CITY OF ELK GROVE
PROUD HERITAGE. BRIGHT FUTURE.

WTS Luncheon - City of Elk Grove
Sheldon and Bradshaw Intersection Project

Introductions

Kevin Bewsey – City of Elk Grove CIP Manager

Jeff Werner – City of Elk Grove ESD Manager

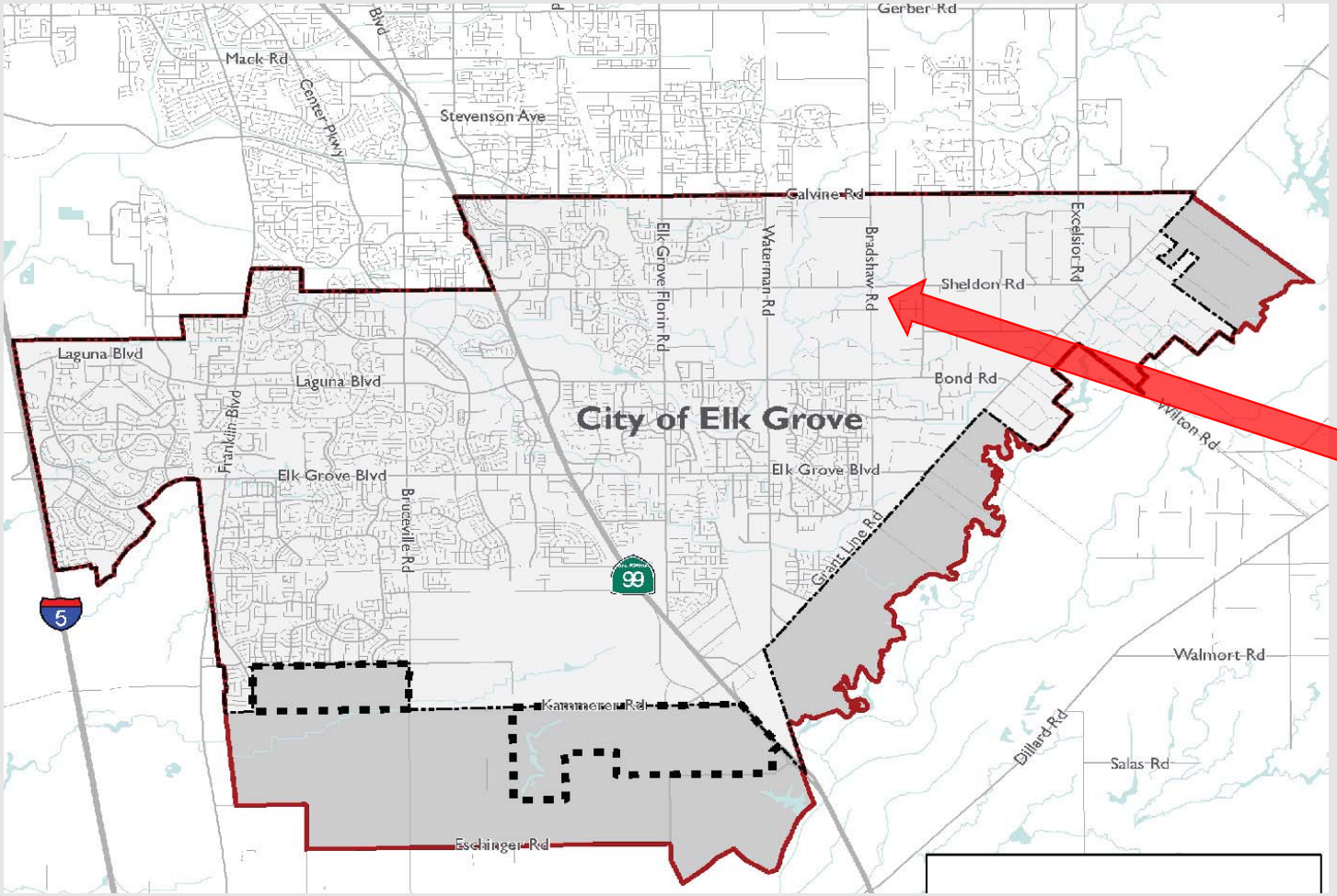
Tom Metcalf – City of Elk Grove Design PM (Willdan)

