Request for Bids
Smaller Contracts

Procurement of:
Access to Potable Water Supply – South Bimini Airport Road and Port Royal Mains Extension

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Project: ***The Bahamas Water Supply and Sanitation***

Systems Upgrade Program

Employer: The Water and Sewerage Corporation

Country: *The Commonwealth of The Bahamas*

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Section I. Instructions to Bidders (ITB)

This Section of the bidding document should provide the information necessary for bidders to prepare responsive bids, in accordance with the requirements of the Employer. It should also give information on bid submission, opening and evaluation, and on the award of Contract.

Matters governing the performance of the Contractor, payments under the Contract, or matters affecting the risks, rights, and obligations of the parties under the Contract are not normally included in this Section, but rather under Section VI, "General Conditions of Contract (GCC)", and/or Section VIII, "Particular Conditions of Contract (PCC)". If duplication of a subject is inevitable in the different sections of the documents, care must be exercised to avoid contradictions between clauses dealing with the same matter.

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Section I. Instructions to Bidders (ITB)

A. General

1. Scope of Bid

1.1 The Employer as defined[1] in "General Conditions of Contract" (GCC) and identified in Section II "Bidding Data Sheet" **(BDS)**, invites bids for the construction of Works, as described **in the BDS** and Section VII, "Particular Conditions of Contract" (PCC). The name and identification number of lot(s) (Contract(s) are provided in the **BDS** and the PCC.

1.2 The successful Bidder shall be expected to complete the Works by the Intended Completion Date specified **in the BDS** and PCC 1.1(r).

1.3 Throughout this bidding document:

(a) the term "in writing" means communicated in written form (e.g., by mail, e-mail, including, if specified in ITB 1.4, distributed, or received through electronic-procurement system used by the Employer) with proof of receipt;

(b) if the context so requires, "singular" means "plural" and vice-versa;

(c) "day" means calendar day; and

(d) "ESHS" means the Environmental, Social, Health and Safety measures (including labor, occupational and community health and safety, natural disasters and climate change, indigenous peoples, vulnerable groups, sexual and gender-based violence (SGBV), stakeholder engagement, and resettlement and livelihood issues), which the Contractor, and if applicable the Subcontractors are required to adopt in the execution of the contract, if applicable.

(e) "SGBV" means Sexual and Gender-based Violence and refers to any act perpetrated against a person's shall that is based on gender norms and unequal power relations. It encompasses threats of violence, coercion and harassment. It can be physical, emotional, psychological or sexual in nature, and can take the form of a denial of resources or access to resources. It includes sexual exploitation, abuse and harassment. It

[1] See Section V, "General Conditions of Contract", Clause 1. Definitions.

inflicts harm on people of all genders. It can affect people of any age across the lifespan and disproportionately affects women, girls, and people of diverse sexual orientations and gender identities.

1.4 If specified **in the BDS**, the Employer intents to use the electronic procurement system indicated **in the BDS** to manage the aspects of this procurement process specified **in the BDS.**[2]

2. Source of Funds

2.1 The Borrower, as defined **in the BDS,** intends to apply part of the funds of a loan from the Inter-American Development Bank (IDB) (hereinafter called "the Bank"), as defined **in the BDS,** in the amount as indicated **in the BDS** towards the cost of the Project, as defined **in the BDS,** to cover eligible expensive under the Contract for the Works.

2.2 Payments by the Inter-American Development Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the financing agreement between the Borrower and the Bank (hereinafter called the "Loan Contract") and will be subject in all respects to the terms and conditions of that Loan Contract. Except as the Bank may specifically otherwise agree, no party other than the Borrower shall derive any rights from the Loan Contract or have any rights to the loan proceeds.

3. Prohibited Practices

3.1 The Bank requires that all Borrowers (including grant Beneficiaries), Executing Agencies and Contracting Agencies, including members of its personnel, as well as all firms, entities and individuals participating in a Bank-financed activity acting as, *inter alia*, bidders, proposers, suppliers, contractors, consultants, subcontractors, sub-consultants, service providers and concessionaires (including their respective officers, employees and representatives or agents, irrespective of whether the agency is expressed or implied), adhere to the highest ethical standards, and report to the Bank[3] all suspected acts of Prohibited Practices of which they have knowledge or become aware both, during the bidding process and throughout the negotiation or execution of a contract. Prohibited Practices are: (i) corrupt practices; (ii) fraudulent practices; (iii) coercive practices; (iv) collusive practices; (v) obstructive practices; and (vi)

[2] In such cases, the Bank must be satisfied with the functionality of said system, as provided in paragraph 3.21 of the Procurement Policies GN-2349-15.

[3] Information on how to present allegations of Prohibited Practices, the application of rules regarding investigation and sanctions process, and the agreement regulating the mutual recognition of sanctions among the IFI's are available on the Bank's website (*https://www.iadb.org/en/who-we-are/transparency/sanctions-system*).

misappropriation of funds. The Bank has established mechanisms to report allegations of Prohibited Practices. Any allegation shall be submitted to the Bank's Office of Institutional Integrity (OII) for the appropriate investigation. The Bank has also adopted Sanctions Procedures to adjudicate cases. The Bank has also entered into agreements with other International Financial Institutions (IFIs) to mutually recognize sanctions imposed by their respective sanctioning bodies.

(a) In pursuance of the Policies for the Procurement of Goods and Works financed by the Bank, the Bank defines for the purposes of this provision, the terms set forth below:

(i) *"corrupt practice"* is the offering, giving, receiving or soliciting, directly or indirectly, *anything* of value to influence improperly the actions of another party;

(ii) "*fraudulent practice*" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) "*coercive practice*" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(iv) "*collusive practice*" is an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;

(v) "*obstructive practice"* is

i. destroying, falsifying, altering, or concealing of evidence material to an IDB Group investigation, or making false statements to investigators with the intent to impede an IDB Group investigation;

ii. threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to an IDB

Group investigation or from pursuing the investigation, or

iii. acts intended to impede the exercise of the IDB Group's contractual rights of audit or inspection provided for under ITB 3.1(f) below or access to information; and

(vi) "*misappropriation*" is the use of IDB Group financing or resources for an improper or unauthorized purpose, committed either intentionally or through reckless disregard.

(b) If the Bank determines that at any stage of the procurement or implementation of a contract any *party that, directly or indirectly, participates or attempts to participate in an activity financed by the Bank or obtains or attempts to obtain financing for an activity financed by the Bank (including, but not limited to, borrowers, recipients of non-refundable financing, beneficiaries, offerors, suppliers, contractors, subcontractors, consultants, sub-consultants, service providers, agents, financial intermediaries, sponsors, parties to a security agreement, fund managers, obligors, issuers of securities, and recipients of investments, including the respective officers, employees, agents, affiliates and shareholders of any of the parties previously listed, as applicable)* engaged in a Prohibited Practice, the Bank may:

(i) not finance any proposal to award a contract for works, goods, and related services financed by the Bank;

(ii) suspend disbursement of the operation if it is determined at any stage that an employee, agent or representative of the Borrower, Executing Agency or Contracting Agency has engaged in a Prohibited Practice;

(iii) declare Misprocurement and cancel, and/or accelerate repayment of the portion of a loan or grant earmarked for a contract, when there is evidence that the representative of the Borrower, or Beneficiary of a grant, has not taken the adequate remedial measures (including, *inter alia*, providing adequate notice to the Bank upon

learning of the Prohibited Practice) within a time period which the Bank considers reasonable;

(iv) issue the firm, entity or individual a reprimand in the form of a formal letter of censure for its behavior;

(v) declare that a firm, entity, or individual is ineligible, either permanently or for a stated period of time, to: (i) be awarded or participate in activities financed by the Bank; and (ii) be a nominated[4] sub-consultant, subcontractor, supplier or service provider of an otherwise eligible firm being awarded a Bank-financed contract;

(vi) impose other sanctions that it deems to be appropriate, among others, the restitution of funds and of fines equivalent to the reimbursement for costs associated with investigations and proceedings contemplated in the Sanctions Procedures. Such other sanctions may be imposed in addition to or in lieu of the sanctions referred above (the "above mentioned" sanctions are reprimand and debarment/ineligibility);

(vii) extend the sanctions imposed on any individual, entity or firm that, directly or indirectly, owns or controls a sanctioned entity, is owned or controlled by a sanctioned entity or is the object of common ownership or control with a sanctioned entity, as well as to officials, employees, affiliates, representatives or agents of a sanctioned entity who also own a sanctioned entity and/or exercise control over a sanctioned entity, even if it has not been concluded that those parties directly incurred in a Prohibited Practice; and/or

(viii) refer the matter to appropriate national law enforcement authorities.

(c) The provisions of ITB 3.1(b)(i) and (ii) shall also be applicable when such parties have been temporarily

[4] A nominated sub-consultant, subcontractor, supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the Bidder in its prequalification application or selection because it brings specific and critical experience and know-how that allow the Bidder to meet the qualification requirements for the particular selection; or (ii) appointed by the Borrower.

suspended to be awarded additional contracts pending a final outcome of a sanction proceeding, or otherwise.

(d) The imposition of any action to be taken by the Bank pursuant to the provisions referred to above may be made public.

(e) In addition, any firm, entity or individual bidding for or participating in a Bank-financed activity including, inter alia, applicants, bidders, suppliers, contractors, consultants, personnel, subcontractors, sub-consultants, service providers, concessionaires, may be subject to sanctions pursuant to agreements that the Bank may have with other IFIs regarding the mutual enforcement of debarment decisions. For purposes of these ITB the term "sanction" shall mean any debarment, conditions on future contracting or any publicly disclosed action taken in response to a violation of an IFI's applicable framework for addressing allegations of Prohibited Practices.

