APPENDIX J

NHPA SECTION 106 CORRESPONDENCE

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Julianne Polanco
State Historic Preservation Officer
California State Office of Historic Preservation
1725 23rd Street
Sacramento, CA 95816

Re: Request for Concurrence on Finding of No Historic Properties Affected under Section 106 of the National Historic Preservation Act for the Proposed USMCA Mitigation of Contaminated Transboundary Flows Project, San Diego County, California

Dear Ms. Polanco:

The U.S. Environmental Protection Agency (EPA) submits this determination of effect for your review and concurrence regarding the United States-Mexico-Canada Agreement (USMCA) Mitigation of Contaminated Transboundary Flows Project (Proposed Action) following Section 106 of the National Historic Preservation Act (NHPA). Enclosed for your review is a copy of *Class III Cultural Resource Inventory for the USMCA Mitigation of Contaminated Transboundary Flows Project in the Tijuana Watershed in San Diego, California,* ASM Affiliates, Inc. (ASM) (Enclosure 1). The Proposed Action is considered an official undertaking as defined in 26 CFR Section 800.15(y).

Proposed Action Purpose and Location
The Environmental Protection Agency (EPA) and the U.S. International Boundary and Water Commission (USIBWC), as joint lead agencies, are proposing to fund and implement the Proposed Action to reduce transboundary flows from Tijuana that cause adverse public health and environmental impacts in the Tijuana River watershed and adjacent coastal areas. The Proposed Action is located on City, County, and Federal lands in the Tijuana River Valley near the community of San Ysidro in the City of San Diego and in areas of Tijuana, Mexico. EPA and the USIBWC are leading the National Environmental Policy Act process for the Proposed Action through the development of a Programmatic Environmental Impact Statement (PEIS), which will evaluate three alternatives: the No-Action Alternative, Alternative 1 (Core Projects), and Alternative 2 (Core and Supplemental Projects). For purposes of this consultation, the Proposed Action includes all projects (Core and Supplemental Projects) that comprise Alternatives 1 and 2 evaluated in the PEIS. Table 1 briefly identifies these projects, and Enclosure 2 provides more detailed descriptions and figures for each project.

Table 1. Projects Comprising the Proposed Action

PEIS Alternative		Project Title	Project Location
Alternative 1: Core Projects	Alternative 2: Core + Supplemental Projects	A. Expanded ITP Option A1: Expand to 40 MGD Option A2: Expand to 50 MGD Option A3: Expand to 60 MGD	U.S. only
		B. Tijuana Canyon Flows to ITP Option B1: Trenching via Smuggler's Gulch and Monument Rd Option B2: Trenchless via Smuggler's Gulch and Under Mesa Option B3: Connect to Existing Canyon Collector System	U.S. and Mexico
		C. Tijuana Sewer Repairs	Mexico only
		D. APTP Phase 1	U.S. and Mexico
		E. APTP Phase 2	U.S. only
		F. U.S.-side River Diversion to APTP	U.S. only
		G. New SABTP	Mexico only
		H. Tijuana WWTP Treated Effluent Reuse	Mexico only
		I. ITP Treated Effluent Reuse	U.S. and Mexico
		J. Trash Boom(s)	U.S. only

Area of Potential Effects (APE)

A preliminary APE of approximately 336 acres is considered for this Class III Cultural Resource Inventory. The APE encompasses areas in the U.S. that could potentially experience disturbance during the construction, operation, and maintenance of the following infrastructure being considered for the Proposed Action:[1]

- **Project A (Expanded ITP):** Project A includes the expansion of the existing 25-MGD South Bay International Wastewater Treatment Plant (ITP) for secondary treatment of wastewater at one of three different average daily flow capacity options. The primary purpose of expanding the ITP is to reduce impacts to the U.S. coast by treating wastewater from the International Collector (a pipeline in Mexico) that otherwise would be discharged to the Pacific Ocean via San Antonio de los Buenos Creek (SAB Creek) without adequate treatment, or any treatment at all.

- **Project B (Tijuana Canyon Flows to ITP):** Project B includes the installation of a wastewater conveyance system from Matadero Canyon and Los Laureles Canyon in Mexico to the expanded ITP for treatment, with three configurations and/or installation methods for the conveyance pipeline in the U.S. The primary purpose of the conveyance system is to reduce the amount of dry-weather wastewater flows that are currently discharged with little to no treatment to the Pacific Ocean via SAB Creek.

- **Project C (Tijuana Sewer Repairs):** Project C includes rehabilitating or replacing targeted sewer collectors in the Tijuana metropolitan area. The primary purpose of the sewer repairs is to reduce the amount of untreated wastewater that currently leaks from the sanitary sewer system in Tijuana and enters the Tijuana River, which would improve downstream water quality in the Tijuana River Valley and estuary.

- **APTP Phase 1):** Project D includes the construction and operation of a 35-MGD Advanced Primary Treatment Plant (APTP) for advanced primary treatment of diverted water from the existing Comisión International de Limites y Aguas pump station (PB-CILA) diversion in

Mexico; rehabilitation and extension of the existing force main from PB-CILA to the new APTP; installation of other new supporting facilities; and associated site modifications. The primary purpose of Phase 1 of the proposed APTP is to reduce impacts to the U.S. coast by treating diverted river water that otherwise would be discharged to the Pacific Ocean via SAB Creek without adequate treatment, or any treatment at all.

- **Project E (APTP Phase 2):** Project E includes the expansion of the 35-MGD APTP to an average daily flow capacity of up to 60-MGD capacity to treat river water from either PB-CILA (during dry-weather flows) and/or a new river diversion farther downstream in the U.S. (see Project F). The primary purpose of Phase 2 of the proposed APTP is to reduce downstream impacts in the Tijuana River and estuary by providing additional capacity to treat contaminated river water.

- **Project F (U.S.-side River Diversion to APTP):** Project F includes construction of a U.S.-side diversion system in the Tijuana River to convey transboundary river flows to the APTP for treatment. The primary purpose of Project F is to improve water quality in the Tijuana River Valley, estuary, and coastal communities in southern San Diego County by diverting transboundary river flows from the Tijuana River in the U.S.

- **Project G (New SABTP):** Project G includes the construction of a new 5-MGD conventional activated sludge plant at the existing San Antonio de los Buenos Treatment Plant (SABTP) site in Mexico for secondary treatment of untreated wastewater that is currently discharged to the Pacific Ocean via SAB Creek. The primary purpose of Project G is to improve the quality of wastewater discharged from SAB Creek and reduce the associated water quality impacts along the Pacific Ocean coastline near the international border.

- **Project H (Tijuana WWTP Treated Effluent Reuse):** Project H includes installation of conveyance pipelines to route between 10.3 and 16.2 MGD of treated effluent from the Arturo Herrera and La Morita wastewater treatment plants (WWTPs) (which currently discharge to the Tijuana River) in Mexico to the Rodriguez Dam impoundment. The primary purpose of Project H is to improve water quality in the Tijuana River Valley and estuary by reducing the frequency of dry-weather transboundary flows caused by river flow rates that exceed the PB-CILA diversion capacity.

- **Project I (ITP Treated Effluent Reuse):** Project I includes construction of a new pump station in the northwest corner of the ITP parcel with a force main to Pump Station 1B (PB1-B) in Mexico. The primary purpose Project I is to convey treated effluent from the ITP to Mexico for potential beneficial reuse.

- **Project J (Trash Boom[s]):** Project J includes the installation of one or more trash booms in the Tijuana River channel in the U.S. between the U.S.-Mexico border and Dairy Mart Road to capture trash and allow for its removal from the river. The primary purpose of Project J is to reduce downstream trash-related impacts in the Tijuana River Valley and estuary, particularly due to wet-weather transport of trash to downstream areas.

Additional information about the projects and their locations can be found in Enclosure 2.

Class III Cultural Resource Inventory
To comply with 36 CFR Section 800.4(b), ERG subcontracted ASM to complete the Class III Cultural Resource Inventory, which included a records search of the California Historical Resources Information System (CHRIS) at the South Coastal Information Center (SCIC) located at San Diego State University. The records search identified seven previously recorded cultural resources that intersect the Proposed Action's APE. An additional multicomponent site, CA-SDI-23075, brought to attention during a discussion with the SHPO also intersects the APE along Dairy Mart Road. The site was recorded during a 2020 investigation by SWCA and was not yet on file at the SCIC. With the addition of CA-SDI-23075, eight previously recorded recourses intersect the APE.

ASM conducted a pedestrian survey of the APE on November 8 – 10, 2021, as part of the Class III Cultural Resources Inventory. The survey was conducted by three archaeologists accompanied by a Native American monitor from the Viejas Band of Kumeyaay Indians. Site visibility ranged from excellent to poor, with approximately 60 percent of the APE being either fully developed or covered in dense vegetation.

Description of Findings and Significance
All eight previously recorded resources intersecting the APE were revisited during the survey, and one new cultural resource, P-37-039926, a historic period site consisting of a cobblestone wall associated with the Windover Ranch established in 1928. Four of the cultural resources are prehistoric and have previously been evaluated and recommended ineligible for listing in the National Register of Historic Places (NRHP). Site CA-SDI-23075 has not yet been formally evaluated. Two of the previously recorded resources are historic period sites and have not yet been formally evaluated, and one of the resources is an isolated shell fragment that is categorically not eligible for listing in the NRHP. The newly recorded resource is also not yet evaluated.

The unevaluated sites CA-SDI-11096H, CA-SDI-11948H, CA-SDI-23075, and P-37-039926 are not associated with important historical events (Criterion A) or individuals (Criterion B), they do not represent distinctive examples of structural types or works of master craftsmen (Criterion C) and lack integrity and research potential (Criterion D). The sites are thus preliminarily recommended as not eligible for listing in the NRHP. Nonetheless, to ensure the Proposed Action does not adversely affect cultural resources, earth-disturbing activities under the Proposed Action will avoid work within these four unevaluated sites.

Native American Consultation
ASM sent a request to the Native American Heritage Commission (NAHC) for a search of their Sacred Lands File. The NAHC responded and indicated the presence of Native American traditional places in the vicinity of the Proposed Action area and provided a list of Native American contacts who might have interest or concern regarding the Proposed Action. EPA sent letters to the Tribal contacts provided by the NAHC and other Tribal contacts in Northern San Diego County seeking early engagement. The Rincon Band of Luiseño Indians ("Rincon Band") responded in a letter dated April 28, 2021, stating that they have no additional information concerning potential impacts on cultural resources. The Rincon Band recommended that EPA coordinate with the Kumeyaay Nation to address and mitigate impacts to cultural resources and requested to be included on future correspondence for the Proposed Action. No other tribal contacts responded to EPA's outreach letter. Separately, in response to the Notice of Intent to prepare an EIS, the Viejas Band of Kumeyaay Indians ("Viejas") commented on April 8, 2021, that the Proposed Action site has cultural significance or ties to Viejas and requested that a Kumeyaay Cultural Monitor be on-site for ground-disturbing activities. As described above, a Native American

monitor from the Viejas Band of Kumeyaay Indians accompanied the pedestrian survey for the Class III Cultural Resources Inventory.

EPA will also distribute a finding of "no historic properties affected" notification letter to each of the Tribal contacts with whom EPA sought early engagement in 2021. The notification letters will include a copy of the Class III Cultural Resource Inventory supporting the finding. Should EPA receive any objections to the finding, EPA will consult with the objecting tribe to resolve the disagreement or request the Advisory Council on Historic Preservation (ACHP) review of the "no adverse effect" finding, per 36 CFR 800.5(c)(2)(i). EPA will concurrently notify all other consulting parties that it has requested ACHP review of the finding.

Finding of Effect

The Proposed Action includes the flexibility to avoid the unevaluated resources. EPA agrees with the conclusions of the Class III Cultural Resources Inventory and has determined that this undertaking constitutes a finding of no historic properties affected in accordance with 36 CFR 800.4(d)(1). EPA seeks your concurrence on the determination of no historic properties affected and requests a response from your agency within 30 days of receiving this letter.

Please contact me or Elizabeth Borowiec, of my staff, at 415-962-3419 borowiec.elizabeth@epa.gov if you have any questions or concerns about the Proposed Action.