Ann Grava – City of Elk Grove Right Of Way (Interwest)

Matt Satow – Consultant Design Project Manager (DHA)

Miguel Ramirez – Consultant Design Engineer (DHA)

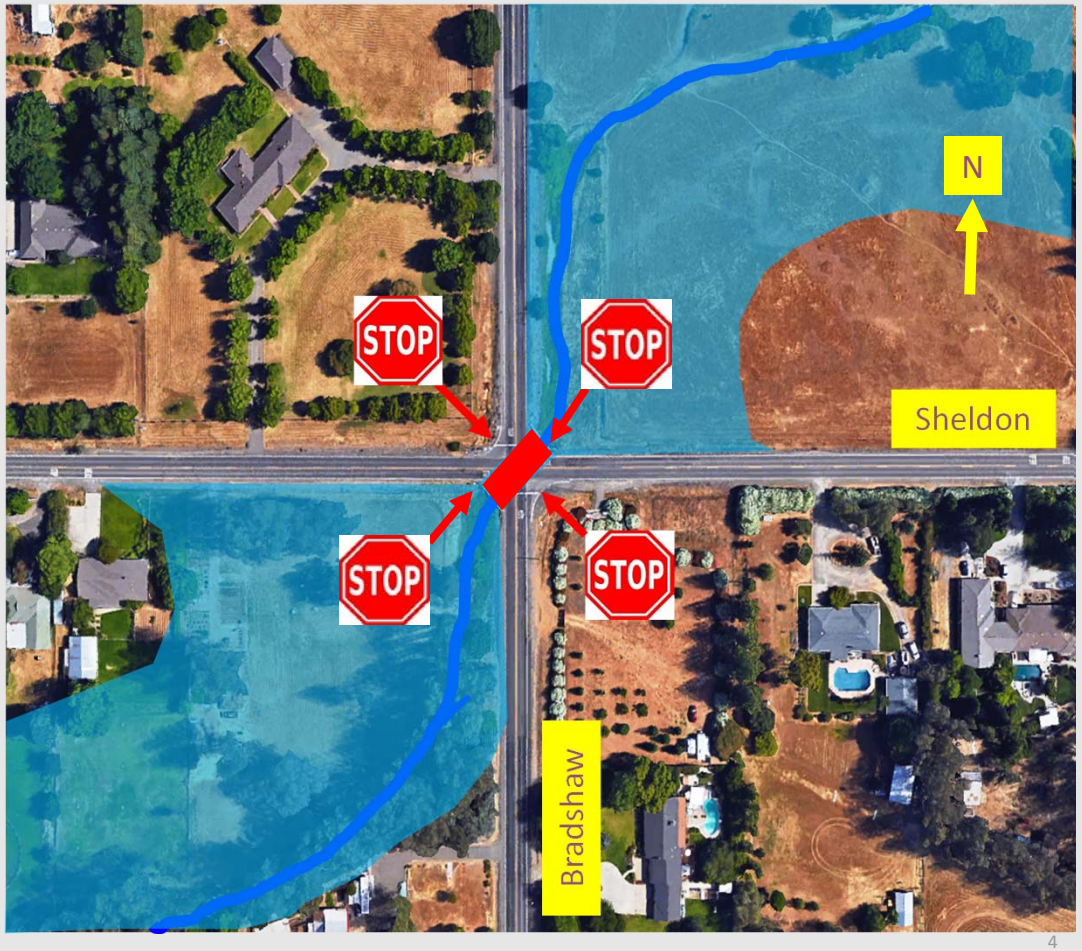
Project Location



Sheldon Road and Bradshaw Road Intersection

Existing Condition

- All way stop, 2 lane roads
  - Sheldon = 7,000 ADT
  - Bradshaw = 11,000 ADT
- No turn lanes
  - Significant delays in the peak hour
- East Branch of Laguna Creek
- 80’ long by 32’ wide two-span bridge at a 45 degree skew SR=64.1 and FO
- Overtopped in the 100 year flood event



Project Need

1. Intersection Level of Service
   a) Existing, LOS F
   b) Policy, LOS D or Higher

Direction of Travel	Existing Intersection Average Delay (AM)	Existing Intersection Average Delay (PM)
SB Bradshaw	126 Seconds	**451 Seconds**
NB Bradshaw	**316 Seconds**	76 Seconds
EB Sheldon	78 Seconds	47 Seconds
WB Sheldon	88 Seconds	85 Seconds