(f) The Bank requires applicants, bidders, suppliers and their representatives or agents, contractors, consultants, subcontractors, sub-consultants, service providers and their representatives or agents and concessionaires permit the Bank to inspect accounts, books or accounting books, records including, for example, invoices, account statements, payroll, contracts or other financial and business data, and other documents relating to the submission of proposals and contract performance as well as to have them audited by personnel appointed by the Bank, in the event that the Bank determines it necessary. Any bidder, applicant, supplier, and their representatives or agents, contractor, consultant, personnel, subcontractor, sub-consultant, service provider and concessionaire shall fully assist the Bank with its investigation. The Bank also requires that all bidders, applicants, suppliers, and their representatives or agents, contractors, consultants, personnel, subcontractors, sub-consultants, service providers and concessionaires: (i) maintain all documents and records related to the Bank-financed activities for seven (7) years after completion of the work contemplated in the relevant contract; (ii) deliver any document necessary for the investigation of allegations of Prohibited Practices; and (iii) ensure that employees, representatives or agents of the applicants,

bidders, suppliers and their representatives or agents, contractors, consultants, personnel, subcontractors, sub-consultants, service providers and concessionaires to respond to questions from Bank personnel or any properly designated investigator, agent, auditor or consultant relating to the investigation. If bidders, applicants, suppliers and their representatives or agents, contractors, consultants, personnel, subcontractors, sub-consultants, service providers or concessionaires fails to cooperate and/or comply with the Bank's request, or otherwise obstructs the investigation, the Bank, discretionally, may take appropriate action against bidders, applicants, suppliers and its agents or representatives, contractors, consultants, personnel, subcontractors, sub-consultants, service providers or concessionaires.

3.2 By submitting their Bids or Proposals, the Bidders represent and warrant:

(a) that they have read and understood the Bank's definition of Prohibited Practices and the applicable sanctions pursuant to the Sanctions Procedures;

(b) that neither they nor their agents, subcontractors, subconsultants, directors, key personnel or principal shareholders have engaged in any Prohibited Practice as set forth herein during the selection, negotiation, award, or execution of this Contract;

(c) that they have not misrepresented or concealed any material facts during the procurement or contract negotiation processes or during the performance of the Contract;

(d) that neither they nor their representatives or agents, subcontractors, sub-consultants, suppliers, directors, key personnel, or principal shareholders have been declared ineligible to be awarded a contract by the Bank;

(e) that all commissions, representatives, or agents' fees, facilitating payments or revenue-sharing agreements related to the Bank-financed activities have been disclosed; and

(f) that they acknowledge that the breach of any of these representations may constitute a basis for the adoption by the Bank of one or more of the measures set forth in ITB 3.1(b).

4. Prohibited Activities

4.1 The Bank requires that all Borrowers (including grant Beneficiaries), implementing agencies and contracting agencies, as well as all firms, entities and individuals engaged in a Bank-financed activity and acting, inter alia, as bidders, proposers, suppliers, contractors, consultants, subcontractors, subconsultants, service providers and concessionaires, shall not knowingly participate, directly or indirectly through Financial Intermediaries, in the production, trade or use of the products and substances or activities listed in Annex I - IDB ENVIRONMENTAL AND SOCIAL EXCLUSION LIST of the Environmental and Social Policy Framework[5], which also allows the insertion of additional exclusions.

4.2 If the Bank determines that, at any stage of contract implementation, the Borrower (including grant Beneficiaries), Executing Agencies and Contracting Agencies, any firm, entity or individual engaged in a Bank-financed activity such as, but not limited to, bidders, proponents, suppliers, contractors, consultants, personnel, subcontractors, subconsultants, service providers and concessionaires used IDB resources to engage in a Prohibited Activity during contract implementation, the Bank may:

(a) suspend disbursement of the operation if it is determined at any stage of the contract that IDB resources have been used to carry out a Prohibited Activity;

(b) declare Misprocurement and cancel, and/or accelerate the payment of, the portion of a loan or grant earmarked for a contract, when there is evidence that the representative of the Borrower, or grant Beneficiary, has not taken the adequate remedial measures (including, inter alia, providing adequate notice to the Bank upon learning of the Prohibited Activity) within a time period which the Bank considers reasonable;

[5] IDB Environmental and Social Policy Framework GN-2965-23: (*https://www.iadb.org/en/who-we-are/topics/environmental-and-social-solutions/environmental-and-social-policy-framework*).

(c) refer the matter to the appropriate law enforcement authorities.

4.3 The Bank requires that all applicants, bidders, proposers, suppliers and their representatives or agents, contractors, consultants, officers or employees, subcontractors, service providers and concessionaires permit the Bank to inspect accounts, records and other documents relating to the performance of contracts, as well as to have them audited by personnel designated by the Bank.

4.4 Applicants, bidders, proponents, suppliers and their representatives or agents, contractors, consultants, subcontractors, subconsultants, subconsultants, service providers and concessionaires shall fully assist the Bank in their monitoring and supervision.

5. Eligible Bidders

5.1 A Bidder, and all parties constituting the Bidder, shall be a national from member countries of the Bank. Bidders from other countries shall be disqualified from participating in contracts intended to be financed in whole or in part from Bank loans. Section V, "Eligible Countries" of this document establishes the Bank's member countries, as well as the criteria to determine the nationality of the Bidders and the country of origin of goods and services. The Bidders with the nationality of a Bank's member country the goods to be supplied under the Contract are not eligible:

(a) if as a matter of law or official regulation, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods and Works required; or

(b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any imports of goods from that country or any payments to persons or entities in that country.

5.2 A Bidder, included in all cases, the subcontractors, directors, key personnel, principal shareholders, proposed personnel and agents should not have conflict of interests. A Bidder that is deemed to have a conflict of interest will be disqualified. A Bidder may be considered to have a conflict of interest for the

purpose of this Bidding process, if the Bidder:

(a) directly or indirectly controls[6] another Bidder, is controlled directly or indirectly by another Bidder, or is controlled together with another Bidder by a natural or legal entity in common; or

(b) receives or has received any direct or indirect subsidy from another Bidder for the purpose of this bidding process; or

(c) has the same legal representative as another Bidder; or

(d) has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or

(e) or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the Bid; or

(f) or any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower as Project Manager for the Contract implementation;

(g) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified **in the BDS** ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm;

(h) including, in all cases, the respective directors, key personnel, principal shareholders, proposed personnel and agents has a close[7] family or financial relationship or past or future employment with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the bidding document or specifications of the contract,

[6] Control will generally mean the ability to direct or cause the direction of the policies or operations of another entity. Control can be economic or operational. Control will be determined in the context of each particular case. .

[7] A close relationship should be understood as being related up to the fourth degree of relationship by blood (consanguinity) or by adoption, or up to the second degree of relationship by marriage or domestic partnership (affinity).

and/or the Bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract.

5.3 A Bidder is not eligible if it or its subcontractors, suppliers, consultants, manufacturers or service providers that intervene in any part of the Contract (including, in all cases, the respective directors, officers, principal shareholders, proposed personnel and agents) are subject to a temporary suspension imposed by the IDB pursuant to an agreement for mutually recognition of imposed sanctions signed by the IDB and other development banks. The list of such ineligible firms and individuals is set forth **in the BDS**.

5.4 A firm that is a Bidder (either individually or as member of a Joint Venture, Consortium or Association ("JVCA")) shall not participate in more than one Bid, except for permitted alternative Bids. This includes participation as a Subcontractor in other Bids. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JVCA member may participate as a subcontractor in more than one Bid. Unless specified **in the BDS**, there is no limit on the number of members in a JVCA.

5.5 Government-owned enterprises in the Employer's country shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, (iii) are not a dependent agency of the Employer or the Borrower and (iv) are not in a case of conflict of interests as defined in ITB 5.2.

5.6 A Bidder shall not be under suspension from bidding by the Employer as a result of non-compliance with a Bid Securing Declaration.

5.7 This bidding is open to all eligible Bidders.

6. Qualifications of the Bidder

6.1 All bidders shall provide in Section IV, "Bidding Forms", a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.

6.2 In the event that prequalification of potential bidders has been undertaken, only bids from prequalified bidders shall be considered for award of Contract. These qualified bidders should submit with their bids any information updating their original prequalification applications or, alternatively, confirm in their bids that the originally submitted prequalification information remains essentially correct as of

the date of bid submission. The update or confirmation should be provided in Section IV, "Bidding Forms".

6.3 If the Employer has not undertaken prequalification of potential bidders, all bidders shall include the following information and documents with their bids in Section IV, "Bidding Forms" unless otherwise stated **in the BDS**:

(a) copies of original documents defining the constitution or incorporation, and principal place of business of the Bidder; written power of attorney of the signatory of the Bid to commit the Bidder;

(b) total amount of annual turnover of construction of Works performed for each of the last five (5) years;

(c) experience in works of a similar nature and size for each of the last five (5) years, and details of work under way or contractually committed; and clients who may be contacted for further information on those contracts;

(d) major items of construction equipment proposed to carry out the Contract;

(e) qualifications and experience of the key technical and administrative personnel proposed to work at the Site of the Works;

(f) reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five (5) years;

(g) evidence of adequacy of working capital for this Contract (access to line(s) of credit and availability of other financial resources);

(h) authorization to seek references from the Bidder's bankers;

(i) information regarding any litigation, current or during the last five (5) years, in which the Bidder was/is involved, the parties concerned, and the disputed amounts and awards; and

(j) proposals for subcontracting components of the Works amounting to more than ten (10) percent of the Contract Price. The ceiling for subcontractor's participation is stated **in the BDS**.

6.4 Bids submitted by a Joint Venture, Consortium or Association

(JVCA) of two or more firms as members shall comply with the following requirements, unless otherwise stated **in the BDS**:

(a) the Bid shall include all the information listed in ITB 6.3 above for each JVCA member;

(b) the Bid shall be signed so as to be legally binding on all members;

(c) all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;

(d) one of the members shall be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of any and all members of the JVCA;

(e) the execution of the entire Contract, including payment, shall be done exclusively with the member in charge; and

(f) a copy of the JVCA Agreement entered into by the members shall be submitted with the Bid; or a Letter of Intent to execute a JVCA agreement in the event of a successful bid shall be signed by all members and submitted with the Bid, together with a copy of the proposed Agreement. The Letter or The Agreement shall specify the participation share (as a percentage) of each member.

6.5 To qualify for award of the Contract, bidders shall meet the following minimum qualifying criteria:

(a) an average annual construction turnover during the period specified **in the BDS** of at least the multiple indicated **in the BDS**;

(b) demonstrate experience as prime contractor in the construction of at least the number of works indicated **in the BDS**, whose nature and complexity are equivalent to the Works tendered, during the period indicated **in the BDS** (to meet this requirement, the works cited must be at least seventy (70%) percent complete);

(c) show that it can ensure the timely availability (own, lease, hire, etc.) of the essential equipment listed **in the**

BDS;

(d) hire a Contract Manager with five years' experience in works of an equivalent nature and volume, including no less than three years as Manager; and

(e) liquid assets and/or credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, of no less than the amount specified **in the BDS**.[8]

A consistent history of litigation or arbitration awards against the Applicant or any member of a JVCA may result in disqualification.

