CITY OF SAN ANTONIO

TO: 2012-2017 Bond Program Drainage Committee Members

FROM: Mike Frisbie, P.E., City Engineer and Director of Capital Improvement Management Services

COPY: Sheryl Sculley, City Manager; Peter Zanoni, Assistant City Manager; Sharon De La Garza, Assistant City Manager; Maria Villagomez, Director of Management and Management; Majed Al-Ghafry, Director of Public Works

DATE: October 21, 2011

SUBJECT: **REQUESTED PROJECT INFORMATION FROM THE DRAINAGE IMPROVEMENTS 2012 BOND CITIZEN COMMITTEE MEMBER MEETING**

Thank you again for being part of the 2012 Bond project development process. Our initial meeting was a great start to this important aspect of the proposed bond program development process. This memo addresses requests for information from Citizen Committee Members during the Drainage Improvements 2012 Bond Citizen Committee Meeting held on Wednesday, October 5, 2011.

Staff Recommended Project Details

1. **Question:** Several Committee Members requested to see the following additional information in regards to the City's Staff Recommended Project List:

    1. Project Name and Budgeted Amount
    2. Project Description
    3. Whether or Not Properties Were Removed from the Flood Plain
    4. Companion Projects
    5. Leveraged Amount and Source, if applicable
    6. City Council Districts

    Answer: Staff has compiled this information in the enclosed attachment, Exhibit A (2012-2017 Bond Program Staff Recommended Drainage Improvement Project Details).

Other Priority Projects

2. **Question:** A Committee Member requested to see a list of priority projects that did not make the City's Staff Recommended List.

    Answer: Staff has compiled this information in the enclosed attachment, Exhibit B (Priority Projects not included in the Staff's $130 million drainage improvement recommendations).

Prepared By:
Capital Improvement Management Services

All Flooding Projects

3. **Question:** Committee member requested to see a map of recent drainage projects conducted within the San Antonio Area; including Bexar County, San Antonio River Authority, 2007-2012 Bond Program, and the proposed 2012-2017 Bond Program.

   Answer: Staff has compiled a map with data from the San Antonio area and it is included here as Exhibit C (Multiple Agency Drainage Projects Map).

Bexar County Drainage Projects

4. **Question:** A committee member inquired about the Bexar County's Drainage Projects.

   Answer: Attached is a PowerPoint presentation from the County's Public Works department prepared for the Association of General Contractors on September 13, 2011. Slides 10-15 on drainage are provided in Exhibit D (Bexar County Public Works Presentation). The Bexar County contact person is David Wagmann (DWagmann@Bexar.Org) if you have any questions.

Maps

5. **Question:** Several committee members requested larger maps.

   Answer: Staff has prepared larger individual maps, as well as a map with all the staff recommended projects in the enclose attachments Exhibit E (Large Individual Maps) and Exhibit F (Staff Recommended Drainage Map).

Citizen Requested Projects

6. **Question:** A committee member requested a list of resident requested projects.

   Answer: Attached in a compiled list of projects that were requested during the Citizen's To Be Heard at the October 5th meeting. The Exhibit G (Citizen Requested Projects).

Prepared By:
Capital Improvement Management Services

EXHIBIT A

EXHIBIT A

2012 -2017 Bond Program Drainage Improvement Staff Recommended Projects Details

Project Name & Budget	Project Description	Properties Removed from the Flood Plain*	Companion Projects	Leverage Funding	Council District
McCullough Ave Area Drainage ($12,509,000)	The project will reduce the amount of runoff to the lower level of IH 35 by constructing an underground system along Park Avenue and Evergreen Ct from Main Avenue to the San Antonio River and reconstruct the affected roadways.	0	N/A	$0	1
Sapphire/Flora Mae (Billy to Alfred Drive) ($5,373,000)	The project will improve drainage in the area by installing a storm sewer system and reconstruct and widen, with curbs sidewalks and driveway approaches, key roads in the neighborhood.	0	N/A	$0	2
Menger Creek Drainage ($6,526,000)	The project will construct concrete channel improvements from N. Walters Street to Rio Grande Street and improve the Rio Grande Crossing as well as the railroad crossing.	92	N/A	$0	2
Belford Area Drainage ($8,000,000)	This project will construct some improvements that will be identified in a Belford Area Drainage study.	0	N/A	$0	3
Goliad Road Drainage (SE Military to Loop 410) ($10,309,000)	This project will construct drainage improvements along Goliad Road and reconstruct the roadway with curbs, sidewalks, and driveway approaches as needed.	0	N/A	$0	3
Indian Creek Channel Improvements ($6,499,000)	Reconstruct portions of the Indian Creek Channel and upgrades the box culvert bridge at Ray Ellison to improve water conveyance.	14	N/A	$0	4
Elmendorf Lake Area Improvements ($1,500,000)	Implementation of projects to reduce erosion and improve water quality at Elmendorf Lake	0	Elmendorf Park included in the Parks Recommendation ($3,000,000)	$8M Bexar County /$2M Parks Department	5
Westwood Village Phase II ($5,000,000)	Construct a detention basin west of Pinn Road adjacent to Westwood Village Creek to improve drainage.	0	N/A	$0	6
Mountain View Estates Phase III ($3,000,000)	Install an underground drainage system that ties into an existing system on Rogers Road and outfall into a tributary of Culebra Creek to resolve flooding issues in the Mountain View Estates area. This project is a complement of Phase I and Phase II that are presently under design and funded for construction via the Regional Storm Water Facilities Fund.	0	N/A	$0	6
Seeling Channel Drainage Improvements Phase II ($24,606,000)	Reconstruct Seeling Channel to west of St. Cloud and construct a detention pond to improve drainage and minimize flooding.	120	N/A	$0	7
Upper Woodlawn Drainage ($3,000,000)	Construct drainage improvements in the Upper Woodlawn Lake area.	0	N/A	$0	7
Hausman Road Drainage (Loop 1604 to IH 10) ($13,500,000)	Widen and reconstruct Hausman with drainage improvements.	0	Hausman Road (1604 to IH 10) Streets Recommendations ($30,000,000)	$13.5M Bexar County	8
West Avenue Low Water Crossing ($6,630,000)	Eliminate the low water crossing northeast of Nakoma and reconstruct roadway as needed	0	N/A	$0	10
Belfast and Janda Susan Drainage Improvements ($4,599,000)	The project will reconstruct a concrete lined channel and provide an underground storm drain system with street reconstruction to include curbs, sidewalks and driveway approaches.	0	N/A	$0	9
Mud Creek Trib A Drainage Improvements ($2,000,000)	The project will improve an existing earthen channel and improve drainage to remove properties from the floodplain.	80	N/A	$0	10
Redland Road Drainage(1604 to Ridgewood Pkwy) ($10,700,000)	Reconstruct and widen Redland Road with drainage improvements as needed.	0	Redland Road (1604 to Ridgewood Pkwy) Streets Recommendation $10,700,000	$0	10
Quail Creek Trib Drainage ($4,949,000)	Improve the drainage in Quail Creek from IH 410 northwards with channel improvements and bridge replacement	58	N/A	$0	10

* Shows number of properties that are estimated to removed from the flood plain because of the project.

Prepared By:
Capital Improvement Management Services

10/20/2011

EXHIBIT B

EXHIBIT B

Unfunded 2012-2017 Bond Program Drainage Projects		
District	**Project Name**	**Scope**
1	Barbara Drainage Project/73A Ph 4	Replace the channel with a box culvert and associated surface drainage structures. The proposed box culverts will extend the existing storm sewer system at Springwood and terminate at an existing system south of Barbara Dr. The proposed system will eliminate the existing storm system located on Waring and Shadywood and alleviate localized flooding in the adjacent neighborhood. Associated street reconstruction and curbs will be completed as needed.
1	Vidor Dr. Area Drainage	Demolish the drainage channel directly east of Vidor and replace with a box culvert system. Install underground storm drainage at Cuilie Dr, Rexford Dr. Sprucewood Lane and Vidor Ave to drain into new box culvert along Vidor. Proposed box culvert will follow the Vidor Road alignment due to the possible future rail expansion. Install underground storm drainage at Rexford Dr, Sprucewood Ln, and Un-named St to drain into existing box culvert at Hwy 281. Reconstruct streets, including curbs, sidewalks, and driveways as needed. Flow from the parking lot at the northwest corner of Chulie and Vidor will also be captured and taken underground.
2	Low Water Crossing #101 (Rittiman Creek @ Gibbs Sprawl)	Project includes construction of a detention basin, the conversion of an earthen channel to a concrete channel, installation of a box culvert structure, railroad reconstruction and the reconstruction of Gibbs Sprawl to raise it above the floodplain.
2	Burleson and Lamar St. Drainage Project	Reconstruct the following street sections with curb, gutter, and an underground drainage system. East Jones Ave from the existing 48-inch RCP tie in to Austin St; Austin St from east Jones Ave to Burleson; Burleson to 70 ft past N. Cherry St; Cherry St from 50 ft north of Burleson to 260 ft south of Lamar St; and Lamar St from 70 ft east of Cherry St to the existing RR tracks to the west. Project will require boring drainage systems across three Union Pacific RR tracks, the lowering of several roadways. Lowering of these intersections will require the installation of combination sidewalk-retaining walls and additional street reconstruction beyond the intersections to tie back to existing grade. Reconstruction of Cherry St with curb and gutter is needed to capture the flow from the east and direct it to the proposed inlets.
3	S. Gevers St. Drainage Imprv./Waleetka/Minnetonka/ Hiawatha/Channning/Nopal	Construct a new drainage system along S. Gevers Street to connect to an existing drainage system at Nopal St. between Cosgrove and Waleetka. Street reconstruction with curbs, sidewalks, and underground storm drain will be added onto the following streets: Gevers, Cosgrove, Channing, Hiawatha, Minnetonka, Nopal and Waleetka. All street reconstruction will include new curb, inlets, storm drain, and 6-foot sidewalks. Bike lane striping is to be added on Geevers Street.
3	Sams Dr. & Bernard Dr. Area Drainage	Includes neighborhood street reconstruction with underground drainage. An existing drainage system on Ashley will be extended down Leah drive to connect to proposed inlets within the subdivision. An existing drainage system on Ashley Rd will be extended down Lucinda to connect to proposed inlets. Underground drainage will be placed at dead end of Bernard Rd and will convey flow through the existing auto part yard, north along Roosevelt Ave and outfall into Six Mile creek. Capacity of the structure at Ashley Rd and will follow the existing ROW approximately 3200 feet until it outfalls at Six Mile Creek.
4	Wabash Storm Drainage	Construct underground drainage laterals on multiple streets west and outfalling to Military Ditch #65 to alleviate flooding of homes. Associated street reconstruction to include curbs, sidewalks, and driveway approaches will be included as needed.
4	Ray Ellison Blvd.	Eliminate LWC#117 & LWC#118 by installing proposing 4~10'x5' MBC and 3~5'x3' MBC at the two existing low water crossing drainage structure locations. The project will also consist of enlarging the downstream channel constriction. Associated street repair and rehabilitation includes sidewalks, curbs, and driveway approaches as required.
5	Charlotte Street Area Drainage Improvement Project	Construct a storm sewer system to collect and convey storm water runoff from several streets and tie into an existing system located at Nogalitos. The proposed project also includes reconstruction of Ellana Claire Ct., Gladstone, Westway, Southway, and Graebner Streets and includes curbs and sidewalks where required.
5	Concepcion Creek Phase I	Construct channel and storm drain box culvert improvements.

EXHIBIT B

District	Project Name	Scope
6	Pinn Rd - Orr St. to Westlawn	Upgrade the existing box culvert system at Westwood Village Creek and the associated storm sewer system. Associated street repair and rehabilitation will include curbs, sidewalks, and driveway approaches as required.
6	Pinn Rd, 1500' S of W. Commerce	This project will provide improvement to Pinn road drainage crossing of Leon Creek in order to provide all weather access to the south from Highway 151.
7	Duke Ave. Area Drainage	This project includes the installation of an underground storm drain system and street reconstruction with curbs, sidewalks and driveways. Street reconstruction includes Duke Ave from Woodlawn to Wake Forest, Marquette Dr from Nortre Dame Dr to Duke Ave, Wake Forest Dr from Norte Dame Dr to Stonegate Dr., and Stonegate Dr from Wake Forest Dr to Note Dame Dr. The proposed storm drain will outfall into the existing storm drain system at the intersection of Stonegate Dr.
7	Quill Outfall (Quill to Freeman)	This project includes providing underground drainage from the existing open channel at Quill west of Oakwood running southeast parallel to Hillcrest and crossing the following streets; Willard Dr., NW 36th St., and running in Dell Pl. and crossing Freeman Dr. to an existing channel. ROW will be required. This project will allow TxDOT project Spur 421 to drain and be built.
8	North Verde Dr. (Low Water Crossing #165.1)	Replace an existing culvert across N. Verde Dr. at French Creek with a bridge to eliminate Low Water Crossing (LWC) #165.1. Proposed bridge will consist of a two-lane, 36-ft wide by 975-ft long bridge. This spans the regulatory floodplain and will provide unflooded access to Verde Hills area residents.
8	Low Water Crossing 30.1, 30.2, & 30.3	This project will upgrade the existing box culvert systems on Southwell Rd., Verbina Rd., & Encino Park Rd.at Huebner Creek Trib A and includes associated street repair after installation of culverts. The project will also include approximately 4800 LF of channel excavation from Southwell Road to Huebner Road, with drainage easement acquisition required for the improvements to be installed. The improvements will remove Low Water Crossings 30.1, 30.2, and 30.3 and provides unflooded access to the neighborhood residents.
9	West Ave - Blanco to Larkspur	Improve street & drainage on West Ave
9	West Avenue North (Low Water Crossing #13 near Interpark)	The proposed project will upgrade the existing culvert system and an earthen channel that will convey the 1% future conditions annual chance storm even. Associated street repairs will be completed as needed.
10	Salado Creek Trib D Drainage Improvements	Improve the capacity of the Salado Creek Tributary D to eliminate flooding to the adjacent properties. Two road crossings will also be improved.
10	Oak Glen/Haskin Low Water Crossing Phase II	Construct storm water system and reconstruct roadways on Albin Drive to Kenilworth Drive to convey runoff. Drainage system & Street work required to intercept flow in the low lying areas and convey runoff within Street ROW to outfall.

