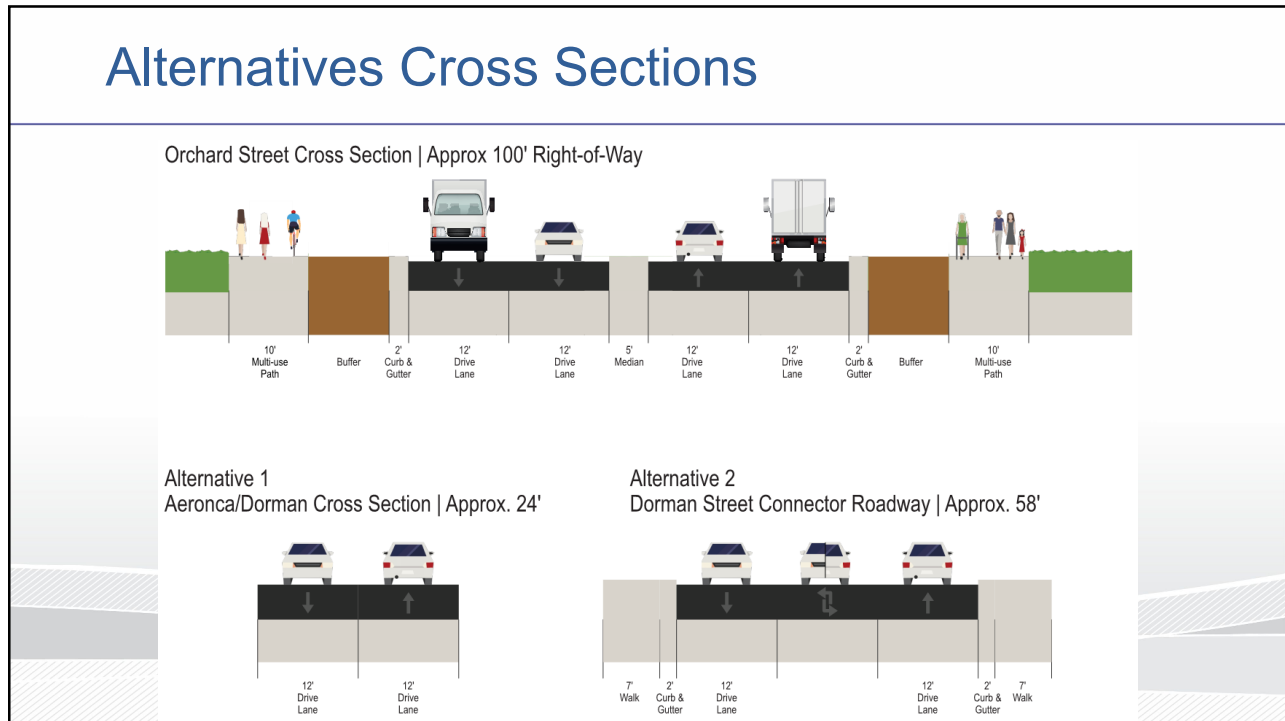
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Complex Drainage Solution