Project Need

2. Hydraulics

a) Eliminates overtopping in the 100 Year Flood Event

Funding

Total Project Costs = $8.5M

Highway Bridge Program 2006

- $6.3M
- Replace the existing bridge with triple box culverts

SACOG Regional/Local Funding Program 2015

- $1.3M
- Intersections Improvements

Local Funds

- $900K

Rural Road Policy

Rural Roads Improvement Policy and Standards, 2007

- Preserve and enhance the existing rural character of the Rural Residential Area

- Roadway and intersection sizing to based on existing ADT not projected ADT.

- Design Influences
  - Roundabout island enhanced aesthetics
  - Colored concrete
  - Cobbles in median
  - Pervious and colored multi-use path

Public Outreach Jan 2016, Full Closure or Partial Closure

Partial Closure

- 4 months of staged construction
- Additional environmental and ROW impacts for on-site detour

Full Closure

- 2 months in summer when school out
- Savings of $400K to $600K
- Safer for traveling public and construction workers

Jan 2016 Open House - Public Voted

- 18 votes for full closure
- O votes for partial closure

Public Outreach Feb 2016

Open House

- Public provided input on preferred intersection control (roundabout vs. signalization)

Roundabout or Signal – Traffic Simulation

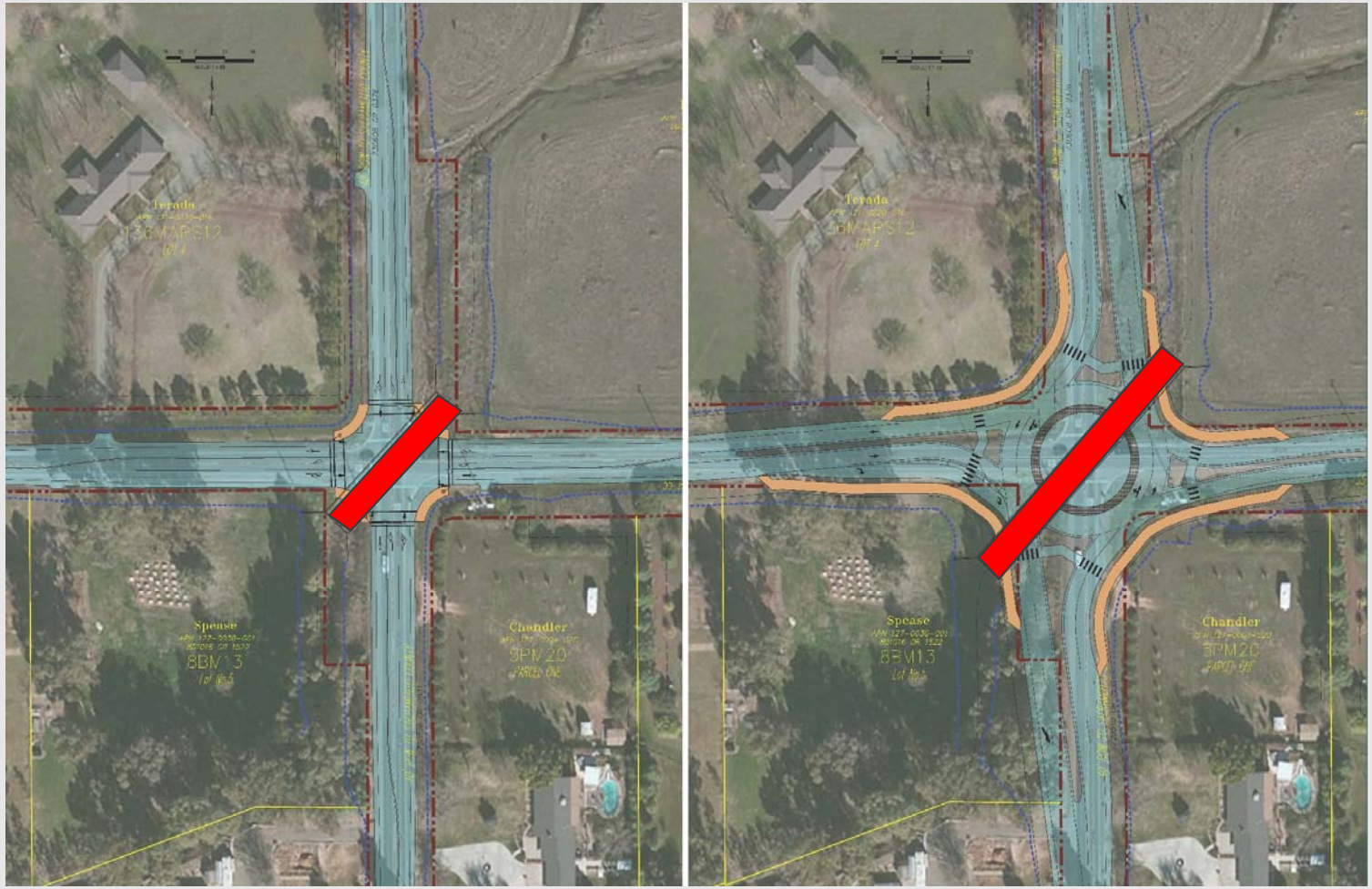
Roundabout or Signal - Structure

Signal

- 160’ long box culverts

Roundabout

- 280’ long box culverts



Roundabout or Signal - Decision

ALTERNATIVE COMPARISON

Sheldon and Bradshaw Intersection Feature	Signal	Roundabout
Anticipated vehicular delay in 2018 after construction	34 Seconds	16 Seconds
Lowerseverity of crashes		X
Increased traffic calming effect		X
Ability to better incorporate rural aesthetics		X
Reduction in vehicle emissions		X
Eliminates overtopping of the 100 year storm event	X	X
Stream relocation impacts	X	X
Least amount of right-of-way needed	X	
Intersection type most familiar to local users	X	
Least amount of impact to utilities	X	
Year when next incremental improvement is needed	2028 (SB Rt Turn)	2030 (Full 2-Lane Roundabout)
Overall Project cost	$6.1M	$7.9M
Portion of project cost paid by the City	$0.9M	$2.7M