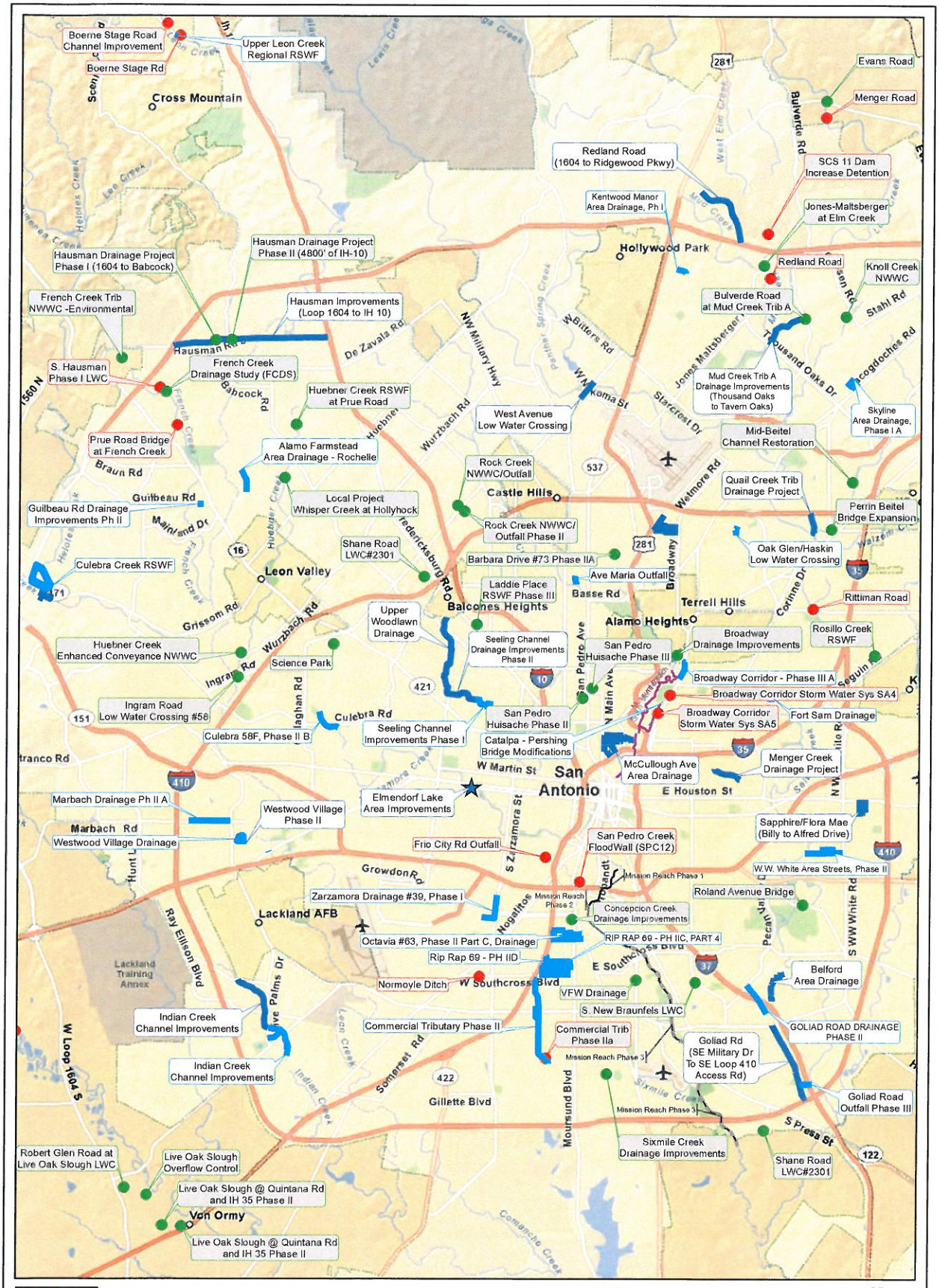


EXHIBIT C

City of San Antonio

Drainge Projects
Bexar County, SARA, COSA

EXHIBIT D

Exhibit D
Excerpts From:

Bexar County Public Works Flood Control/Transportation Capital Projects Update

09-13-2011

FY 2011 – 2012 and Beyond

Flood Control Projects

Overview

Currently have a total of 45 projects in process.

- ✓ 32 In Design (10 to go to Construction in FY 2012)
- ✓ 6 in Construction
- ✓ 7 In Negotiation for Design

37 Engineering firms as Primes with an estimated contract total of $49 MM

- 19 of those Primes are certified SMWBE (51% or $25.2 MM)
- 31 different Sub-consultants are certified SMWBE and support multiple projects

10 different Environmental Firms with 7 being SWMBE

- Estimated Total of $4 MM

9 different firms providing Construction Phase Services

- Material Testing, Inspection, Demo, Maintenance, etc. with 8 being SWMBE; est. Total $2.4 MM

Estimated Additional Contracts for FY12

- $15 MM for Engineering
- Approx. $55 MM for Construction – 10 Projects
- Approx. $8 MM in Real Estate Acquisitions

Flood Control Projects

Projects Under Design

	Project	Pct.	ICL/OCL	Estimated Construction Cost	CURRENT STATUS	Design status	Advertise date
CB19	Schaefer Road Drainage Phase I	4	O.C.L.	$10,400,000	Detailed Design	95%	November 2011
LC9	Hausman Drainage Project Phase I	3	I.C.L.	$7,300,000	Detailed Design	95%	November 2011
SA41	Calaveras 8 Increase Detention	4	O.C.L.	$780,000	Detailed Design	90%	January 2012
SC18	Roland Avenue Bridge	4	I.C.L.	$5,300,000	Detailed Design	95%	October 2011
SA6	Rock Creek NWWC/Outfall	3	I.C.L.	$2,500,000	Detailed Design	90%	January 2012
SC15	Rosillo Creek NWWC	4	I.C.L.	$7,700,000	Detailed Design	85%	December 2011
SA43	Sixmile Creek Drainage Improvements	1	I.C.L.	$3,000,000 (Bridge) $20,000,000 (Channel)	Channel – Prelim. Design S Flores Bridge Detail Design	90% - PER 90% Bridge	South Flores Bridge November 2011
SA2	Laddie Place RSWF Phase III	2	I.C.L.	$9,000,000	Detailed Design	55%	February 2012
LC17	Huebner Creek Enhanced Convey NWWC	2	I.C.L.	Seg II $8,500,000 Seg III $10,500,000	Segment 1 – LOMR Segments 2 & 3 Detailed Design	50%	Segment 2 - March 2012
LC15	Huebner Creek RSWF at Prue Road	3	I.C.L.	$2,200,000	Detailed Design	25%	October 2012
MR29	Local Project -Luckey Road near Wheeler Rd	1	O.C.L.	$550,000	Detailed Design	40%	July 2012
MR27	Live Oak Slough –Overflow Control	1	O.C.L.	$2,550,000	Preliminary Design	30%	October 2012

Flood Control Projects

Projects Under Design

44	Project	Pct.	ICL/OC	Estimated Construction Cost	CURRENT STATUS	status	Advertise date
LC19	**Local Project -Whisper Creek at Hollyhock**	3	I.C.L.	$1,650,000	Detailed Design	40%	October 2012
SC9	**Perrin Beitel & Briar Glenn**	4	I.C.L.	$4,200,000	Preliminary Design	75%	June 2013
SA22	**San Pedro Huisache Phase III**	2, 4	I.C.L.	$7,000,000	Detailed Design	20%	October 2012
LC10	**Hausman Drainage Phase II**	3	I.C.L.	$6,510,000	Preliminary Design	20%	September 2013
SA42	**Broadway Drainage Improvements**	2	I.C.L.	TBD	Preliminary Design	20%	TBD
CB9	**Cimarron Subdivision**	4	O.C.L.	$1,000,000	Preliminary Design	5%	April 2013
LC22	**FCDS –French Creek Drainage Study**	3	I.C.L.	$10,000,000	Preliminary Design	5%	TBD
SA48	**Concepcion Creek Drainage Improvements**	1	I.C.L.	$9,000,000	Preliminary Design	5%	May 2013
SC4	**Knoll Creek**	3,4	I.C.L.	$5,000,000	Preliminary Design	15%	January 2014
SA44	**VFW Drainage**	1	I.C.L.	$7,500,000	Detailed Design	20%	PH 1B – Nov 2012
SA3	**Barbara Drive**	2	I.C.L.	$8,500,000	Preliminary Design	5%	October 2013
LC23	**French Creek Trib NWWC – Environmental**	3	O.C.L.	$3,500,000	Preliminary Design	5%	October 2012
			Total	**$154,140,000**			

Flood Control Projects

Projects Under Negotiation for Engineering

Project		Pct.	ICL/OCL	Estimated Construction Cost	CURRENT STATUS	Design status	Scheduled Commissioner's Court Date
SA14	**Science Park**	2	I.C.L.	$3,300,000	Negotiation / Preliminary	0%	9/06/2011
SC27	**Bulverde and Jung Mud Creek Trib A**	3	O.C.L.	$4,200,000	Negotiation / Preliminary	0%	Oct 2011
SC28	**Jones Maltsberger at Elm Creek**	3	I.C.L.	$2,700,000	Negotiation / Preliminary	0%	Oct 2011
SA8	**S. New Braunfels**	1	I.C.L.	$8,000,000	Negotiation / Preliminary	0%	9/13/2011
MR28	**Local Project -Briggs Road**	1	O.C.L.	$2,000,000	Negotiation / Preliminary	0%	Nov 2011
MR9	**Robert Glenn LWC**	1	O.C.L.	$2,000,000	Negotiation / Preliminary	0%	9/13/2011
SA6	**Rock Creek NWWC/Outfall Phase II**	3	I.C.L.	$3,000,000	Negotiation / Preliminary	0%	Oct 2011
LC27	**Old Fredericksburg Road**	3	O.C.L.	$2,500,000	Negotiation / Detailed Design	0%	Dec 2011/Jan 2012
MR30	**Grosenbacher Rd South of Madrona**	1	O.C.L.	$3,000,000	Negotiation / Detailed Design	0%	Dec 2011/Jan 2012
SA47	**Henze Road LWC**	1	O.C.L.	$3,000,000	Negotiation / Detailed Design	0%	Dec 2011/Jan 2012
SA17	**Real Road LWC**	4	O.C.L.	$3,200,000	Negotiation / Detailed Design	0%	Dec 2011/Jan 2012
SA45	**Casias Road LWC**	4	O.C.L.	$2,000,000	Negotiation / Detailed Design	0%	Dec 2011/Jan 2012

Projects Under Negotiation for Engineering

Project	Pct.	ICL/OCL	Estimated Construction Cost	CURRENT STATUS	Design status	Awarded Date
SA46 Kirkner Road LWC	4	O.C.L.	$3,000,000	Negotiation / Detailed Design	0%	Dec 2011/Jan 2012
MR31 Elm Forest at Turtle Cross St	1	O.C.L.	$3,250,000	Negotiation / Detailed Design	0%	Dec 2011/Jan 2012
		Total	**$45,150,000**			