45

Alternatives Cross Sections

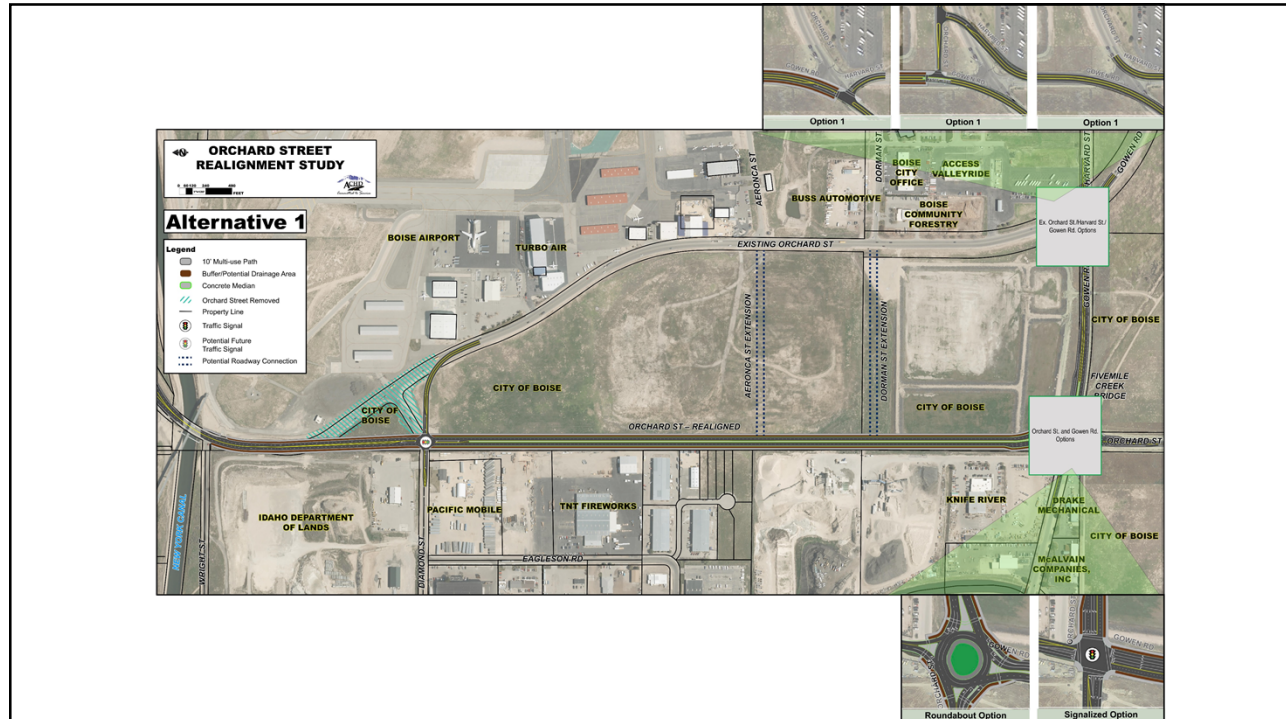


46

Alternative #1

- Four lane Orchard Street with a raised center median
- 10-ft wide shared-use paths
- Pedestrian and cyclist connections between realigned Orchard Street and existing Orchard Street.
- Realigned Gowen Road to provide a curve designed for 40 mph in the vicinity of existing Orchard Street/Harvard Street.
- Full movement intersection at Diamond Street and realigned Orchard Street
- Full movement intersection with realigned Orchard Street at either Dorman Street or Aeronca Street
 - with roundabout control at Dorman Street
 - with the option of roundabout or signal control at Aeronca Street
- Full movement intersection with realigned Orchard Street at Gowen Road with either signalized or roundabout control

