8.0 RECOMMENDED IMPROVEMENTS

8.1 Current Status of Projects Identified Since 2009

This SMP Update summarizes the results of the re-evaluation of the projects in the 2009 SMP and identification of new projects not in the 2009 SMP. Specifically, this update identifies a project as being in one of the these categories:

- New. These projects have been identified since 2009 and have been discussed in Section 3.
- Completed/Completed Revised. The 2009 project has been completed, either in the form as envisioned in 2009 or in some alternative form developed through further study.
- Revised, Partially Complete. The 2009 project has been partially completed and is included in this SMP Update in a revised form from that envisioned in 2009.
- Revised, Alternative. The 2009 project is included in this SMP Update in the form of an alternative solution.
- No Change Since 2009 SWMP. The 2009 project is included in this SMP Update in essentially the same form as envisioned in 2009.
- Alternative Funding Being Sought. These projects are typically sited within rights-of-way associated with other funding agencies (e.g., TxDOT, EPCWCID No. 1, etc.), and alternative funding is being sought. These projects are included in the prioritized list of projects for funding.
- Not in EPWater Jurisdiction. These projects are not located within the jurisdiction of EPWater and are not included in the prioritized list for funding. These include projects sponsored by EPCWID No. 1 (Montoya Drain or Mesa Drain-related projects) or selected TXDOT projects (MV6, NW8, WC7). EPWater may provide partial funding for these projects in partnership with these agencies.
- New Projects Identified in Technical Memorandum No. 3, Stormwater Master Plan (MCi, 2021). These include projects CE6A, CE6B, EA11, MidV8, MidV9, and MidV10.

Table 8-1 provides a list of the 2009 projects plus new projects and assigns each project to one of the above categories.

8.2 Current Project Descriptions and Costs

Each of the 2009 projects and the new projects in Table 8-1 were reviewed by EPWater and: 1) the project description was updated to reflect the current project concept; 2) the project figure was updated to reflect the current project concept; and 3) project costs were updated. Project costs were updated as discussed in Section 8.4. The

highlighted column shows which projects are in EPWater's jurisdiction and are not included in the final list of projects prioritized for funding.

Table 8-2 provides a summary by project of issues addressed by the project, a project description, and 2018 estimated construction costs. The highlighted rows identify projects for which EPWater is seeking alternative funding (e.g., TXDOT) to fully or partially fund the project. These projects are included in the final list of projects prioritized for funding.

Figure 8-1 provides an overview of projects located within the Central Region. Figures 8-1-1 through 8-1-7 provide figures for the individual projects in the Central Region.

Figure 8-2 provides an overview of projects located within the East Side Region. Figures 8-2-1 through 8-2-11 provide figures for the individual projects in the East Side Region.

Figure 8-3 provides an overview of projects located within the Mission Valley Region. Figures 8-3-1 through 8-3-11 provide figures for the individual projects in the Mission Valley Region.

Figure 8-4 provides an overview of projects located within the Northeast Region. Figures 8-4-1 through 8-4-8 provide figures for the individual projects in the Northeast Region.

Figure 8-5 provides an overview of projects located within the Northwest Region. Figures 8-5-1 through 8-5-14 provide figures for the individual projects in the Northwest Region.

Figure 8-6 provides an overview of projects located within the West Central Region. Figures 8-6-1 through 8-6-7 provide figures for the individual projects in the West Central Region.

Figure 8-7 provides an overview of projects located within the Mid-Valley Region. Figures 8-7-1 through 8-7-7 provide figures for the individual projects in the Mid-Valley Region.

8.3 Current Projects Located Outside of EPWater Jurisdiction

The projects in Table 8-3 are those that are not located in the jurisdiction of EPWater. As with the projects in Table 8-2, each of the projects in Table 8-3 was reviewed by EPWater and: 1) the project description was updated to reflect the current project concept; 2) the project figure was updated to reflect the current project concept; and 3) project costs were updated as discussed in Section 8.4.

8.4 Discussion of Cost Basis for Projects

The costs in Tables 8-2 and 8-3 were derived as follows:

- Projects that were included in the 2017-2018 prioritization process with the Master Plan Update Focus Group (as described in Chapter 7) have the same costs as presented in that process. In general, these costs derived from the costs presented for the same projects in the 2009 SMP by 30% to account for changes in the Consumer Price Index (CPI).
- Several projects in the 2018 table have been divided into phases in Tables 8-1 through 8-3. These projects include NW11, NW13, NW14, and NW15. The project costs for each of these phases were derived by reviewing the detailed costing provided in the 2009 SMP and assembling the 2009 costs associated with each phase. These costs were then increased by 30% to be consistent with other projects conceived in the 2018 Draft SMP Update.
- Projects MV1, MV6, MV8, MV10, MV12, and WC7 (all of which seek alternative funding) are included in the 2021 SMP Update based upon full 2018 planning costs or full 2009 SMP costs increased by 30%. The extent of available alternative funding is not known at this time.
- Project MV2 was divided into three phases with the cost of each phase estimated per the discussion for NW projects above.
- Several projects were included in the 2009 SMP but not reviewed by the Focus Group in 2017-2018. In the review for this SMP Update, a decision was made to re-introduce these projects into the SMP. These include MidV7 (referred to as MV13 in the 2009 SMP), NE5, NW18, WC6A, WC6B, WC6C, WC7, and WC8. The costs for these projects were derived from the 2009 SMP, increased by 30% or (as with NW18) based upon more recent project formulation and cost estimates.
- The cost for project NW3 was based upon a revised (since 2009) project concept and approximate pump station costs estimated from a previous study.
- The new projects identified in Technical Memorandum No. 3 of the Stormwater Master Plan for the Mid Valley Region (MCi, 2021) have construction cost estimates taken directly from the memorandum. These projects include CE6A, CE6B, EA11, MidV8, MidV9, and MidV10.

Table 8-1. List of Projects

Project No.	Project Name	Project Description	System	Not in 2009 SWMP	Com-pleted	Complete Revised	Revised Partially Complete	Revised, Alternative, Not Started	No Change Since 2009 SWMP	Alternative Funding Sought	Not Reviewed by FG[(1)]	Delete	Not in EPWater Juris-diction
CE Dam 2	Dam 2 Morehead	Upgrade dam to meet TCEQ requirements	Magnolia	X									
CE Dam 4	Dam 4 Memphis	Upgrade dam to meet TCEQ requirements	Magnolia						X				
CE Dam 6	Dam 6 Scenic	Upgrade dam to meet TCEQ requirements	Magnolia	X									
CE Dam 7	Dam 7 Tremont	Upgrade dam to meet TCEQ requirements	Magnolia						X				
CE Dam 8	Dam 8 Murchison	Upgrade dam to meet TCEQ requirements	Dallas	X									
CE Dam 9	Dam 9	Upgrade dam to meet TCEQ requirements	Dallas		X								
CE Dam 10	Dam 10 Cliff	Upgrade dam to meet TCEQ requirements	Dallas						X				
CE 1	Government Hills Channel Improvements	Expand the street inlets at Altura, Hastings, Cambridge and Cumberland	Government Hills		X								
CE2	Government Hills Channel Improvements	Enlarge culverts at Cambridge, Cumberland, Chester and Trowbridge	Government Hills			X							
CE3	Government Hills Conduit	Pressurize conduit to increase capacity, install automatic gate at Rio Grande	Government Hills					X					
CE4A	Magnolia Pond (Houston School Ball Field)	Expand Magnolia Pond	Magnolia				X						
CE4B	Gateway Ponds Drain System (Pump Station)	Construct Gateway Pond dewatering pump station and discharge header to the existing Cebada conduit	Cebada				X						
CE4C	Cebada Pump Station Wet Well Improvements	Add mechanical bar screen to remove debris from the existing wet well	Cebada				X						
CE5A	Dallas PS	Modify existing street inlets, design/construct new inlet to the existing Dallas basins, and start land acquisition process for a new 43 ac-ft basin	Dallas				X	X					
CE5B	Dallas Basin	Buy land and build new basin to connect to existing Dallas PS basins, including new inlets, and install one new pumping unit at Dallas PS	Dallas				X	X					
CE5C	Cypress PS by River to Complete Dallas Water-shed Improvements	Complete phased construction of new basin to connect to existing Dallas PS basins; also build new Cypress PS facility by river	Dallas				X						
CE6A	Altura Avenue Drainage Improvements	Extend existing storm drain system on Altura Avenue 150 LF towards Boone Street with 36-inch pipe and install new 36-inch storm drain pipe at intersection of Boone Street and Altura Avenue to existing system under Boone Street	Government Hills	X							X		
CE6B	Montana Avenue Drainage Improvements	Install approx. 500 LF of new 24-inch storm drain at the intersection of Montana Avenue and Houston Street tying back into channel	Government Hills	X							X		
EA1A	Fort Bliss Spur Drain	Install culverts at four crossings	Phelps Dodge						X				
EA1B	Fort Bliss Spur Drain	Install drain system on Cielo Vista Drive	Phelps Dodge						X				
EA2	Sunmount Channel	Expand existing drain to add 20 ac-ft of storage	Phelps Dodge						X				

Project No.	Project Name	Project Description	System	Not in 2009 SWMP	Com-pleted	Complete Revised	Revised Partially Complete	Revised, Alternative, Not Started	No Change Since 2009 SWMP	Alternative Funding Sought	Not Reviewed by FG[(1)]	Delete	Not in EPWater Juris-diction
EA2 Alternate	Sunmount Channel	Alternate - Enclose drain using an underground storage system to utilize as park space; or install 10-10x10 CBC along 900 ft of drain OR install underground large span crossing	Phelps Dodge					X					
EA3A	Lorne Channel - (Ph I)	Increase channel capacity down to retention basin	Phelps Dodge						X				
EA3B	Lorne Channel - (Ph II)	Add storm drain system within streets to reduce street flooding issues	Phelps Dodge						X				
EA4A	Album Park-Pond Expansion	Expand 85 ac-ft capacity to Album Park	Phelps Dodge						X				
EA4B	Wedgewood Storm Drain	Install Wedgewood Storm Drain	Phelps Dodge						X				
EA4C	Zanzibar Storm Drain	Install Zanzibar Storm Drain	Phelps Dodge						X				
EA4D	Ballymonte & Orkney Storm Drain	Install Ballymonte and Orkney Storm Drain	Phelps Dodge						X				
EA5	Upgrade Eastwood Dam	Upgrade Eastwood Dam to meet TCEQ requirements	Mesa Drain Upstream					X					
EA6A	Sam Snead Drive	Construct Sam Snead Storm Drain System (Pico Norte to Lee Trevino)	Lomaland Basin					X					
EA6B	Sam Snead Drive	Construct Sam Snead Storm Drain System (Lee Trevino to Dan Sikes)	Lomaland Basin					X					
EA6C	Sam Snead Drive	Construct Sam Snead Storm Drain System (Lee Trevino from Sam Snead to Amy Sue)	Lomaland Basin					X					
EA6D	Sam Snead Drive	Construct Sam Snead Storm Drain System (Frank Beard from Sam Snead to Anise)	Lomaland Basin					X					
EA6E	Sam Snead Drive	Construct Sam Snead Storm Drain System (Octubre Drive from Sam Snead to Montwood)	Lomaland Basin					X					
EA6F	Bywood Drive	Construct Bywood Drive storm drain system from Fierro Drive to Lee Trevino, 48-inch and 60-inch RCP, 7'x7' CBC, with cross-street trench drains at all intersecting streets and along Bywood Drive	Lomaland Basin					X					
EA6I	Eads Place	Storm drain system consisting of 9' x 9' CBC & cross street trench drains along Eads Pl. to handle flows from surrounding residential areas. Eads Pl to Pebble Hills Blvd.	Lomaland Basin					X					
EA6J	Ashwood Drive	Storm drain system consisting of 9-foot by 5-foot CBC to handle flows from surrounding residential areas	Lomaland Basin					X					
EA6K	Ashwood Drive	Storm drain system consisting of 66-inch RCP to handle flows from surrounding residential areas	Lomaland Basin					X					
EA7 Ph2	Rojas at Lee Trevino, Kaiser & GWW	Construct Ashwood Storm Drain Improvements (Yarbrough)	Lomaland Basin					X					
EA8A	Pullman Storm Drain	Construct Pullman Storm Drain	Americas Basin						X				
EA8B	Peter Cooper Storm Drain	Expand existing Peter Cooper Storm Drain	Americas Basin						X				

Project No.	Project Name	Project Description	System	Not in 2009 SWMP	Com-pleted	Complete Revised	Revised Partially Complete	Revised, Alternative, Not Started	No Change Since 2009 SWMP	Alternative Funding Sought	Not Reviewed by FG[(1)]	Delete	Not in EPWater Juris-diction
EA8C	Henry Brennan Storm Drain	Expand existing and add new Henry Brennan Storm Drain	Americas Basin						X				
EA8D	G. Dieter Storm Drain	Construct Dieter Storm Drain	Americas Basin						X				
EA8E	Zaragoza Storm Drain	Expand existing and add new Zaragoza Storm Drain	Americas Basin						X				
EA9A	SAC 1 - Detention/ Sediment Basin	Build sediment/detention basin upstream of Paseo del Este Drive	Americas Ten Basin					X	X				
EA9B	Concrete Line RV Channel	Concrete line RV Channel (20-ft bottom width, 4 ft depth; rectangular channel)	Americas Ten Basin					X	X				
EA10A	SAC 2 - Detention/ Sediment Basin	Build sediment/detention basin upstream of Paseo del Este Drive	Americas Ten Basin						X				
EA10B	Concrete Line Mercantile Channel	Concrete line Mercantile Channel (20-ft bottom width, 5 ft depth; rectangular channel)	Americas Ten Basin						X				
EA11	Avalon Drive Drainage Improvements	Install approximately 400 LF of 36-inch and 700 LF of 48-inch storm drain pipe connecting to existing system on Airway Boulevard	Cielo Vista	X							X		
MidV1	Clardy Fox Pump Station Improvement	Add pumps in empty bays and upgrade electrical service of Clardy Fox PS	Modesto	X									
MidV2	Clardy Fox Neighborhood Improvements	Improve neighborhood storm sewer system network	Mid Valley	X	X								
MidV3	Val Verde Drainage Improvements	Parallel conduit with Concepcion to create hydraulic network	Mid Valley	X								X	
MidV4	Coors Channel	New 8 ft x 4 ft concrete box culvert, pond with inlet and outlet	Mid Valley	X								X	
MidV5	Montview Pump Station and Basin Improvements	Expand an existing basin and add one new detention basin with interconnecting pipe and new pump station	Bassett	X									
MidV6	Bassett-Geronimo Improvements	Provide two new retention basins (~1.33 and ~1.25 acres) and new storm drain systems in the residential areas north of Bassett Place	Bassett	X									
MidV7	Basin A System	Reconstruct 36-inch existing storm drain	Basin A	X							X		
MidV8	Raynolds Street Drainage Improvements	New detention pond at La Luz Avenue with outlet tower, upsizing pipes to 48 and 60 inches, installing new drainage inlets along Raynolds Street, and new 48-inch pipe extending north to Hastings Drive	Loretto	X							X		
MidV9	Yandell Drive Drainage Improvements	Install 1200 LF of new 36-inch storm drain along Yandell Drive, tying into existing system located in Paisano Drive and extending to intersection with Argentina Street	Bassett	X							X		
MidV10	El Paso Drive Drainage Improvements	Upsize existing storm drain system located along El Paso Street to 36 inches	Bassett	X							X		
MV1	Upgrade Basin A Pump Station	Upgrade the existing pump station at Basin A by installing new pumps (525 cfs total capacity)	Basin A							X			

Project No.	Project Name	Project Description	System	Not in 2009 SWMP	Com-pleted	Complete Revised	Revised Partially Complete	Revised, Alternative, Not Started	No Change Since 2009 SWMP	Alternative Funding Sought	Not Reviewed by FG[(1)]	Delete	Not in EPWater Juris-diction
MV2A	Basin B Improvement (Vocational Pond)	Excavate and regrade the slope in Basin B so that water flows to the pump station, install new culverts	Basin A						X	X			
MV2B	New Basin B Pump Station	Install new pump station (165 cfs total capacity) and conduit in the portion of Basin B west of Mimosa Avenue to pump water to the Rio Grande River	Basin A							X			
MV2C	Expand Basin B Pump Station	Expand pump station by installing an additional 165 cfs pump and conduit	Basin A							X			
MV3	Featherlake II Improvements	Install auto-gates, 25 cfs pump station, two new concrete box culverts	Basin G						X				
MV4	Middle Drain Interceptor Storage	Excavate 115 ac-ft pond and culverts to divert Franklin Drain, put in auto-gates to Middle Drain Interceptor, and 25 cfs pump station to dewater pond	Basin G						X				
MV5B	Basin G Improvements	Upgrade PS to 820 cfs w/ new Rio Grande conduits - Proposed Land Acquisition from EPCWID	Basin G						X	X			
MV6	Alameda Drive Drainage Improvements	Install a storm drain system along the affected area of Alameda Drive that empties into Playa Drain just north of the intersection with Delta Drive	Basin A										X
MV7	Playa Drain Crossing at Yarbrough	Increase existing culvert capacity to two 5-ft x 5-ft concrete box culverts	Basin G						X				
MV8	Basin C Pump Station (Shawver Pond)	Install new pump station (160 cfs total capacity) and conduits at Basin C to pump water from basin to Rio Grande; excavate basin so it is 3 feet below channel elevation of Playa Drain; install new culverts under Independence Drive	Basin G							X			
MV9	Mesa Drain Storage	Construct parapet walls along channel from Le Barron to Featherlake, to include flap gates	Mesa Drain						X	X			X
MV10	Mesa Drain Improvements	Expand Mesa Drain 20 feet in width on south side of channel where feasible; line portions of channel with concrete that cannot be expanded and line 20 feet upstream of all crossings with concrete	Mesa Drain							X			
MV12	Americas Ten Basin Outfall	Reconstruct Americas Ten Basin outfall	Americas Ten Basin							X			
NE1	Railroad Drive Ditch Upstream Crossings	Replace five undersized crossing structures over Railroad Drive Ditch upstream of Railroad Drive	Fort Bliss Sump						X				
NE2	Concrete Line Railroad Drive Ditch	Concrete line Railroad Drive Ditch, increase capacity of existing ditch crossing, improve channel into Fort Bliss Sump	Fort Bliss Sump		Construct			X					
NE3A	Will Ruth Pond	Construct Will Ruth Pond to catch FP 15 midstream	Fort Bliss Sump					X					

Project No.	Project Name	Project Description	System	Not in 2009 SWMP	Com-pleted	Complete Revised	Revised Partially Complete	Revised, Alternative, Not Started	No Change Since 2009 SWMP	Alternative Funding Sought	Not Reviewed by FG[(1)]	Delete	Not in EPWater Juris-diction
NE3B	Alcan Pond	Construct Alcan Pond: new catch basin to capture FP15 upstream	Fort Bliss Sump					X					
NE4	Range Dam Outlet Channel	Increase crossing capacity over Range Dam Outlet Channel, improve junction of Range Dam Outlet Channel and Tobin Drain Channel	Fort Bliss Sump					X					
NE5	Clearview Channel	Increase capacity of two existing crossings, add new sediment basin	Fort Bliss Sump					X	X				
NE6	Johnson Channel	Install subsurface conduit from outfall to open channel	Fort Bliss Sump				X						
NE7C	Castner Range Sediment Basin	Construct sediment basin with 10-ft depth	Northeast Ponding						X				
NE7D	Castner Range Detention Basin (if needed after construction of NE7 Ph 3)	Add detention to sediment basin if appropriate	Northeast Ponding						X				
NE8	Electric Ditch Improvements	Construct improvements to Electric Ditch	Range Dam		X								
NE9	Northgate Diversion Channel	Place RCP culverts to divert Flowpath from Northgate Diversion Channel to Northgate Dam	Range Dam						X				
NW1	Doniphan Ditch Improvements	Improve crossing capacity	Doniphan Ditch		X								
NW2	Construct Sediment Basin	Phase 2: construct sediment basin	Doniphan Ditch					X					
NW3	Doniphan System PS Improvements	Construct new larger capacity Doniphan Pump Station to replace PS1, with new force main directly to the Rio Grande. Install new catch basin with mechanical bar screen upstream of PS2.	Doniphan Ditch					X		X			
NW4	Flow Path No. 38	Replace three undersized culvert crossings at Playa del Sol, Corona del Sol, and Villa del Sol	Flow Path						X				
NW5	Flow Path No. 39A Detention	Construct FP39 Dam/ sediment basin; 2 small detention ponds, Resler Drive culvert improvement	Flow Path					X					
NW6	Flow Path No. 40	FP40 Dam; build sediment and detention basin	Flow Path						X				
NW7	Arroyo 4 (Study in-house)	Slipline existing storm drain, construct detention basin	Keystone Dam					X					
NW8	Arroyo 5 Culvert Replacement	Replace culvert under Mesa Street onto Resler Canyon	Keystone Dam						X	X			X
NW9	Arroyo 1 - Detention Improvements	Construct new debris and volume dam to prevent breach of existing channel	Keystone Dam					X					
NW10	Ridge View Channel	Construct improvements to Ridge View Channel	Keystone Dam			X					X		
NW11A	Ojo de Agua Arroyo (Upstream Sediment Basin)	Build sediment basin upstream at Via Serena	Keystone Dam						X				
NW11B	Ojo de Agua Arroyo (Upstream Sediment Basin)	Add culvert at Via Descanso Drive (culvert may not be needed upon completion of sediment basin)	Keystone Dam						X				

Project No.	Project Name	Project Description	System	Not in 2009 SWMP	Com-pleted	Complete Revised	Revised Partially Complete	Revised, Alternative, Not Started	No Change Since 2009 SWMP	Alternative Funding Sought	Not Reviewed by FG[(1)]	Delete	Not in EPWater Juris-diction
NW11C	Ojo de Agua Arroyo (Upstream Sediment Basin)	Add culvert at Loma de Cristo Drive (culvert may not be needed upon completion of sediment basin)	Keystone Dam						X				
NW11D	Ojo de Agua Arroyo (Upstream Sediment Basin)	Add culvert at Westwind Drive (culvert may not be needed upon completion of sediment basin)	Keystone Dam						X				
NW12	Doniphan Ditch Improvements	Construct improvements to Doniphan Ditch	Montoya Drain							X		X	
NW13A	Montoya Drain - Lombardy Avenue Culvert Replacement	Replace culvert at Lombardy Avenue	Montoya Drain							X			X
NW13B	Montoya Drain - Upper Section Sunset Road Culvert Replacement	Replace culvert at Sunset Road	Montoya Drain							X			X
NW13C	Montoya Drain - Upper Section Mulberry Avenue Culvert Replacement	Replace culvert at Mulberry Avenue	Montoya Drain							X			X
NW14A	Montoya Drain - Middle Section Turnstone Bridge Replacement	Replace Bridge at Turnstone	Montoya Drain							X			X
NW14B	Montoya Drain - Middle Section Bridge Replacement	Replace Bridge	Montoya Drain							X			X
NW14C	Montoya Drain - Middle Section Bridge Replacement	Replace Bridge	Montoya Drain							X			X
NW14D	Montoya Drain - Middle Section River Bend Drive Channel Improvements	Extend channel from 600 ft downstream of Turnstone Drive to 800 ft downstream of Frontera Road	Montoya Drain							X			X
NW15A	Montoya Drain - Lower Section Sunland Park Drive Culvert Replacement	Replace culvert crossing at Sunland Park	Montoya Drain							X			X
NW15B	Montoya Drain - Lower Section Culvert Replacement	Replace culvert crossing	Montoya Drain							X			X
NW15C	Montoya Drain - Lower Section Culvert Replacement	Replace culvert crossing	Montoya Drain							X			X
NW15D	Montoya Drain - Lower Section Channel Improvements	Extend channel from 800 ft downstream of Frontera Road to Rio Grande	Montoya Drain							X			X
NW15E	Montoya Drain - Lower Section Rio Grande Automatic Gate	Add automatic gate at Rio Grande	Montoya Drain							X			X

Project No.	Project Name	Project Description	System	Not in 2009 SWMP	Com-pleted	Complete Revised	Revised Partially Complete	Revised, Alternative, Not Started	No Change Since 2009 SWMP	Alternative Funding Sought	Not Reviewed by FG[1]	Delete	Not in EPWater Juris-diction
NW16	White Spur Drain - Upstream	Expand channel from Village Courtt to Doniphan Drive	Montoya Drain					X					
NW17	White Spur Drain improvements	Increase capacity of two crossings	Montoya Drain		X								
NW18	Mesa Hills Channel Improvements	Construct improvements to Mesa Hills Channel	Oxidation Dam						X		X		
NW19	Silver Springs Dam	Construct new dam/sediment basin	Oxidation Dam		X								
NW26	New Montoya Drain Wetland	Acquire land, construct permanent wetland, install storm drain system to Doniphan Drive, construct pipeline to Doniphan Pump Station, and build new pump station to control flood levels	Montoya Drain	X				X		X			
WC1	Canterbury Channel	Construct debris basin and build check-dams along arroyo	West Central						X				
WC2	Flowpath 20 Detention	Construct detention	West Central			X							
WC3	Flow Path No. 20	Widen channel at downstream at Paisano and replace bridge	West Central System						X				
WC4	Flow Path No. 21	Build detention basin on EPWater land on O'Keefe	West Central					X					
WC5	Flow Path No. 21	Extend existing siphon to the river	West Central						X				
WC6A	Flow Path No. 23 Detention, Palisades	Improve existing dam, build new basin	West Central					X					
WC6B	Flow Path No. 23 Channel Improvements	Improve channel upstream of Hwy 20	West Central						X	X			
WC6C	Flow Path No. 23 Crossing Improvements	Improve two crossings, University Avenue and Oregon Street	West Central						X				
WC7	Flow Path No. 23 Crossing Improvements	Improve three crossings, CanAn Hwy 85	West Central							X			X
WC 8	New Sediment Basin	Construct new sediment basin	West Central						X				

(1) FC = Focus Group from 2017-2018.

