

# City of Fort Bragg 2016 Streets and Alleys Project Preliminary Design Report

City of Fort Bragg - City Council Meeting  
July 11, 2016

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PRESENTED BY:

JACK SCROGGS, KASL ENGINEERS



# PROJECT SCOPE

Prepare construction documents for improvements to the following City of Fort Bragg Streets and Alleys.



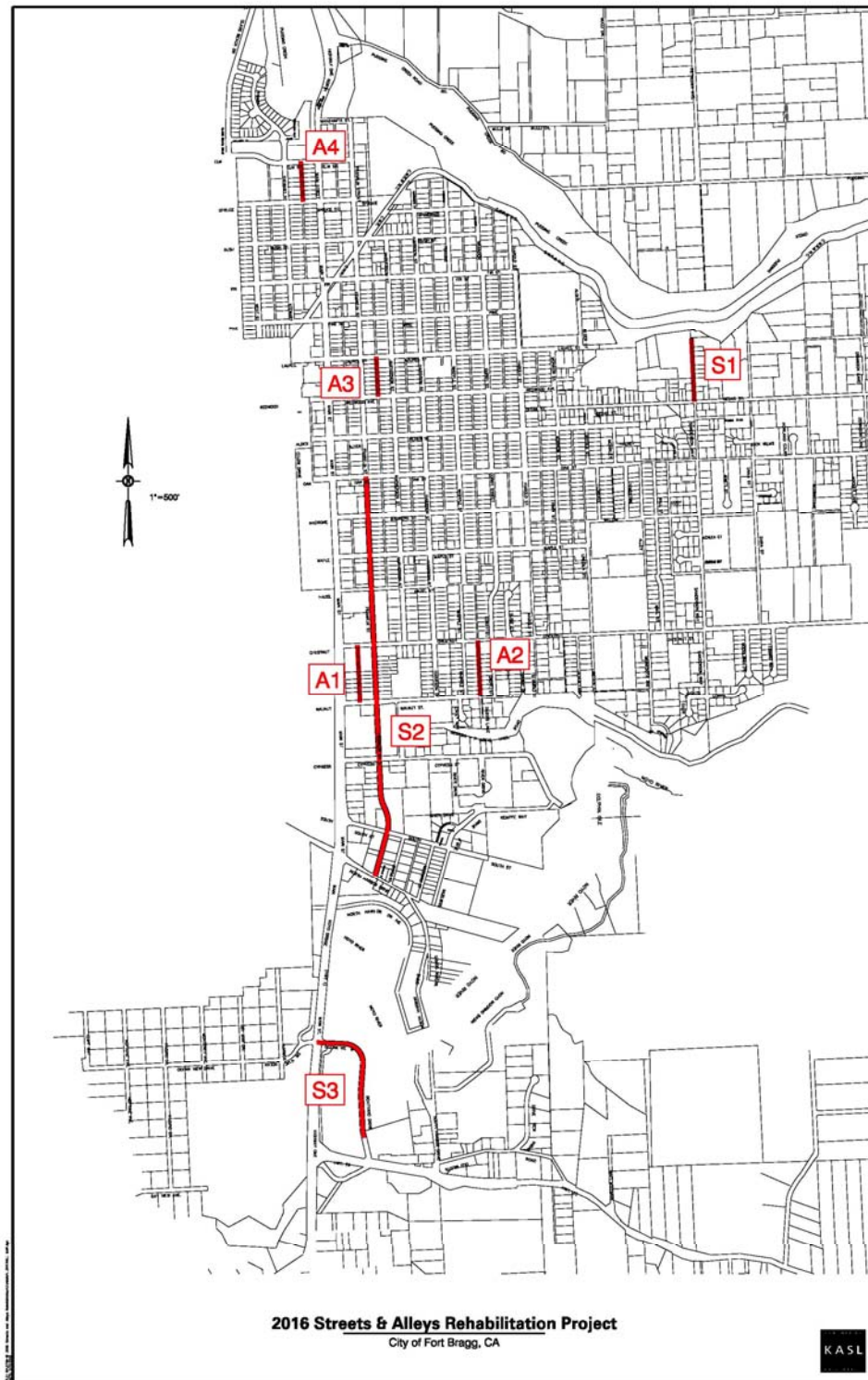
## Alleys

- A1. Located between S. Main St. (Highway 1) and S. Franklin St. from Walnut St. to Chestnut St.
- A2. Located between S. Whipple and Grove St. from Walnut St. to Chestnut St.
- A3. Located between N. Franklin St. and N. McPherson St. from Redwood Ave. to Laurel St.
- A4. Located between Stewart St. and Main St. (Highway 1) from Spruce St. to Elm St.

## Streets

- S1. N. Sanderson Way from Cedar St. to the north end.
- S2. S. Franklin St. from Oak St. to N. Harbor Dr.
- S3. Boatyard Drive / Ocean View Dr. from Main St. (Highway 1) to Boatyard Shopping Center

# 2016 Streets and Alleys



# Purpose of this Presentation

- Review Preliminary Findings and Recommendations and provide the City Council with cost estimates of suggested rehabilitation improvements.

# Alley 1 (Starbucks Alley)

- Heavily used Commercial Area Alley
- Grading, pavement and drainage improvements needed
- Existing 18 inch and an 8 inch sewer within Alley; 20 foot R/W
- Alley / slopes north towards Chestnut Street