March 2016

- City Council selected the Roundabout

Environmental Clearance and Permits

CEQA March 2016

- Mitigated Negative Declaration

NEPA

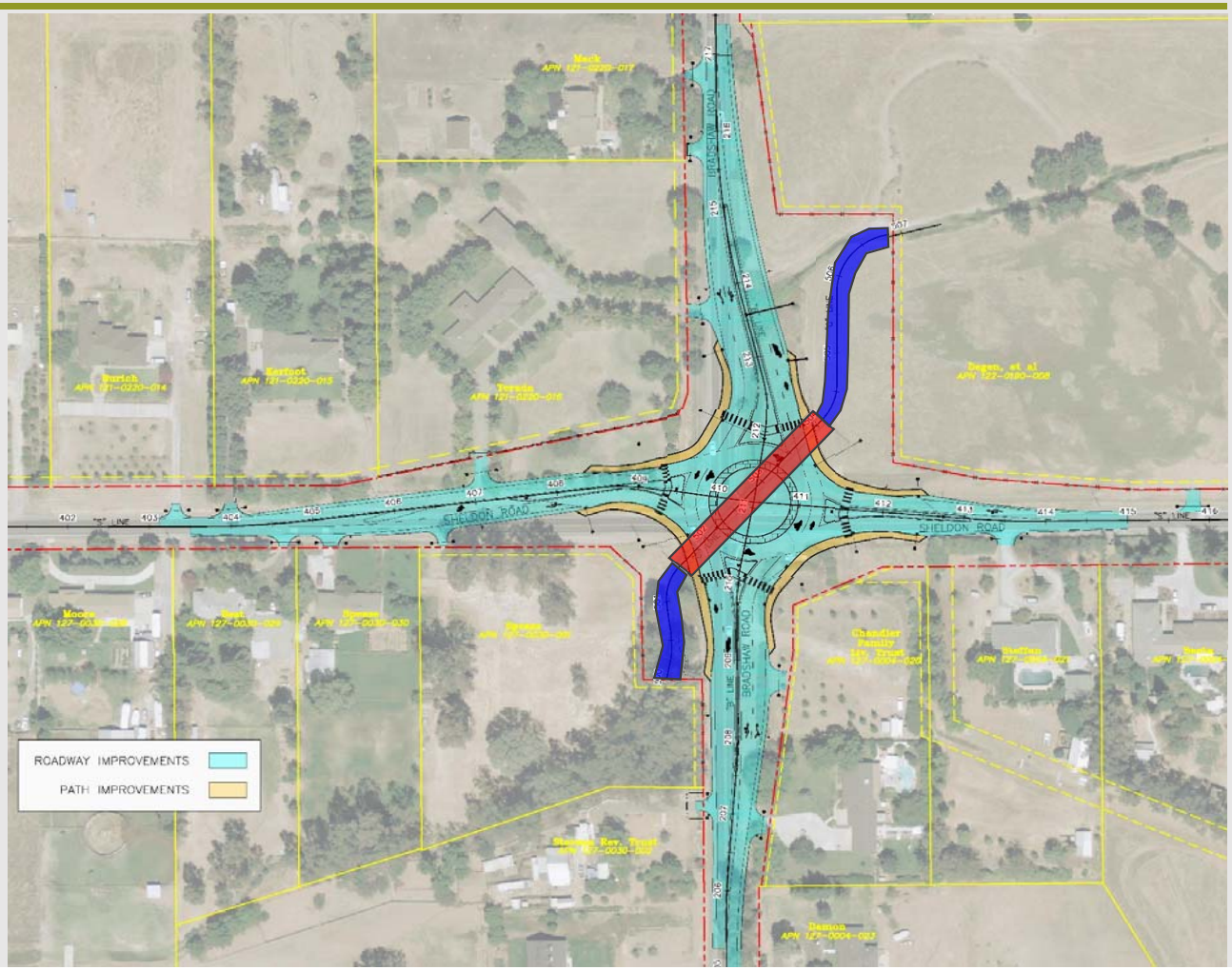
- CE

Permits

- 401, 404, 1602, Tree Removal

Unique Design Challenges

- Box culverts extending diagonally under the roundabout
- Significant stream realignment
- Pervious and colored multi-use path



Right Of Way

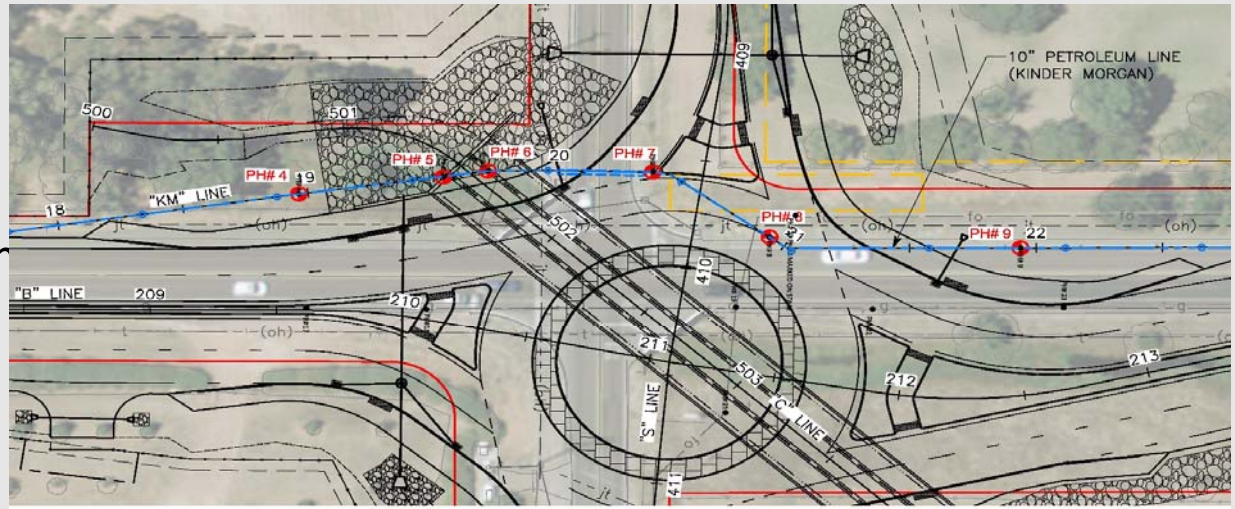
Challenges – 5 parcels

- Accelerated schedule
  - Plats and Legals to ROW Cert = 8 months
  - Avoided condemnations
- One co-property owner in Switzerland
- One property owner in Japan
  - Had to translate documents into Japanese
- One property owner father of elected official

