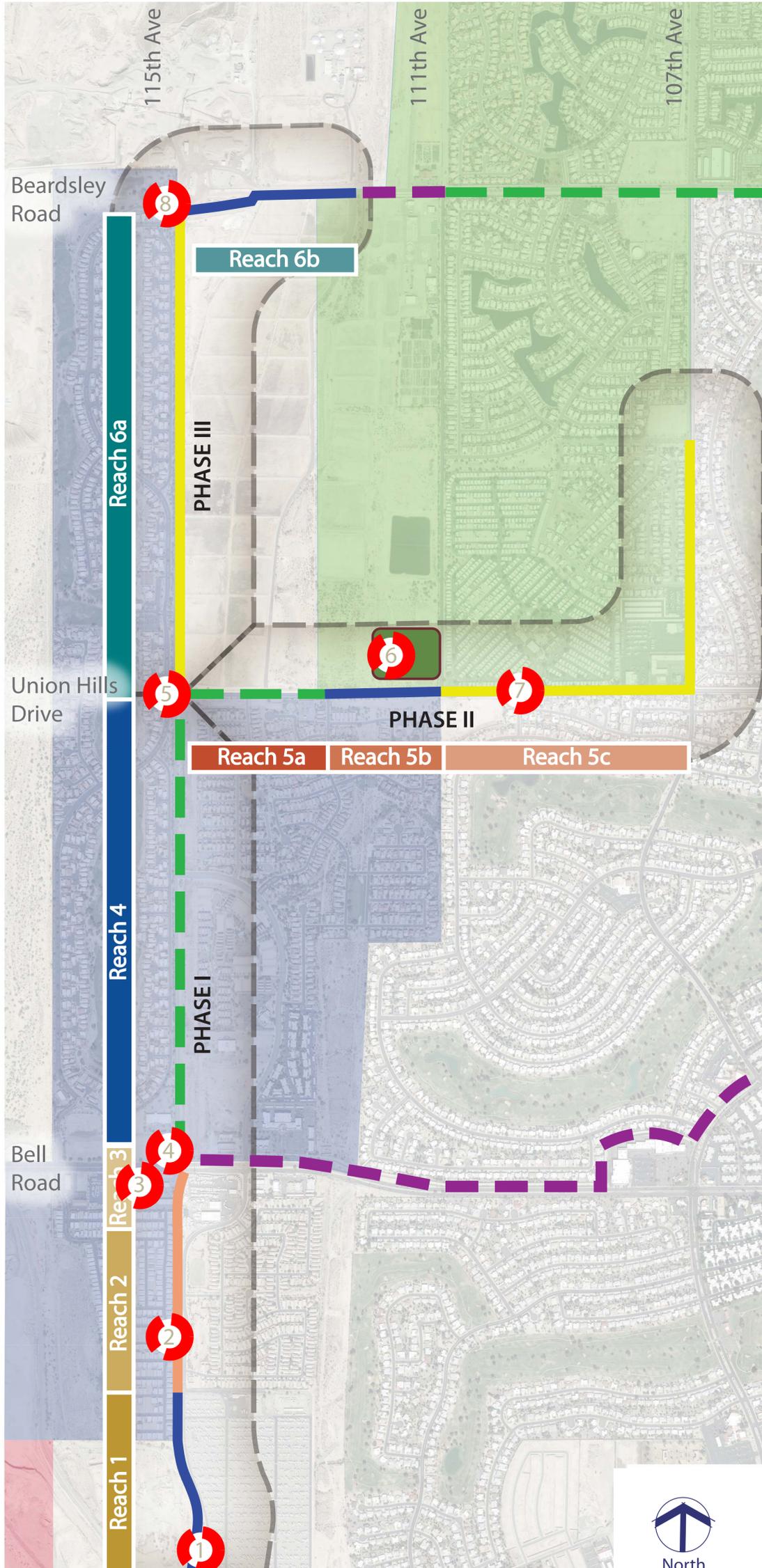




# 115th Avenue & Union Hills Drive Drainage Improvements Project



# Project Overview



## Legend

### System Phasing

Proposed Project Phase Limits

### Conveyance Features

- Existing Earthen Channel
- Improved Existing Earthen Channel
- Proposed Concrete Channel
- Proposed Storm Drain
- Existing Concrete or Gunitite Channel
- Improved Existing Basin

### City Boundaries

- City of Peoria
- City of Surprise
- City of El Mirage

### Key Features

- Open Space: Potential Spreader Basin
- 40' Potential Water-harvesting Area
- Landscape Area & 33' Right-of-way
- Bell Road Basin Concept
- Existing Landscape (Replace in Kind)
- Basin Concept
- Existing Landscape (Preserve Pine, Repair Turf)
- Splitter Structure



# 115th Avenue & Union Hills Drive Drainage Improvements Project



# Landscape Themes



## Legend

### System Phasing

--- Proposed Project Phase Limits

### Landscape Design Themes

- Natural Sonoran Desert
- Semi-natural Sonoran Desert
- Enhanced Desert
- No Landscape Design Theme

### City Boundaries

- City of Peoria
- City of Surprise
- City of El Mirage

### City of Surprise Planning

- Special Street Designation

## Landscape Design Theme Examples

Natural Sonoran Desert



Semi-natural Sonoran Desert



Enhanced Desert





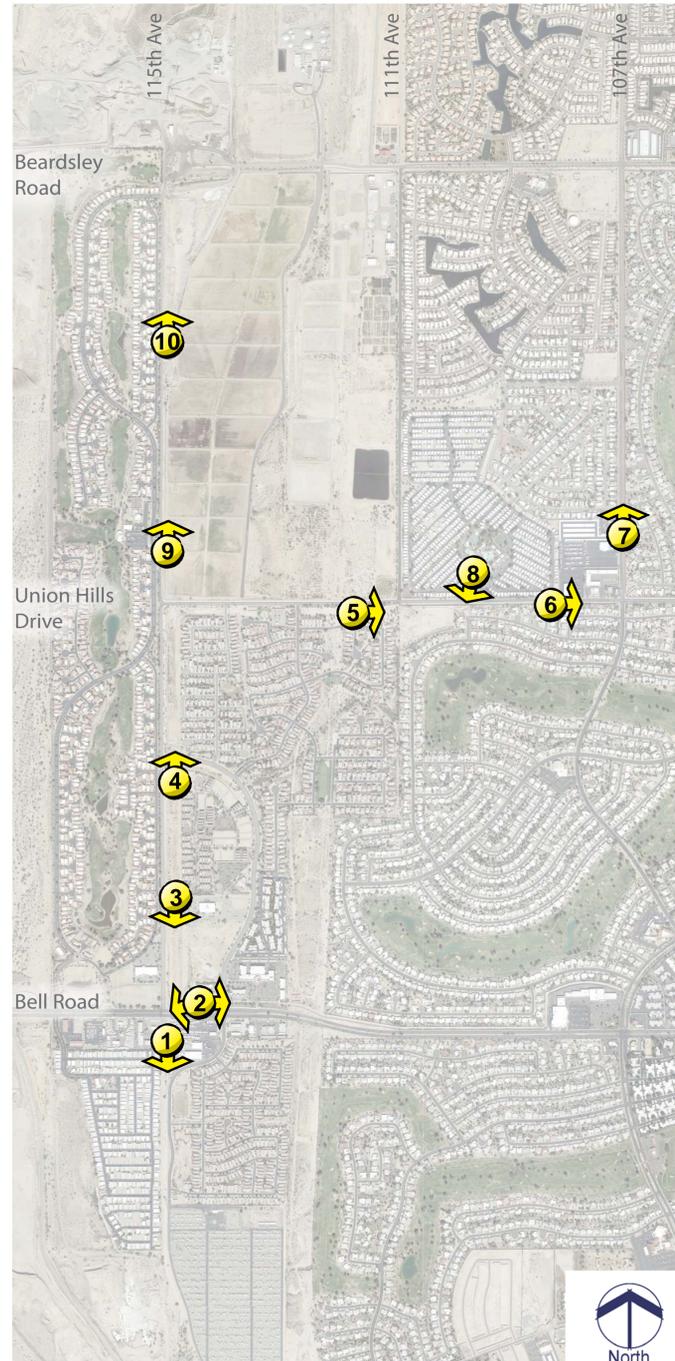
# 115th Avenue & Union Hills Drive Drainage Improvements Project Existing Conditions



