



## **APPENDIX A**

# **STORMWATER MANAGEMENT SYSTEM MAINTENANCE**

## **PHASE I**

# **CULVERT CLEANING**

# **SCOPE OF WORK**

## PROJECT DESCRIPTION AND SUMMARY

The Guam Visitors Bureau “GVB” is a non-stock, non-profit membership corporation which by legal authority leads Guam’s efforts to maintain and improve Guam’s tourism industry.

Tumon Bay (Tomhum Bay) is the heart of the tourist district. Its main artery, Chalan San Vitores (also San Vitores Boulevard) connects the entire district from north to south. Chalan San Vitores sees thousands of local residents and visitors daily along its streets and sidewalks. As such it must be maintained to provide the safest, cleanest experience possible for residents, employees and visitors.

Integral parts of this maintenance requirement include maintenance and upkeep of the stormwater management system along the entire length of Chalan San Vitores. The maintenance sectors include Gogña Beach Road, Australian Cable Road, JFK Road and Ypao Road. As part of its maintenance program GVB is inviting bids from qualified and responsive construction providers for the:

### STORMWATER MANAGEMENT SYSTEM MAINTENANCE PHASE I CULVERT CLEANING

The intent of this project is to clean the existing culvert system of dirt, sand and debris to improve storm drainage flow and culvert storage capacity prior to the 2020 rainy season. The project time to complete will not exceed 90 days.

Limits of work are along Chalan San Vitores beginning near the Rivera Lane/San Vitores intersection to the Fujita Ponding Basin from Sta 30+92.64 to ~ 51+20.

The scope of work includes inspection of the existing storm drain system prior to construction, the removal of hardened sediment in the storm drains, flushing of the storm drains, disposal of removed silt and a video record of the final cleaning. The Contractor shall prevent removed hardened materials from entering the Fujita Ponding Basin, and all materials must be disposed of in accordance with Guam Environmental Protection Agency requirements and in no case shall be left on-site.

The project area is limited to existing underground box culverts and no digging or trenching away from the culverts is anticipated. Dewatering facilities or measures may be required.

The Contractor shall be solely responsible for performing all work and for furnishing all materials, labor, supplies and parts inventory and equipment necessary to complete the Work; and including all permits and clearances to conduct the work. The GVB will assist with permit clearances but the Contractor must provide all necessary documentation including the Environmental Protection Plan.

The Contractor shall make necessary assessments and diagnoses of existing facilities prior to work ensure proper materials are on hand.

Work shall be scheduled, sequenced, and performed in a manner which minimizes disruption to the public. When activated the Contractor shall prepare daily QC (Quality Control) Reports and Contractor Production Reports submitted to GVB via its Construction Manager for approval. The Contractor shall provide daily report photographs taken prior construction and after finishing work for each aspect of the work.

This is a fixed cost maintenance agreement and a project schedule is required with the bid submission to indicate the schedule and completion of work to be completed prior to July, 2020.

By Thursday of the week preceding the weekly project meeting, the Contractor shall regularly incorporate construction and schedule information in preparing a “Look-Ahead” Schedule. The schedules shall include the Contractor's activities necessary to satisfy all requirements of the Contract Documents.

The Work shall be performed and coordinated in such order or precedence as determined by the Contractor, subject to the conditions and the approval of the Construction Manager. Each completed section of culvert shall be inspected and approved by Construction Manager prior payment.

Coordinate traffic disruptions with the Department of Public Works, the Guam Fire Department, the Guam Police Department and the Guam Visitors Bureau.

### **Time of Completion**

The Contractor shall begin Work upon the date of the Notice to Proceed and shall complete all Work under the Contract as follows:

- Inspection of Manholes and Existing Culvert Conditions
- Work Plan and Schedule – Unconfined
- Work Plan and Schedule – Confined Space
- Permits and Clearances
- Safety and Warning Measures
- Hardened Sediment Removal Beginning at Approximately STA 38+00 to the Fujita Ponding Basin
- Disposal of Hardened Sediment
- Final Flushing and Cleanup

The foregoing are provided as guidelines and all work to be done is likely not included in the list. In this case the Contractor shall submit a schedule of when such work shall be done. The schedule is subject to mutual agreement among GVB, the Construction Manager and the Contractor. In case of disagreement, the final decision shall be by GVB.

## **Payment**

Certify and sign statement on each invoice that all work to be paid under the invoice has been completed in accordance with contract requirements.