47

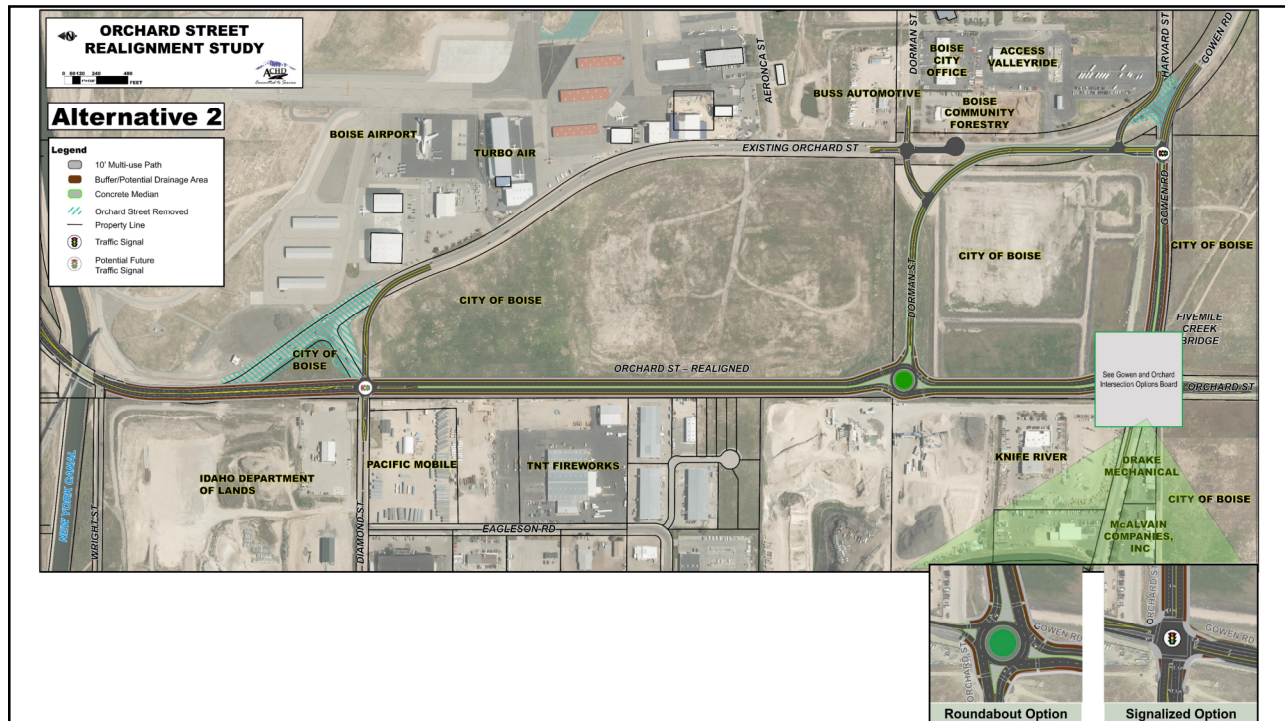


48

Alternative #2

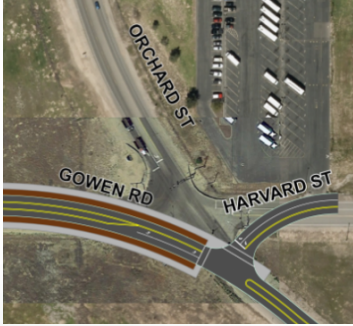
- Four lane Orchard Street with a raised center median
- 10-ft wide shared-use paths on both sides of realigned Orchard Street and on both sides of Gowen Road between realigned Orchard Street and existing Orchard Street.
- Realigned Gowen Road to provide a curve designed for 40 mph in the vicinity of existing Orchard Street/Harvard Street
- Full movement intersection with realigned Orchard Street at Dorman Street with roundabout control
- Full movement intersection at Diamond Street and realigned Orchard Street Full movement intersection with realigned Orchard Street at Gowen Road with either signalized or roundabout control

49



50

Harvard Street/Gowen Road/Ex. Orchard Street Intersection



Option 1



Option 2



Option 3

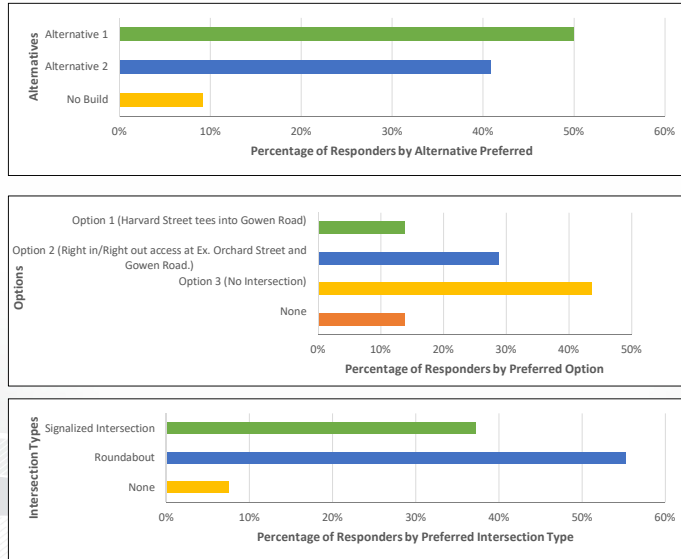
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Audience Survey

- Type response in Chat
 - Which alternative do you like best and why?

