

Conceptual Stormwater Management Approaches

- ▶ Research Approaches for Design
 - ▶ Natural Channel
 - ▶ Detention/LID Basin
 - ▶ Extended Detention Ponds
 - ▶ Wetlands
 - ▶ Permeable Pavement and Dry Wells
- ▶ Select Final Design Approach
 - ▶ Decision Matrix

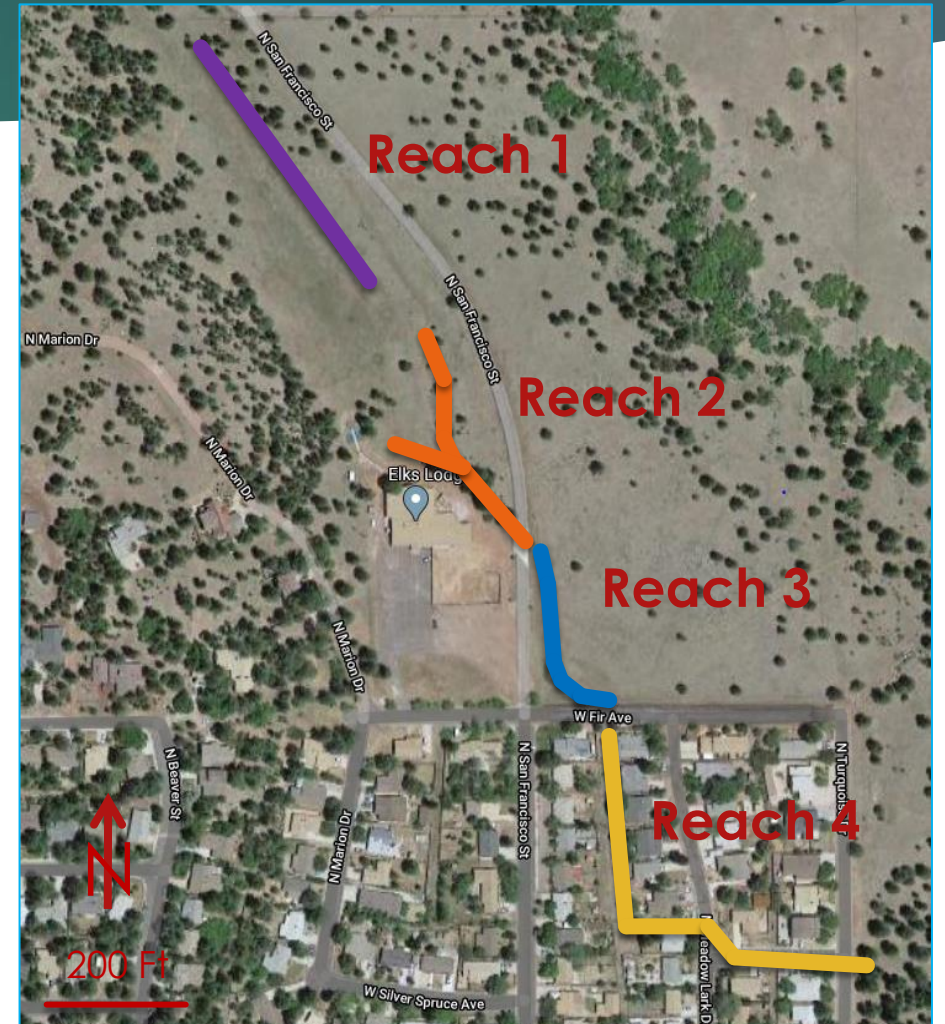


Figure 3: Aerial Map of Project Location with Channel Reaches [1]

Natural Channel

- ▶ Adding Missing 275 Feet (RED LINE)
- ▶ Modifying (Enlarging) Channel to Convey 100-yr flow
- ▶ Revegetating Reaches 1, 2, and 4



Figure 4: Aerial Map of Project Location with Natural Channel Modification [1]

Natural Channel/Culvert Bypass

- ▶ Includes 1st Natural Channel Recommendation
- ▶ Channel Bypass
 - ▶ Connect to Downstream Culvert



Figure 5: Aerial Map of Project Location with Channel Bypass [1]

Detention/LID Basin and Extended Detention Basin

- ▶ Detention Basin north of Elk's Lodge
- ▶ Existing small pond
- ▶ Forebay: Maximum 4 acres
- ▶ Micro-Pool: Maximum 4 acres



Figure 6: Aerial Map of Project Location with Detention Basins [1]

Wetlands

- ▶ Located above Elk's Lodge
- ▶ Original thought: Approx. 4 Acres
- ▶ Extend further North of area



Figure 7: Aerial Map of Project Location with Wetland [1]

Upper Basin and Natural Channel

- ▶ Upper Detention Basin located at small pond
 - ▶ Privately owned land
- ▶ Natural Channel Modification from 1st Alternative
 - ▶ Detention Basin will decrease incoming flow to channel