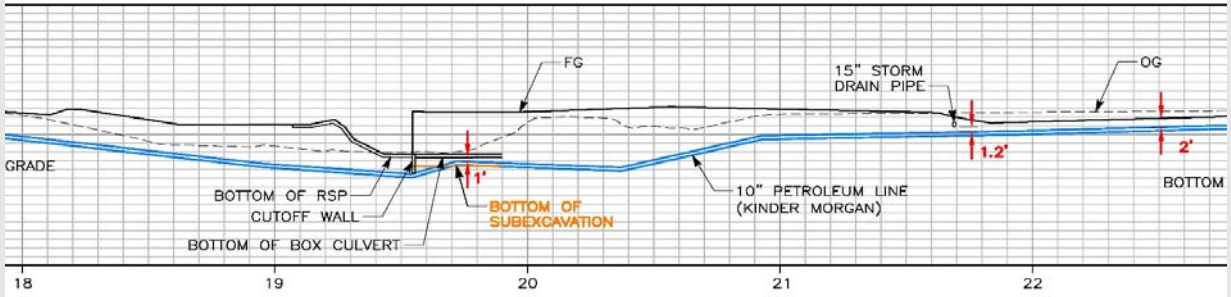
Utility Coordination and Relocation

10” underground petroleum line

- Conflict with the proposed box bottom
- High priority utility relocation
- 1200’ of HDD
- Extensive coordination to relocate prior to construction
- Required temp full closures of the intersection



PLAN



PROFILE

Utility Coordination and Relocation

Fiber Optics Communication Hub

- Performed extensive outreach with the utility
- Unable to relocate prior to Construction
- During construction, held weekly coordination meetings with the Contractor, CM Team, Design Team and Utility
- Team effort resulted in no delay in the opening of the roundabout and minimal financial impact to the project

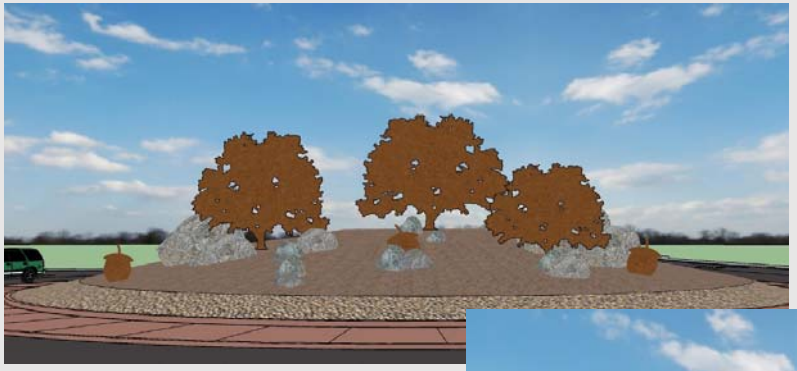
Roundabout Aesthetics - Committee

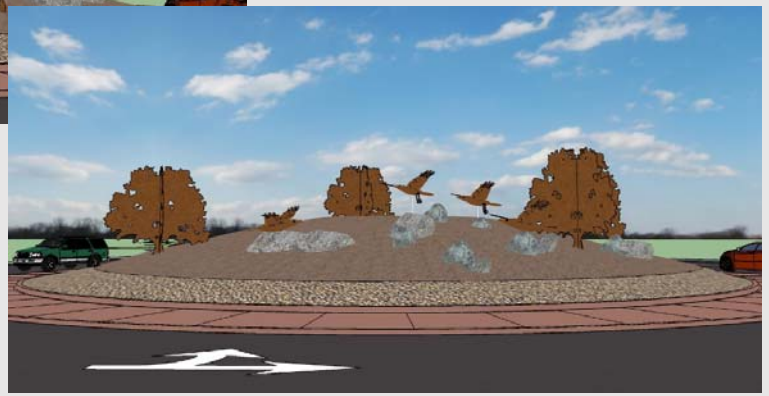
Aesthetics Committee

- Sheldon Community Association
- Greater Sheldon Road Estates Homeowners Association
- Representative from the City's Arts Committee