1 Looking south from Bell Road at Existing Concrete Channel



2a Looking east to QT from existing gunite channel at Bell Road



2b Looking to south-west at the existing culvert under Bell Road



3 Looking south at existing basins along 115th Avenue



4 Existing culverts at Avenue of the Arts



5 Looking east in existing channel (Canyon Ridge Estates)



6 Looking east along Union Hills Drive at existing conditions



7 Looking north along 107th Avenue at existing conditions



8 Existing basin, looking south



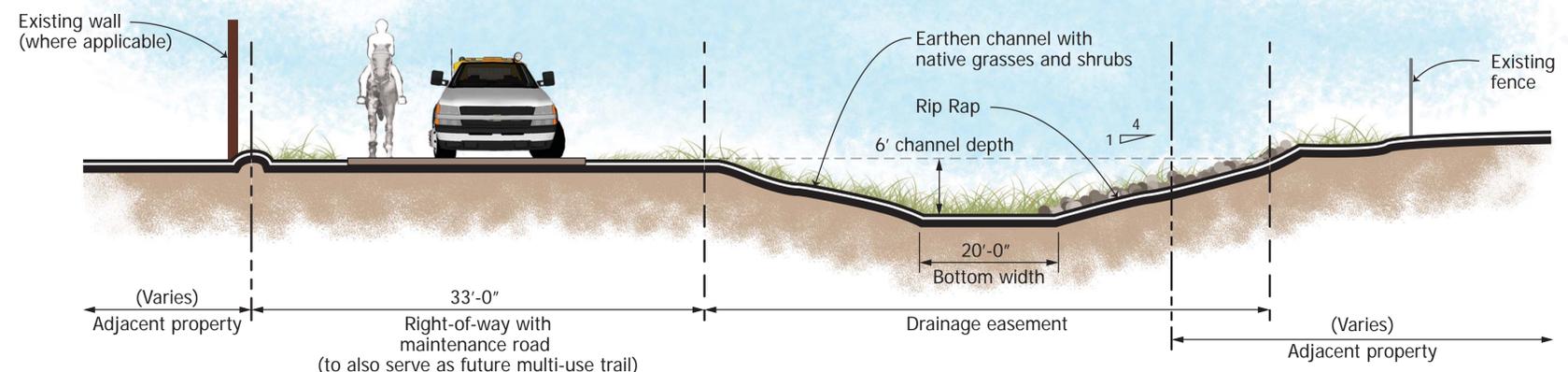
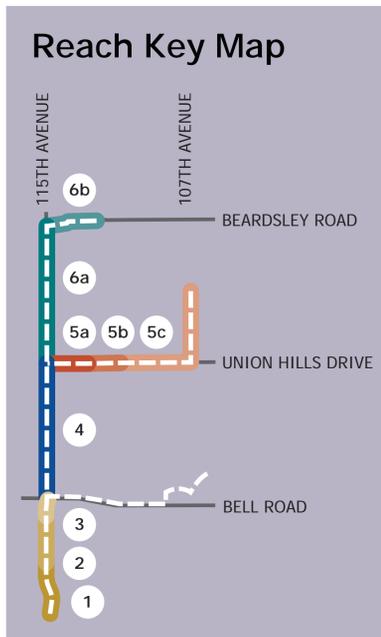
9 Looking north along 115th Avenue



10 Looking north along 115th Avenue



# 115th Avenue & Union Hills Drive Drainage Improvements Project Typical Cross-sections



## Reach 1: Channel to the Agua Fria River (looking north)

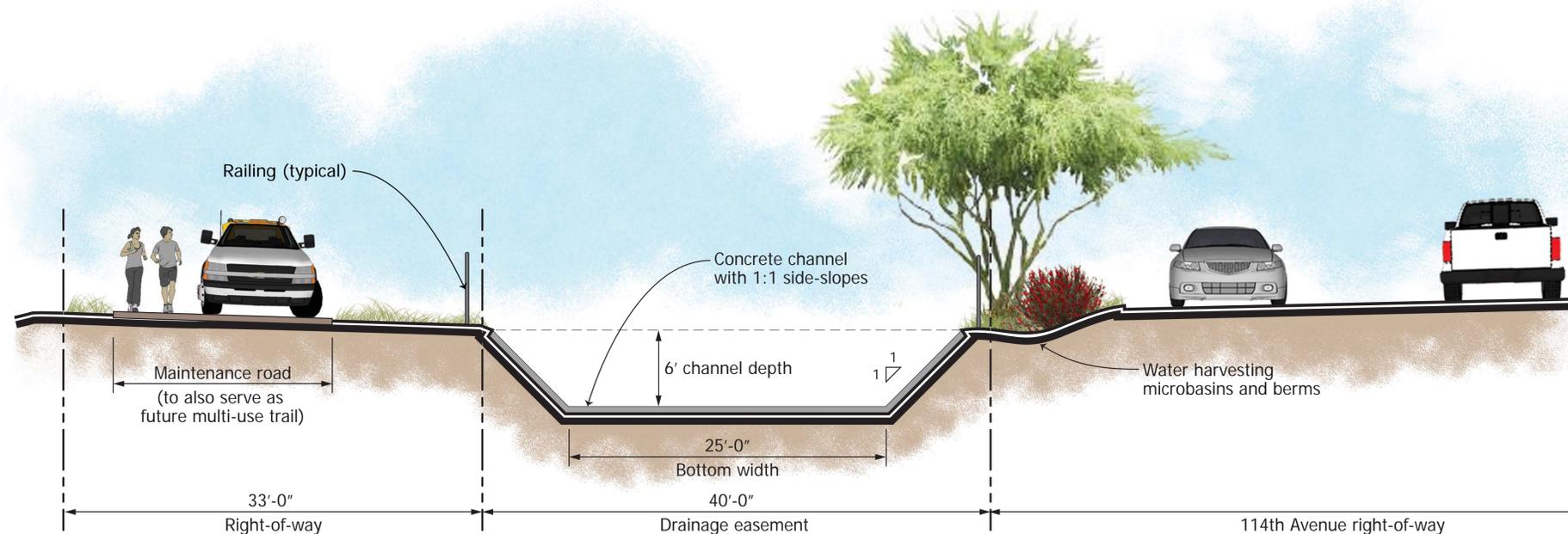
Earthen channel along 115th Avenue alignment with native vegetation for restoration or dust control purposes only