Invoices shall be submitted first to the Construction Manager for review and processing. Upon approval with or without notations or exceptions, the CM shall forward to the GVB for processing.

## **Safety**

The Stormwater Management System along Chalan San Vitores is important for public health and safety. The Contractor shall schedule and conduct activities to enable the existing facilities to operate continuously, unless otherwise approved by Construction Manager.

The Contractor must have a Safety Officer on staff with the appropriate certifications. Personnel working on electrical systems including generators and temporary lighting must be supervised by a competent technician and must be trained in safety procedures.

Appropriate safety certifications shall be current for any personnel working on high-lift bucket truck, ladder and extended ladder work, confined spaces, electrical equipment and traffic safety.

The Contractor must have established procedures for all work being performed under this contract including emergency instructions, first aid/CPR assistance and emergency contact information.

The Contractor must be aware that a significant portion of this work will take place in confined spaces and certification of adequate training, ventilation, safety and emergency response measures will be required prior to any work taking place in confined spaces.

The Contractor shall comply with all applicable laws and regulations relating to the safety of persons or property or to the protection of persons or property from damage, injury, or loss and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall be responsible for preventing health hazards arising from work related activities of its employees. Persons shall be afforded safe passages around areas of demolition.

The Contractor shall exercise care in preserving vegetation and protecting property, to avoid disturbing areas beyond the limits of the Work and promptly repair any damage caused by Contractor operations.

Stock piles of earth and other construction-related materials shall be protected from being transported from the Site by wind or water.

Traffic Control when required shall comply with the requirements of the Guam Police Department and the Department of Public Works. This traffic control is anticipated to be required primarily when the work is at the crosswalks, but may be required for work on the streetlights as well, e.g., when a bucket truck will be blocking one lane during the work.

In all cases the provisions for safety must adhere to the Manual on Uniform Traffic Control Devices (MUTCD) including the provisions for pedestrian and bicycle traffic, OSHA requirements for the protection of workers and others, permits or notifications required by the Guam Police Department and applicable sections of the Guam Building Code including the NFPA, the NEC and IBC 2009.

Any work including diagnosis must be accompanied by a pre-work safety meeting (tailgate or otherwise), and an AHA must be submitted for any types of work under this contract. The AHA should include confined space procedures.

### **Background**

The modern evolution of the Pale San Vitores Road in Tomhum first began in 1978 when infrastructure including stormwater management systems was upgraded to enhance collection, conveyance, storage and treatment of runoff.

The complete reconstruction of Pale San Vitores began in 1996 through 2000 as part of the Tumon Bay Infrastructure and Beautification Project (TBIB), a special bond-funded capital improvement. Under this reconstruction modern signalized intersections connected the five-lane (centerlane included) highway along the entire length of the Tomhum Bay Hotel District.

Phase I of this project consisted of the reconstruction of Pale San Vitores from its intersection at the Australian Cable intersection at Marine Drive to the Westin then through the Happy Landing Road intersection. This segment also included a stretch of Gogña Road from the Westin to the Nikko Hotel intersection. This reconstruction included infrastructure upgrades for water, sewer, electrical, cable, communications, stormwater, roadways and sidewalks.

Phase II consisted of the same from Happy Landing Road up to the rotunda at the Pale San Vitores/Chalan San Antonio intersection.

The culvert systems were last flushed (cleaned) in 2013-14. When the hardened sedimentation buildup was discovered the project stalled and is now being resurrected through this solicitation and contract.

The appendix contains information including the project plan and locations of Manholes and access points to the underground culverts.

The Contractor shall refer to the Appendix which contains details in the form of drawings and other information. The Contractor shall verify the scope of the Work. The Contractor shall comply with the maintenance and guarantee requirements.

## **Materials**

No long lead materials are anticipated for this project.

Removal and disposal of culvert sediment and trash will be properly disposed of at authorized locations and transported by authorized handlers and haulers.

## **Inspection and Testing**

All applicable tests, special inspections, and observations required by the contract shall be approved by the Construction Manager.

Perform and participate in Pre-Final and Final Inspection of every task. Submit a list of deficiencies to the Construction Manager for each inspection. Correct all deficiencies prior to the Final inspection. Notify Construction Manager prior to final inspection to establish a schedule date acceptable by the Construction Manager. This provision is applicable to each and every repair or servicing task from simple replacement to complete redo's.