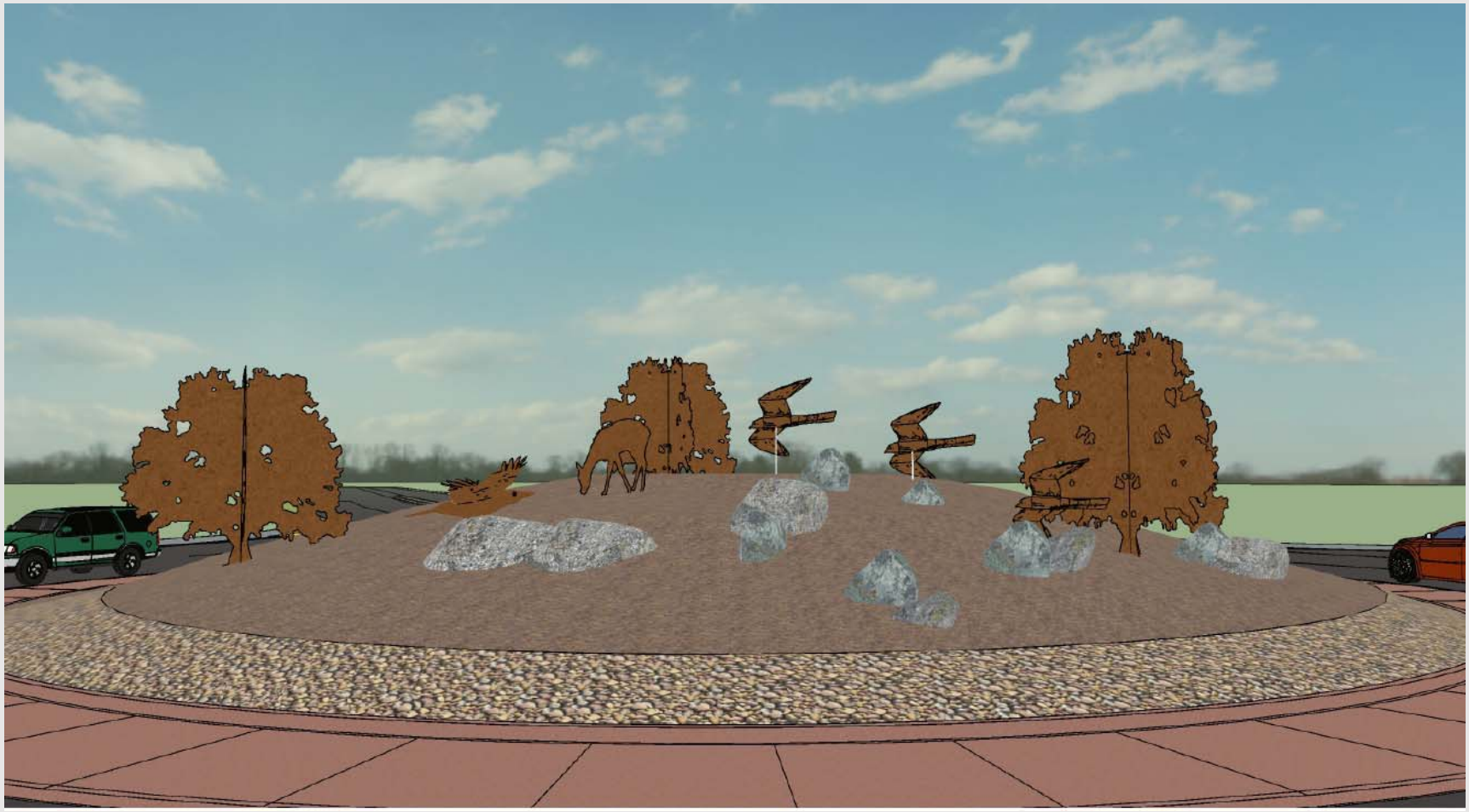
Decided upon a Conservation Theme

Roundabout Aesthetics – Concept Evolution





Public Outreach April 2018, Final Aesthetics



Project Award and Savings

Engineers Opinion of Probable Cost - $5.8M

Bid Summary

- Contractor #1 - $4.5M
- Contractor #2 - $5.5M
- Contractor #3 - $5.7M
- Contractor #4 - $6.1M

Project Savings

- Lowest bid was $1.3M below Opinion of Probably Cost

Questions