Sincerely,

Gullatt, Kristin Digitally signed by Gullatt, Kristin Date: 2022.05.25 11:33:14 -07'00'

Tomás Torres, Director
Water Division

Enclosures:

Enclosure 1: *Class III Cultural Resource Inventory for the USMCA Mitigation of Contaminated Transboundary Flows Project in the Tijuana Watershed in San Diego, California* (ASM Affiliates, Inc., February 2022)

cc: Jeffrey Delsescaux, Associate State Archaeologist
California State Office of Historic Preservation

ENCLOSURE 1

***CLASS III CULTURAL RESOURCE INVENTORY FOR THE USMCA MITIGATION OF CONTAMINATED TRANSBOUNDARY FLOWS PROJECT IN THE TIJUANA WATERSHED IN SAN DIEGO, CALIFORNIA* (ASM AFFILIATES, INC., FEBRUARY 2022)**

Note: The cultural resources report provided in Enclosure 1 included confidential information that is not suitable for public release. See Appendix B (Class III Cultural Resource Inventory [Public Draft]) for a public version of the report.

ENCLOSURE 2

DESCRIPTION OF THE PROPOSED ACTION

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DESCRIPTION OF THE PROPOSED ACTION

The United States (U.S.) Environmental Protection Agency (EPA) and the U.S. International Boundary and Water Commission (USIBWC), as joint lead agencies, are proposing to fund and implement the United States-Mexico-Canada Agreement (USMCA) Mitigation of Contaminated Transboundary Flows Project (the Proposed Action) to reduce transboundary flows from Tijuana that cause adverse public health and environmental impacts in the Tijuana River watershed and adjacent coastal areas. EPA and USIBWC are considering the following alternatives for implementation of the Proposed Action.

1 ALTERNATIVE 1: CORE PROJECTS

For consideration in the environmental review, EPA and USIBWC have developed a solution to address transboundary flows that consists of four Core Projects identified as Projects A, B, C, and D. These four projects, in total, comprise Alternative 1 and are analyzed in detail in the Programmatic Environmental Impact Statement (PEIS).

Some components of Alternative 1 would take place in Mexico. Binational negotiations are underway regarding the scope, funding, and implementation of projects in Mexico being contemplated as part of the USMCA Mitigation of Contaminated Transboundary Flows Project. EPA and USIBWC would move forward with funding and/or implementing projects in Mexico only if such projects have support and funding contributions from appropriate Mexican authorities.

1.1 Projects A, B, and C: Improve Collection and Treatment of Wastewater

Alternative 1 includes three Core Projects (Projects A, B, and C) that are intended to improve collection and treatment of wastewater from Tijuana. Project A involves expanding wastewater treatment capacity at an existing facility in the U.S. (the ITP). Projects B and C are focused on modifying and improving wastewater collection systems to ensure that more wastewater is conveyed to treatment, rather than released directly to the Tijuana River or the Pacific Ocean without treatment.

1.1.1 Project A: Expanded ITP

Project A includes the expansion of the 25-MGD ITP for secondary treatment of wastewater at one of three different average daily flow capacity options—40 MGD (Option A1), 50 MGD (Option A2), or 60 MGD (Option A3); construction of a new solids processing facility; installation of other new supporting facilities; and associated site modifications. The primary purpose of expanding the ITP is to reduce impacts to the U.S. coast by treating wastewater from the International Collector that otherwise would be discharged to the Pacific Ocean via SAB Creek without adequate treatment, or any treatment at all. The expanded ITP may also reduce untreated wastewater overflows from the sanitary sewer to the Tijuana River caused by mechanical failures at PB1-B. Depending on the proposed capacity of the plant, the expanded ITP may also provide treatment for sewage collected in the canyons (Project B), as well as for additional sewage flows produced by the future population of Tijuana. Project A construction is estimated to be completed no later than 2027.

The ITP expansion would include auxiliary facilities to provide support functions such as office space, a control room, and restrooms. This would involve constructing at least one new building and/or renovating the existing office building used by contract staff. Other improvements would include additional roads and parking within the ITP parcel; new utility connections, such as electrical (including a backup electrical generator) and communications; and expanded security fencing and lighting around the ITP.

Site modifications would be necessary to accommodate the new and expanded facilities. This would include providing fill material to create a level foundation for the proposed secondary reactors and

clarifiers (the areas southwest of Dairy Mart Road are approximately 10 feet lower in elevation than the rest of the ITP parcel); relocating the portion of Dairy Mart Road that crosses through the ITP parcel by demolishing it and paving a replacement road along the western boundary of the ITP parcel; and enclosing or relocating the stormwater swale that runs alongside this portion of Dairy Mart Road. Construction activities would also potentially involve temporary work (e.g., material/equipment staging and stormwater management) throughout the undeveloped 25-acre southwest quadrant of the ITP parcel and in portions of the 4-acre parcel northwest of the ITP.

The infrastructure at the expanded ITP would require regular and ongoing O&M activities to ensure operational reliability and efficiency. Additional staff members would also be required to accommodate the anticipated increase in O&M needs. Long-term recurring operations would include hauling of sludge produced by the treatment process to Mexico for disposal. The pumps and equipment supporting the ITP would also require regular and ongoing O&M activities such as rehabilitation and replacement at varying time intervals.

Figure 1-1 depicts the anticipated general locations of project elements and construction activities for Project A. Figure 1-2 provides an example conceptual site plan of the individual facilities that would be constructed for Project A.

Project A includes three proposed average daily flow capacity options for the proposed ITP expansion from the current 25-MGD capacity: Option A1, A2, and A3. The differences between the three options are summarized below and in **Error! Reference source not found.**.

- **Option A1: Expand to 40 MGD.** Expanding the ITP to a design treatment capacity of 40 MGD (average daily flow) would enable the plant to treat all wastewater in the International Collector and wastewater that would be collected by the rehabilitated sewer collectors in Tijuana (see Project C). However, the 40-MGD option would have minimal if any reserve capacity for future population growth.
- **Option A2: Expand to 50 MGD.** Expanding the ITP to a design treatment capacity of 50 MGD (average daily flow) would provide the same treatment capabilities as the 40-MGD option (see Option A1) while also accommodating wastewater collected in the canyons in Mexico (see Project B) and providing capacity for current and projected wastewater flows through 2030.
- **Option A3: Expand to 60 MGD.** Expanding the ITP to a design treatment capacity of 60 MGD (average daily flow) would provide the same treatment capabilities as the 50-MGD option (see Option A2) while providing capacity for current and projected wastewater flows through 2050.

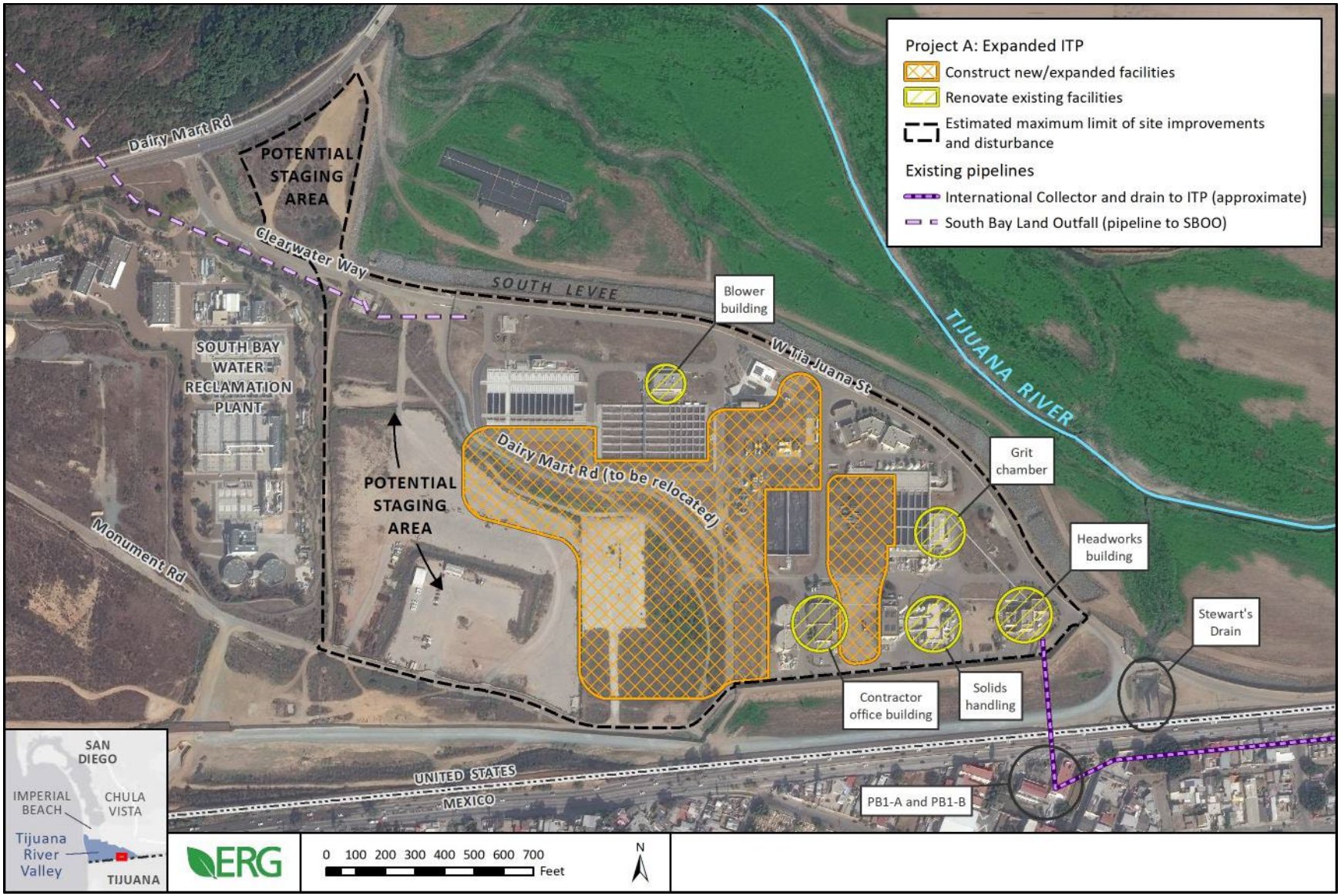

Figure 1-1. Project A (Expanded ITP) – Locations of Project Components

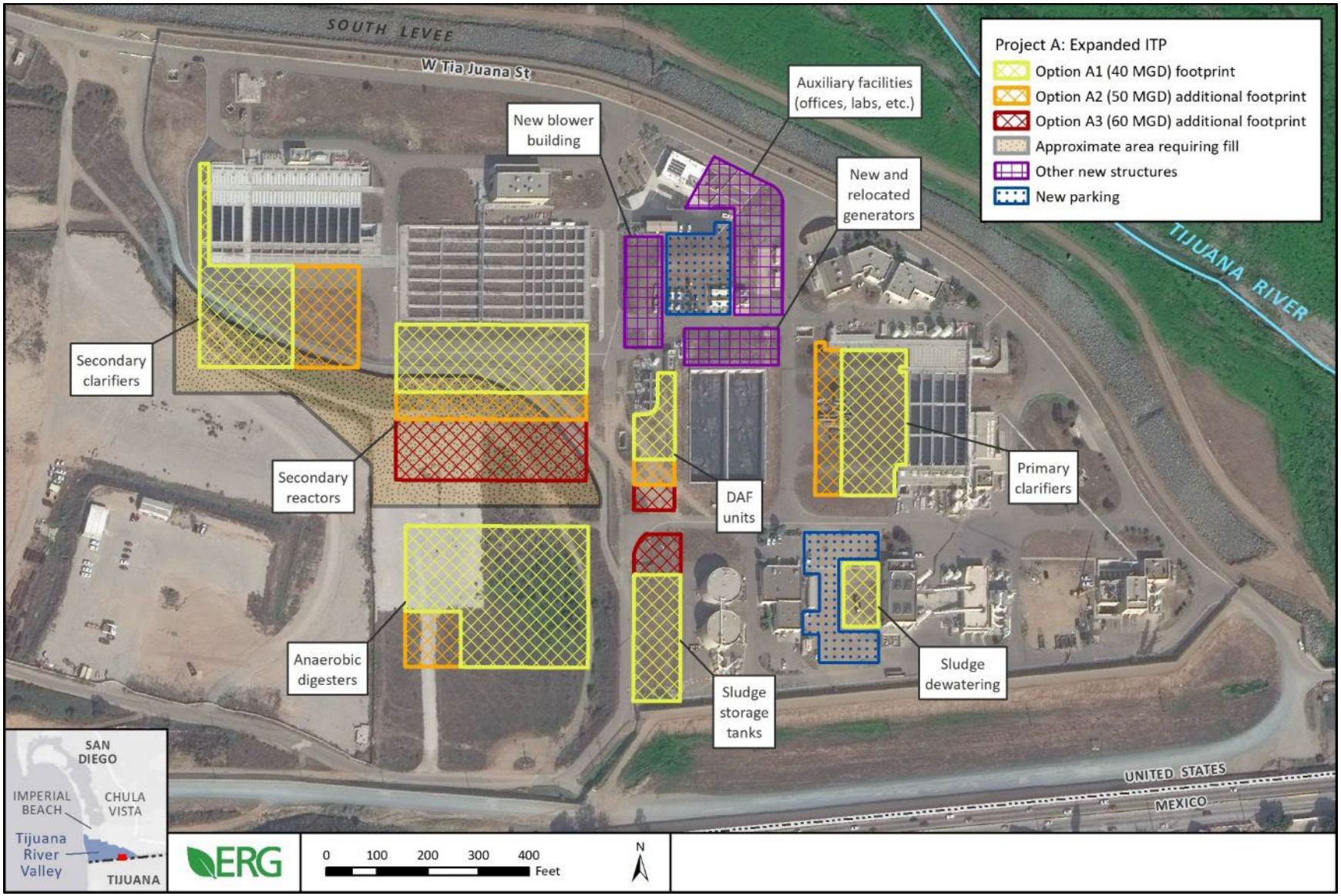

Figure 1-2. Project A (Expanded ITP) – Conceptual Site Plan of Proposed Facilities