The Contractor shall maintain a testing and inspection plan and log. Ensure that all testing is performed in accordance with the U.S. Department of Transportation Federal Highway Administration FHWA Lighting Handbook August 2012 or later, the MUTCD and the manufactures recommendations. Review all test reports and notify the Construction Manager of all deficiencies, along with a proposal for corrective actions.

## **Other**

The Contractor shall be expected to be able to respond to emergency requirements which may include temporary warning signs, barricades, flashing messaging indicators (trailerable) and temporary concrete or pavement repairs.

Traffic Control when required shall comply with the requirements of the Guam Police Department and the Department of Public Works. This traffic control is anticipated to be required primarily when the work is at the crosswalks, but may be required for work on the sidewalks and medians as well.

In all cases the provisions for safety must adhere to the Manual on Uniform Traffic Control Devices (MUTCD) including the provisions for pedestrian and bicycle traffic, OSHA requirements for the protection of workers and others, permits or notifications required by the Guam Police Department and applicable sections of the Guam Building Code including the NFPA, the NEC and IBC 2009.

Appropriate safety certifications shall be current for any personnel working on high-lift bucket trucks, confined spaces, electrical equipment, mechanized equipment such as backhoes, dump trucks and "Bobcats" for example, and traffic safety.

The Contractor must have established procedures for all work being performed under this contract including emergency instructions, first aid/CPR assistance and emergency contact information.

No roads or lanes shall be closed without a 5-day notice to GVB except in cases of emergencies. Such emergencies shall be immediately brought to the attention of GVB.

Refer to the Appendices for additional data and information.

**Summary:**

**The box culverts affected by this scope of work are:**

RC Box A: Nine (9) Manholes (A1 through A9) – Total Length = 2,030 Lineal Feet

RB Box B: Nine (9) Manholes (B1 through B9) – Total Length = 2,030 Lineal Feet

RB Box C: Seven (7) Manholes (C1 through C7) – Total Length = 1,618 Lineal Feet

Total Number of Manholes: 25 Manholes

**Total Length of Culvert: 5,678 Lineal Feet (DFS/Outrigger to Fujita Ponding Basin)**

Estimated Silt Volumes:

<u>Box Culvert No</u>	<u>Estimated Silt Volume</u>
A1-A9	650 Cubic Yards
B1-B9	800 Cubic Yards
C1-C7	<u>500 Cubic Yards</u>
<b>TOTAL</b>	<b>1,950 (+/-) Dry Cubic Yards*</b>

\* Equivalent to 163 Dry Dump Truck Loads at 12 CY – The Loads are Expected to be Wet Loads so the Equivalent Number Should Be increased by 75% to Account for Saturation.

These Quantities are Estimated Only. The Contractor should Account for Greater or Lesser Quantities.

**Estimated Length of Hardened Sediment Deposits:**

6,000+/- LF of Box Culverts (3'x6' and 4'x6') – See Attachment A-1 in Appendix.



**BID SCHEDULE**

**STORMWATER MANAGEMENT SYSTEM MAINTENANCE  
 PHASE I  
 CULVERT CLEANING**

**BID SCHEDULE**

BID ITEM NO.	BID ITEM DESCRIPTION	QNTY	UNIT	UNIT PRICE <sup>(1)</sup>	BID AMOUNT <sup>(1)</sup>
1.0	Mobilization	1	Lump Sum		
2.0	Traffic Control / Safety Measures	1	Lump Sum		
3.0	Safety Plan	1	Lump Sum		
4.0	Quality Control, Engineering & Technical	1	Lump Sum		
5.0	Disposal, Including Fees	1	Lump Sum		
6.0	Vacuum Truck	240	Hour		
7.0	Dump Trucks	200	Hour		
8.0	Front-End Loader	1	Lump Sum		
9.0	Tire Backhoe	1	Lump Sum		
10.0	Hard Sediment Removal	6,000	Linear Feet		
11.0	Dewatering	1	Lump Sum		
12.0	Photo Record (Every 50')	5,700	Linear Feet		
13.0	FORCE ACCOUNT	1	Lump Sum	\$ 35,000.00	\$ 35,000.00
<b>TOTAL BID AMOUNT</b>					

(1) These Columns MUST be filled in by Contractor at the Time of Bid.