Example of earthen channel with hydroseed



Example of concrete channel with limited adjacent landscape



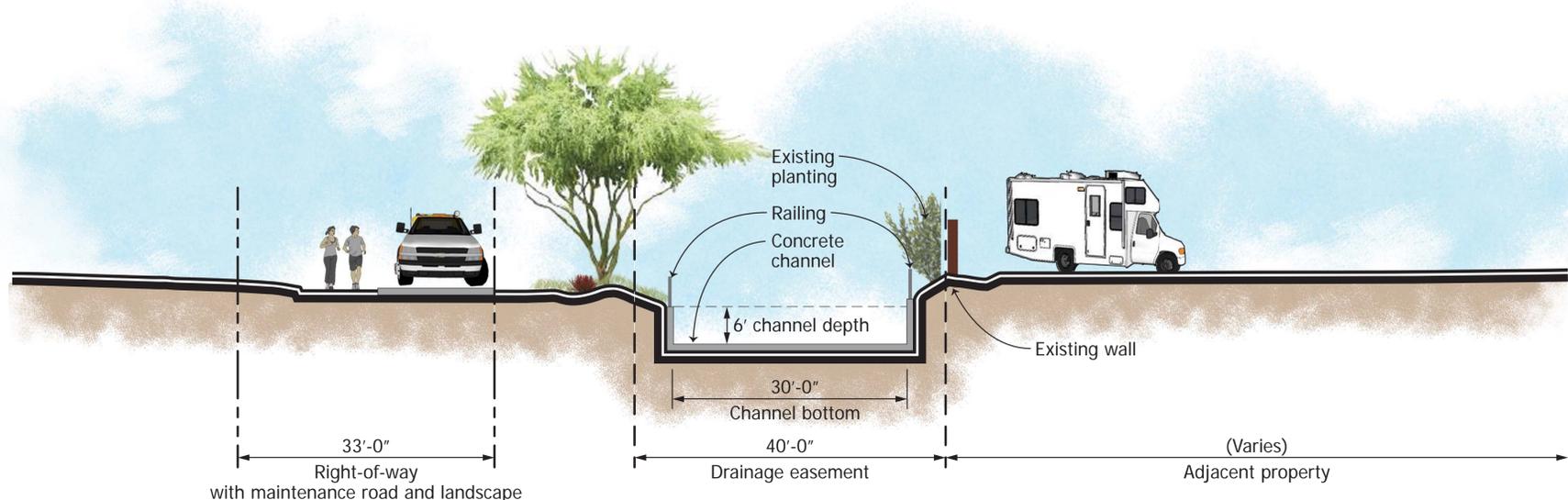
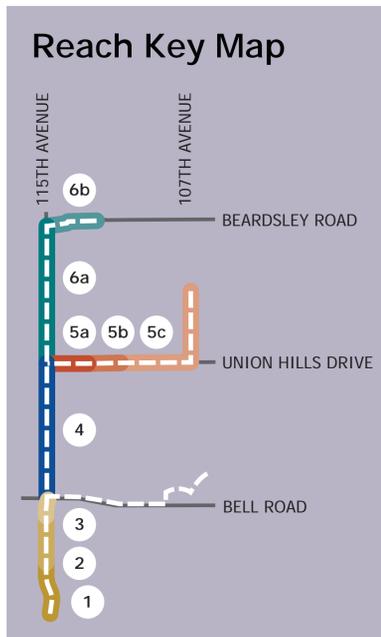
## Reach 2: Channel South of Bell Road (looking north)

Concrete channel along 115th Avenue alignment with water-harvesting microbasins and semi-natural Sonoran Desert landscape treatments



# 115th Avenue & Union Hills Drive Drainage Improvements Project

## Typical Cross-sections

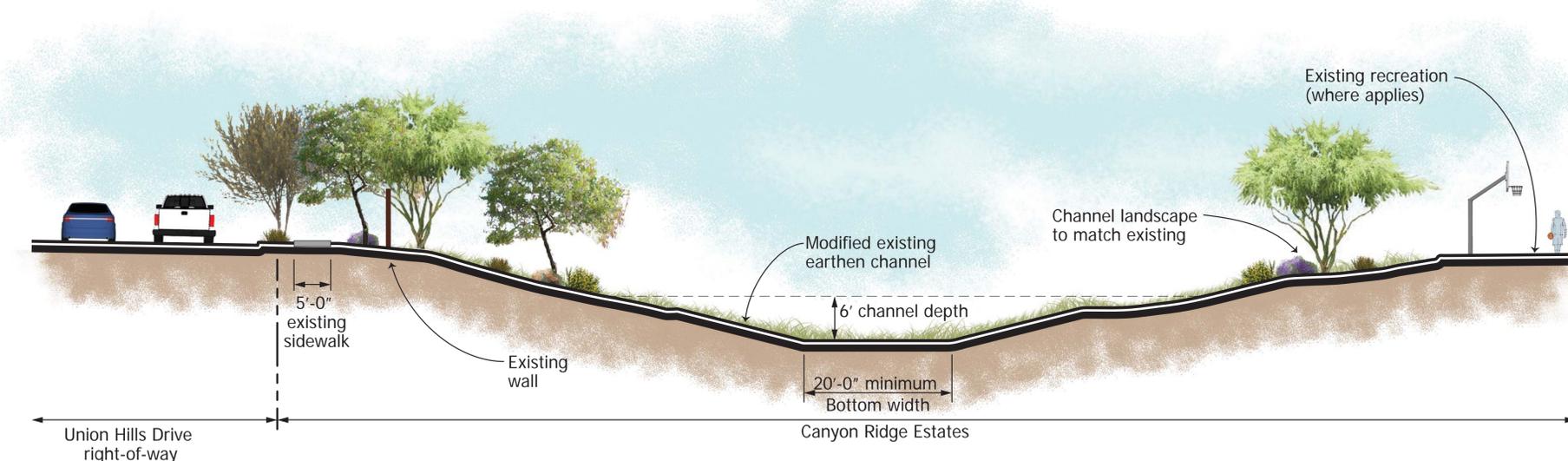


### Reach 3: Channel South of Bell Road (looking north)

Concrete u-shaped channel south of Bell Road starting at 115th Avenue



Example of u-shaped concrete channel with minimal or no landscape



### Reach 5b: Union Hills Drive Channel from 111th Avenue to 113th Avenue (looking east)

Existing earthen channel excavated deeper with 4:1 side-slopes and natural Sonoran Desert landscape treatments to match existing conditions