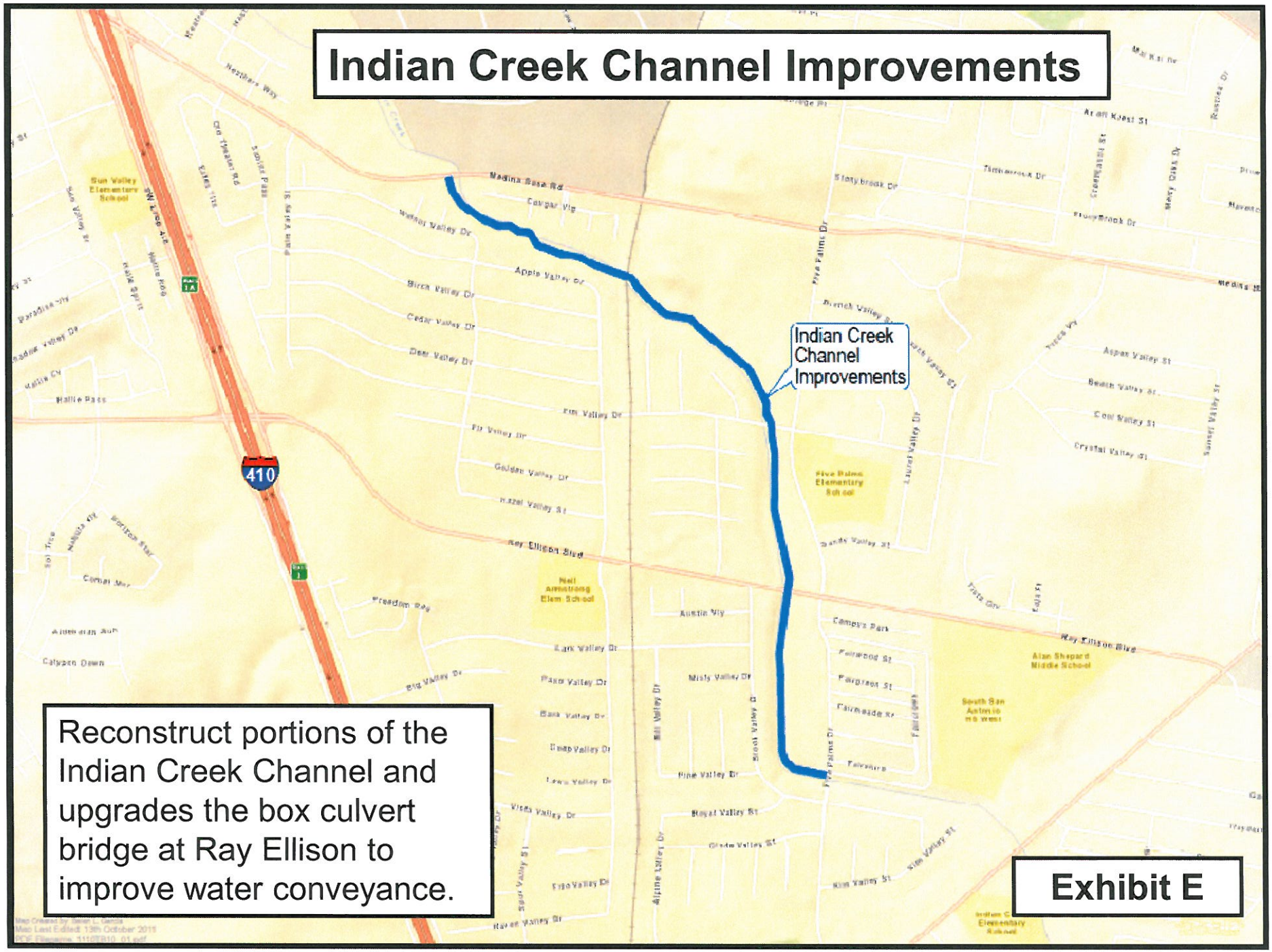
Flood Control Projects

Projects In Construction

ID	Project	Pct.	ICL/OC	Construction Cost	CURRENT STATUS (August 31, 2011)	Completion date
SA33	**Olmos Dam Rehabilitation**	All	I.C.L.	$4,025,963.00	100%	June 2011
MR8	**Shepherd Road at Black Hill Branch and Elm Creek**	1	O.C.L.	$2,365,875.59	95%	October 2011
SC5	**Mid Beitel Creek**	4	I.C.L.	$1,119,968.00	90%	February 2012
LC8	**Ingram Road Low Water Crossing**	2	I.C.L.	$6,777,037.35	45%	Open Roadway to Two-Lane Two-Way Nov 2011 February 2012
SA22	**San Pedro Huisache Phase II**	2, 4	I.C. L.	$7,622,223.30	15%	October 2012
SA4	**Shane Road Low Water Crossing**	1	I.C.L.	$1,155,776.09	5%	January 2012
SC2	**Evans Road**	3	O.C.L.	$2,066,529.32	0%	January 2013
			Total	**$25,133,372.65**		

EXHIBIT E

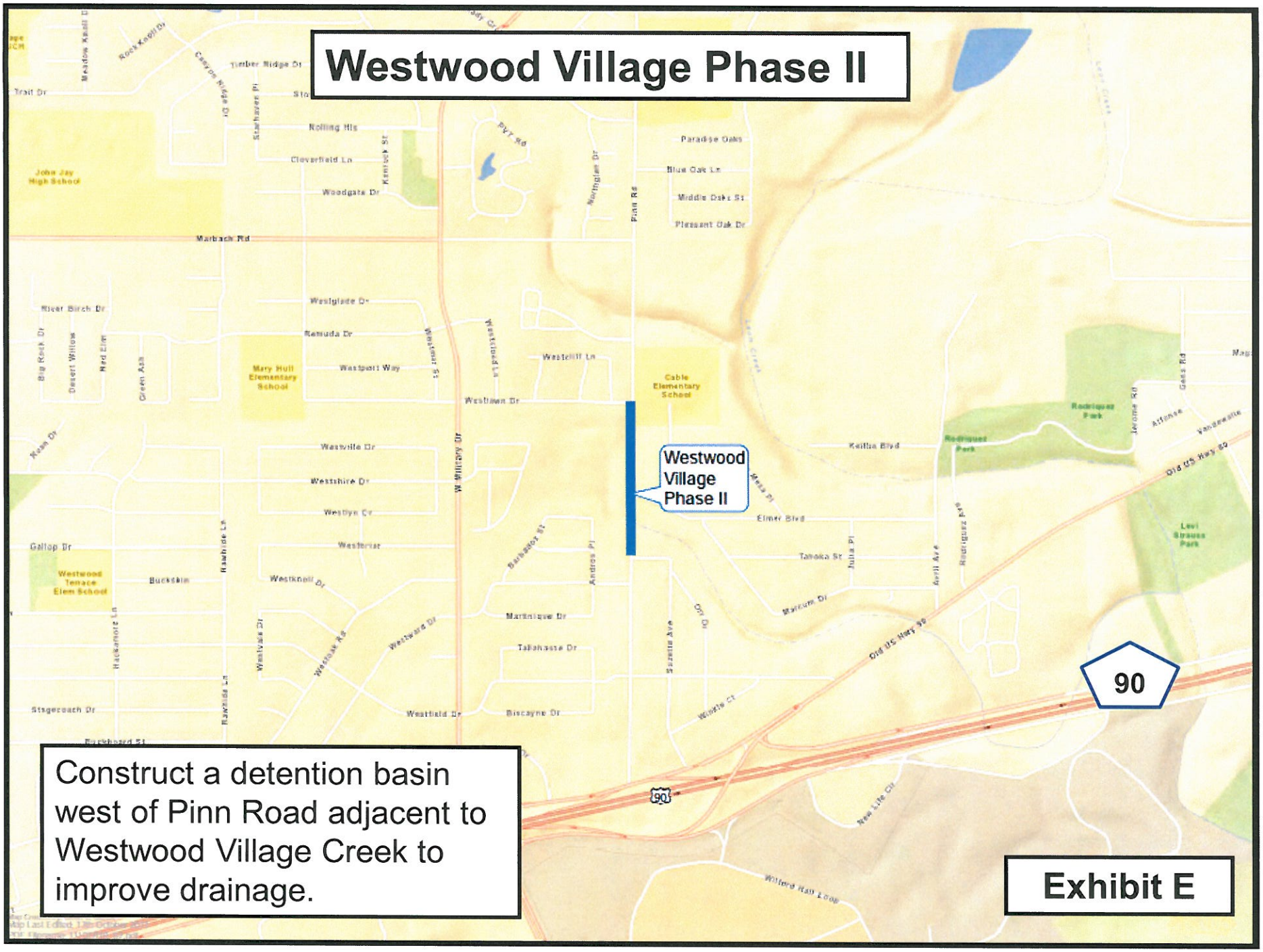
Indian Creek Channel Improvements



Reconstruct portions of the Indian Creek Channel and upgrades the box culvert bridge at Ray Ellison to improve water conveyance.

Exhibit E

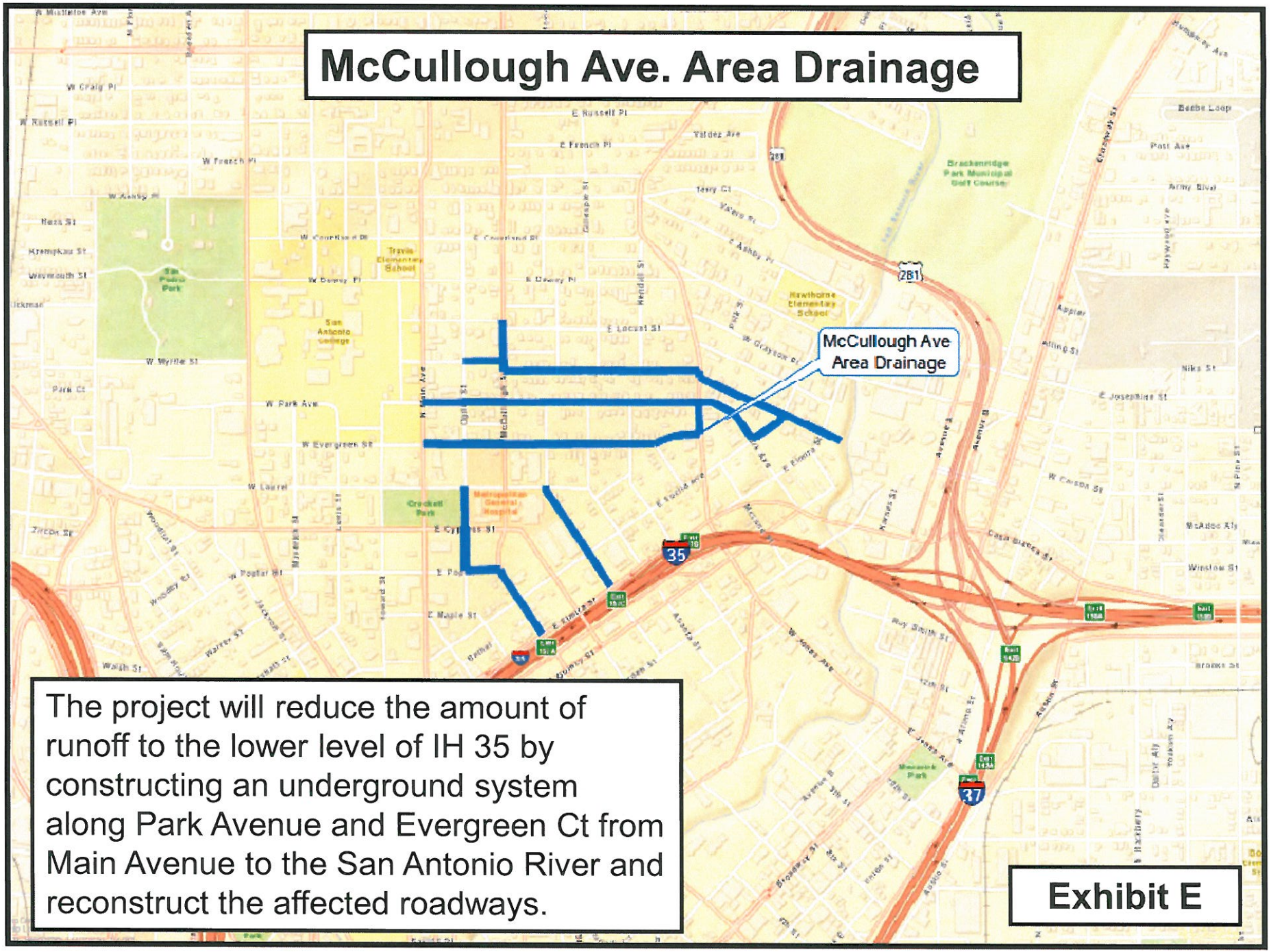
Westwood Village Phase II



Construct a detention basin west of Pinn Road adjacent to Westwood Village Creek to improve drainage.

