City of Colleyville
City Council
Worksession Agenda

City Hall
100 Main Street
Colleyville, Texas 76034
817.503.1000
www.colleyville.com

Tuesday, January 24, 2017
6:00 p.m.

Executive Conference Room
Third Floor - City Hall

1. CALL TO ORDER

2. PRESENTATION AND DISCUSSION

2a Presentation and discussion of the Glade Road Project

3. ADJOURNMENT

I hereby certify this agenda was posted on City Hall bulletin boards Friday, January 20, 2017, by 5:00 p.m.

Amy Shelley, TRMC
City Secretary

A quorum of any Colleyville board, commission, or committee may be present at this meeting.

Any matter on this agenda may, at the discretion of the governing body, be opened for public comment and discussion.

If you plan to attend this public meeting and have a disability that requires special accommodations, please advise the City Secretary at least 48 hours in advance at 817.503.1133, and reasonable accommodations will be made to assist you.

City of Colleyville
Colleyville City Council Worksession Agenda Briefing

City Hall
100 Main Street
Colleyville, Texas 76034
www.colleyville.com

Agenda Number 2a **Agenda Date** 01/24/2017
Type Presentation and Discussion
Department Public Works

Title
Presentation and discussion of the Glade Road Project

Explanation
Staff presented an update on the Glade Road Project during the August 24, 2016 City Council worksession. During the discussion at the worksession, City Council identified questions and requests for additional information which required further analysis by the design consultant. The August 24, 2016 City Council worksession presentation is attached for reference and was a comprehensive review that covered several topics including:

- Project History
- Review of Traffic Counts
- Phase 1 overview of the current plans:
  - Bransford Road Intersection
  - Bedford Road Intersection
  - Riverwalk Drive intersection
  - Bluebonnet Drive intersection
  - Overview of the proposed retaining walls
  - Proposed traffic control plan
  - Complete plans overview
- Phase 2 overview
- Phase 3 overview
- Phase 4 overview
- Project Schedules
- Interim Maintenance

This presentation and discussion, which will be led by City staff and the design consultant will focus on the follow up items discussed during the August 24, 2016 City Council worksession. City Council identified questions and had requests for additional information about various options for Phase 2 of Glade Road which required further analysis including:

- **Base Option** - Curb and gutters with Turn lanes, trail on the north side and sidewalk on the south

- **Option 1** - Ribbon curb with roadside ditches, sidewalk/trail on the south side, sidewalk on the north side from Montclair to Pool Road, and no turn lanes

- **Option 2** - Ribbon curbs with roadside ditches and inlets, sidewalk/trail on the south side, sidewalk on the north from Montclair to Pool Road, and no turn lanes

- **Option 3** - Ribbon curbs with roadside ditches and inlets, sidewalk/trail on the south side, sidewalk on the north from Montclair to Pool Road, and turn lanes

It should be noted that the Base Option includes an asphalt street section with concrete curbs. This option would be considered a complete reconstruction of the roadway. Options 1, 2, and 3, include the reconstruction of the existing roadway similar to a Full Depth Reclamation Project but with the addition of a concrete ribbon curb as well as various other features depending on the option selected. Option 1, 2 or 3 would result in a new asphalt roadway (including surface and subgrade) with concrete ribbon curbs.

Attachments

1. January 24, 2017 Presentation
2. August 24, 2016 Presentation
3. Opinion of Probable Cost
4. Typical Cross Sections
5. Base Option Exhibit
6. Option 1 - Exhibit
7. Option 2 - Exhibit
8. Option 3 - Exhibit

Glade Road
Project Update

January 24, 2017
City Council Worksession

Scope of Worksession

Objective Statement – To provide the City Council with an update on the status of the Glade Road Project with a focus on addressing questions and requests for additional information presented during the August 24, 2016 worksession

- **Phasing Overview**
- **Current CIP Project Schedules**
- **Interim Maintenance**
- **Information Requested**
- **Phase 2 – Base Option**
- **Phase 2 – Base Option 1**
- **Phase 2 – Base Option 2**
- **Phase 2 – Base Option 3**
- **City Council Direction**

Phases of Glade Road Corridor

Current Project Schedules

Currently Underway

- Design of Glade Road Phase 2 (Manning Drive to Pool Road)
- Design of Glade Road Phase 3 (Pool Road to Heritage Avenue)
- Design of Glade Road Phase 4 (Western City Limits to Bransford Road)

Funding Currently Allocated

- Construction of Glade Road Phase 1 (Bransford Road to Manning Drive)
- ROW Acquisition for Glade Road Phase 2 (Manning Drive to Pool Road)
- ROW Acquisition for Glade Road Phase 3 (Pool Road to Heritage Avenue)

In the Current 5-Year CIP in FY 2018

- Construction of Glade Road Phase 2 (Manning Drive to Pool Road)

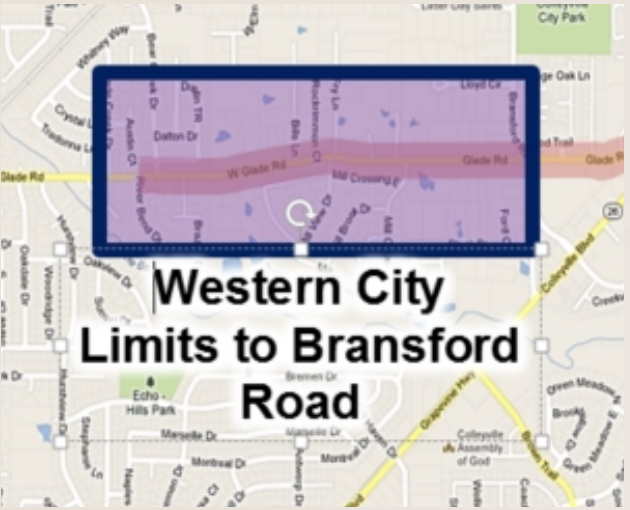
In the Current 5-Year CIP in FY 2019

- Construction of Glade Road Phase 3 (Pool Road to Heritage Avenue)

Not included in the current 5 year CIP

- ROW Acquisition for Glade Road Phase 4 (Western City Limits to Bransford Road)
- Construction of Glade Road Phase 4 (Western City Limits to Bransford Road)

Interim Maintenance



Funding

- Project budget: $142,000
- Funding source
  - Capital Projects Fund

Funding

- Project budget: $198,000
- Funding source
  - Capital Projects Fund

Project Information

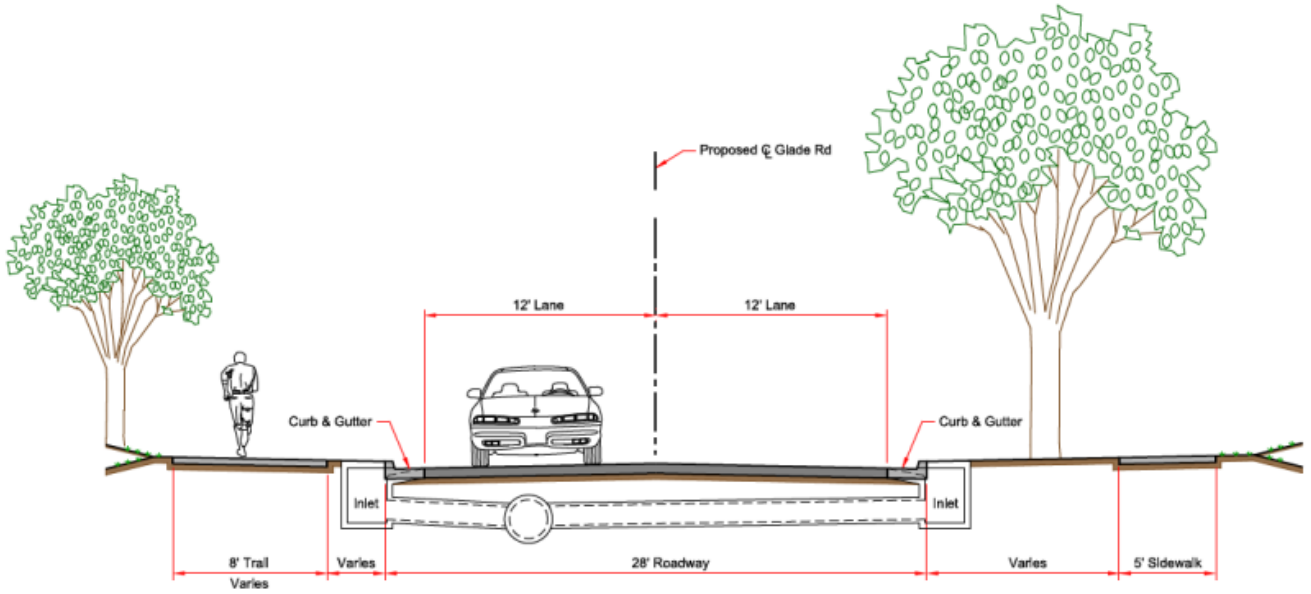
- In order to address the pavement condition and ride quality of the sections of Glade Road that are not slated for reconstruction in the near future, a maintenance project was included in the current year of the Capital Improvement Program. The work will include a level-up course in order to address any rutting, and a 2” asphalt overlay which will address the surface condition of the roadway and improve ride quality. This will be a short term solution that will provide a better driving surface until such time the complete reconstruction can be performed. ***Staff is working with the asphalt contractor to finalize the schedule and with City Council concurrence staff will work to get this work completed as soon as possible.***

Information Requested

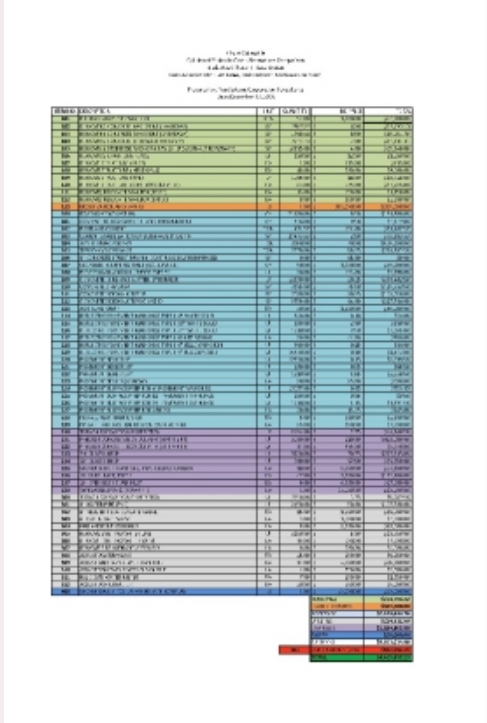
During the August 24, 2016 City Council worksession, staff presented an update on the Glade Road Project and during the discussion at the worksession, City Council identified questions and had requests for additional information about various options for Phase 2 of Glade Road which required further analysis including:

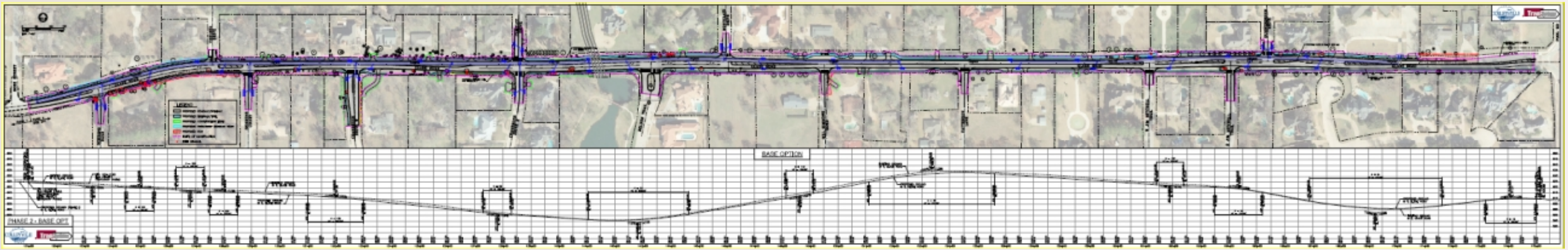
- **Base Option -** Curb and gutters with turn lanes, trail on the north side and sidewalk on the south
- **Option 1 - Ribbon curb with roadside ditches**, sidewalk/trail on the south side, sidewalk on the north side from Montclair to Pool Road, and no turn lanes
- **Option 2 -** Ribbon curbs with roadside ditches **and inlets**, sidewalk/trail on the south side, sidewalk on the north from Montclair to Pool Road, and no turn lanes
- **Option 3 -** Ribbon curbs with roadside ditches and inlets, sidewalk/trail on the south side, sidewalk on the north from Montclair to Pool Road, **and turn lanes**