Table 2-1. Comparison of Project A Options

Component [a]	Option A1	Option A2	Option A3
ITP treatment capacity (average daily flow)	40 MGD	50 MGD	60 MGD
ITP treatment capacity (peak daily flow)	100 MGD	100 MGD	100 MGD
New primary clarifiers (#)	5	8	8
New secondary reactors (#)	5	7	10
New centrifugal blowers (#)	5	5	6
New secondary clarifiers (#)	7	12	12
New DAF units (#)	4	5	6
New anaerobic digestors (#)	5	6	6
New sludge storage tanks (#)	2	2	3
New facility footprint, total (approximate)	400,000 SF	475,000 SF	530,000 SF
New ITP employees (#)	30	40	50
Estimated capital cost for construction [b,c]	$227 million	$299 million	$372 million

a – All scope estimates presented in the PEIS are based on feasibility-level engineering and are subject to refinement during the design process.
b – Cost estimates do not include renovations to the existing grit chambers and solids handling facilities.
c – All cost estimates were developed with an estimated accuracy of +50%/-25% for U.S.-side projects and +100%/-50% for Mexico-side projects.

1.1.2 Project B: Tijuana Canyon Flows to ITP

Project B includes the installation of a wastewater conveyance system from Matadero Canyon and Los Laureles Canyon in Mexico to the expanded ITP for treatment (see Project A for details on the ITP expansion); decommissioning of three pump stations in the canyons; and associated temporary construction activities. Following treatment, these flows would be discharged to the Pacific Ocean through the SBLO/SBOO as described for Project A. Three configurations and/or installation methods of the conveyance line are being considered: trenching through Smuggler's Gulch and Monument Rd (Project B1), trenchless installation in Smuggler's Gulch and under the mesa (Project B2), and connection to the existing canyon collector system (Project B3). The primary purpose of the proposed conveyance system is to reduce the amount of dry-weather wastewater flows that are currently discharged with little to no treatment to the Pacific Ocean via SAB Creek. As a secondary benefit, Project B would potentially reduce the volume and frequency of dry-weather transboundary flows in Goat Canyon and Smuggler's Gulch by eliminating the reliance on pump stations whose mechanical issues may cause occasional wastewater overflows into the canyons in Mexico.

Up to 12.7 MGD (peak daily) of wastewater from the canyons would be collected by the new conveyances and transported to the ITP for treatment. The current wastewater flow from the canyons is 6.3 MGD, so the new conveyances would have available capacity to accommodate flow increases over time.

The new wastewater conveyance system would include new pipelines (Reaches 1-4) in Mexico that use gravity to convey wastewater to the U.S., which would allow the existing pump stations in the canyons to be decommissioned—specifically, the Matadero pump station in Matadero Canyon and the Los Laureles 1 and Los Laureles 2 pump stations in Los Laureles Canyon. The new Reach 5 pipeline in the U.S. is described later in this section. The new conveyance lines in Mexico would consist of the following:

- **Reach 1:** A 15-inch nominal diameter gravity sewer that would flow directly east from the Los Laureles 2 pump station and connect to Reach 2. Reach 1 would be approximately 2,000 feet long, would pass underneath the high ground between the two canyons, and would be installed using directional drilling.

- **Reach 2:** A 15-inch nominal diameter gravity sewer that would flow generally north from the eastern end of Reach 1 to the Matadero pump station. Reach 2 would be approximately 1,700 feet long and would be installed using conventional open-cut trenching methods.
- **Reach 3:** A 21-inch nominal diameter gravity sewer that would flow generally north along Matadero Canyon from the Matadero pump station until it intersects Reach 4 approximately 150 feet south of the border. Reach 3 would be about 3,500 feet long and would be installed using conventional open-cut trenching methods (except for approximately 700 feet passing beneath the International Highway, which would be installed using micro-tunneling).
- **Reach 4:** A 15-inch nominal diameter gravity sewer that would flow generally east from the Los Laureles 1 pump station until it intersects with Reach 3. Reach 4 would be approximately 4,000 feet long, would pass beneath the high ground between the canyons, and would be installed using directional drilling.

The sections of the proposed conveyance line that would be installed using open-cut trenching (Reach 2 and a part of Reach 3) would occur in undeveloped areas in Matadero Canyon and would require temporary land disturbance and lighting along the proposed route during construction, as well as for staging areas. The sections of the proposed conveyance line that would be installed using micro-tunnelling or directional drilling (Reach 1, 4, and part of Reach 3) would require temporary pits at each end of the micro-tunnel or drilling location with construction staging areas to feed the pipe sections underground. The construction areas on each side of the micro-tunnel or drilling operation would require temporary fencing, lighting, a truck-mounted generator to run equipment, and other construction equipment. The pipes would have shallow installation, so dirt would be backfilled following installation.

In the U.S., Project B includes three proposed configurations of Reach 5 to convey flows from the end of Reach 4 to the expanded ITP: Option B1, B2, and B3. The differences between the three options are summarized below.

- **Reach 5, Option B1: Trenching via Smuggler's Gulch and Monument Road.** Option B1 includes installing Reach 5 using open-cut trenching methods through Smuggler's Gulch and along Monument Road. Reach 5 would consist of a 24-inch nominal diameter force main that would run from 150 feet south of the border in Matadero Canyon to the headworks of the ITP. This sewer would run north beneath the border for approximately 1,000 feet; north under the Smuggler's Gulch access road for approximately 1,300 feet; east under Monument Road for approximately 6,100 feet; and east/southeast adjacent to Clearwater Way and W. Tia Juana Street for approximately 3,600 feet before reaching the headworks of the ITP.

  Reach 5 would be installed using conventional open-cut trenching methods except for the section beneath the U.S.-Mexico border, which would be installed using micro-tunneling. Temporary pits would be required at each end of the micro-tunnel section and may require additional security during construction due to their proximity to the border. Depending on the results of utility surveys, open-cut trenching would be confined to the existing roadway in Smuggler's Gulch and along Monument Road and would be confined to the undeveloped strip of land adjacent to Clearwater Way and W. Tia Juana Street. Unvegetated areas would be used for construction staging activities, as necessary.
- **Reach 5, Option B2: Trenchless installation via Smuggler's Gulch and under mesa**. Option B2 includes installing Reach 5 using a combination of open-cut trenching and trenchless methods to avoid or minimize disturbances within Smuggler's Gulch and along Monument Road. Reach 5 would be a 24-inch nominal diameter polyvinyl chloride (PVC) force main that starts 150 feet south of the border and runs approximately 1,000 feet north into Smuggler's Gulch; east underneath the mesa for approximately 5,000 feet; and east/southeast along Dairy Mart Road,

Clearwater Way, and W. Tia Juana Street for approximately 4,500 feet before reaching the headworks of the ITP.

The sections of Reach 5 underneath the border, Smuggler's Gulch, and the mesa between Smuggler's Gulch and the ITP would be installed using directional drilling. These sections would require three temporary pits: one located 150 feet south of border in Smuggler's Gulch, one located approximately 900 feet north of the border in Smuggler's Gulch (adjacent to the canyon flow diversion structure), and one located near the intersection of Dairy Mart Road and Monument Road. The temporary construction pits in Smuggler's Gulch may require additional security during construction due to their proximity to the border. Open-cut trenching would be used for the final section to the ITP headworks (identical to that for Option B1).

- **Reach 5, Option B3: Connect to existing canyon collector system**. Option B3 includes installation of Reach 5 beneath the border to connect to the existing canyon collector pipeline in Smuggler's Gulch for conveyance to the ITP. This option would minimize disturbances and leverage existing infrastructure. Reach 5 would be a 24-inch nominal diameter high-density polyethylene (HDPE) gravity pipe that runs north beneath the border for approximately 1,000 feet and connects to the existing 30-inch gravity sewer ("canyon collector") that currently conveys flows from the Smuggler's Gulch canyon flow diversion structure to the Hollister Street pump station. The existing equipment at the pump station would be used to pump these combined flows (from Reach 5 and the U.S.-side canyon flow diversion structures) to the ITP using the existing 16-inch and 30-inch force mains.[1]

  Reach 5 would be installed using micro-tunnelling underneath the border. The U.S.-side micro-tunnelling pit would also be used to connect Reach 5 to the existing canyon collector. Temporary pits would be required at each end of the micro-tunnel section and may require additional security during construction due to their proximity to the border.

Project B construction activities, including components in Mexico, are projected to take approximately two years to complete following mobilization but the specific schedule for starting and completing construction is not known at this time.

The infrastructure proposed for Project B would be expected to require regular and ongoing O&M activities to ensure operational reliability and efficiency. Maintenance on the U.S. side would generally consist of inspecting the ground along the sections of pipe installed using open-cut trenching to look for potential leaks. The new conveyance pipelines would use gravity to transport wastewater; therefore, minimal mechanics would be involved, reducing the overall maintenance requirements, and decommissioning the Matadero, Los Laureles 1, and Los Laureles 2 pump stations would reduce maintenance requirements as only access points would remain. Maintenance of the new gravity pipelines in Mexico would generally consist of routine CCTV inspections, cleaning, and leak repairs. Binational negotiations regarding O&M responsibilities and funding for Project B are ongoing.

Figure 1-3, Figure 1-4, and Figure 1-5 depict the anticipated general locations of project elements and construction activities for Options B1, B2, and B3, respectively, of Project B.

[1] Depending on the results of the USIBWC condition assessment of existing ITP components, the scope of Option B3 could also include rehabilitation of the Hollister Street pump station and associated force mains.