Exhibit E

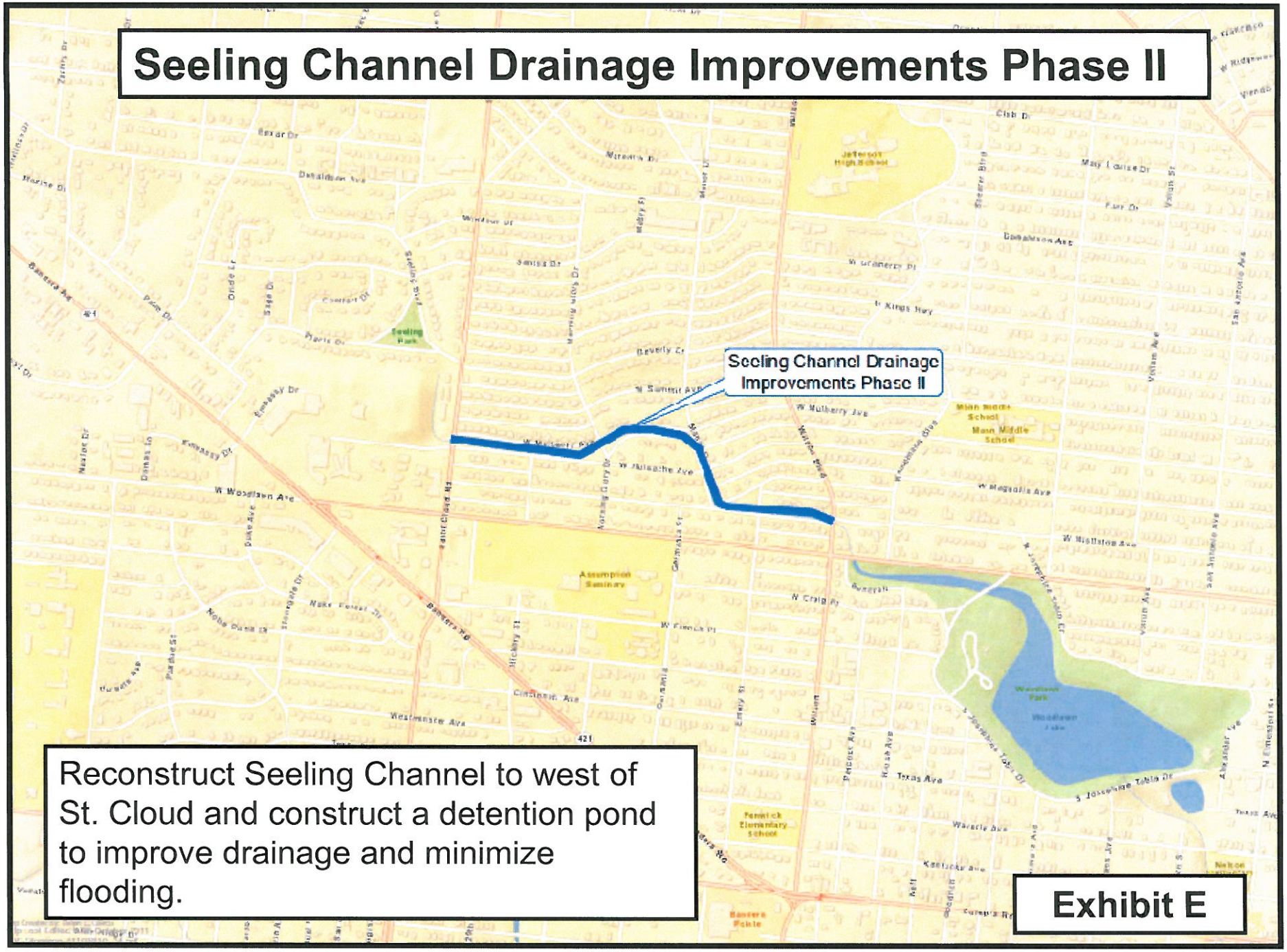
McCullough Ave. Area Drainage



The project will reduce the amount of runoff to the lower level of IH 35 by constructing an underground system along Park Avenue and Evergreen Ct from Main Avenue to the San Antonio River and reconstruct the affected roadways.

Exhibit E

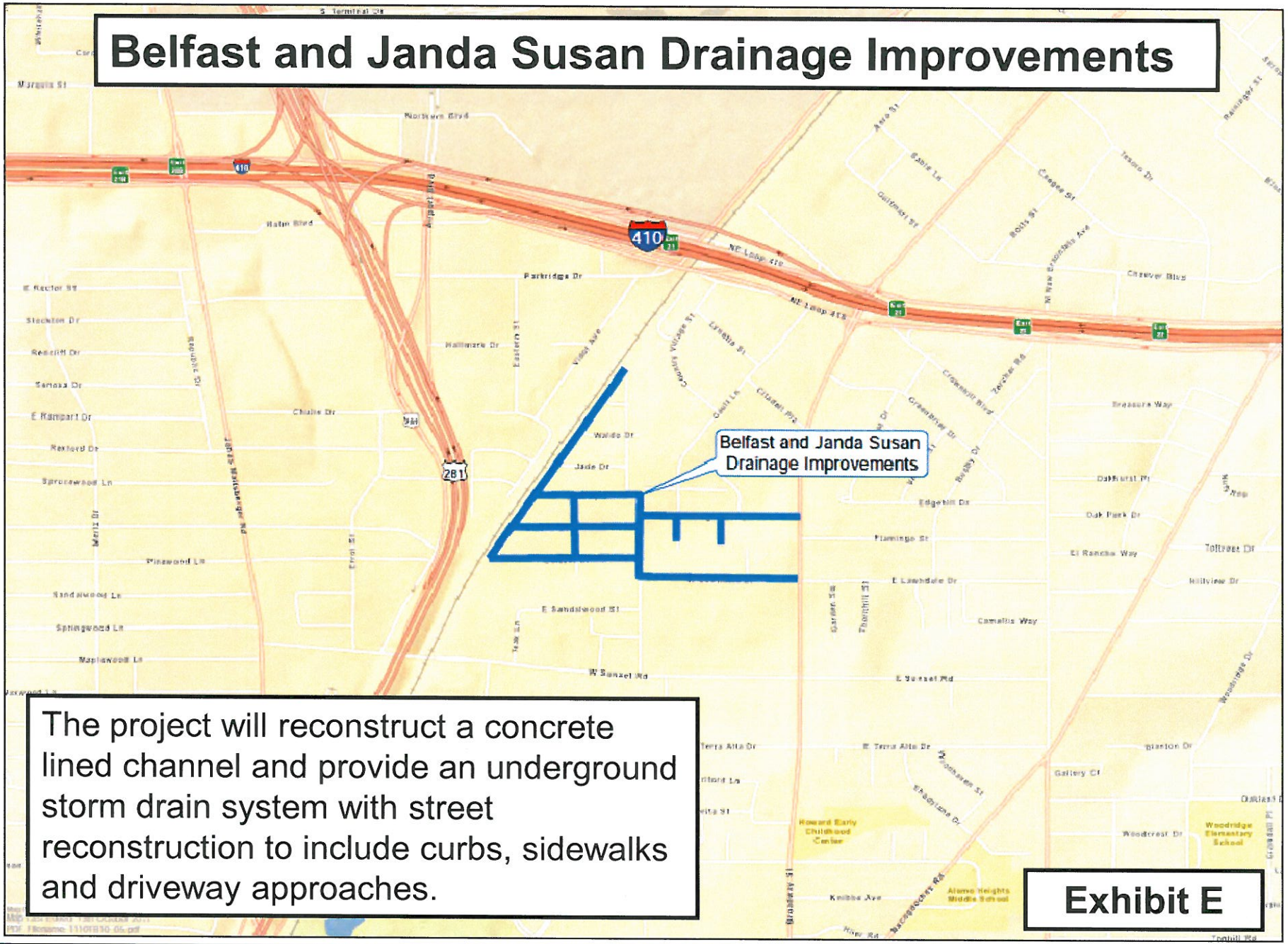
Seeling Channel Drainage Improvements Phase II



Reconstruct Seeling Channel to west of St. Cloud and construct a detention pond to improve drainage and minimize flooding.

Exhibit E

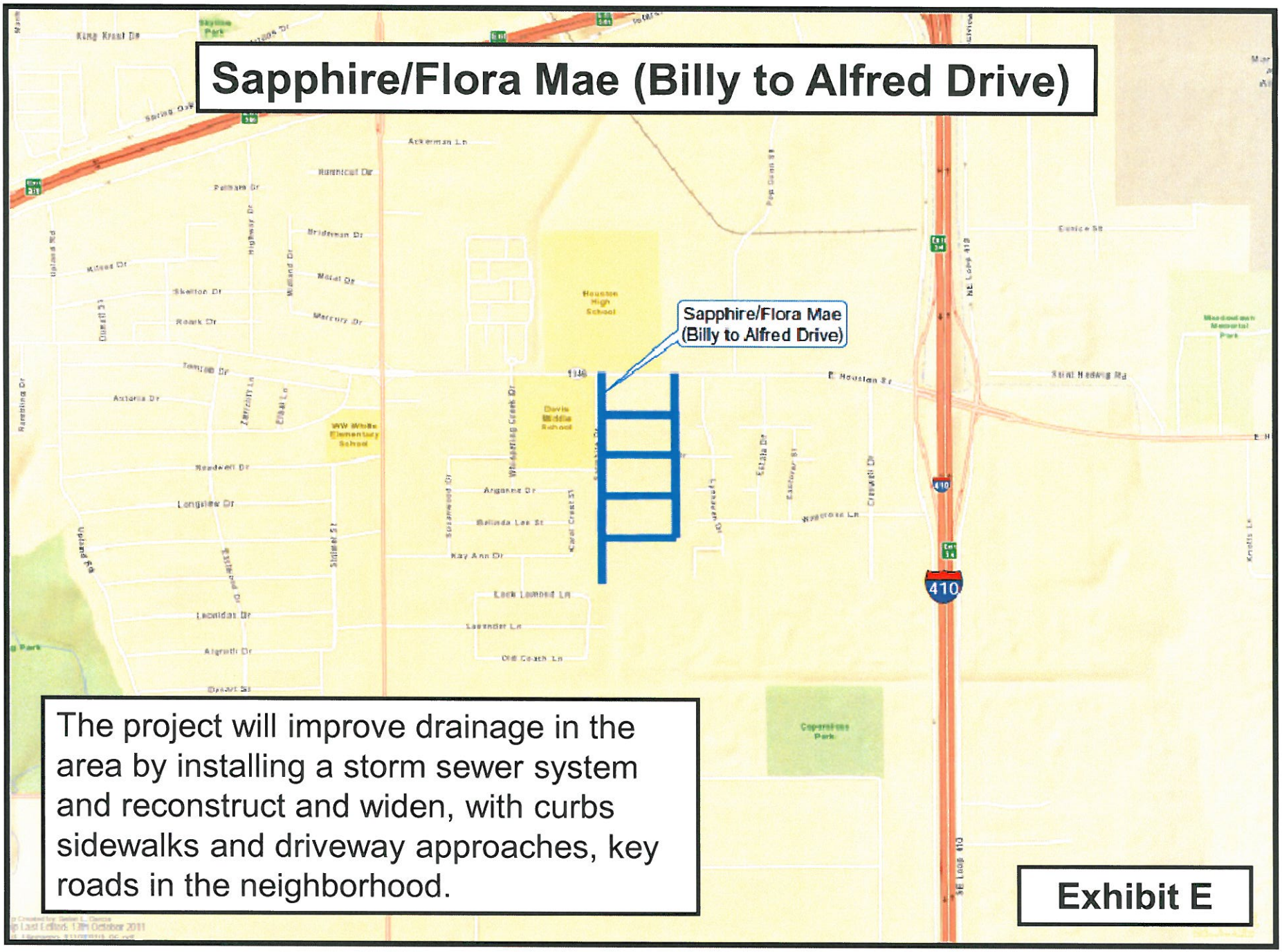
Belfast and Janda Susan Drainage Improvements



The project will reconstruct a concrete lined channel and provide an underground storm drain system with street reconstruction to include curbs, sidewalks and driveway approaches.