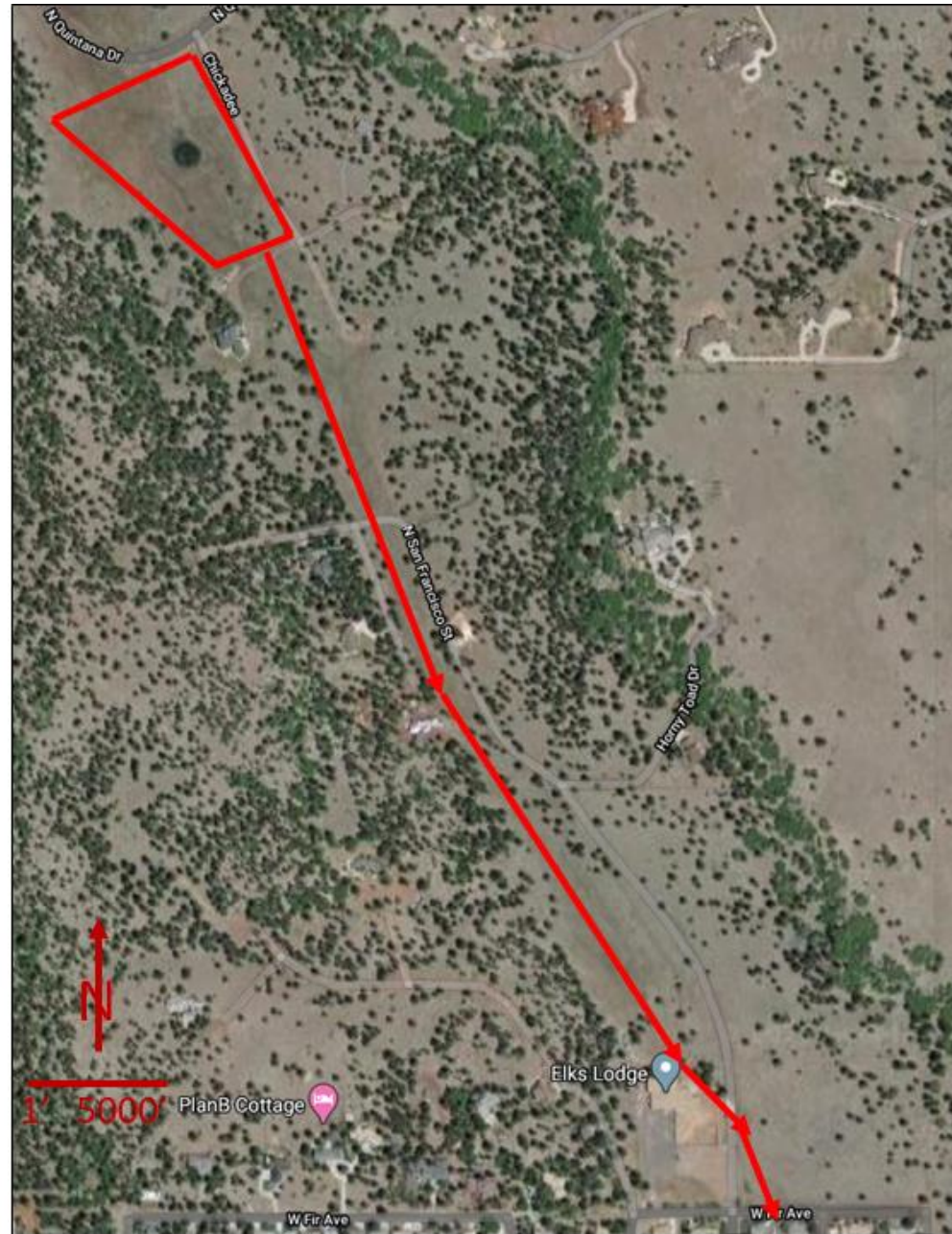


Figure 9: Aerial Map of Project Location with Upper Basin and Natural Channel [1]

Selection of Final Alternative

	Cost/Benefit		Environmental/Social Impact		OM		Area Needed		Appeal		Total
Weight	0.2	Score	0.2	Score	0.2	Score	0.2	Score	0.2	score	
Natural Channel	2	0.4	4	0.8	5	1	3	0.6	3	0.6	3.4
Natural Channel/culvert bypass	4	0.8	3	0.6	4	0.8	4	0.8	4	0.8	3.8
Extended Basins	1.5	0.3	2	0.4	2	0.4	1	0.2	2	0.4	1.7
Detention Basin/LID basin	2	0.4	3	0.6	2	0.4	1	0.2	3	0.6	2.2
Wetlands	1	0.2	4	0.8	1	0.2	2	0.4	2	0.4	2
Upper Basin+ Natural Channel	4	0.8	3	0.6	3	0.6	3	0.6	4	0.8	3.4
WLB basin	3	0.6	2	0.4	3	0.6	3	0.6	0	0	2.2

Table 1: Decision Matrix