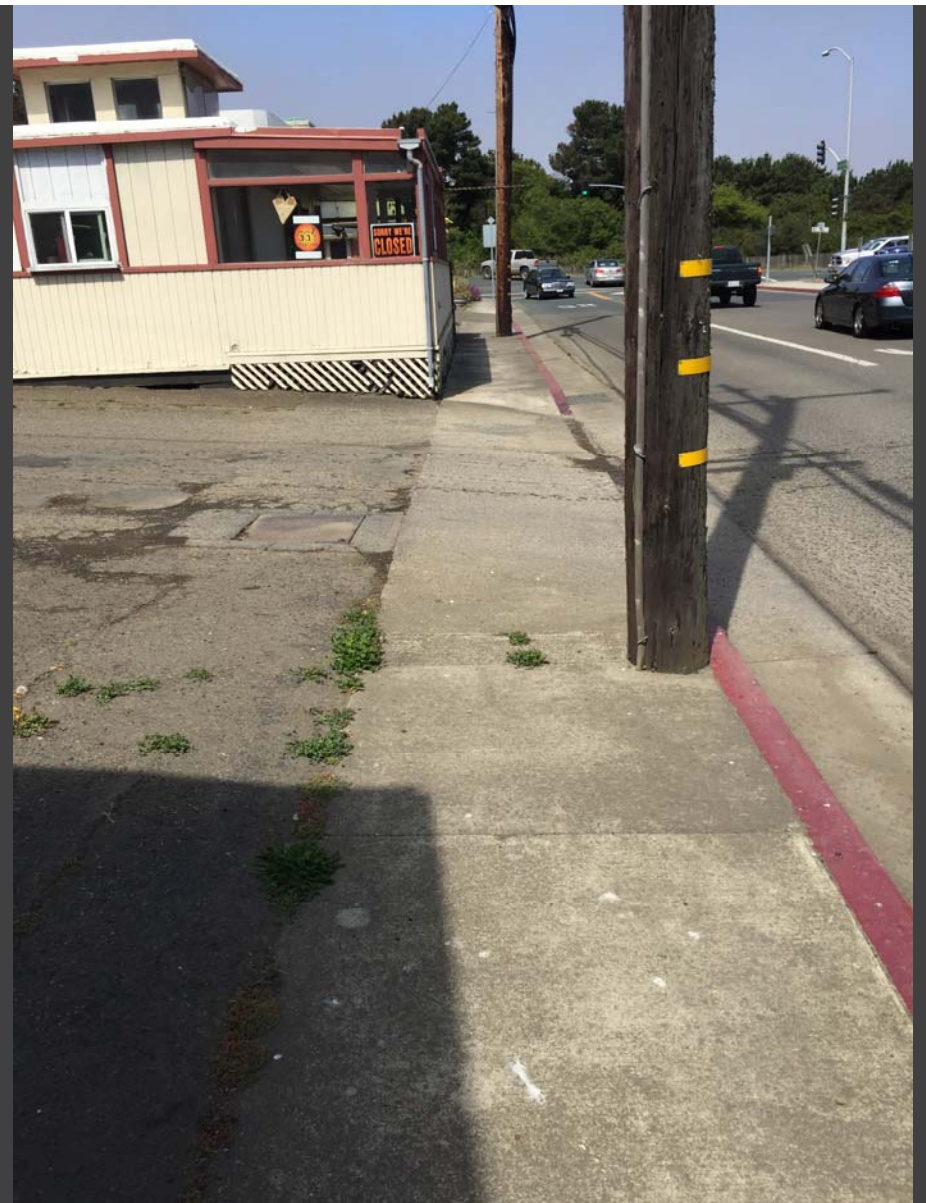
**Existing Alley/  
Conditions - Walnut  
Street Looking North**





**Existing Alley 1 Conditions  
Chestnut Street Looking  
South**



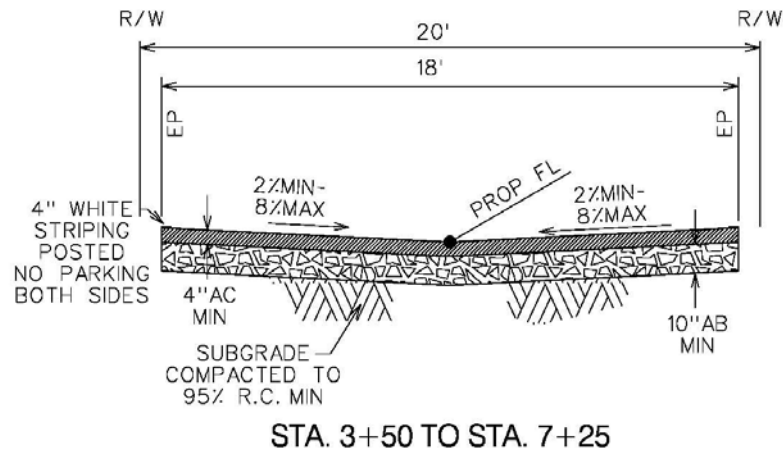
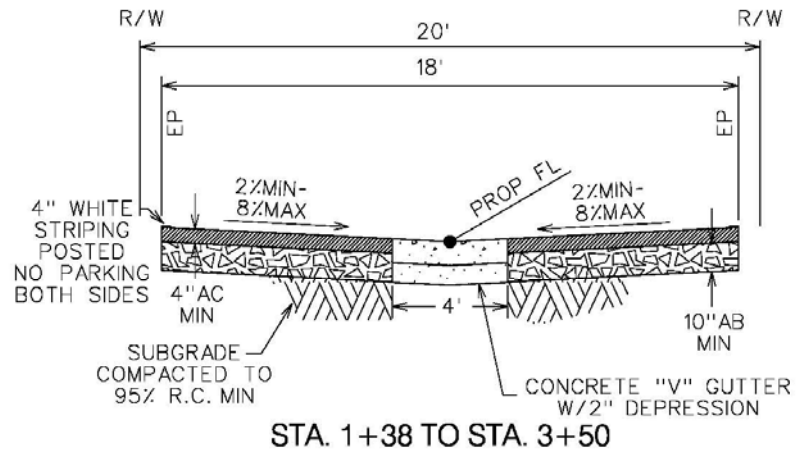