6.6 The figures for each of the members of a JVCA shall be added together to determine the Bidder's compliance with the minimum qualifying criteria of ITB 6.5(a) and (e); however, for a JVCA to qualify, each of its members must meet at least twenty-five (25) percent of minimum criteria of ITB 6.5(a), (b), and (e) for an individual Bidder, and the member in charge at least forty (40) percent of those minimum criteria. Failure to comply with this requirement shall result in rejection of the JVCA's Bid.

6.7 Subcontractors' experiences and resources shall not be considered in determining the Bidder's compliance with the qualifying criteria, unless otherwise stated **in the BDS**.

7. One Bid per Bidder

7.1 Each Bidder shall submit only one Bid, either individually or as a member in a JVCA[9]. A Bidder who submits or participates in more than one Bid (other than as a subcontractor or in cases of alternatives that have been permitted or requested) shall cause all the proposals with the Bidder's participation to be rejected.

8. Cost of Bidding

8.1 The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer shall in no case be responsible or liable for those costs.

9. Site Visit

9.1 The Bidder, at the Bidder's own responsibility and risk, is encouraged to visit and examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering a contract for construction

[8] Usually, the equivalent of the estimated payments flows over 4-6 months at the average (straight line distribution) construction rate. The actual period of reference shall depend on the speed with which the Employer shall pay the Contractor's monthly certificates.

[9] For the avoidance of doubt, where the bidding includes lots, "Bid" means bid for each lot.

of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

B. Bidding Document

10. Contents of Bidding Document

10.1 The bidding document comprises the documents listed below, and addenda issued in accordance with ITB 12:

Section I.	Instructions to Bidders (ITB)
Section II.	Bid Data Sheet (BDS)
Section III.	Evaluation and Qualification Criteria
Section IV.	Bidding Forms
Section V.	Eligible Countries
Section VI.	General Conditions of Contract (GCC)
Section VII.	Particular Conditions of Contract (PCC)
Section VIII.	Specifications & Performance Requirement
Section IX.	Drawings
Section X.	Bill of Quantities[10]
Section XI.	Contract Forms

11. Clarification of Bidding Document

11.1 A prospective Bidder requiring any clarification of the bidding document may notify the Employer in writing at the Employer's address indicated **in the BDS.** The Employer shall respond to any request for clarification received earlier than 14 days[11] prior to the deadline for submission of bids. Copies of the Employer's response shall be forwarded to all purchasers of the bidding document, including a description of the inquiry, but without identifying its source.

12. Amendment of Bidding Document

12.1 Before the deadline for submission of bids, the Employer may modify the bidding document by issuing addenda.

12.2 Any addendum thus issued shall be part of the bidding document and shall be communicated in writing to all prospective bidders that obtained the bidding document.[12] Prospective bidders shall

[10] In lump sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule".

[11] It may be necessary to extend the deadline for submission of bids if the Employer's response results in substantial changes to the bidding document. See ITB 12 below.

[12] It is therefore important that the Employer maintain a complete and accurate list of recipients of the bidding document and their addresses.

acknowledge receipt of each addendum in writing to the Employer, and must also be published in the media in which the call for bids was published.

12.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall extend, as necessary, the deadline for submission of bids, in accordance with ITB 22.2 below.

C. Preparation of Bids

13. Language of Bid

13.1 All documents relating to the Bid shall be in the language specified **in the BDS.**

14. Documents Comprising the Bid

14.1 The Bid submitted by the Bidder shall comprise the following:

(a) **Letter of Bid**, in the form indicated in Section IV, "Bidding Forms";

(b) **Bid Security, or Bid Securing Declaration**, in accordance with ITB 18, if required;

(c) **Priced Bill of Quantities**[13] completed in accordance with ITB 15, as specified **in the BDS**;

(d) **Qualifications:** Information Forms and supporting documents for Qualification, where the qualifications of the Bidder to execute the contract, if the Bid is accepted, are stated;

(e) **Alternative Bid** if permissible, in accordance with ITB 19;

(f) **Conformity**: the Bidder shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, "Bidding Forms", in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the Specifications & Performance Requirements and the completion time; and

(g) any other documents required to be completed and submitted by bidders, as specified **in the BDS.**

15. Bid Prices and Discounts

15.1 The prices and discounts (including any price reduction) quoted by the Bidder in the Letter of Bid and in the Bill of Quantities[14] shall conform to the requirements specified below.

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[13] In Lump Sum Contracts, delete "priced Bill of Quantities" and replace with "priced Activity Schedule".
[14] In lump sum contracts, delete "priced Bill of Quantities" and replace with "priced Activity Schedule".

15.2 The Bidder shall submit a Bid for the whole of the Works described in ITB 1.1. The Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities.[15] Items for which no rate or price is entered by the Bidder shall not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Bill of Quantities.

15.3 The price to be quoted in the Letter of Bid shall be the total price of the Bid, excluding any discounts offered.

15.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Letter of Bid.

15.5 The prices[16] quoted by the Bidder shall be subject to adjustment during the performance of the Contract if provided for **in the BDS** and **PCC** and the provisions of Clause 47 of the General Conditions of Contract. The Bidder shall submit with the Bid all the information required under the Particular Conditions of Contract and GCC Clause 47.

15.6 If so, specified in ITB 1.1, Bids are invited for individual lots (contracts) or for any combination of lots (packages). Bidders wishing to offer discounts for the award of more than one Contract shall specify in their Bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 15.4, provided the Bids for all lots (contracts) are opened at the same time.

15.7 All duties, taxes, and other levies payable by the Contractor under the Contract, **or** for any other cause, as of the date 28 days prior to the deadline for submission of Bids, shall be included in the rates and prices[17] and the total Bid price submitted by the Bidder.

16. Currencies of Bid and Payments

16.1 The rates and unit prices[18] shall be quoted by the Bidder entirely in the currency of the Employer's country as specified **in the BDS.** Foreign currency payment requirements shall be stated as percentages of the Bid price (excluding provisional sums[19]) and shall be paid in up to three foreign currencies of the Bidder's choice.

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[15] In lump sum contracts, delete "described in the Bill of Quantities" and replace with "described in the drawings and specifications and listed in the Activity Schedule".

[16] In lump sum contracts, delete "prices" and replace with "lump sum price".

[17] In lump sum contracts, delete "rates and prices and the".

[18] In lump sum contracts, delete "rates and unit prices" and replace with "lump sum price".

[19] Provisional sums are monetary sums specified by the Employer in the Bill of Quantities, to be used at his discretion for nominated subcontractors and other specified purposes.

16.2 The exchange rates to be used by the Bidder in arriving at the local currency equivalent and the percentages mentioned in ITB 16.1 above shall be the selling rates for similar transactions established by the source specified **in the BDS** prevailing on the date 28 days prior to the latest deadline for submission of bids. These exchange rates shall apply for all payments so that no exchange risk shall be borne by the Bidder. If the Bidder uses other exchange rates, the provisions of ITB 30.1 shall apply; in any case, payments shall be computed using the rates quoted in the Bid.

16.3 Bidders shall indicate details of their expected foreign currency requirements in the Bid.

16.4 Bidders may be required by the Employer to clarify their foreign currency requirements and to substantiate that the amounts included in the rates and unit prices,[20] if required **in the BDS,** are reasonable and responsive to ITB 16.1.

17. Bid Validity

17.1 Bids shall remain valid for the period[21] specified **in the BDS.**

17.2 In exceptional circumstances, the Employer may request that the bidders extend the Bids´ period of validity for a specified additional period. The request and the bidders' responses shall be made in writing. If a Bid Security is requested in accordance with ITB 18, it shall be extended up to twenty-eight (28) days after the deadline of the extended Bid Validity period. A Bidder may refuse the request without forfeiting the Bid Security or execution of its Bid Securing Declaration. A Bidder agreeing to the request shall not be required or permitted to modify its Bid, except as provided in ITB 18.

17.3 In the case of contracts in which the Contract Price is fixed (not subject to price adjustment), if the period of Bid Validity is extended beyond fifty-six (56) days, the amounts payable in local and foreign currency to the Bidder selected for award, shall be adjusted as specified in the request for extension. Bid evaluation shall be based on the Bid Price without taking the above correction into consideration.

18. Bid Security or Bid Securing Declaration

18.1 If required **in the BDS,** the Bidder shall furnish as part of its Bid, a Bid Security, or a Bid Securing Declaration, in original form, as specified **in the BDS**.

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[20] For lump sum contracts, delete "rates and unit prices" and replace with "Lump Sum".

[21] The period is a realistic time, usually not less than 35 days nor more than 105 days, allowing for bid evaluation, clarifications, and the Bank's "no objection" (where awards of Contract are subject to prior review).

18.2 The Bid Security shall be in the amount specified **in the BDS** and denominated in the currency of the Employer's country or the currency of the Bid or in another freely convertible currency, and shall:

(a) at the Bidder's option, be in the form of either a letter of credit, or a bank guarantee from a banking institution, or a bond or surety issued by non-bank financial institution, such as an insurance or bonding institution;

(b) be issued by a reputable institution selected by the Bidder and located in any country. If the institution issuing the bond or surety is located outside the Employer's Country, it shall have a correspondent financial institution located in the Employer's Country to make it enforceable.

(c) be substantially in accordance with one of the forms of Bid Security included in Section IV "Bidding Forms" , or other form approved by the Employer prior to bid submission;

(d) be payable promptly upon written demand by the Employer in case the conditions listed in ITB 18.6 are invoked;

(e) be submitted in its original form; copies shall not be accepted;

(f) remain valid for a period of twenty-eight (28) days beyond the validity period of the bids, as extended, if applicable, in accordance with ITB 17.2.

18.3 If a Bid Security or a Bid Securing Declaration is required in accordance with ITB 18.1, any Bid not accompanied by a substantially responsive Bid Security or Bid Securing Declaration in accordance with the requirements of the above instruction, shall be rejected by the Employer as non-responsive.

18.4 The Bid Security or the Bid Securing Declaration of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the Performance Security.