Table 8-2. Issues to be Addressed by Projects

Project No.	Figure	Region	System	Project Name	Issue to be Addressed	Project Description	2018 Estimated Construction Cost	Alternate Funding Sought?
CE Dam 2	8-1-2	Central	Magnolia	Dam 2 Morehead	Dam inside private property	Upgrade dam to meet TCEQ requirements	$750,000	
CE Dam 10	8-1-1	Central	Dallas	Dam 10 Cliff	Dam does not meet TCEQ standards	Upgrade dam to meet TCEQ requirements	$600,000	
CE Dam 4	8-1-2	Central	Magnolia	Dam 4 Memphis	Dam does not meet TCEQ standards	Upgrade dam to meet TCEQ requirements	$400,000	
CE Dam 6	8-1-2	Central	Magnolia	Dam 6 Scenic	Dam does not meet TCEQ standards	Upgrade dam to meet TCEQ requirements	$600,000	
CE Dam 7	8-1-2	Central	Magnolia	Dam 7 Tremont	Dam does not meet TCEQ standards	Upgrade dam to meet TCEQ requirements	$600,000	
CE Dam 8	8-1-1	Central	Dallas	Dam 8 Murchison	Dam does not meet TCEQ standards	Upgrade dam to meet TCEQ requirements	$600,000	
CE3	8-1-3	Central	Government Hills	Government Hills Conduit	The Government Hills System consists of a 90-inch pressurized conduit that outfalls into the Rio Grande. The design capacity is 375 cfs but has been reduced to 50 cfs. The reduction in flow is a direct result of multiple tie-ins along the system which cause localized flooding along minor tie-ins.	Pressurize conduit to increase capacity, install automatic gate at Rio Grande	$2,500,000	
CE4A	8-1-4	Central	Magnolia	Magnolia Pond (Houston School Ball Field)	Conveyance problems through Cebada Reservoir and Magnolia systems cause major flooding on IH-10 and on Cebada Road.	Expand Magnolia Pond	$7,200,000	
CE4B	8-1-4	Central	Cebada	Gateway Ponds Drain System (Pump Station)	Dewatering of gateway ponds to maintain full capacity of the pond system to handle large rain events / back to back storms.	Construct Gateway Pond dewatering pump station and discharge header to the existing Cebada conduit	$7,200,000	
CE4C	8-1-4	Central	Cebada	Cebada Pump Station Wet Well Improvements	To improve personnel safety and operational efficiency, provide a mechanical means to remove debris from the wet well	Add mechanical bar screen to remove debris from the existing wet well.	$9,500,000	
CE5A	8-1-5	Central	Dallas	Dallas PS	Significant inland flooding occurs along Missouri Avenue across from (upstream of) existing Dallas PS basins and cannot effectively and expeditiously outfall into existing Dallas PS basins	Modify existing street inlets, design/construct new inlet to the existing Dallas basins, and start land acquisition process for a new 43 ac-ft basin	$135,000	
CE5B	8-1-5	Central	Dallas	Dallas Basin	Continuing from CE5A to ultimately handle and control inland flooding just north of existing Dallas PS, construction activities will continue, including new pond construction and additional pump capacity at Dallas PS to handle additional flow	Buy land and build new basin to connect to existing Dallas PS basins, including new inlets, and install one new pumping unit at Dallas PS	$7,522,081	
CE5C	8-1-5	Central	Dallas	Cypress PS by River to Complete Dallas Water-shed Improvements	Project addresses the City's interior drainage limitations that historically cause widespread interior flooding in the southern areas of the watershed.	Complete phased construction of new basin to connect to existing Dallas PS basins; also build new Cypress PS facility by river	$12,767,000	
CE6A	8-1-6	Central	Government Hills	Altura Avenue Drainage Improvements	Area experiences flooding	Extend existing storm drain system on Altura Avenue 150 LF towards Boone Street with 36" pipe and new 36" storm drain pipe at intersection of Boone Street and Altura Avenue to existing system under Boone Street	$250,000	
CE6B	8-1-7	Central	Government Hills	Montana Avenue Drainage Improvements	Area experiences flooding	Install approx. 500 LF of new 24-inch storm drain at the intersection of Montana Avenue and Houston Street tying back into channel	$220,000	
EA1A	8-2-1	East Side	Phelps Dodge	Fort Bliss Spur Drain	Undersized culvert crossings, street flows travel too far over flat slopes causing flooding.	Install culverts at four crossings	$1,650,000	
EA1B	8-2-1	East Side	Phelps Dodge	Fort Bliss Spur Drain	Undersized culvert crossings, street flows travel too far over flat slopes causing flooding.	Install drain system on Cielo Vista Drive	$8,500,000	
EA2	8-2-2	East Side	Phelps Dodge	Sunmount Channel	Undersized culvert crossing.	Expand existing drain to add 20 ac-ft of storage	$900,000	

Project No.	Figure	Region	System	Project Name	Issue to be Addressed	Project Description	2018 Estimated Construction Cost	Alternate Funding Sought?
EA2 Alternate	8-2-2	East Side	Phelps Dodge	Sunmount Channel	Undersized culvert crossing.	Alternate - Enclose drain using an underground storage system to utilize as park space; or install 10-10x10 CBC along 900 ft of drain OR install underground large span crossing	$5,000,000	
EA3A	8-2-3	East Side	Phelps Dodge	Lorne Channel - (Ph I)	Undersized channel and flooding problems upstream of channel.	Increase channel capacity down to retention basin	$1,100,000	
EA3B	8-2-3	East Side	Phelps Dodge	Lorne Channel - (Ph II)	Undersized channel and flooding problems upstream of channel.	Add storm drain system within streets to reduce street flooding issues	$5,460,000	
EA4A	8-2-4	East Side	Phelps Dodge	Album Park-Pond Expansion	Street flows travel too far over flat slopes causing flooding, street closures and damage.	Expand 85 ac-ft capacity to Album Park	$9,500,000	
EA4B	8-2-4	East Side	Phelps Dodge	Wedgewood Storm Drain	Street flows travel too far over flat slopes causing flooding, street closures and damage.	Install Wedgewood Storm Drain	$1,500,000	
EA4C	8-2-4	East Side	Phelps Dodge	Zanzibar Storm Drain	Street flows travel too far over flat slopes causing flooding, street closures and damage.	Install Zanzibar Storm Drain	$1,500,000	
EA4D	8-2-4	East Side	Phelps Dodge	Ballymonte & Orkney Storm Drain	Street flows travel too far over flat slopes causing flooding, street closures and damage.	Install Ballymonte and Orkney Storm Drain	$2,500,000	
EA5	8-2-5	East Side	Mesa Drain Upstream	Upgrade Eastwood Dam	Street flows flooding at Interstate crossing.	Upgrade Eastwood Dam to meet TCEQ requirements	$2,500,000	
EA6A	8-2-6	East Side	Lomaland Basin	Sam Snead Drive	Street flows travel too far over flat slopes causing flooding, street closures, and damage.	Construct Sam Snead Storm Drain System (Pico Norte to Lee Trevino)	$4,532,000	
EA6B	8-2-6	East Side	Lomaland Basin	Sam Snead Drive	Street flows travel too far over flat slopes causing flooding, street closures, and damage.	Construct Sam Snead Storm Drain System (Lee Trevino to Dan Sikes)	$3,922,000	
EA6C	8-2-6	East Side	Lomaland Basin	Sam Snead Drive	Street flows travel too far over flat slopes causing flooding, street closures, and damage.	Construct Sam Snead Storm Drain System (Lee Trevino from Sam Snead to Amy Sue)	$5,600,000	
EA6D	8-2-6	East Side	Lomaland Basin	Sam Snead Drive	Street flows travel too far over flat slopes causing flooding, street closures, and damage.	Construct Sam Snead Storm Drain System (Frank Beard from Sam Snead to Anise)	$3,284,000	
EA6E	8-2-6	East Side	Lomaland Basin	Sam Snead Drive	Street flows travel too far over flat slopes causing flooding, street closures, and damage.	Construct Sam Snead Storm Drain System (Octubre Drive from Sam Snead to Montwood)	$2,928,000	
EA6F	8-2-6	East Side	Lomaland Basin	Bywood Drive	Street flows travel too far over flat slopes causing flooding, street closures, and damage.	Construct Bywood Drive Storm drain System from Fierro Drive to Lee Trevino, 48-inch and 60-inch RCP, 7'x7' CBC, with cross-street trench drains at all intersecting streets and along Bywood Drive	$2,207,500	
EA6I	8-2-6	East Side	Lomaland Basin	Eads Place	Street flows travel too far over flat slopes causing flooding, street closures, and damage.	Storm drain system consisting of 9' x 9' CBC & cross street trench drains along Eads Pl. to handle flows from surrounding residential areas. Eads Pl to Pebble Hills Blvd.	$9,962,138	
EA6J	8-2-6	East Side	Lomaland Basin	Ashwood Drive	Street flows travel too far over flat slopes causing flooding, street closures, and damage.	Storm drain system consisting of 9-foot by 5-foot CBC to handle flows from surrounding residential areas	$8,070,200	
EA6K	8-2-6	East Side	Lomaland Basin	Ashwood Drive	Street flows travel too far over flat slopes causing flooding, street closures, and damage.	Storm drain system consisting of 66-inch RCP to handle flows from surrounding residential areas	$5,389,800	
EA7 Ph2	8-2-7	East Side	Lomaland Basin	Rojas at Lee Trevino, Kaiser & GWW	Runoff flooding streets because it does not enter Jesuit Basin effectively.	Construct Ashwood Storm Drain Improvements (Yarbrough)	$8,400,000	
EA8A	8-2-8	East Side	Americas Basin	Pullman Storm Drain	Runoff from surrounding commercial areas flooding streets because of ineffective routing to Bluff Channel.	Construct Pullman Storm Drain	$2,500,000	
EA8B	8-2-8	East Side	Americas Basin	Peter Cooper Storm Drain	Runoff from surrounding commercial areas flooding streets because of ineffective routing to Bluff Channel.	Expand existing Peter Cooper Storm Drain	$3,000,000	

Project No.	Figure	Region	System	Project Name	Issue to be Addressed	Project Description	2018 Estimated Construction Cost	Alternate Funding Sought?
EA8C	8-2-8	East Side	Americas Basin	Henry Brennan Storm Drain	Runoff from surrounding commercial areas flooding streets because of ineffective routing to Bluff Channel.	Expand existing and add new Henry Brennan Storm Drain	$3,000,000	
EA8D	8-2-8	East Side	Americas Basin	G. Dieter Storm Drain	Runoff from surrounding commercial areas flooding streets because of ineffective routing to Bluff Channel.	Construct Dieter Storm Drain	$4,000,000	
EA8E	8-2-8	East Side	Americas Basin	Zaragoza Storm Drain	Runoff from surrounding commercial areas flooding streets because of ineffective routing to Bluff Channel.	Expand existing and add new Zaragoza Storm Drain	$4,000,000	
EA9A	8-2-9	East Side	Americas Ten Basin	SAC 1 - Detention/ Sediment Basin	Undersized crossings, unfinished earthen channels, and sediment transfer clogging culverts.	Build sediment/detention basin upstream of Paseo del Este Drive	$7,500,000	
EA9B	8-2-9	East Side	Americas Ten Basin	Concrete Line RV Channel	Undersized crossings, unfinished earthen channels, and sediment transfer clogging culverts.	Concrete line RV Channel (20-ft bottom width, 4 ft depth; rectangular channel)	$2,700,000	
EA10A	8-2-10	East Side	Americas Ten Basin	SAC 2 - Detention/ Sediment Basin	Undersized crossings, unfinished earthen channels, and sediment transfer clogging culverts.	Build sediment/detention basin upstream of Paseo del Este Drive	$6,100,000	
EA10B	8-2-10	East Side	Americas Ten Basin	Concrete Line Mercantile Channel	Undersized crossings, unfinished earthen channels, and sediment transfer clogging culverts.	Concrete line Mercantile Channel (20-ft bottom width, 5 ft depth; rectangular channel)	$2,000,000	
EA11	8-2-11	East Side	Cielo Vista	Avalon Drive Drainage Improvements	area experiences flooding	Install approximately 400 LF of 36-inch and 700 LF of 48-inch storm drain pipe connecting to existing system on Airway Boulevard	$550,060	
MidV1	8-7-1	Mid Valley	Modesto	Clardy Fox Pump Station Improvement	storm sewer system is being improved in the Clardy Fox neighborhood and current PS capacity is not enough to handle	Add pumps in empty bays and upgrade electrical service of Clardy Fox PS	$4,100,000	
MidV5	8-7-2	Mid Valley	Bassett	Montview Pump Station and Basin Improvements	neighborhood experiences flooding; capacity of PS is not enough	Expand an existing basin and add one new detention basin with interconnecting pipe and new pump station	$5,000,000	
MidV6	8-7-3	Mid Valley	Bassett	Bassett-Geronimo Improvements	Flooding of Commercial Property	Provide two new retention basins (~1.33 and ~1.25 acres) and new storm drain systems in the residential areas north of Bassett Place	$4,348,740	
MidV7	8-7-4	Mission Valley	Basin A	Basin A System	Storm drain requires more capacity	Reconstruct 36-inch existing storm drain	$227,500	
MidV8	8-7-5	Mid Valley	Loretto	Raynolds Street Drainage Improvements	area experiences flooding	New detention pond at La Luz Avenue with outlet tower, upsizing pipes to 48 and 60 inches, installing new drainage inlets along Raynolds Street, and new 48-inch pipe extending north to Hastings Drive	$4,304,300	
MidV9	8-7-6	Mid Valley	Bassett	Yandell Drive Drainage Improvements	area experiences flooding	Install 1200 LF of new 36-inch storm drain along Yandell Drive, tying into existing system located in Paisano Drive and extending to intersection with Argentina Street	$405,080	
MidV10	8-7-7	Mid Valley	Bassett	El Paso Drive Drainage Improvements	area experiences flooding	Upsize existing storm drain system located along El Paso Street to 36 inches	$585,004	
MV1	8-3-1	Mission Valley	Basin A	Upgrade Basin A Pump Station	The pump station at Basin A does not have capacity for the 100-year storm event. Additional flow is contributed back into the Playa Drain.	Upgrade the existing pump station at Basin A by installing new pumps (525 cfs total capacity)	$24,804,000	X
MV2A	8-3-2	Mission Valley	Basin A	Basin B Improvement (Vocational Pond)	Basin B currently serves as detention storage for the upper portion of the Playa Drain and the neighborhoods surrounding the basin.	Excavate and regrade the slope in Basin B so that water flows to the pump station. Install new culverts	$300,000	X
MV2B	8-3-2	Mission Valley	Basin A	New Basin B Pump Station	Basin B currently serves as detention storage for the upper portion of the Playa Drain and the neighborhoods surrounding the basin.	Install a new pump station (165 cfs total capacity) and conduit in the portion of Basin B west of Mimosa Avenue to pump water to the Rio Grande River.	$13,536,900	X

Project No.	Figure	Region	System	Project Name	Issue to be Addressed	Project Description	2018 Estimated Construction Cost	Alternate Funding Sought?
MV2C	8-3-2	Mission Valley	Basin A	Expand Basin B Pump Station	Basin B currently serves as detention storage for the upper portion of the Playa Drain and the neighborhoods surrounding the basin.	Expand pump station by installing an additional 165 cfs pump and conduit.	$7,829,900	X
MV3	8-3-3	Mission Valley	Basin G	Featherlake II Improvements	The Middle Drain is contributing flow to the Mesa Drain Interceptor causing capacity and tailwater issues. There is need for additional storage along the Interceptor System in Mission Valley.	Install auto-gates, 25 cfs pump station, two new concrete box culverts	$1,000,000	
MV4	8-3-4	Mission Valley	Basin G	Middle Drain Interceptor Storage	The Franklin Drain is contributing flow to the Middle Drain Interceptor causing capacity and tailwater issues. There is a need for additional storage along the Interceptor System in Mission Valley.	Excavate 115 ac-ft pond and culverts to divert Franklin Drain, put in auto-gates to Middle Drain Interceptor, and 25 cfs pump station to dewater pond	$21,000,000	
MV5B	8-3-5	Mission Valley	Basin G	Basin G Improvements	The current configuration and capacity of Basin G is causing tailwater to significantly restrict the capacity of the major drains and Interceptor System in Mission Valley. There is a need for additional storage in Basin G.	Upgrade PS to 820 cfs w/ new Rio Grande conduits - Proposed Land Acquisition from EPCWID	$35,000,000	
MV7	8-3-7	Mission Valley	Basin G	Playa Drain Crossing at Yarbrough	The following crossing on Playa Drain is undersized: Just Downstream of Yarbrough Drive (one 36-inch RCP).	Increase existing culvert capacity to two 5-ft x 5-ft concrete box culverts	$125,000	
MV8	8-3-8	Mission Valley	Basin G	Basin C Pump Station (Shawver Pond)	Basin C is currently serving as a detention area for water from surrounding neighborhoods. After leaving the basin, water enters the Playa Drain where it contributes to the capacity problems of the drain.	Install a new pump station (160 cfs total capacity) and conduits at Basin C to pump water from the basin to the Rio Grande River. Excavate the basin so it is three feet below the channel elevation of Playa Drain. Install new culverts under Independence Drive.	$13,962,000	X
MV10	8-3-10	Mission Valley	Mesa Drain	Mesa Drain Improvements	Mesa Drain is significantly undersized.	Expand Mesa Drain 20 feet in width on the south side of the channel where feasible. Also, line portions of channel with concrete that cannot be expanded and line 20 feet upstream of all crossings with concrete.	$8,138,000	X
MV12	8-3-11	Mission Valley	Americas Ten Basin	Americas Ten Basin Outfall	The outfall structure has collapsed. The existing earthen channel is highly erosive and is within private property	Reconstruct Americas Ten Basin outfall	$1,800,000	X
NE1	8-4-1	Northeast	Fort Bliss Sump	Railroad Drive Ditch Upstream Crossings	Replace the following crossings on Railroad Drive Ditch that are undersized: Falcon Avenue (one 18-inch RCP) Waycross Avenue (one 12-inch RCP) Wren Drive (one 18-inch RCP) Lexington Drive (one 18-inch RCP) Crossing S. of Falcon Avenue (one 12-inch RCP)	Replace five undersized crossing structures over Railroad Drive Ditch upstream of Railroad Drive	$1,200,000	
NE2	8-4-2	Northeast	Fort Bliss Sump	Concrete Line Railroad Drive Ditch	The following crossing on Railroad Drive Ditch Downstream is undersized: east of Julian Drive (five 8-foot by 4-foot CBCs).	Concrete line Railroad Drive Ditch, increase capacity of existing ditch crossing, improve channel into Fort Bliss Sump	$6,500,000	
NE3A	8-4-3	Northeast	Fort Bliss Sump	Will Ruth Pond	Flow Path 15 contributes to flooding in Tobin Ditch	Construct Will Ruth Pond to catch Flow Path 15 midstream	$7,500,000	
NE3B	8-4-3	Northeast	Fort Bliss Sump	Alcan Pond	Flow Path 15 floods Dyer between Transmountain and Will Ruth	Construct Alcan Pond: new catch basin to capture Flow Path 15 upstream	$13,500,000	
NE4	8-4-4	Northeast	Fort Bliss Sump	Range Dam Outlet Channel	1. Crossing on Range Dam Outlet Channel is undersized. 2. Downstream junction of Range Dam Outlet Channel and Tobin Drain Channel floods	Increase crossing capacity over Range Dam Outlet Channel, improve junction of Range Dam Outlet Channel and Tobin Drain Channel	$1,900,000	
NE5	8-4-5	Northeast	Fort Bliss Sump	Clearview Channel		Increase capacity of two existing crossings, add new sediment basin	$2,197,000	