**Existing Alley 1 Intersections  
Walnut (L) Chestnut (R)**



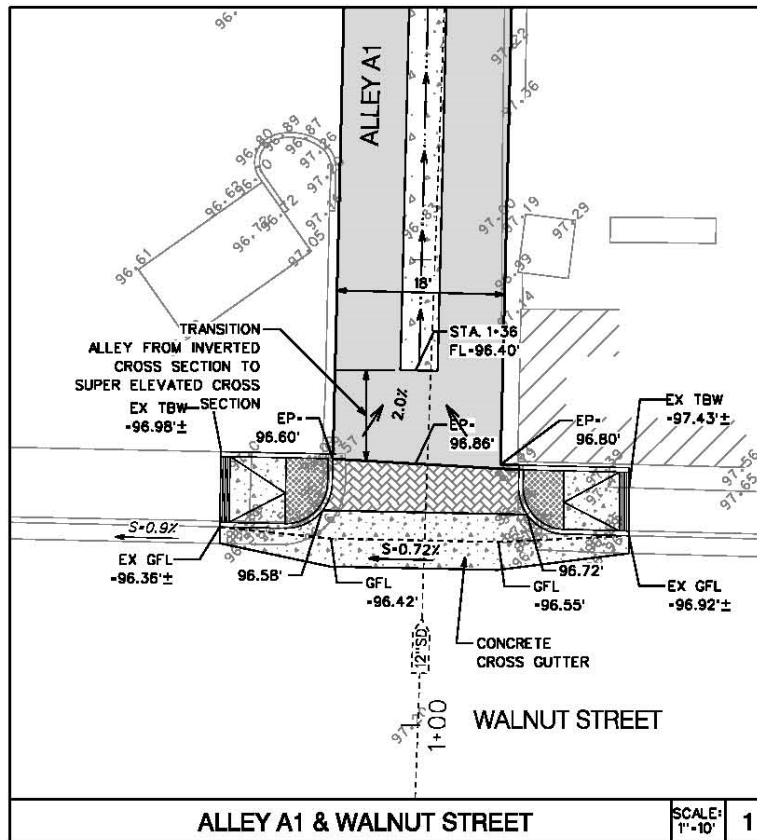
## Suggested A1 Improvements:

- Similar to Commercial / MF Residential Type 2 Alley of Alley Master Plan
- 18 foot wide paved alley with 4 foot wide concrete V gutter; 4" A.C. over 10" A.B. structural section (to be verified)
- Connect V gutter to existing drain inlet at Chestnut
- Concrete cross gutter, pedestrian ramps and stamped, colored asphalt crosswalks at both intersections
- Estimated construction cost = \$286,000



## ALLEY A1 PROPOSED CROSS SECTIONS

# Proposed Alley 1 Cross Sections





# Alley 2

- Residential Alley
- Grading, Pavement, drainage improvements needed
- Existing 6 inch sewer, existing 8 inch water; No storm drain, 20 foot R/W
- Alley 2 slopes south towards Walnut street
- Existing 12 inch diameter storm drain improvements in Walnut Street



**Existing Alley 2  
Conditions - South  
End Looking North**





**Existing Alley 2 Conditions  
North End - Looking North**

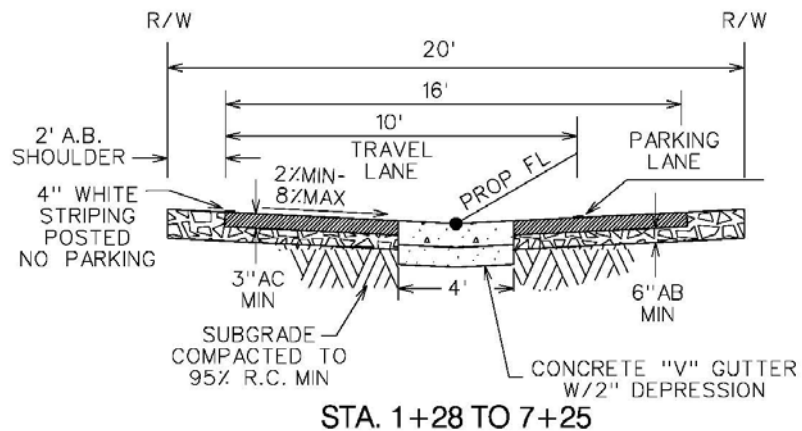




**Existing Alley 2 Intersections**  
**Walnut (L) Chestnut (R)**

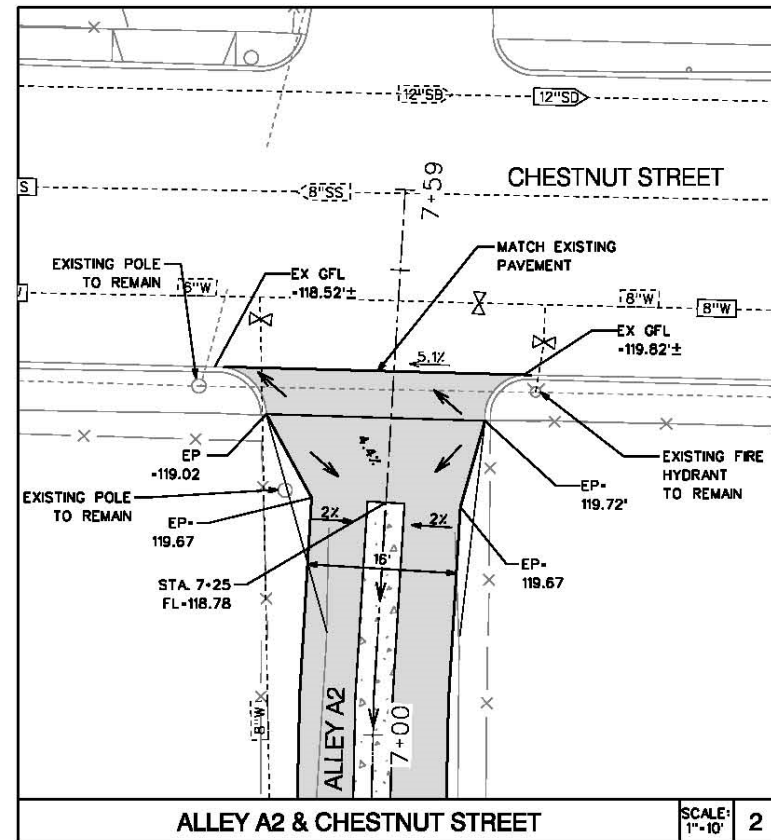
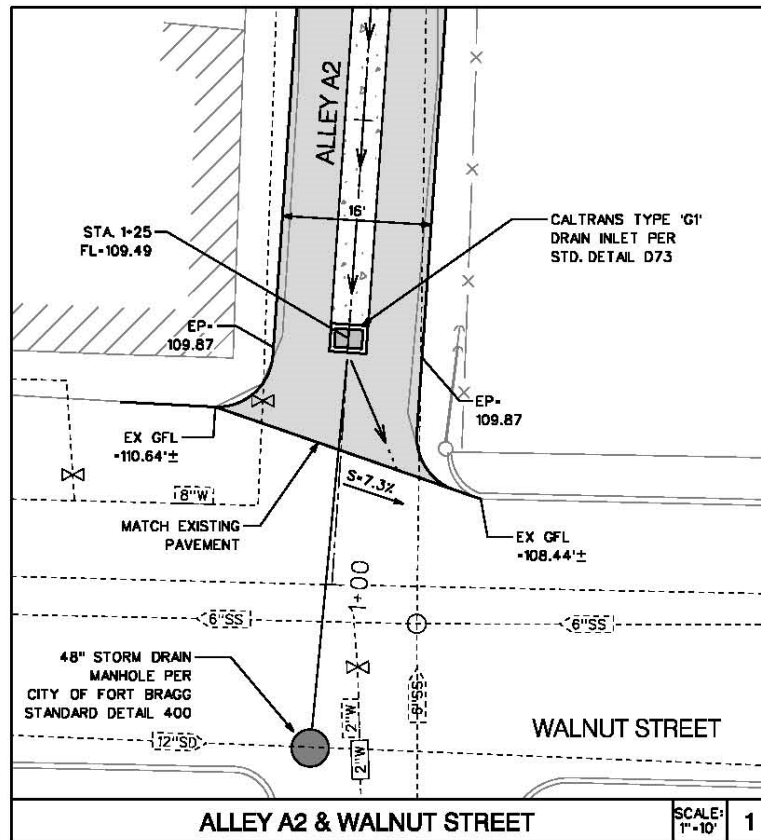
## Suggested A2 Improvements:

- Similar to Residential Type 2 Alley of the Alley Master Plan
- 16 foot wide paved alley width proposed
- 4 foot wide concrete V gutter proposed with 3 inch A.C. over 6 inch A.B. structural section (to be verified)
- New drain inlet at south end of alley to connect to existing Walnut Street storm drain
- Estimated construction cost = \$251,000



# Proposed Alley 2 Cross Section





## ALLEY A2 INTERSECTION PROPOSALS

## Alley 3 (Sears Alley)

- Located within Fort Bragg Central Business District
- “Green Alley” improvements proposed similar to recently constructed “Green Alley” to the south
- Existing 6 inch water, 6 inch sewer, no storm drain, 20 foot R/W
- Coordinating utility potholing with City Staff
- Northerly 80% slopes towards Laurel; southerly 20% slopes towards Redwood



**Existing Alley 3  
Looking North From  
Existing Green Alley**





**Existing Alley 3  
Conditions - Looking  
North From Mid  
Block**



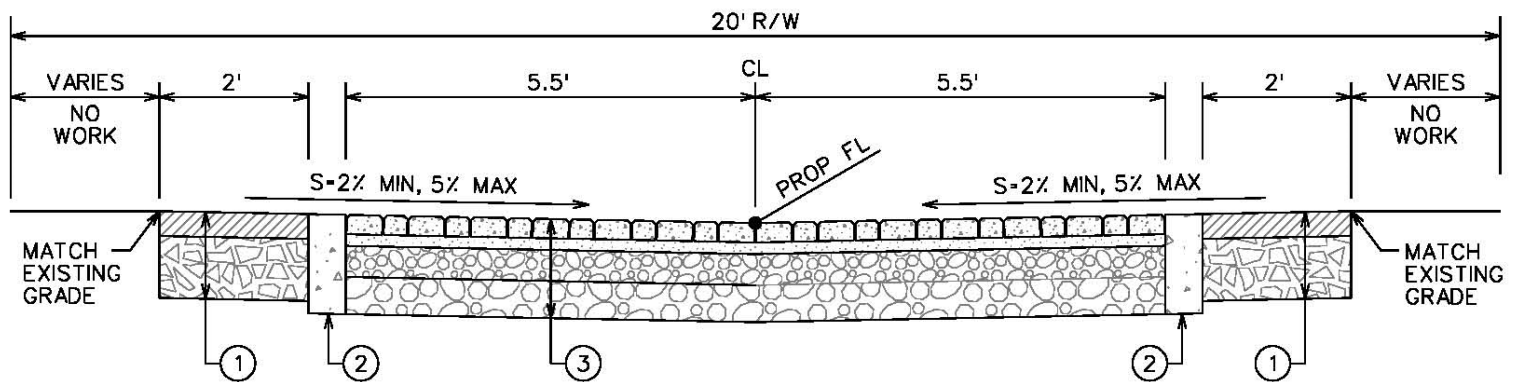


**Existing Alley 3 Intersections**  
**Redwood (L) Laurel (R)**

## Suggested A3 Improvements:

- 11 foot wide section of permeable pavers bordered by 6 inch wide concrete (flush) curbs and 2 foot wide A.C. (4" A.C. over 10" A.B.) pavement; possible rain garden
- Under normal rainfall, storm water would infiltrate (recharge) to pervious subbase
- When rainfall more intense, surface runoff to Laurel Street and Redwood Street gutters.
- Intersection improvements at Redwood Street are needed to correct gutter flow; protect existing intersection improvements at Laurel Street
- Estimated construction cost = \$309,000