18.5 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnish the required Performance Security and if required **in the BDS**, the Environmental, Social, Health and Safety (ESHS) Performance Security.

18.6 The Bid Security may be forfeited, or the Bid Securing Declaration executed:

(a) if a Bidder withdraws its bid during the period of Bid Validity specified by the Bidder on the Bid Letter, except as provided in ITB 17.2; or

(b) if the Bidder does not accept the correction of its Bid Price pursuant to ITB 29.

(c) if the successful Bidder fails within the specified time to:

(i) sign the Contract; or

(ii) furnish the Performance Security and if required **in the BDS**, the Environmental, Social, Health and Safety (ESHS) Performance Security in accordance with ITB 42.

18.7 The Bid Security or Bid Securing Declaration of a JVCA must be in the name of the JVCA that submits the bid. If the JVCA has not been legally constituted at the time of bidding, the Bid Security or Bid Securing Declaration shall be in the names of all future members as named in the letter of intent mentioned in ITB 6.4(f) and ITB 12.2.

18.8 If a Bid Security is **not** required **in the BDS**, pursuant to ITB 18.1, and;

(a) if a Bidder withdraws its Bid prior to the expiry date of the Bid validity specified by the Bidder on the Letter of Bid or any extended date provided by the Bidder; or

(b) if the successful Bidder fails to:

(i) sign the Contract in accordance with ITB 41; or

(ii) furnish a Performance Security and if required **in the BDS**, the ESHS Performance Security in accordance with ITB 42,

the Employer may**, if provided for in the BDS,** declare the Bidder ineligible to be awarded a contract by the Employer for a period of time **stated in the BDS**.

19. Alternative Bids

19.1 Alternatives Bids shall not be considered, unless specifically allowed **in the BDS.** If so allowed, ITB 19.1 and 19.2 shall govern Alternative Bids, and **the BDS** shall specify which of the following options shall be allowed:

(a) Option One. A bidder may submit alternative bids with the base bid and the Employer shall only consider the alternative bids offered by the Bidder whose bid for the base case was determined to be the Most Advantageous Bid, or

(b) Option Two. A bidder may submit an alternative bid with or without a bid for the base case. All bids received, for the base case, as well as alternative bids meeting the technical specifications and performance requirements pursuant to Section VIII, "Specification and Performance Requirements" shall be evaluated on their own merits.

19.2 Alternative bids shall provide all information necessary for a complete evaluation of the alternative by the Employer, including design calculations, technical specifications, breakdown of prices, proposed construction methods and other relevant details.

20. Format and Signing of Bid

20.1 The Bidder shall prepare an original of the documents comprising the Bid as described in the ITB 14, which shall form part of the volume containing the Bid and shall clearly mark it as "ORIGINAL". In addition, the Bidder shall submit the number of copies of the Bid as indicated **in the BDS** and clearly mark each copy as "COPY". In the event of discrepancy between the original and the copies, the text of the original shall prevail over that of the copies.

20.2 Bidders must mark as "CONFIDENTIAL" the information included in their Bids which is confidential to their business. This may include proprietary information, trade secrets or commercial or financially sensitive information.

20.3 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder, pursuant to ITB 6.3(a). The person or persons signing the Bid shall initial all pages of the Bid where entries or amendments have been made.

20.4 The Bid shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.

20.5 The Bidder shall furnish information as described in the Form of Bid on commissions or gratuities, if any, paid or to be paid to

agents relating to this Bid, and to contract execution if the Bidder is awarded the contract.

D. Submission of Bids

21. Submission, Sealing and Marking of Bids

21.1 Bidders may always submit their bids by mail or deliver them personally. When so specified **in the BDS**, bidders shall have the option of submitting their bids electronically. Bidders submitting bids electronically shall follow the procedures specified **in the BDS**. In the case of Bids submitted by mail or delivered personally, the Bidder shall seal the original and all copies of the Bid in two inner envelopes, duly marking them as "ORIGINAL" and "COPIES", respectively, and shall seal the two inner envelopes into an outer envelope.

21.2 The inner and outer envelopes shall:

(a) be addressed to the Employer at the address[22] provided **in the BDS;**

(b) bear the name and identification number of the Contract as defined **in the BDS** and PCC; and

(c) provide a warning not to open before the specified time and date for Bid opening as defined **in the BDS.**

21.3 In addition to the identification required in ITB 21.2, the inner envelopes shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared late, pursuant to ITB 23.

21.4 If the outer envelope is not sealed and marked as above, the Employer shall assume no responsibility for the misplacement or premature opening of the Bid.

22. Deadline for Submission of Bids

22.1 Bids must be received by the Employer at the address specified in ITB 21.2(a) no later than the time and date specified **in the BDS**.

22.2 The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with ITB 12, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline shall then be subject to the new deadline.

23. Late Bids

23.1 Any Bid received by the Employer after the deadline prescribed

[22] The receiving address should be an office that is staffed during normal working hours by personnel authorized to certify time and date of receipt and assure safekeeping until Bid opening. A post office address is not satisfactory. The address must be the same as the receiving address described in the Invitation for Bids.

in ITB 22 shall be returned unopened to the Bidder.

24. Withdrawal, Substitution and Modification of Bids

24.1 Bidders may withdraw, substitute, or modify their Bids by giving notice in writing before the deadline prescribed in ITB 22.

24.2 Each Bidder's withdrawal, substitution or modification notice shall be prepared, sealed, marked, and delivered in accordance with ITB 20 and 21, with the outer and inner envelopes additionally marked "WITHDRAWAL", SUBSTITUTION", or "MODIFICATION" as appropriate.

24.3 Notices for "WITHDRAWAL", SUBSTITUTION", or "MODIFICATION" of bids shall be delivered to the Employer at the address specified in ITB 21.2(a) no later than the time and date specified **in the BDS** ITB 22.1.

24.4 Withdrawal of a Bid between the deadline for submission of bids and the expiration of the period of Bid Validity specified **in the BDS** in accordance with ITB 17.1 or as extended pursuant to ITB 17.2 may result in the forfeiture of the Bid Security or execution of the Bid Securing Declaration pursuant to ITB 18.

E. Bid Opening and Evaluation

25. Bid Opening

25.1 The Employer will open the Bids and the notices of WITHDRAWAL, SUBSTITUTION and MODIFICATION of the Bids submitted in accordance with ITB 24, in a public act, in the presence of Bidders' designated representatives who chooses to attend, at the time, date and place specified **in the BDS**. Any specific electronic Bid opening procedures required if electronic bidding is permitted in accordance with ITB 21.1, shall be as specified **in the BDS**.

25.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding Bid shall be returned unopened to the Bidder. No Bid WITHDRAWAL shall be permitted unless the corresponding WITHDRAWAL notice contains a valid authorization to request the WITHDRAWAL and is read out at Bid opening, in accordance with ITB 24.

25.3 Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted; the substituted Bid will be returned unopened to the Bidder. No Bid SUBSTITUTION shall be allowed unless the corresponding SUBSTITUTION notice contains a valid authorization to request the SUBSTITUTION and is read out at Bid opening.

25.4 Next, envelopes marked "MODIFICATION" shall be opened and read out, with the corresponding Bid. No Bid modification shall be allowed unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening.

25.5 Next, all remaining envelopes shall then be opened, one at a time, reading out: the name of the Bidder and mentioning the modification, if any, the Total Bid Price, per lot (contract), if applicable, including all discounts and any Alternative Bids (if Alternative Bids have been requested or permitted), the existence or absence of a Bid Security or the Bid Securing Declaration, and any other details that the Employer deems appropriate. Only discounts and Alternative Bids read aloud at the Bid opening will be considered in the evaluation. The Letter of Bid and the Lists of Quantities must be initialed by the representatives of the Employer attending the Bid opening in the manner indicated **in the BDS**.

25.6 No Bid or notice shall be rejected at Bid opening except for late Bids in accordance with ITB 23. SUBSTITUTION and MODIFICATION Bids submitted in accordance with ITB 24 that are not opened and read out at Bid opening shall not be considered for evaluation, regardless of the circumstances. Late Bids and with envelopes marked "WITHDRAWAL", "SUBSTITUTION" or "MODIFICATION" must be returned unopened to the Bidders.

25.7 The Employer shall prepare a record of the Bid opening that shall include, as a minimum: the name of the Bidder and whether there is a WITHDRAWAL, SUBSTITUTION, or MODIFICATION; the Bid Price, per lot (contract) if applicable, including any discounts; and any Alternative Bids; and the presence or absence of a Bid Security or Bid-Securing Declaration. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

26. Confidentiality

26.1 Information relating to the Examination, Clarification, Evaluation, and Comparison of Bids and Recommendations for the Award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the Notification of Intention to Award is transmitted to all Bidders in accordance with ITB 37.1. Any effort by a Bidder to influence the Employer's processing of bids or award decisions may result in the rejection of its Bid, , and could be considered a practice sanctionable by the Ban. Notwithstanding the above, from the

time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it should do so in writing.

27. Clarification of Bids

27.1 To assist in the examination, evaluation, and comparison of Bids, the Employer may, at the Employer's discretion, ask any Bidder for clarification of the Bidder's Bid, including breakdowns of unit prices.[23] The request for clarification and the response shall be in writing, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with ITB 29.

28. Determination of Responsiveness

28.1 Prior to the detailed evaluation of Bids, the Employer shall determine whether each Bid:

(a) meets the eligibility criteria defined in ITB 5;

(b) has been properly signed;

(c) is accompanied by the Bid Security or the Bid Securing Declaration, if required; and

(d) is substantially responsive to the requirements of the bidding document.

28.2 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the bidding document, without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:

(a) which affects in any substantial way the scope, quality, or performance of the Works;

(b) which limits in any substantial way, inconsistent with the bidding document, the Employer's rights, or the Bidder's obligations under the Contract; or

(c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive Bids.

28.3 If a Bid is not substantially responsive, it shall be rejected by the Employer and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

29. Correction of Arithmetical

29.1 Bids determined to be substantially responsive shall be checked by the Employer for any arithmetic errors. In admeasurement

[23] In lump sum contracts, delete "unit rates" and replace with "the prices in the Activity Schedule".