Exhibit E

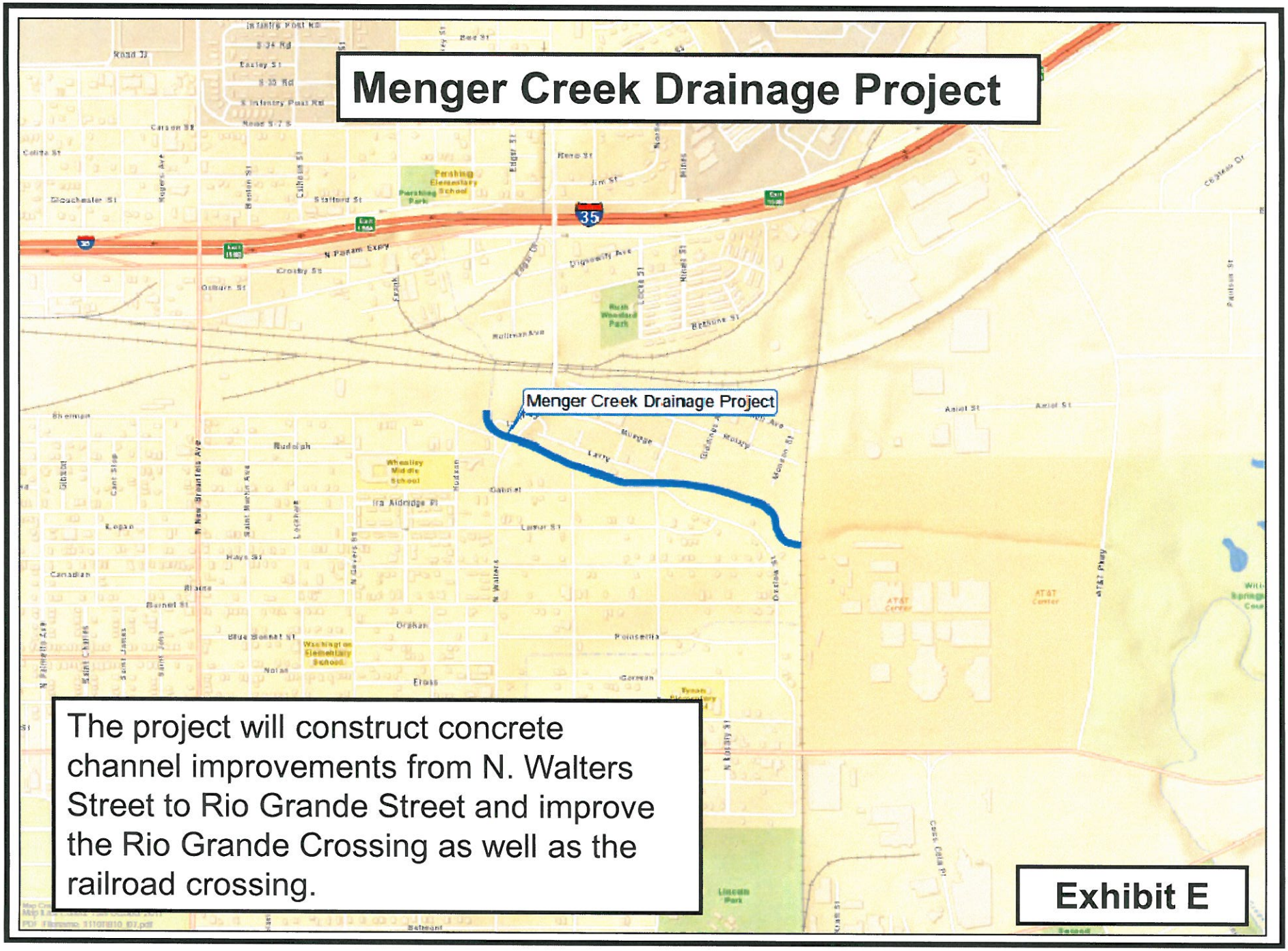
Sapphire/Flora Mae (Billy to Alfred Drive)



The project will improve drainage in the area by installing a storm sewer system and reconstruct and widen, with curbs sidewalks and driveway approaches, key roads in the neighborhood.

Exhibit E

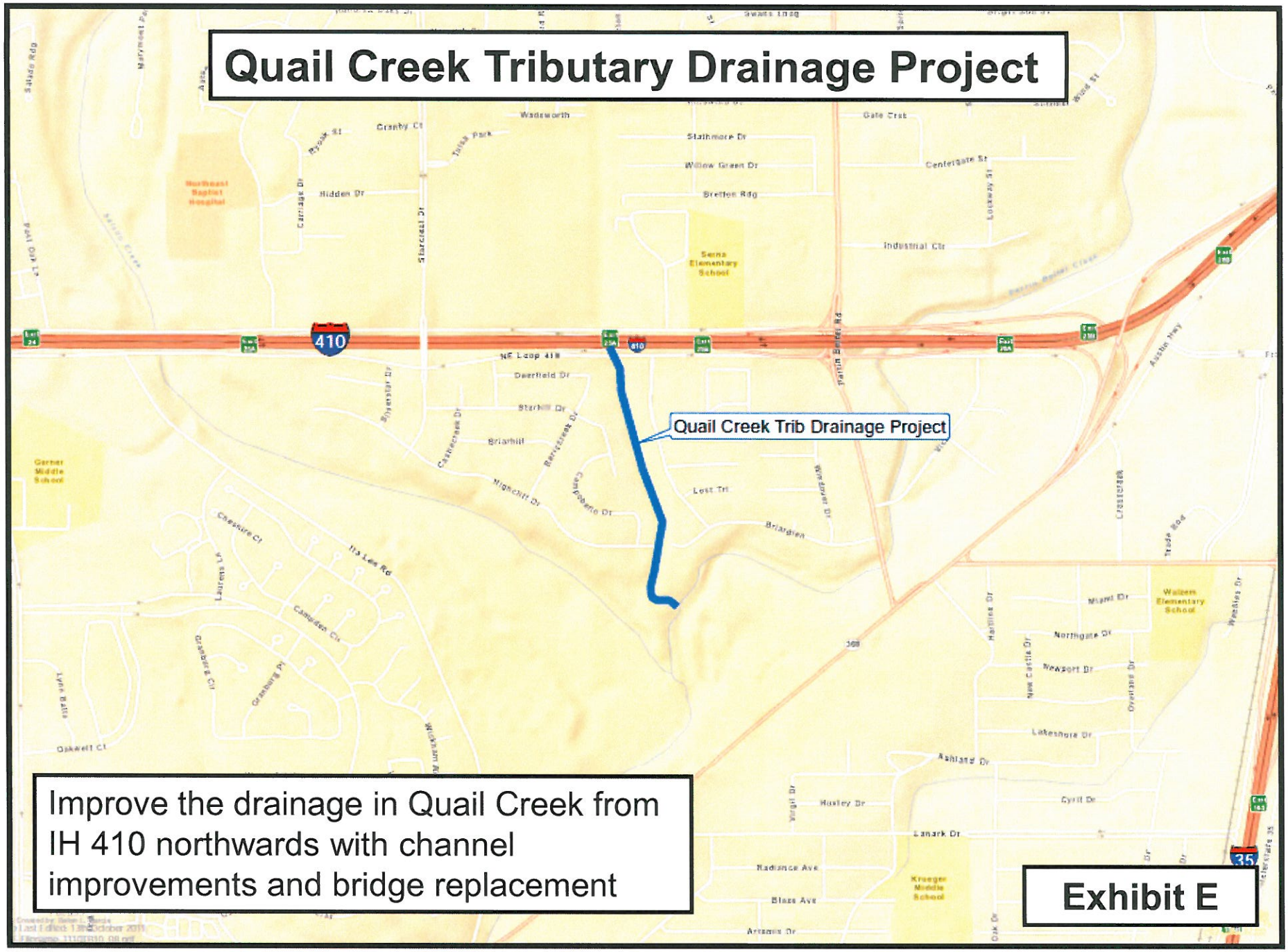
Menger Creek Drainage Project



The project will construct concrete channel improvements from N. Walters Street to Rio Grande Street and improve the Rio Grande Crossing as well as the railroad crossing.

Exhibit E

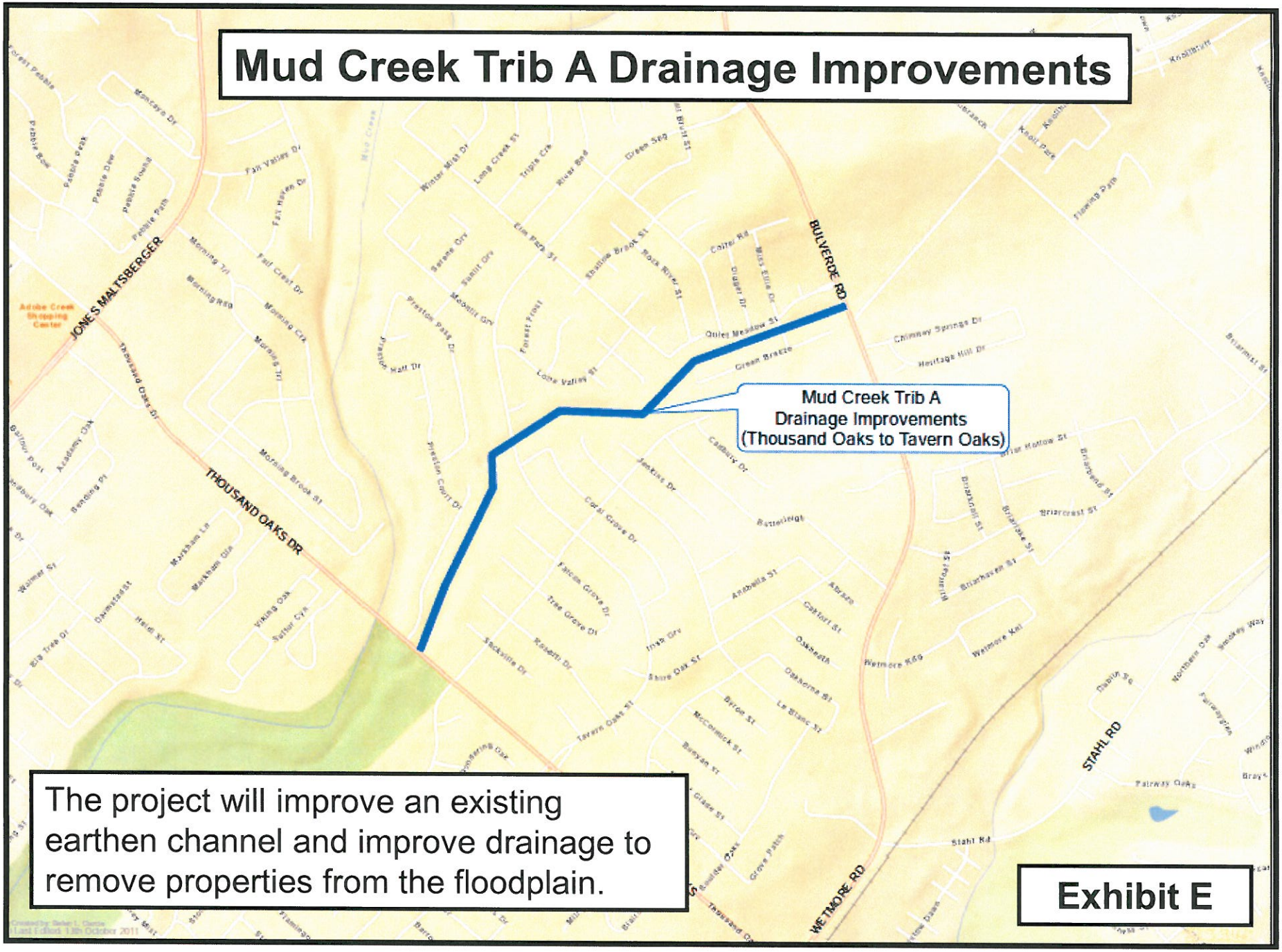
Quail Creek Tributary Drainage Project



Improve the drainage in Quail Creek from IH 410 northwards with channel improvements and bridge replacement

Exhibit E

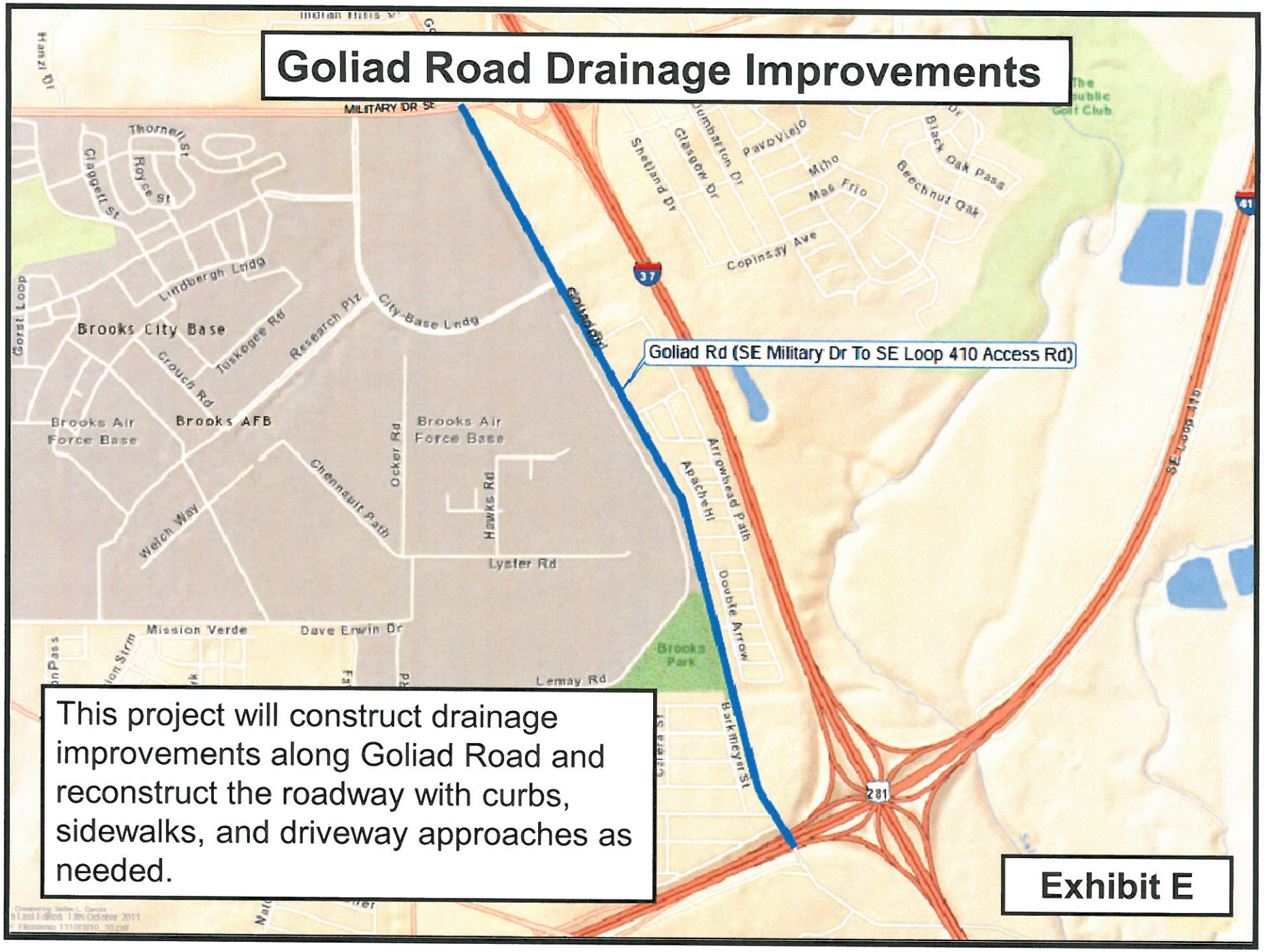
Mud Creek Trib A Drainage Improvements



The project will improve an existing earthen channel and improve drainage to remove properties from the floodplain.