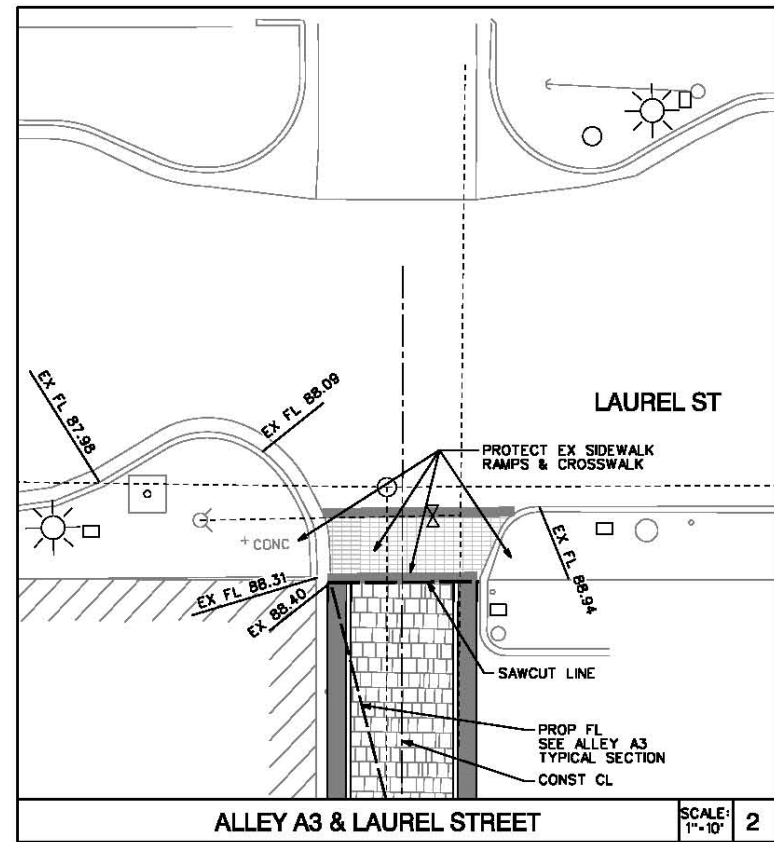
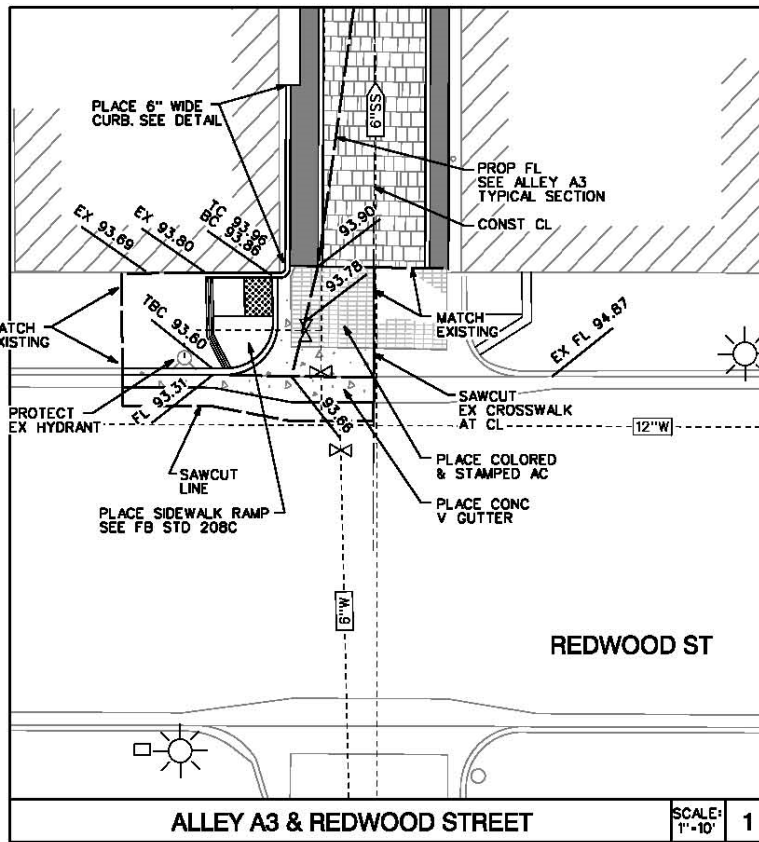




TYPICAL SECTION

- ① 4" AC OVER 10" AB
- ② CUT-OFF WALL. SEE DETAIL
- ③ 3 1/8" CONC PAVER  
1 7/8" BEDDING (ASTM NO. 8)  
5" AB (ASTM NO. 57)  
6" SB (ASTM NO. 2, 3, 4 OR 57)

## ALLEY A3 PROPOSED CROSS SECTION



## ALLEY A3 INTERSECTION PROPOSALS

# Alley 4

- West of Main Street; commercial / light industrial alley
- Grading, pavement, drainage improvements needed
- Existing 6 inch water, 24 inch sewer, no storm drain, 20 foot R/W
- There is an existing storm drain pipe in Spruce Street (south) , but alley slopes to Elm Street (north)





**Existing Alley 4  
Conditions – Spruce  
Street Looking North**



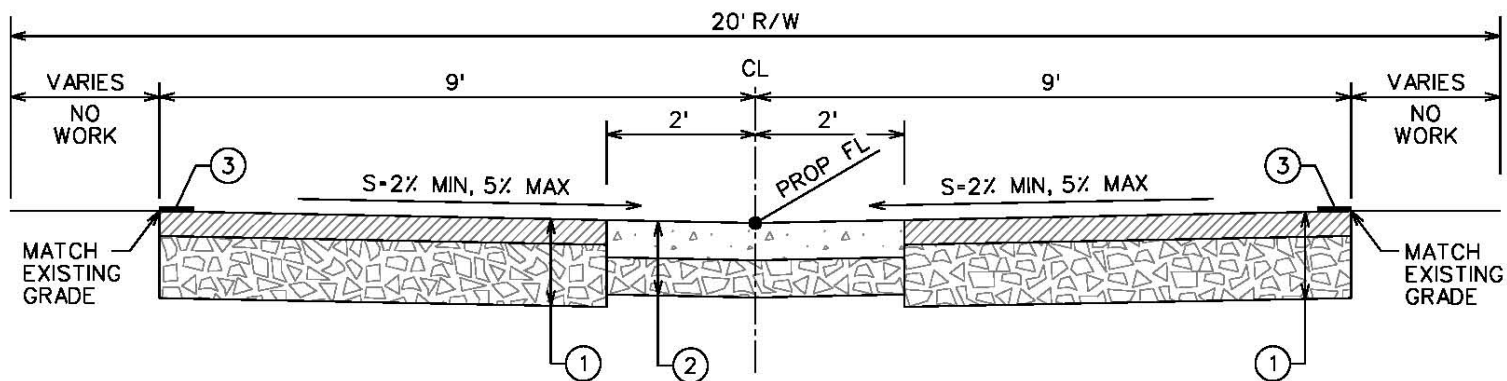


**Existing Alley 4 Intersections  
Spruce (L) Elm (R)**

## Suggested Alley 4 Improvements:

- Similar to Commercial / MF Residential Type 2 Alley of Alley Master Plan
- 18 foot wide paved alley with 4 foot wide concrete V gutter; 4" A.C. over 10" A.B. Structural Section (to be verified)
- V gutter to drain to existing Elm Street gutter and then to existing inlet at Elm & Stewart (West)
- Ramps, cross gutter and stamped A. C. crosswalk proposed at Elm Street; Cross gutter and stamped A. C. crosswalks at Spruce
- Estimated construction cost = \$208,000