Errors

contracts, errors shall be corrected by the Employer as follows:

(a) if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obviously misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern, and the unit price shall be corrected;

(b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail, and the total shall be corrected; and

(c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

29.2 In Lump-Sum contracts, the Employer shall correct the arithmetic errors in the following manner:

(a) **Priced Sub-Activity Schedule**: where there are errors between the total of the quantities given under the column for Sub-activity Price and the quantities given under the total for the Sub-activity, the former shall prevail, and the latter shall be corrected;

(b) **Priced Activity Schedule**: where there are errors between the total of the quantities given under the column for the Activity Price and the quantity given under the total price of Activities, the former shall prevail and the latter will be corrected accordingly; and where there are errors between the total of the amounts in the Priced Sub-Activity Schedule and the corresponding amount in the Priced Activity Schedule, the former shall prevail and the latter will be corrected accordingly; and

(c) **Grand Summary**: where there are errors between the total price of Activities in the Priced Activity Schedule and the amount indicated in Grand Summary, the former shall prevail, and the latter will be corrected accordingly.

29.3 The amount stated in the Bid shall be adjusted by the Employer in accordance with the above procedure for the correction of arithmetical errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid shall be rejected, and the Bid Security may be forfeited or the Bid - Securing Declaration

executed in accordance with ITB 18.6(b).

30. Currency for Bid Evaluation

30.1 Bids shall be evaluated as quoted in the currency of the Employer's Country in accordance with ITB 16.1, unless a Bidder has used different exchange rates than those prescribed in ITB 16.2, in which case the Bid shall be first converted into the amounts payable in different currencies using the rates quoted in the Bid and then reconverted to the currency of the Employer's country using the exchange rates prescribed in ITB 16.2.

31. Evaluation and Comparison of Bids

31.1 The Employer shall evaluate and compare only the bids determined to be substantially responsive in accordance with ITB 28.

31.2 In evaluating the bids, the Employer shall determine for each Bid the evaluated Bid price by adjusting the Bid price as follows:

(a) making any correction for errors pursuant to ITB 29;

(b) excluding provisional sums and the provision, if any, for contingencies in the Bill of Quantities,[24] but including Daywork,[25] where priced competitively;

(c) making an appropriate adjustment for any other acceptable variations, deviations, or alternative offers submitted in accordance with ITB 19;

(d) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with ITB 15.4;

(e) using BAFO if so, specified **in the BDS** ITB 34.1.

(f) the additional evaluation factors are specified in Section III, "Evaluation and Qualification Criteria".

31.3 The Employer reserves the right to accept or reject any variation, deviation, or Alternative Bid. Variations, deviations, and alternative offers and other factors which are in excess of the requirements of the bidding document or otherwise result in unsolicited benefits for the Employer shall not be taken into account in Bid evaluation.

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[24] In lump sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule".

[25] Daywork is work carried out following instructions of the Project Manager and paid for on the basis of time spent by workers, and the use of materials and the Contractor's equipment, at the rates quoted in the Bid. For Daywork to be priced competitively for Bid evaluation purposes, the Employer must list tentative quantities for individual items to be costed against Daywork (e.g., a specific number of tractor driver staff-days, or a specific tonnage of Portland cement), to be multiplied by the bidders' quoted rates and included in the total Bid price.

31.4 The estimated effect of any price adjustment conditions under GCC Clause 47, during the period of implementation of the Contract, shall not be considered in Bid evaluation.

31.5 If this bidding document allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated cost of the contract combinations, including any discounts offered in the Letter of Bid, is specified in Section III, "Evaluation and Qualification Criteria".

31.6 **Subcontractors**

(a) Unless otherwise stated **in the BDS**, the Employer does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Employer.

(b) The subcontractor's qualifications shall not be used by the Bidder to qualify for the Works unless their specialized parts of the Works were previously designated by the Employer **in the BDS** as can be met by subcontractors referred to hereafter as "Specialized Subcontractors", in which case, the qualifications of the Specialized Subcontractors proposed by the Bidder may be added to the qualifications.

(c) Bidders may propose subcontracting up to the percentage of total value of contracts or the volume of works as specified **in the BDS**. Subcontractors proposed by the Bidder shall be fully qualified for their parts of the Works.

32. Abnormally Low Bids

32.1 An Abnormally Low Bid is one where the Bid price, in combination with other constituent elements of the Bid, appears unreasonably low to the extent that the Bid price raises material concerns as to the capability of the Bidder to perform the Contract for the offered Bid price.

32.2 In the event of identification of a potentially Abnormally Low Bid, the Employer shall seek written clarifications from the Bidder, including detailed price analyses of its Bid price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the bidding document.

32.3 After evaluation of the price analyses, if the Employer determines that the Bidder has failed to demonstrate its capability to perform the Contract for the offered Bid Price, the Employer shall reject the Bid.

33. Unbalanced or Front-Loaded Bids

33.1 If the Bid for an Admeasurement Contract, which results in the lowest evaluated cost, in the Employer's opinion, seriously unbalanced or front loaded the Employer may require the Bidder to provide written clarifications. Clarifications may include

detailed price analyses to demonstrate the consistency of the Bid prices with the scope of Works, proposed methodology, schedule and any other requirements of the bidding document.

33.2 After the evaluation of the information and detailed price analyses presented by the Bidder, the Employer may as appropriate:

(a) accept the Bid; or

(b) require that the total amount of the Performance Security be increased at the expense of the Bidder to a level not exceeding 25% of the Contract Price; or

(c) reject the Bid.

34. Best and Final Offer and Negotiations

34.1 If so, specified **in the BDS** the Employer will use the Best and Final Offer method, the Bidders who submitted bids substantially responsive to the requirements will be invited to present their Best and Final Offer in accordance with ITB 34.3 to ITB 34.6 reducing prices, clarifying, or modifying the bid or providing additional information, as appropriate.

34.2 If so, specified **in the BDS** the Employer will use Negotiations after evaluation of bids and before final award of Contract, the Bidder who submitted the Most Advantageous Bid will be invited to Negotiations in accordance with ITB 38.2 and following instructions.

34.3 Bidders are not required to submit a Best and Final Offer. There shall be no Negotiations after Best and Final Offer.

34.4 To observe and report on the application of the Best and Final Offer, the Employer may, and in the case of Negotiations shall, appoint the Independent Probity Assurance Authority indicated **in the BDS.**

34.5 The Employer shall specify **in the BDS** a new deadline and details for the submission of the Best and Final Offer or to initiate Negotiations. Instructions in ITB 21 to ITB 27 shall apply to the presentation, opening and clarifications of the Best and Final Offer of the Bidders.

34.6 On receipt of the Best and Final Offer from each Bidder, the Employer shall proceed with the evaluation and comparison of the bids again in accordance with ITB 28 to ITB 33 and then shall proceed with ITB 35 and following instructions.

35. Employer's Right to

35.1 The Employer reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any

Accept any Bid and to Reject any or all Bids

time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Employer's action.[26]

36. Standstill Period

36.1 The Contract shall not be awarded earlier than the expiry of the Standstill Period. The Standstill Period shall be ten (10) Business Days unless extended in accordance with ITB 40. The Standstill Period commences when the Employer has transmitted to each Bidder the Notification of Intention to Award the Contract. Where only one Bid is submitted, or if this contract is in response to an emergency situation recognized by the Bank, the Standstill Period shall not apply.

37. Notification of Intention to Award

37.1 The Employer shall send to each Bidder the Notification of Intention to Award the Contract to the successful Bidder. The Notification of Intention to Award shall contain, at a minimum, the following information:

(a) the name and address of the Bidder submitting the successful Bid;

(b) the Contract price of the successful Bid;

(c) the names of all Bidders who submitted Bids, and their Bid prices as readout, and as evaluated;

(d) a statement of the reason(s) the Bid (of the unsuccessful Bidder to whom the notification is addressed) was unsuccessful, unless the price information in (c) above already reveals the reason;

(e) if the method of Best and Final Offer was used in the evaluation of bids;

(f) the expiry date of the Standstill Period; and

(g) instructions on how to request a debriefing and/or submit a complaint during the standstill period.

F. Award of Contract

38. Award Criteria

38.1 Subject to ITB 35, the Employer shall award the Contract to the Bidder offering the Most Advantageous Bid. The Most Advantageous Bid is the Bid of the Bidder that meets the

[26] Employers shall not reject bids or annul bidding processes, except as permitted in the Policies for the Procurement of Goods and Works financed by the Bank.

qualification criteria and whose Bid has been determined to be:

(a) substantially responsive to the bidding document; and

(b) the lowest evaluated cost; or

(c) the best evaluated Bid considering the combination of price and factors other than price.

38.2 If the Employer has not used the Best and Final Offer method in the Bid evaluation and if **in the BDS** ITB 34.2 it is specified that the Employer will use Negotiations with the Bidder with the Most Advantageous Bid, the selected Bidder shall be invited to Negotiations before the final adjudication of the Contract. The Negotiations will be performed in the presence of the Independent Probity Assurance Authority established **in the BDS** ITB 34.4.

38.3 Once the Employer has determined the Bidder with the Most Advantageous Bid, the Employer shall promptly notify the selected Bidder the terms to initiate Negotiations in accordance with **BDS** ITB 34.5. Negotiations may include terms and conditions, price or social, environmental, innovative and cybersecurity aspects, provided that the minimum requirements of the bid are not modified.

38.4 The Employer will first negotiate with the Bidder that has submitted the Most Advantageous Bid. If the result is not satisfactory or an agreement is not reached, the Employer will notify the Bidder that the Negotiations concluded without agreement and may then notify the Bidder with the following Most Advantageous Bid on the list, and so on until a satisfactory result is achieved.

39. Notification of Award

39.1 Prior to the expiration of the Bid Validity Period and upon expiry of the Standstill Period or any extension thereof, and upon satisfactorily addressing any complaint that has been filed within the Standstill Period, the Employer shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification of award (hereinafter and in the Contract Forms called the "Letter of Acceptance") shall specify the sum that the Employer will pay the Contractor in consideration of the execution of the Contract (hereinafter and in the Conditions of Contract and Contract Forms called "the Contract Price").