Phase 2 - Base Option

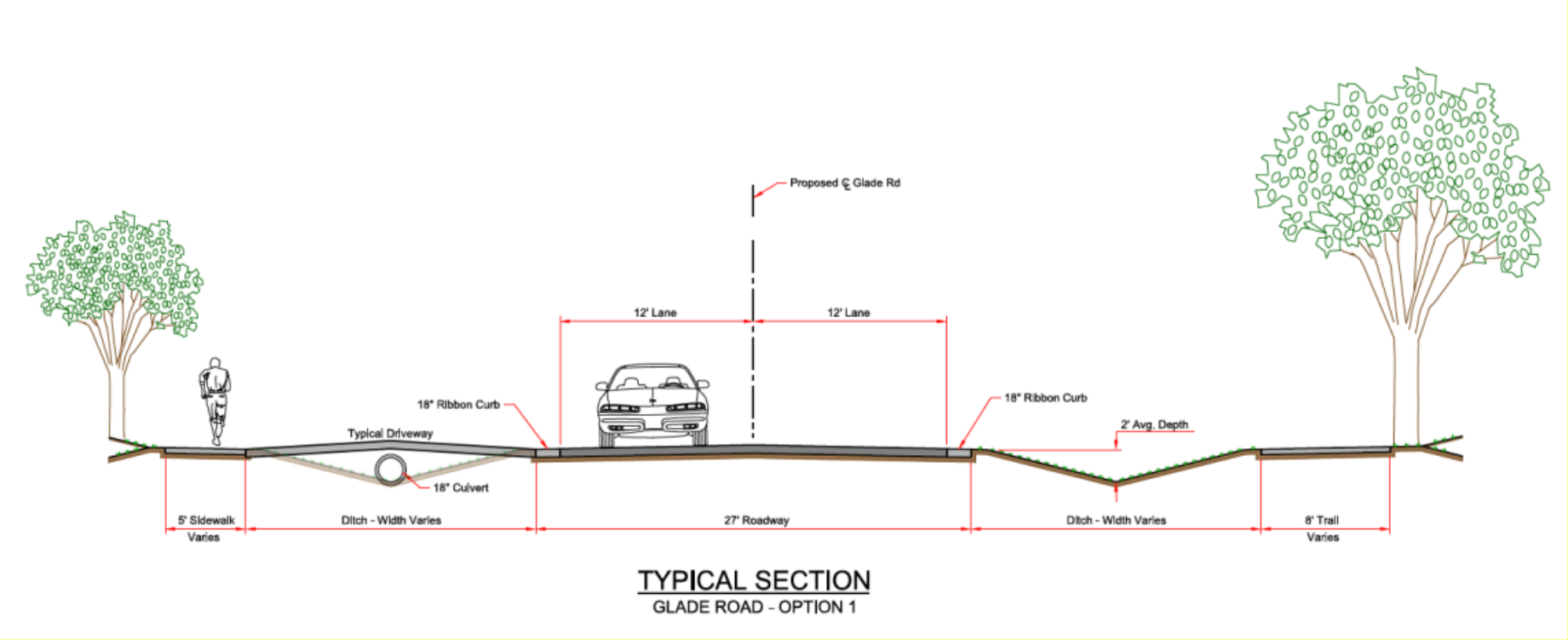


TYPICAL SECTION
GLADE ROAD - BASE OPTION

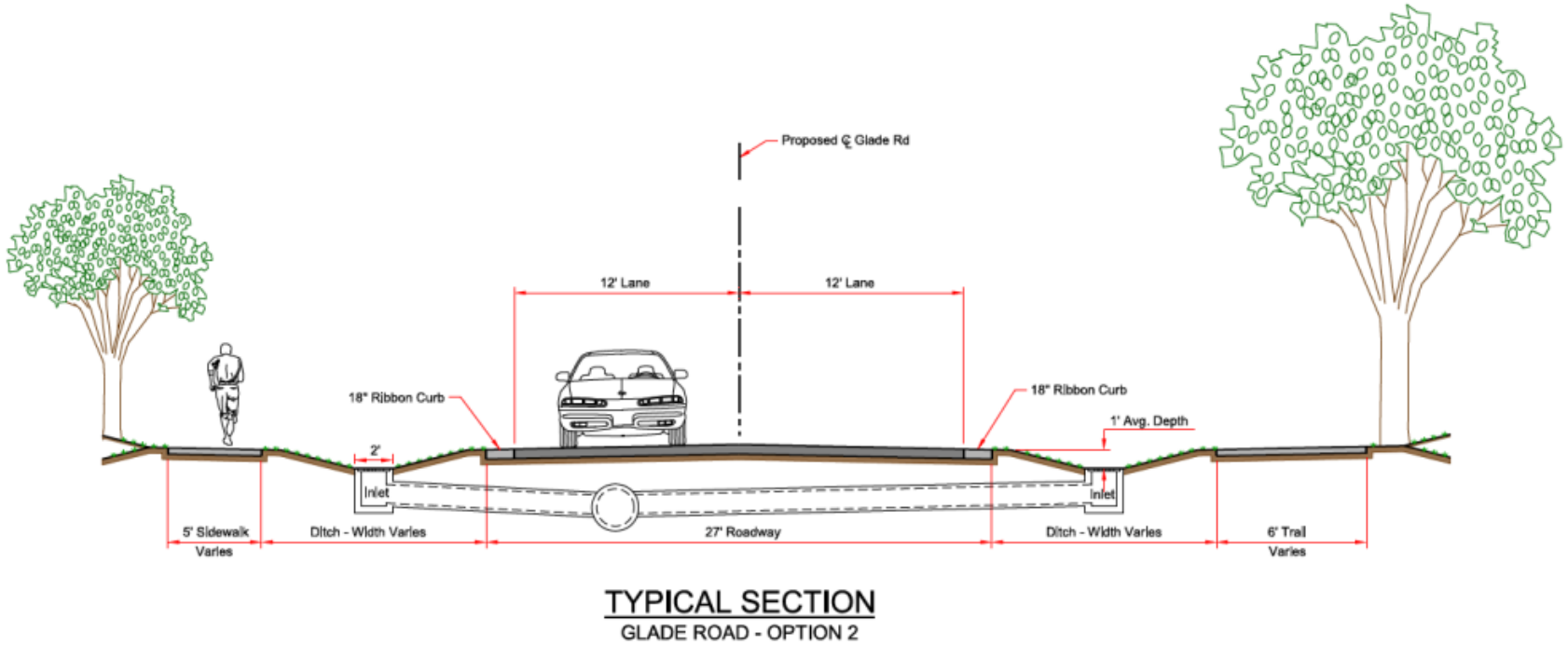




Phase 2 - Option 1

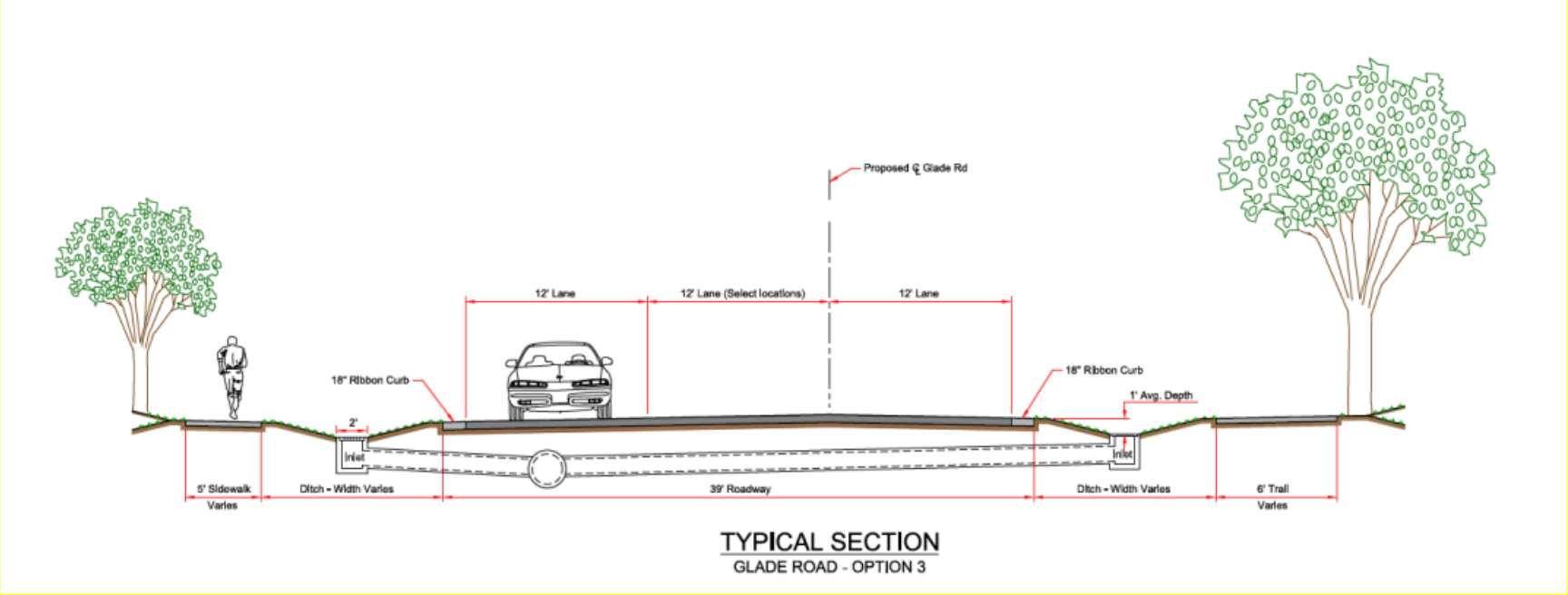


Phase 2 - Option 2



TYPICAL SECTION
GLADE ROAD - OPTION 2

Phase 2 - Option 3



City Council Direction

Staff is seeking City Council direction on the following:

- Concurrence with the execution of the interim maintenance of Glade Road from the Western City Limits to Bransford Road and Stafford Drive to Jim Mitchell Trail
- Clarification of the City Council's preference for the design elements of Glade Road Phase 2

Questions and Discussion

Glade Road
Project Update

August 24, 2016
Worksession

Scope of Worksession

Objective Statement – To provide the City Council with an update on the status of the Glade Road Project and provide an opportunity to discuss each phase of the corridor

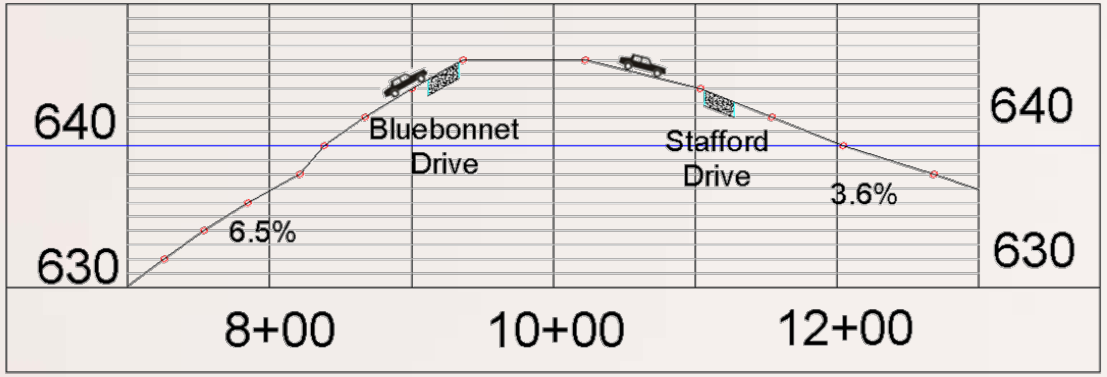
- **Project History**
- **Review of Traffic Counts**
- **Phase 1 overview:**
  - Bransford Road intersection
  - Bedford Road intersection
  - Riverwalk Drive intersection
  - Bluebonnet Drive intersection
  - Overview of the proposed retaining walls
  - Proposed traffic control plan
  - Complete overview
- **Phase 2 overview**
- **Phase 3 overview**
- **Phase 4 overview**
- **Project Schedules**
- **Interim Maintenance**

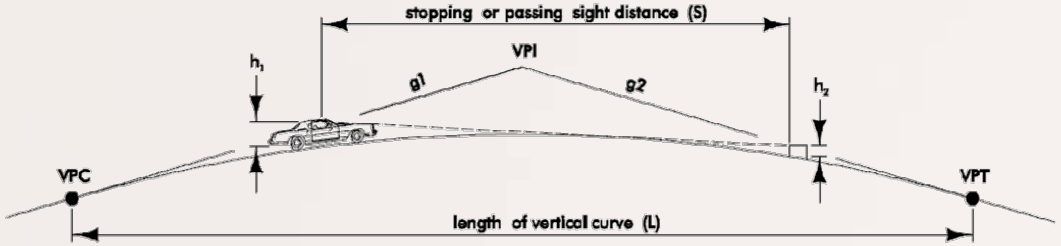
Project History

<u>October 5, 2011</u>

Pre Council presentation on the Glade Road and Bluebonnet Road intersection

150’ east of eastbound stop sign





Project History

July 2, 2012 – Preliminary engineering study authorized for Glade Road from Heritage Avenue to SH26 (Colleyville Boulevard)

November 20, 2012 – Results of preliminary engineering study presented to City Council

February 19, 2013 – Engineering services agreement approved for concept design from Heritage Avenue to west city limits

May 7, 2013 – Preview of the public meeting presentation delivered to City Council during a Pre Council session

May 23, 2013 – Initial public input meeting

November 5, 2013 – Council updated on the status of the project and feedback received at initial Public Input Meeting

November 18, 2013 – Second Public Input Meeting (Concept Designs Presented)

March 3, 2014 – Recommended design presented to City Council

Project History

April 16, 2014 – Council Worksession to review recommended design

June 17, 2014 – Pre Council discussion to review recommended design

June 30, 2014 – Council Worksession to discuss the project. Council provided direction to proceed with the final design of the section between Bransford Road and Manning Drive

July 15, 2014 – Approval of a final design contract for the section between Bransford Road and Manning Drive

August 6, 2014 – Council Worksession to review the Glade Road Corridor

October 3, 2014 –Acquisition of 1209 Glade Road (right-of-way necessary for the roundabout at the Riverwalk Intersection)

October 6, 2014 – Petition to limit scope of the Glade Road Project submitted to the City of Colleyville

Project History

October 21, 2014 – Pre Council discussion and project design placed on hold

June 2, 2015 – Pre Council discussion and project was released to proceed with the design

July 28, 2015 – Pre Council discussion and Phase 1 Update

October 20, 2015 – Pre Council discussion and Phase 1 60% Update and CIP phasing discussion

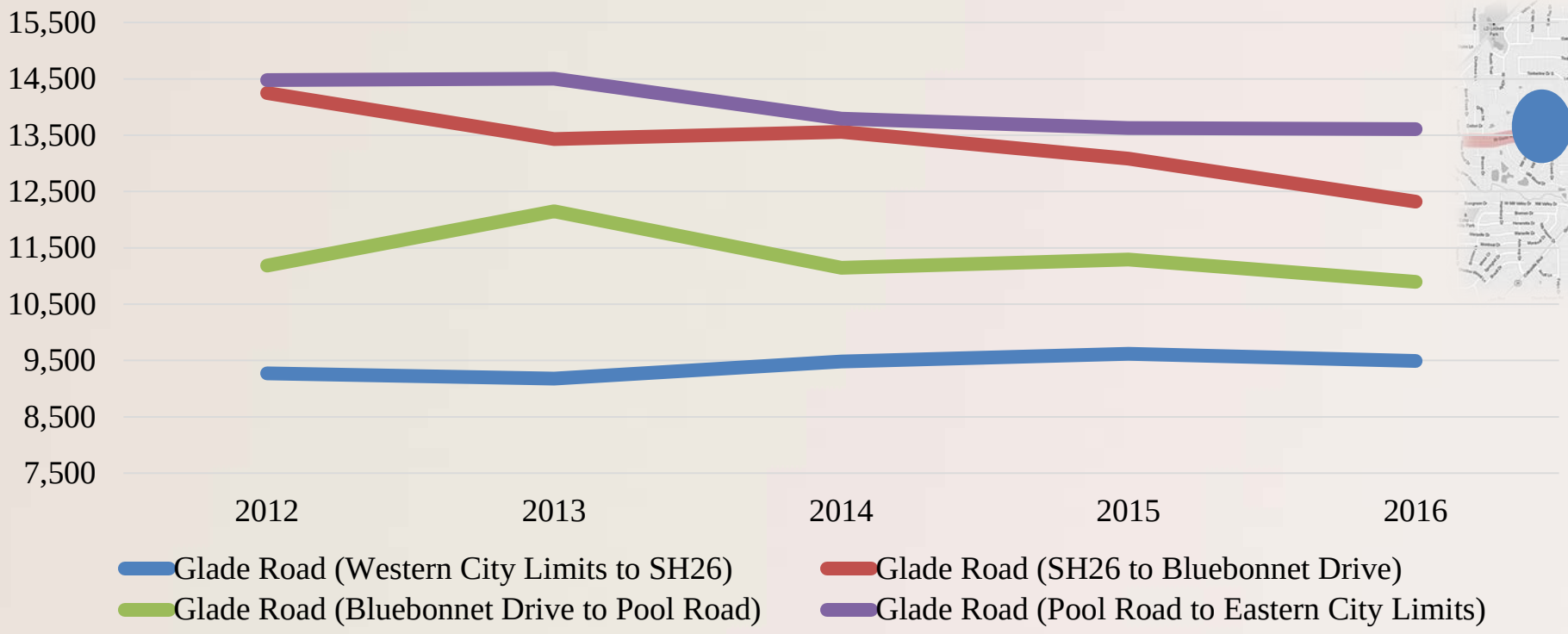
December 15, 2015 – Pre Council discussion on Phase 1, specifically on the roundabout at Bransford Road and Glade Road

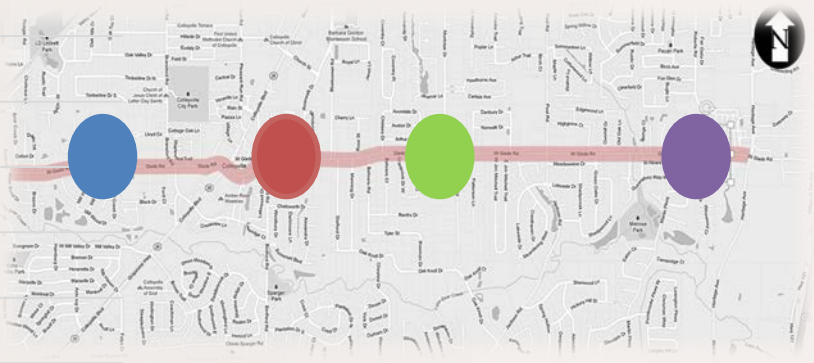
April 19, 2016 - Pre Council discussion on Phase 1, specifically on 90% exhibit and the tree conservation and mitigation efforts