Exhibit E

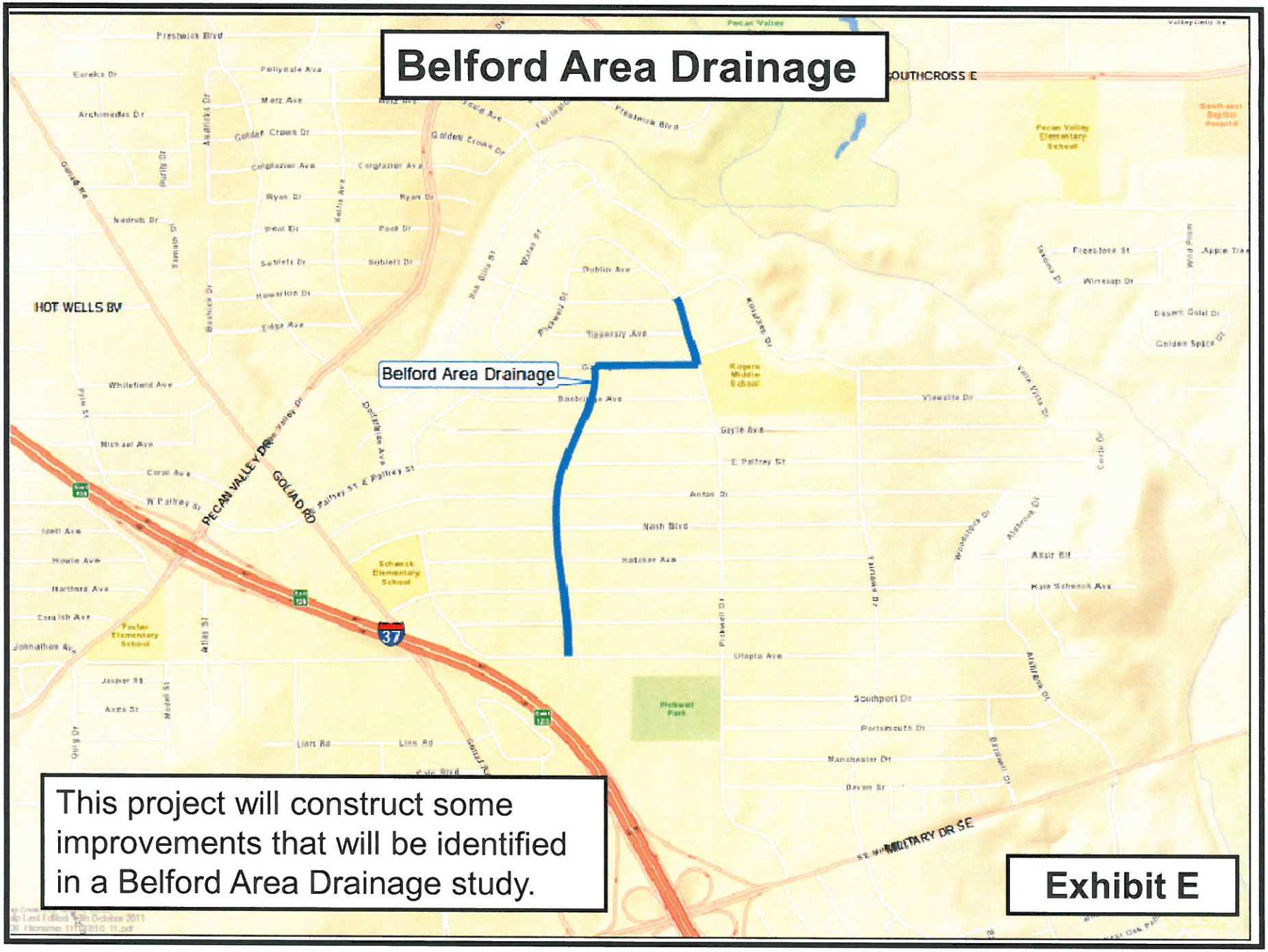
Goliad Road Drainage Improvements



This project will construct drainage improvements along Goliad Road and reconstruct the roadway with curbs, sidewalks, and driveway approaches as needed.

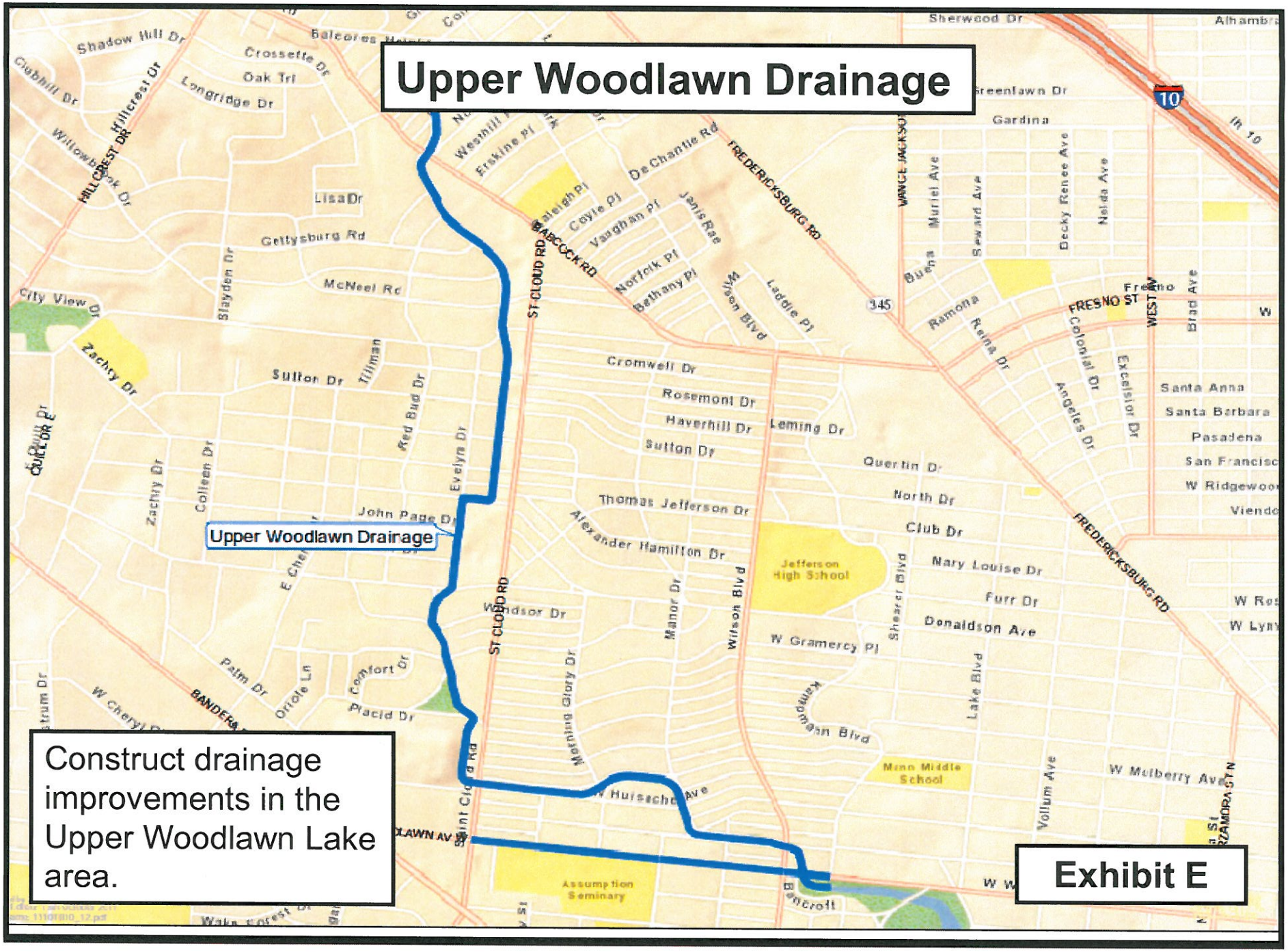
Exhibit E

Belford Area Drainage

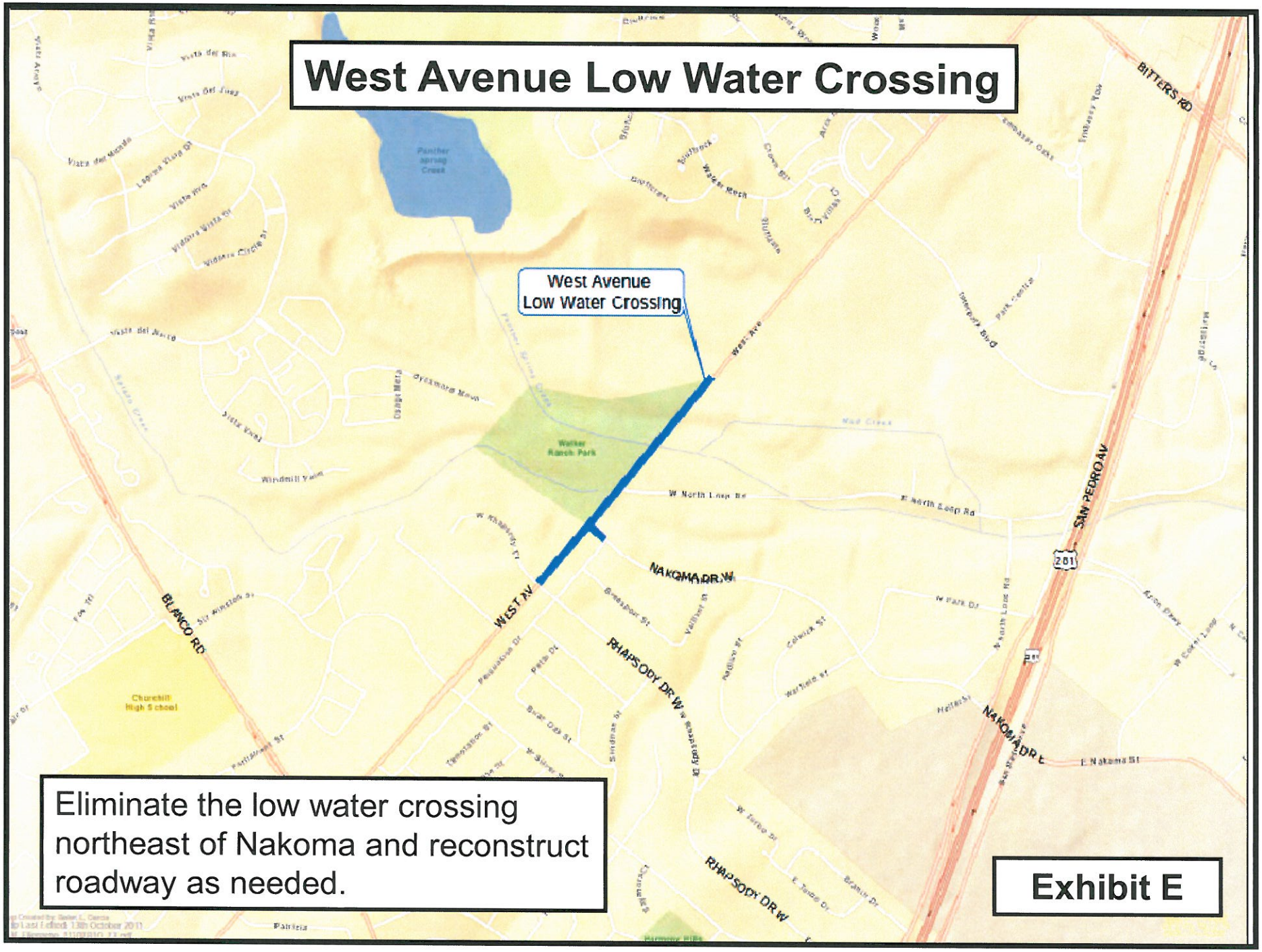


This project will construct some improvements that will be identified in a Belford Area Drainage study.