39.2 Within ten (10) Business Days after the date of transmission of the Letter of Acceptance, the Employer shall publish the

Contract Award Notice which shall contain, at a minimum, the following information:

(a) name and address of the Employer;

(b) name and reference number of the contract being awarded, and the selection method used;

(c) names of all Bidders that submitted Bids, and their Bid prices as read out at Bid opening, and as evaluated;

(d) names of all Bidders whose Bids were rejected either as nonresponsive or as not meeting qualification criteria, or were not evaluated, with the reasons therefor;

(e) the name of the successful Bidder, the final total contract price, the contract duration and a summary of its scope;

(f) if Negotiations were used in the final award, if applicable; and

(g) successful Bidder's Beneficial Ownership Disclosure Form, **if specified in BDS in reference to ITB 41.1.**

39.3 The Contract Award Notice shall be published on the Employer's website with free access if available, or in at least one newspaper of national circulation in the Employer's Country, or in the official gazette. The Employer shall also publish the contract award notice in Inter-American Development Bank online.

39.4 Until a formal Contract is prepared and executed, the Letter of Acceptance shall constitute a binding Contract.

40. Debriefing by the Employer

40.1 On receipt of the Employer's Notification of Intention to Award referred to in ITB 37.1, an unsuccessful Bidder has three (3) Business Days to make a written request to the Employer for a debriefing on the reasons why its Bid was not selected. The Employer shall provide a debriefing to all unsuccessful Bidders whose request is received within this deadline.

40.2 Where a request for debriefing is received within the deadline, the Employer shall provide a debriefing within five (5) Business Days, unless the Employer decides, for justifiable reasons, to provide the debriefing outside this timeframe. In that case, the Standstill Period shall automatically be extended until five (5) Business Days after such debriefing is provided. If more than one debriefing is so delayed, the Standstill Period

shall not end earlier than five (5) Business Days after the last debriefing takes place. The Employer shall promptly inform, by the quickest means available, all Bidders of the extended Standstill Period.

40.3 Where a request for debriefing is received by the Employer later than the three (3)-Business Day deadline, the Employer should provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of Public Notice of Award of contract. Requests for debriefing received outside the three (3)-day deadline shall not lead to extension of the Standstill Period.

40.4 Debriefing of unsuccessful Bidders may be done in writing or through an information meeting, or both, at the option of the Employer. The Bidders shall bear their own costs of attending such a meeting.

41. Signing of Contract

41.1 The Employer shall send to the successful Bidder the Letter of Acceptance including the Contract Agreement, included in Section XI, "Contract Forms", and, **as specified in the BDS**, a request to submit the Beneficial Ownership Disclosure Form providing additional information on its beneficial ownership, **if specified in BDS in reference to ITB 41.1**. The Beneficial Ownership Disclosure Form shall be submitted within eight (8) Business Days of receiving this request.

41.2 The successful Bidder shall sign, date, and return to the Employer, the Contract Agreement within twenty-eight (28) days of its receipt.

42. Performance Security

42.1 Within twenty-eight (28) days of the receipt of the Letter of Acceptance from the Employer, the successful Bidder shall furnish the Performance Security and, if required **in the BDS**, the Environmental, Social, Health and Safety Performance Security in accordance with the General Conditions of Contract, using for that purpose the Performance Security and ESHS Performance Security Forms included in Section XI, Contract Forms, or another form acceptable to the Employer. If any of the Performance Securities furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Employer. A foreign institution providing a bond shall have a correspondent financial institution located in the Employer's Country, unless the Employer has agreed in writing that a correspondent financial institution is not required.

42.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Employer may award the Contract to the Bidder offering the next Most Advantageous Bid.

43. Advance Payment and Security

43.1 The Employer shall provide an Advance Payment on the Contract Price as stipulated in the GCC, subject to a maximum amount, as stated **in the BDS.** The Advance Payment shall be guaranteed by a Security. Section XI "Contract Forms" provides a Bank Guarantee for Advance Payment form.

44. Technical Adjudicator

44.1 The Employer proposes the person named **in the BDS** to be appointed as Technical Adjudicator under the Contract, at an hourly fee specified **in the BDS,** plus reimbursable expenses. If the Bidder disagrees with this proposal, the Bidder should so state in the Bid. If, in the Letter of Acceptance, the Employer has not agreed on the appointment of the Technical Adjudicator, the Technical Adjudicator shall be appointed by the Appointing Authority designated **in the BDS** and the PCC at the request of either party.

45. Procurement Related Complaint

45.1 The procedures for making a Procurement-related Complaint are as specified **in the BDS**.

Section II. Bid Data Sheet[1] (BDS)

The specific data presented as follows shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

A. General	
ITB 1.1	The Employer is ***The Water and Sewerage Corporation*** The Works are*:* ***South Bimini Water Main Extension To Airport/Port Royal. The works include the supply and installation of approximately 80 feet of 6-inch C900 DR 18 water mains, 27,725 feet of 4-inch C900 DR 18 water mains, 680 feet of 2-inch SDR 21 PVC water mains, 133 service connections, and all associated appurtenances as shown in the drawings.*** The name and identification number of the contract is: ***Access to Potable Water Supply – South Bimini Airport Road & Port Royal Water Main Extension - 5959/OC-BH/BH-L1061-P00069***
ITB 1.2	The Intended Completion Date is **12 months** after mobilization
ITB 1.4 **Electronic – Procurement System**	The Employer ***shall use an*** electronic-procurement system to manage this Request for Bids (RfB): ***The Government of The Bahamas' eProcurement website https://bahamas.bonfirehub.com*** The electronic-procurement system shall be used to manage the following aspects of the procurement process: ***Issuing Bidding document*** ***Issuing amendments to the bidding documents*** ***Issuing clarification to the bidding documents*** ***Submissions of Bidding documents*** ***Opening of Bidding documents***
ITB 2.1	The Borrower is: ***The Water & Sewerage Corporation*** Funds are from a loan from the Inter-American Development Bank (IDB) (hereinafter called "the Bank").

[1] This section should be filled out by the Employer before issuance of the bidding document.

ITB 2.1	The expression "Bank" used in this document includes the Inter-American Development Bank (IDB) and the funds it administers. Requirements of IDB and any other fund administered by the IDB are identical; except in the case of eligibility where membership is different (See Section V, "Eligible Countries"). The expression "loans" include the financing instruments and methods, the technical cooperation (TC) and the financing of operations. The expression "Loan Contract" includes all the legal instruments under which the Bank operations are formalized. The Bank Loan is: ***CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS (CCLIP) - FIRST INDIVIDUAL OPERATION*** ***(BH-O0014*** Number: **5959/OC-BH / BH-L1061** Date: ***February 3rd, 2025*** Loan amount: ***US$50,000,000.00***
ITB 2.1	The Project is: **THE BAHAMAS WATER SUPPLY AND SANITATION SYSTEMS UPGRADE PROGRAM** Objective: The general objective of the CCLIP and the first loan operation is to contribute to improving the sustainability of WSC's potable water supply and wastewater services in The Bahamas. Specific Objectives. The specific objectives of the operation are to: (i) improve coverage of potable water supply services in Family Islands (FI) and New Providence (NP), and reliability of wastewater services in NP; (ii) improve WSC's operational and financial performance; and (iii) improve the governance of WSC and the water and sanitation sector.
ITB 5.3	The Bank website (*https://www.iadb.org/en/who-we-are/transparency/sanctions-system*) provides information on firms and sanctioned persons by the IDB Group for having committed Prohibited Practices, and how to report suspicions of possible Prohibited Practices..
ITB 5.4	Maximum number of members in a JVCA shall be: ***N/A***
ITB 6.3[2]	The information required from bidders in ITB 6.3 is modified as follows: 6.3 (c) experience in works of a similar nature and size for two (2) projects within the last five (5) years.
ITB 6.3(j)	The ceiling for subcontractor's participation is: ***0%***
ITB 6.4	The qualification data required from JVCA in ITB 6.4 are modified as follows: ***None***.

[2] Delete if prequalification has been conducted.

ITB 6.5	The qualification criteria for Bidders will be found in Section III.
ITB 6.5(a)	The multiple is: ***0.5*** The period is: ***5 years***
ITB 6.5(b)	The number is: ***two (2)*** The period is: ***5 years***
ITB 6.5(c)	The essential equipment to be made available for the Contract by the successful Bidder shall be: heavy machinery (back hoe, trencher or excavator) required to cut, reinstate trench (compactor), and general plumbing tools (wrench).
ITB 6.7	The Employer allows that for the following activities or parts of the Works the Bidder may indicate Subcontractors in which case the technical experience qualifications of the Subcontractors may be added to the qualifications of the Bidder: *N/A*
B. Bidding Document	
ITB 11.1	For **Clarification of Bid purposes** only, the Employer's address is: *Fane Austin Project Manager / Tamara Morton, Procurement Specialist* ***https://bahamas.bonfirehub.com*** *Project Execution Unit* *Water and Sewerage Corporation* *38 University Drive E.* *George Moss Bldg.,* *PO Box N-3905* *Nassau, N.P., The Bahamas* **A virtual pre-bid meeting will be held on:** **Date: 16th October, 2026 10:00 AM EST** **Virtual Link: TBA, will be provided via Bonfire** **A pre-bid site inspection meeting will be held on:** **Date: 8th October, 2026 Time: 10:00 am**

	Location: South Bimini *(prospective bidders will be responsible for their own travel and accommodation expenses)*
C. Preparation of Bids	
ITB 13.1	The language of the Bid is: ***English***
ITB 14.1(c)	The following schedules shall be submitted with the Bid: (a) Letter of Bid, in the form indicated in Section IV, "Bidding Forms"; (b) Priced Bill of Quantities completed in accordance with ITB 15, as specified in the BDS; (c) Qualifications: Information Forms and supporting documents for Qualification, where the qualifications of the Bidder to execute the contract, if the Bid is accepted, are stated; (d) Conformity: the Bidder shall furnish a technical proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, "Bidding Forms", in sufficient detail to demonstrate the adequacy of the Bidders' proposal to meet the Specifications & Performance Requirements and the completion time; and
ITB 14.1(g)	The successful Bidder shall deliver within fourteen (14) days of receipt of the Letter of Acceptance, and in any event prior to commencement of works, the following documents for the Employer's review and approval: **Code of Conduct (ESHS)** The successful Bidder shall submit its Code of Conduct which shall be applied and communicated appropriately to the Contractor's and Subcontractors' personnel to ensure compliance with its Environmental, Social, Health and Safety (ESHS) obligations under the Contract. In addition, the Bidder shall detail how this Code of Conduct will be implemented. This will include how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored and how the Contractor proposes to deal with any breaches. The Contractor and its Subcontractors shall be required to implement the agreed Code of Conduct. **Management Strategies and Implementation Plans (MSIP) to manage ESHS risks and impacts** The successful Bidder shall submit for approval and subsequent implementation the Management Strategies and Implementation Plans (MSIPs) to manage the key Environmental, Social, Health and Safety