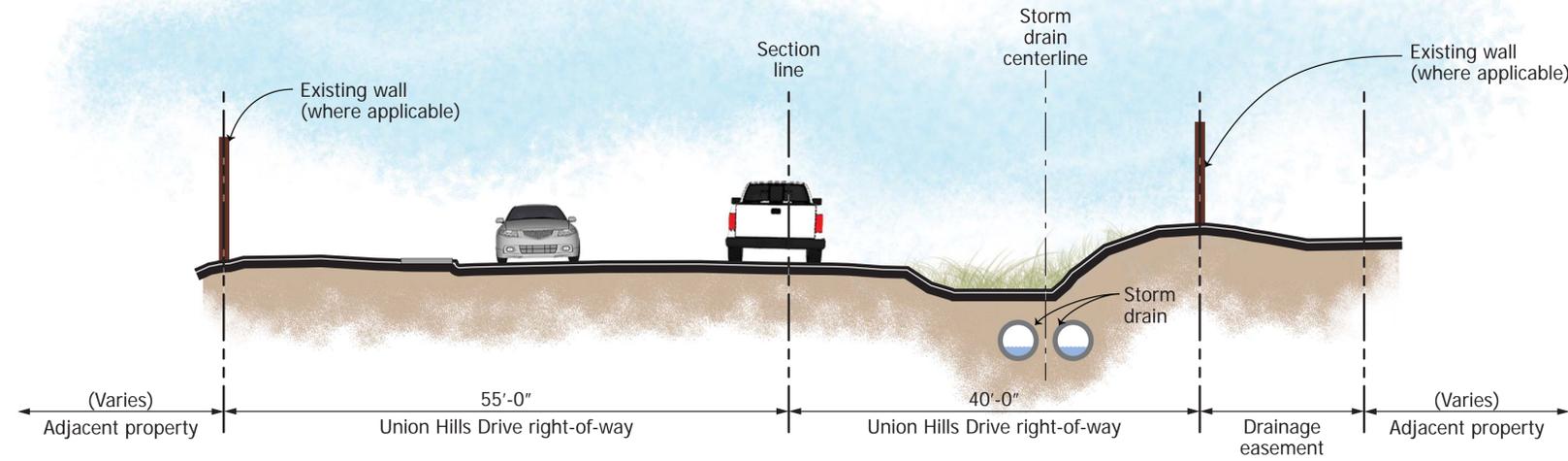
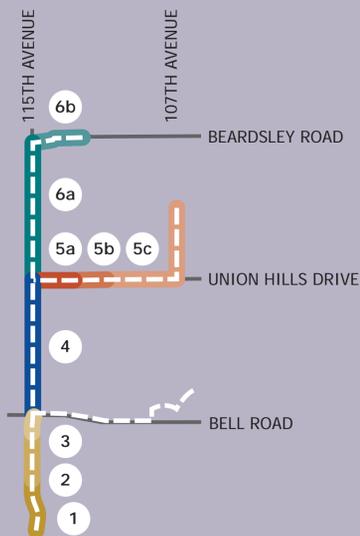


# 115th Avenue & Union Hills Drive Drainage Improvements Project

# Typical Cross-sections

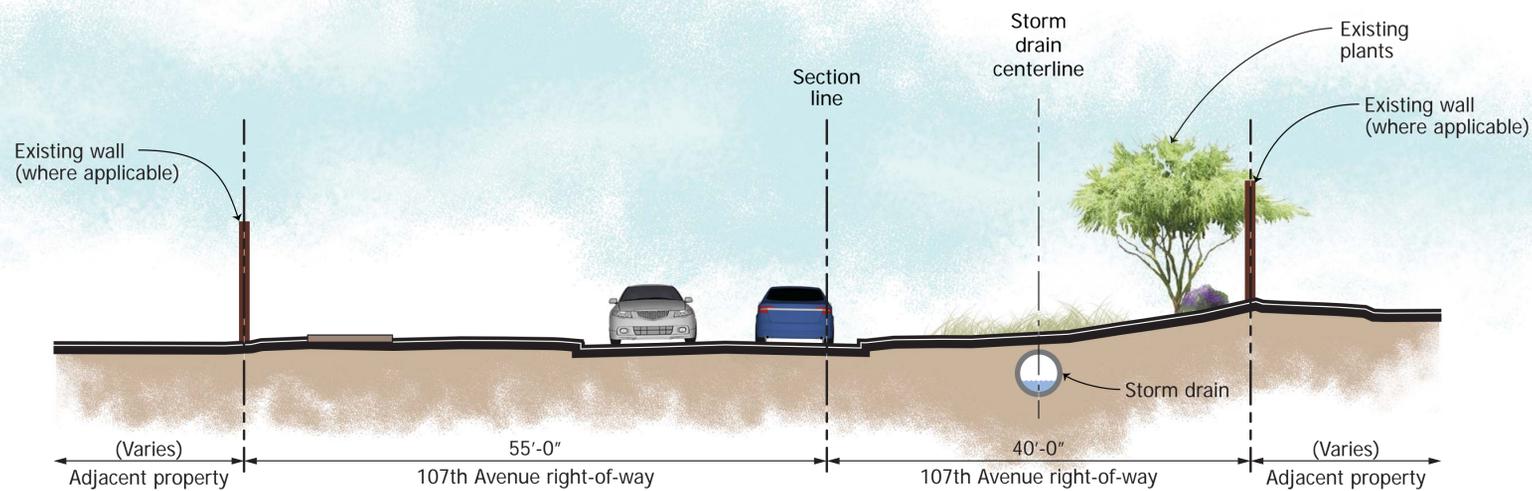


## Reach Key Map



### Reach 5c: Union Hills Drive Storm Drain east of 113th Avenue (looking east)

Proposed storm drain in Union Hills Drive right-of-way



### Reach 5c: 107th Avenue Storm Drain (looking north)

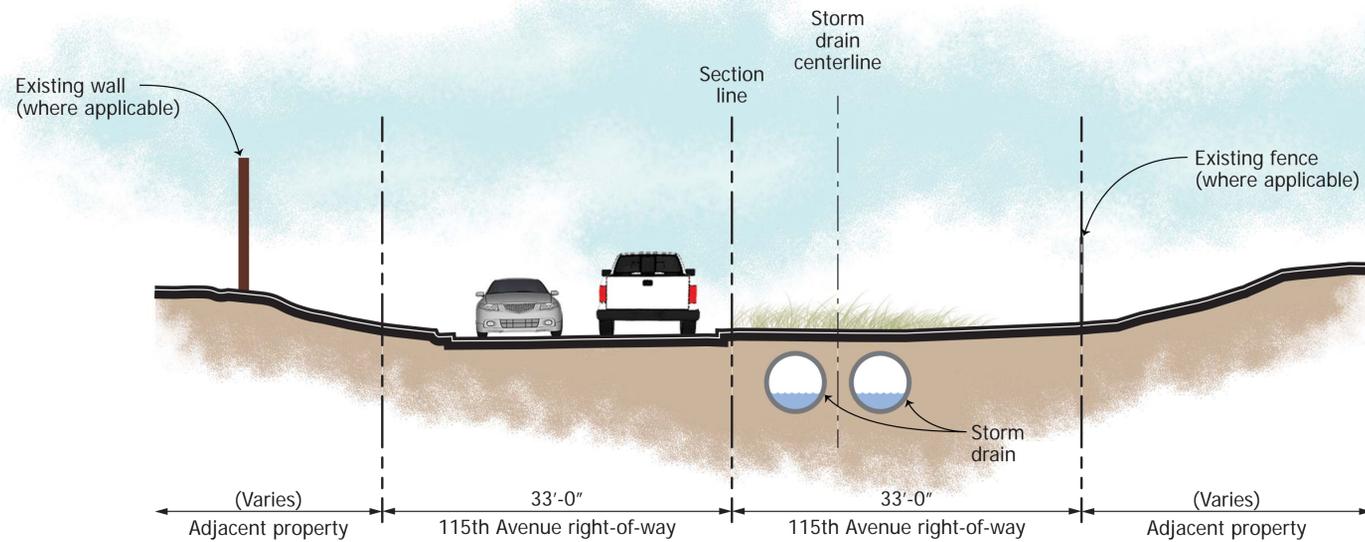
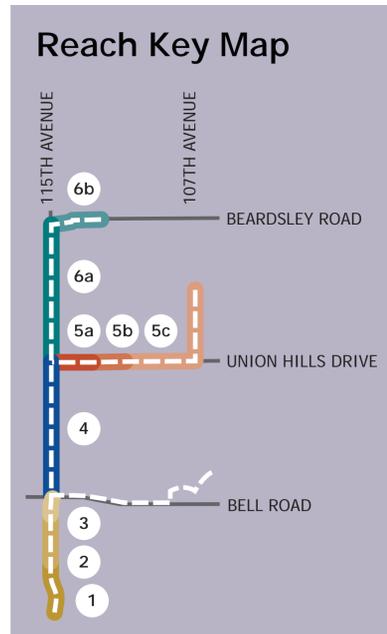
Proposed storm drain in 107th Avenue right-of-way