May 3, 2016 - Approval of the right-of-way acquisition services contract

Traffic Counts

Glade Road Traffic Volumes

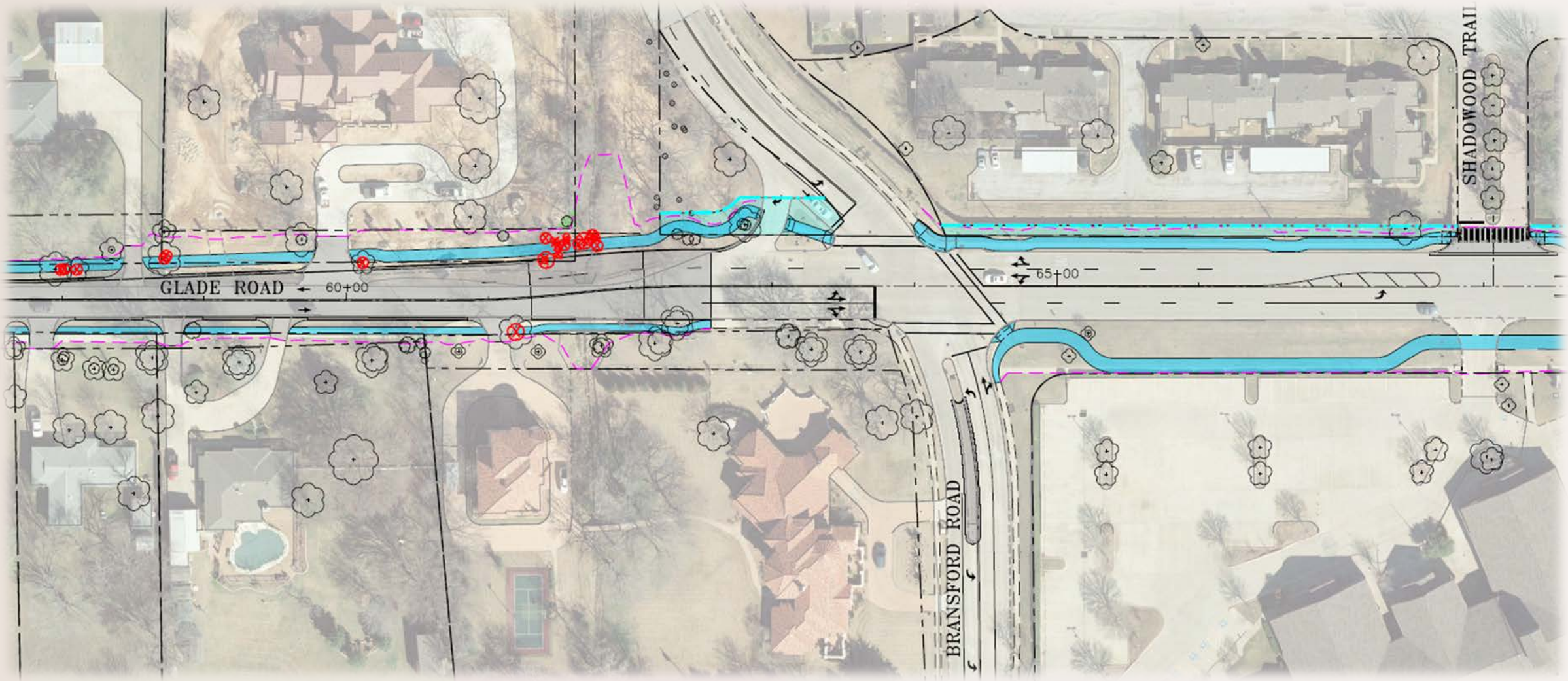




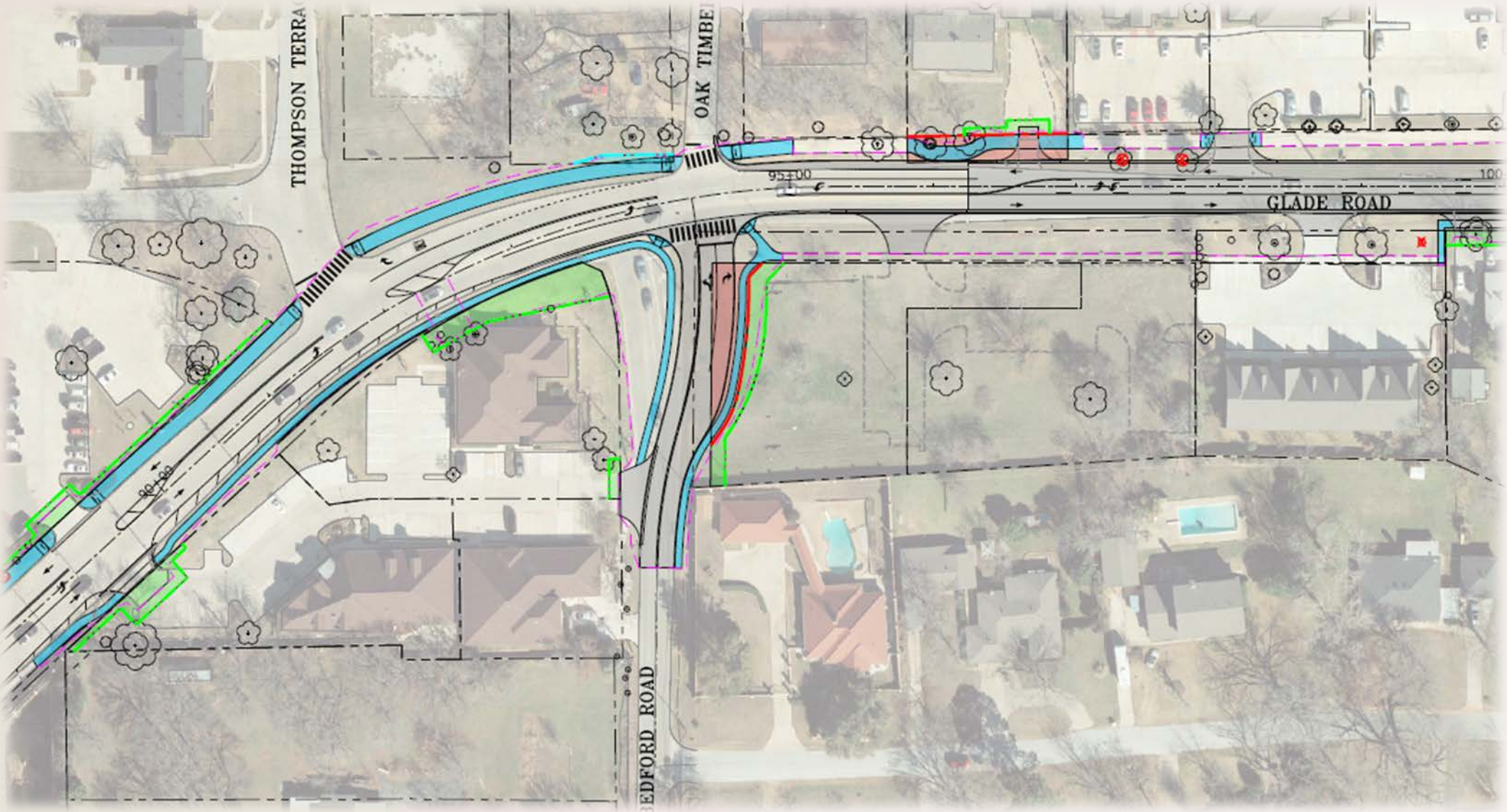
	2012	2013	2014	2015	2016
Glade Road (Western City Limits to SH26)	9,274	9,177	9,480	9,618	9,490
Glade Road (SH26 to Bluebonnet Drive)	14,250	13,433	13,557	13,085	12,322
Glade Road (Bluebonnet Drive to Pool Road)	11,183	12,147	11,144	11,293	10,895
Glade Road (Pool Road to Eastern City Limits)	14,478	14,501	13,796	13,625	13,610

Phases of Glade Road Corridor

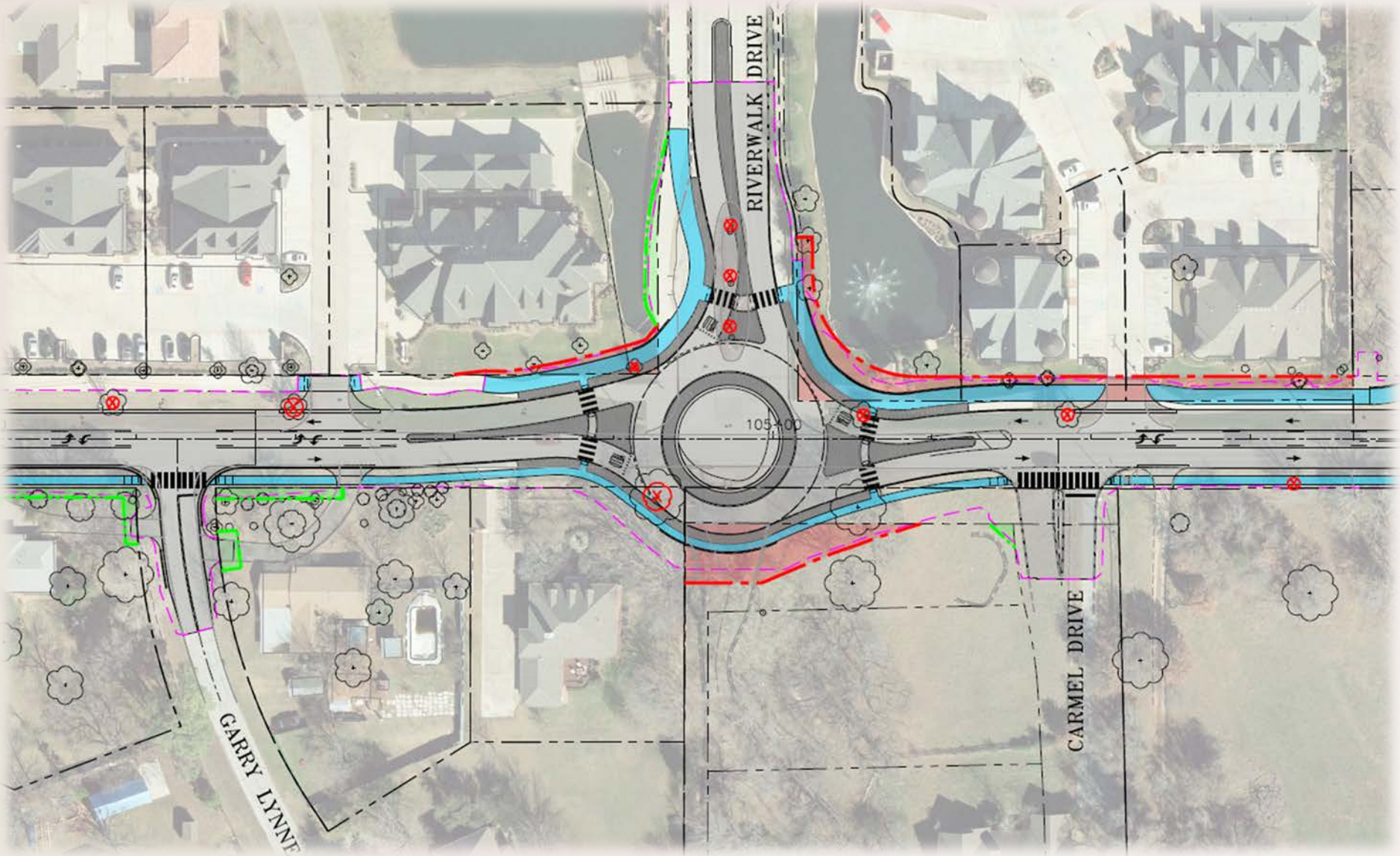
Phase 1 *(Bransford Road Intersection)*



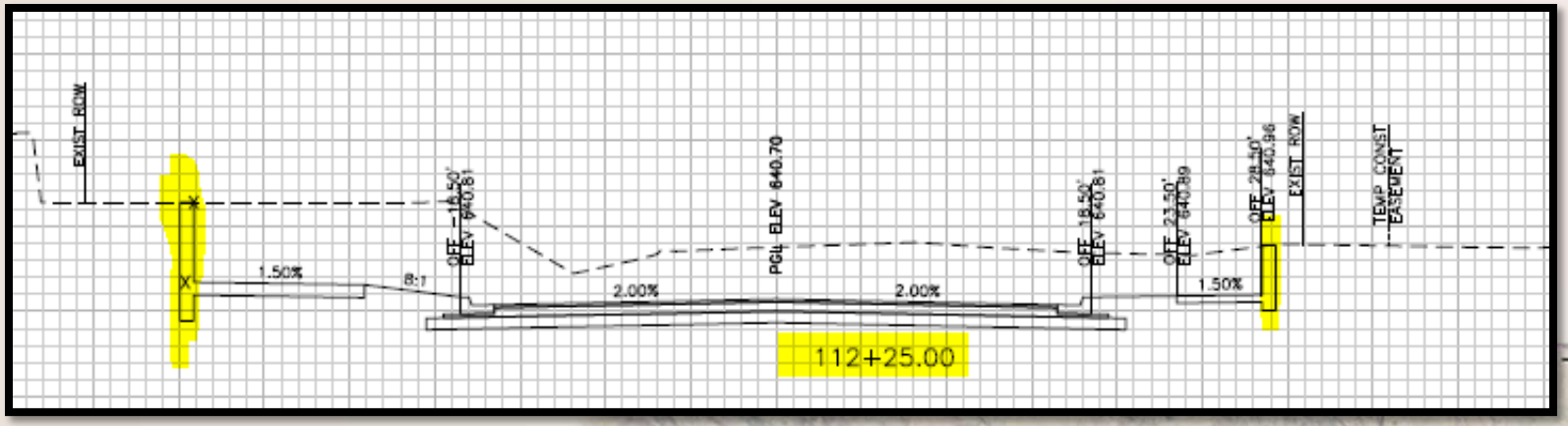
Phase 1 *(Bedford Road Intersection)*

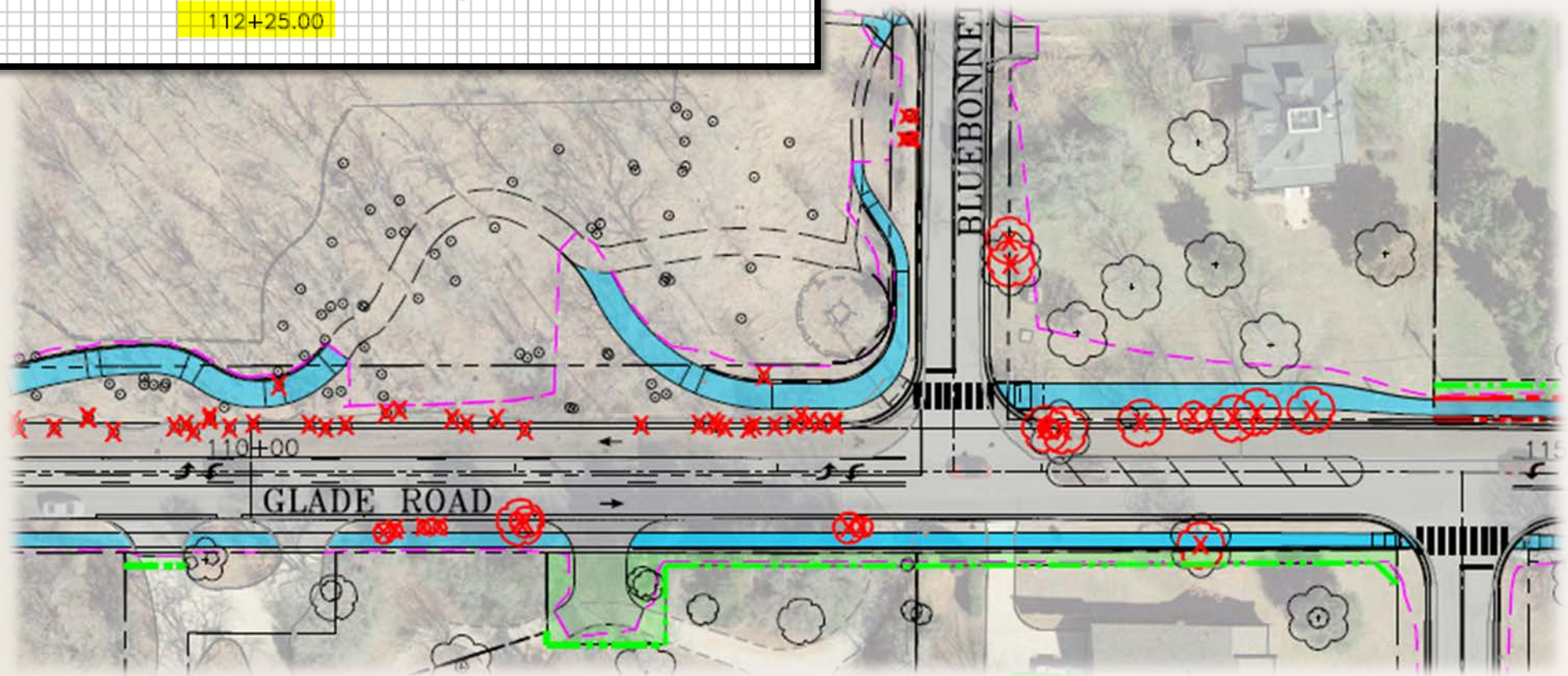


Phase 1 *(Riverwalk Roundabout)*

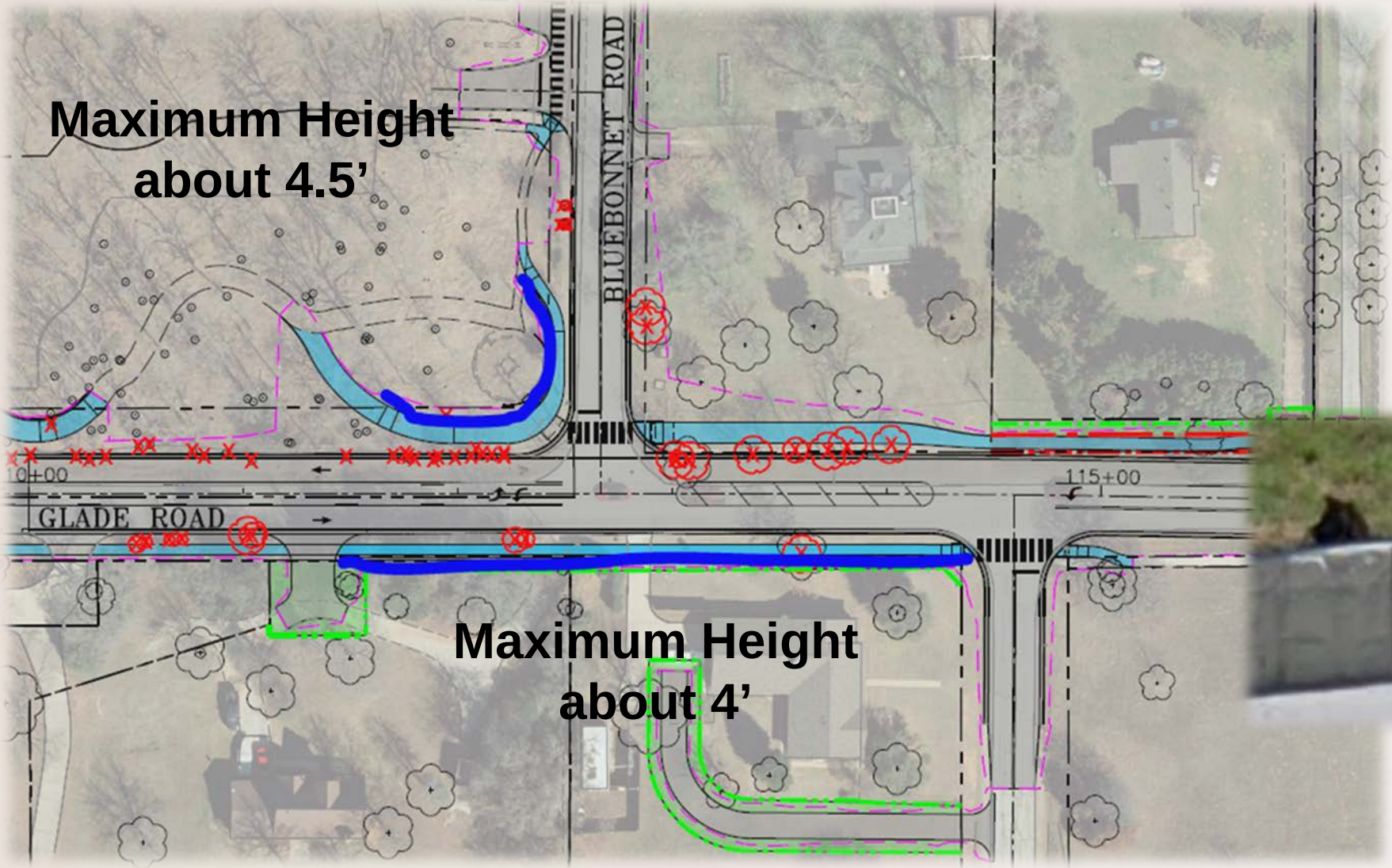


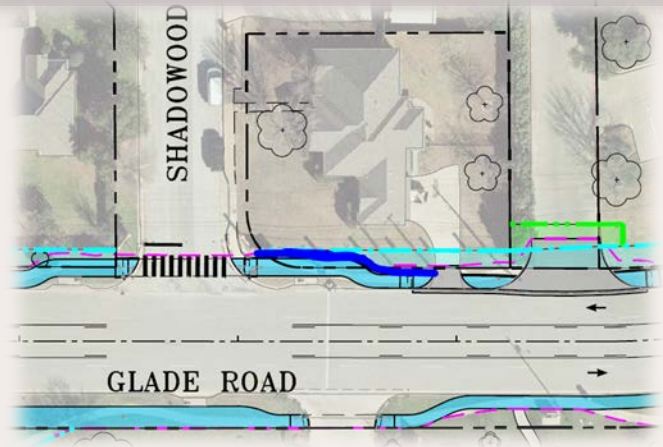
Phase 1 *(Bluebonnet Drive Intersection)*





Phase 1 *(Retaining Walls)*





Maximum Height
about 20”