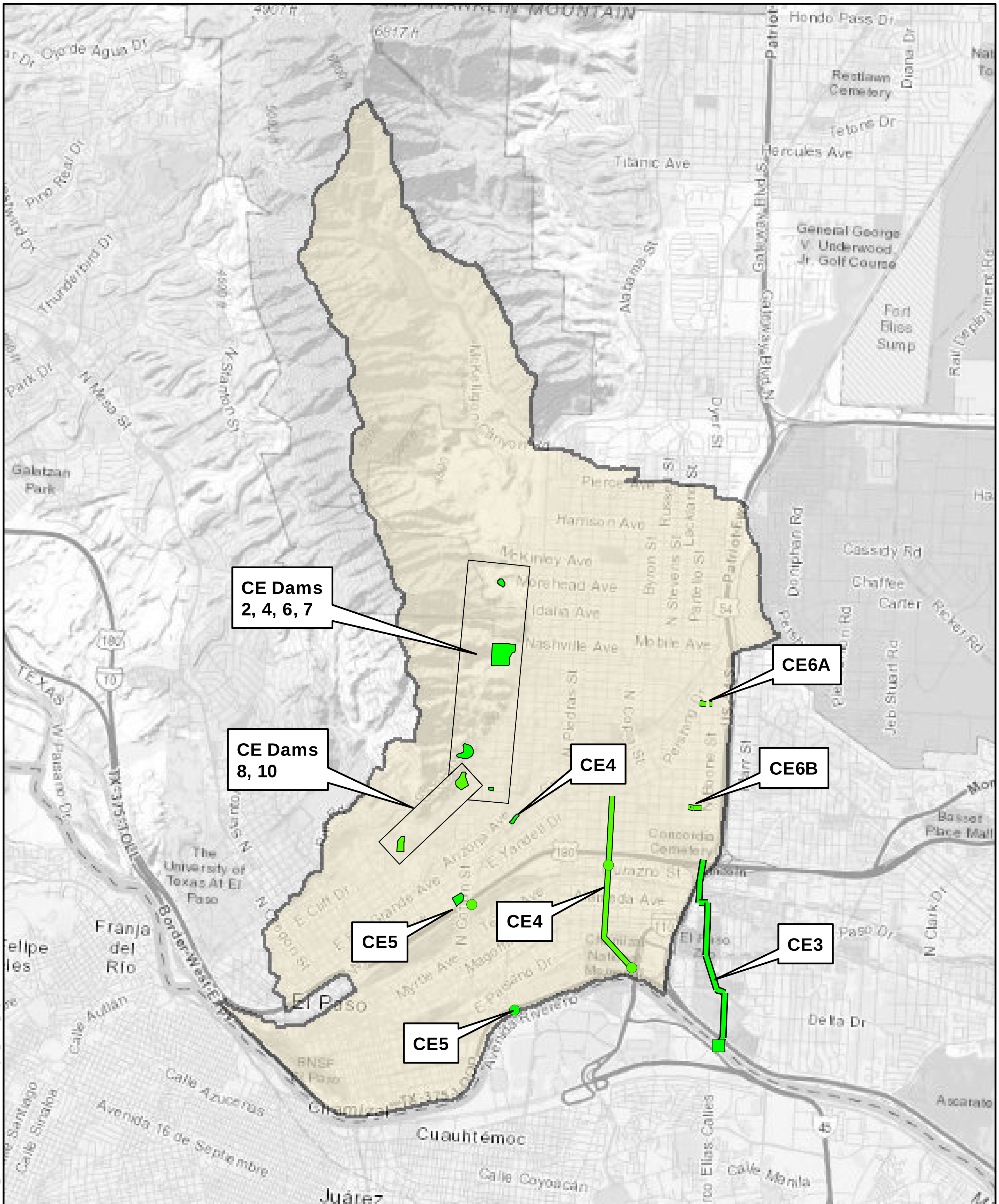
Project No.	Figure	Region	System	Project Name	Issue to be Addressed	Project Description	2018 Estimated Construction Cost	Alternate Funding Sought?
NE6	8-4-6	Northeast	Fort Bliss Sump	Johnson Channel	1. Erosion along Lincoln Avenue due to flows in the downstream portion of Johnson Channel. 2. One undersized crossing was identified on Johnson Channel beneath a dead-end road in a vacant lot, but is not causing any serious problems.	Install subsurface conduit from outfall to open channel	$800,000	
NE7C	8-4-7	Northeast	Northeast Ponding	Castner Range Sediment Basin	Northeast Channel No. 2 has high sediment loads due to large upstream deposits.	Construct sediment basin with 10-ft depth	$10,000,000	
NE7D	8-4-7	Northeast	Northeast Ponding	Castner Range Detention Basin (if needed after construction of NE7 Ph 3)	Northeast Channel No. 2 is significantly undersized.	Add detention to sediment basin if appropriate	$20,000,000	
NE9	8-4-8	Northeast	Range Dam	Northgate Diversion Channel	Flooding and erosion issues at the intersection of Hondo Pass Avenue and Hondo Pass Drive due to flow from Northgate Diversion Channel.	Place RCP culverts to divert Flowpath from Northgate Diversion Channel to Northgate Dam	$1,000,000	
NW2	8-5-1	Northwest	Doniphan Ditch	Construct Sediment Basin	This section of Doniphan Ditch has five undersized crossings and the channel is undersized. There is a known sediment issue.	Phase 2: construct sediment basin	$6,500,000	
NW3	8-5-2	Northwest	Doniphan Ditch	Doniphan System PS Improvements	PS in Doniphan system are undersized	Construct new larger capacity Doniphan Pump Station to replace PS1, with new force main directly to the Rio Grande. Install new catch basin with mechanical bar screen upstream of PS2.	$10,000,000	X
NW4	8-5-3	Northwest	Flow Path	Flow Path No. 38	Flow Path No. 38 has three undersized crossings.	Replace three undersized culvert crossings at Playa del Sol, Corona del Sol, and Villa del Sol	$600,000	
NW5	8-5-4	Northwest	Flow Path	Flow Path No. 39A Detention	Flow Path No. 39A has one undersized crossing and historical blow out of berm redirecting flow.	Construct FP39 Dam/ sediment basin; 2 small detention ponds, Resler Drive culvert improvement	$8,400,000	
NW6	8-5-5	Northwest	Flow Path	Flow Path No. 40	Flow Path No. 40 has one undersized crossing and part of channel undersized. Identified upstream sediment and debris source.	FP40 Dam; build sediment and detention basin	$4,600,000	
NW7	8-5-6	Northwest	Keystone Dam	Arroyo 4 (Study in-house)	Arroyo 4 has four undersized crossings.	Slipline existing storm drain, construct detention basin	$4,000,000	
NW9	8-5-8	Northwest	Keystone Dam	Arroyo 1 - Detention Improvements	Debris and volume from Arroyo 1 cause the existing High ridge channel to breach.	Construct new debris and volume dam to prevent breach of existing channel.	$3,000,000	
NW11A	8-5-9	Northwest	Keystone Dam	Ojo de Agua Arroyo (Upstream Sediment Basin)	Identified upstream sediment source.	Build sediment basin upstream at Via Serena	$2,500,000	
NW11B	8-5-9	Northwest	Keystone Dam	Ojo de Agua Arroyo (Upstream Sediment Basin)	Undersized crossing.	Add culvert at Via Descanso Drive (culvert may not be needed upon completion of sediment basin)	$132,600	
NW11C	8-5-9	Northwest	Keystone Dam	Ojo de Agua Arroyo (Upstream Sediment Basin)	Undersized crossing.	Add culvert at Loma de Cristo Drive (culvert may not be needed upon completion of sediment basin)	$383,500	X
NW11D	8-5-9	Northwest	Keystone Dam	Ojo de Agua Arroyo (Upstream Sediment Basin)	Undersized crossing.	Add culvert at Westwind Drive (culvert may not be needed upon completion of sediment basin)	$1,261,000	X

Project No.	Figure	Region	System	Project Name	Issue to be Addressed	Project Description	2018 Estimated Construction Cost	Alternate Funding Sought?
NW16	8-5-12	Northwest	Montoya Drain	White Spur Drain - Upstream	East extent of White Spur Drain is undersized.	Expand channel from Village Court to Doniphan Drive	$1,000,000	
NW18	8-5-13	Northwest	Oxidation Dam	Mesa Hills Channel Improvements	Existing channel requires repair and upgrade	Construct improvements to Mesa Hills Channel	$750,000	
NW26	8-5-14	Northwest	Montoya Drain	NEW Montoya Drain Wetland	Reduce flooding of Doniphan Drive and create control of the Montoya Drain System & Keystone Outfall with new pump station	Acquire land, construct a permanent wetland, install a storm drain system to Doniphan Drive, construct pipeline to Doniphan Pump Station and build new pump station to control flood levels.	$35,000,000	
WC1	8-6-1	West Central	West Central	Canterbury Channel	Canterbury Channel has an identified upstream debris source.	Construct debris basin and build check-dams along arroyo	$1,000,000	
WC3	8-6-2	West Central	West Central	Flow Path No. 20	The lower portion of Flow Path No. 20 has an undersized culvert and channel.	Widen channel at downstream at Paisano and replace bridge	$3,800,000	
WC4	8-6-3	West Central	West Central	Flow Path No. 21	Flow Path No. 21 has one undersized crossing.	Build detention basin on EPWater land on O'Keefe	$3,000,000	
WC5	8-6-4	West Central	West Central	Flow Path No. 21	The lower portion of Flow Path No. 21 has an undersized culvert and channel.	Extend existing siphon to the river	$3,800,000	
WC6A	8-6-5	West Central	West Central	Flow Path No. 23 Detention	Reduce risk of sediment blockage of culverts under streets (Campbell, Kansas, Stanton, Mesa) and associated flooding	Improve existing dam, build new basin	$897,000	
WC6B	8-6-6	West Central	West Central	Flow Path No. 23 Channel Improvements	Improve channel upstream of Hwy 20	Improve channel upstream of Hwy 20	$172,900	X
WC6C	8-6-6	West Central	West Central	Flow Path No. 23 Crossing Improvements	Improve 2 crossings, University Avenue and Oregon St	Improve two crossings, University Avenue and Oregon Street	$1,796,600	X
WC8	8-6-7	West Central	West Central	New Sediment Basin	Reduce risk of sediment blockage of culvert under Stanton Street and associated flooding	Construct new sediment basin	$897,000	

Table 8-3. Issues to be Addressed by Projects – Projects Not in EPWater Jurisdiction

Project No.	Figure	Region	System	Project Names	Issue to be Addressed	Project Description	2018 Estimated Construction Cost
MV6	8-3-6	Mission Valley	Basin A	Alameda Drive Drainage Improvements	There are flooding issues on Alameda Drive (SH 20) between Paisano Drive and El Paso Drive.	Install a storm drain system along the affected area of Alameda Drive that empties into Playa Drain just north of the intersection with Delta Drive	$55,742,700
MV9*	8-3-9	Mission Valley	Mesa Drain	Mesa Drain Storage	The elevation of the channel banks along the lower portion of Mesa Drain is preventing the top portion of the Feather Lake capacity from being utilized.	Construct parapet walls along channel from Le Barron to Featherlake, to include flap gates	$6,210,000
NW13A*	8-5-10	Northwest	Montoya Drain	Montoya Drain - Lombardy Avenue Culvert Replacement	North section of Montoya Drain has undersized crossing.	Replace culvert at Lombardy Avenue	$1,500,000
NW13B*	8-5-10	Northwest	Montoya Drain	Montoya Drain - Upper Section Sunset Road Culvert Replacement	North section of Montoya Drain has undersized crossing.	Replace culvert at Sunset Road	$564,200
NW13C*	8-5-10	Northwest	Montoya Drain	Montoya Drain - Upper Section Mulberry Avenue Culvert Replacement	North section of Montoya Drain has undersized crossing.	Replace culvert at Mulberry Avenue	$417,300
NW14A*	8-5-11	Northwest	Montoya Drain	Montoya Drain - Middle Section Turnstone Bridge Replacement	Mid section of Montoya Drain has three undersized culverts and the channel is undersized.	Replace Bridge at Turnstone	$4,673,500
NW14B*	8-5-11	Northwest	Montoya Drain	Montoya Drain - Middle Section Bridge Replacement	Mid section of Montoya Drain has three undersized culverts and the channel is undersized.	Replace Bridge	$143,000
NW14C*	8-5-11	Northwest	Montoya Drain	Montoya Drain - Middle Section Bridge Replacement	Mid section of Montoya Drain has three undersized culverts and the channel is undersized.	Replace Bridge	$1,222,000
NW14D*	8-5-11	Northwest	Montoya Drain	Montoya Drain - Middle Section River Bend Drive Channel Improvements	Mid section of Montoya Drain has three undersized culverts and the channel is undersized.	Extend channel from 600 ft downstream of Turnstone Drive to 800 ft downstream of Frontera Road	$1,371,500
NW15A*	8-5-11	Northwest	Montoya Drain	Montoya Drain - Lower Section Sunland Park Drive Culvert Replacement	Lower section of Montoya Drain has three undersized culverts and the channel is undersized. This section of the drain is in New Mexico.	Replace culvert crossing at Sunland Park	$5,967,000
NW15B*	8-5-11	Northwest	Montoya Drain	Montoya Drain - Lower Section Culvert Replacement	Undersized culverts	Replace culvert crossing	$998,400
NW15C*	8-5-11	Northwest	Montoya Drain	Montoya Drain - Lower Section Culvert Replacement	Undersized culverts	Replace culvert crossing	$634,400
NW15D*	8-5-11	Northwest	Montoya Drain	Montoya Drain - Lower Section Channel Improvements	Channel requires extension to allow discharge into Rio Grande	Extend channel from 800 ft downstream of Frontera Road to Rio Grande	$1,903,200
NW15E*	8-5-11	Northwest	Montoya Drain	Montoya Drain - Lower Section Rio Grande Automatic Gate	Gate required for discharge into Rio Grande	Add automatic gate at Rio Grande	$265,200
NW8	8-5-7	Northwest	Keystone Dam	Arroyo 5 Culvert Replacement	Arroyo 5 has one undersized crossing.	Replace culvert under Mesa Street onto Resler Canyon	$2,500,000
WC7	8-6-6	West Central	West Central	Flow Path No. 23 Crossing Improvements	Inadequate culvert capacity	Improve 3 crossings, CanAn Hwy 85	$2,372,500

*These projects will be funded per agreement between EPCWID No. 1 and EPWater.



N

0 0.5 1 Miles

Legend

Central Region

Project Area

Central Region Projects

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-1

el paso WATER

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N

0 500 1,000 Feet

1 : 18,000 or 1 Inch = 1,500 Feet

el paso WATER

Legend

Recommended Improvements

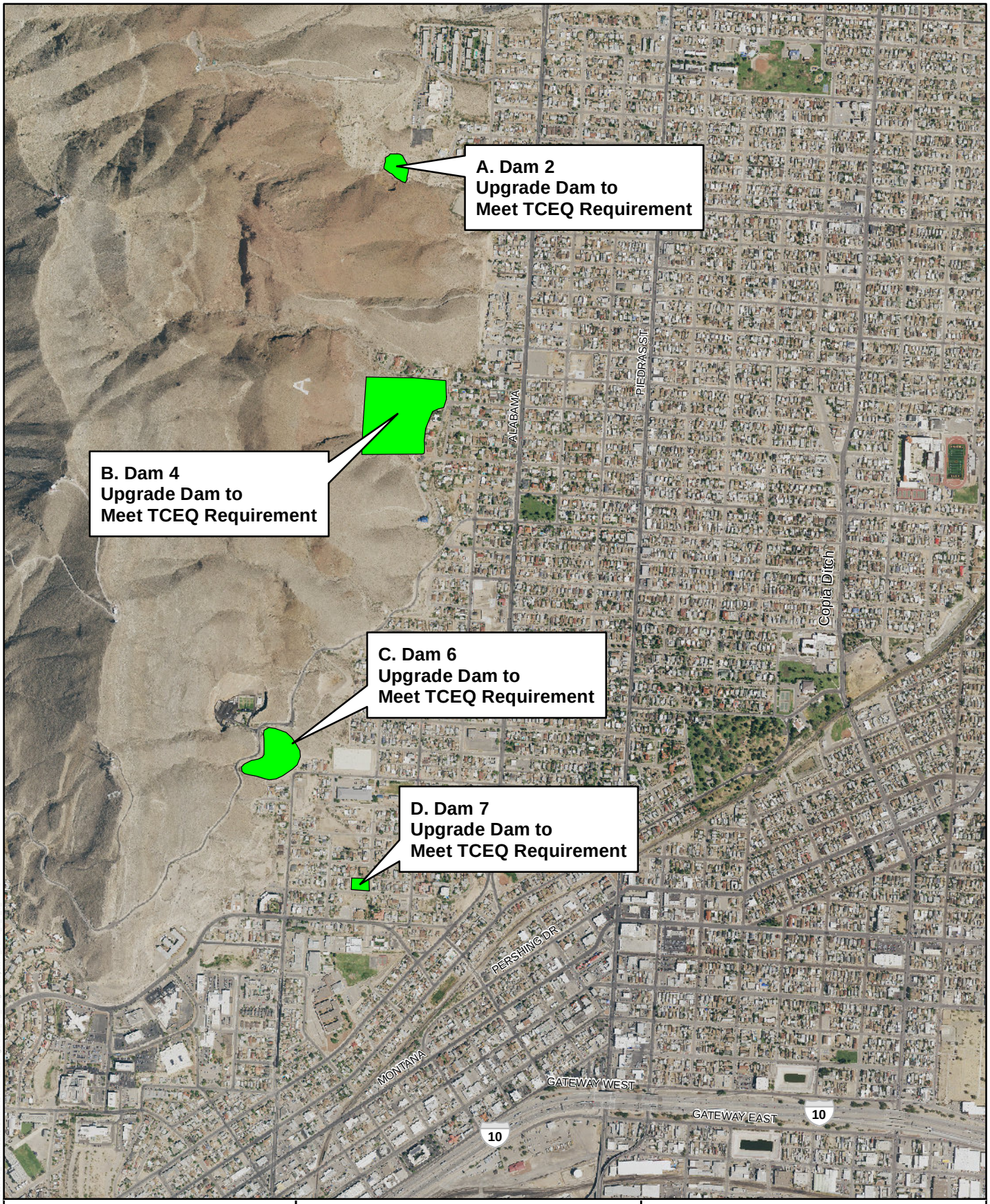
Basin

Dallas System - Dam 8 and Dam 10 Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-1-1



N

0 750 1,500 Feet

1 : 18,000 or 1 Inch = 1,500 Feet

el paso WATER

Legend

Recommended Improvements

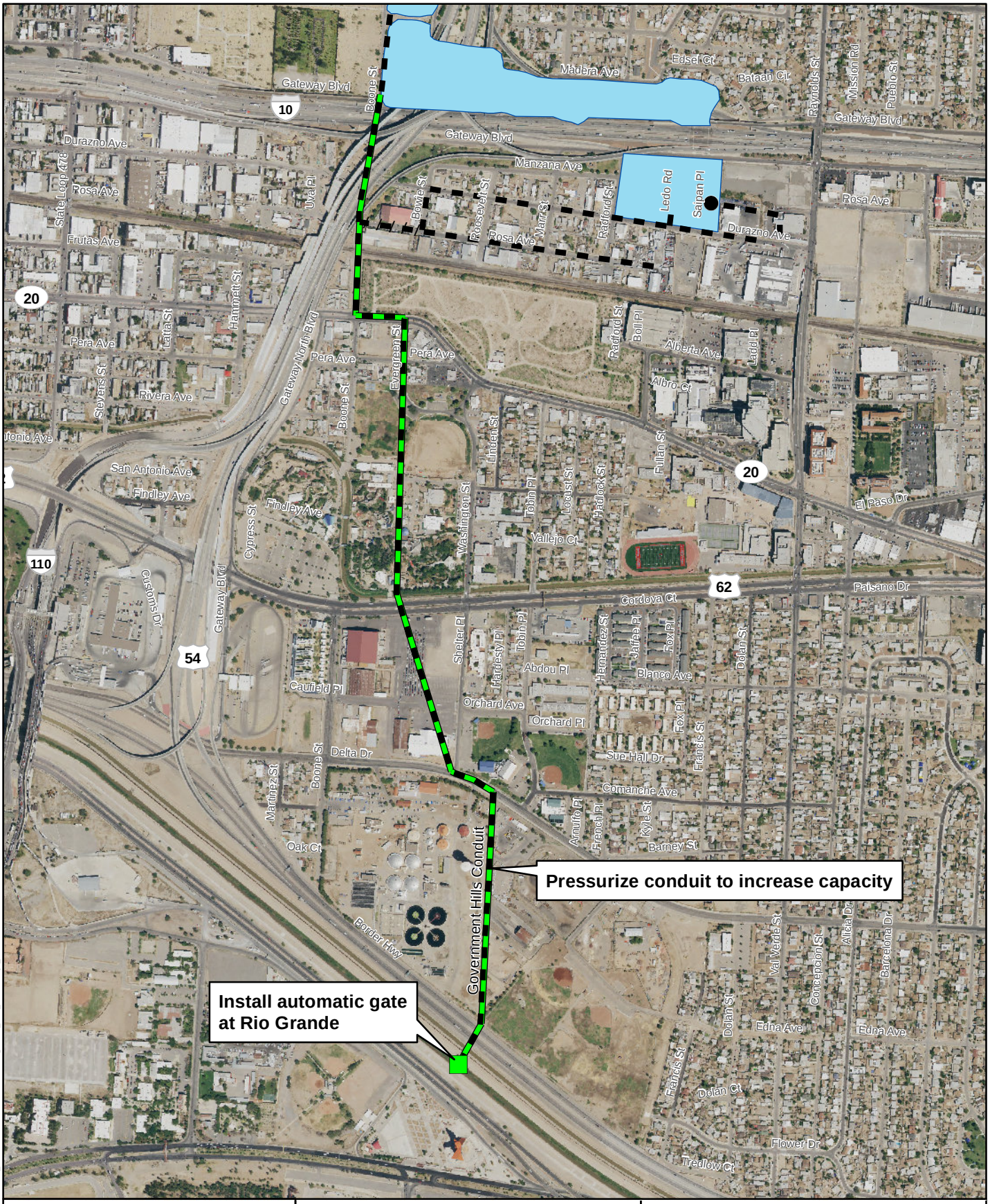
Basin

Magnolia System - Dam 2, Dam 4, Dam 6 and Dam 7 - Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-1-2


Pressurize conduit to increase capacity
Install automatic gate at Rio Grande
Government Hills Conduit
Gateway Blvd
Madera Ave
Edsel Ct
Bataan Ct
Reynolds St
Mission Rd
Pueblo St
Durazno Ave
Rosa Ave
Manzana Ave
Ledo Rd
Saipan Pl
Bowie St
Roosevelt St
Main St
Radford St
Uva Pl
State Loop 478
Frutas Ave
Hammett St
Pera Ave
Gateway North Blvd
Evergreen St
Boll Pl
Alberta Ave
Ladd Pl
Albro Ct
Linden St
Fullan St
Stevens St
Rivera Ave
San Antonio Ave
Findley Ave
Cypress St
Washington St
Tobin Pl
Locust St
Hardock St
Vallejo Ct
El Paso Dr
Customs Dr
Cordova Ct
Paisano Dr
Shelter Pl
Hardesty Pl
Abdou Pl
Hernandez St
Jaffee Pl
Fox Pl
Blanco Ave
Dolan St
Caulfield Pl
Orchard Ave
Orchard Pl
Francis St
Sue Hall Dr
Delta Dr
Comanche Ave
Martinez St
Oak Ct
Arnulfo Pl
French Pl
Kyle St
Barney St
Border Hwy
Val Verde St
Concepcion St
Alicia Dr
Barcelona Dr
Edna Ave
Dolan Ct
Flower Dr
Tredlow Ct
20
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110
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62
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500
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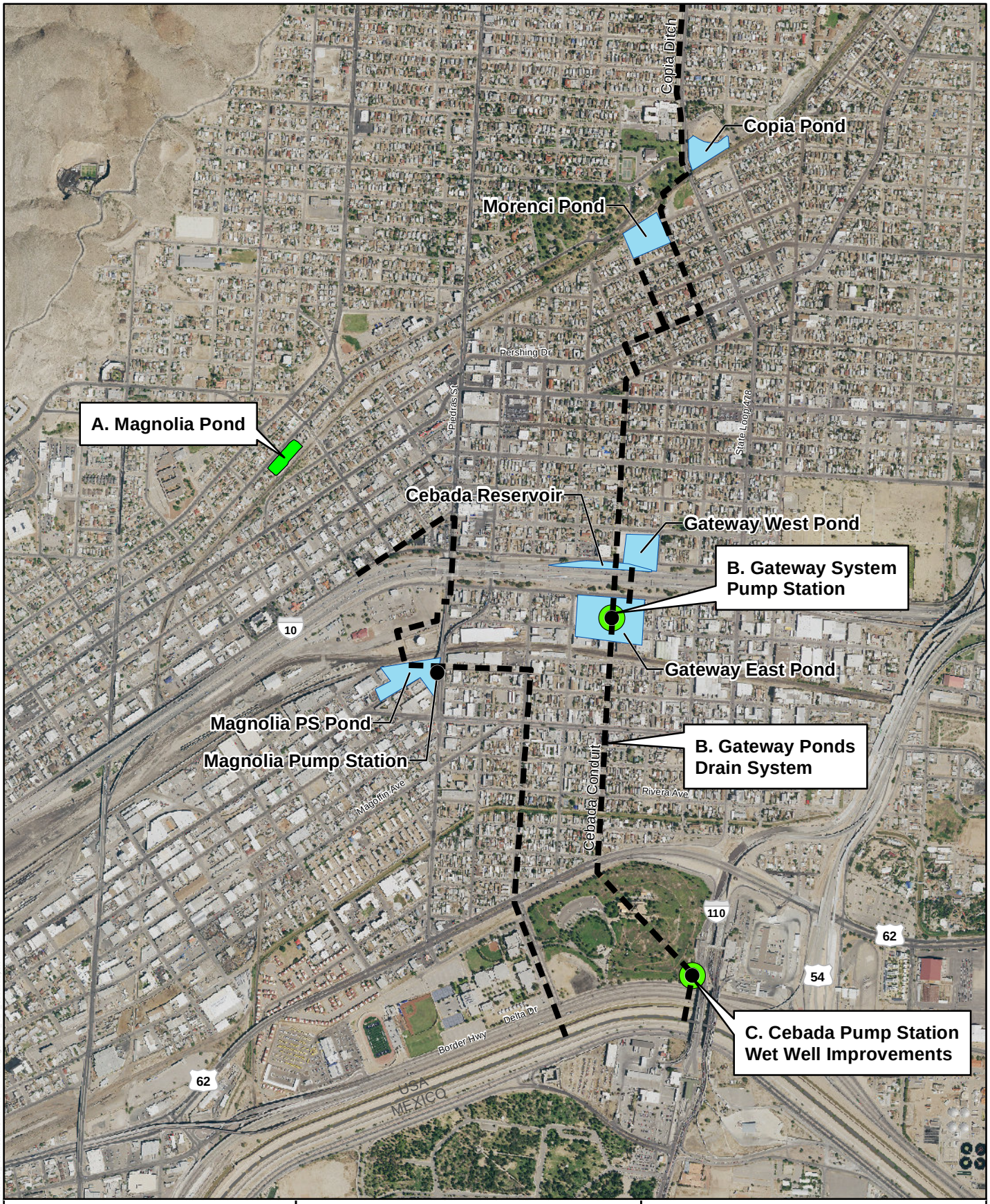
Feet
1 : 12,000 or 1 inch = 1,000 Feet
Legend
Existing Conduit
Existing Basin
Pump Station
Recommended Improvements
Conduit
el paso WATER
Government Hills System - Government Hills Conduit (CE3)
Central Region
El Paso 2021 Stormwater Master Plan Update
Date: 6/24/2021
Figure 8-1-3