	(ESHS) risks and impacts, which are collectively known as the Contractor's Environmental and Social Management Plan (C-ESMP) and shall be developed in accordance with the Project's Environmental and Social Assessment (ESA), the project-specific Environmental and Social Framework (ESF) and Environmental and Social Management Plan (ESMP), and the IDB's respective Environmental and Social Action Plan (ESAP) Code of Conduct (ESHS). All IDB policies must be respected including: Bahamas Building Code Employment Act Environmental Planning and Protection Bill 2019 IDB Code of Conduct Project Environmental and Social Assessment (ESA)/Environmental and Social Management Plan (ESMP)
ITB 15.5	The prices quoted *shall not* be subject to price adjustment in accordance with GCC Clause 47.
ITB 16.1	The currency of the Employer's country is: Bahamian Dollar (BSD).
ITB 16.2	The source for establishing the exchange rates shall be *Central Bank of The Bahamas.*
ITB 16.4	Bidders *are not* required to clarify their foreign currency requirements and to substantiate that the amounts included in the unit rates and prices are reasonable and responsive to ITB 16.1.
ITB 17.1	The Bid shall be valid for ***120*** days counted from the date of submission of bids.
ITB 18.1	Bid shall include a Bid Securing Declaration using the forms included in Section IV, "Bidding Forms".
ITB 18.2	N/A
ITB 18.8	If the Bidder performs any of the actions prescribed in ITB 18.8(a) or (b), the Employer will declare the Bidder ineligible to be awarded contracts by the Employer for a period of ___2___ years.
ITB 19.1	Alternative Bids *shall not be* considered.
ITB 20.1	N/A

D. Submission of Bids	
ITB 21.1	Bidders must submit their bids electronically. Bids are to be submitted electronically at The Government of The Bahamas https://bahamas.bonfirehub.com) Bidders shall submit their Proposals electronically. Bidders should submit their bids including all required documents in accordance with the instructions provided on The Government of The Bahamas' eProcurement website https://bahamas.bonfirehub.com. The electronic Bidding submission procedures shall be: • In order to access the portal a bidder must be registered as a vendor. • Bidders are to follow the link below for a step-by-step guide to register as a standard vendor. • All unregistered bidders can register at https://mofvendors.gov.bs or at https://bahamas.bonfirehub.com. • All questions regarding this registration process are to be directed to Christopher Minnis at The Ministry of Finance at (242)-702-1555 (Office) christopherminnis@bahamas.gov.bs. • Then submit Bids to: https://gobonfire.com/bonfire-standard-vendors. • Bidders are urged to commence bid upload at least three (3) hours prior to the submission time. The Government of The Bahamas will not be held liable for bids not submitted on time due to late commencement of tender upload. • At the FIRST sign of any technical difficulties kindly contact the Public Portal Technical Support in the portal The Government of The Bahamas (bahamas.bonfirehub.com). All bids shall be submitted in accordance to instructions provided, and accompanied by a Bid Security Declaration. The electronic-procurement system shall be used to manage the following aspects of the procurement process: • Publication of Request for Bids • Issuing Bidding document • Issuing amendments to the bidding documents

	• Issuing clarification to the bidding documents • Submissions of Bids • Opening of Bids • Notification of Award
ITB 21.2(a)	For Bid submission purposes only, the Employer's address is: Bids are to be submitted electronically at The Government of The Bahamas https://bahamas.bonfirehub.com
ITB 21.2(b)	Name and Identification number of the Contract as given in ITB 1.1 above.
ITB 22.1	The deadline for Bid submission (and withdrawals, substitutions, or modifications) is: Date: November 16th, 2026 Time: 4:00 PM EST
E. Bid Opening and Evaluation	
ITB 25.1	The Bid opening (and reading of notices of withdrawals, substitutions, or modifications of bids) shall take place at the following location and time: The Government of The Bahamas' eProcurement portal at the following website: https://bahamas.bonfirehub.com. Date and Time: TBD and will be available on Bonfire. The online opening procedure shall be: Bidders will be sent an email including the virtual meeting link for the public opening of the Bids, the location, and date and time. The virtual meeting link to attend the public opening of the Bids will also be published on the Government of The Bahamas' eProcurement portal at the following website: https://bahamas.bonfirehub.com. The opening shall take place on: Zoom Meeting Link to be shared at a later date. Bidders *shall submit* their Bids electronically. Bidders shall submit their Proposals electronically. Bidders should submit their bids including all required documents in accordance with the instructions provided on The Government of The Bahamas' eProcurement website https://bahamas.bonfirehub.com.

ITB 31.6(a)	At this time the Employer *does not intend* to execute certain specific parts of the Works by subcontractors selected in advance.
ITB 31.6(b)	The parts of the Works for which the Employer permits Bidders to propose Specialized Subcontractors are designated as follows: **N/A**
ITB 31.6(c)	Contractor's proposed subcontracting: Maximum percentage of subcontracting permitted is: *0%*
ITB 34.1 **BAFO**	N/A
ITB 34.2 **Negotiations**	N/A
ITB 34.5 **Address for Negotiations and submission of Negotiated Bid**	N/A
F. Award of Contract	
ITB 41.1 **Beneficial Ownership**	The successful Bidder ***shall*** submit the Beneficial Ownership Disclosure Form.
ITB 42.1 **Performance Security**	The Performance Security acceptable to the Employer shall be *a Performance Bond of 25% of the Contract Price.*
ITB 43.1 **Advance Payment**	The Advance Payment shall be limited to twenty five percent (25%) of the Contract Price.
ITB 44.1 **Technical Adjudicator**	The Technical Adjudicator proposed by the Employer is: ***TBD*** **The hourly fees for this proposed Technical Adjudicator shall be *TBD.*** The curriculum information of the proposed Technical Adjudicator is as follows:

	Chartered Quantity Surveyor with at least 10 years experience in Construction Commercial Management. The Authority who shall appoint the Technical Adjudicator when there is no agreement is ***The Chartered Institute of Arbitrators (Bahamas Branch).***
ITB 45.1 **Procurement-Related Complaints**	The procedures for making a Procurement-related Complaint are detailed in the Procurement Policies for Goods and Works financed by the Inter-American Development Bank GN-2349-15. If a Bidder wishes to make a Procurement-related Complaint, the Bidder should submit its complaint following these procedures, in writing (by the quickest means available, that is e-mail), to: For the attention: Fané Austin Title/position: Project Manager Employer: Project Management Unit, Water and Sewerage Corporation E-mail address: wcfaustin@wsc.com.bs

Section III. Evaluation and Qualification Criteria

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1. Evaluation

In addition to the criteria listed in ITB 31.2(a) – (g) the following criteria shall apply:

Assessment of adequacy of Technical Proposal with Requirements:

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section VIII, "Specifications & Performance Requirements".

Multiple Contracts

If permitted under ITB 31.5, will be evaluated as follows:

Award Criteria for Multiple Contracts (ITB 31.5):

Lots

Bidders have the option to Bid for any one or more lots. Bids will be evaluated lot-wise, taking into account discounts offered, if any, after considering all possible combinations of lots, the contract(s) will be awarded to the Bidder or Bidders offering the lowest evaluated cost to the Employer for combined lots, subject to the selected Bidder(s) meeting the required qualification criteria for lot or combination of lots as the case may be.

Packages

Bidders have the option to Bid for any one or more packages and for any one or more lots within a package. Bids will be evaluated package-wise, taking into account discounts offered, if any, for combined packages and/or lots within a package. The contract(s) will be awarded to the Bidder or Bidders offering the lowest evaluated cost to the Employer for combined packages, subject to the selected Bidder(s) meeting the required qualification criteria for combination of packages and or lots as the case may be.

Specialized Subcontractors

If permitted under ITB 31.6, only the specific experience of Subcontractors for specialized works permitted by the Employer will be considered. The general experience and financial resources of the Specialized Subcontractors shall not be added to those of the Bidder for purposes of qualification of the Bidder.

2. Qualification

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
Sub-Factor	Subject	Requirement	Single Entity	Joint Venture, Consortium or Association (JVCA) (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
1. Eligibility							
1.1	**Nationality**	Nationality in accordance with ITB 5.1	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI-1.1 and ELI-1.2, with attachments
1.2	**Conflict of Interest**	No conflicts of interest in accordance with ITB 5.2	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.3	**Bank Ineligibility**	Not be on the list of parties sanctioned by the Bank, in accordance with ITB 5.3.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.4	**State-owned Enterprise or Institution of the Employer's country**	Meets conditions of ITB 5.2 and ITB 5.5	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI-1.1 and ELI-1.2, with attachments
1.5	**United Nations resolution or Borrower's country law**	Not having been excluded as a result of prohibition in the Borrower's country laws or official regulations against commercial relations with the Bidder's country, or by an act of compliance with UN Security Council	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI-1.1 and ELI-1.2, with attachments

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
Sub-Factor	Subject	Requirement	Single Entity	Joint Venture, Consortium or Association (JVCA) (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		resolution, both in accordance with ITB 5.1(a) and (b).					
2. Historical Contract Non-Performance							
2.1	**History of Non-Performing Contracts**	Non-performance of a contract[1] did not occur as a result of contractor default since 1st January 2021.	Must meet requirement	Must meet requirements	Must meet requirement[2]	N/A	Form CON-2
2.2	**Suspension based on Execution of Bid/Proposal Securing Declaration by the Employer**	Not under suspension based on-execution of a Bid/Proposal Securing Declaration pursuant to ITB 5.6 or withdrawal of the Bid. pursuant ITB 18.8.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
2.3	**Pending Litigation**	Bid's financial position and prospective long-term profitability still sound	Must meet requirement	N/A	Must meet requirement	N/A	Form CON-2

[1] Non-performance, as decided by the Employer, shall include all contracts where (a) non-performance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Non-performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Nonperformance must be based on all information on fully settled disputes or litigation, i.e., dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted.