= Proposed
Retaining Wall

Phase 1 *(Possible Traffic Control Plan)*

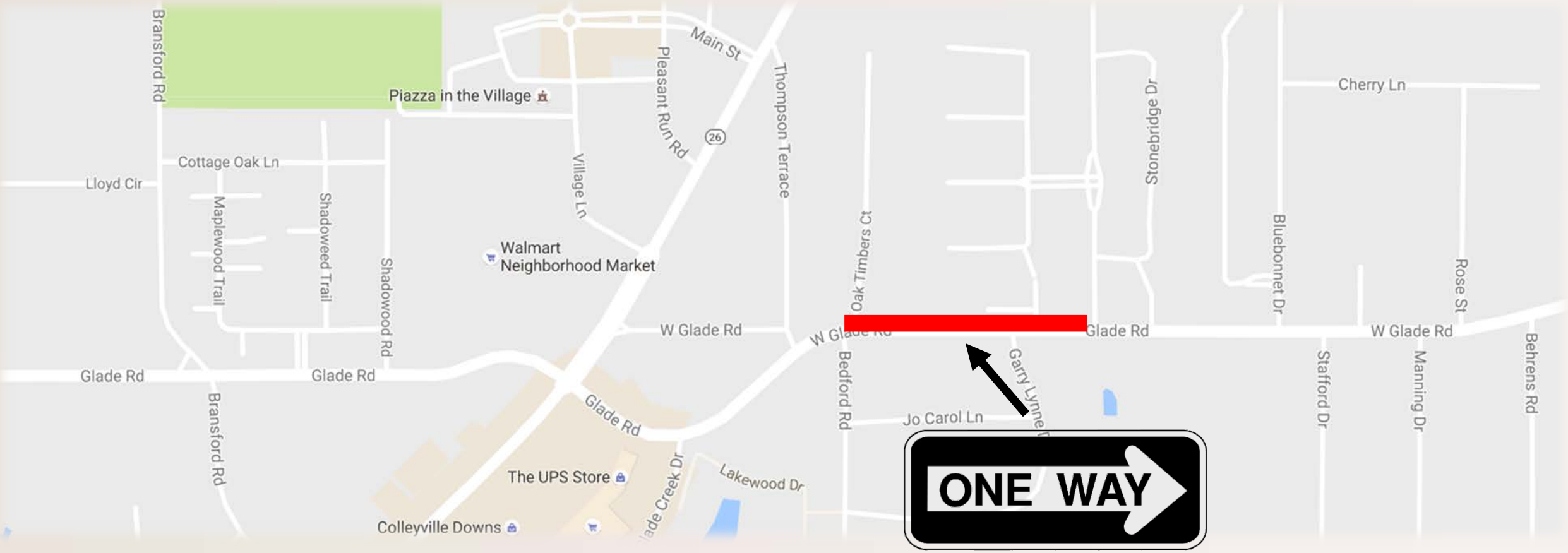
Stage 0

Phase 1 *(Possible Traffic Control Plan)*

Stage 1

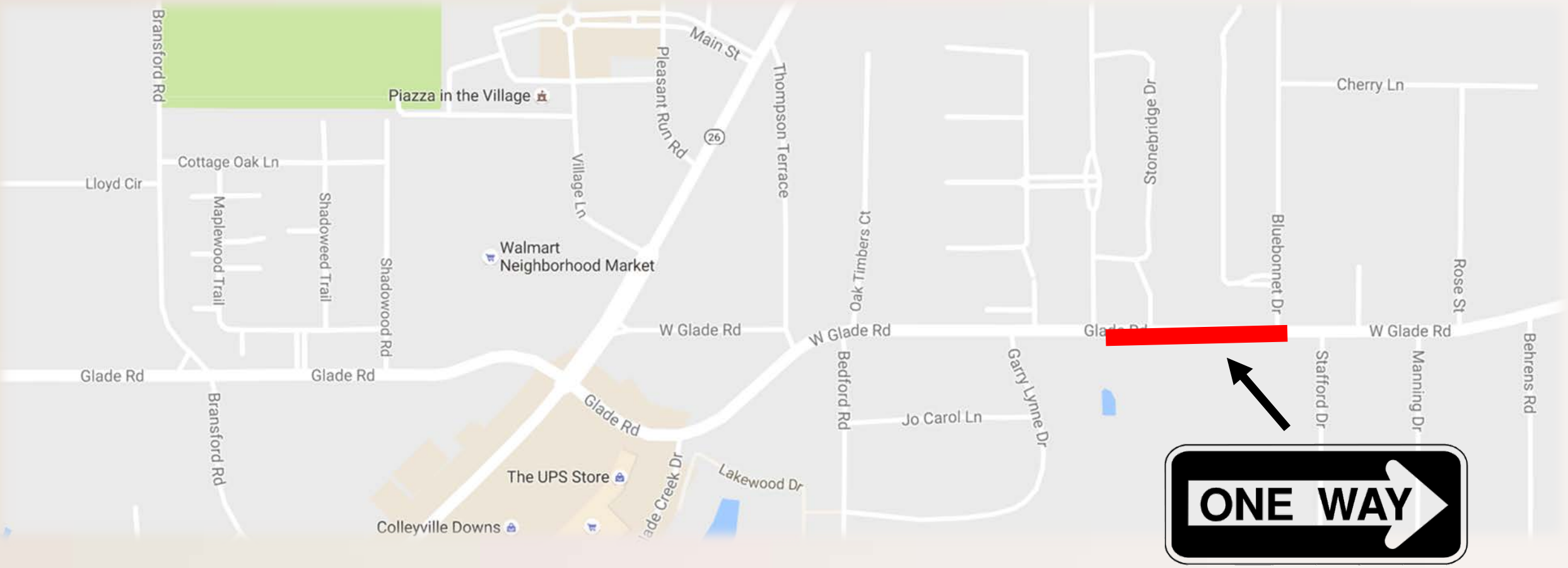
Phase 1 *(Possible Traffic Control Plan)*

Stage 2



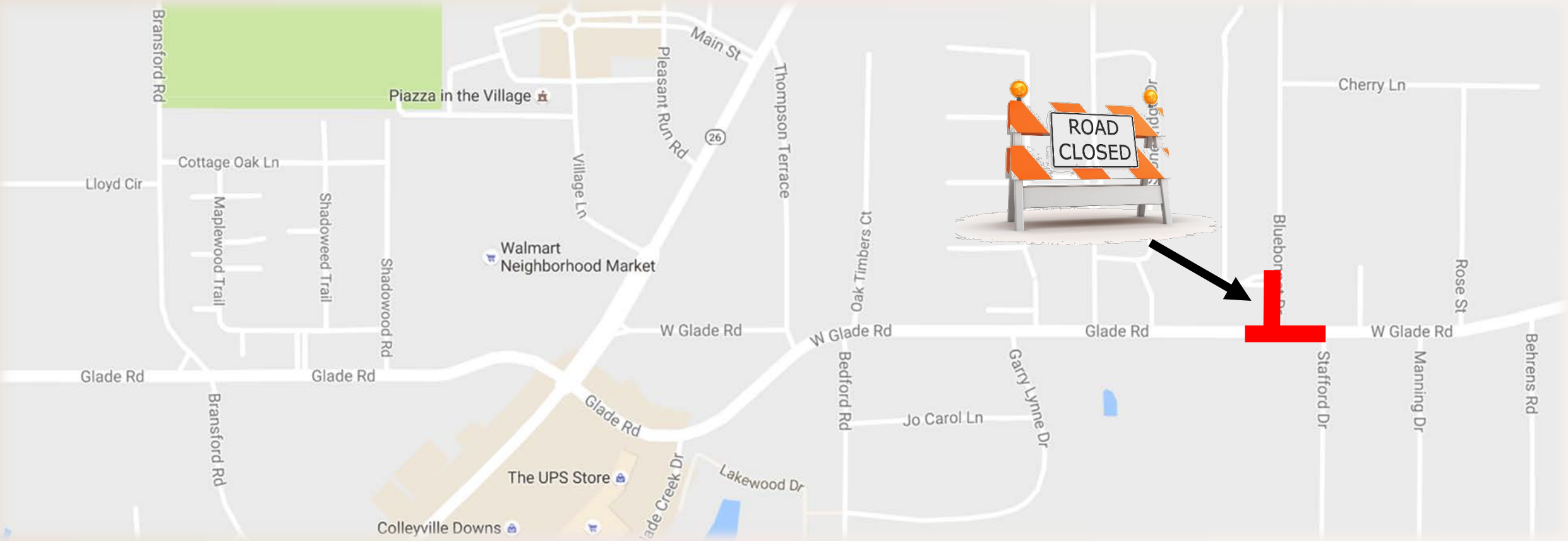
Phase 1 *(Possible Traffic Control Plan)*

Stage 3



Phase 1 *(Possible Traffic Control Plan)*

Stage 4

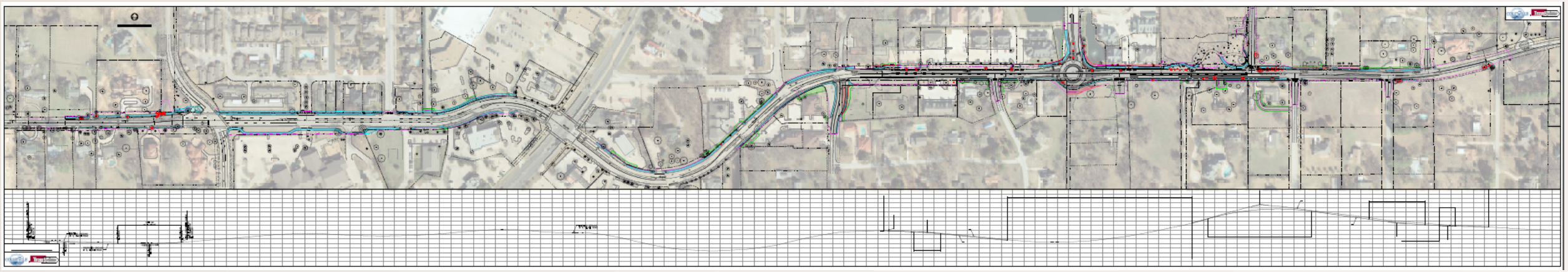


Phase 1 *(Possible Traffic Control Plan)*

Stage 5

Phase 1

The design consultant will walk through the design of Glade Road Phase 1



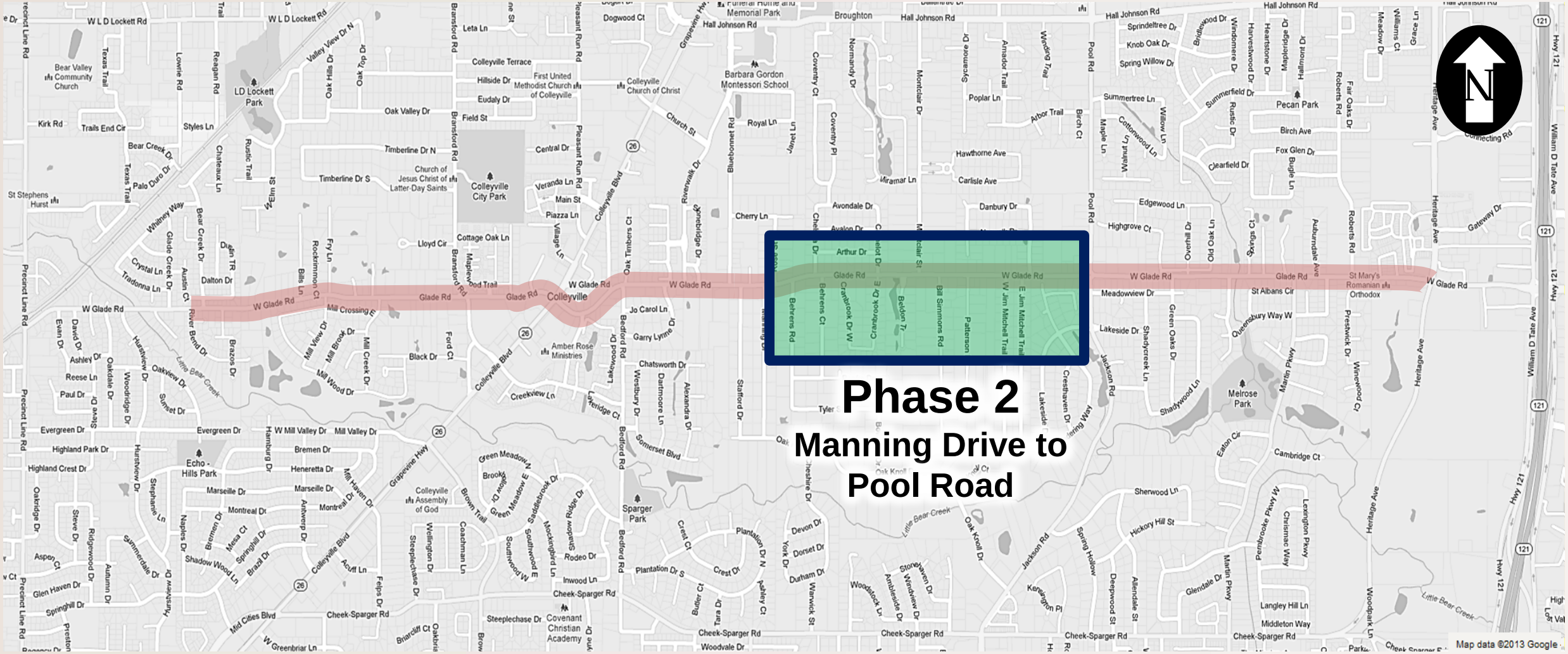
Phase 1 (Bransford Road to Manning Drive)

Bransford Road to Manning Drive

Scope Includes – New through lane at Bransford Road, a roundabout at Riverwalk Drive, realignment of Bedford Road, lowering of Glade Road at Bluebonnet to remove the stop signs and a 10' trail on the north side and 5' sidewalk on the south side.

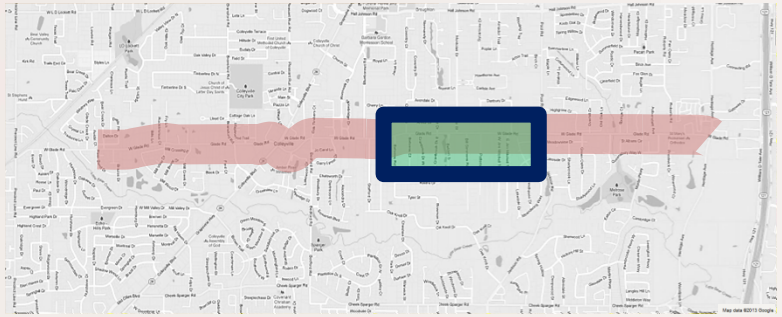
Final design cost	**$664,365**
Estimated construction cost	**$4,124,615**
Estimated right-of-way parcels	**9**
Estimated sidewalk easements	**13**
Estimated temporary construction easements	**19**
Estimated number of affected parcels	**32**
Estimated construction duration	**13 Months**

Phase 2 (Manning Drive to Pool Road)



Phase 2 (Manning Drive to Pool Road)

Glade Road from Manning Drive to Pool Road, key components include:

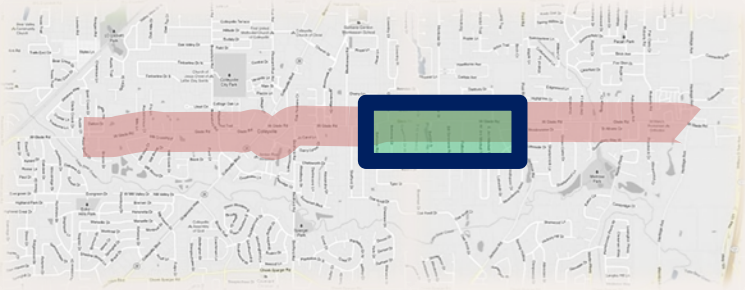


- Engineered drainage system designed to accommodate a 100 year storm using concrete curbs and gutters
- A center turn lane between Behrens Road and Chelsea Drive
- Two lane section for the majority of the section between Chelsea Drive and Camelot Drive to reduce right-of-way impacts
- Eastbound dedicated left turn lane for Camelot Drive
- Center turnlane for the section between Camelot Drive to Montclair Drive
- Two lane section from Montclair Drive to Jim Mitchell Trail West
- Westbound dedicated left turn lane for Jim Mitchell Trail West
- Center turn lane between Jim Mitchell Trail East and Summerbrook Drive
- Eastbound dedicated left turn lane for the Senior Center
- 5’ sidewalk on the south side
- 10’ trail on the north side
- Street lighting at intersections

Phase 2 (Design Parameters)

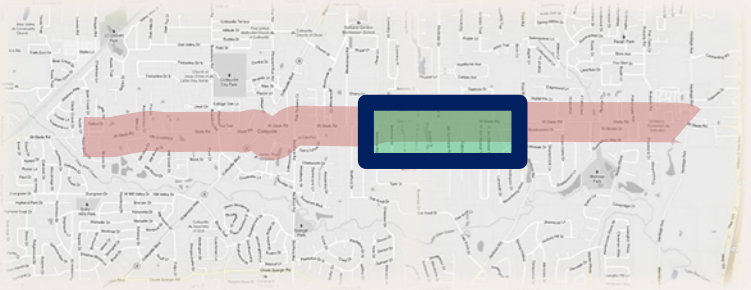
Design parameters to include the following:

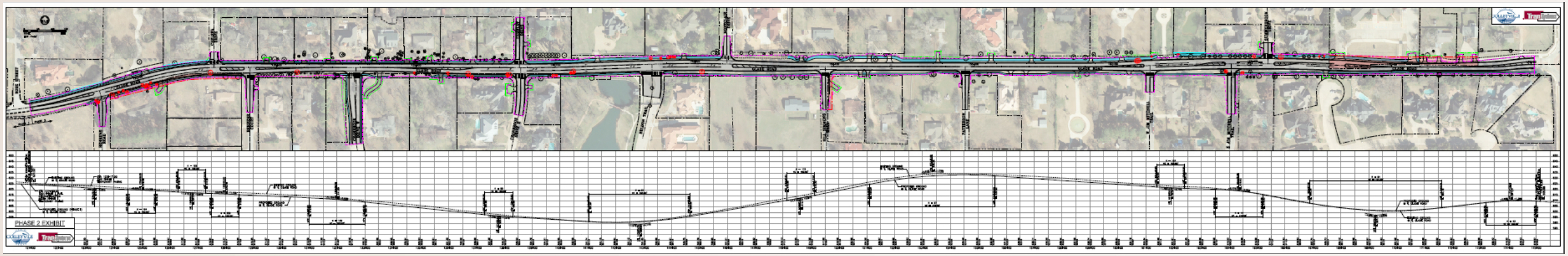
- **Roadway Section**
  - Two lane roadway with left turn lanes at:
    - Continuous from Behrens Road to Chelsea Drive, Camelot Drive to Montclair Drive, Jim Mitchell Trail East to Summerbrook Drive.
    - Glade Road westbound left turn lanes; Jim Mitchell Trail West and East Cranbrook Drive
    - Glade Road eastbound left turn lanes; Camelot Drive, Senior Center
- **Pedestrian Improvements**
  - 10 foot trail on the north side of the roadway
  - If needed - reduce trail width, minimum of 6 foot, to limit the various impacts (right-of-ways, trees, etc.)
  - Consider constructing the trail adjacent to the back of curb to reduce the possible various impacts (right-of-ways, trees, etc.)
  - 5 foot sidewalk on the south side of the roadway
- **Lighting**
  - Street lighting will be included at the intersections
- **Storm Drainage**
  - Curb and gutter storm drainage
  - Utilize existing curb and gutter on south side of Glade Road (approximately 18%), where feasible