N

0 750 1,500 Feet

1 : 18,000 or 1 Inch = 1,500 Feet

el paso WATER

Legend

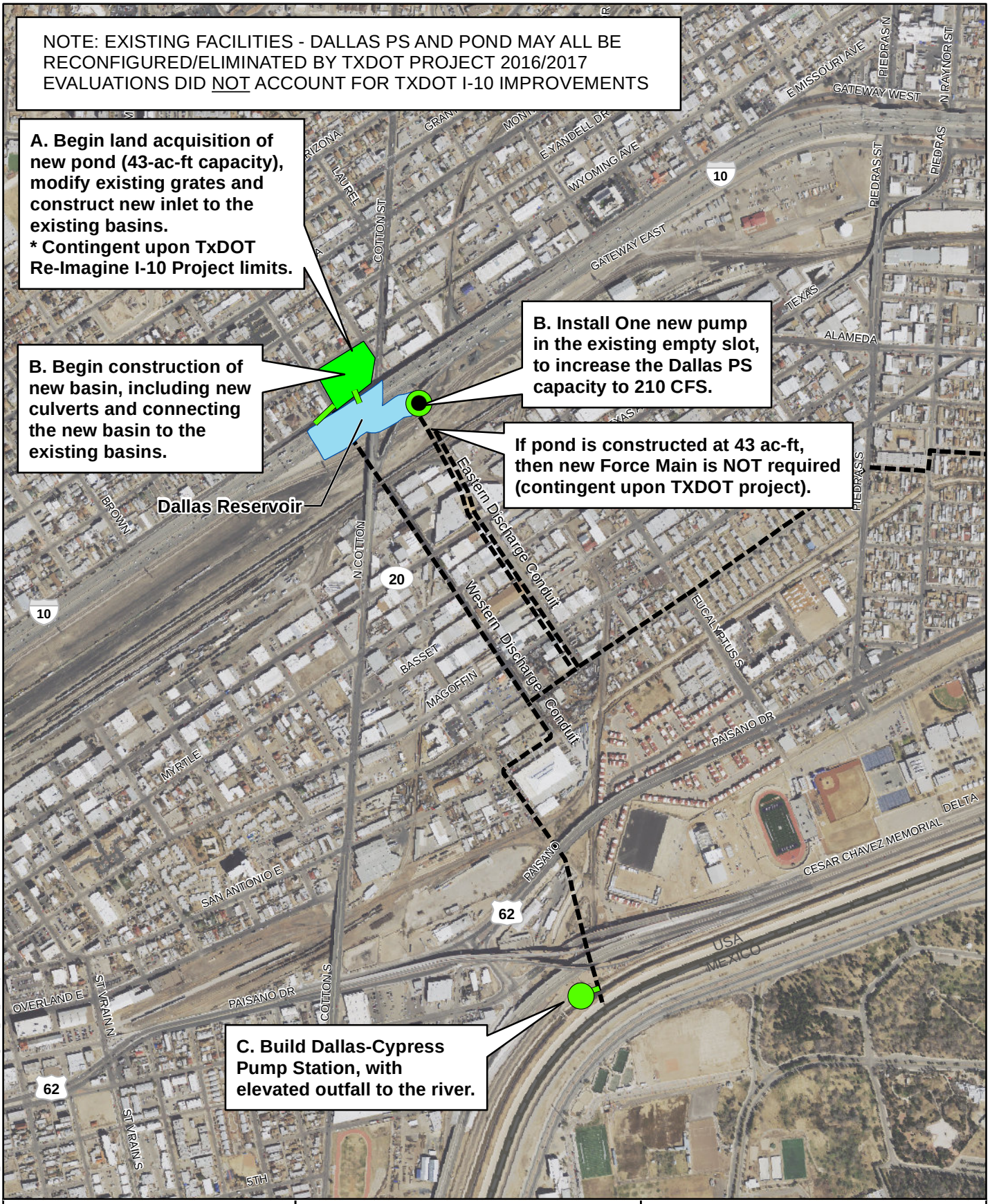
- Existing Pump Station
- Existing Channel or Conduit
- Existing Basin
- Pump Station
- Basin

Cebada System - Cebada Reservoir & IH-10 Flooding (CE4) Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-1-4



el paso WATER

Dallas System - Dallas Reservoir (CE5) Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 7/9/2021

Figure 8-1-5

N

0 150 300 Feet

1 : 3,600 or 1 inch = 300 Feet

el paso WATER

Legend

Recommended Improvements

Conduit

Government Hills System - Altura Avenue Drainage Improvements (CE6A) Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/24/2021

Figure 8-1-6

N

0 150 300 Feet

1 : 3,600 or 1 inch = 300 Feet

el paso WATER

Legend

Recommended Improvements

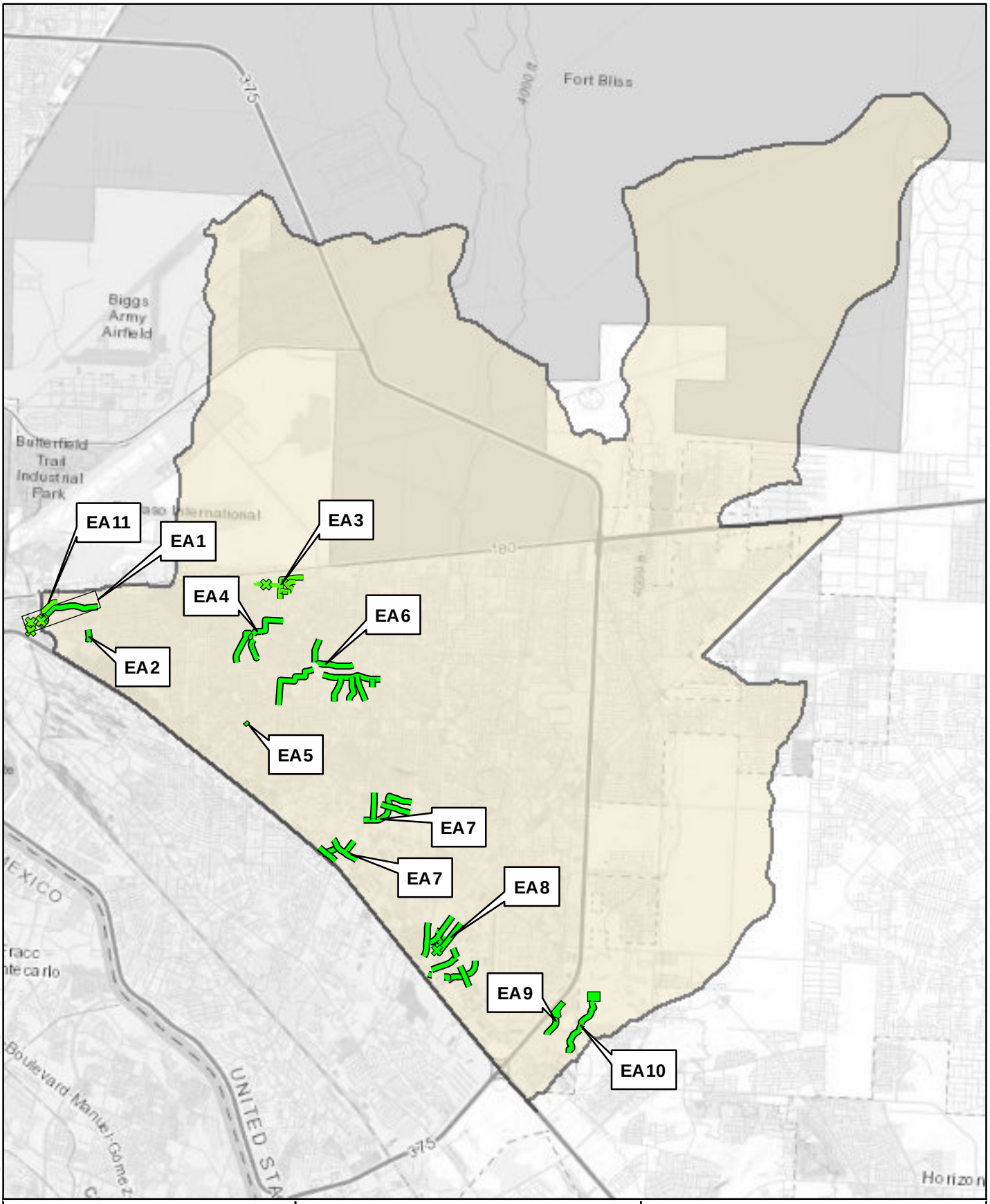
Conduit

Government Hills System - Montana Avenue Drainage Improvements (CE6B) Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/24/2021

Figure 8-1-7



N

0 0.9 1.8 Miles

Legend

East Side Region

Project Area

el paso WATER

East Side Region Projects

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-2

N

0 500 1,000 Feet

1 : 12,000 or 1 Inch = 1,000 Feet

el paso WATER

Legend

- Existing Channel
- *Recommended Improvements*
- Storm Drain
- Undersized Crossing

Phelps Dodge System - Fort Bliss Spur Drain (EA1) East Side Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021	Figure 8-2-1


Expand existing drain to add 20 ac-ft of storage
Alternate - Enclose drain using an underground storage system to utilize as park space; or installation of 10-10x10 CBC along 900 ft of drain
CIELO VISTA BASIN A
Greenwood Cir
Dennis Cir
Nueces Way
Parade Ln
Hopewell Dr
Brookhaven Dr
Devonshire Dr
Elmhurst Dr
Fairfield Dr
Honeysuckle Dr
Idlewilde Dr
Clausen Dr
Meadowview Dr
Prairie Dr
Avalon Dr
Catalina Way
Cielo Vista Dr
Parkland Dr
Likins Dr
Oakdale St
Gessna Dr
Edgemere Blvd
Edgemere Blvd
Dempsey Ave
Apple Ln
Dempsey Ave
Ash Ln
Juniper St
Catalpa Ln
Catalpa Ln
Violet Way
Driveway
Driveway
Bellrose Dr
WH Burges Dr
H Burges Dr
Airway Blvd
Willis Dr
International Rd
Viscount Blvd
Viscount Blvd
Morley Dr
Gerald Dr
Vineola Dr
Moye Dr
Shaver Dr
Westmoreland Dr
Edison Way
Sunmount Dr
Parking Lot
Parking Lot
Grover Dr
Gateway Blvd
Gateway Blvd
Humble Pl
Industrial Ave
Commerce Ave
Eastside Rd
Market Ave
Hawkins Blvd
Wall St
10
10
N
0
375
750
Feet
1 : 9,000 or 1 Inch = 750 Feet
Legend
Existing Channel
Existing Basin
Recommended Improvements
Channel
Basin
el paso WATER
Phelps Dodge System - Sunmount Channel (EA2)
East Side Region
El Paso 2019 Stormwater Master Plan Update
Date: 6/14/2021
Figure 8-2-2

el paso WATER

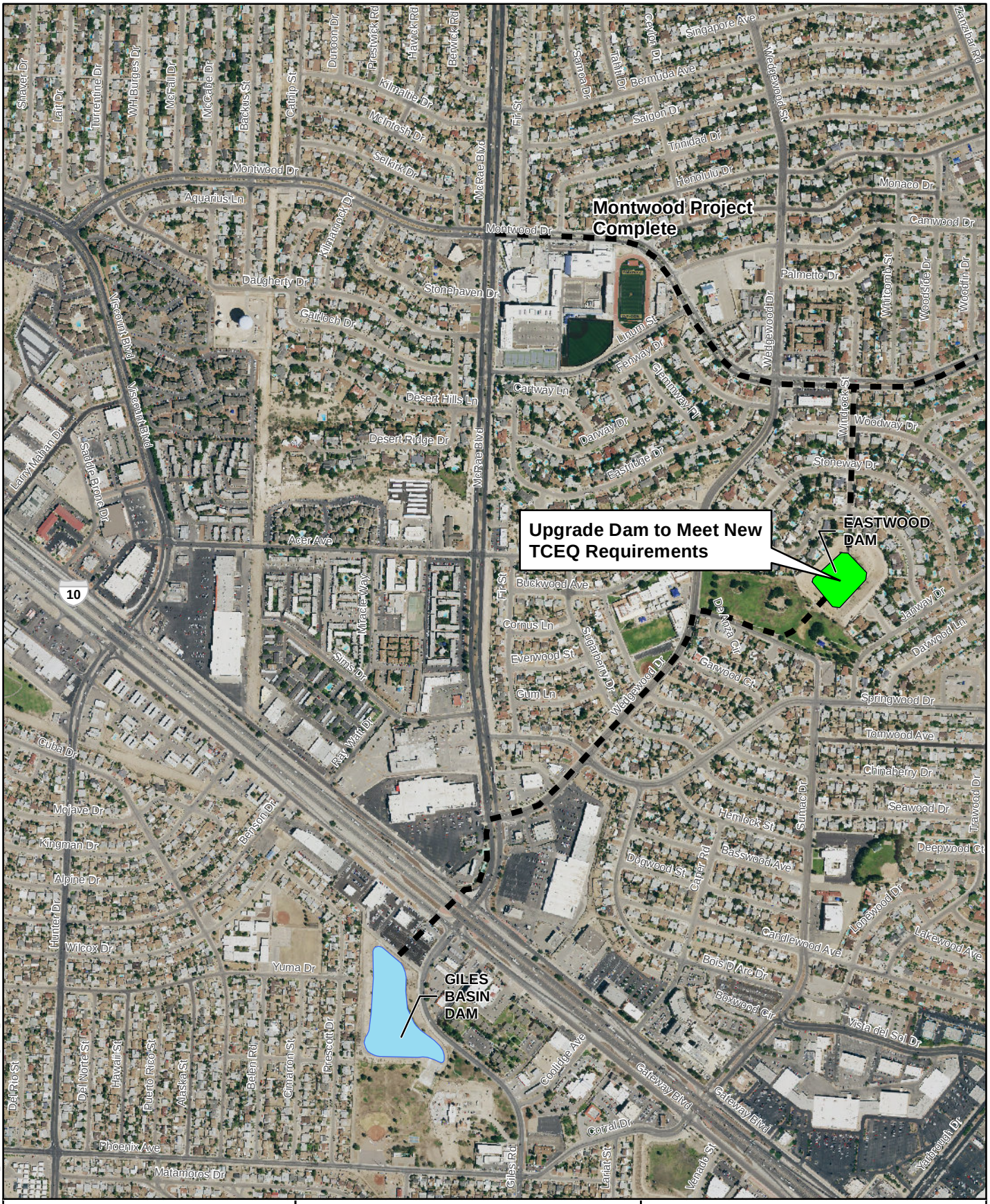
Phelps Dodge System - Lorne Channel (EA3) East Side Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-2-3


A. Increase storage at park to approximately 85 acre-feet
B. Install storm drain
C. Install storm drain
D. Install storm drain
Castletown Dr
Donegal Rd
Wedgewood Dr
Dublin Rd
Ormsby Rd
Shetland Rd
Suffolk Rd
Lonnie Rd
Tyrone Rd
Limerick Rd
Wexford Dr
Bosham Dr
Edgemere Blvd
Dungarvan Dr
Dundee St
Killarney St
Kilkenny Rd
Bantry St
Cork Dr
Cornwall Rd
Drummond Rd
Clyde Rd
Ballymote Dr
Luella Ave
Bayo Ave
Saigon Dr
Blackwood Ave
Brandwood Ct
Woodall St
Lockerbie Ave
Album Ave
Debbie Dr
Woody Dr
Parkwood St
Stewood Ct
Madwood Dr
Yarwood Dr
KayWood Dr
Chezelle Dr
Gardenia Ct
Heather Ave
Suez Dr
Sumatra St
Singapore Ave
Tahiti Dr
Bermuda Ave
Ceylon Dr
Trinidad Dr
Westerwood St
Bush Ln
Acorn Pl
Yarbrough Dr
Parwood Dr
Bywood Dr
Leewood Dr
Honolulu Dr
Zanzibar Rd
Maxwood Dr
Ruewood Pl
Glaswood St
Ashwood Dr
N
0
350
700
Feet
1 : 8,400 or 1 Inch = 700 Feet
Legend
Eastwood/Album Park Boundary
Recommended Improvements
Storm Drain
Basin
el paso WATER
Phelps Dodge System - Album Park Pond and Storm Drains (EA4) East Side Region
El Paso 2021 Stormwater Master Plan Update
Date: 7/1/2021
Figure 8-2-4



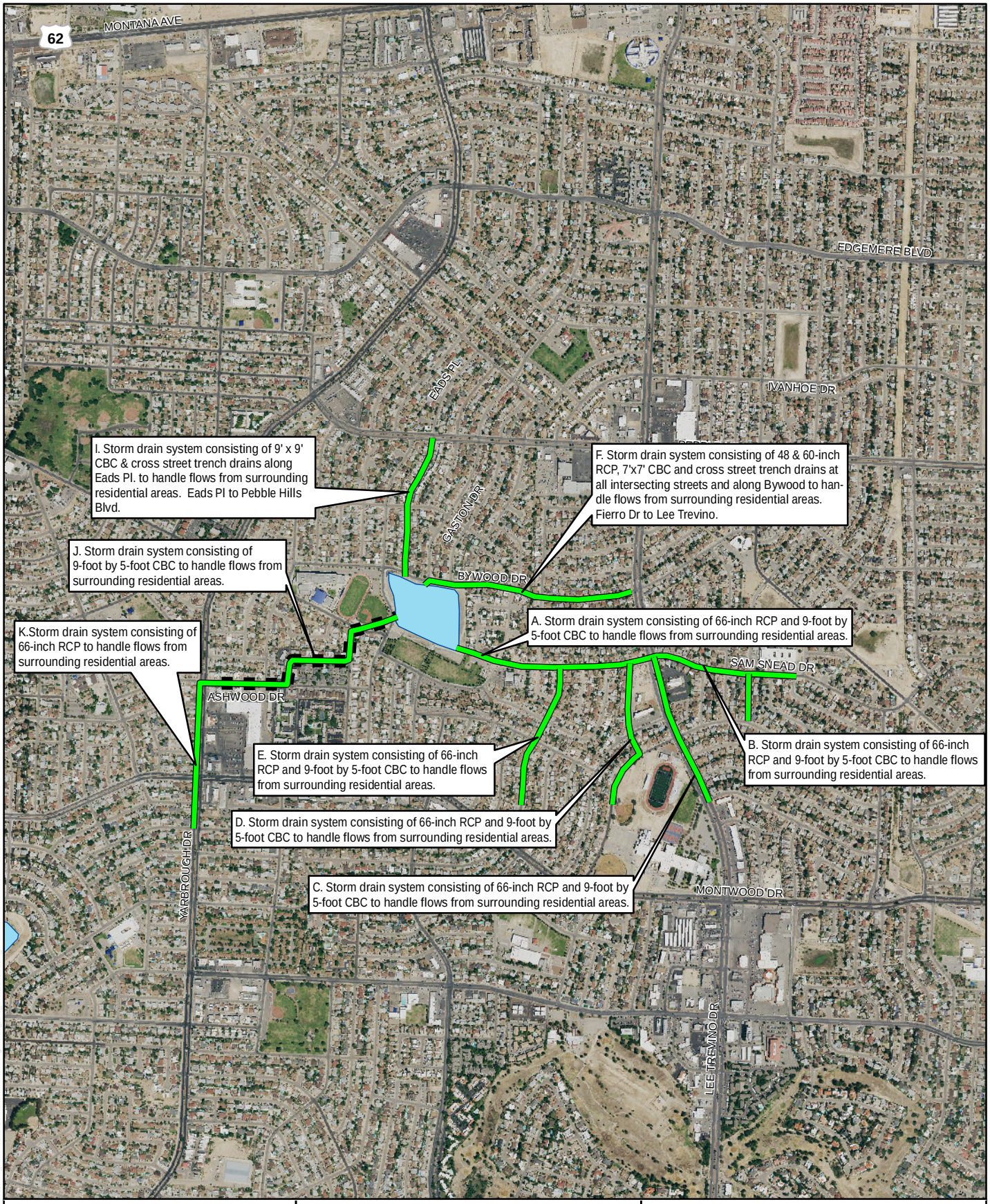
Upgrade Eastwood Dam (EA5)

East Side Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-2-5



N

0 800 1,600 Feet

1 : 19,200 or 1 Inch = 1,600 Feet

el paso WATER

Legend

Existing Pond

Recommended Improvements

Increase Capacity of Existing Storm Drain

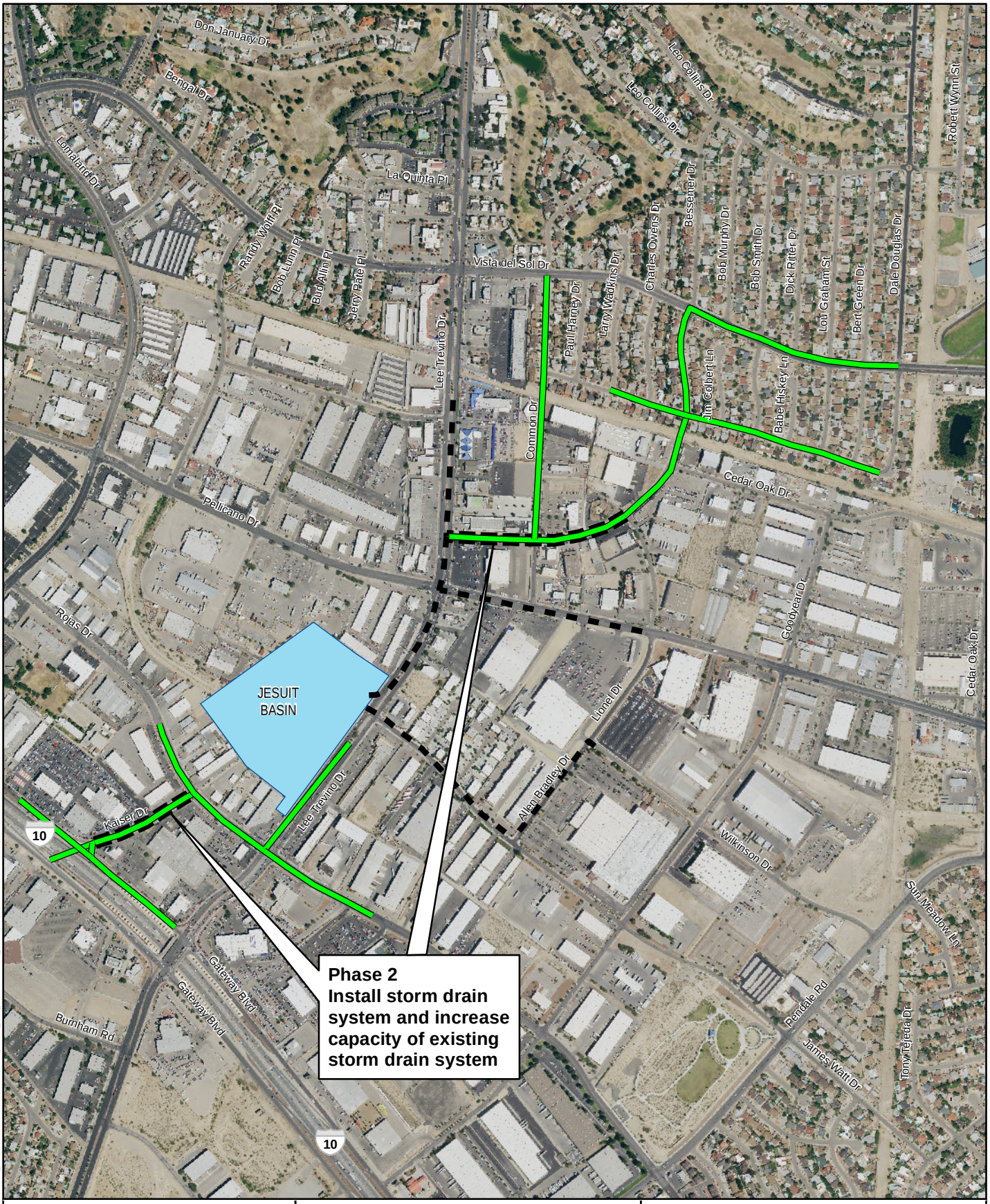
New Storm Drain

Lomaland Basin System Pico Norte - Improvements (EA6) East Side Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-2-6