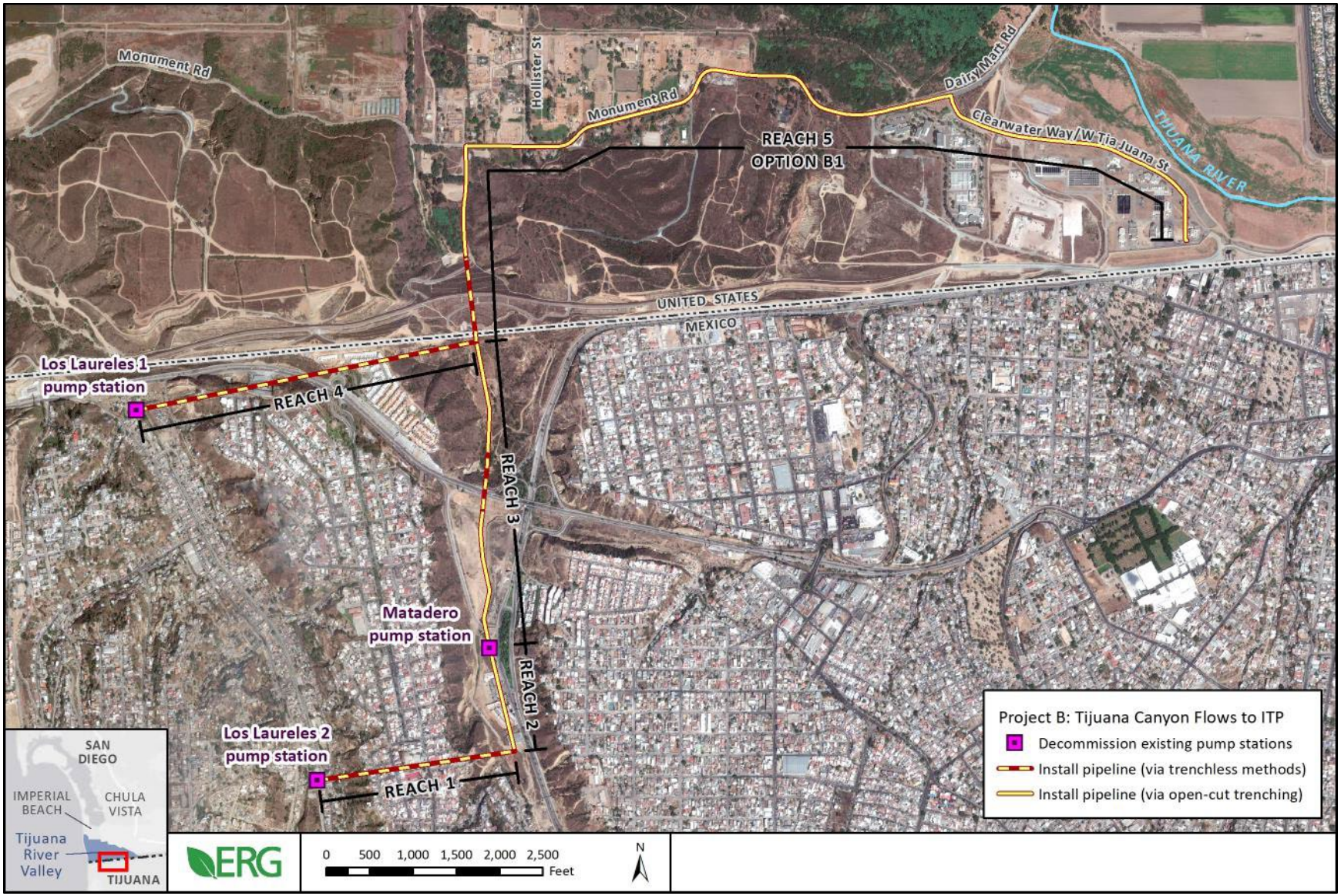

Figure 1-3. Project B (Tijuana Canyon Flows to ITP), Option B1 – Locations of Project Components

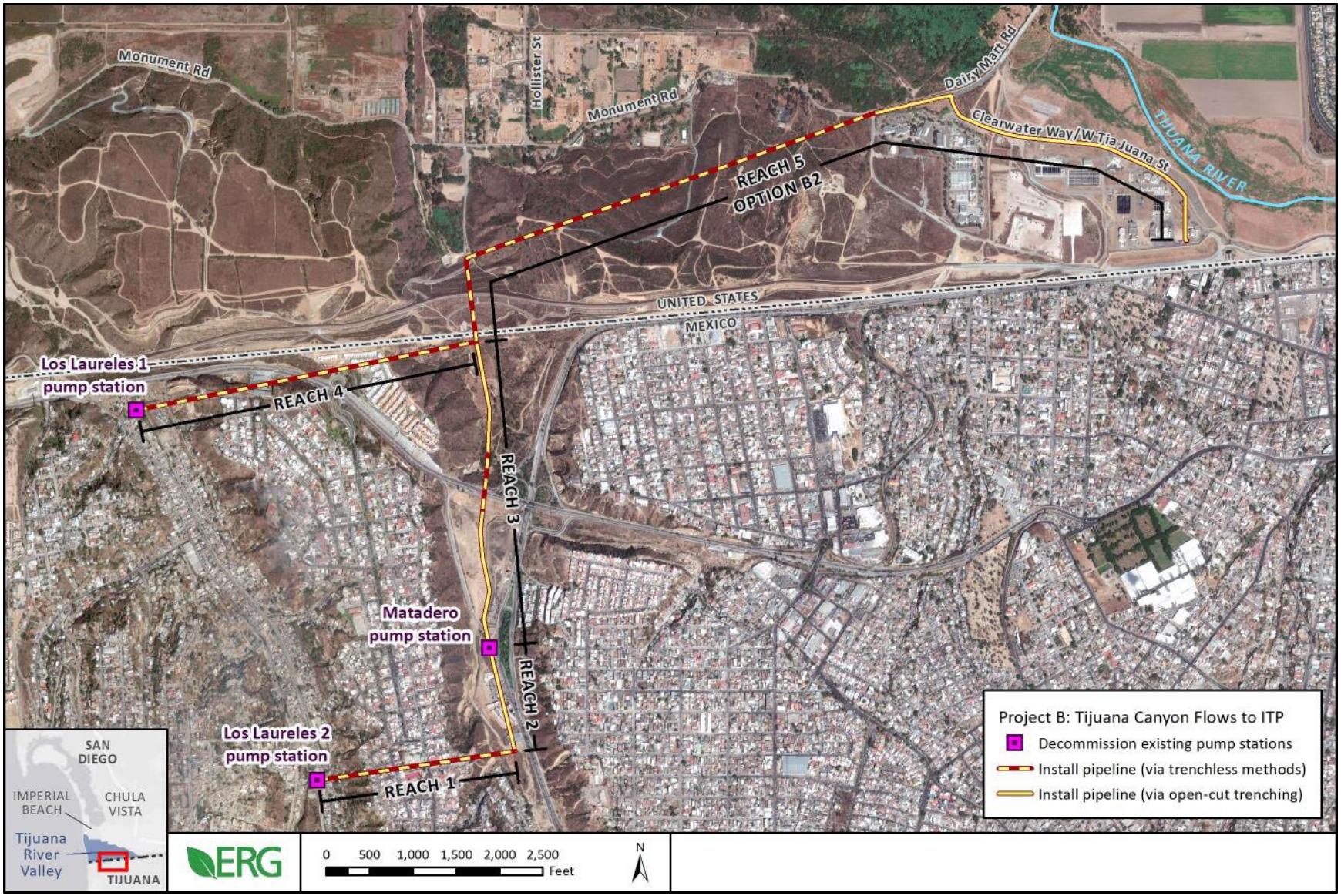

Figure 1-4. Project B (Tijuana Canyon Flows to ITP), Option B2 – Locations of Project Components

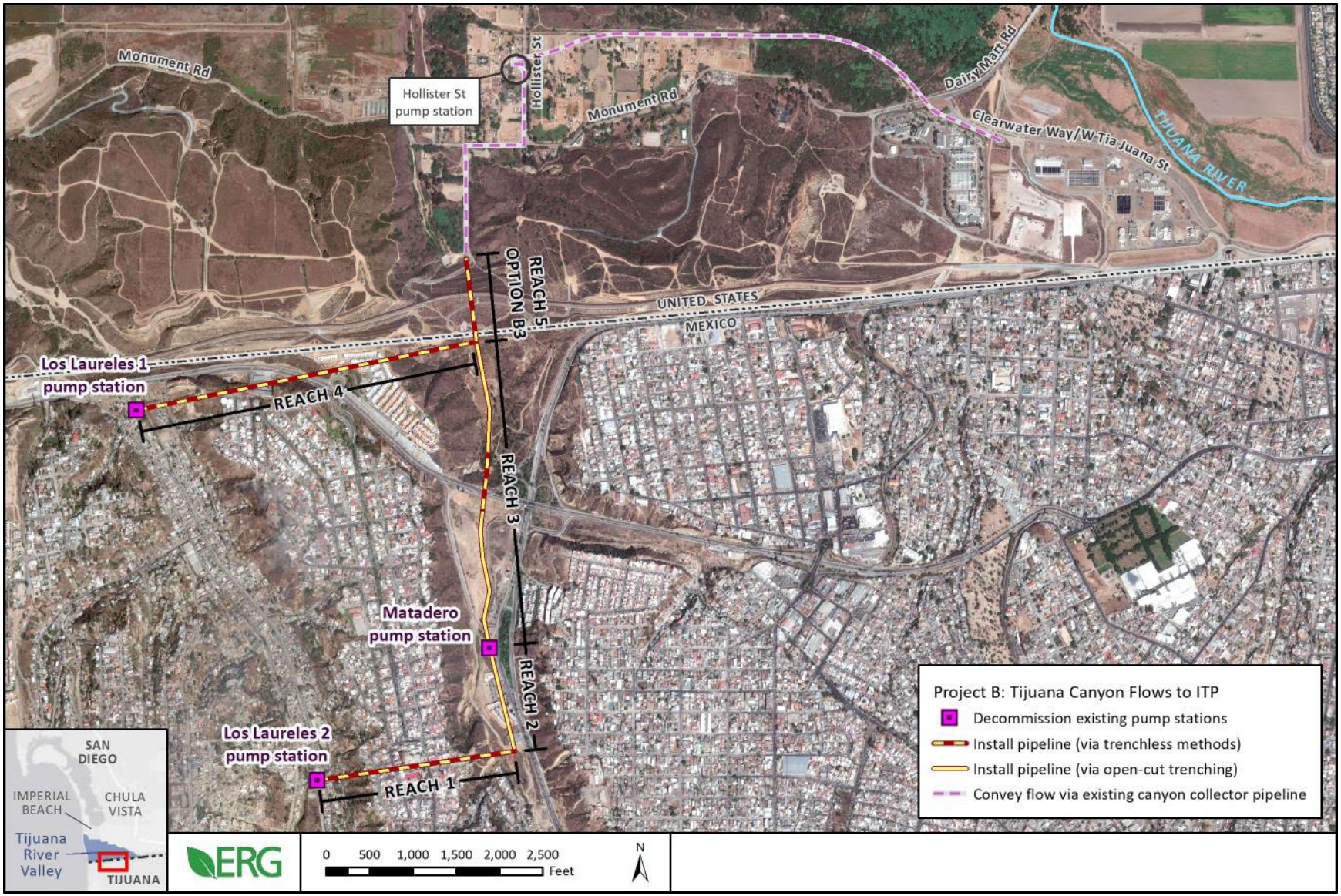

Figure 1-5. Project B (Tijuana Canyon Flows to ITP), Option B3 – Locations of Project Components

1.1.3 Project C: Tijuana Sewer Repairs

Project C includes rehabilitating or replacing targeted sewer collectors in the Tijuana metropolitan area in order to reduce the amount of untreated wastewater that currently leaks from the sanitary sewer system in Tijuana and enters the Tijuana River. By reducing wastewater leaks to the river in Tijuana, Project C would improve downstream water quality in the Tijuana River Valley and estuary by both 1) reducing overall river flow volumes and thus reducing the frequency of dry-weather transboundary flows caused by river flow rates that exceed the PB-CILA diversion capacity, and 2) ensuring that more wastewater in the Tijuana sewer system is successfully conveyed to the expanded ITP for treatment (see Project A) rather than entering the U.S. as a transboundary flow.

CESPT and CONAGUA, with concurrence from EPA and USIBWC have identified seven sewer collectors to be rehabilitated or replaced using USMCA, BWIP, and/or Mexico funds as a Core Project. Most of the improvements would include replacement of old concrete pipes with new pipes made from more durable material (e.g., PVC or HDPE) to prevent the risk of leaks and collapses. Most of these collector rehabilitation and replacement projects, listed in Table 1-2, were selected with the goal of reducing transboundary wastewater leaks to the Tijuana River down to 5 MGD.[2] One project (Force Main Antiguo, project #7) was selected with the goal of reducing transboundary wastewater leaks that reach the U.S. and the Tijuana River via Los Laureles Canyon and Matadero Canyon.

Figure 1-6 depicts a schematic of the wastewater collection system in Tijuana, and the project locations.

Construction activities for rehabilitation or replacement of these sewer collectors would include the use of heavy construction equipment and open-cut trenching in most locations. In some cases (e.g., when sections of pipelines are particularly deep or would cross busy roadways), trenchless methods would be used. The targeted sewers are located in urban, developed areas predominantly within existing streets.

Project C construction activities are projected to take approximately one to three years to complete (per individual project) following mobilization but the specific schedule for starting and completing construction for all collector repairs is not known at this time. Binational negotiations regarding O&M responsibilities and funding for Project C are ongoing.

It is possible that funding through the BWIP program would allow some or all of these targeted sewer collector repair projects to proceed before completion of the PEIS. In this scenario, the repairs would still be considered as part of EPA's comprehensive solution to address transboundary flows but would receive separate NEPA review independent of the PEIS.

The sewer collector repair projects listed in Table 1-2 include current projects having priority for rehabilitation or repairs. While Mexico has the prerogative to modify the list to prioritize other repair projects, any such modifications to the list of projects would preserve the overall goal reducing existing wastewater leaks to the Tijuana River down to 5 MGD. This would ensure that the transboundary impacts and improvements are similar to those of the projects listed in Table 1-2.