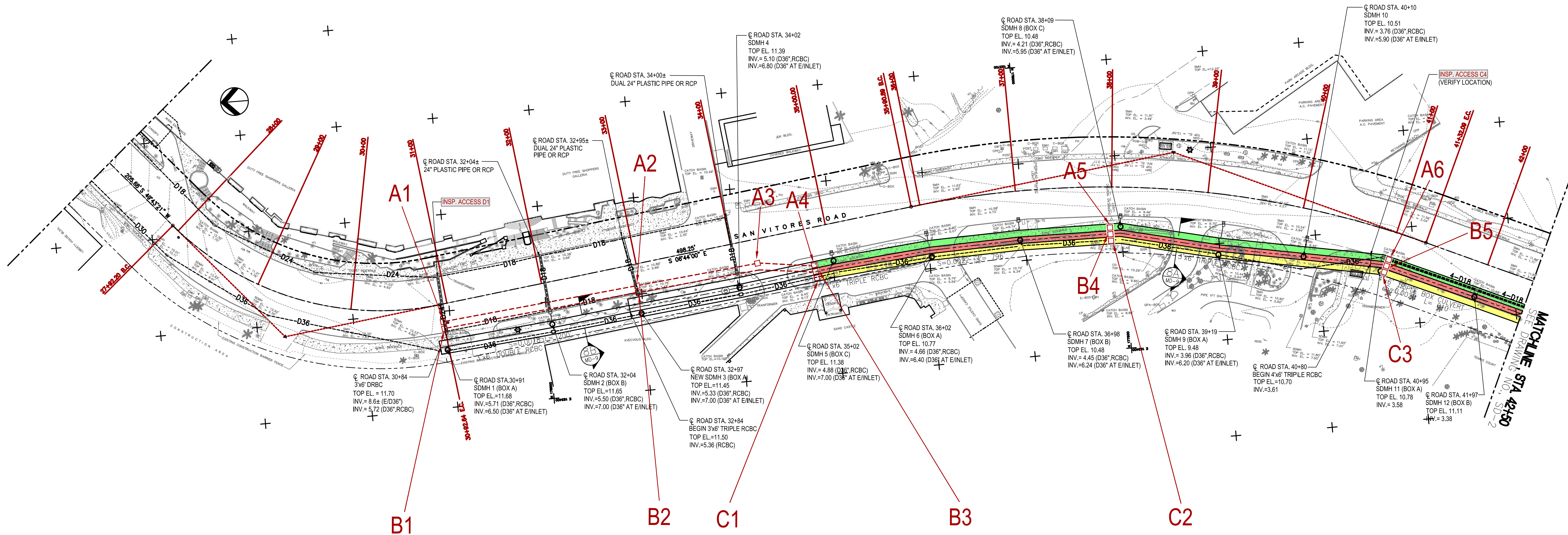
General Notes: Any Other Work Items in Support of the Work shall be Considered Incidental to the Work and Will not be Considered for Billing.

Leave no blank columns – if Costs for Any Bid Item are N/A or \$ 0.00, Insert \$ 0.00.

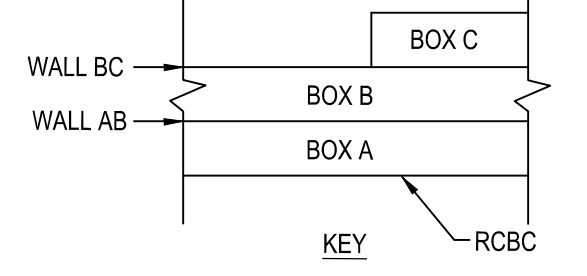
The Total Bid Amount Under Column must be a an Accurate Sum of all Items 1.0 through 13.0 under the “BID AMOUNT” Column. An Inaccurate Sum Will be Cause for Automatic Disqualification.

## EXHIBITS

- A-1: Work Limits from ~ STA 31+00 to STA 42+50
- A-2: Continuation of Work Limits from STA 42+50 to  
Fujita Ponding Basin
- A-3: Depictive Photos from 2013/2014 Cleaning
- A-4: Depictive Photos from 2013/2014 Cleaning
- A-5: Depictive Photos from 2013/2014 Cleaning
- A-6: Depictive Photos from 2013/2014 Cleaning