N

0 500 1,000 Feet

1 : 12,000 or 1 Inch = 1,000 Feet

el paso WATER

Legend

- Existing Dam
- Existing Storm Drain

Recommended Improvements

- Increase Capacity of Existing Storm Drain
- New Storm Drain

Lomaland Basin System - Jesuit Basin Improvements (EA7 Ph2)

East Side Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-2-7

el paso WATER

Americas Basin System - Bluff Channel (EA8) East Side Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-2-8

N

0 500 1,000 Feet

1 : 12,000 or 1 Inch = 1,000 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Channel

Basin

Americas Ten Basin System - RV Channel (EA9) East Side Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-2-9

N

0 500 1,000 Feet

1 : 12,000 or 1 Inch = 1,000 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Channel

Basin

Americas Ten Basin System - Mercantile Channel (EA10) East Side Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-2-10

N

0 200 400 Feet

1 : 4,800 or 1 Inch = 400 Feet

el paso WATER

Legend

Existing Pond

Recommended Improvements

Increase Capacity of Existing Storm Drain

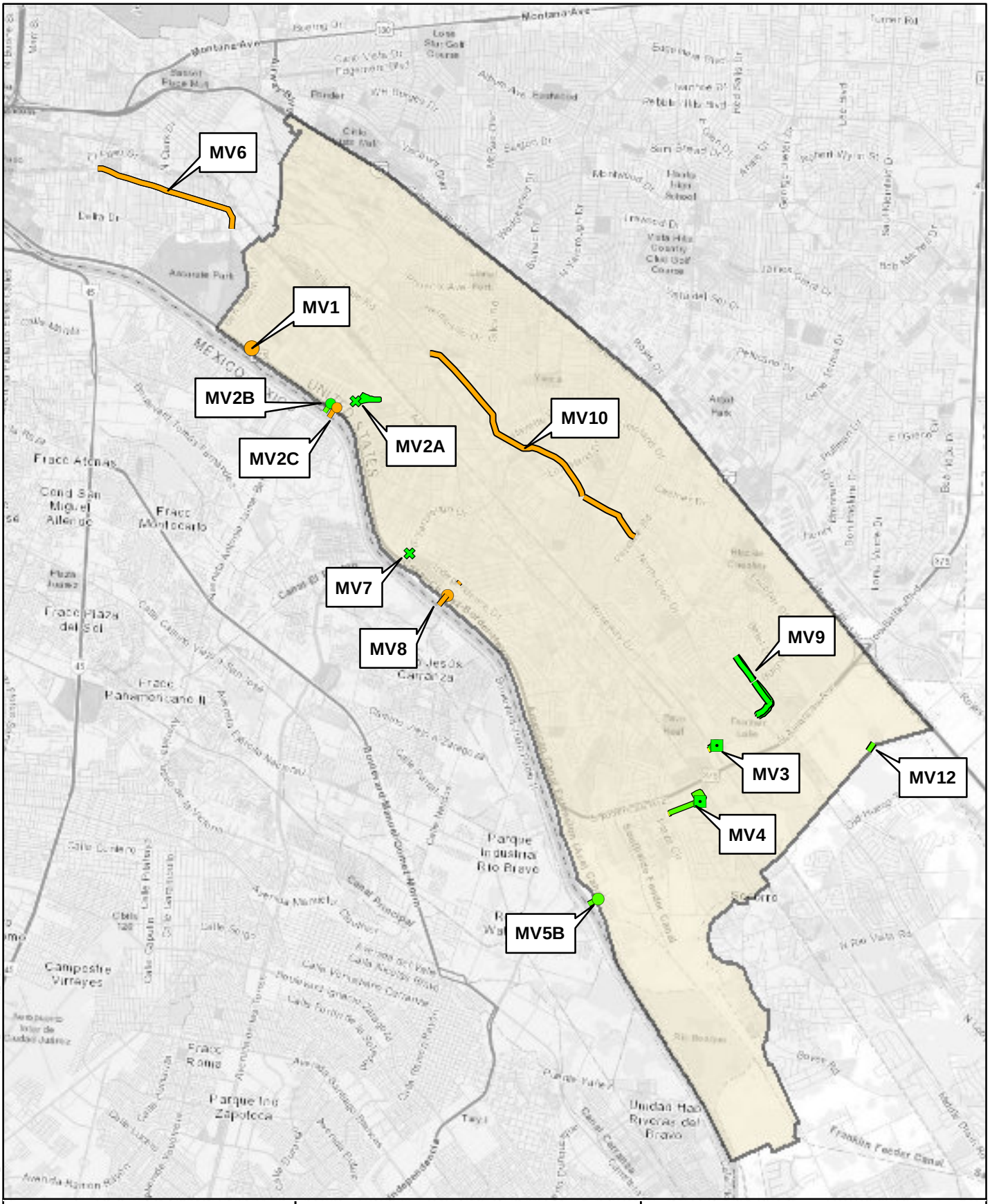
New Storm Drain

Cielo Vista System - Avalon Drive Drainage Improvements (EA11) East Side Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/24/2021

Figure 8-2-11



N

0 0.7 1.4 Miles

Legend

- Mission Valley Region
- Project Area
- Alternatively Funded Project Area

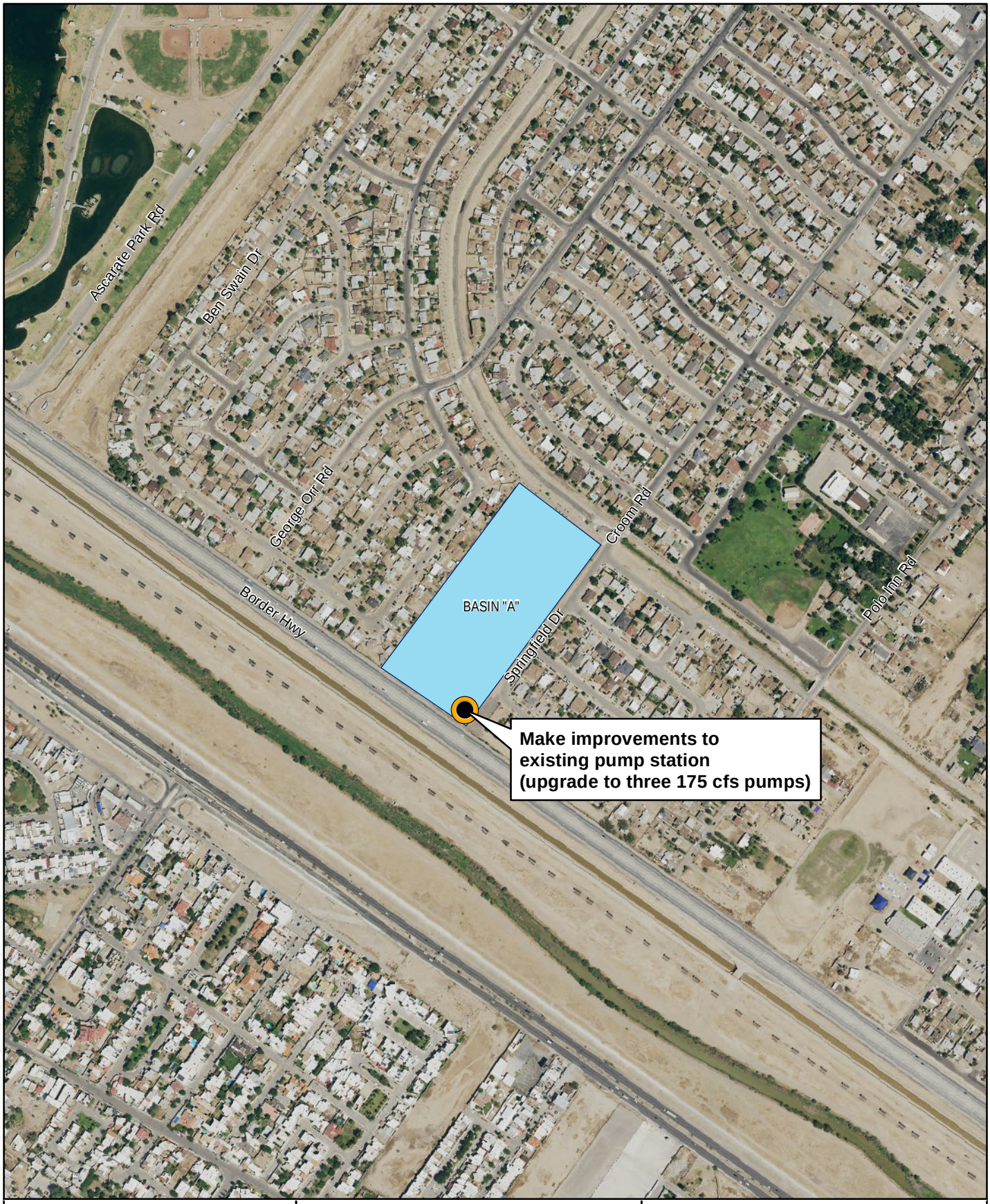
el paso WATER

Mission Valley Region Projects

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-3



N

0 300 600 Feet

1 : 7,200 or 1 inch = 600 Feet

el paso WATER

Legend

- Existing Detention Basin
- Existing Pump Station

Recommended Improvements, Alternatively Funded

- Pump Station

Basin A System - Basin A Improvements (MV1) Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021	Figure 8-3-1

N

0 300 600 Feet

1 : 7,200 or 1 inch = 600 Feet

el paso WATER

Legend

- Existing Channel
- Existing Basin
- *Recommended Improvements*
  - Pump Station
  - Conduit
  - Basin
- *Recommended Improvements, Alternatively Funded*
  - Pump Station
  - Conduit

Basin A System - Basin B Pump Station (MV2) Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-3-2

N

0 300 600 Feet

1 : 7,200 or 1 inch = 600 Feet

el paso WATER

Legend

- Existing Channel
- Existing Basin

Recommended Improvements

- Automated Gates
- Pump Station
- Block Channel
- Conduit

Basin G System - Feather Lake II Improvements (MV3) Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-3-3

N

0 300 600 Feet

1 : 7,200 or 1 inch = 600 Feet

el paso WATER

Legend

- Existing Channel

Recommended Improvements

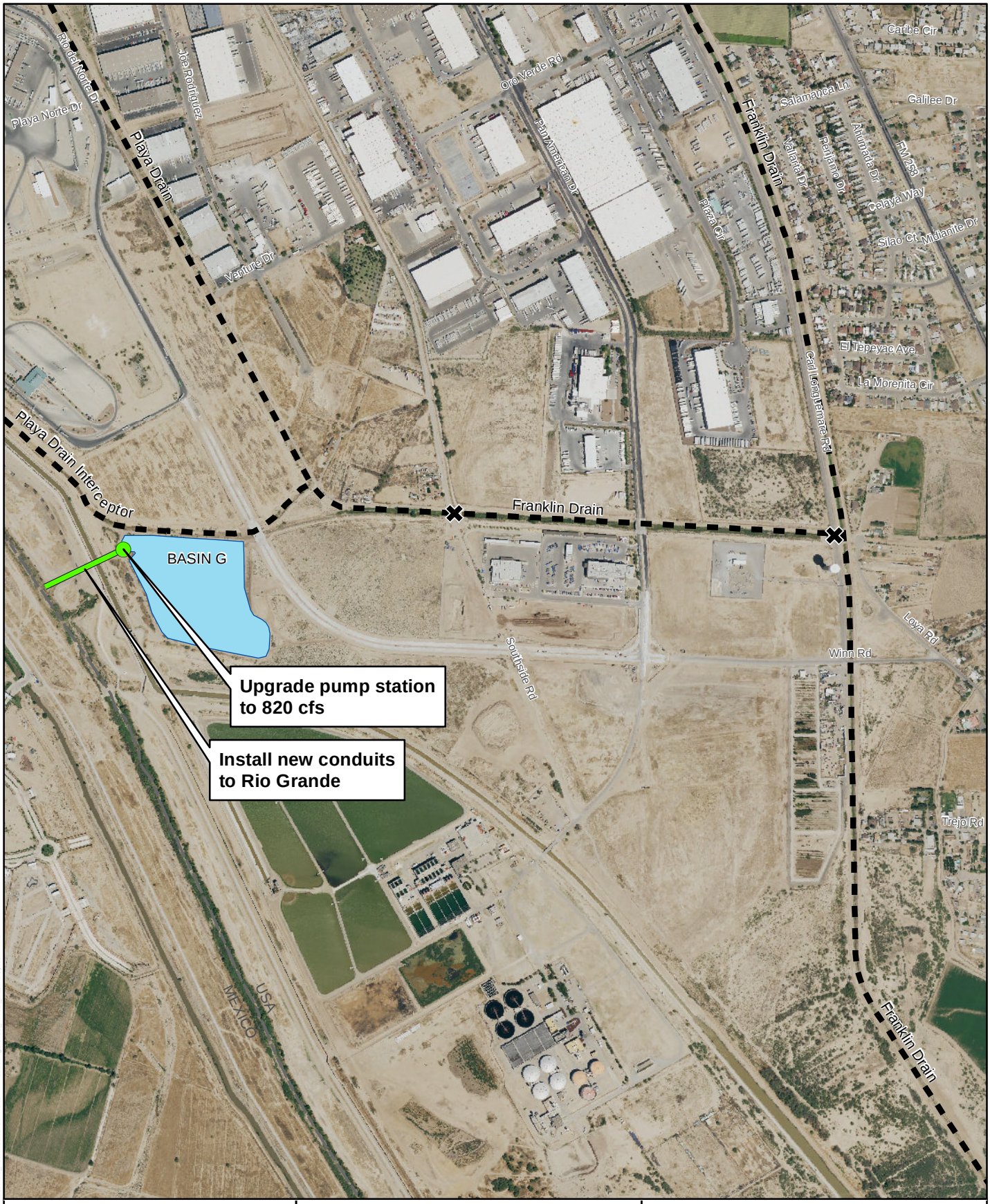
- Automated Gates
- Pump Station
- Block Channel
- Conduit
- Basin

Basin G System - Middle Drain Interceptor Storage (MV4) Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-3-4



N

0 500 1,000 Feet

1 : 12,000 or 1 inch = 1,000 Feet

el paso WATER

Legend

- Existing Crossing
- Existing Channel
- Existing Basin

Recommended Improvements

- Pump Station
- Conduit

Basin G System - Basin G Improvements (MV5B) Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-3-5

N

0 750 1,500 Feet

1 : 18,000 or 1 Inch = 1,500 Feet

el paso WATER

Legend

- Existing Channel
- Existing Dam/Basin
- *Recommended Improvements, Alternatively Funded*
- Storm Drain

Basin A System - Alameda Drive Drainage Improvements (MV6) Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 7/1/2021

Figure 8-3-6

N

0 400 800 Feet

1 : 9,600 or 1 inch = 800 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Crossing

Basin G System - Playa Drain Crossing at Yarbrough (MV7) Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/24/2021

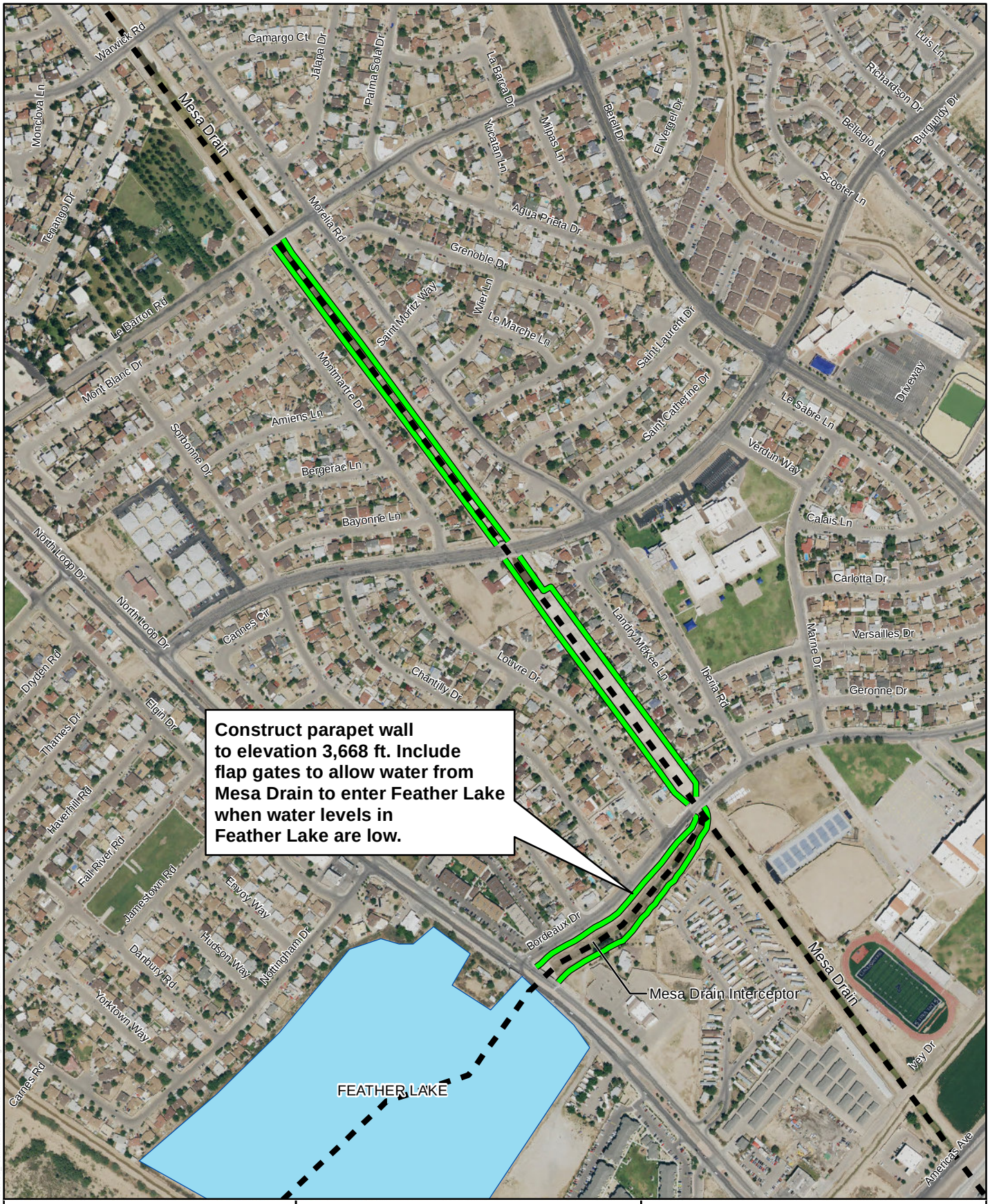
Figure 8-3-7

Basin G System - Basin C Pump Station (Shawver Pond) (MV8) Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/24/2021

Figure 8-3-8



N

0 300 600 Feet

1 : 7,200 or 1 Inch = 600 Feet

el paso WATER

Legend

- Existing Channel
- Existing Dam

Recommended Improvements

- Parapet Wall

Mesa Drain System - Mesa Drain Storage (MV9) Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-3-9

N

0 2,000 4,000 Feet

1 : 48,000 or 1 Inch = 4,000 Feet

el paso WATER

Legend

- Existing Channel
- Existing Dam/Basin

Recommended Improvements, Alternatively Funded

- Channel

Mesa Drain System - Mesa Drain Improvements (MV10) Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-3-10

N

0 500 1,000 Feet

1 : 12,000 or 1 Inch = 1,000 Feet

el paso WATER

Legend

- Existing Outfall Structure
- Existing Dam/Basin

Recommended Improvements, Alternatively Funded

- Reconstruct Existing Outfall

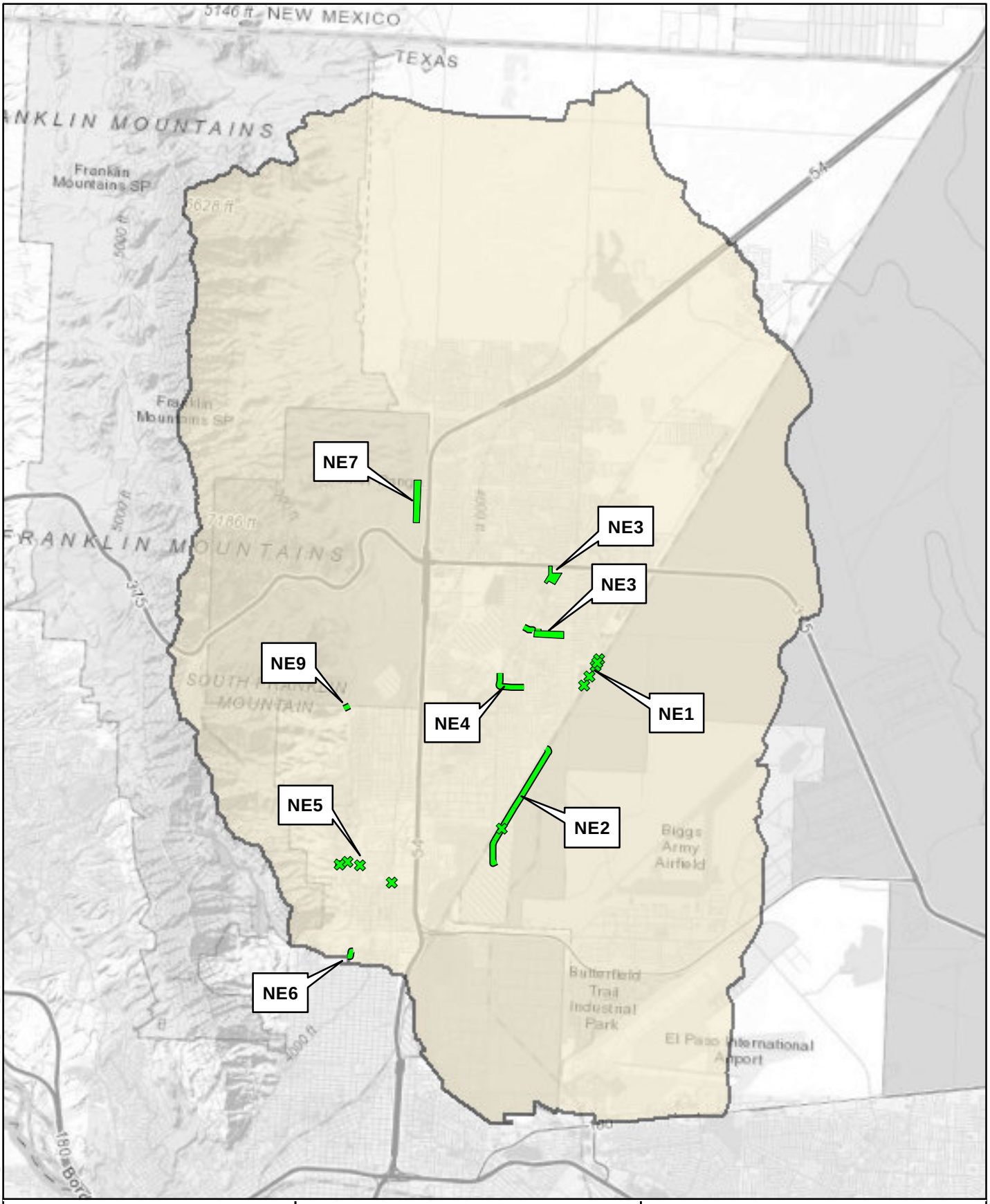
Americas Ten Basin - Americas Ten Basin Outfall (MV12)