Phase 2 (Design Update)

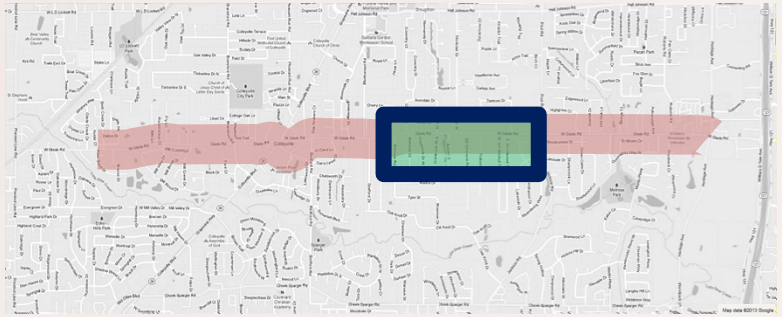
- The design consultant will walk through the design of Glade Road Phase 2





Phase 2 (Manning Drive to Pool Road)

Manning Drive to Pool Road

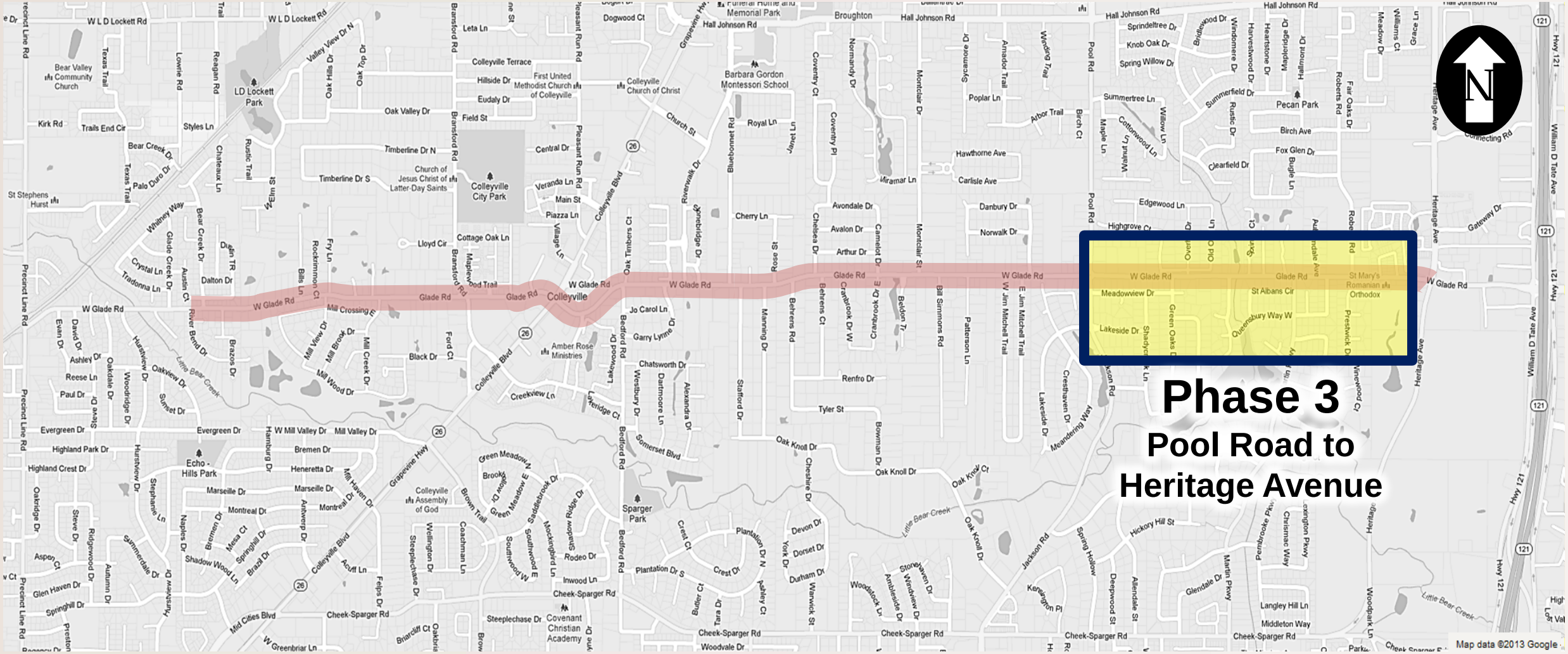


Scope Includes - All new pavement with left turn lanes where warranted and standard curb and gutters. A 10’ trail on the north side and 5’ sidewalk on the south side.

Final design cost	**$576,224**
Estimated construction cost	**$5,484,000***
Estimated right-of-way parcels	**6**
Estimated sidewalk easements	**3**
Estimated temporary construction easements	**27**
Estimated number of affected parcels	**30**
Estimated construction duration	**16 Months**

Based on preliminary design

Phase 3 (Pool Road to Heritage Avenue)



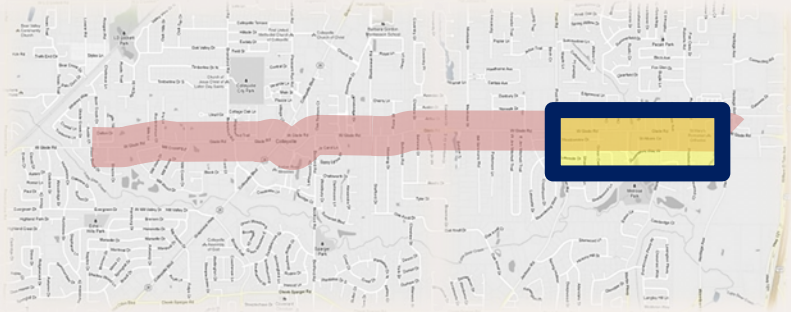
Phase 3 (Pool Road to Heritage Avenue)

Glade Road from Pool Road to Heritage Avenue, key components include:

- Addition of a westbound lane from Heritage Avenue to Roberts Road
- Add a southbound right turn lane on Roberts Road
- 5’ sidewalk on the south side
- 10’ trail on the north side
- Street lighting at intersections
- Standard curb and gutter

Phase 3 (Design Parameters)

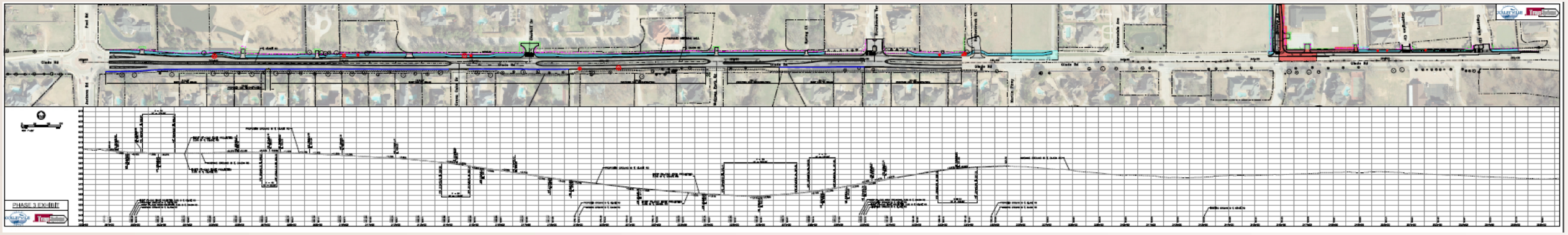
Design parameters to include the following:



- **Roadway Section**
  - From Pool Road to Strathmore Terrace will be two lanes with raised, curbed medians and left turn lanes
  - From Roberts Road to Heritage Avenue, westbound lane to be added
  - Intersection of Glade Road and Prestwick Drive/Roberts Road to be adjusted to increase sight distances
  - Left turn lanes at:
    - Glade Road westbound; Green Oaks Drive and Melrose Park Drive
    - Glade Road eastbound; Overhill Drive and Strathmore Terrace
  - A southbound right turn lane to be added to Roberts Road
- **Pedestrian Improvements**
  - 10 foot trail on the north side of the roadway
  - If needed - reduce trail width, minimum of 6 foot, to limit the various impacts (right-of-ways, trees, etc.)
  - 5 foot sidewalk on the south side of the roadway
- **Lighting**
  - Street lighting will be included at the intersections
- **Storm Drainage**
  - Curb and gutter storm drainage
  - Utilize existing curb and gutter on south side of Glade Road (approximately 90%), where feasible

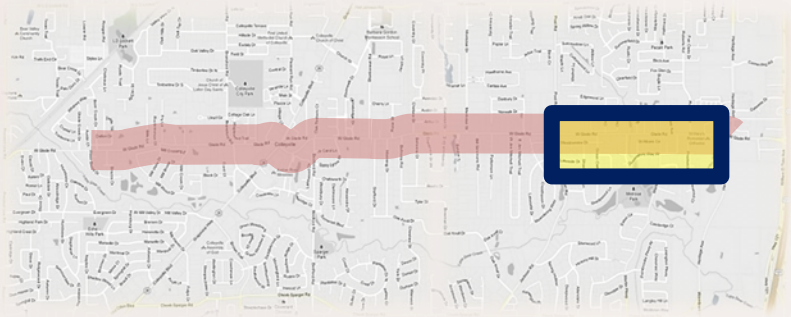
Phase 3 (Design Update)

- The design consultant will walk through the design of Glade Road Phase 3



Phase 3 (Pool Road to Heritage Avenue)

Pool Road to Heritage Avenue

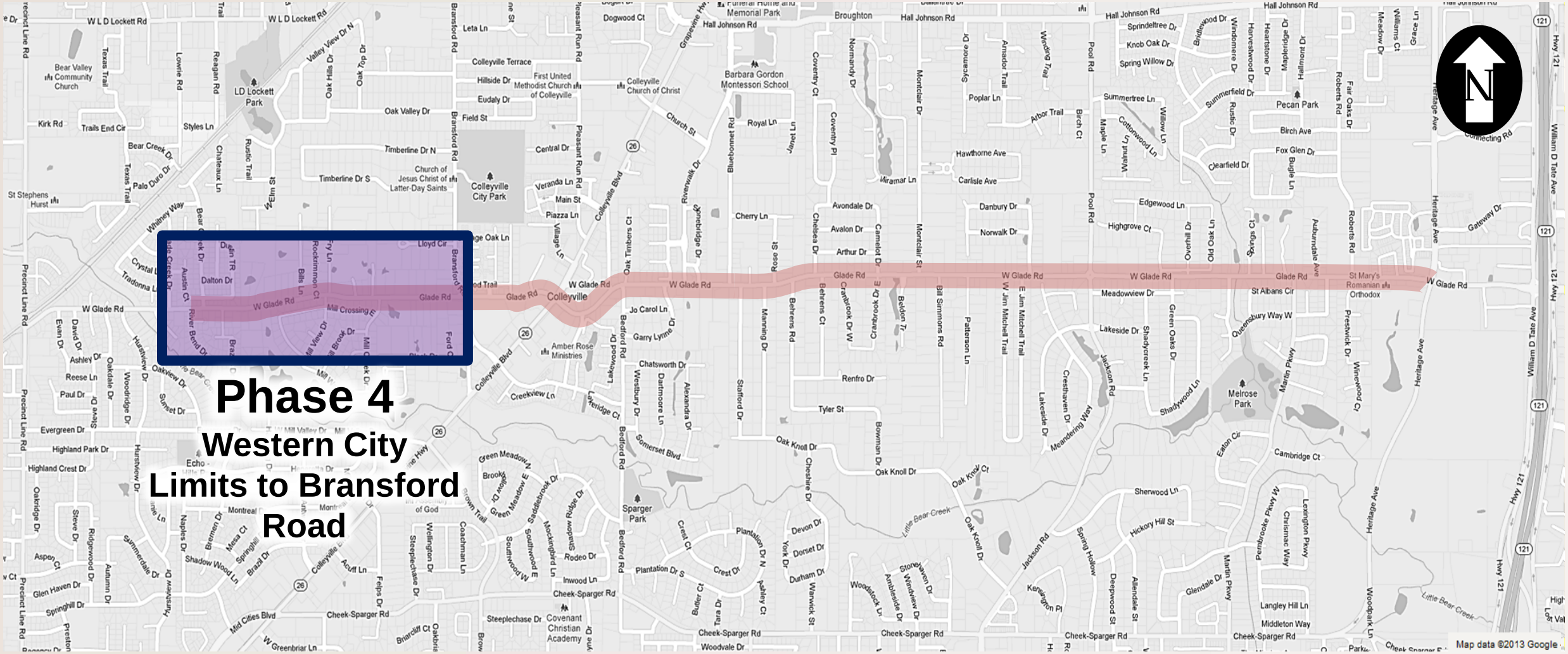


Scope Includes - All new pavement with left turn lanes where warranted and standard curb and gutters. A right turn lane on Roberts Road and an additional westbound lane from Heritage Avenue to Roberts Road. A 10' trail on the north side and 5' sidewalk on the south side.

Final design cost	**$431,778**
Estimated construction cost	**$3,530,250***
Estimated right-of-way parcels	**1**
Estimated sidewalk easements	**5**
Estimated temporary construction easements	**9**
Estimated number of affected parcels	**13**
Estimated construction duration	**14 Months**

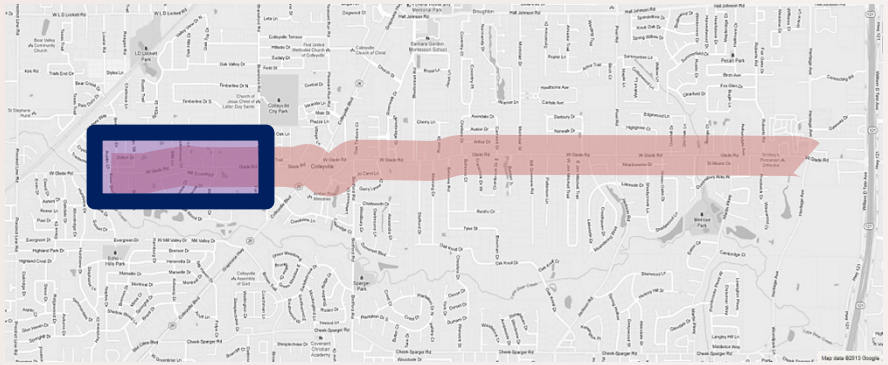
Based on preliminary design

Phase 4 (Western City Limits to Bransford Road)



Phase 4 (Western City Limits to Bransford Road)

Glade Road from the western city limits to Bransford Road, key components include:

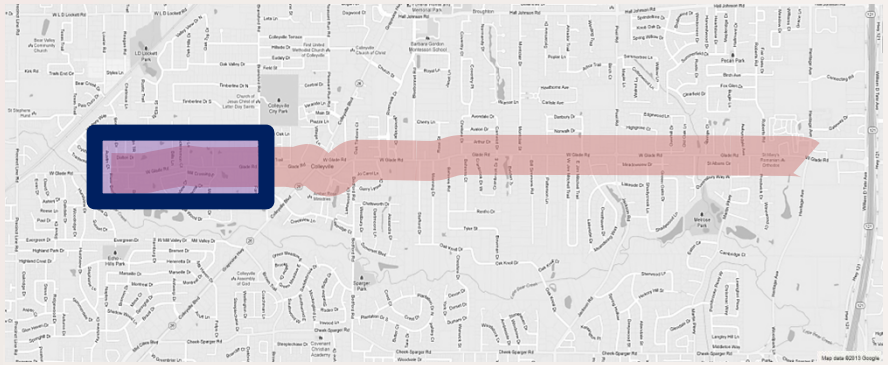


- Engineered drainage system designed to accommodate a 100 year storm using concrete curbs and gutters
- A center turn lane between River Bend Drive and Bear Creek Drive
- Westbound dedicated left turn lane for Clear Fork Drive
- Eastbound dedicated left turn lane for Rockrimmon Court
- Westbound dedicated left turn lane for Mill View Drive
- Westbound dedicated left turn lane for Mill Creek Drive
- 5’ sidewalk on the south and a 10’ trail on the north side
- Street lighting at intersections
- Standard curb and gutter

Phase 4 (Design Parameters)

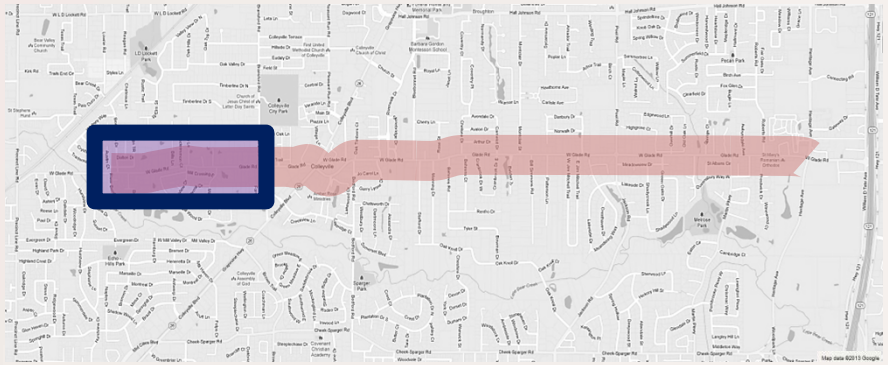
Design parameters to include the following:

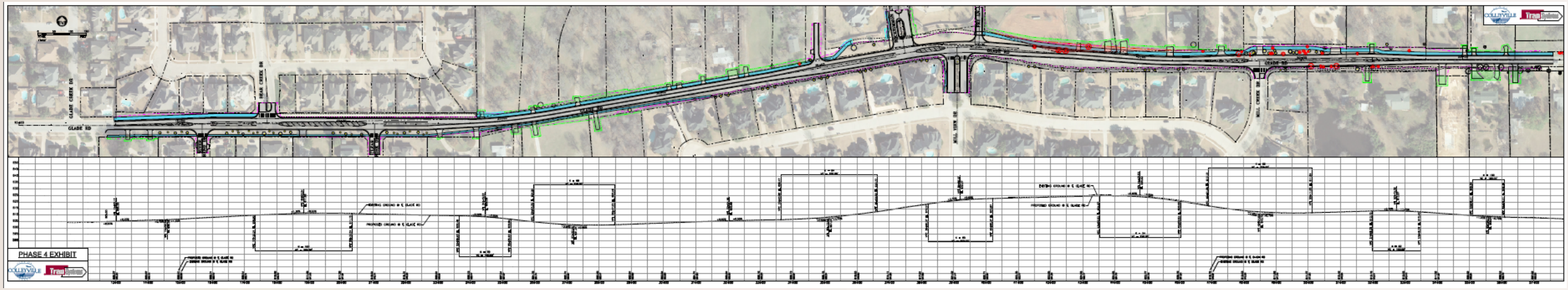
- **Roadway Section**
  - From western city limits to Bransford Road will be a two-lane roadway with left turn lanes at:
    - Continuous from River Bend Drive to Bear Creek Drive
    - Glade Road west bound; Clear Fork Drive, Mill View Drive, Mill Creek Drive
    - Glade Road east bound; Rockrimmon Court
- **Pedestrian Improvements**
  - 10 foot trail on the north side of the roadway
  - If needed - reduce trail width, minimum of 6 foot, to limit the various impacts (right-of-ways, trees, etc.)
  - 5 foot sidewalk on the south side of the roadway
- **Lighting**
  - Street lighting will be included at the intersections
- **Storm Drainage**
  - Curb and Gutter storm drainage
  - Culvert replacement or modification between Clear Fork Drive and Rockrimmon Court
  - Utilize existing infrastructure, where feasible
- **Coordination with the City of Hurst**



Phase 4 (Design Update)

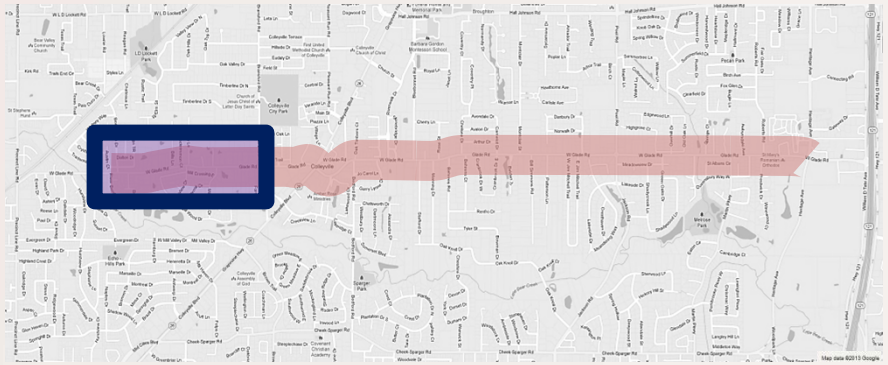
- The design consultant will walk through the design of Glade Road Phase 4





Phase 4 (Western City Limits to Bransford Road)

Western City Limits to Bransford Road



Scope Includes - All new pavement with left turn lanes where warranted and standard curb and gutters. A 10' trail on the north side and 5' sidewalk on the south side.

Final design cost	**$425,475**
Estimated construction cost	**$4,737,000***
Estimated right-of-way parcels	**2**
Estimated sidewalk easements	**2**
Estimated temporary construction easements	**25**
Estimated number of affected parcels	**26**
Estimated construction duration	**13 Months**

Based on preliminary design

Project Schedules

FY 2016

- Construction of Glade Road Phase 1 (Bransford Road to Manning Drive)
- Design of Glade Road Phase 2 (Manning Drive to Pool Road)
- Design of Glade Road Phase 3 (Pool Road to Heritage Avenue)
- Design of Glade Road Phase 4 (Western City Limits to Bransford Road)

FY 2017

- ROW Acquisition for Glade Road Phase 2 (Manning Drive to Pool Road)
- ROW Acquisition for Glade Road Phase 3 (Pool Road to Heritage Avenue)

FY 2018

- Construction of Glade Road Phase 2 (Manning Drive to Pool Road)

FY 2019

- Construction of Glade Road Phase 3 (Pool Road to Heritage Avenue)

FY 2022

- ROW Acquisition for Glade Road Phase 4 (Western City Limits to Bransford Road)

FY 2023

- Construction of Glade Road Phase 4 (Western City Limits to Bransford Road)

Interim Maintenance

- Current Pavement Condition
  - A mill and overlay maintenance project for the asphalt sections of Glade Road Phase 2 and 4 has been included in the proposed 2017 – 2021 CIP which would allow for the interim maintenance to take place in FY2017

- Maintenance over the past 10 Years
  - 2004 M&O Bluebonnet to Summerbrook Drive
  - 2005 M&O Bedford Road to Bluebonnet Drive
  - 2006 Reconstruction from Strathmore Terrace to Heritage Avenue
  - 2008 M&O Bluebonnet Drive to Montclair Drive
  - 2009 M&O SH26 to Bransford Road
  - 2010 M&O Riverwalk Drive to Bluebonnet Drive and Bill Simmons Road to Patterson Lane

Green/Good PCI(70 to 100)

Yellow/Fair PCI (50 to 70)

Red/Poor PCI (0 to 50)

Questions and Discussion

City of Colleyville
Opinion of Probable Cost - Alternatives Comparison
Glade Road Phase II - Base Option
Curb & Gutter with Turn Lanes, Trail on North & Sidewalk on South

Prepared by: TranSystems Corporation Consultants
Date: December 22, 2016

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	BID PRICE	TOTAL
101	RIGHT-OF-WAY PREPARATION	STA	54.00	$ 1,000.00	$54,000.00
102	REMOVING CONCRETE PAVEMENT (ROADWAY)	SY	2882.22	$ 6.00	$17,293.33
103	REMOVING CONCRETE PAVEMENT (DRIVEWAY)	SY	1768.44	$ 8.50	$15,031.78
104	REMOVING CONCRETE (SIDEWALK OR RAMP)	SY	2044.44	$ 7.00	$14,311.11
105	REMOVING STAB BASE AND ASPH PAV (3"-9") (ASPHALT ROADWAY)	SY	16385.00	$ 4.00	$65,540.00
106	REMOVING CHAIN LINK FENCE	LF	100.00	$ 12.00	$1,200.00
107	REMOVE STRUCTURE (INLET)	EA	1.00	$ 715.00	$715.00
108	REMOVE STRUCTURE (HEADWALL)	EA	18.00	$ 500.00	$9,000.00
109	REMOVE STRUCTURE (PIPE)	LF	1096.00	$ 18.00	$19,728.00
110	REMOVE STRUCTURE (DRIVEWAY CULVERT)	EA	23.00	$ 575.00	$13,225.00
111	REMOVE/ RELOCATE MAILBOX (POST)	EA	13.00	$ 150.00	$1,950.00
112	REMOVE/ RELOCATE MAILBOX (BRICK)	EA	8.00	$ 350.00	$2,800.00
113	MOBILIZATION AND BONDS	LS	1.00	$ 365,000.00	$365,000.00
200	ROADWAY EXCAVATION	CY	21400.00	$ 8.50	$181,900.00
201	COMPACTED ROADWAY FILL AND EMBANKMENT	CY	436.00	$ 9.50	$4,142.00
202	PORTLAND CEMENT	TON	471.57	$ 151.00	$71,207.57
203	CEMENT STABILIZATION OF SUBGRADE 8" DEPTH	SY	29473.33	$ 2.50	$73,683.33
204	TYPE B HMAC PG64-22	TON	8980.00	$ 70.00	$628,600.00
205	TYPE D HMAC PG64-22	TON	2570.00	$ 88.25	$226,802.50
206	8" CONCRETE STREET PAVING, CONTINUOUSLY REINFORCED	SY	0.00	$ 45.00	$0.00
207	SIDEWALK RETAINING WALL (COLLEYVILLE)	CY	50.00	$ 1,100.00	$55,000.00
208	PEDESTRIAN HANDRAIL, TxDOT TYPE "F"	LF	30.00	$ 133.00	$3,990.00
209	CONCRETE CURB AND GUTTER, 6" BARRIER	LF	12370.00	$ 20.25	$250,492.50
210	CONCRETE DRIVEWAY	SY	2195.00	$ 75.50	$165,722.50
211	CONCRETE SIDEWALK TYPE B	SY	2600.00	$ 60.25	$156,650.00
212	CONCRETE SIDEWALK TYPE C AND D	SY	3556.00	$ 64.00	$227,584.00
213	ADA CURB RAMP	EA	30.00	$ 1,500.00	$45,000.00
214	REFLECTIVE PAVEMENT MARKINGS TYPE II 4" WHITE SOLID	LF	340.00	$ 0.10	$34.00
215	REFLECTIVE PAVEMENT MARKINGS TYPE II 18" WHITE SOLID	LF	190.00	$ 2.00	$380.00
216	REFLECTIVE PAVEMENT MARKINGS TYPE II 24" WHITE SOLID	LF	1210.00	$ 2.50	$3,025.00
217	REFLECTIVE PAVEMENT MARKINGS TYPE II WHITE ARROW	EA	20.00	$ 44.00	$880.00
218	REFLECTIVE PAVEMENT MARKINGS TYPE II 4" YELLOW BROKEN	LF	560.00	$ 0.15	$84.00
219	REFLECTIVE PAVEMENT MARKINGS TYPE II 4" YELLOW SOLID	LF	16430.00	$ 0.10	$1,643.00
220	PAVEMENT SEALER 4"	LF	17330.00	$ 0.15	$2,599.50
221	PAVEMENT SEALER 18"	LF	190.00	$ 0.35	$66.50
222	PAVEMENT SEALER 24"	LF	1210.00	$ 1.85	$2,238.50
223	PAVEMENT SEALER (ARROW)	EA	20.00	$ 25.00	$500.00
224	PAVEMENT SURFACE PREP FOR 4" PAVEMENT MARKINGS	LF	15077.00	$ 0.05	$753.85
225	PAVEMENT SURFACE PREP FOR 18" PAVEMENT MARKINGS	LF	190.00	$ 0.05	$9.50
226	PAVEMENT SURFACE PREP FOR 24" PAVEMENT MARKINGS	LF	1210.00	$ 1.15	$1,391.50
227	PAVEMENT SURFACE PREP FOR ARROW	EA	20.00	$ 13.25	$265.00
228	INSTALL NEW TRAFFIC SIGN	EA	5.00	$ 500.00	$2,500.00
229	INSTALL EXISTING TRAFFIC SIGN ON NEW POST	EA	25.00	$ 300.00	$7,500.00
230	TRENCH EXCAVATION PROTECTION	LF	6134.00	$ 2.75	$16,868.50
231	PRECAST CONCRETE BOX CULVERT (4 FT X 2 FT)	LF	2000.00	$ 210.00	$420,000.00
232	PRECAST CONCRETE BOX CULVERT (8 FT X 4 FT)	LF	14.00	$ 495.00	$6,930.00
233	24" CLASS III RCP	LF	3220.00	$ 70.75	$227,815.00
234	30" CLASS III RCP	LF	900.00	$ 87.50	$78,750.00
235	STORM SEWER MANHOLE, TYPE 1 JUNCTION BOX	EA	18.00	$ 5,200.00	$93,600.00
236	10' CURB INLET, TYPE 1	EA	47.00	$ 3,700.00	$173,900.00
237	10' OPEN BACK CURB INLET	EA	6.00	$ 4,500.00	$27,000.00
238	WINGWALL (PW-1) (HW=4 FT)	EA	1.00	$ 10,000.00	$10,000.00
300	TRENCH EXCAVATION PROTECTION	LF	2150.00	$ 3.75	$8,062.50
301	8" WATER PIPE (PVC)	LF	2150.00	$ 50.00	$107,500.00
302	8" RESILIENT SEATED GATE VALVE	EA	15.00	$ 1,200.00	$18,000.00
303	8" CUT IN GATE VALVE	EA	3.00	$ 1,500.00	$4,500.00
304	FIRE HYDRANT ASSEMBLY	EA	8.00	$ 2,500.00	$20,000.00
305	REMOVE EXISTING WATER LINE	LF	2150.00	$ 5.00	$10,750.00
306	REMOVE EXISTING WATER VALVE	EA	15.00	$ 500.00	$7,500.00
307	REMOVE FIRE HYDRANT ASSEMBLY	EA	8.00	$ 500.00	$4,000.00
308	ADJUST WATER VALVE	EA	25.00	$ 250.00	$6,250.00
309	ADJUST SANITARY SEWER MANHOLE	EA	14.00	$ 2,000.00	$28,000.00
310	ADJUST SANITARY SEWER CLEAN OUT	EA	4.00	$ 750.00	$3,000.00
311	RELOCATE WATER METER	EA	7.00	$ 250.00	$1,750.00
312	ADJUST WATER METER	EA	20.00	$ 250.00	$5,000.00
400	STORM WATER POLLUTION PREVENTION PLAN	LS	1.00	$ 50,000.00	$50,000.00
				REMOVALS	**$214,794.22**
				TRAFFIC CONTROL	**$365,000.00**
				ROADWAY	**$2,104,644.76**
				UTILITIES	**$224,312.50**
				DRAINAGE	**$1,054,863.50**
				SWPPP	**$50,000.00**
				SUBTOTAL	**$4,013,614.98**
			401	CONTINGENCY (15%)	**$602,042.25**
				TOTAL	**$4,615,657.23**

City of Colleyville
Opinion of Probable Cost - Alternatives Comparison
Glade Road Phase II - Option 1
Ribbon Curb with Roadside Ditches, Sidewalk/Trail on South, Sidewalk on North from Montclair to Pool, No Turn Lanes

Prepared by: TranSystems Corporation Consultants
Date: December 22, 2016

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	BID PRICE	TOTAL
101	RIGHT-OF-WAY PREPARATION	STA	54.00	$ 1,000.00	$54,000.00
102	REMOVING CONCRETE PAVEMENT (ROADWAY)	SY	470	$ 6.00	$2,820.00
103	REMOVING CONCRETE PAVEMENT (DRIVEWAY)	SY	2500	$ 8.50	$21,250.00
104	REMOVING CONCRETE (RETAINING WALLS)	SY	44.00	$ 34.50	$1,518.00
105	REMOVING CONCRETE (SIDEWALK OR RAMP)	SY	2103.00	$ 7.00	$14,721.00
106	REMOVE CONCRETE (PAVERS)	SY	11.00	$ 10.00	$110.00
107	REMOVING STAB BASE AND ASPH PAV (0"-4") (ASPHALT DRIVEWAYS)	SY	201.00	$ 3.00	$603.00
108	REMOVING WOOD FENCE	LF	500.00	$ 15.00	$7,500.00
109	REMOVING ROD IRON FENCE	LF	30.00	$ 15.00	$450.00
110	REMOVING CHAIN LINK FENCE	LF	230.00	$ 12.00	$2,760.00
111	REMOVING BRICK FENCE	LF	520.00	$ 40.00	$20,800.00
112	REMOVE AND RELOCATE GATE	EA	3.00	$ 1,200.00	$3,600.00
113	REMOVE STRUCTURE (HEADWALL)	EA	18.00	$ 500.00	$9,000.00
114	REMOVE STRUCTURE (WINGWALL)	EA	1.00	$ 1,200.00	$1,200.00
115	REMOVE STRUCTURE (PIPE)	LF	1096.00	$ 18.00	$19,728.00
116	REMOVE STRUCTURE (DRIVEWAY CULVERT)	EA	23.00	$ 575.00	$13,225.00
117	REMOVE CONC/ROCK RIPRAP	SY	40	$ 10.00	$400.00
118	REMOVE/ RELOCATE MAILBOX (POST)	EA	13.00	$ 150.00	$1,950.00
119	REMOVE/ RELOCATE MAILBOX (BRICK)	EA	8.00	$ 350.00	$2,800.00
120	TRAFFIC CONTROL, MOBILIZATION, BONDS	LS	1.00	$ 260,000.00	$260,000.00
200	ROADWAY EXCAVATION	CY	10927.00	$ 8.50	$92,879.50
201	COMPACTED ROADWAY FILL AND EMBANKMENT	CY	942.00	$ 9.50	$8,949.00
202	ASPHALT ROADWAY RECLAMATION	SY	14373.00	$ 38.00	$546,174.00
203	PORTLAND CEMENT	TON	88.00	$ 151.00	$13,288.00
204	CEMENT STABILIZATION OF SUBGRADE 8" DEPTH	SY	5458.00	$ 2.50	$13,645.00
205	TYPE B HMAC PG64-22	TON	799.00	$ 70.00	$55,930.00
206	TYPE D HMAC PG64-22	TON	123.00	$ 88.25	$10,854.75
207	8" CONCRETE STREET PAVING, CONTINUOUSLY REINFORCED	SY	448.00	$ 45.00	$20,160.00
208	SIDEWALK RETAINING WALL (COLLEYVILLE)	CY	12.00	$ 1,100.00	$13,200.00
209	PEDESTRIAN HANDRAIL, TxDOT TYPE "F"	LF	29.00	$ 133.00	$3,857.00
210	CONCRETE CURB AND GUTTER, RIBBON CURB	LF	9510.00	$ 20.25	$192,577.50
211	CONCRETE DRIVEWAY	SY	2655.00	$ 75.50	$200,452.50
212	CONCRETE SIDEWALK TYPE B	SY	4873.00	$ 60.25	$293,598.25
213	ADA CURB RAMP	EA	20.00	$ 1,500.00	$30,000.00
214	REFLECTIVE PAVEMENT MARKINGS TYPE II 24" WHITE SOLID	LF	1928.00	$ 2.50	$4,820.00
215	REFLECTIVE PAVEMENT MARKINGS TYPE II 4" YELLOW SOLID	LF	9050.00	$ 0.10	$905.00
216	PAVEMENT SEALER 4"	LF	17847.00	$ 0.15	$2,677.05
217	PAVEMENT SEALER 18"	LF	415.00	$ 0.35	$145.25
218	PAVEMENT SEALER 24"	LF	2904.00	$ 1.85	$5,372.40
219	PAVEMENT SURFACE PREP FOR 4" PAVEMENT MARKINGS	LF	15077.00	$ 0.05	$753.85
220	PAVEMENT SURFACE PREP FOR 24" PAVEMENT MARKINGS	LF	2904.00	$ 1.15	$3,339.60
221	INSTALL NEW TRAFFIC SIGN	EA	5.00	$ 500.00	$2,500.00
222	INSTALL EXISTING TRAFFIC SIGN ON NEW POST	EA	25.00	$ 300.00	$7,500.00
223	TRENCH EXCAVATION PROTECTION	LF	4344.00	$ 2.75	$11,946.00
224	PRECAST CONCRETE BOX CULVERT (4 FT X 2 FT)	LF	2000.00	$ 210.00	$420,000.00
225	PRECAST CONCRETE BOX CULVERT (8 FT X 4 FT)	LF	14.00	$ 495.00	$6,930.00
226	18" CLASS III RCP	LF	1040.00	$ 58.00	$60,320.00
227	24" CLASS III RCP	LF	2330.00	$ 70.75	$164,847.50
228	STORM SEWER MANHOLE, TYPE 1 JUNCTION BOX	EA	10.00	$ 5,200.00	$52,000.00
229	10' CURB INLET, TYPE 1	EA	3.00	$ 3,700.00	$11,100.00
230	WINGWALL (PW-1) (HW=4 FT)	EA	1.00	$ 10,000.00	$10,000.00
231	SAFETY END TREATMENT (TYPE II)(18" RCP)(4:1)C	EA	61.00	$ 500.00	$30,500.00
232	SAFETY END TREATMENT (TYPE II)(24" RCP)(4:1)P	EA	44.00	$ 500.00	$22,000.00
233	GRATE INLET, TYPE 1	EA	2.00	$ 5,000.00	$10,000.00
300	FIRE HYDRANT ASSEMBLY	EA	4.00	$ 2,500.00	$10,000.00
301	REMOVE FIRE HYDRANT ASSEMBLY	EA	4.00	$ 500.00	$2,000.00
302	ADJUST WATER VALVE	EA	18.00	$ 250.00	$4,500.00
303	ADJUST SANITARY SEWER MANHOLE	EA	14.00	$ 2,000.00	$28,000.00
304	ADJUST SANITARY SEWER CLEAN OUT	EA	2.00	$ 750.00	$1,500.00
305	RELOCATE WATER METER	EA	23.00	$ 250.00	$5,750.00
306	ADJUST WATER METER	EA	8.00	$ 250.00	$2,000.00
400	STORM WATER POLLUTION PREVENTION PLAN	LS	1.00	$ 50,000.00	$50,000.00

	REMOVALS	**$178,435.00**
	TRAFFIC CONTROL	**$260,000.00**
	ROADWAY	**$1,513,578.65**
	UTILITIES	**$53,750.00**
	DRAINAGE	**$799,643.50**
	SWPPP	**$50,000.00**
	SUBTOTAL	**$2,855,407.15**
401	CONTINGENCY (15%)	**$428,311.07**
	TOTAL	**$3,283,718.22**

City of Colleyville
Opinion of Probable Cost - Alternatives Comparison
Glade Road Phase II - Option 2
Ribbon Curb with Roadside Ditches with Inlets, Sidewalk/Trail on South, Sidewalk on North from Montclair to Pool, No Turn Lanes

Prepared by: TranSystems Corporation Consultants
Date: December 22, 2016

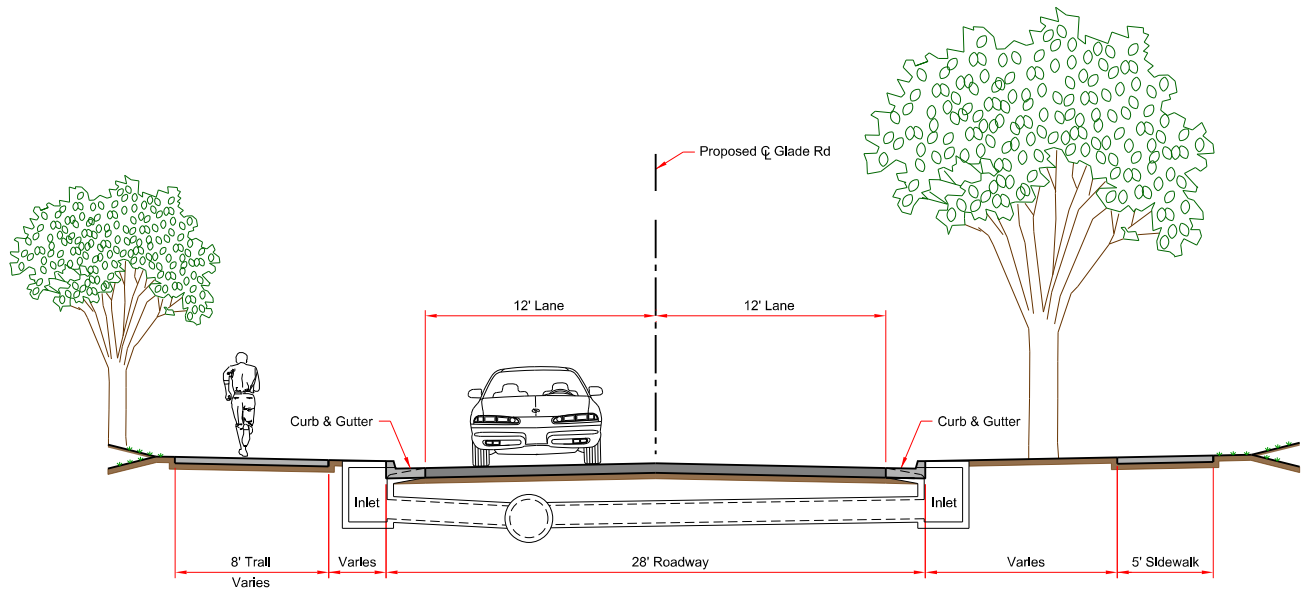
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	BID PRICE	TOTAL
101	RIGHT-OF-WAY PREPARATION	STA	54	$ 1,000.00	$54,000.00
102	REMOVING CONCRETE PAVEMENT (ROADWAY)	SY	470	$ 6.00	$2,820.00
103	REMOVING CONCRETE PAVEMENT (DRIVEWAY)	SY	1515	$ 8.50	$12,877.50
104	REMOVING CONCRETE (RETAINING WALLS)	SY	10	$ 34.50	$345.00
105	REMOVING CONCRETE (SIDEWALK OR RAMP)	SY	1421	$ 7.00	$9,947.00
106	REMOVE CONCRETE (PAVERS)	SY	11	$ 10.00	$110.00
107	REMOVING STAB BASE AND ASPH PAV (0"-4") (ASPHALT DRIVEWAYS)	SY	201	$ 3.00	$603.00
108	REMOVING WOOD FENCE	LF	253	$ 15.00	$3,795.00
109	REMOVING ROD IRON	LF	48	$ 15.00	$720.00
110	REMOVING CHAIN LINK FENCE	LF	227	$ 12.00	$2,724.00
111	REMOVING BRICK FENCE	LF	42	$ 40.00	$1,680.00
112	REMOVE STRUCTURE (HEADWALL)	EA	18	$ 500.00	$9,000.00
113	REMOVE STRUCTURE (WINGWALL)	EA	1	$ 1,200.00	$1,200.00
114	REMOVE STRUCTURE (PIPE)	LF	1096	$ 18.00	$19,728.00
115	REMOVE STRUCTURE (DRIVEWAY CULVERT)	EA	23	$ 575.00	$13,225.00
116	REMOVE CONC/ROCK RIPRAP	SY	40	$ 10.00	$400.00
117	REMOVE/ RELOCATE MAILBOX (POST)	EA	13	$ 150.00	$1,950.00
118	REMOVE/ RELOCATE MAILBOX (BRICK)	EA	8	$ 350.00	$2,800.00
119	TRAFFIC CONTROL, MOBILIZATION, BONDS	LS	1	$ 265,000.00	$265,000.00
200	ROADWAY EXCAVATION	CY	7550	$ 8.50	$64,175.00
201	COMPACTED ROADWAY FILL AND EMBANKMENT	CY	1190	$ 9.50	$11,305.00
202	ASPHALT ROADWAY RECLAMATION	SY	14373	$ 38.00	$546,174.00
203	PORTLAND CEMENT	TON	88	$ 151.00	$13,288.00
204	CEMENT STABILIZATION OF SUBGRADE 8" DEPTH	SY	5458	$ 2.50	$13,645.00
205	TYPE B HMAC PG64-22	TON	799	$ 70.00	$55,930.00
206	TYPE D HMAC PG64-22	TON	123	$ 88.25	$10,854.75
207	8" CONCRETE STREET PAVING, CONTINUOUSLY REINFORCED	SY	448	$ 45.00	$20,160.00
208	PEDESTRIAN HANDRAIL, TxDOT TYPE "F"	LF	29	$ 133.00	$3,857.00
209	CONCRETE CURB AND GUTTER, RIBBON CURB	LF	9510	$ 20.25	$192,577.50
210	CONCRETE DRIVEWAY	SY	1952	$ 75.50	$147,376.00
211	CONCRETE SIDEWALK TYPE B	SY	3295	$ 60.25	$198,523.75
212	ADA CURB RAMP	EA	26	$ 1,500.00	$39,000.00
213	REFLECTIVE PAVEMENT MARKINGS TYPE II 24" WHITE SOLID	LF	900	$ 3.50	$3,150.00
214	REFLECTIVE PAVEMENT MARKINGS TYPE II 4" YELLOW SOLID	LF	9500	$ 0.50	$4,750.00
215	PAVEMENT SEALER 4"	LF	9500	$ 0.20	$1,900.00
216	PAVEMENT SEALER 24"	LF	900	$ 1.25	$1,125.00
217	PAVEMENT SURFACE PREP FOR 4" PAVEMENT MARKINGS	LF	9500	$ 0.20	$1,900.00
218	PAVEMENT SURFACE PREP FOR 24" PAVEMENT MARKINGS	LF	900	$ 1.25	$1,125.00
219	INSTALL NEW TRAFFIC SIGN	EA	5	$ 500.00	$2,500.00
220	INSTALL EXISTING TRAFFIC SIGN ON NEW POST	EA	25	$ 300.00	$7,500.00
221	TRENCH EXCAVATION PROTECTION	LF	6286	$ 2.75	$17,286.50
222	PRECAST CONCRETE BOX CULVERT (4 FT X 2 FT)	LF	2000	$ 210.00	$420,000.00
223	PRECAST CONCRETE BOX CULVERT (8 FT X 4 FT)	LF	8	$ 495.00	$3,960.00
224	24" CLASS III RCP	LF	4278	$ 70.75	$302,668.50
225	STORM SEWER MANHOLE, TYPE 1 JUNCTION BOX	EA	12	$ 5,200.00	$62,400.00
226	DROP INLET TYPE C (GRATE)	EA	56	$ 4,000.00	$224,000.00
227	10' CURB INLET, TYPE 1	EA	3	$ 3,700.00	$11,100.00
228	WINGWALL (PW-1) (HW=4 FT)	EA	1	$ 10,000.00	$10,000.00
300	FIRE HYDRANT ASSEMBLY	EA	3	$ 2,500.00	$7,500.00
301	REMOVE FIRE HYDRANT ASSEMBLY	EA	3	$ 500.00	$1,500.00
302	ADJUST WATER VALVE	EA	18	$ 250.00	$4,500.00
303	ADJUST SANITARY SEWER MANHOLE	EA	14	$ 2,000.00	$28,000.00
304	ADJUST SANITARY SEWER CLEAN OUT	EA	2	$ 750.00	$1,500.00
305	RELOCATE WATER METER	EA	22	$ 250.00	$5,500.00
306	ADJUST WATER METER	EA	7	$ 250.00	$1,750.00
400	STORM WATER POLLUTION PREVENTION PLAN	LS	1	$ 50,000.00	$50,000.00

	REMOVALS	**$137,924.50**
	TRAFFIC CONTROL	**$265,000.00**
	ROADWAY	**$1,340,816.00**
	UTILITIES	**$50,250.00**
	DRAINAGE	**$1,051,415.00**
	SWPPP	**$50,000.00**
	SUBTOTAL	**$2,895,405.50**
401	CONTINGENCY (15%)	**$434,310.83**
	TOTAL	**$3,329,716.33**

City of Colleyville
Opinion of Probable Cost - Alternatives Comparison
Glade Road Phase II - Option 3
Ribbon Curb with Roadside Ditches with Inlets, Sidewalk/Trail on South, Sidewalk on North from Montclair to Pool, Turn Lanes Added

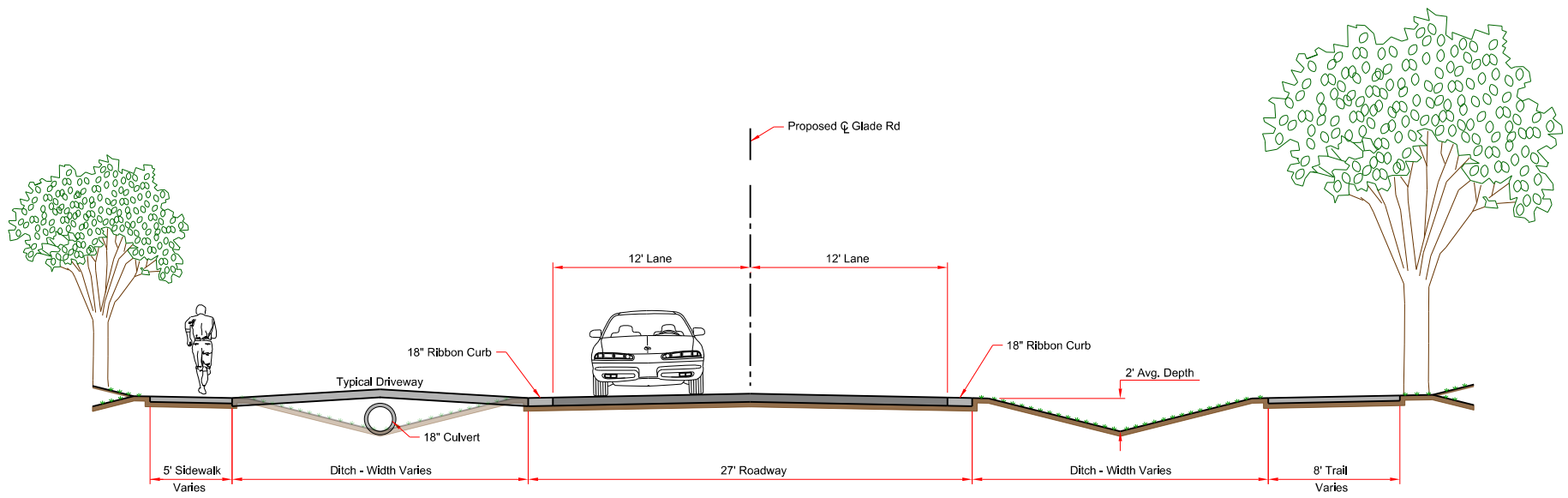
Prepared by: TranSystems Corporation Consultants
Date: December 22, 2016