# 115th Avenue & Union Hills Drive Drainage Improvements Project

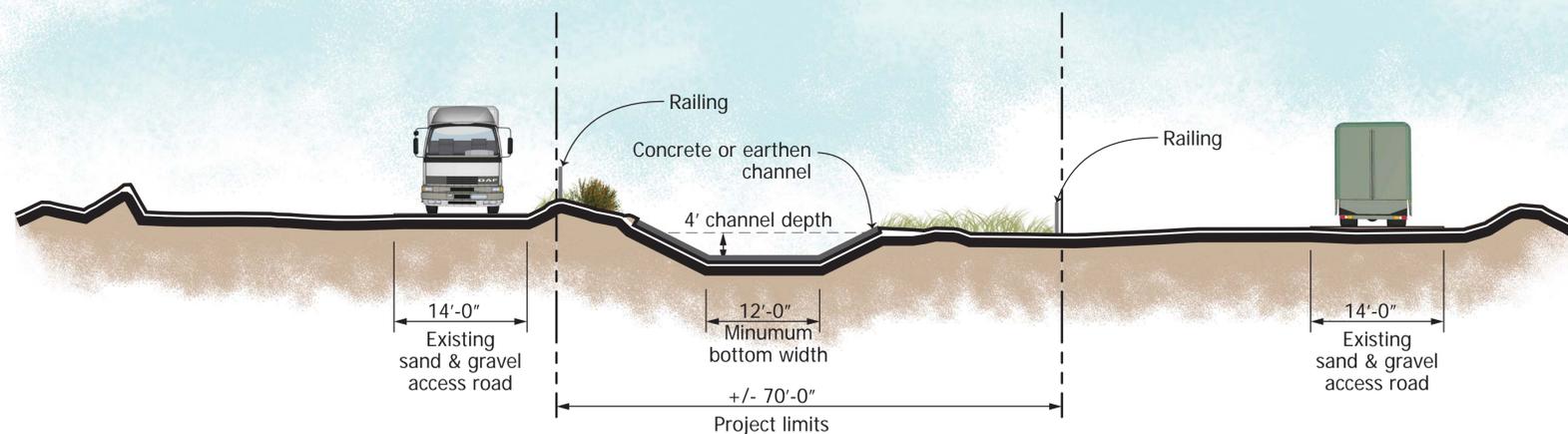


# Typical Cross-sections



## Reach 6a: 115th Avenue from Union Hills Drive to Beardsley Road (looking north)

Proposed storm drain in 115th Avenue right-of-way

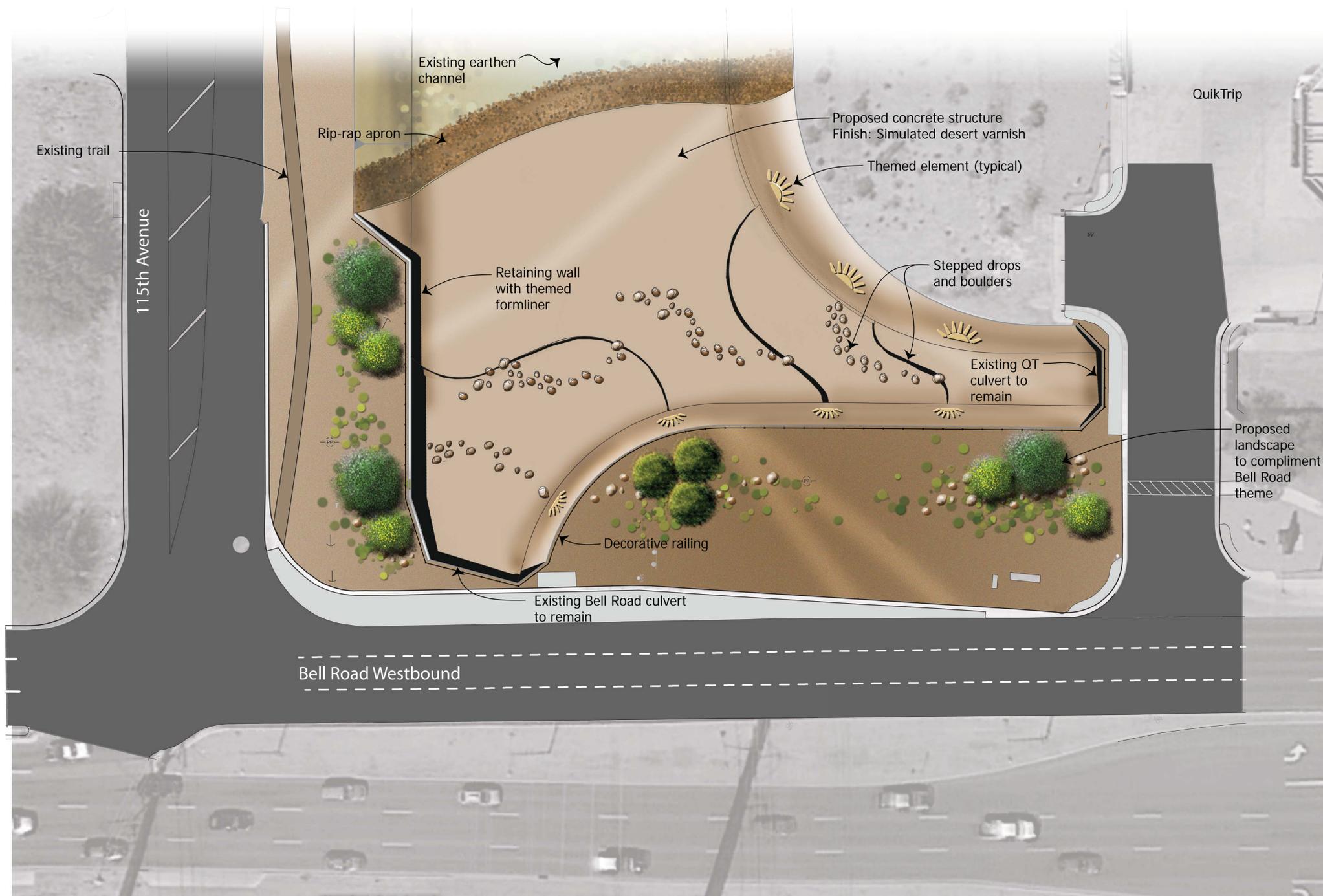


## Reach 6b: Beardsley Road Channel (looking northeast)

Concrete or earthen channel



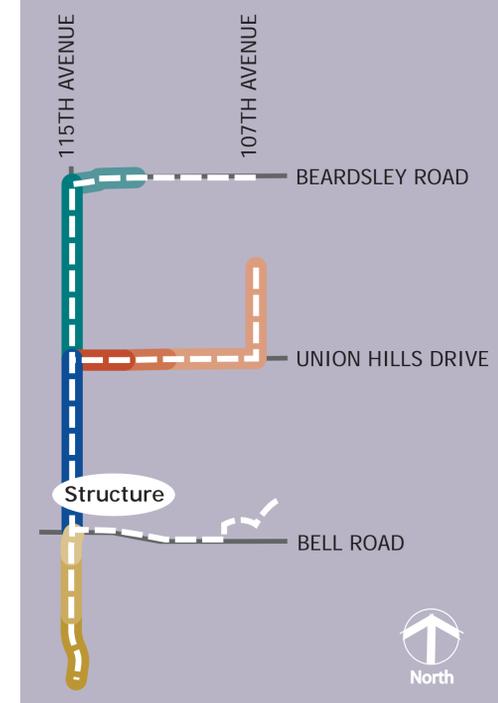
# 115th Avenue & Union Hills Drive Drainage Improvements Project Bell Road Basin Concept



Stepped Drops and Boulders Example



Key Map

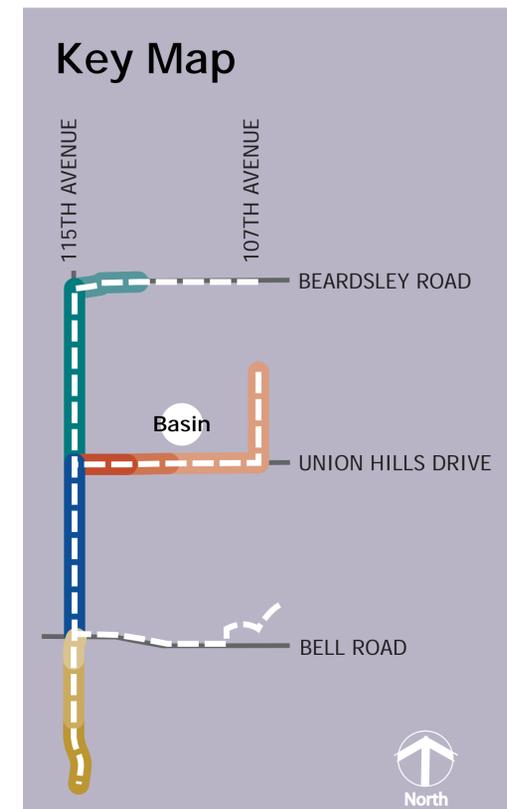




# 115th Avenue & Union Hills Drive Drainage Improvements Project Basin Concept



## Passive Recreation/Open Space Example



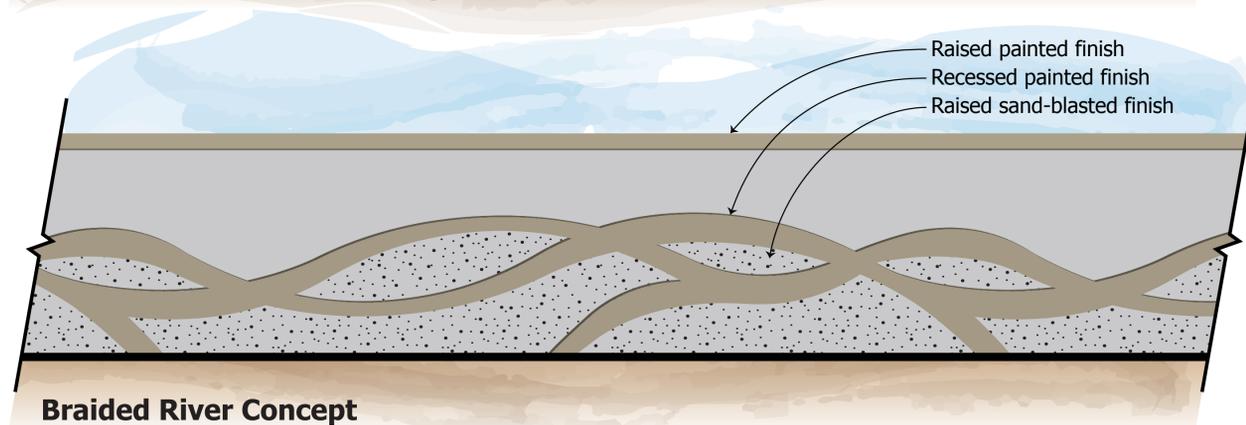
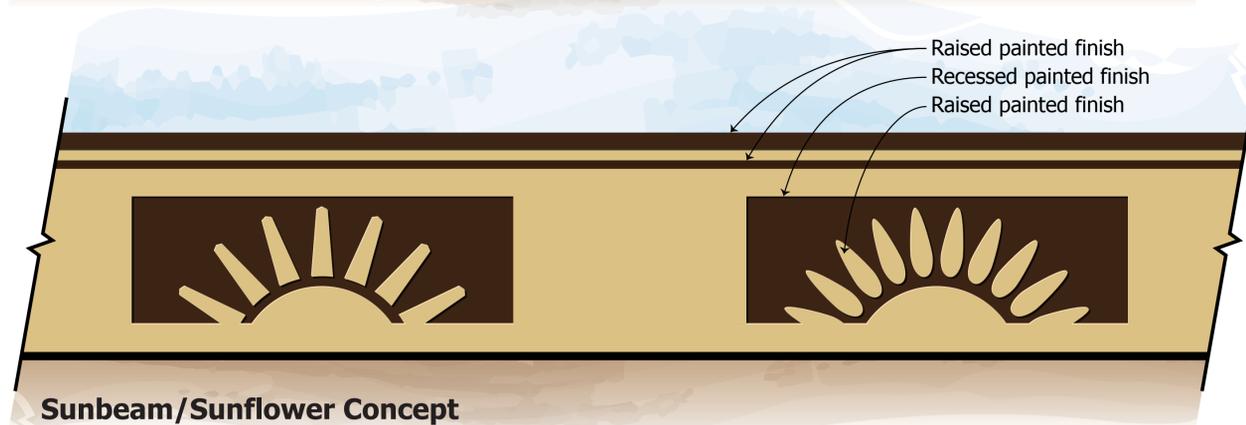
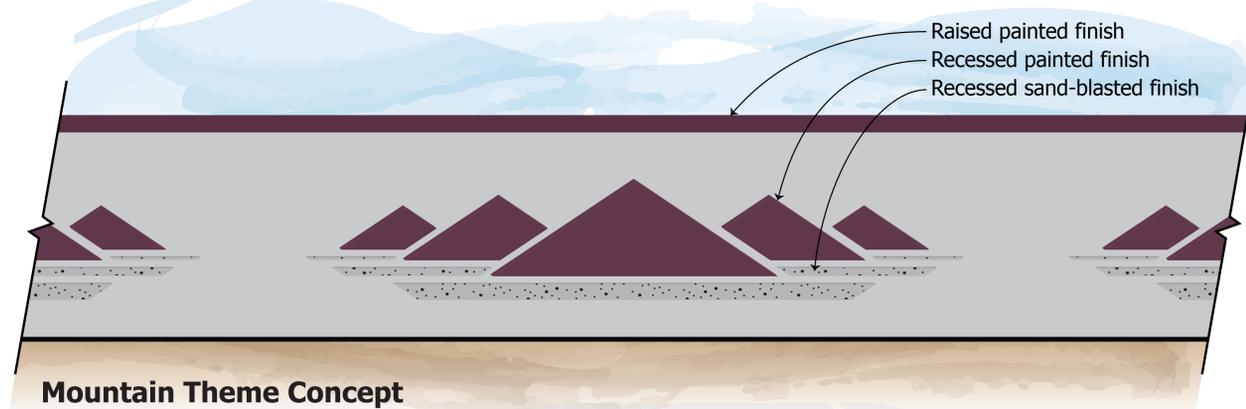


# 115th Avenue & Union Hills Drive Drainage Improvements Project

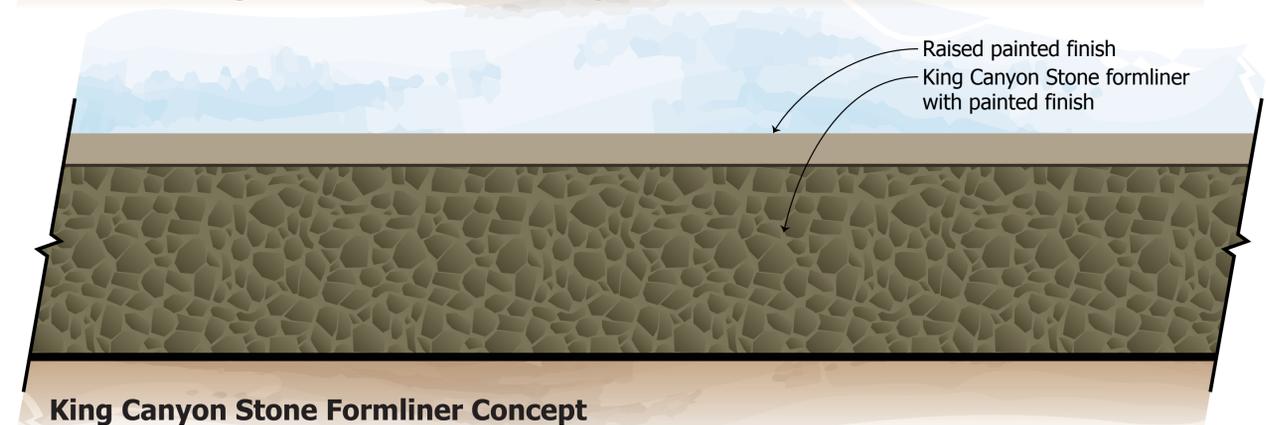
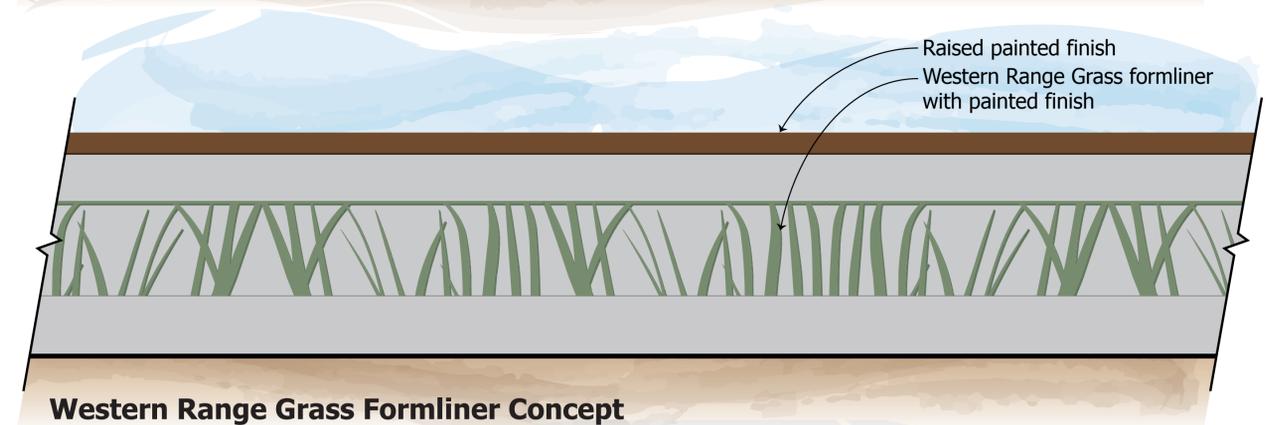
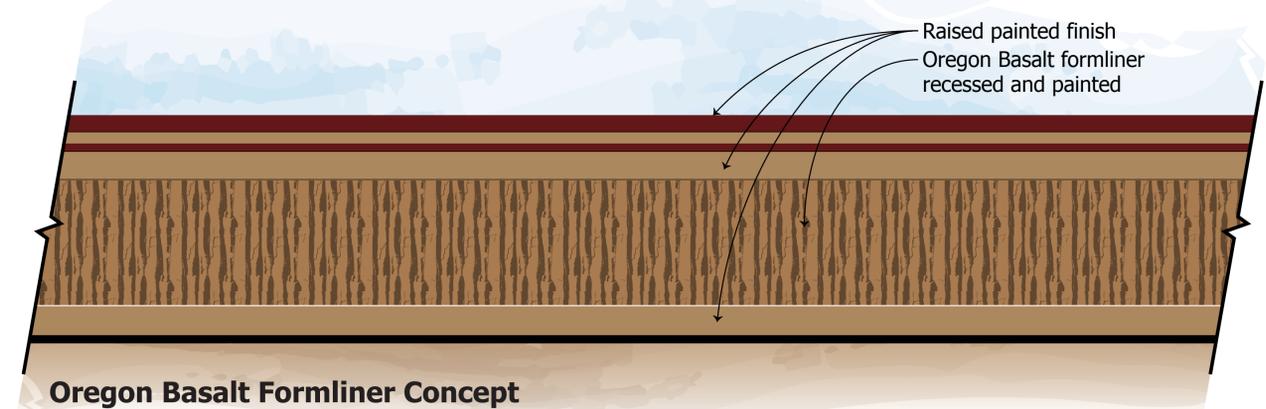
# Structural Aesthetics Examples



## CUSTOM FORMLINER PATTERNS

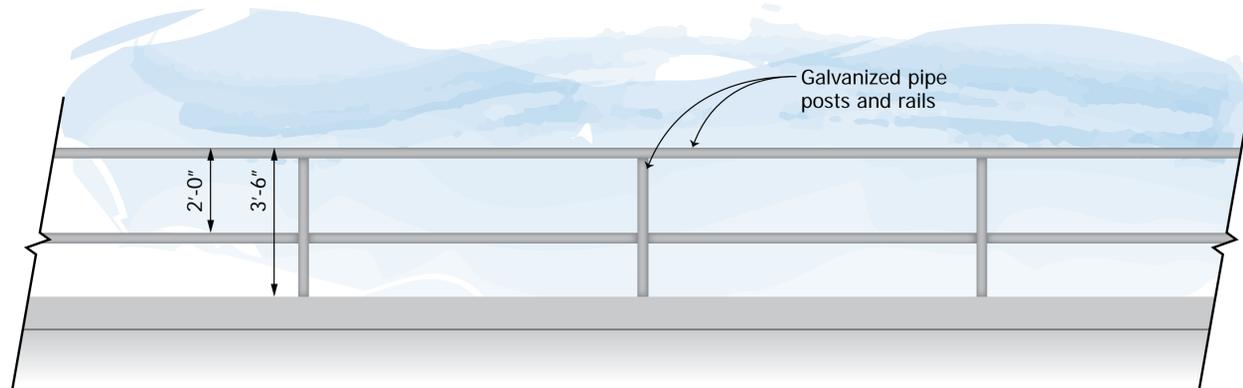


## STANDARD FORMLINER PATTERNS

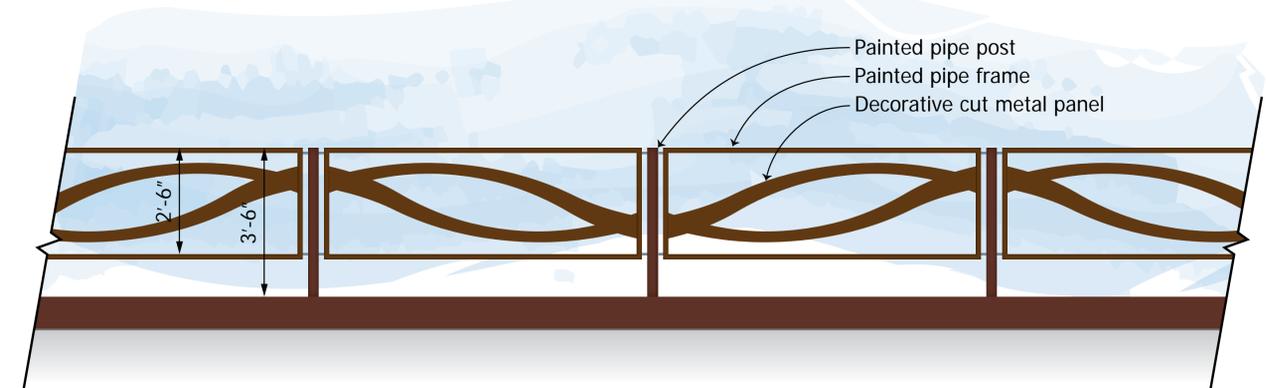




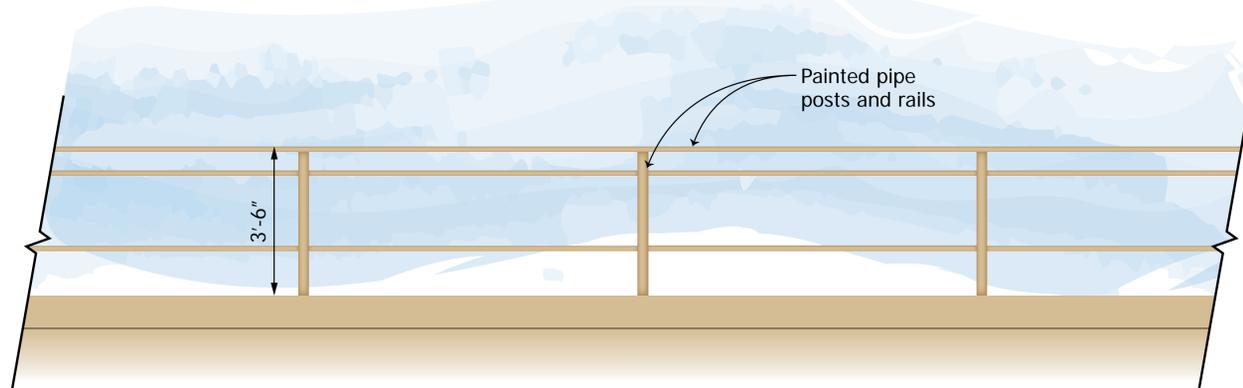
# 115th Avenue & Union Hills Drive Drainage Improvements Project Railing Aesthetics



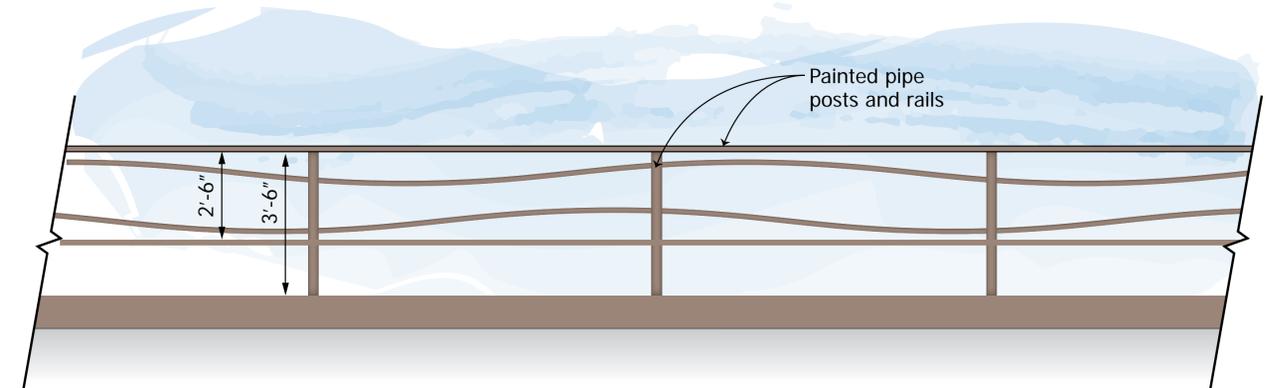
Galvanized Pipe Railing



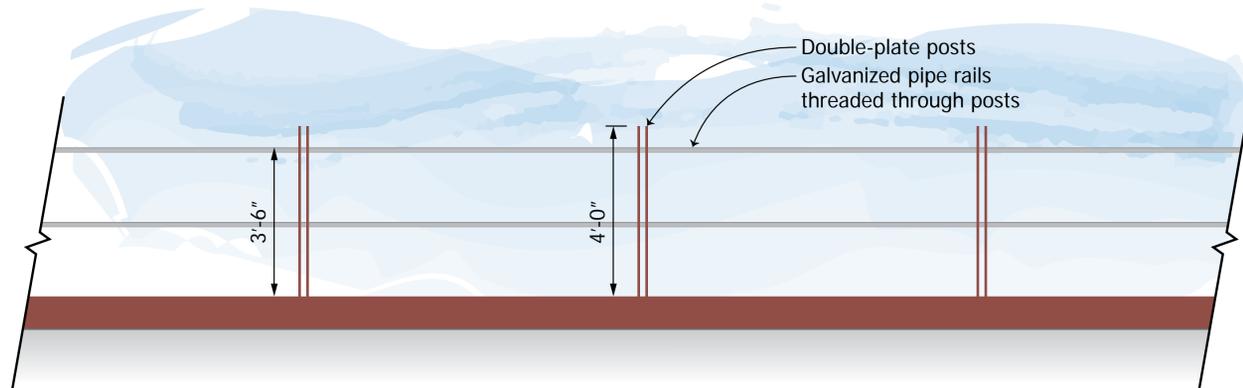
Railing with Framed Ribbon Theme Panels



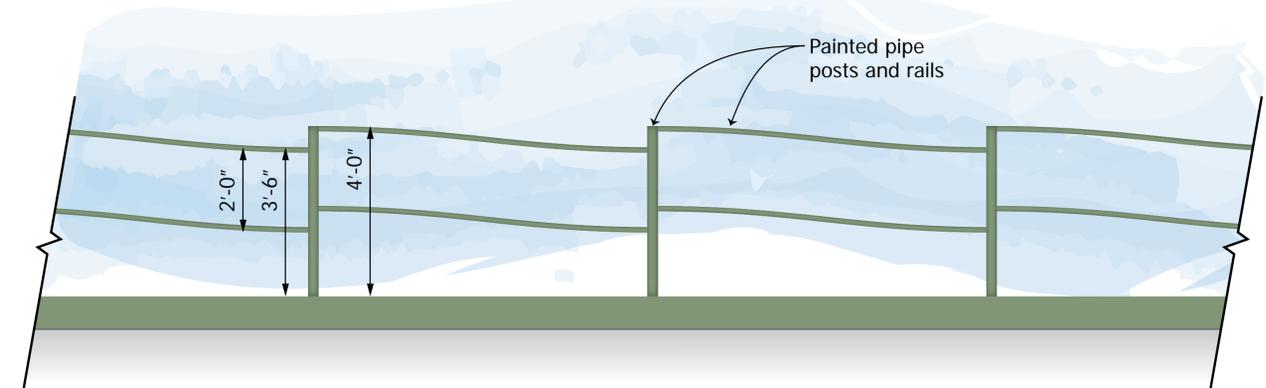
Painted Pipe Railing with Added Horizontal Rail



Curved Pipe Railing



Double-plate Posts with Galvanized Horizontal Rails



Curved Pipe Railing



# 115th Avenue & Union Hills Drive Drainage Improvements Project

## Example Structural Aesthetics