Mission Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-3-11


NEW MEXICO
TEXAS
FRANKLIN MOUNTAINS
Franklin Mountains SP
NE7
NE3
NE3
NE9
NE4
NE1
NE5
NE2
NE6
Biggs Army Airfield
Butterfield Trail Industrial Park
El Paso International Airport
0
0.9
1.8
Miles
Legend
Northeast Region
Project Area
el paso WATER
Northeast Region Projects
El Paso 2021 Stormwater Master Plan Update
Date: 6/15/2021
Figure 8-4

N

0 500 1,000 Feet

1 : 12,000 or 1 inch = 1,000 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

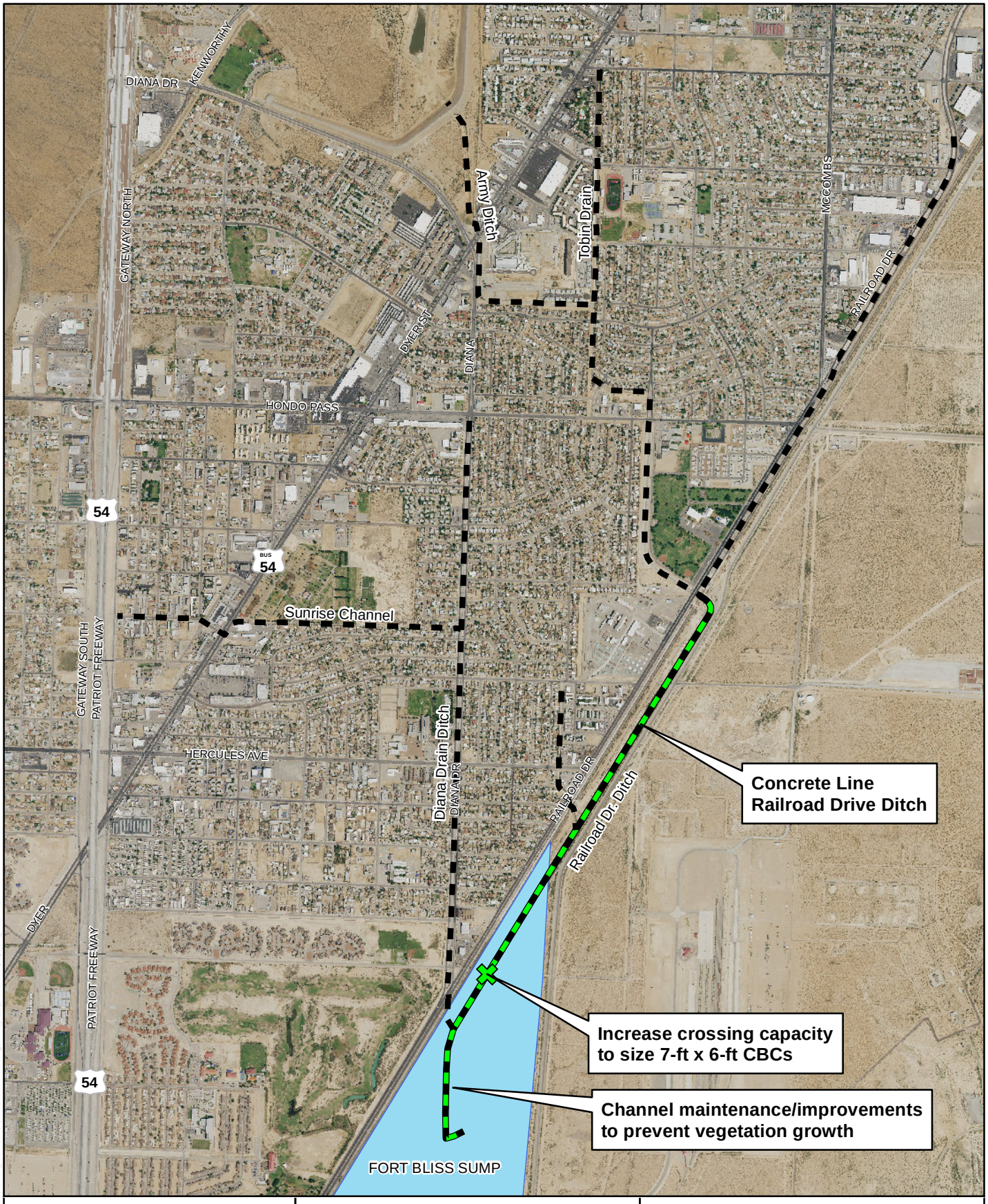
Crossing

Fort Bliss Sump System - Railroad Drive - Upstream Crossings (NE1) Northeast Region

El Paso 2021 Stormwater Master Plan Update

Date: 7/1/2021

Figure 8-4-1



N

0 1,000 2,000 Feet

1 : 12,000 or 1 Inch = 2,000 Feet

el paso WATER

Legend

- Existing Channel
- Existing Sump

Recommended Improvements

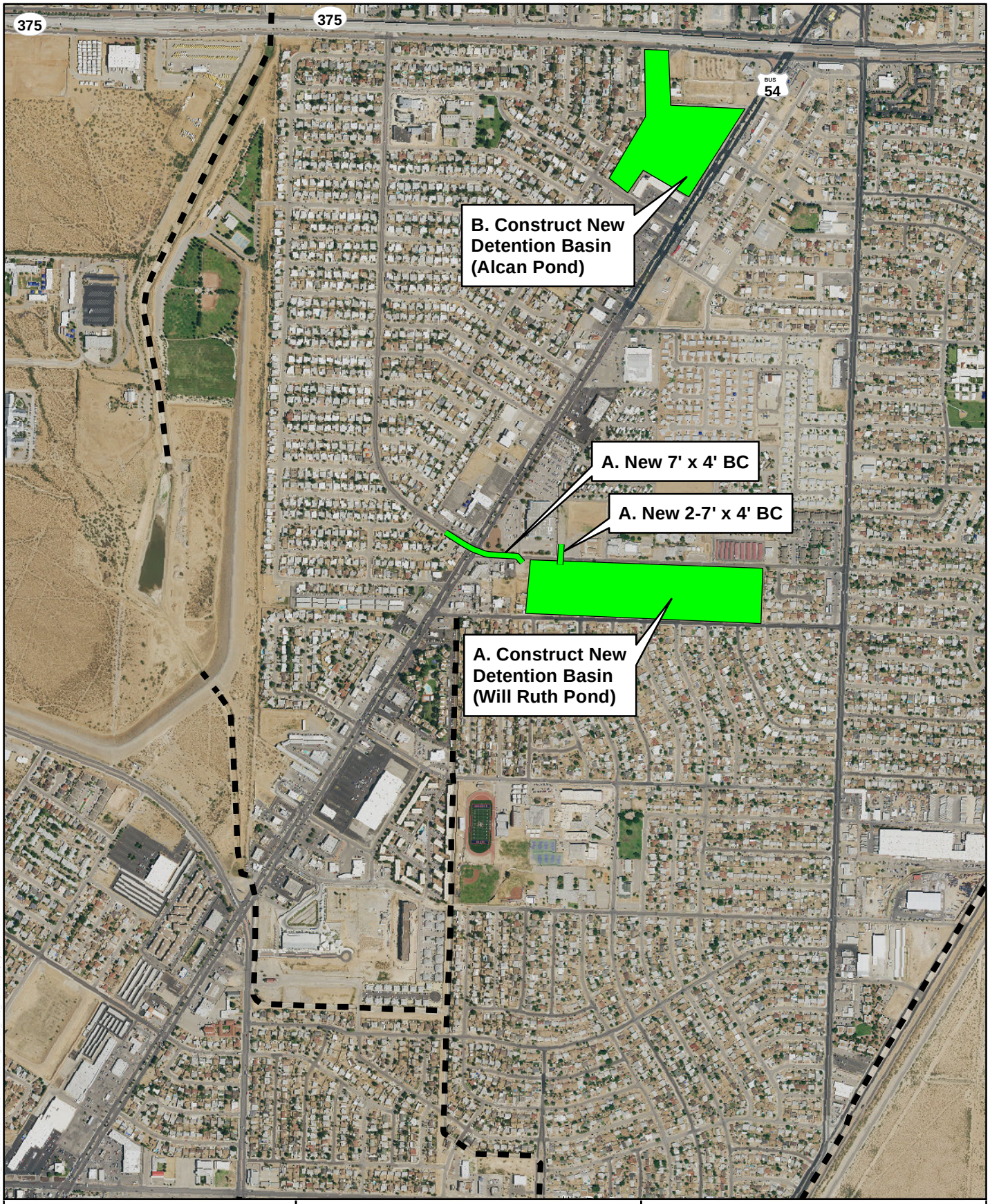
- Crossing
- Channel

Fort Bliss Sump System - Railroad Drive Ditch - Downstream (NE2) Northeast Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-4-2



N

0 600 1,200 Feet

1 : 14,400 or 1 inch = 1,200 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Conduit

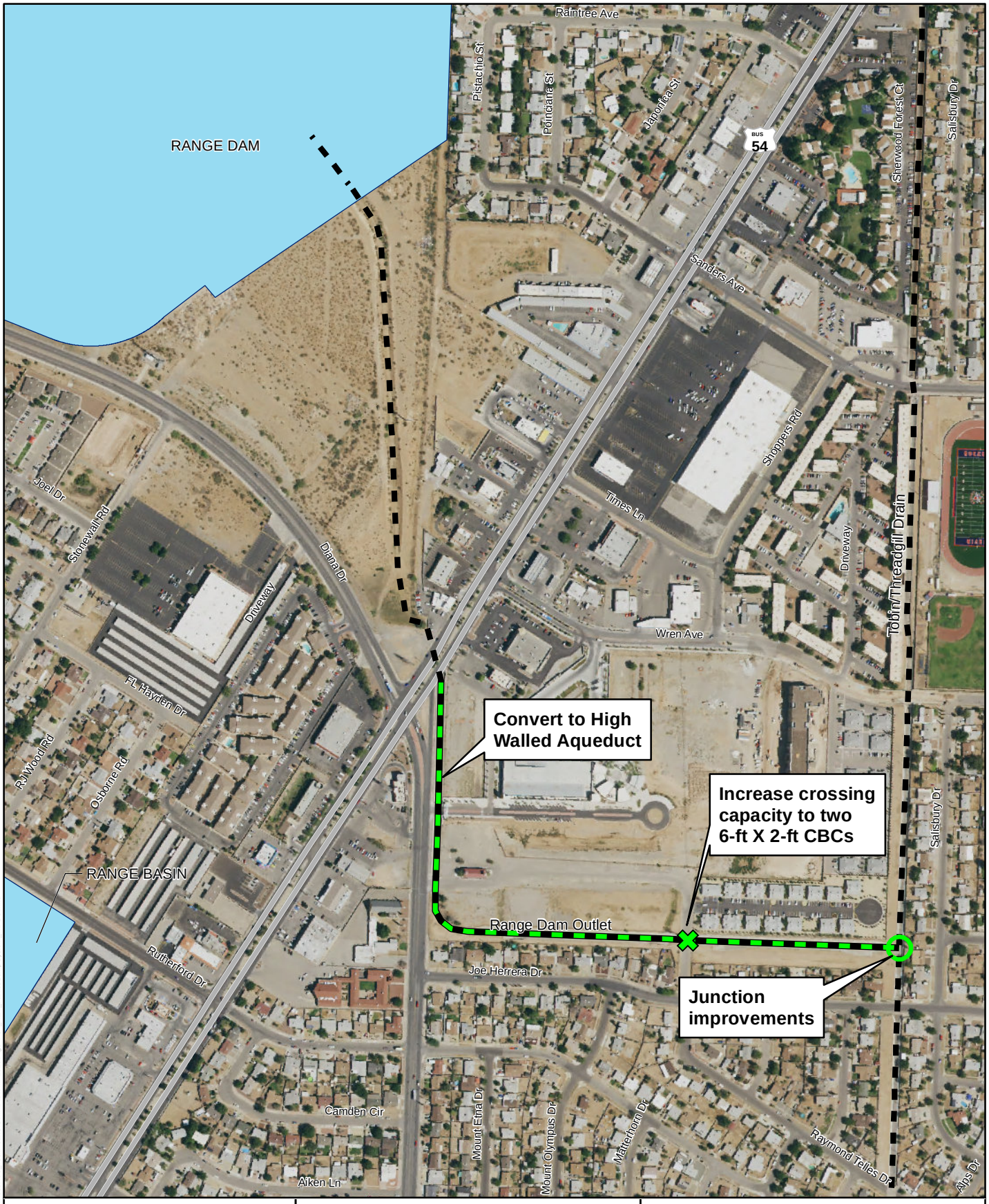
Basin

Fort Bliss Sump System - Flow Path 15
Tobin Drain / Will Ruth Pond (NE3) Northeast Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-4-3



N

0 250 500 Feet

1 : 6,000 or 1 Inch = 500 Feet

el paso WATER

Legend

- Existing Channel
- Existing Dam/Basin

Recommended Improvements

- Junction
- Crossing
- Potential Add-On

Fort Bliss Sump System - Range Dam Outlet Channel (NE4) Northeast Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-4-4

N

0 200 400 Feet

1 : 4,800 or 1 Inch = 400 Feet

el paso WATER

Legend

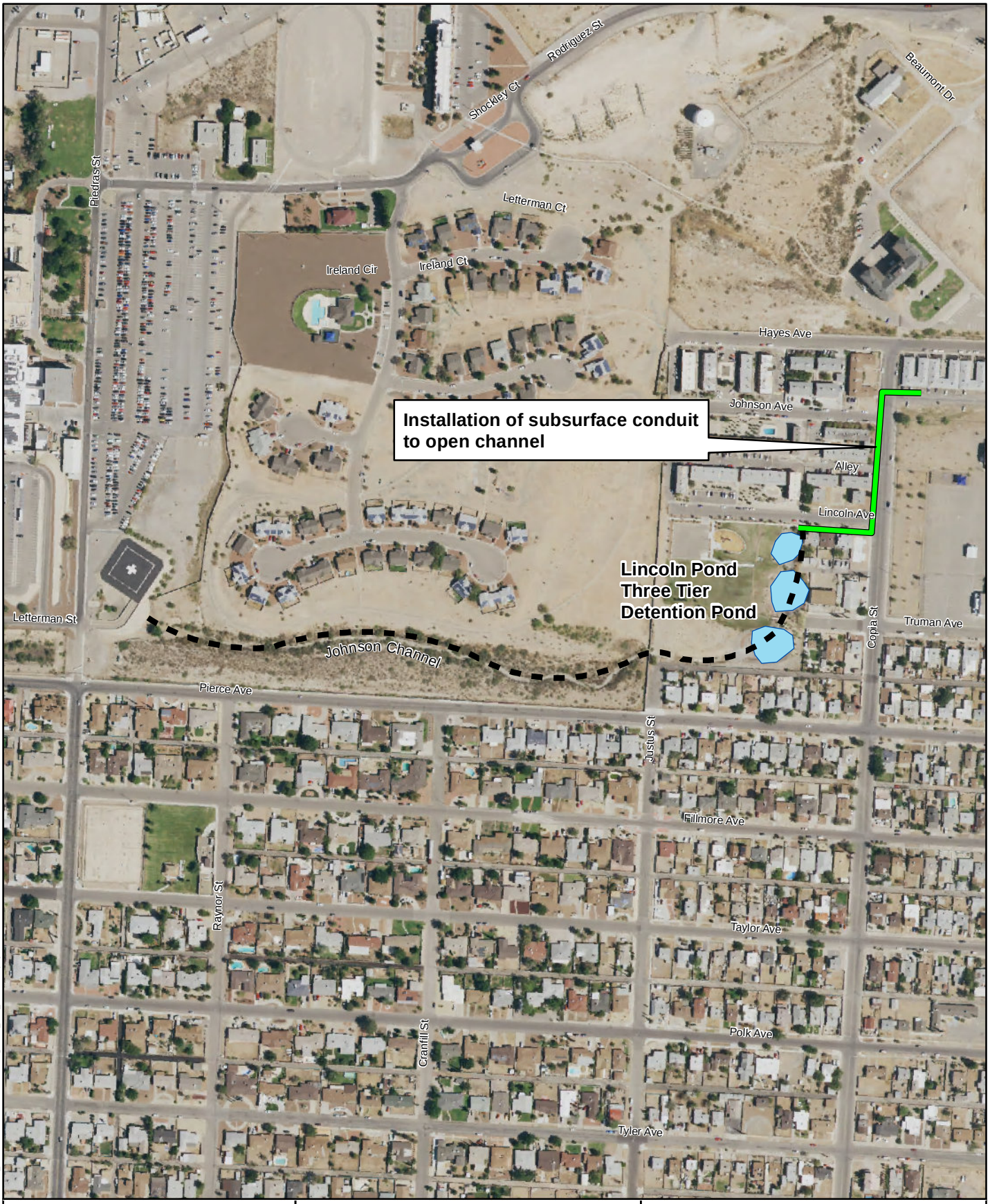
- Existing Channel
- *Recommended Improvements*
- Crossing
- Basin

Fort Bliss Sump System - Clearview Channel (NE5) Northeast Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-4-5



N

0 200 400 Feet

1 : 4,800 or 1 Inch = 400 Feet

el paso WATER

Legend

- Existing Channel
- Existing Basin

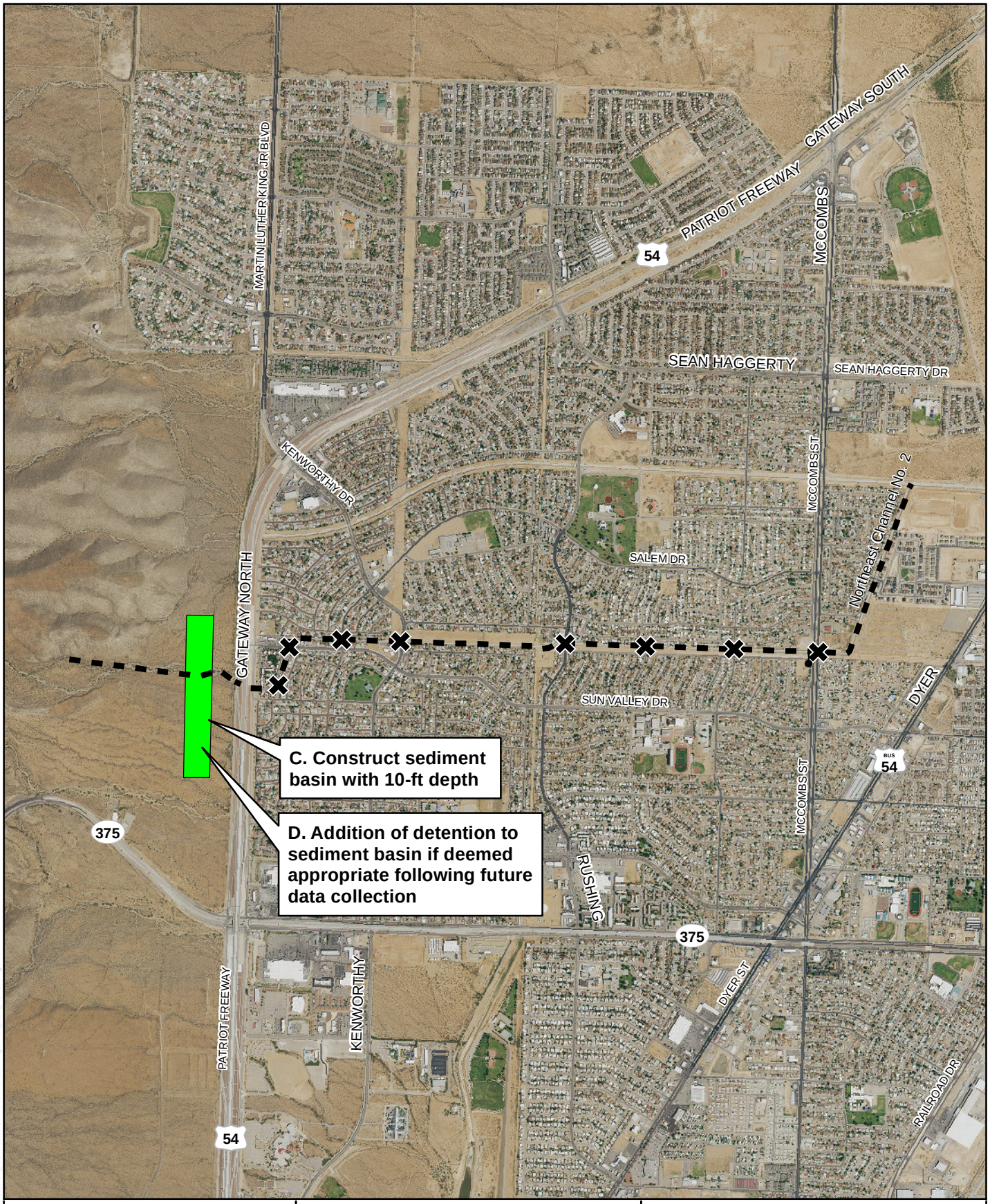
Recommended Improvements

- Conduit

Fort Bliss Sump System - Johnson Channel (NE6) Northeast Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021	Figure 8-4-6



N

0 1,250 2,500 Feet

1 : 30,000 or 1 Inch = 2,500 Feet

el paso WATER

Legend

- Crossing
- Existing Channel
- *Recommended Improvements*
- Basin

Northeast Ponding System - NE Channel No. 2 (NE7) Northeast Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-4-7

N

0 200 400 Feet

1 : 4,800 or 1 Inch = 400 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Channel