52

Stakeholder Meeting #3 and Public Comments



53

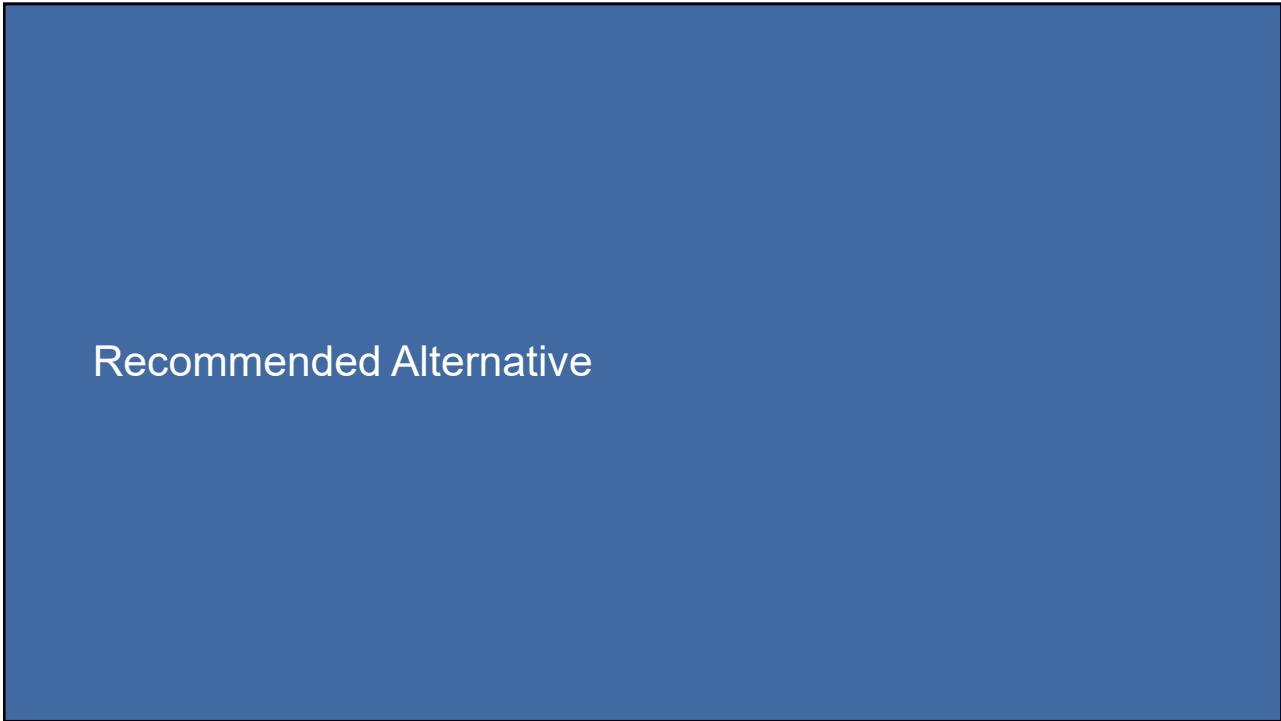
Alternatives Comparison

	Alt 1 – Aeronca		Alt 1 – Dorman		Alt 2	
	Signalized	Roundabout	Signalized	Roundabout	Signalized	Roundabout
Traffic Movement/ Efficiency	Good	Excellent	Good	Excellent	Good	Excellent
Traffic Safety	Good	Excellent	Good	Excellent	Good	Excellent
Access to Land/Future Plans	Fair	Fair	Good	Good	Good	Good
Truck Movement	Good	Good	Good	Good	Good	Good
Bicycle & Pedestrian Mobility	Good	Good	Good	Good	Good	Good
Cost	Poor	Poor	Good	Good	Good	Good
Constructability/Risk	Poor	Poor	Fair	Fair	Fair	Fair