[2] In addition to the projects identified in Table 1-2, EPA is planning to provide BWIP funding for separate efforts (pursuant to separate NEPA reviews) that also would perform priority repairs to sewer infrastructure in Tijuana.

Table 1-2. Tijuana Sewer Collectors Included in Project C for Rehabilitation or Replacement

ID Number	Name	Description	Length to be Rehabilitated (feet)	Existing Pipe	Proposed Pipe
1	International Collector (Phase 2) [a]	Rehabilitate International Collector piping using trenchless methods due to location along a major highway.	8,200	72-inch concrete	72-inch PVC SPR (PVC Spiral inside concrete pipe)
2	Rehabilitation of Insurgentes Collector	Replace Insurgentes Collector piping.	18,400	36-inch concrete	36-inch PVC
3	Rehabilitation of Poniente Collector (missing sections in col. 20 de Noviembre)	Rehabilitate Poniente Interceptor pipeline, which is old, at risk of collapse, and causes major spills and wastewater discharges to the Tijuana River.	2,300	42-inch concrete	42-inch & 48-inch PVC
4	Rehabilitation of Collector Carranza	Replace Carranza Collector piping in Colonia Carranza.	9,200	36-inch concrete	36-inch PVC
5	Rehabilitation of Interceptor Oriente	Replace the Oriente Collector in the eastern section of the Tijuana River.	22,800	42- and 48-inch concrete	42-inch & 48-inch PVC
6	Tijuana River Gates	Replace piping along the Alamar and Tijuana River wastewater collection system to reduce untreated wastewater discharges to the Tijuana River.	23,300	8- to 60-inch concrete	8-inch to 60-inch PVC
Project to Reduce Wastewater Leaks to Los Laureles Canyon and Matadero Canyon in Mexico					
7	Force Main Antiguo	Rehabilitate the force main section of the old conveyance from PB1 to SABTP.	14,400	42-inch steel core concrete	42-inch steel or PVC pipe

a – Phase 1 of the International Collector repairs, which includes construction of new alternative piping through the streets of Tijuana using 60-inch PVC, is being funded through the BWIP program and received a Categorical Exclusion in March 2022 to complete its NEPA review.

Figure 1-6. Project C – Schematic of Tijuana Sewer Collectors for Rehabilitation or Replacement

1.2 Project D: APTP Phase 1

Project D includes the construction and operation of a 35-MGD Advanced Primary Treatment Plant (APTP) for advanced primary treatment of diverted water from the existing PB-CILA diversion in Mexico; rehabilitation and extension of the existing force main from PB-CILA to the new APTP; installation of other new supporting facilities; and associated site modifications. The primary purpose of Phase 1 of the proposed APTP is to reduce impacts to the U.S. coast by treating diverted river water that otherwise would be discharged to the Pacific Ocean via SAB Creek without adequate treatment, or any treatment at all. This project would also reduce the frequency of transboundary river flows by eliminating the use of a pump station (PB1-A) whose mechanical issues indirectly cause occasional shutdowns of the PB-CILA diversion.

The APTP would operate independently of the existing ITP and would consist of the following treatment processes: screening, aerated grit removal, grit dewatering, a ballasted flocculation process, and sludge handling.

The proposed 35-MGD APTP for Project D would be designed as an initial Phase 1 and would be constructed to allow for potential expansion under Phase 2. For example, concrete pads constructed under Phase 1 for ballasted flocculation, sludge storage, and other process units would be large enough to accommodate the potential installation of additional process units under Phase 2, and piping and stub-outs to convey flows between the units would be sized to accommodate the flow rates of a 60-MGD plant. While these expanded pads would not specifically support operation of the 35-MGD plant, this approach is necessary to ensure soil and foundation stability for the overall plant and to ensure that the siting of Phase 1 infrastructure does not inadvertently prevent potential future expansion under Phase 2. Refer to Section 2.2.1 (Project E: APTP Phase 2) for additional information on the proposed Phase 2.

The new APTP would include facilities for offices, a control room, and restrooms to support operations. These facilities would potentially be co-located with similar proposed support facilities at the expanded ITP (Project A). The existing blower building at the ITP would be repurposed to house the controls for the APTP process. Electrical upgrades, including additional back-up power, to the current system would support the pumps and equipment for the proposed APTP. The APTP site is enclosed by the existing ITP fence, but additional or upgraded lighting would potentially be required.

Site modifications for the proposed APTP would be necessary and would include grading and land disturbance for siting of the proposed APTP (shown in Figure 1-7) on the northern edge of the ITP property and for construction staging areas within the ITP site. The proposed APTP would be constructed in the north area of the ITP parcel, immediately north of the ITP secondary treatment units and south of W. Tia Juana Street. Construction activities would also potentially involve temporary work (e.g., material/equipment staging and stormwater management) throughout the undeveloped 25-acre southwest quadrant of the ITP parcel.

In order to convey river water to the new APTP, the existing PB-CILA diversion in Mexico (which would operate when the instantaneous river flow rate is 35 MGD or less) would convey diverted river flows through an existing force main across the border to the APTP headworks. Project D would include the rehabilitation and extension of this existing force main from PB-CILA in Mexico to the new APTP in the U.S. PB-CILA currently conveys diverted river water to PB1-A through a 42-inch force main. This line would be rehabilitated and extended to direct flows from PB-CILA to the headworks of the new APTP, thus bypassing PB1-A and allowing it to be decommissioned. The section of the line proposed for rehabilitation runs from PB-CILA to Avenue M in Tijuana and is approximately 7,200 feet long. Rehabilitation of this section of existing pipe would involve installing mechanical joint restraints and applying corrosion protection. A new section of 42-inch HDPE force main, approximately 800 feet in total length, would be installed (using micro-tunneling) under the border from the PB1-A site in Mexico to a location west of Stewart's Drain on ITP property in the U.S. Finally, open-cut trenching in the U.S.

would be used to construct an approximately 1,800-foot section of new 42-inch HDPE force main north to W. Tia Juana St and then to the headworks of the new APTP.

Rehabilitating and extending the existing force main line would involve temporary land disturbance during construction in both Tijuana and in the U.S. within the ITP parcel. In Tijuana, temporary pumps would re-route flow between PB-CILA and PB1-A while this portion of the force main is rehabilitated, and temporary fencing and lighting would be constructed to increase security and support operations. Micro-tunneling under the U.S.-Mexico border would require temporary pits at both ends, and open-cut trenching would involve land disturbance and additional lighting. A temporary shutdown of PB-CILA or bypass of the force main (e.g., by sending diverted river flows to the International Collector) would be necessary to allow for connection of the rehabilitated and new force main sections.

The proposed APTP would require regular and ongoing O&M activities to ensure operational reliability and efficiency. Approximately 30 additional staff members would be required to accommodate the anticipated increase in O&M needs. Long-term recurring operations would include hauling of solids produced by the treatment process to a local solid waste disposal site. The pumps and equipment supporting the APTP would also require regular and ongoing O&M activities such as rehabilitation and replacement at varying time intervals.

Figure 1-7 and Figure 1-8 depict the anticipated general locations of project elements and construction activities for Project D. Figure 1-9 provides an example conceptual site plan of the individual facilities that would be constructed for Project D.

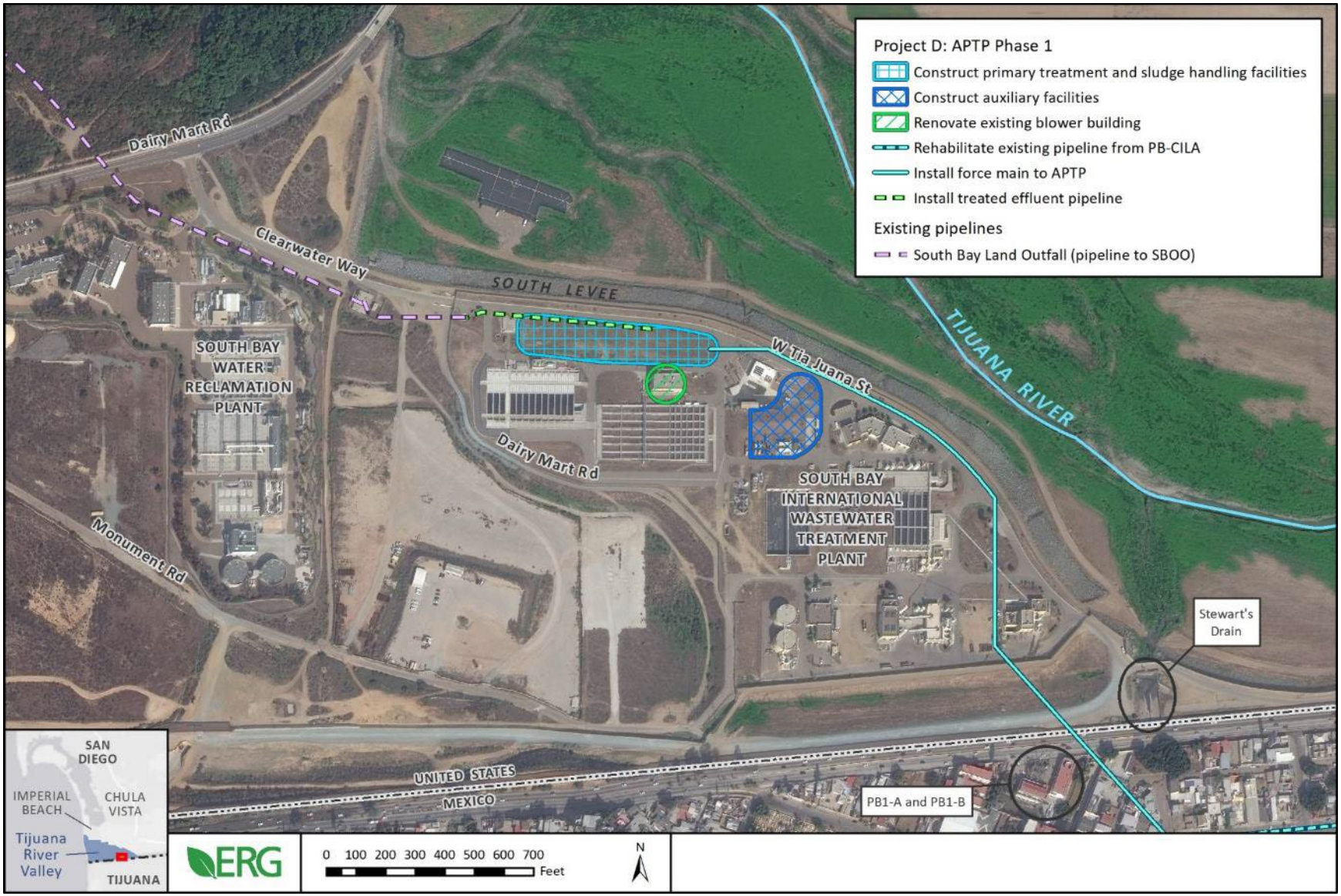

Figure 1-7. Project D (APTP Phase 1) – Locations of Project Components (1 of 2)

Figure 1-8. Project D (APTP Phase 1) – Locations of Project Components (2 of 2)