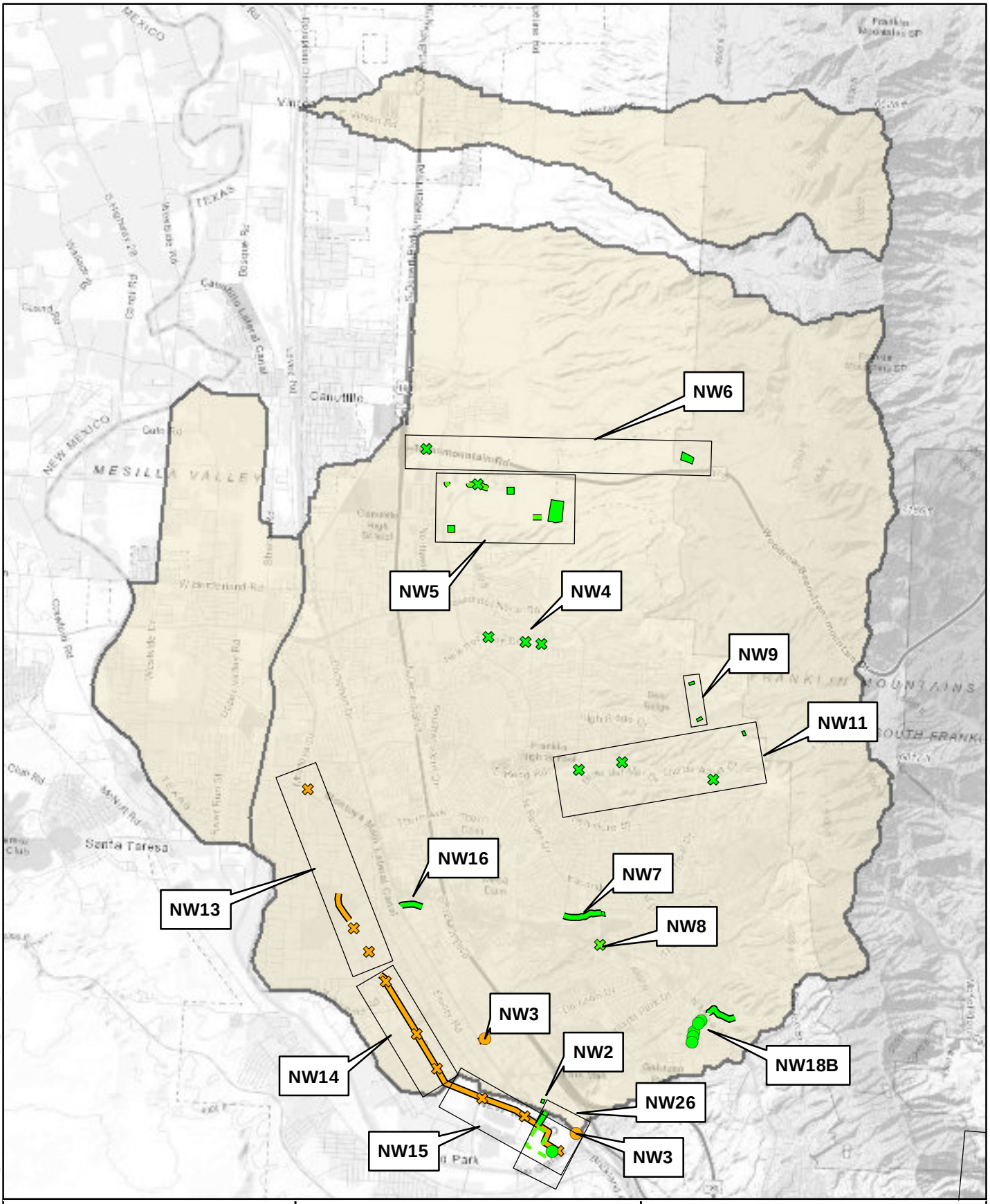
Range Dam System - Northgate Diversion Channel (NE9) Northeast Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-4-8

File: P:\GIS_Projects\EPWU\MXD\FinalReport\F834_RangeDamSystem_Northgate_NE9.mxd



N

0 0.7 1.4 Miles

Legend

- Northwest Region
- Project Area
- Alternatively Funded Project Area

el paso WATER

Northwest Region Projects

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-5

N

0 1,000 2,000 Feet

1 : 24,000 or 1 inch = 2,000 Feet

el paso WATER

Legend

- Existing Basin
- Existing Culvert
- Existing Channel

Recommended Improvements

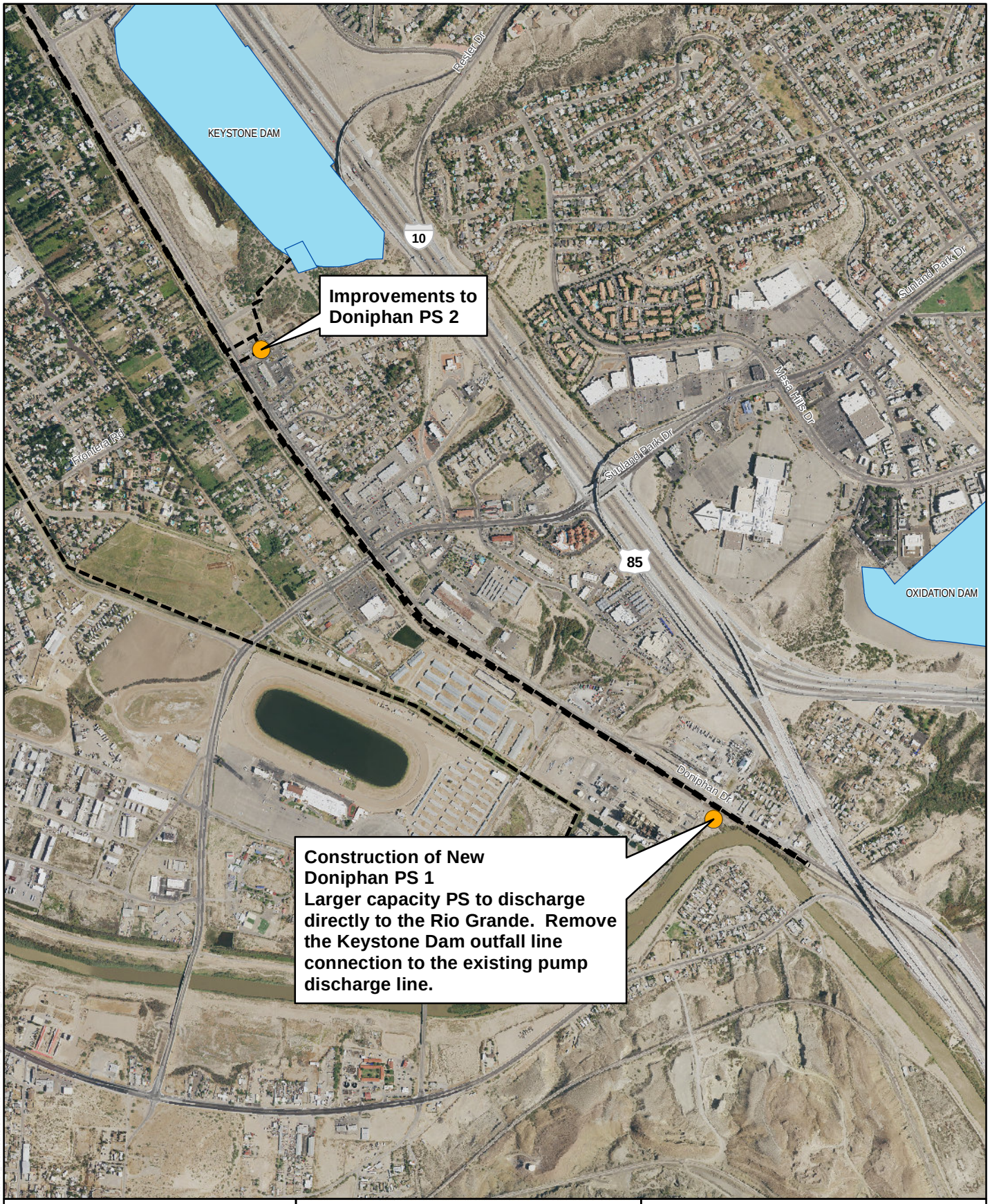
- Basin

Doniphan System - Doniphan Ditch (NW2) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-5-1



N

0 750 1,500 Feet

1 : 18,000 or 1 inch = 1,500 Feet

el paso WATER

Legend

- Existing Channel
- Dam

Recommended Improvements, Alternatively Funded

- Pump Station

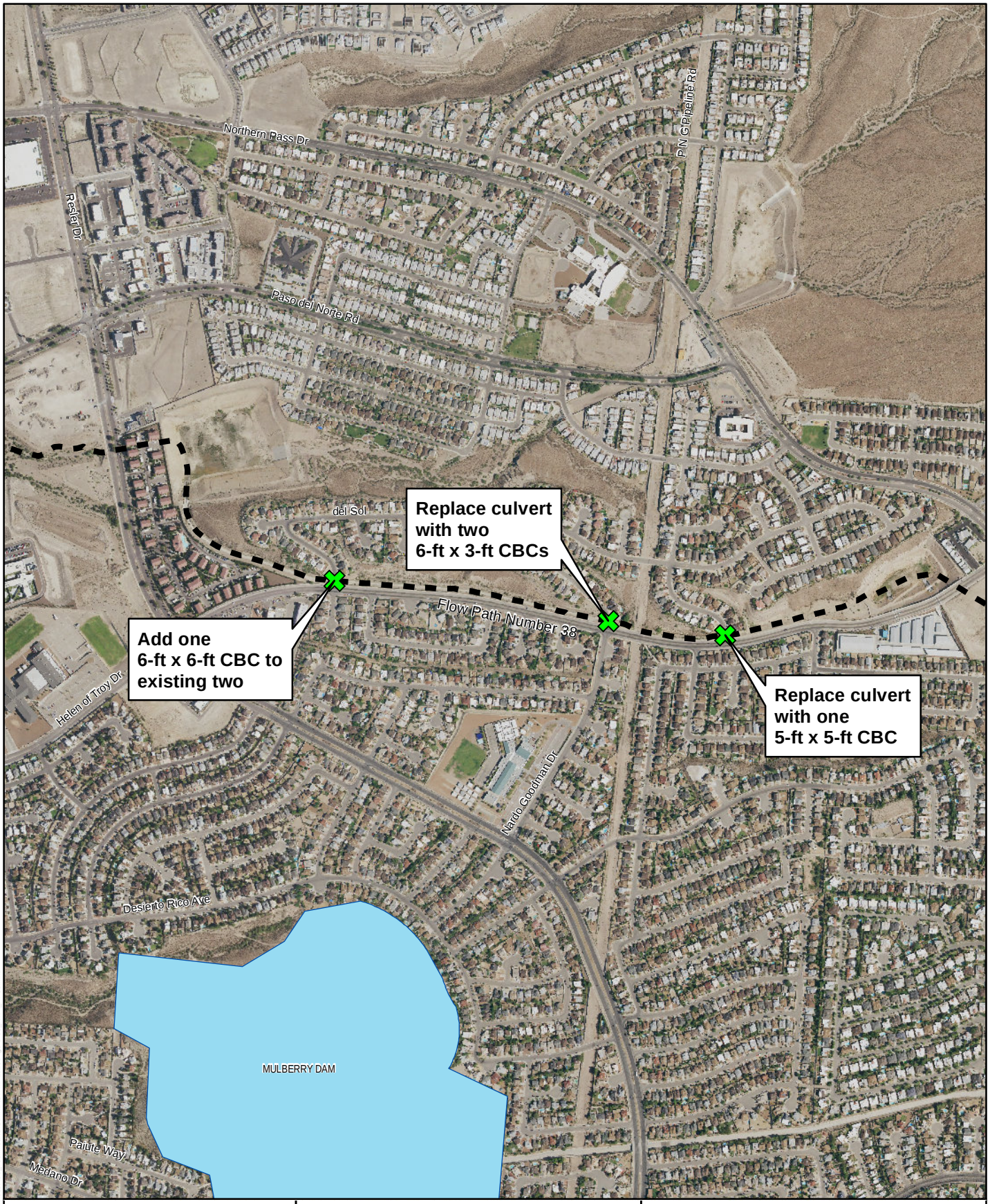
Doniphan System - Pump Station Improvements (NW3)

Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-5-2



N

0 500 1,000 Feet

1 : 12,000 or 1 inch = 1,000 Feet

el paso WATER

Legend

- Existing Conduit
- Existing Basin

Recommended Improvements

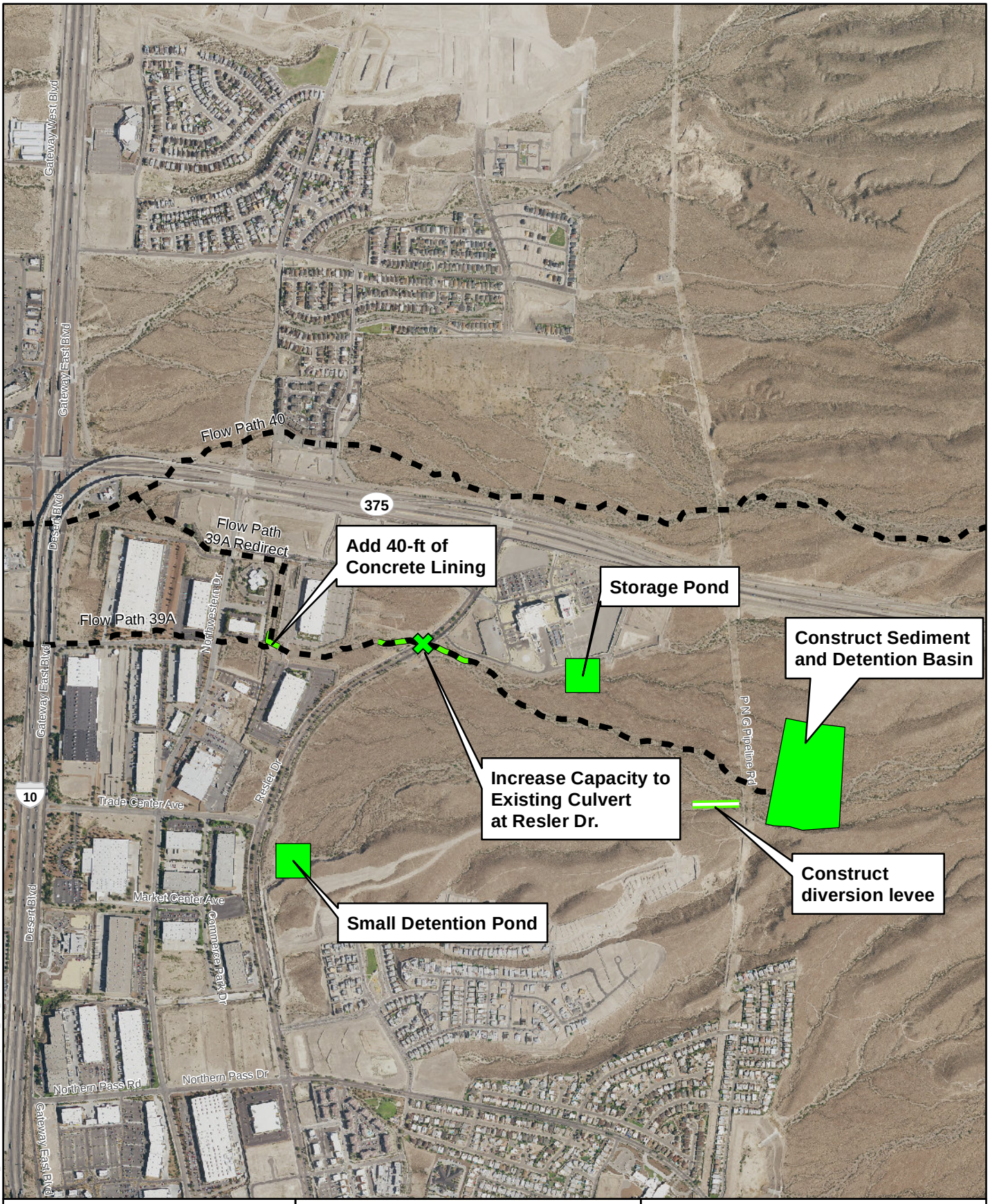
- Alternative Project

Flow Paths System - Flow Path No. 38 (NW4) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-5-3



N

0 750 1,500 Feet

1 : 18,000 or 1 inch = 1,500 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Channel

Levee

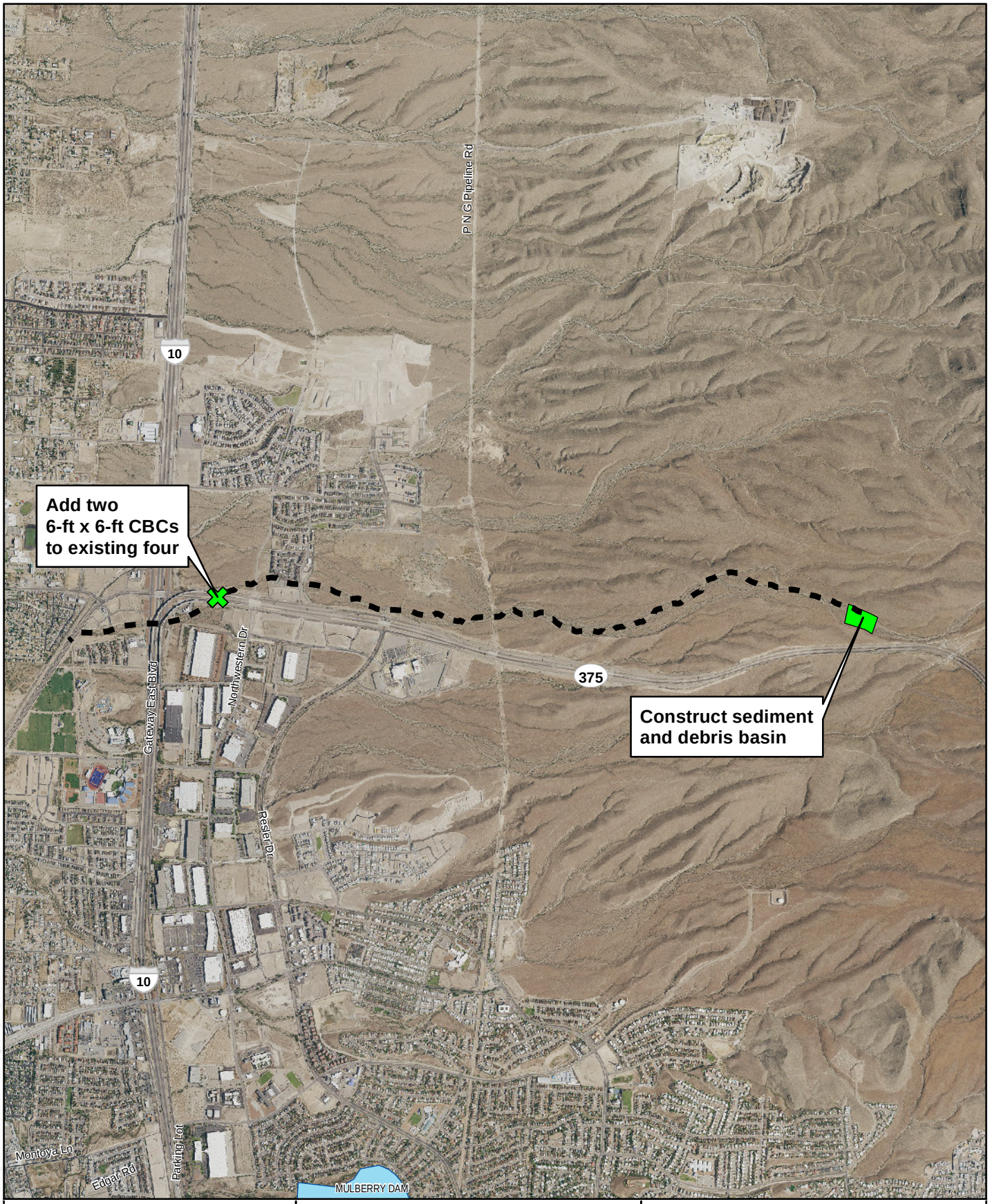
Basin

Flow Paths System - Flow Path No. 39A Detention (NW5) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/24/2021

Figure 8-5-4



N

0 1,500 3,000 Feet

1 : 36,000 or 1 inch = 3,000 Feet

el paso WATER

Legend

- Existing Conduit
- Existing Basin

Recommended Improvements

- Crossing
- Basin

Flow Paths System - Flow Path No. 40 (NW6) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-5-5

N

0 750 1,500 Feet

1 : 18,000 or 1 inch = 1,500 Feet

el paso WATER

Legend

- Existing Channel

Recommended Improvements

- Storm Drain Improvements
- Basin

Keystone Dam System - Arroyo 4 (NW7)
Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 05/25/2017

Figure 8-5-6

N

0 250 500 Feet

1 : 6,000 or 1 inch = 500 Feet

el paso WATER

Legend

Existing Conduit

Recommended Improvements

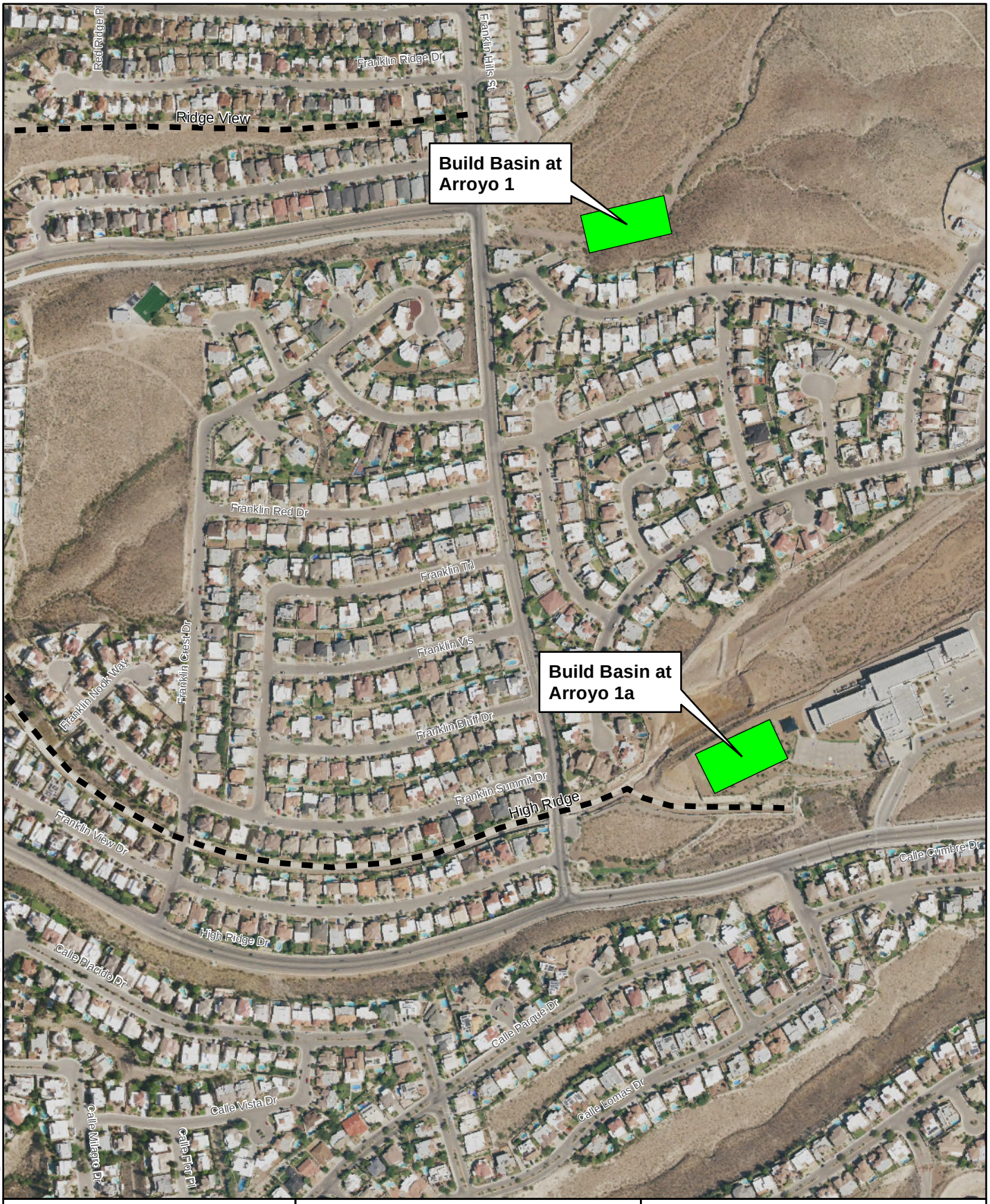
Crossing

Keystone Dam System - Arroyo 5 Culvert Replacement (NW8) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/25/2021

Figure 8-5-7



N

0 250 500 Feet

1 : 6,000 or 1 inch = 500 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Basin

Keystone Dam System - Arroyo 1 - Detention Improvements (NW9) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-5-8

N

0 750 1,500 Feet

1 : 18,000 or 1 inch = 1,500 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Crossing