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	BID PRICE	TOTAL
101	RIGHT-OF-WAY PREPARATION	STA	54	$ 1,000.00	$54,000.00
102	REMOVING CONCRETE PAVEMENT (ROADWAY)	SY	493	$ 6.00	$2,958.00
103	REMOVING CONCRETE PAVEMENT (DRIVEWAY)	SY	1633	$ 8.50	$13,880.50
104	REMOVING CONCRETE (RETAINING WALLS)	SY	10	$ 34.50	$345.00
105	REMOVING CONCRETE (SIDEWALK OR RAMP)	SY	1930	$ 7.00	$13,510.00
106	REMOVE CONCRETE (PAVERS)	SY	11	$ 10.00	$110.00
107	REMOVING STAB BASE AND ASPH PAV (0"-4") (ASPHALT DRIVEWAYS)	SY	206	$ 3.00	$618.00
108	REMOVING WOOD FENCE	LF	399	$ 15.00	$5,985.00
109	REMOVING ROD IRON FENCE	LF	48	$ 15.00	$720.00
110	REMOVING CHAIN LINK FENCE	LF	227	$ 12.00	$2,724.00
111	REMOVING BRICK FENCE	LF	42	$ 40.00	$1,680.00
112	REMOVE STRUCTURE (HEADWALL)	EA	18	$ 500.00	$9,000.00
113	REMOVE STRUCTURE (WINGWALL)	EA	1	$ 1,200.00	$1,200.00
114	REMOVE STRUCTURE (PIPE)	LF	1096	$ 18.00	$19,728.00
115	REMOVE STRUCTURE (DRIVEWAY CULVERT)	EA	23	$ 575.00	$13,225.00
116	REMOVE CONC/ROCK RIPRAP	SY	40	$ 10.00	$400.00
117	REMOVE/ RELOCATE MAILBOX (POST)	EA	13	$ 150.00	$1,950.00
118	REMOVE/ RELOCATE MAILBOX (BRICK)	EA	8	$ 350.00	$2,800.00
119	TRAFFIC CONTROL, MOBILIZATION, AND BONDS	LS	1	$ 285,000.00	$285,000.00
200	ROADWAY EXCAVATION	CY	9597	$ 8.50	$81,574.50
201	COMPACTED ROADWAY FILL AND EMBANKMENT	CY	1344	$ 9.50	$12,768.00
202	ASPHALT ROADWAY FILL AND EMBANKMENT	SY	14564	$ 38.00	$553,432.00
203	PORTLAND CEMENT	TON	129	$ 151.00	$19,479.00
204	CEMENT STABILIZATION OF SUBGRADE 8" DEPTH	SY	8016	$ 2.50	$20,040.00
205	TYPE B HMAC PG64-22	TON	1834	$ 70.00	$128,380.00
206	TYPE D HMAC PG64-22	TON	439	$ 88.25	$38,741.75
207	8" CONCRETE STREET PAVING, CONTINUOUSLY REINFORCED	SY	429	$ 45.00	$19,305.00
208	PEDESTRIAN HANDRAIL, TxDOT TYPE "F"	LF	29	$ 133.00	$3,857.00
209	SIDEWALK RETAINING WALL (COLLEYVILLE)	CY	30	$ 1,100.00	$33,000.00
210	CONCRETE CURB AND GUTTER,RIBBON CURB	LF	9640	$ 20.25	$195,210.00
211	CONCRETE DRIVEWAY	SY	2025	$ 75.50	$152,887.50
212	CONCRETE SIDEWALK TYPE B	SY	4000	$ 60.25	$241,000.00
213	ADA CURB RAMP	EA	26	$ 1,500.00	$39,000.00
214	REFLECTIVE PAVEMENT MARKINGS TYPE II 8" WHITE SOLID	LF	316	$ 1.00	$316.00
215	REFLECTIVE PAVEMENT MARKINGS TYPE II 24" WHITE SOLID	LF	900	$ 3.50	$3,150.00
216	REFLECTIVE PAVEMENT MARKINGS TYPE II WHITE ARROW	EA	16	$ 100.00	$1,600.00
217	REFLECTIVE PAVEMENT MARKINGS TYPE II 4" YELLOW BROKEN	LF	1418	$ 0.50	$709.00
218	REFLECTIVE PAVEMENT MARKINGS TYPE II 4" YELLOW SOLID	LF	13583	$ 0.50	$6,791.50
219	REFLECTIVE PAVEMENT MARKINGS TYPE II 8" YELLOW SOLID	LF	627	$ 1.00	$627.00
220	PAVEMENT SEALER 4"	LF	15001	$ 0.20	$3,000.20
221	PAVEMENT SEALER 8"	LF	943	$ 0.40	$377.20
222	PAVEMENT SEALER 24"	LF	900	$ 1.25	$1,125.00
223	PAVEMENT SEALER (ARROW)	EA	16	$ 10.00	$160.00
224	PAVEMENT SURFACE PREP FOR 4" PAVEMENT MARKINGS	LF	15001	$ 0.20	$3,000.20
225	PAVEMENT SURFACE PREP FOR 8" PAVEMENT MARKINGS	LF	943	$ 0.40	$377.20
226	PAVEMENT SURFACE PREP FOR 24" PAVEMENT MARKINGS	LF	900	$ 1.25	$1,125.00
227	PAVEMENT SURFACE PREP FOR ARROW	EA	16	$ 10.00	$160.00
228	INSTALL NEW TRAFFIC SIGN	EA	5	$ 500.00	$2,500.00
229	INSTALL EXISTING TRAFFIC SIGN ON NEW POST	EA	25	$ 300.00	$7,500.00
230	TRENCH EXCAVATION PROTECTION	LF	6425	$ 2.75	$17,668.75
231	PRECAST CONCRETE BOX CULVERT (4 FT X 2 FT)	LF	1999	$ 210.00	$419,790.00
232	PRECAST CONCRETE BOX CULVERT (8 FT X 4 FT)	LF	8	$ 495.00	$3,960.00
233	24" CLASS III RCP	LF	4418	$ 70.75	$312,573.50
234	STORM SEWER MANHOLE, TYPE 1 JUNCTION BOX	EA	13	$ 5,200.00	$67,600.00
235	DROP INLET TYPE C (GRATE)	EA	55	$ 3,500.00	$192,500.00
236	10' CURB INLET, TYPE 1	EA	2	$ 3,700.00	$7,400.00
237	WINGWALL (PW-1) (HW=4 FT)	EA	1	$ 10,000.00	$10,000.00
300	FIRE HYDRANT ASSEMBLY	EA	4	$ 2,500.00	$10,000.00
301	REMOVE FIRE HYDRANT ASSEMBLY	EA	4	$ 500.00	$2,000.00
302	ADJUST WATER VALVE	EA	15	$ 250.00	$3,750.00
303	ADJUST SANITARY SEWER MANHOLE	EA	14	$ 2,000.00	$28,000.00
304	ADJUST SANITARY SEWER CLEAN OUT	EA	2	$ 750.00	$1,500.00
305	RELOCATE WATER METER	EA	22	$ 250.00	$5,500.00
306	ADJUST WATER METER	EA	8	$ 250.00	$2,000.00
400	STORM WATER POLLUTION PREVENTION PLAN	LS	1	$ 50,000.00	$50,000.00
				REMOVALS	**$144,833.50**
				TRAFFIC CONTROL	**$285,000.00**
				ROADWAY	**$1,571,193.05**
				UTILITIES	**$52,750.00**
				DRAINAGE	**$1,031,492.25**
				SWPPP	**$50,000.00**
				SUBTOTAL	**$3,135,268.80**
			401	CONTINGENCY (15%)	**$470,290.32**
				TOTAL	**$3,605,559.12**



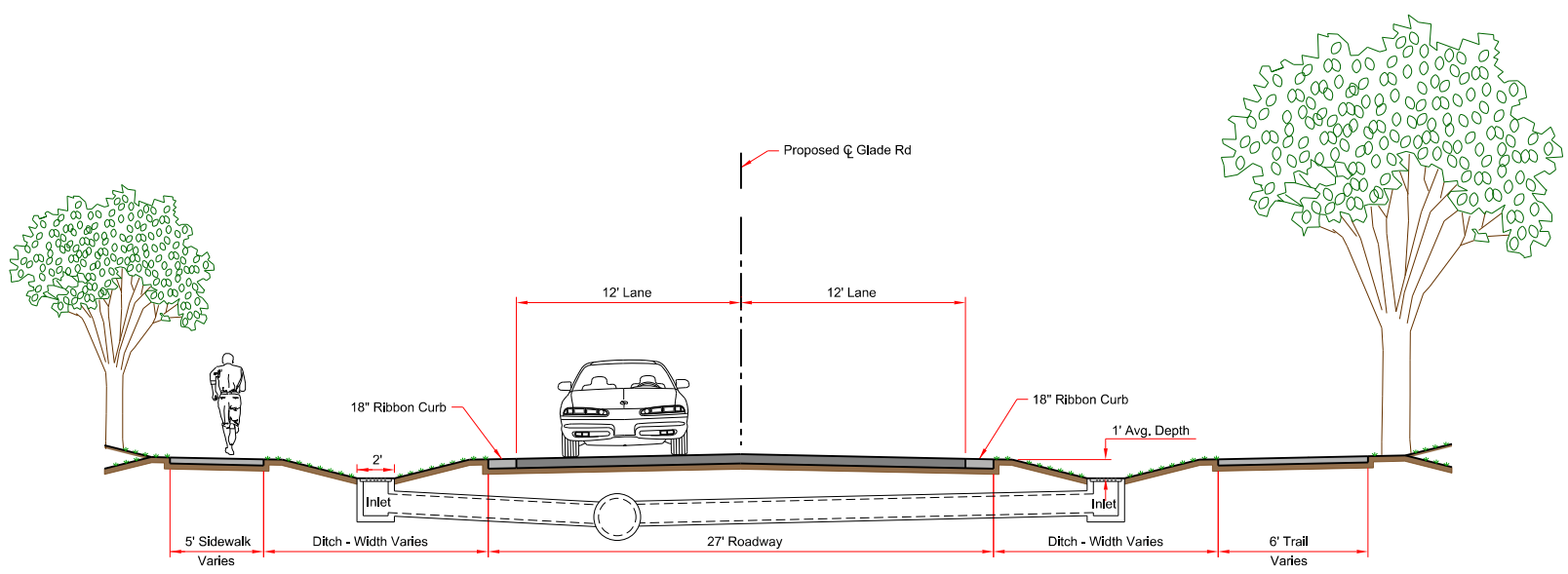
TYPICAL SECTION

GLADE ROAD - BASE OPTION



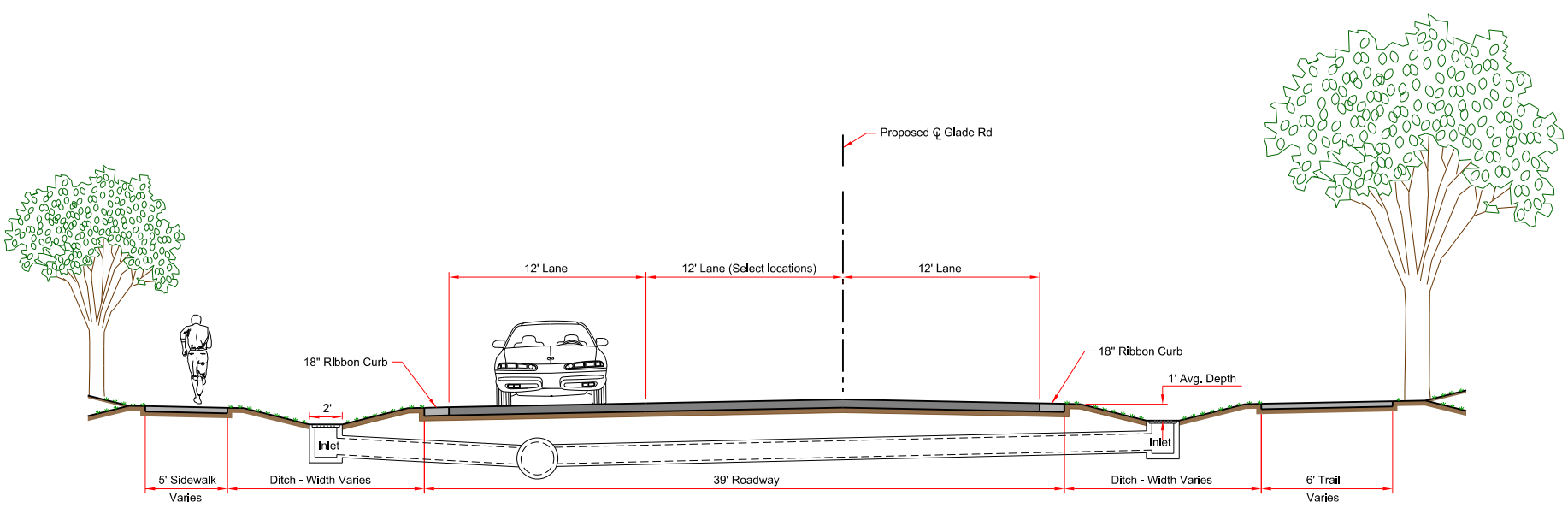
TYPICAL SECTION

GLADE ROAD - OPTION 1



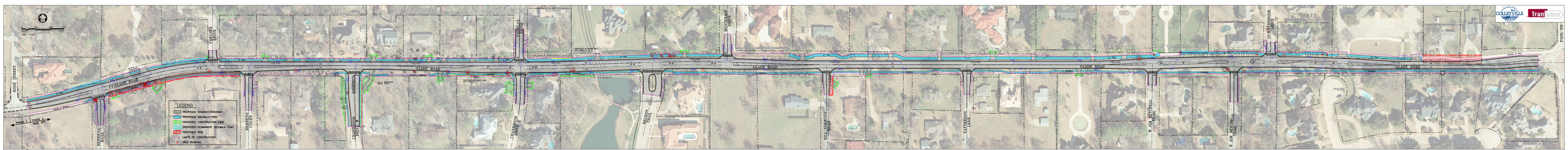
TYPICAL SECTION

GLADE ROAD - OPTION 2

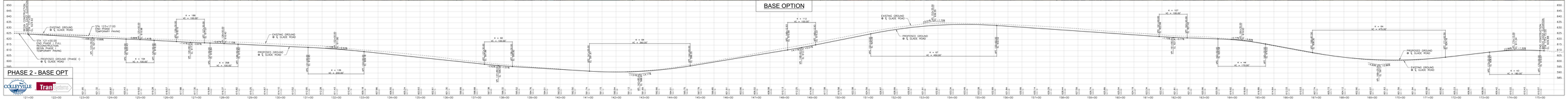


TYPICAL SECTION

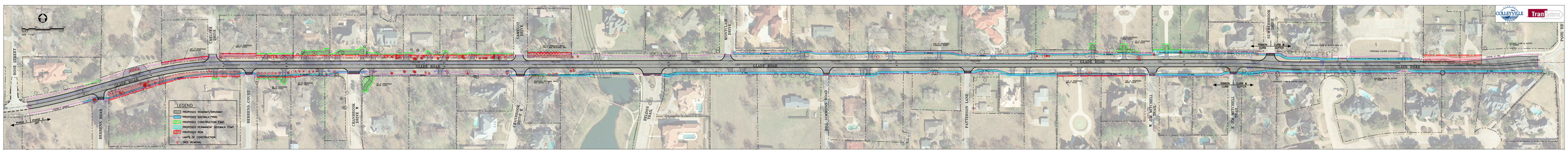
GLADE ROAD - OPTION 3



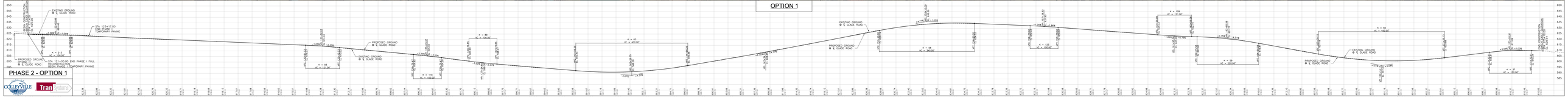
BASE OPTION

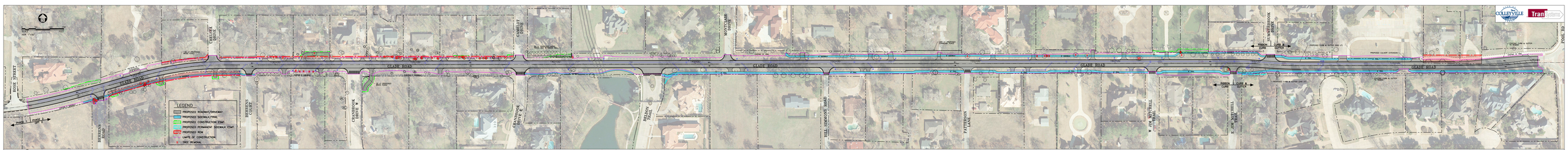


PHASE 2 - BASE OPT

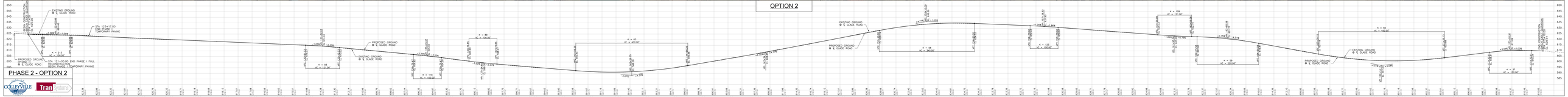

GLADE ROAD
ROOF STREET
BERKENS ROAD
BERKENS COURT
CRANEBROOK DRIVE
CRANEBROOK DRIVE E
BRIAR TRAIL
BRIAR HAMMOND ROAD
PATTERSON LANE
W. FOX MITCHELL TRAIL
E. FOX MITCHELL TRAIL
MONTCLAIR DRIVE
CAMELOT DRIVE
PORTE RD
LEGEND
PROPOSED ROADWAY/DRIVEWAY
PROPOSED SIDEWALK/TRAIL
PROPOSED CONSTRUCTION EZMT.
PROPOSED PERMANENT SIDEWALK EZMT.
PROPOSED ROW
LIMITS OF CONSTRUCTION
TREE REMOVAL
PHASE 1 TEMP. PAVING
PHASE 2 TEMP. PAVING

OPTION 1

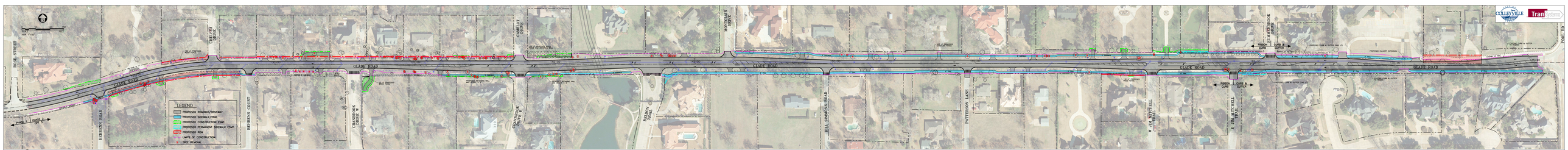

EXISTING GROUND @ ℄ GLADE ROAD
STA. 123+17.00 END PHASE 1 TEMPORARY PAVING
PROPOSED GROUND @ ℄ GLADE ROAD
STA. 121+00.00 END PHASE 1 FULL RECONSTRUCTION BEGIN PHASE 1 TEMPORARY PAVING
PHASE 2 - OPTION 1



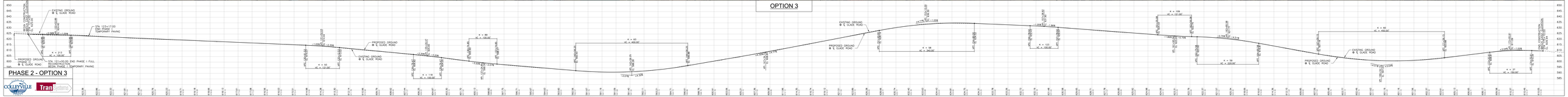
OPTION 2



PHASE 2 - OPTION 2


GLADE ROAD
ROSS STREET
BERHENS ROAD
BERHENS COURT
CHELSEA QUEEN
CAMELOT DRIVE
CLEARWATER DRIVE
BILL SAMMONS ROAD
PATTERSON LANE
W. 17th MITCHELL TRAIL
SUNNYBROOK DRIVE
LEGEND
PROPOSED ROADWAY/DRIVEWAY
PROPOSED SIDEWALK/TRAIL
PROPOSED CONSTRUCTION EZMT.
PROPOSED PERMANENT SIDEWALK EZMT.
PROPOSED ROW
LIMITS OF CONSTRUCTION
TREE REMOVAL

OPTION 3


EXISTING GROUND @ ℄ GLADE ROAD
STA. 123+17.00 END PHASE 1 TEMPORARY PAVING
PROPOSED GROUND @ ℄ GLADE ROAD
STA. 121+00.00 END PHASE 1 FULL RECONSTRUCTION BEGIN PHASE 2 TEMPORARY PAVING
PHASE 2 - OPTION 3