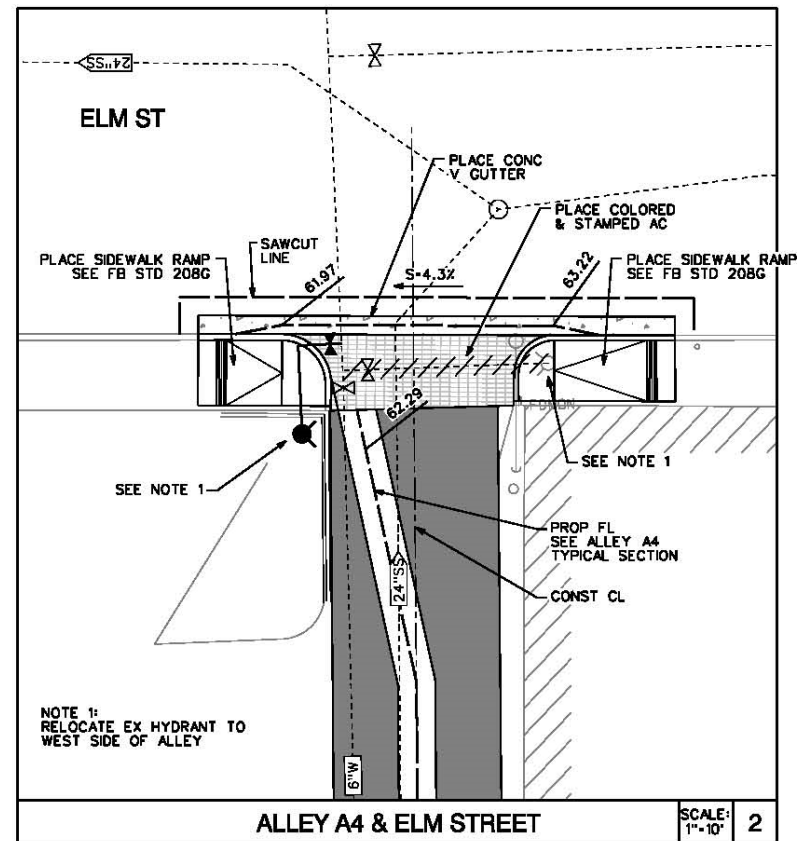
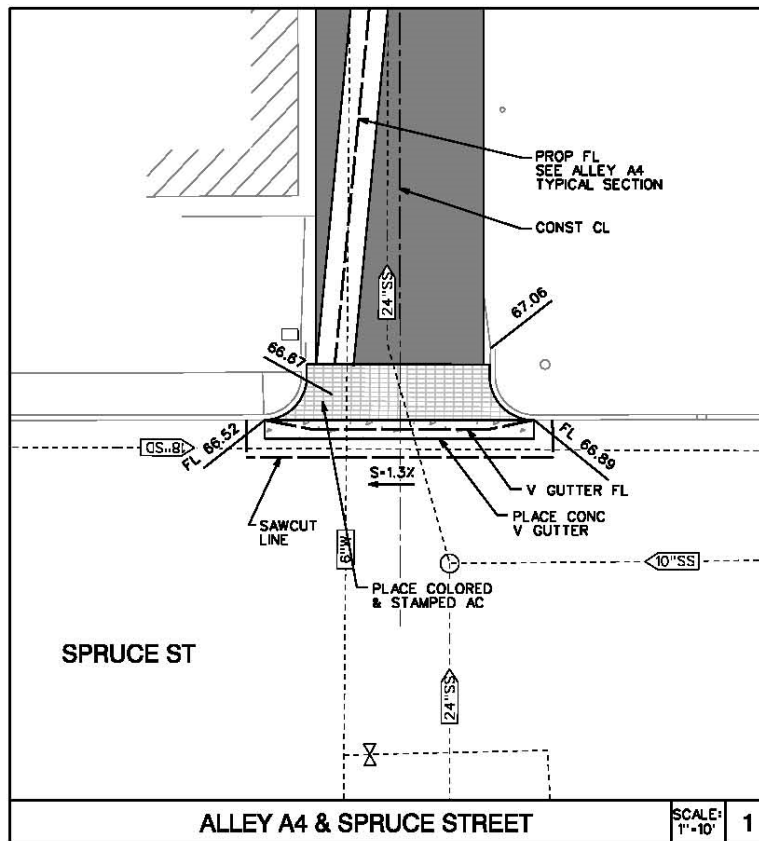




TYPICAL SECTION

- ① 4" AC OVER 10" AB
- ② CONC V-GUTTER
- ③ 4" WHITE STRIPE

## ALLEY A4 PROPOSED CROSS SECTION



## ALLEY A4 INTERSECTION PROPOSALS

# S1 North Sanderson Street

- Biggest challenge of 2016 Streets and Alleys Project
- Narrow (20 foot R/W) residential street
- Grading, pavement, drainage issues
- Several large (60" to 91" diameter) redwood trees along west side of street have lifted or ruptured pavement in several locations
- Portions of Street slope to two release points located on east side approximately ½ way between Cedar and north end
- Drainage flows east to existing ditch, east of Sanderson
- Existing drainage ditch was partially improved to serve a new subdivision south of Cedar Street