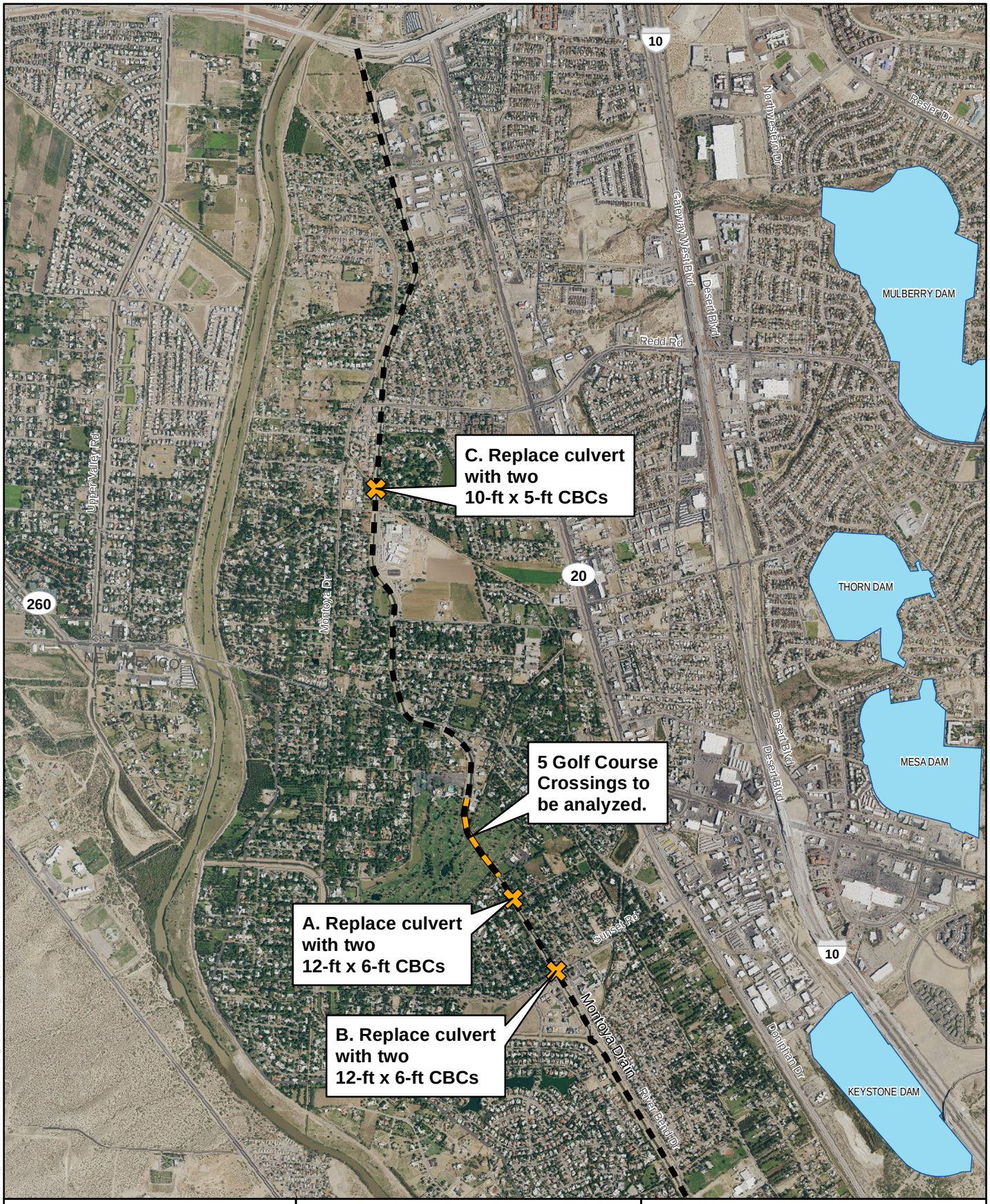
Basin

Keystone Dam System - Ojo de Agua Arroyo (NW11) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/25/2021

Figure 8-5-9



N

0 1,250 2,500 Feet

1 : 30,000 or 1 inch = 2,500 Feet

el paso WATER

Legend

- Existing Channel
- Existing Basin

Recommended Improvements, Alternatively Funded

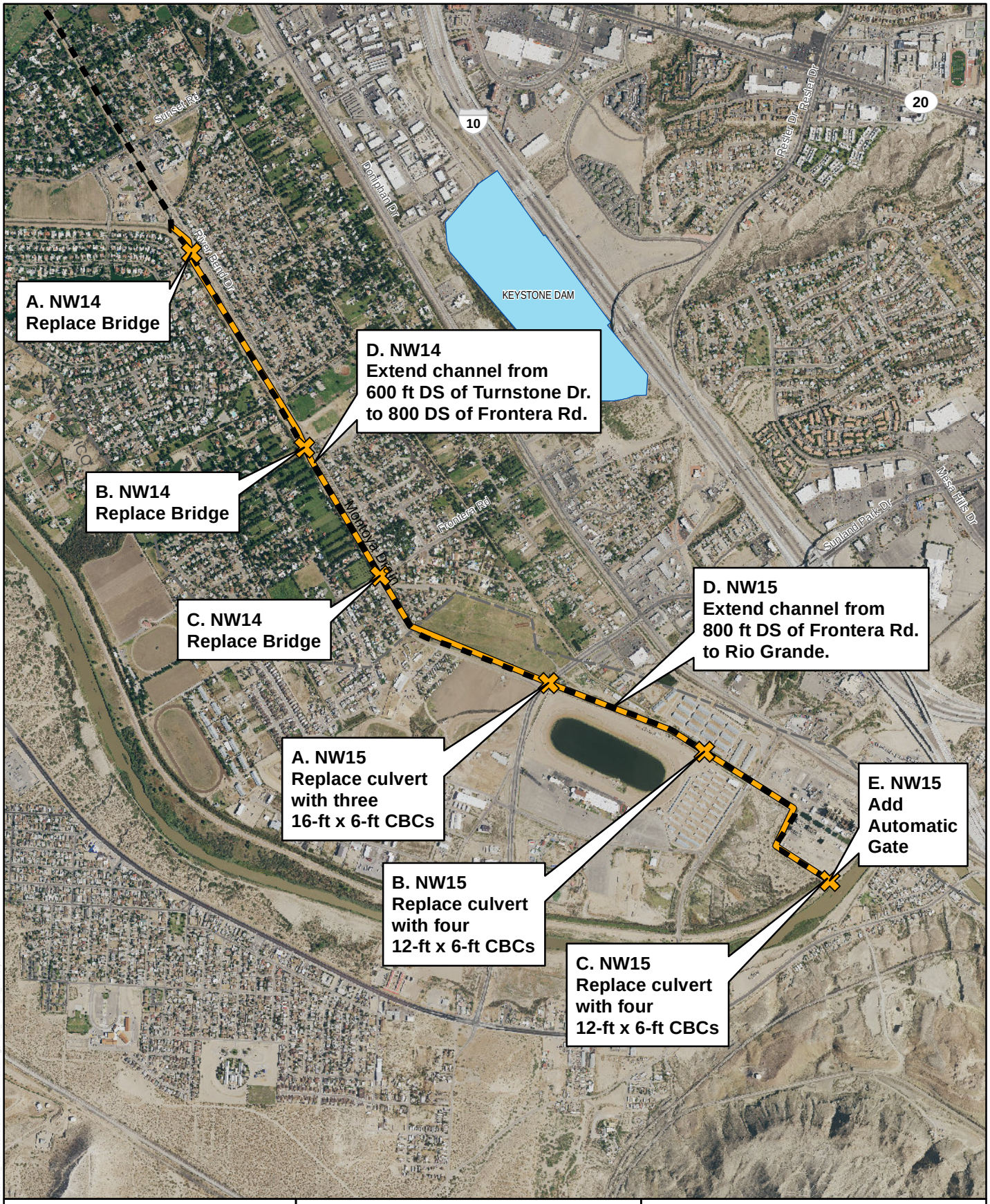
- Crossing
- Channel

Montoya Drain System - Montoya Drain (NW13) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-5-10



N

0 1,000 2,000 Feet

1 : 24,000 or 1 inch = 2,000 Feet

el paso WATER

Legend

- Existing Channel
- Existing Basin

Recommended Improvements, Alternatively Funded

- Crossing
- Channel

Montoya Drain System - Montoya Drain (NW14 & NW15) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-5-11

N

0 500 1,000 Feet

1 : 12,000 or 1 inch = 1,000 Feet

el paso WATER

Legend

Existing Channel

Culvert

Recommended Improvements

Channel

Montoya Drain System - White Spur Drain (NW16) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-5-12

N

0 250 500 Feet

1 : 6,000 or 1 inch = 500 Feet

el paso WATER

Legend

- Existing Channel

Recommended Improvements

- Improve Inlet
- Channel Improvements

Oxidation Dam System - Mesa Hills Channel (NW18) Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/25/2021

Figure 8-5-13

N

0 300 600 Feet

1 : 7,200 or 1 Inch = 600 Feet

el paso WATER

Legend

- Gated Structure
- Existing Channel

Recommended Improvements

- Pump Station
- Proposed Conduit
- Wetland

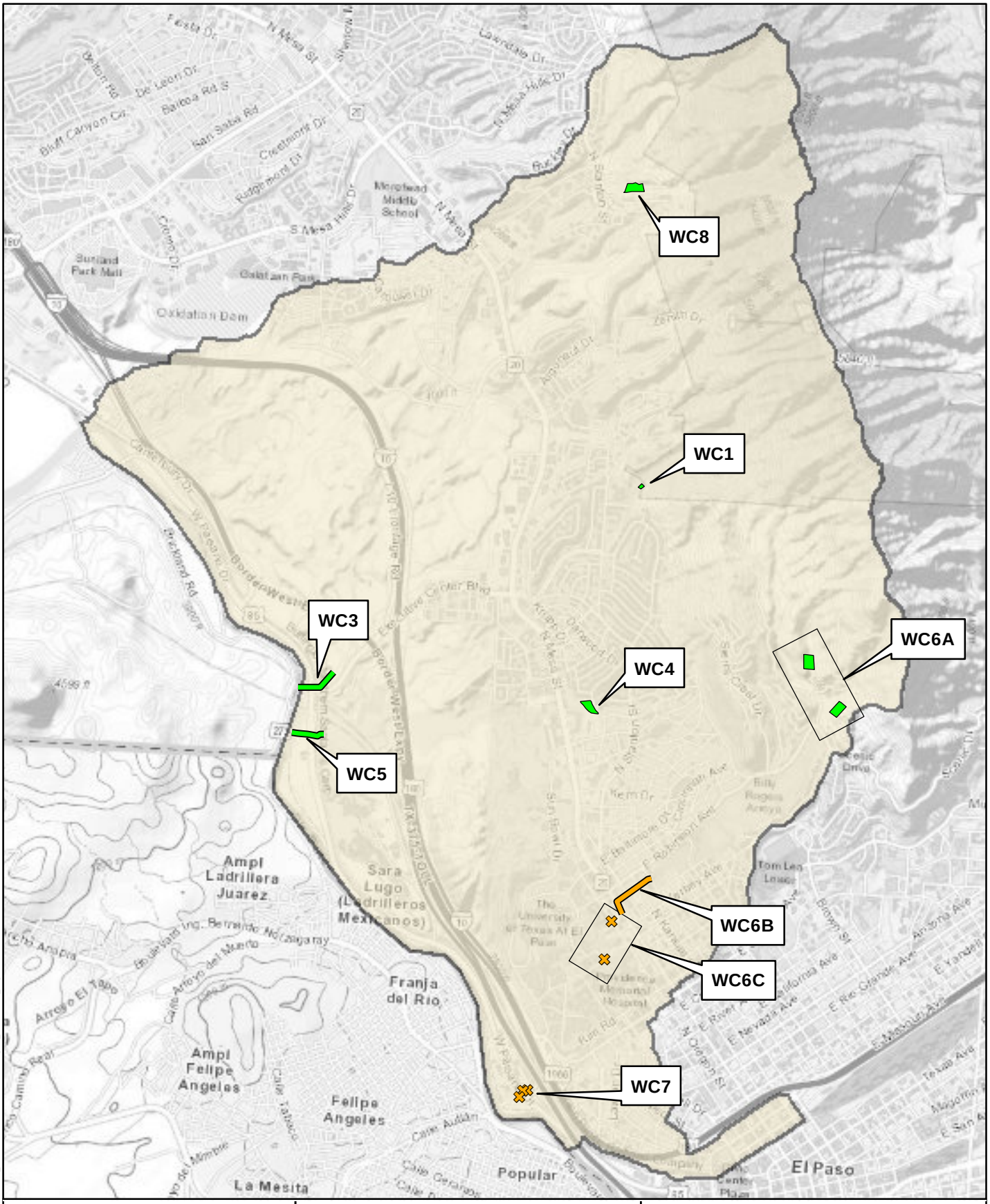
Montoya Drain System - New Montoya Drain Wetland (NW26)

Northwest Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/25/2021

Figure 8-5-14



West Central Region Projects

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-6

N

0 250 500 Feet

1 : 6,000 or 1 inch = 500 Feet

el paso WATER

Legend

Recommended Improvements

Basin

West Central System - Canterbury Channel (WC1)
West Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-6-1

N

0 750 1,500 Feet

1 : 18,000 or 1 inch = 1,500 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Channel

West Central System - Flow Path No. 20 (WC3)
West Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-6-2

N

0 750 1,500 Feet

1 : 18,000 or 1 inch = 1,500 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Basin

West Central System - Flow Path No. 21 (WC4)
West Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-6-3

N

0 750 1,500 Feet

1 : 18,000 or 1 inch = 1,500 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Siphon

West Central System - Flow Path No. 21 (WC5)
West Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-6-4

N

0 750 1,500 Feet

1 : 18,000 or 1 inch = 1,500 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements

Basin

West Central System - Flow Path No. 23 Detention (WC6A)
West Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-6-5

N

0 750 1,500 Feet

1 : 18,000 or 1 inch = 1,500 Feet

el paso WATER

Legend

Existing Channel

Recommended Improvements, Alternatively Funded

Crossing

Channel

West Central System - Flow Path No. 23 (WC6B & C, WC7)

West Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-6-6

N

0 250 500 Feet

1 : 6,000 or 1 inch = 500 Feet

el paso WATER

Legend

Recommended Improvements

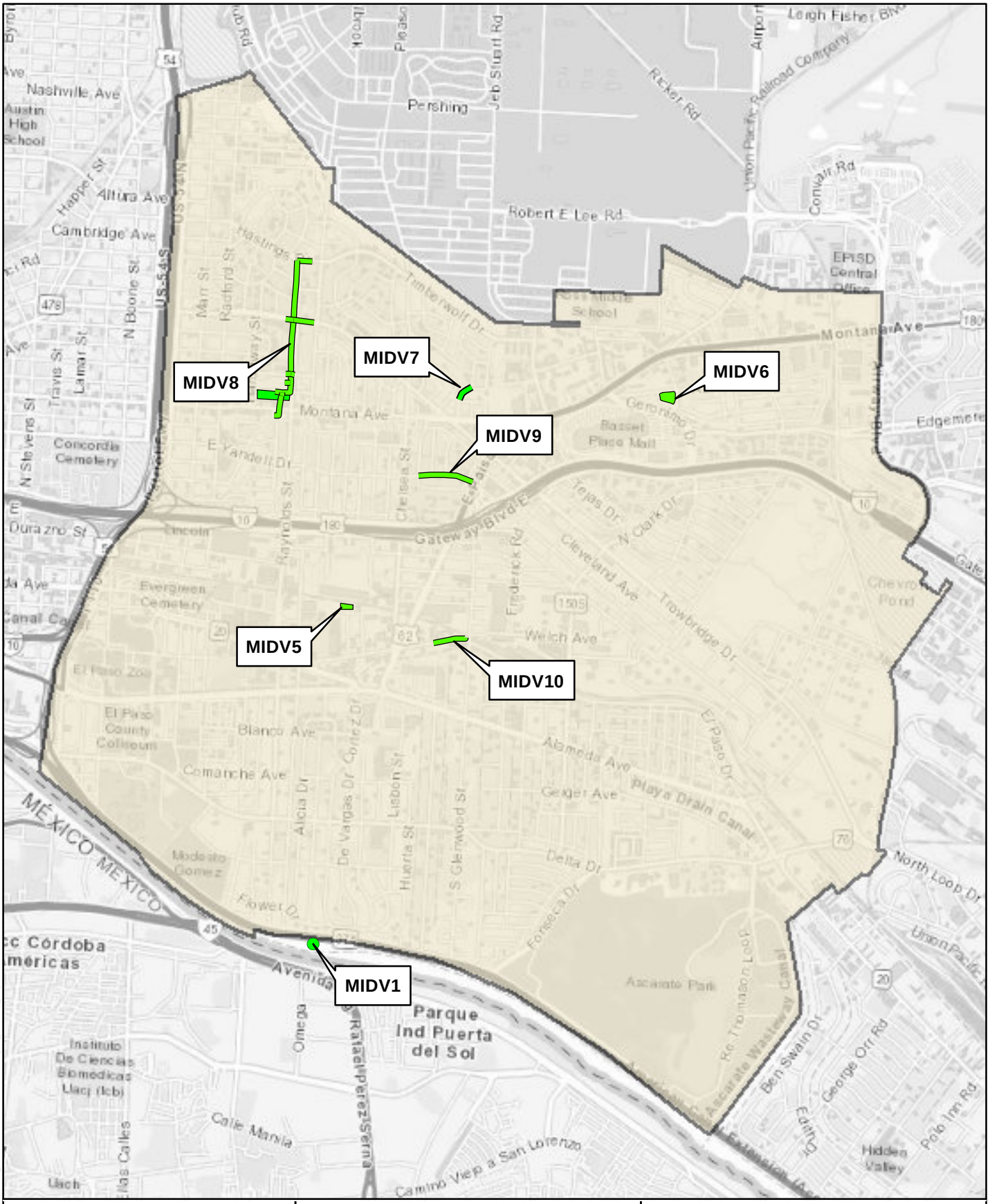
Basin

West Central System - New Sediment Channel (WC8) West Central Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/25/2021

Figure 8-6-7



N

0 0.25 0.5 Miles

Legend

Mid-Valley Region

Project Area

el paso WATER

Mid-Valley Region Projects

El Paso 2021 Stormwater Master Plan Update

Date: 6/15/2021

Figure 8-7

N

0 350 700 Feet

1 : 8,400 or 1 Inch = 700 Feet

el paso WATER

Legend

- Existing Channel
- Existing System

Recommended Improvements

- Pump Station

Modesto System - Clardy Fox Pump Station Improvement (MidV1) Mid Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/25/2021

Figure 8-7-1

N

0 225 450 Feet

1 : 5,400 or 1 Inch = 450 Feet

el paso WATER

Legend

Recommended Improvements

Basin

Conduit

Bassett System - Bassett-Geronimo Improvements (MidV6) Mid Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 4/20/2022	Figure 8-7-3

N

0 150 300 Feet

1 : 3,600 or 1 Inch = 300 Feet

el paso WATER

Legend

- Existing Channel

Recommended Improvements

- Pump Station
- Conduit
- Basin

Bassett System - Montview Pump Station and Basin Improvements (MidV5) Mid Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 12/7/2021

Figure 8-7-2

N

0 225 450 Feet

1 : 5,400 or 1 Inch = 450 Feet

el paso WATER

Legend

Recommended Improvements

Basin

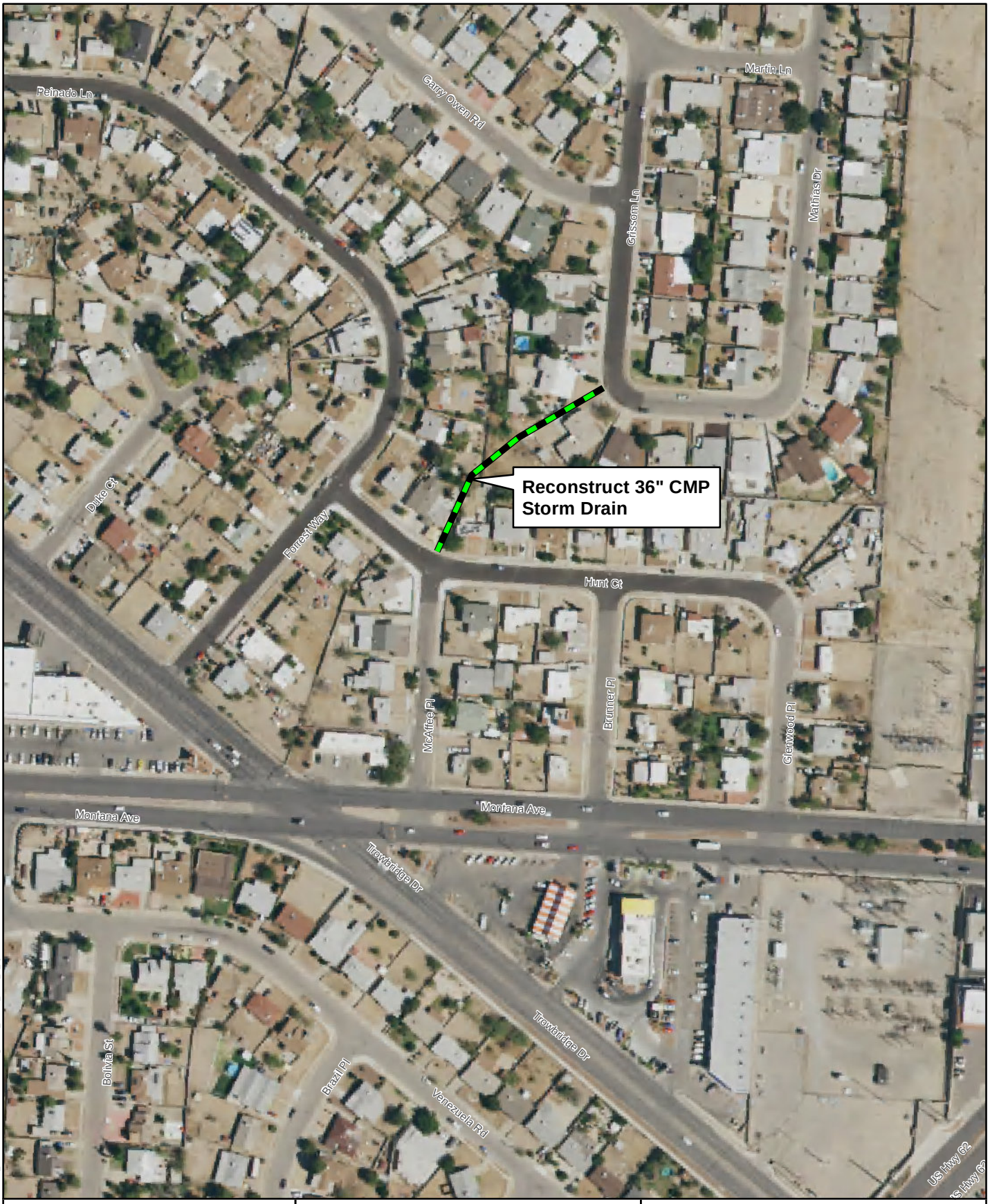
Conduit

Bassett System - Bassett-Geronimo Improvements (MidV6) Mid Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 12/7/2021

Figure 8-7-3



N

0 100 200 Feet

1 : 2,400 or 1 Inch = 200 Feet

el paso WATER

Legend

Existing Drain

Existing Dam/Basin

Recommended Improvements

Reconstruct Existing Drain System

Basin A System - Basin A System (MidV7) Mid Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/25/2021	Figure 8-7-4

N

0 300 600 Feet

1 : 7,200 or 1 Inch = 600 Feet

el paso WATER

Legend

Recommended Improvements

Conduit

New Detention Pond

Loretto System - Raynolds Street Drainage Improvements (MidV8) Mid Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/25/2021

Figure 8-7-5

N

0 200 400 Feet

1 : 4,800 or 1 Inch = 400 Feet

Legend

Recommended Improvements

Conduit

el paso WATER

Bassett System - Yandell Drive Drainage Improvements (MidV9) Mid Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/25/2021

Figure 8-7-6

N

0 200 400 Feet

1 : 4,800 or 1 Inch = 400 Feet

el paso WATER

Legend

Recommended Improvements

Conduit

Bassett System - El Paso Drive Drainage Improvements (MidV10) Mid Valley Region

El Paso 2021 Stormwater Master Plan Update

Date: 6/25/2021

Figure 8-7-7