Exhibit E


Upper Woodlawn Drainage
Upper Woodlawn Drainage
Construct drainage improvements in the Upper Woodlawn Lake area.
Exhibit E
Jefferson High School
Mann Middle School
Assumption Seminary
Sherwood Dr
Greenlawn Dr
Gardina
Shadow Hill Dr
Crossette Dr
Oak Trl
Longridge Dr
Lisa Dr
Gettysburg Rd
McNeel Rd
City View Dr
Zachry Dr
Sutton Dr
Tillman
Red Bud Dr
Evelyn Dr
Colleen Dr
John Page Dr
Palm Dr
Oriole Ln
Comfort Dr
Placid Dr
Cromwell Dr
Rosemont Dr
Haverhill Dr
Leming Dr
Sutton Dr
Thomas Jefferson Dr
Alexander Hamilton Dr
Quentin Dr
North Dr
Club Dr
Mary Louise Dr
Furr Dr
Donaldson Ave
W Gramercy Pl
Windsor Dr
Manor Dr
Wilson Blvd
Shearer Blvd
Lake Blvd
Kampmann Blvd
Morning Glory Dr
Vollum Ave
W Mulberry Ave
Santa Anna
Santa Barbara
Pasadena
Ramona
Reina Dr
Colonial Dr
Angeles Dr
Excelsior Dr
Brad Ave
Muriel Ave
Seward Ave
Decky Renee Ave
Nelda Ave
Buena
Laddie Pl
Janis Rae
Norfolk Pl
Bethany Pl
Coyle Pl
Vaughan Pl
De Chantie Rd
Erskine Pl
Westhill
Balcones
Hillcrest Dr
Willowbrook Dr
Clubhill Dr
Zachry Dr
Slayden Dr
Quill Dr E
Bancroft
Bancroft
Wake Forest Dr
Ih 10
10
345
FREDERICKSBURG RD
ST CLOUD RD
BABCOCK RD
VANCE JACKSON
FRESNO ST
WEST AV
BANDERA
W Cheryl
Saint Cloud Rd
Huisache Ave
Bancroft

West Avenue Low Water Crossing

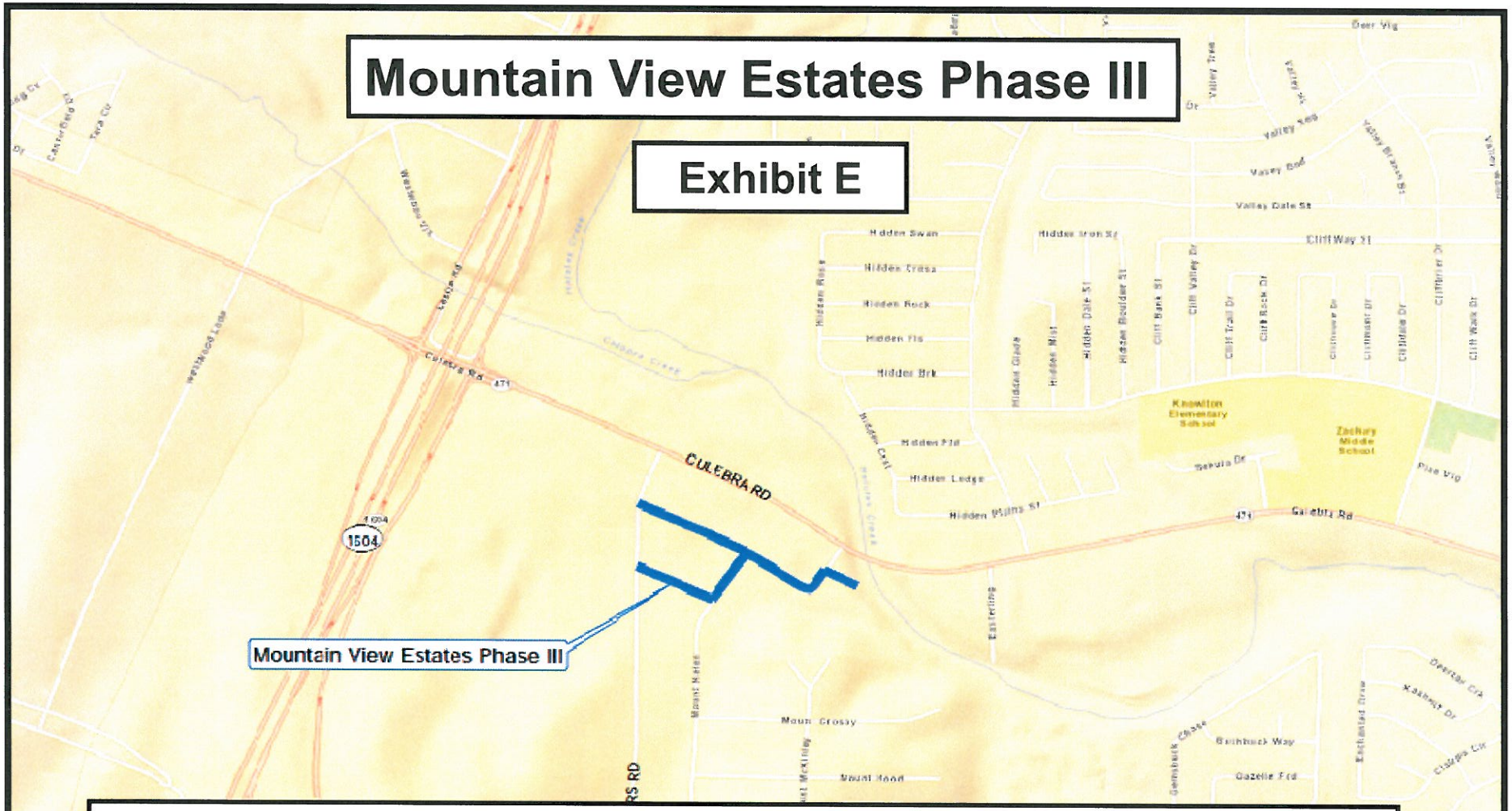


Eliminate the low water crossing northeast of Nakoma and reconstruct roadway as needed.

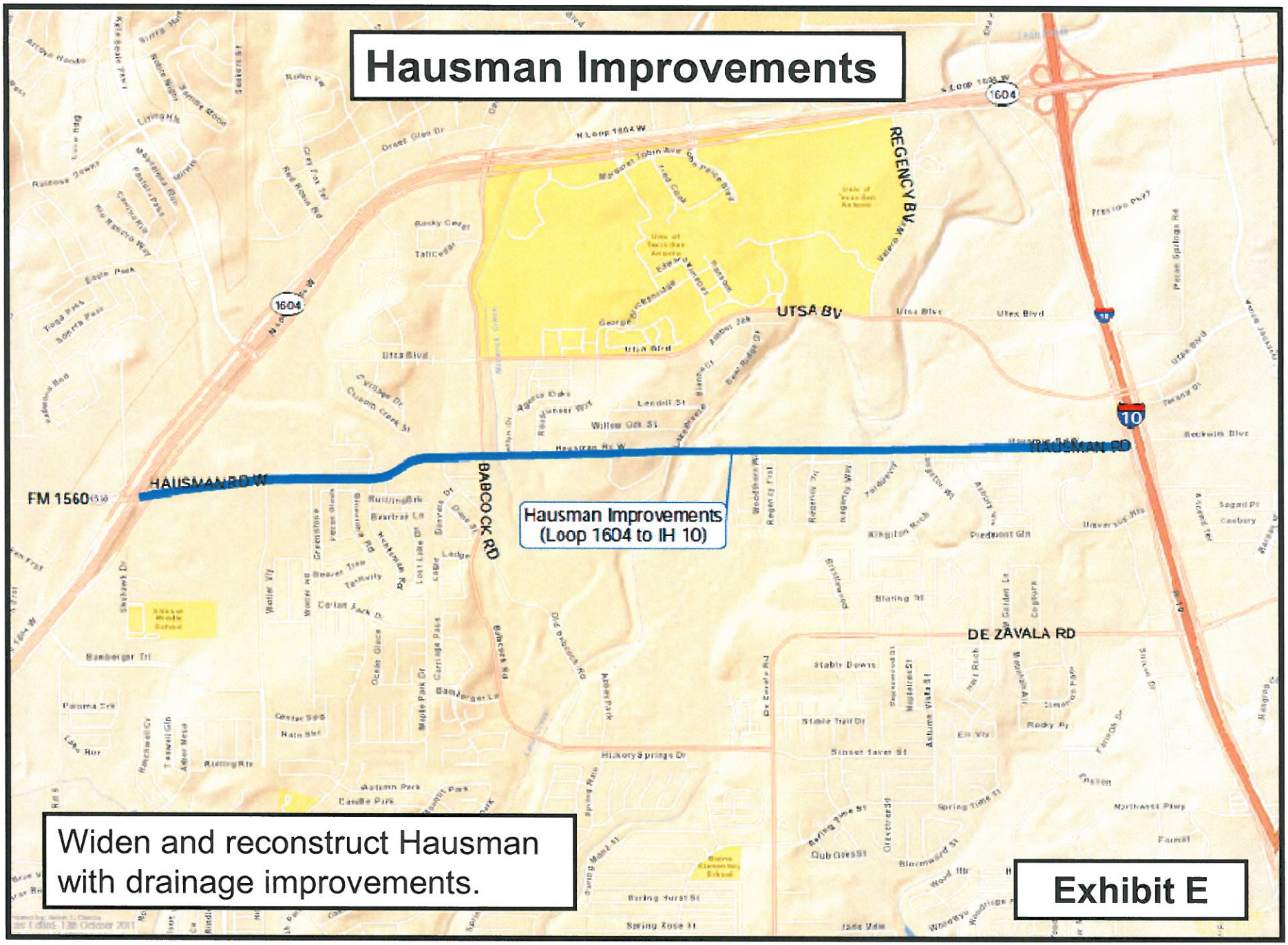
Exhibit E

Mountain View Estates Phase III

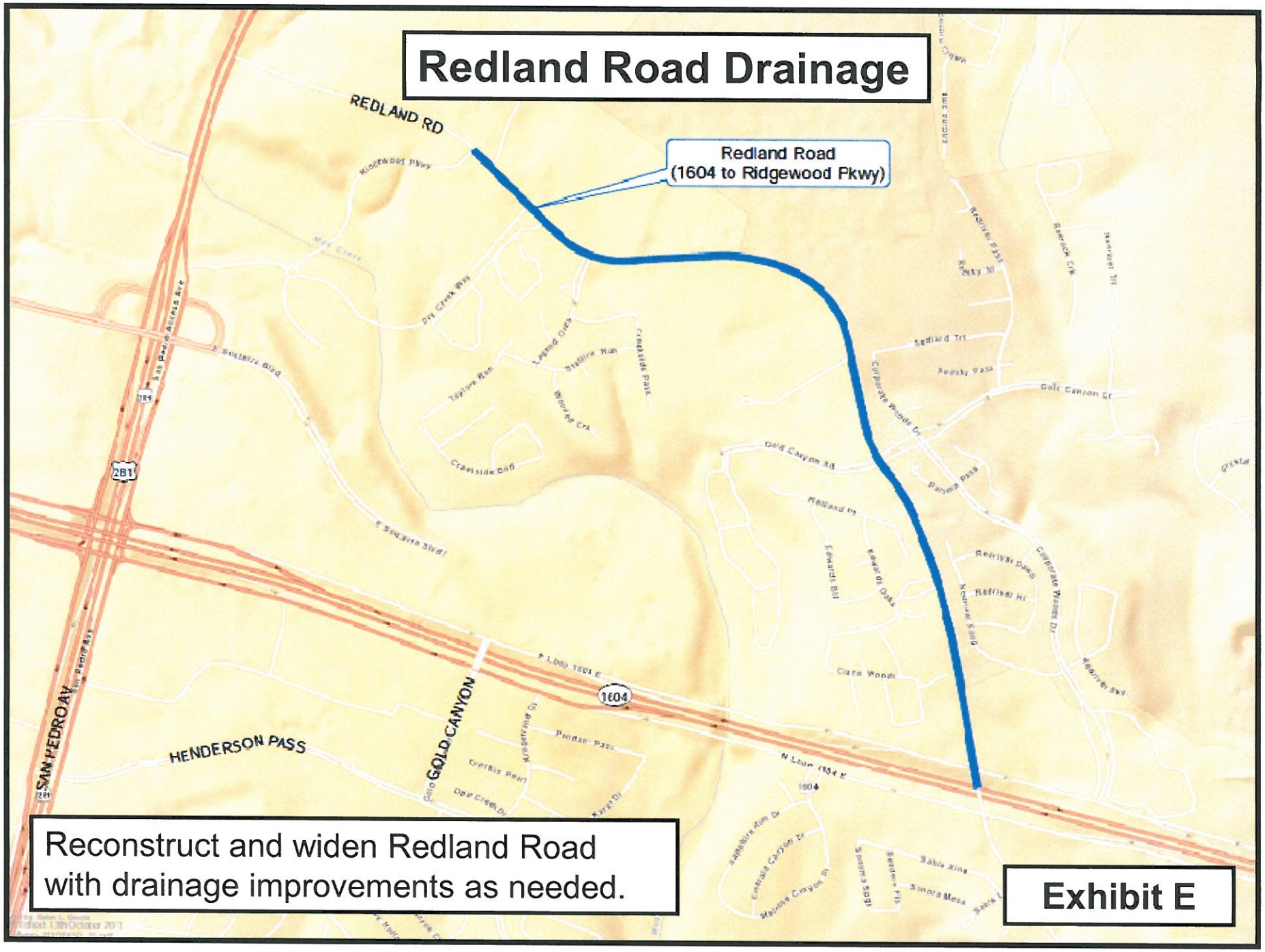
Exhibit E



Install an underground drainage system that ties into an existing system on Rogers Road and outfall into a tributary of Culebra Creek to resolve flooding issues in the Mountain View Estates area. This project is a complement of Phase I and Phase II that are presently under design and funded for construction via the Regional Storm Water Facilities Fund.