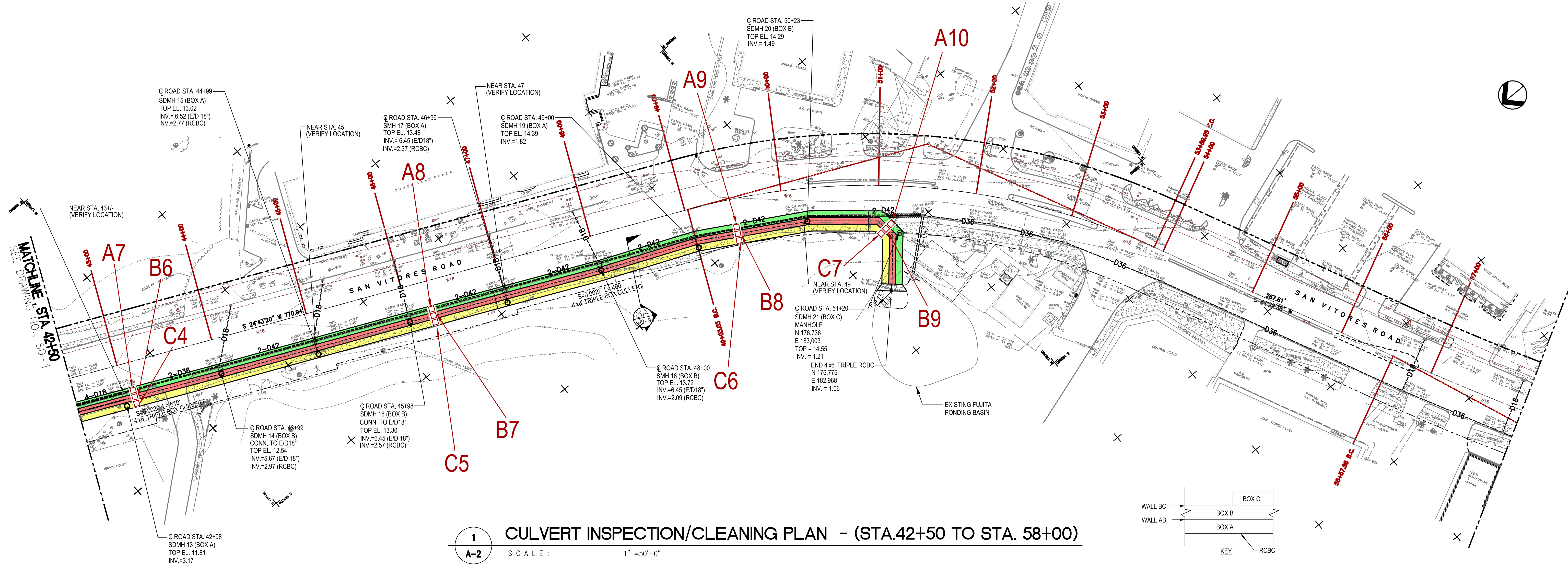




1  
A-1 CULVERT INSPECTION/CLEANING P L A N - (STA.27+00 TO STA.42+50)  
SCALE: 1" = 50'-0"



REVISION	DATE	BY	DESCRIPTION	APPROVED
PROJECT No.			<b>GUAM VISITORS BUREAU</b> 	<b>STORM WATER SYSTEM MAINTENANCE            CHALAN SAN VITORES</b>
PROJECT NUMBER				
CONTRACT No.				RECOMMENDED BY : _____ DATE _____ CHIEF OF ENGINEERING
DESIGNED BY:				
DRAWN BY :			DRAWER NO. <b>A-1</b>	SHEET 1 OF 2
CHECKED BY:				
SURV. BY :			DRAWING NUMBER	
PROJECT ENGINEER			DATE	
SECTION MANAGER			DRAWER NO.	
SCALE :			DRAWING NUMBER	

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION



REVISION	DATE	BY	DESCRIPTION	APPROVED
PROJECT No.			<b>GUAM VISITORS BUREAU</b> 	<b>STORM WATER SYSTEM MAINTENANCE</b> <b>CHALAN SAN VITORES</b>
PROJECT NUMBER				
CONTRACT No.			RECOMMENDED BY : _____ DATE _____	DRAWER NO. _____ DRAWING NUMBER <b>A-2</b> SHEET 2 OF 2
DESIGNED BY:				
DRAWN BY :				
CHECKED BY:				
SURV. BY :			PROJECT ENGINEER _____ DATE _____ SECTION MANAGER _____	
SCALE :			W.B. Flores & Associates CONSULTING ENGINEERS	

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION