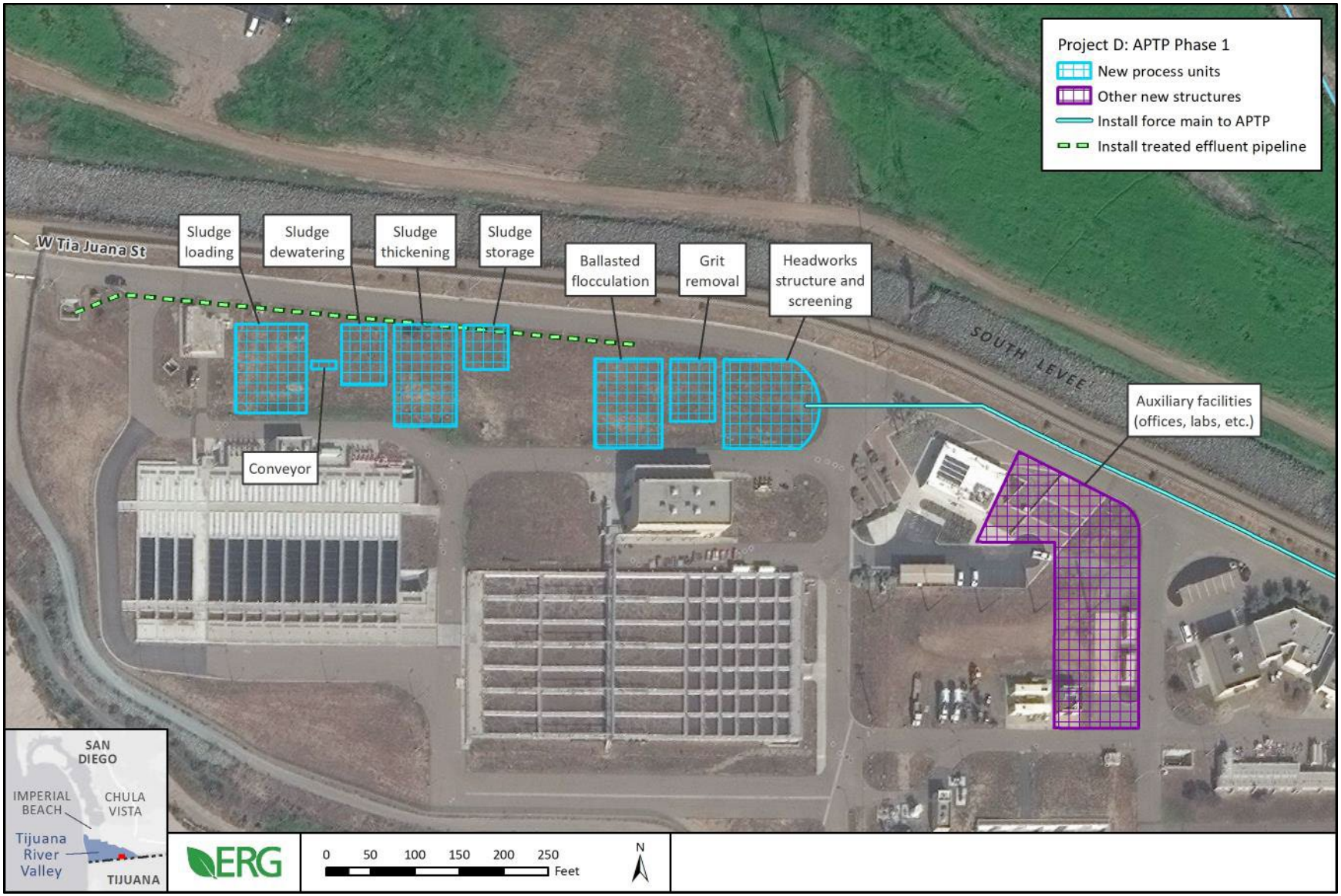

Figure 1-9. Project D (APTP Phase 1) – Conceptual Site Plan of Proposed Facilities

2 ALTERNATIVE 2: CORE AND SUPPLEMENTAL PROJECTS

For consideration in the environmental review, EPA and USIBWC have developed a comprehensive solution to address transboundary flows which consists of the four Core Projects described above and six Supplemental Projects that would also meet EPA's purpose and need for action. These 10 projects, in total, comprise Alternative 2.

Similar to Alternative 1, components of Alternative 2 would take place in Mexico. Binational negotiations are underway regarding the scope, funding, and implementation of projects in Mexico being contemplated as part of the USMCA Mitigation of Contaminated Transboundary Flows Project. EPA and USIBWC would move forward with funding and/or implementing projects in Mexico only if such projects have support and funding contributions from appropriate Mexican authorities.

2.1 Core Projects

Alternative 2 includes the four Core Projects (Projects A, B, C, and D) considered as part of Alternative 1 that are described in Section 1 (Alternative 1: Core Projects). Alternative 2 does not include any changes to the Core Projects.

2.2 Supplemental Projects

In addition to the Core Projects, Alternative 2 includes six Supplemental Projects (Projects E, F, G, H, I, and J) that are intended to provide a more comprehensive solution for reducing contaminated transboundary flows.

The timing to complete construction for Supplemental Projects is unknown.

2.2.1 Project E: APTP Phase 2

Project E includes the expansion of the 35-MGD APTP (Phase 1; see Project D) to an average daily flow capacity of up to 60-MGD capacity (Phase 2). As described in Section 1.2 (Project D: APTP Phase 1) , Phase 1 would include the design and construction of concrete pads for both phases to ensure soil and foundation stability for the overall plant. These pads would be large enough to accommodate Phase 2 process units, and piping and stub-outs between the treatment units would be sized to accommodate the flow rates of a 60-MGD plant. Depending on operating conditions at the existing 35-MGD PB-CILA river diversion in Mexico, the expanded APTP would treat river water from PB-CILA (during dry-weather flows) and/or a new river diversion farther downstream in the U.S. (see Project F). The primary purpose of Phase 2 of the proposed APTP is to reduce downstream impacts in the Tijuana River and estuary by providing additional capacity to treat contaminated river water.

Project E would include installing additional facilities and equipment (bar screens, grit removal, ballasted flocculation units, sludge storage units, screens, and belt filter presses) to expand the capacity of the treatment train. New units would be installed between and immediately adjacent to units constructed under Phase 1 (see Figure 1-9). Treated effluent from the APTP would continue to be discharged through the SBLO/SBOO to the Pacific Ocean, though modifications to the wye diffuser array on the SBOO could be necessary to promote dispersal of the increased loadings (e.g., opening ports on existing capped risers and/or installing new diffuser heads and ports to existing blind flanged risers). Some minor interior modifications to the APTP would potentially be required.

Concrete work, earthwork, and mobilization of construction equipment would be minimal, and the majority of construction activities would take place within the APTP facility and immediately adjacent areas.

The expanded APTP would require regular and ongoing O&M activities to ensure operational reliability and efficiency, similar to those required for Phase 1. However, the expanded APTP would produce more

solids than Phase 1, resulting in greater long-term recurring truck hauling needs for disposal. Up to approximately 20 additional staff members would be required to accommodate the anticipated increase in O&M needs.

Figure 2-1 depicts the anticipated general locations of project elements and construction activities for Project E.

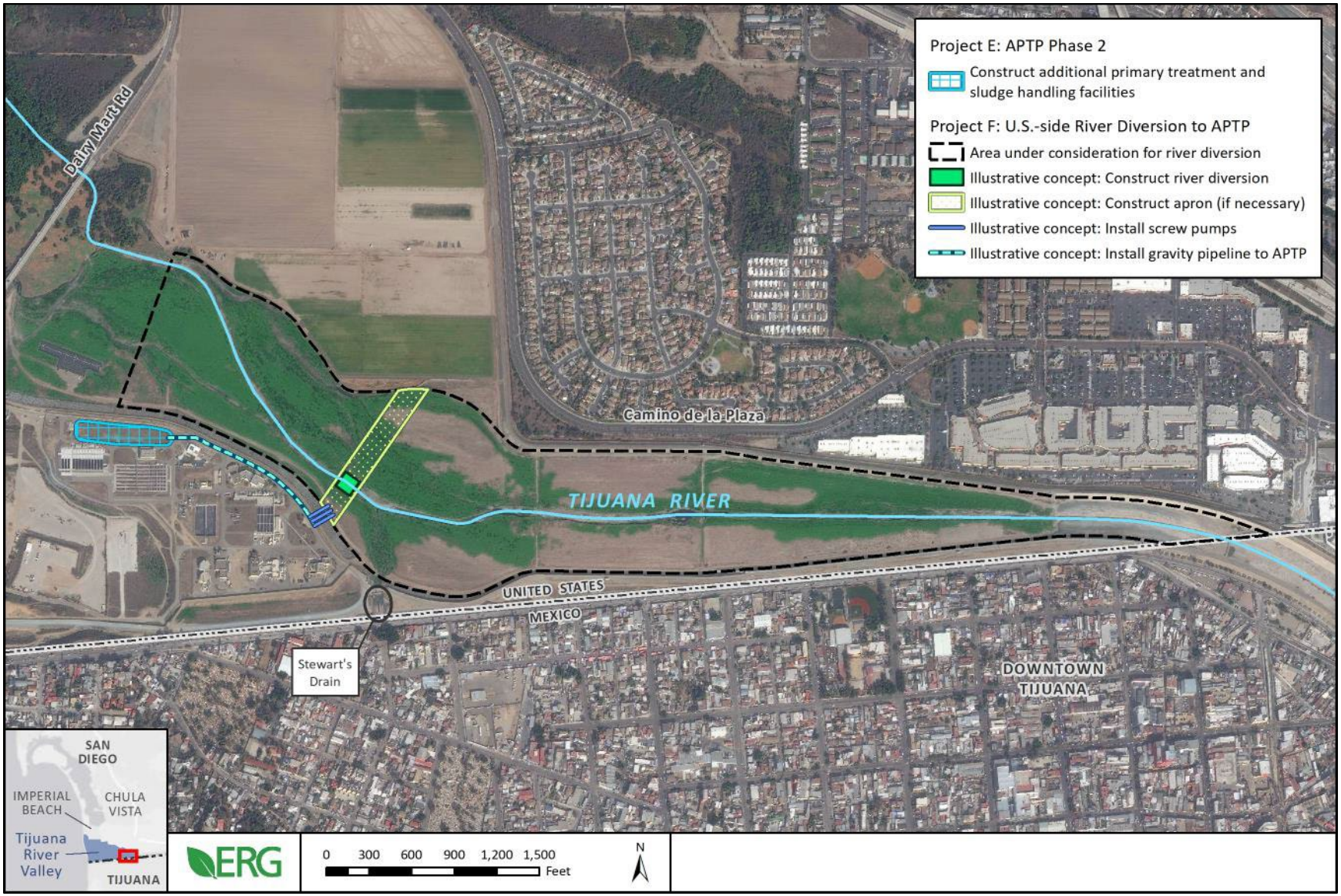

Figure 2-1. Projects E (APTP Phase 2) and F (U.S.-side River Diversion to APTP) – Conceptual Locations of Project Components

2.2.2 Project F: U.S.-side River Diversion to APTP

Project F includes construction of a U.S.-side diversion system in the Tijuana River to convey transboundary river flows[3] to the APTP for treatment. The primary purpose of Project F is to improve water quality in the Tijuana River Valley, estuary, and coastal communities in southern San Diego County by diverting transboundary river flows from the Tijuana River in the U.S. The capacity and operation of the river diversion, and thus the degree and extent of downstream water quality improvements, would depend on the capacity of the APTP that receives and treats the diverted flows. Specifically:

- If the US-side river diversion is designed to divert 35 MGD to a 35-MGD APTP (Project D, i.e., Phase 1), the system would divert primarily dry-weather transboundary river flows (e.g., those that occur due to a PB-CILA diversion system shutdown in Mexico or a release via Stewart's Drain) and a portion of smaller wet-weather[4] transboundary river flows.
- If the US-side river diversion is designed to divert 60 MGD to a 60-MGD APTP (Project E, i.e., Phase 2), the system would be capable of operating more frequently and diverting a larger portion of wet-weather transboundary river flows in addition to dry-weather flows.

The U.S.-side Tijuana River diversion would not operate during all wet-weather flow conditions to reduce the risk of system damage and avoid unnecessary O&M expenditures that do not result in significant environmental benefit. The 35-MGD diversion would shut off when the instantaneous flow rate exceeds approximately 60 MGD, and the 60-MGD diversion would shut off when the instantaneous flow rate exceeds approximately 120 MGD.[5,6]

While potential alternative locations for the diversion structure have not been identified, it would be located within the "area under consideration" that extends approximately 8,300 feet downstream of the U.S.-Mexico border as shown on Figure 2-1. Identifying an optimal location and design concept for the diversion structure requires additional engineering, hydrological, and environmental analyses and interagency consultation and coordination.

The size of the diversion structure would likely depend on the location in future conceptual designs. For example, if necessary to prevent scouring around the diversion structure and ensure capture of bifurcated flows, the diversion structure would potentially incorporate a broad shotcrete apron that spans a substantial portion of the floodplain. This apron, if necessary, would cover an area of up to approximately 8 acres, depending on factors including the width of the river channel at the selected location. Diverted river flows would be conveyed to an intake channel that would be designed to promote separation of trash and sediment from the APTP influent, then through a combination of screw pumps and gravity pipelines to the APTP headworks.

Construction of the diversion system would require excavation, vegetation removal, grubbing, the use of temporary staging areas and access roads, and temporary damming and flow diversion of the river. The

[3] While Project F would not prevent river flows from entering the U.S., it would divert at least a portion of these river flows immediately downstream of the border for treatment and thus reduce contaminated flows affecting the Tijuana River Valley and downstream areas. Therefore, for purposes of the PEIS, diversion of these flows in the U.S. is considered to be a reduction in transboundary river flows.

[4] Wet weather is defined as 72 hours following a rainfall event of 0.1 inches or greater.