Hausman Improvements
HAUSMAN RD W
FM 1560
BABCOCK RD
Hausman Improvements
(Loop 1604 to IH 10)
HAUSMAN RD
REGENCY BV
UTSA BV
DE ZAVALA RD
1604
10
Widen and reconstruct Hausman with drainage improvements.
Exhibit E

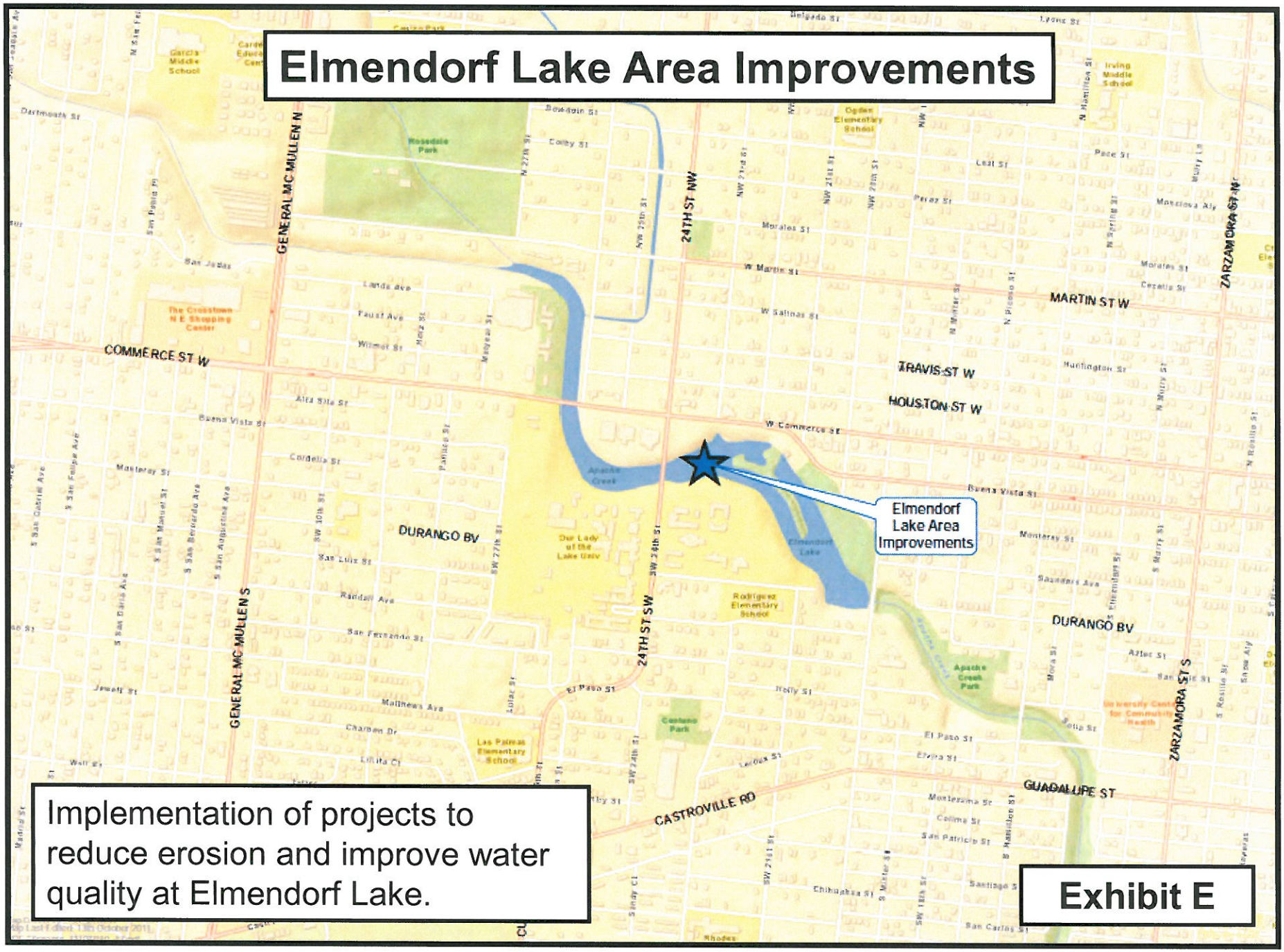
Redland Road Drainage



Reconstruct and widen Redland Road with drainage improvements as needed.

Exhibit E

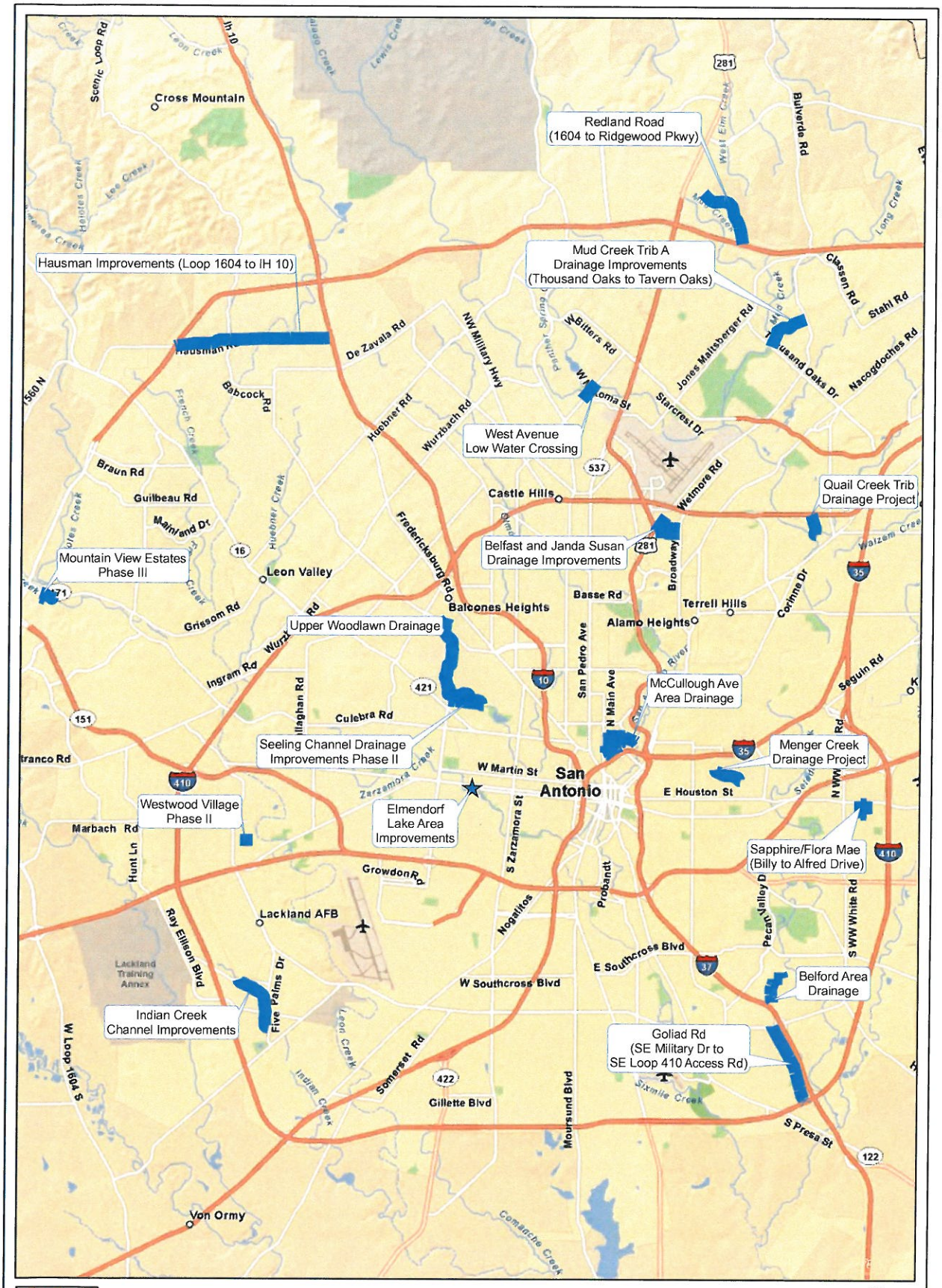
Elmendorf Lake Area Improvements



Implementation of projects to reduce erosion and improve water quality at Elmendorf Lake.

Exhibit E

EXHIBIT F



Data Source: City of San Antonio Enterprise GIS, Bexar Metro 911, Bexar Appraisal District

"This Geographic Information Systems Product, received from the City of San Antonio is provided "as-is" without warranty of any kind, and the City of San Antonio expressly disclaims all express and implied warranties, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. The City of San Antonio makes no warranty, guarantee, or make any representation regarding the use, or the results of the use, of the information provided to you by the City of San Antonio in terms of correctness, accuracy, reliability, timeliness or otherwise. The entire risk as to the results and performance of any information obtained from the City of San Antonio is entirely assumed by the recipient."

"Please contact the responsible Central San Antonio Department for specific determinations."

Map Created by: Belen L. Garcia

Map file location: \\sccommon\Land\GIS\Technical Services Class\GIS\PROJECTS\DRAINAGE\TOP\2012_Bond\CommittedRequest\Drainage\Drainage_AMSI_B.mxd

Map Last Edited: 17th October 2011

PDF Filename: 1110TB09.pdf

Drainage Drainage

Exhibit F

City of San Antonio

Staff Recommended
2012- 2017 Projects, Drainage

1 inch = 10,500 feet

0 2,500 5,000 10,000 Feet

N W E S 1:126,000

City of San Antonio
Capital Improvements
Management Services
Technical Services
Director Mike Frisbie, P.E.
Municipal Plaza Building
114 West Commerce Street
San Antonio, TX 78205

EXHIBIT G

EXHIBIT G

Resident Comments and/or Requests				
District	Citizen's Name	Project Name	Summary of Comments	From Meeting or Project Request Form
7	Henrietta LaGrange (Mulberry Girls)	Seeling Channel Linear Park	Citizen would like to see a linear park included in the Seeling Channel Phase II project to promote health and wellness.	Meeting
7	Carmen De La Rosa	Longfellow Middle School Drainage Project	Citizen would like to see improvements made to the drain at Longfellow Middle School. Citizen request that there be a cover put over the drain for safety reasons.	Meeting
7	Bianca Maldonado	Seeling Channel Phase II Upper Woodlawn Drainage	Citizen supports the Seeling Channel Phase II Project. Citizen supports the Upper Woodlawn Drainage Project. Citizen emphasized the I-10/ Loop 410 Interchange water ends up in the Woodlawn Lake Area.	Meeting
7	Ed Garza	Lee's Creek Wilson Boulevard	Citizen requested $2 million for the Lee's Creek watershed to compliment for the SAISD Bond Program. Citizen mentioned that the drain at Lee's Creek divides Longfellow Middle School. Citizen requested $1 million for Wilson Boulevard to compliment for the SAISD Bond Program. Citizen stated that the street is in the flood plain and the flooding affects the new track they are building in the SAISD Bond Program.	Meeting
6	Lauro DeLeon	Acuna Project	Citizen is requesting a drainage project in the Acuna Area. Citizen stated that flooding occurs in the neighborhood backyards causing a safety hazard. The citizen stated the safety hazard occurs when fire trucks are unable to enter the alleys during flooding.	Meeting
6	Manuel Garza	Acuna Project	Citizen requesting support for the Acuna Project	Meeting
2	Juan Zapata	Sapphire Project	Citizen was in support of the Sapphire Project. Citizen stated when flooding occurs, water remains for 3 weeks, including extreme flooding will enter homes of residents. Citizen mentioned large drainage in close proximity and mentioned possibly connecting to those drains to prevent neighborhood flooding.	Meeting