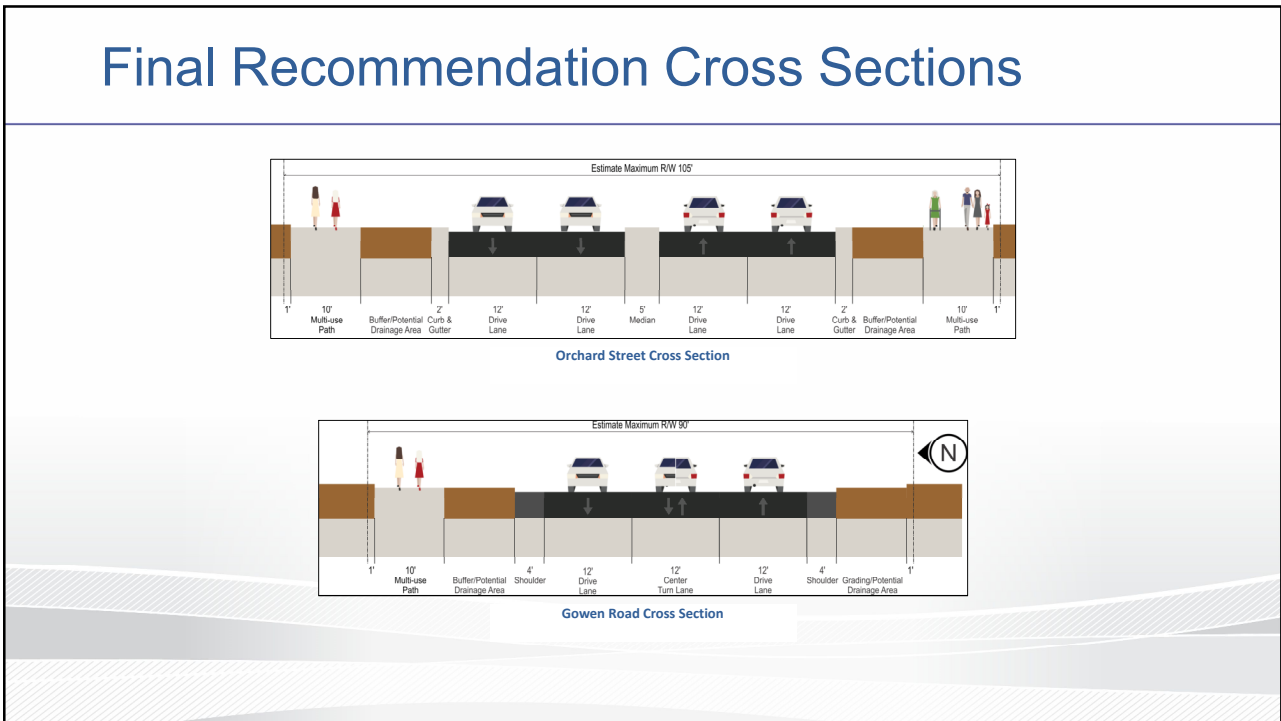
	Alt 1 – Harvard/Gowen/Existing Orchard		
	Option 1	Option 2	Option 3
Traffic Movement/ Efficiency	Fair	Good	Good
Traffic Safety	Fair	Good	Excellent
Access to Land/Future Plans	Fair	Good	Poor
Cost	Good	Good	Good

- Excellent
- Good
- Neutral
- Fair
- Poor

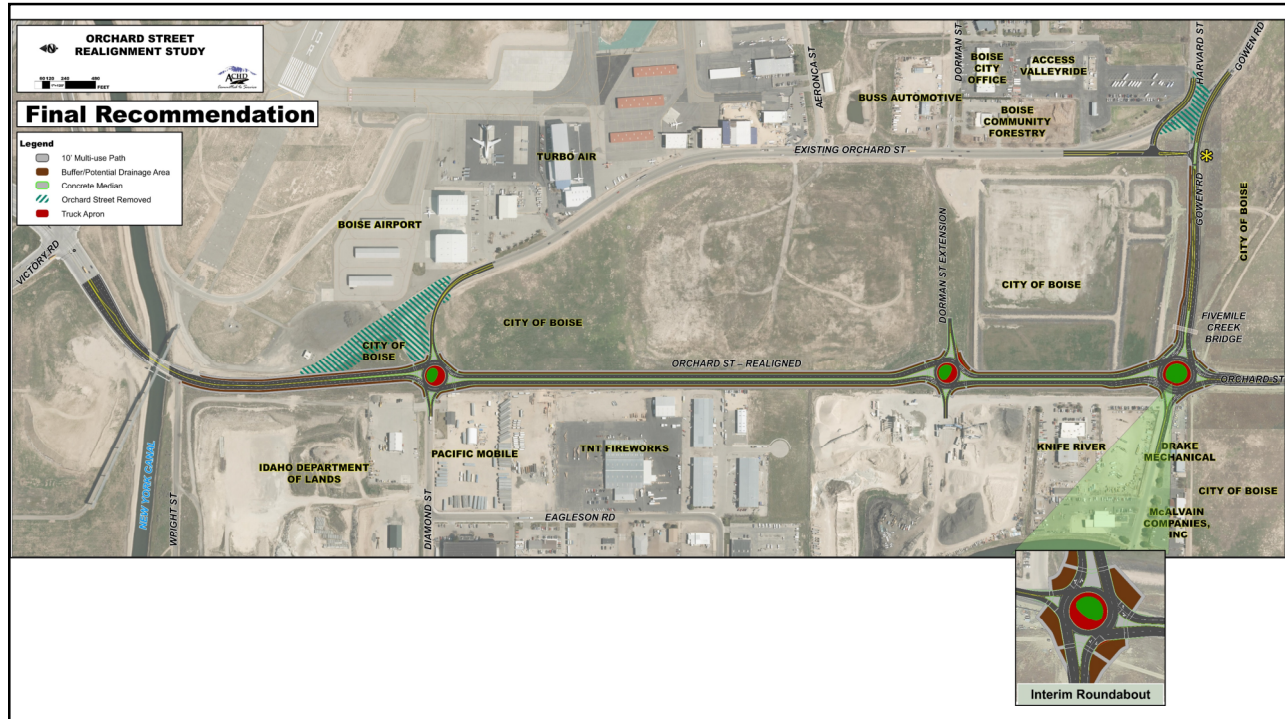
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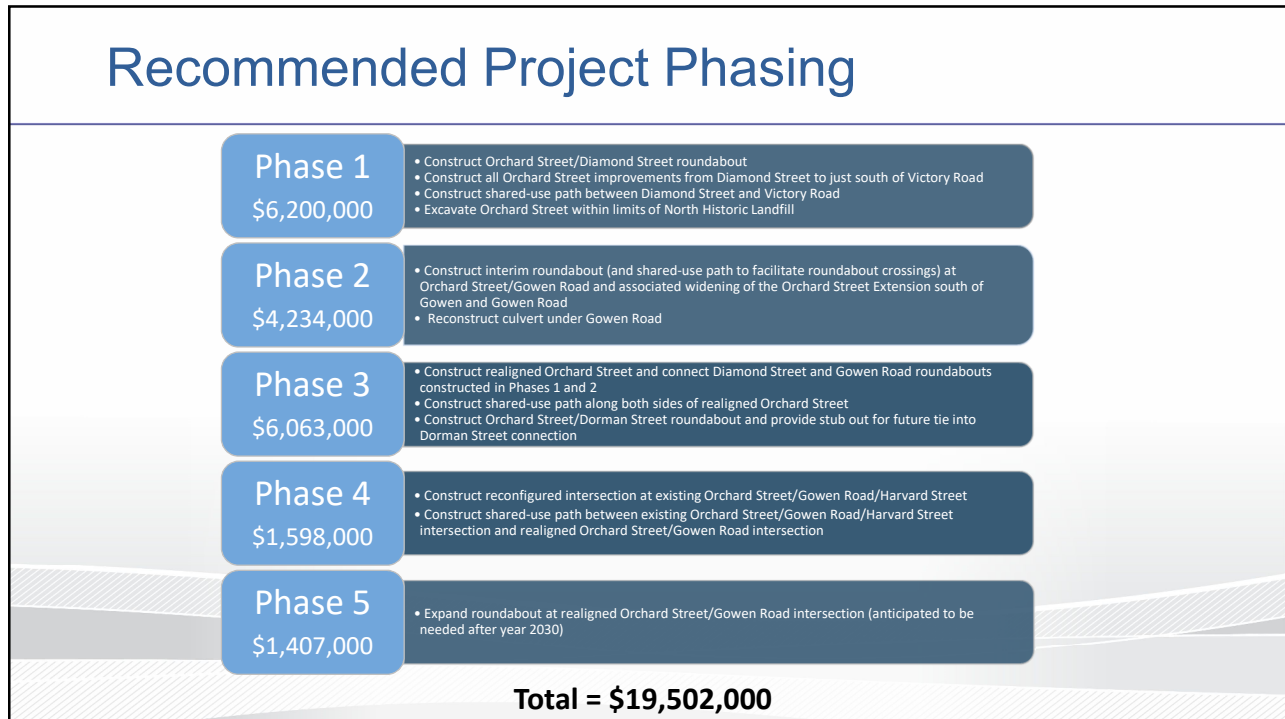
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56



57



58

Project Lessons Learned

59

Balancing Project Team/Stakeholder Concerns

- Dynamic team
 - Technical staff, planners, agency/stakeholder representatives
- Stakeholder Concerns
 - One-on-one meetings
- Transitioning PMs
- New Consultant
- Elected Official Buy-in

60

Current Project Status

61

Current Status

- Currently in Design (Summer 2020-Fall 2021)
 - Changes since adoption
- Right-of-Way Phase 2022-2023
- Construction to follow Right-of-Way over two years

62



Thank You!

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