[5] Implementing thresholds that are based on instantaneous flow rates (rather than average daily flow rates) would require real-time flow gauging.

[6] These thresholds were determined based on a feasibility-level engineering analysis of environmental benefits attained from continuing to operate at times of high flow. Actual operating procedures would be subject to refinement during both design and process optimization once the system is operational and may differ from the thresholds used in analyses supporting the PEIS.

project would require connection to existing utilities, including electrical with backup generators for the pumps and communications.

The infrastructure proposed for Project F would be expected to require regular and ongoing O&M activities to ensure operational reliability and efficiency (e.g., rehabilitation and replacement of pump equipment, regular cleaning, and sediment removal from the intake structure). Up to approximately five additional staff members would be required to accommodate the anticipated increase in O&M needs.

Figure 2-1 depicts the anticipated general locations of project elements and construction activities for Project F.

2.2.3 Project G: New SABTP

Project G includes the construction of a new 5-MGD conventional activated sludge plant at the existing SABTP site in Mexico for secondary treatment of untreated wastewater that is currently discharged to the Pacific Ocean via SAB Creek. The primary purpose of Project G is to improve the quality of wastewater discharged from SAB Creek and reduce the associated water quality impacts along the Pacific Ocean coastline near the international border. The proposed plant would be designed to produce a final effluent with BOD_5 and TSS less than 30 mg/L (monthly average).

Site modifications to accommodate construction of the new plant would include draining the existing lagoons and decommissioning the existing SABTP. Project G would also involve temporary land disturbance, including excavation and use of temporary staging areas, dredge pads, and access roads. Temporary pumping support and additional electrical supply would re-route wastewater during construction activities.

The proposed plant would require similar O&M activities as described for Project D, including removal, processing, and disposal of sediment, sludge, and trash, and occasional rehabilitation and replacement of the force main, pumps, and equipment at the plant. It is unknown how many staff the Mexican entities that would operate the new plant would require to accommodate the anticipated increase in O&M needs.

Figure 2-2 depicts the anticipated general locations of project elements and construction activities for Project G.

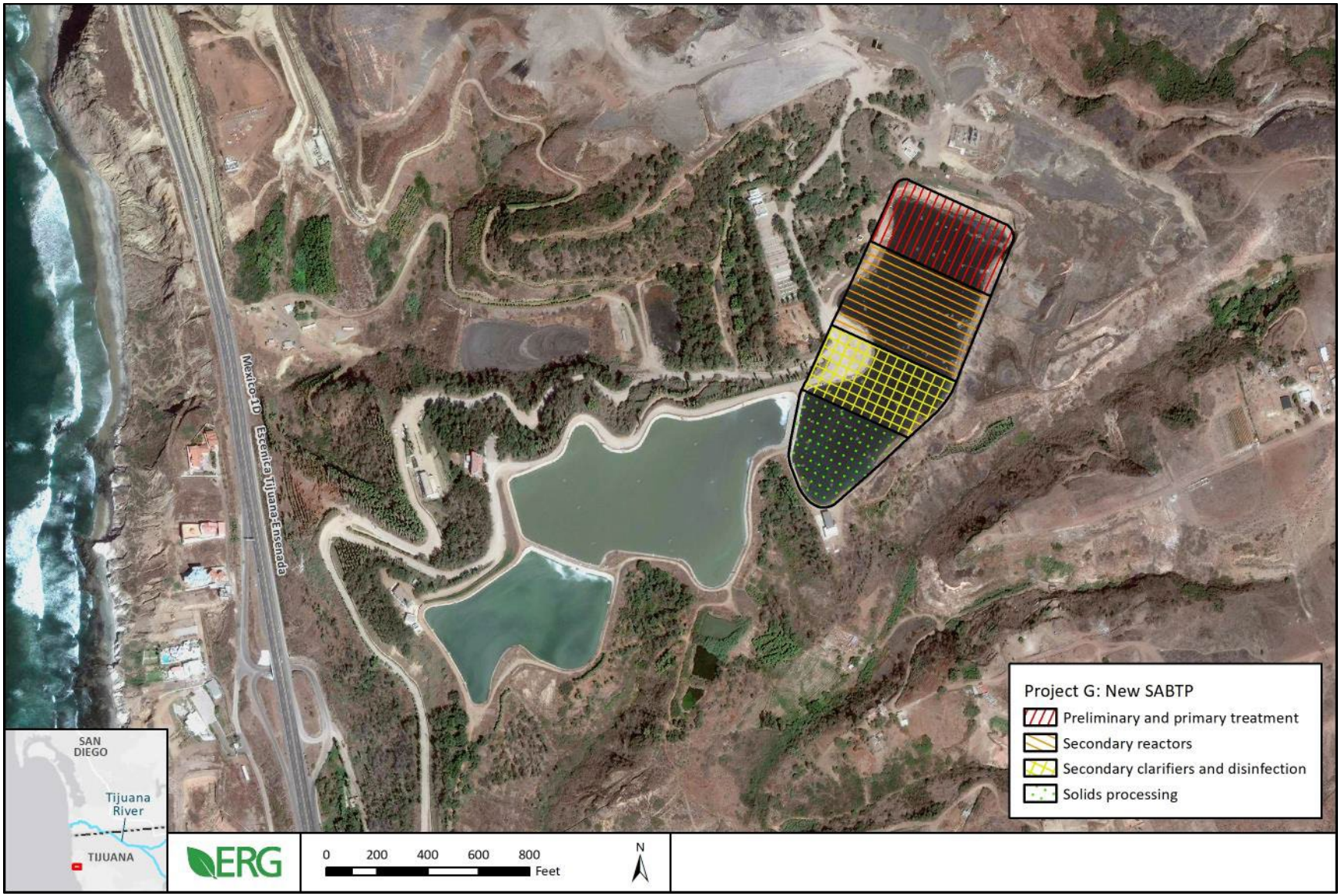

Figure 2-2. Project G (New SABTP) – Conceptual Locations of Project Components

2.2.4 Project H: Tijuana WWTP Treated Effluent Reuse

Project H includes installation of conveyance pipelines to route between 10.3 and 16.2 MGD of treated effluent from the Arturo Herrera and La Morita WWTPs (which currently discharge to the Tijuana River) in Mexico to the Rodriguez Dam impoundment. The primary purpose of Project H is to improve water quality in the Tijuana River Valley and estuary by reducing the frequency of dry-weather transboundary flows caused by river flow rates that exceed the PB-CILA diversion capacity. Project H would effectively increase the available pumping and treatment capacity of the existing system by reducing the amount of treated effluent in the Tijuana River, thus reducing overall river flow volumes and enabling the downstream system to divert and treat a higher proportion of the remaining flow.

Treated effluent would be conveyed either directly to the Rodriguez Dam impoundment or to a location upstream of the impoundment. To route treated effluent directly to the impoundment, Project H would include the following: (details would change if the effluent is instead to be conveyed upstream of the impoundment)

- Installation of a new pipeline from the Arturo Herrera WWTP to the Rodriguez Dam impoundment (approximately 5,900 feet of new force main) and a new 10.5-MGD pump station.
- Either of the following approaches for treated effluent from the La Morita WWTP:
  - Installation of an entirely new pipeline from the La Morita WWTP to the Rodriguez Dam impoundment (approximately 16,500 feet of new force main) and a new 5.8-MGD pump station.
  - Installation of a new pipeline from the La Morita WWTP (approximately 1,500 feet of new force main) to connect to an existing, unutilized 15,000-foot pipeline to the Rodriguez Dam impoundment, and a new 5.8-MGD pump station.

Further studies are needed to better define the scope of Project H, and EPA and USIBWC are engaged in binational discussions related to the specifics and limitations of this project. There are currently several unknowns about the scope such as the conditions and need for structural analysis of the Rodriguez Dam impoundment, infiltration rates upstream of the impoundment, and opportunities for beneficial reuse of the effluent. The optimum location of the discharge (i.e., directly into the impoundment or somewhere upstream of it) would be analyzed in subsequent tiered NEPA analysis.

Installation of new pipelines and construction of the new pump stations would involve temporary land disturbance, including earth disturbance during trenching and construction activities. The sediment removed during pipeline installation would be backfilled, requiring temporary erosion control and staging areas around the active construction site. Most of the project construction area would be accessed using existing roadways, but new temporary, minor access roads would likely be required in some areas. Other improvements would include ancillary utilities such as electrical connections to provide power to the pump stations, backup generators, as well as fencing and lighting.

Project H is expected to require up to approximately two additional staff to support O&M of the proposed pipelines and pump stations. However, since Project H would involve separating the WWTP effluent from the Tijuana River, pumping and treatment requirements downstream as well as O&M requirements would be reduced in the Tijuana River diversion system (i.e., PB-CILA, PB1-A, PB1-B, and either the SABTP or ITP).

Figure 2-3 depicts the anticipated general locations of project elements and construction activities for Project H. This figure depicts conveyance of treated effluent directly into the impoundment. The proposed pipelines would follow a different path if the project would instead convey effluent to a location upstream of the impoundment.

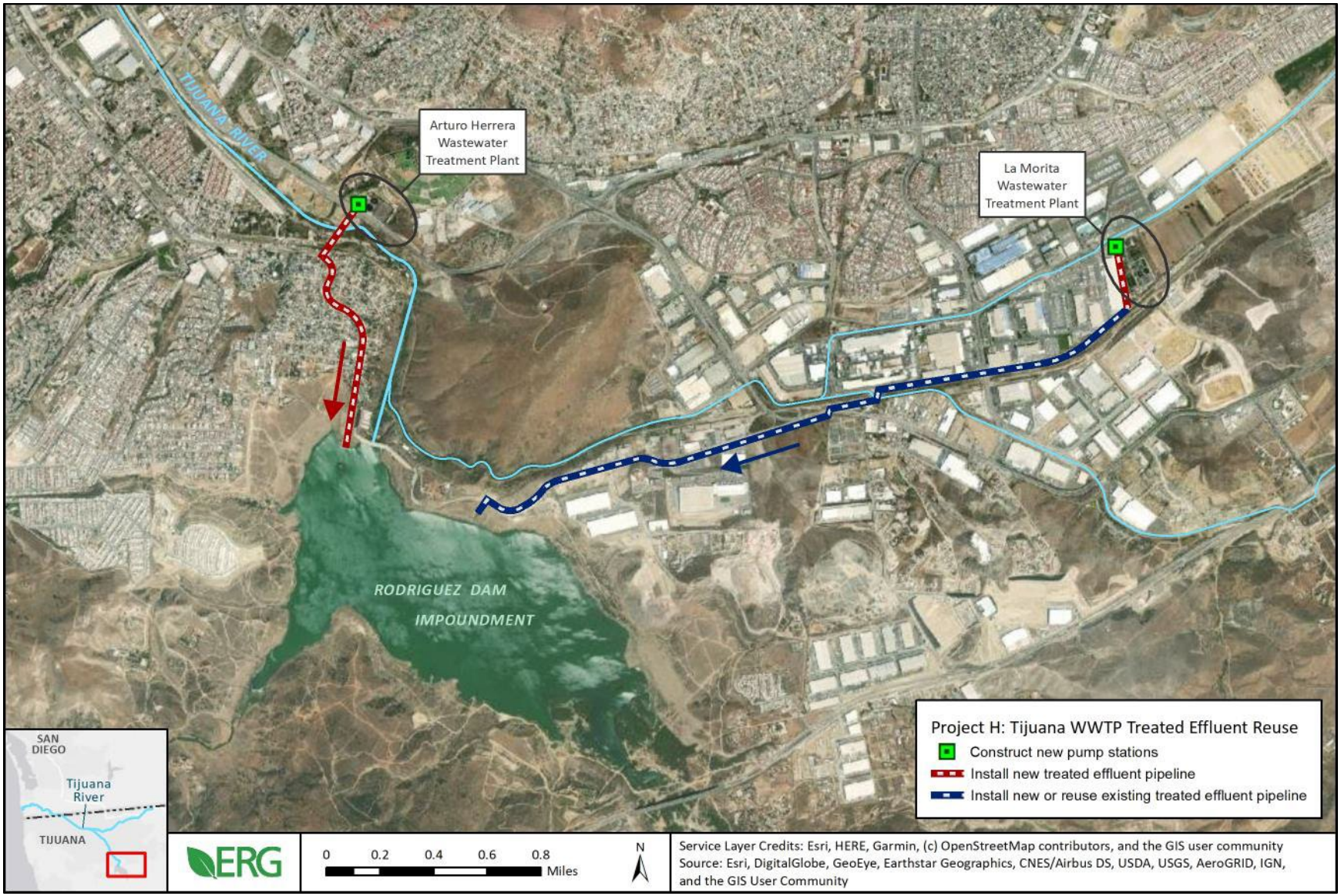

Figure 2-3. P**roject H (Tijuana WWTP Treated Effluent Reuse) – Conceptual Locations of Project Components**

2.2.5 Project I: ITP Treated Effluent Reuse

The purpose Project I is to convey treated effluent from the ITP to Mexico for potential beneficial reuse.[7] This project involves constructing a new pump station in the northwest corner of the ITP parcel and a 42-inch diameter, 3,700-foot force main from the pump station to PB1-B in Mexico. The pump station would be designed to pump no greater than an average daily flow rate of 40 MGD, due to PB1-B's capacity limitations. Therefore, daily ITP effluent flow rates above 40 MGD would continue to be discharged to the Pacific Ocean via the SBOO.