**Existing North Sanderson St  
Looking North From Cedar**





## **Pavement Lifting & Ruptures At Redwood Tree**





**Existing North Sanderson Street  
Ditch Conditions**



# Suggested North Sanderson St. Improvements

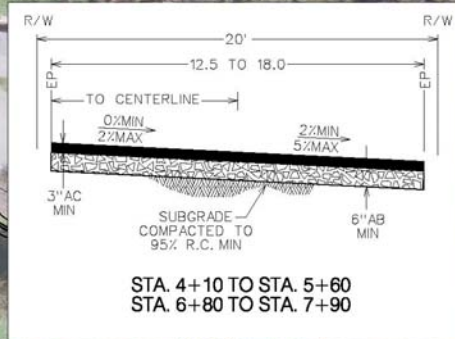
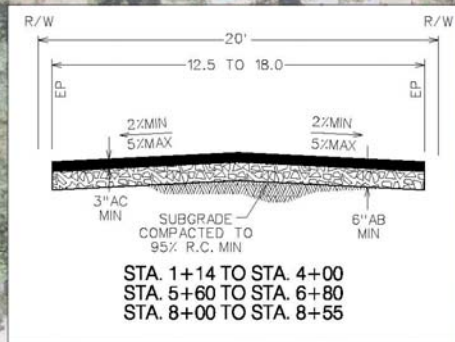
- Combination of crowned and “super elevated” street sections (west to east) are proposed
- Much of the existing pavement will need to be removed for repairs, grade corrections
- Proposed pavement width would vary from 13 to 18 feet to avoid redwood trees, and maintain improvements within R/W
- Follow Arborist recommendations regarding cutting redwood tree roots at proposed edge of pavement
- Pavement Section 3” A.C. over 6” A.B. proposed (to be verified)
- Drain street to existing release points on east side of street and to Sanderson Ditch
- Widen approximately 150 to 200 feet of existing ditch to meet 10 year storm conditions
- Replace existing culverts at two driveway locations
- Clear existing ditch beginning at Cedar Street to restore capacity
- Estimated construction cost = \$339,000