The Project I feasibility analysis was limited to conveying the ITP's effluent to PB1-B. For the ITP effluent to be beneficially reused in Mexico, additional treatment and conveyance facilities may be necessary, depending on how and where the water will be reused. Further research and coordination are necessary to identify the specific beneficial reuse opportunities in Mexico that this project would enable, and to define the infrastructure upgrades in Mexico that are necessary to convey treated effluent to the appropriate destination. Examples of necessary upgrades in Mexico could include cleaning and rehabilitating pipelines (e.g., the parallel conveyance pipelines that currently convey flows from PB1-A and PB1-B to the SABTP and SAB Creek), rehabilitating the PB1-B pump station, and constructing new pipelines.

The force main would be installed via open-cut trenching in the U.S. and micro-tunneling under the U.S.-Mexico border. The force main would be fitted with intermediate pressure release valves to prevent pipe collapse and to enable preventative maintenance.

Figure 2-4 depicts the anticipated general locations of project elements and construction activities for Project I.

[7] Conveying treated effluent to Mexico for reuse, rather than keeping the effluent in the U.S. for reuse, is in accordance with the terms of Treaty Minute 283 which states that both countries reserve the right to return for reuse in their respective country part or all of the ITP effluent corresponding to their country's sewage inflows.

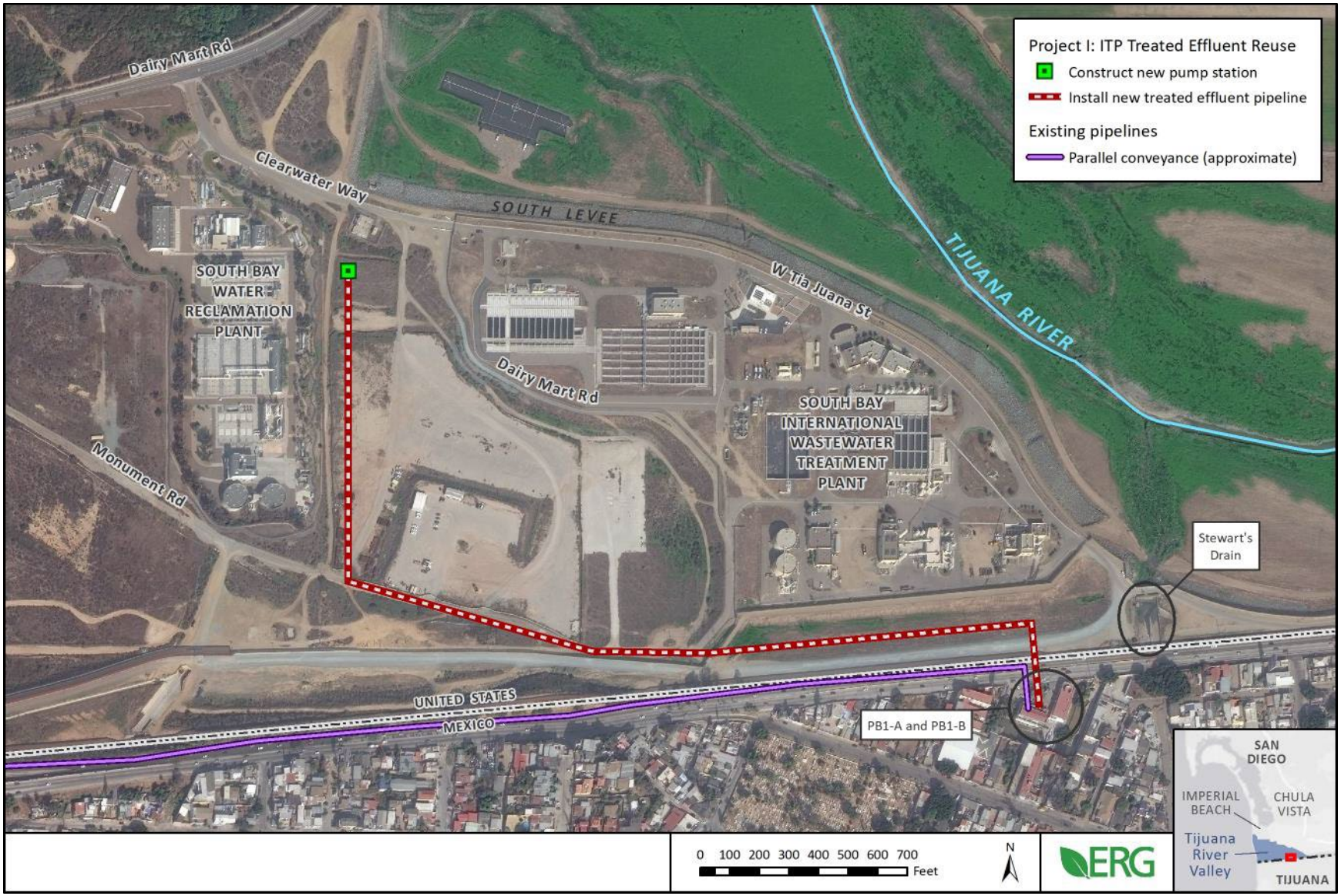

Figure 2-4. Project I (ITP Treated Effluent Reuse) – Conceptual Locations of Project Components

2.2.6 Project J: Trash Boom(s)

Project J includes the installation of one or more trash booms in the Tijuana River channel in the U.S., similar to those currently installed in Smuggler's Gulch and Goat Canyon, to capture trash and allow for its removal from the river. The purpose of the project is to reduce downstream trash-related impacts in the Tijuana River Valley and estuary, particularly due to wet-weather transport of trash to downstream areas. The trash boom(s) would be installed in the river main channel between the U.S.-Mexico border and Dairy Mart Road and would be designed to float on the surface and capture floatable trash, such as plastics. Based on the performance of the boom in Goat Canyon, a trash boom in the river would be expected to capture approximately 75 percent of trash loads in transboundary river flows, with potentially higher capture efficiency if multiple booms are used in series.

The trash boom(s) would be located within the area shown in Figure 2-5, between approximately 3,200 and 8,300 feet downstream of the U.S.-Mexico border. The trash booms would likely be constructed downstream of the energy dissipation section of the channelized river (due to expected greater effectiveness in slower-flowing waters) and upstream of the river diversion system proposed in Project F (to reduce trash interference with the river intake). Depending on the location, a trash boom would cross a span of between approximately 700 and 870 feet. Potential trash processing area(s), if necessary, would be located in either the narrow parcel south of the south levee and between the primary and secondary border fences, or in a narrow parcel outside of the floodplain along the south boundary of the USIBWC-owned sod farm. Access to the processing area would be provided via existing access ramps and gates in the secondary border fence or may require the construction of new access ramps and gates, depending on the location of the trash boom. Dump trucks would likely use existing paved and dirt roads to access the processing area and haul away trash for disposal.

Construction activities would require limited vegetation removal, grubbing, and grading in the main channel to promote contact between the trash boom and the river surface. Construction would also require localized excavation to construct the concrete footings that secure the ends of the trash boom.

Once the trash boom is constructed, it would require occasional maintenance to extract the captured trash (using equipment such as a bulldozer or front-end loader). Trash would accumulate upstream of the trash boom until conditions allow extraction to occur. The timing and frequency of trash extraction would depend on factors including site conditions, current and forecasted flow conditions, and equipment availability but ideally would take place shortly after wet-weather events that result in substantial trash capture. Extracted trash would potentially require temporary staging in a processing area until being loaded onto dump trucks and hauled to a local solid waste disposal site. The timing and frequency of trash hauling would depend on factors including availability of trucks and hauling crews but ideally would take place as soon as possible after trash is extracted from the river.

EPA is exploring options for additional studies (e.g., trash boom pilot study) that would help to refine the scope, effectiveness estimates, and understanding of the operational impacts of this project.

Figure 2-5 depicts the anticipated general locations of project elements and construction activities for Project J.

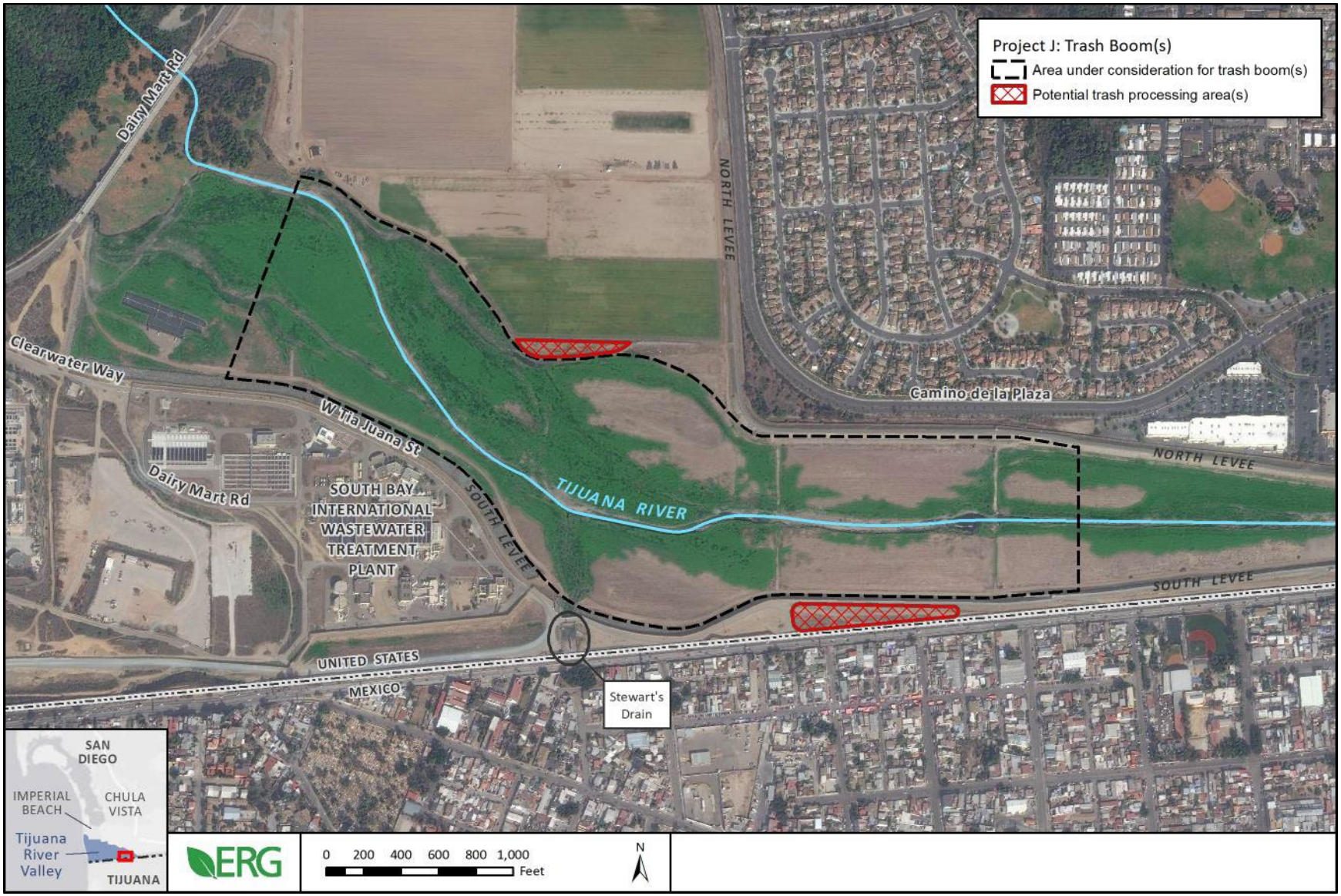

Figure 2-5. Project J (Trash Boom(s)) – Conceptual Locations of Project Components