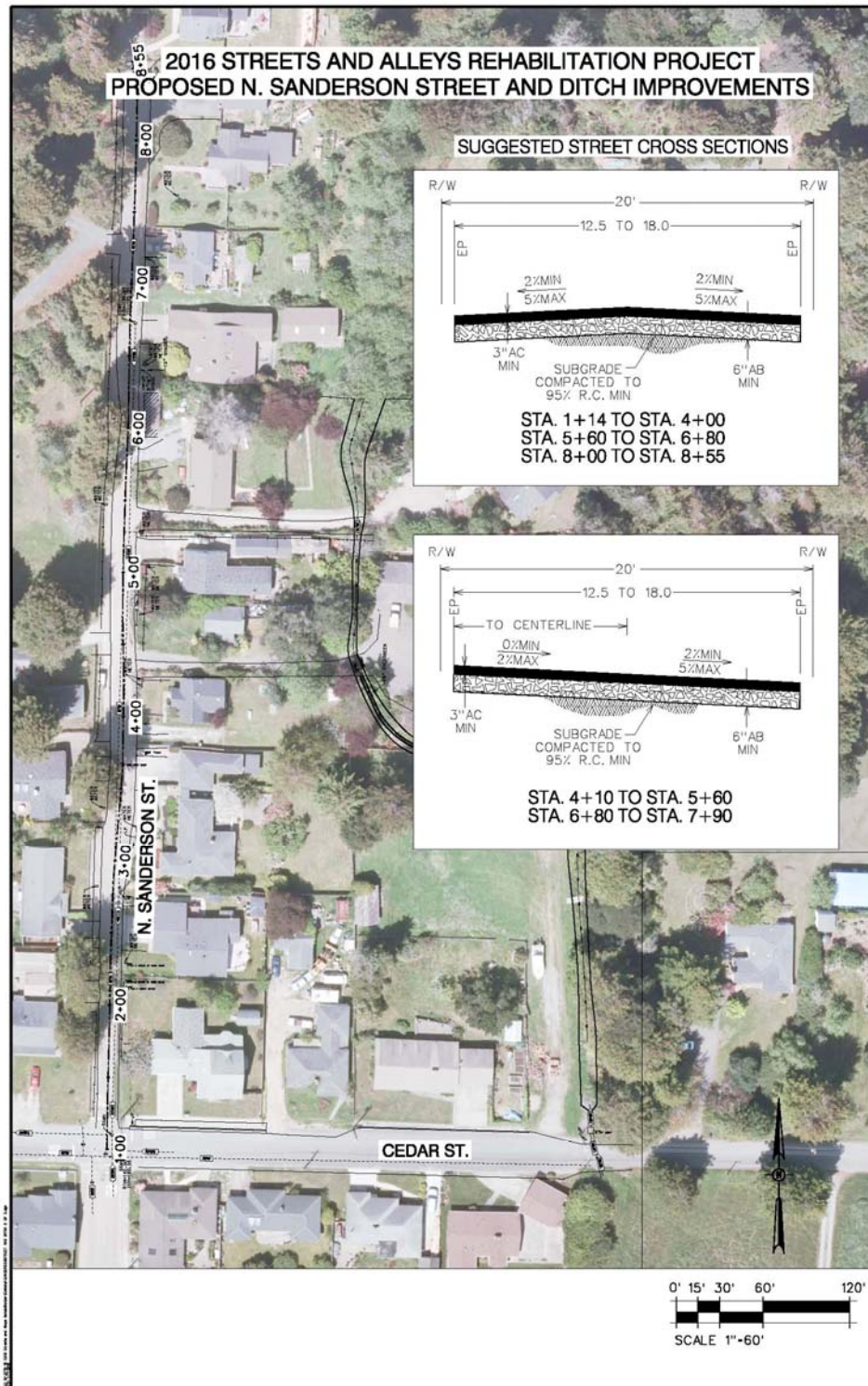


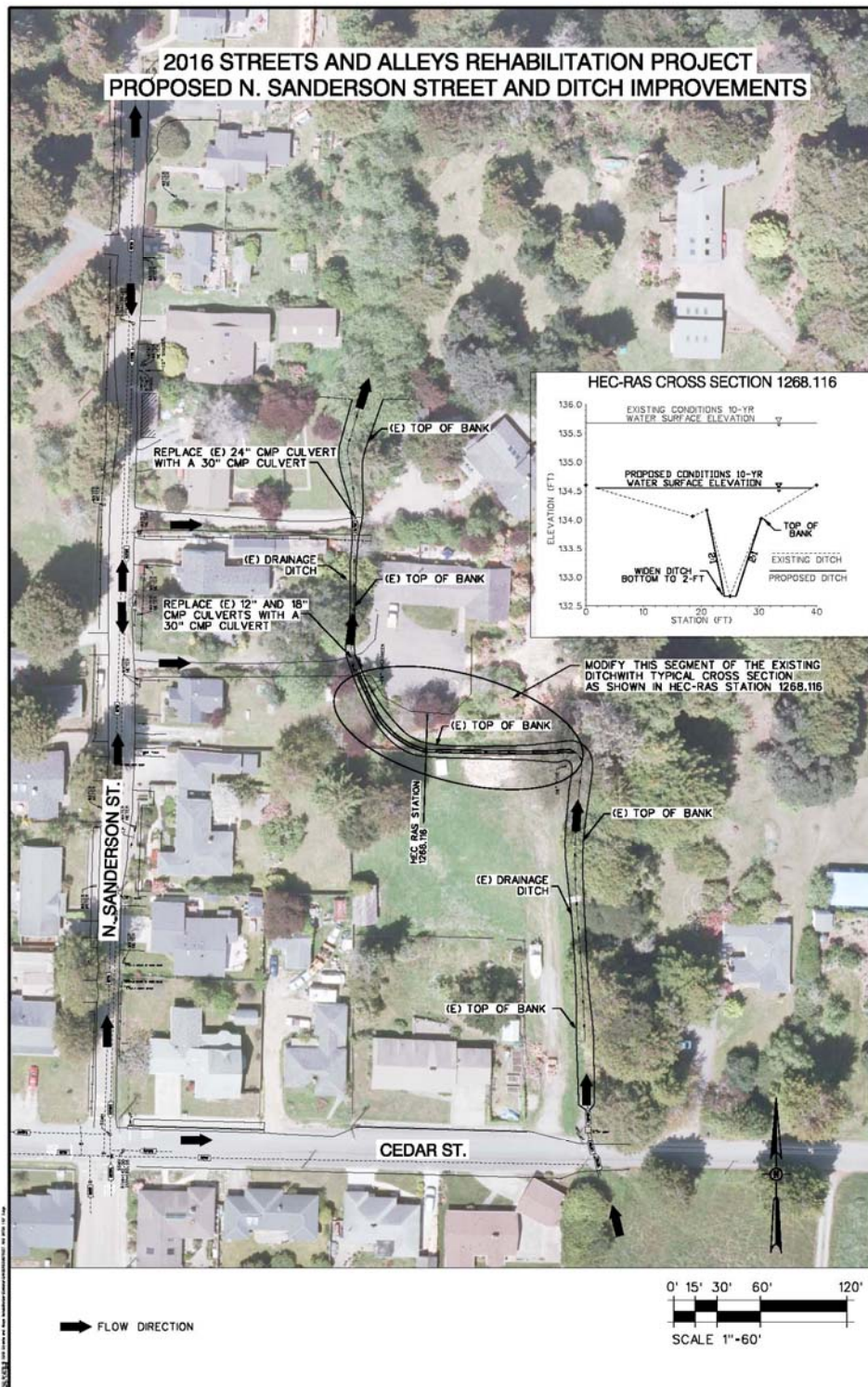
**2016 STREETS AND ALLEYS REHABILITATION PROJECT  
PROPOSED N. SANDERSON STREET AND DITCH IMPROVEMENTS**

**SUGGESTED STREET CROSS SECTIONS**



# Suggested North Sanderson Street Sections





# Suggested Sanderson Street Ditch Improvements



## S2 South Franklin Street

- Scope includes pavement rehabilitation for approximately 8 blocks
- Recommend remove and replace  $\pm$  15,000 square feet of existing pavement at specific locations
- Most areas (surface failures) can be repaired with single lift (3" A.C.) of pavement replacement
- Other areas (subsurface failures) will require two pavement lifts (6" A.C.)
- Numerous patch repairs previously completed on South Franklin







South Franklin Pavement Repair Area  
Looking North Near South St. Intersection



South Franklin Pavement Repair Area  
Looking North Near Walnut St. Intersection



South Franklin Pavement Repair Area  
Looking North Near Hazel St. Intersection



South Franklin Pavement Repair Area  
Looking North Near Oak St. Intersection

# Suggested South Franklin Improvements

- Dig out and replace specific failed pavement areas
- Slurry seal, or similar, entire street from Oak to North Harbor
- Consider A.C. overlay as Bid Alternate
- Restripe
- Estimated Costs
  - Pavement Repairs \$311,000
  - Slurry Seal (or similar) \$136,000
  - Restriping \$61,000
- We are also evaluating existing Franklin Street pedestrian ramp and curb returns for ADA compliance and drainage
- 5 of the 27 ramps and curb returns should be reconstructed
- Estimated cost = \$ 38,000.





# S3 Boatyard Drive / Ocean View Drive

- Pavement Repairs at Specific location needed



Boatyard Drive Pavement Repair Area  
Looking North Towards Ocean View Drive

# Suggested Boatyard / Ocean Drive Improvements

- Remove and replace approximately 3500 square feet of failed (surface) pavement
- Dig out and replace with 3" thick (single lift) A.C. at specific locations
- Estimated construction cost \$72,000





# Summary of Estimated (Preliminary) 2016 Streets and Alleys Project costs

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Alley 1	\$286,000
Alley 2	\$251,000
Alley 3	\$309,000
Alley 4	\$208,000
Street 1 (N Sanderson)	\$339,000
Street 2 (S Franklin)	\$546,000
Street 3 (Boatyard/Ocean)	<u>\$ 72,000</u>
Est. Cost	\$2,011,000
(includes 20% contingencies)	



# Questions & Comments