[2] This requirement also applies to contracts executed by the Bidder as JVCA member.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
Sub-Factor	Subject	Requirement	Single Entity	Joint Venture, Consortium or Association (JVCA) (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		according to criteria movestablished in Sub-factor 3.1 below and assuming that all pending litigation will be resolved against the Bidder					
2.4	**Litigation History**	No consistent history of court/arbitral award decisions against the Bidder[3] since 1st January *2021*	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON-2
2.5	**Declaration: Environmental, Social, Health, and Safety (ESHS) past performance**	Declare any civil work contracts that have been suspended or terminated and/or performance security called by an employer for reasons related to the non-compliance of any Environmental, Social, Health and Safety requirement (including labor, occupational and community health and	Must make the declaration. Where there are Specialized Sub-contractor(s), the Specialized Sub-contractor(s) must also make the declaration.	N/A	Each must make the declaration. Where there are Specialized Sub-contractor(s), the Specialized Sub-contractor(s) must also make	N/A	Form CON-3 ESHS Performance Declaration

[3] The Bidder shall provide accurate information on the related Bid Form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of court/arbitral awards against the Bidder or any member of a JVCA may result in disqualifying the Bidder.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
Sub-Factor	Subject	Requirement	Single Entity	Joint Venture, Consortium or Association (JVCA) (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		safety, natural disasters and climate change, indigenous peoples, vulnerable groups, gender, sexual and gender-based violence (SGBV), stakeholder engagement, and resettlement and livelihood issues) in the last five years[4].			the declaration.		
3. Financial Situation and Performance							
3.1	**Financial Capabilities**	(i) The Bidder shall demonstrate that it has access to, or has available, liquid assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as USD $*210,000.00* for the subject contract(s) net of the Bidder's other commitments	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN-3.1, with attachments

[4] The Employer may use this information to seek further information or clarifications in carrying out its due diligence.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
Sub-Factor	Subject	Requirement	Single Entity	Joint Venture, Consortium or Association (JVCA) (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		(ii) The Bidders shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments. (iii) The audited balance sheets or, if not required by the laws of the Bidder's country, other financial statements acceptable to the Employer (to be signed off by a Certified Public Accountant), for the last *5* years shall be submitted and must demonstrate the current soundness of the Bidder's financial position and indicate its prospective long-term profitability.	Must meet requirement Must meet requirement	Must meet requirement N/A	N/A Must meet requirement	N/A N/A	
3.2	**Average Annual**	Minimum average annual construction turnover of US$525,000, calculated as	Must meet requirement	Must meet requirement	Must meet *25%*, *Twenty-five percent* of	Must meet *51 %*, *Fifty-one percent* of	Form FIN-3.2

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
Sub-Factor	Subject	Requirement	Single Entity	Joint Venture, Consortium or Association (JVCA) (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
	Construction Turnover	total certified payments received for contracts in progress and/or completed within the last *5* years, divided by *5* years			the requirement	the requirement	
4. Experience							
4.1(a)	**General Construction Experience**	Experience under construction contracts in the role of prime contractor, JVCA member, sub-contractor, or management contractor for at least the last *5* years, starting January 1st, 2021.	Must meet requirement	N/A	Must meet requirement	N/A	Form EXP-4.1
4.2(a)	**Specific Construction & Contract Management Experience**	(i) A minimum number of *2* similar contracts specified below that have been satisfactorily and substantially[5] completed as a prime contractor, JVCA member[6], management	Must meet requirement	Must meet requirement Must meet requirement[7]	N/A	Must meet the following requirements for the key activities listed below [list key activities and	Form EXP-4.2(a)

[5] Substantial completion shall be based on 80% or more works completed under the contract.
[6] For contracts under which the Bidder participated as a JVCA member or sub-contractor, only the Bidder's share, by value, shall be considered to meet this requirement.
[7] In the case of JVCA, the value of contracts completed by its members shall not be aggregated to determine whether the requirement of the minimum value of a single contract has been met. Instead, each contract performed by each member shall satisfy the minimum value of a single contract as required for single

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
Sub-Factor	Subject	Requirement	Single Entity	Joint Venture, Consortium or Association (JVCA) (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		contractor or sub-contractor between 1st January *2021* and bid submission deadline: (ii) **2** contracts, each of minimum value **$700,000**; The similarity of the contracts shall be based on the following: *[Based on Section VIII, "Specifications & Performance Requirements"].*				the corresponding minimum requirements to be met by one member otherwise state: "N/A"]	
4.2(b)		For the above and any other contracts *[substantially completed and under implementation]* as prime contractor, JVCA member, or sub-contractor between 1st January *2021* and Application submission deadline, a minimum construction experience in the following key activities	Must meet requirements	Must meet requirements	N/A	Must meet the following requirements for key activities listed below	Form EXP-4.2(b)

entity. In determining whether the JVCA meets the requirement of total number of contracts, only the number of contracts completed by all members each of value equal or more than the minimum value required shall be aggregated.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
Sub-Factor	Subject	Requirement	Single Entity	Joint Venture, Consortium or Association (JVCA) (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		successfully completed[8]: ***water infrastructure installation.*** *Under Sub-factor 4.2(a), specified requirements defined as similarity of contracts: Installation, replacement, or rehabilitation of water transmission and distribution mains, including potable and non-potable water pipelines.* *Installation, replacement, or rehabilitation of gravity sewers, pressure sewers, and rising mains.* *Construction of buried pipeline networks for municipal or utility infrastructure, including works within road reserves or urban environments.*					

[8] Volume, number, or rate of production of any key activity can be demonstrated in one or more contracts combined if executed during same time period.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
Sub-Factor	Subject	Requirement	Single Entity	Joint Venture, Consortium or Association (JVCA) (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		Pipeline installation works involving trenching, bedding, pipe laying, jointing, testing, backfilling, and surface reinstatement. *Installation of pipelines of varying diameters and materials, including but not limited to ductile iron, PVC, HDPE, steel, copper, or concrete pipes.* *Associated works such as valves, manholes, chambers, hydrants, service connections, meters, and fittings related to water or sewer networks.* *Pipeline works executed under traffic management constraints, in congested areas, or within existing utility corridors.* *Plumbing works for buildings or facilities, including installation or modification of internal and*					

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
Sub-Factor	Subject	Requirement	Single Entity	Joint Venture, Consortium or Association (JVCA) (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		external water supply, sanitary plumbing, and drainage systems. *Installation of building service pipelines, including cold and hot water supply, soil and waste systems, and vent piping.* *Connection of buildings or facilities to public water and sewer networks, including service laterals and associated plumbing works.*					

***Note**: [For Multiple lots (contracts) specify financial and experience criteria for each lot under Sub-Factors 3.1, 3.2, 4.2(a) and 4.2(b)]*

3. Key Personnel

The Bidder must demonstrate that it will have suitably qualified (and in adequate numbers) Key Personnel, as described in the Evaluation Criteria and Specifications.

The Bidder shall provide details of the Key Personnel and such other Key Personnel that the Bidder considers appropriate to perform the Contract, together with their academic qualifications and work experience. The Bidder shall complete the relevant Forms in Section IV, “Bidding Forms”.

4. Equipment

The Bidder must demonstrate that it has access to necessary machinery and equipment (At minimum possess equipment for cutting and reinstating trench)

The Bidder shall provide further details of proposed items of equipment using the relevant of Section IV, “Bidding Forms”.

Section IV. Bidding Forms

Table of Bidding Forms

1. Letter of Bid..... 61

2. Technical Proposal..... 65

3. Bidder's Qualification Information..... 76

4. Forms of Bid Security..... 95

1. Letter of Bid

*[The **Bidder** shall fill in and submit this form with the Bid. If the Bidder objects to the Technical Adjudicator proposed by the Employer in the bidding document, it should so state in its Bid, and present an alternative candidate, together with the candidate's daily fees and curriculum data, in accordance with ITB 44.*

In respect to the statement on commissions, bonuses or fees, services it may be for example, payments to, or through, individuals or entities that are authorized to act on behalf of the Bidder to advance the interests of the Bidder in relation to this process of bidding or execution of the Contract].

[Note: All italicized text is to help Bidders in preparing this form.]

[date]

RfB Identification no. and Title of Contract: *[insert identification number and title of the Contract]*

To: *[name and address of Employer]*

By submitting our Bid, we declare the following:

Conformity: Having examined the bidding document, including addenda *[insert list],* we offer to execute the *[name and identification number of Contract]* in accordance with the GCC accompanying this Bid.

Bid Price: The total price of our Bid, excluding any discounts offered in item (c) below is: *[insert]*

Total price is: *[insert the total price of the Bid in words and figures, indicating the various amounts and the respective currencies];*

- **Discounts:** The discounts offered and the methodology for their application are:

The discounts offered are: *[specify in detail each discount offered].*

The exact method of calculations to determine the net price after application of discounts is shown below: *[specify in detail the method that shall be used to apply the discounts]*;

Advance Payment: The advance payment required is (up to 25%):

Amount	Currency
(a)	
(b)	
(c)	
(d)	

(a) Technical Adjudicator: We accept the appointment of [insert name proposed in Bid Data Sheet] as the Technical Adjudicator.

[or]

We do not accept the appointment of *[insert name proposed in Bid Data Sheet]* as the Technical Adjudicator and propose instead that *[insert name]* be appointed as Technical Adjudicator, whose daily fees and curriculum data are attached.

Binding Contract: We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed; and

Not Bound to Accept: We understand that the Employer is not bound to accept the lowest evaluated cost Bid, the Most Advantageous Bid or any other Bid that you may receive.

Bid Validity and Bid Security: We hereby confirm that this Bid complies with the Bid Validity and, if required, Bid Security or Bid Securing Declaration as required by the bidding document and specified **in the BDS**.

Eligibility: The subscribers, including all subcontractors required to implement any part of the contract are nationals of the Bank member countries according to ITB 5.1 and in case of detecting that any of the named parties are in any conflict of interest, we will notify this circumstance in writing to the Employer, either during the selection process, the negotiations, or the execution of the Contract. If the Works contract includes the supply of goods and related services, we undertake that these goods and related services originate in member countries of the Bank.

In addition, we, including any subcontractor or supplier for any component of the contract, have no conflict of interest, in accordance with the provisions of ITB 5.2; and in case of detecting that any of those named are in any conflict of interest, we will notify this circumstance in writing to the Employer, either during the selection process and the negotiations or the execution of the Contract.

Suspension and Debarment: We, (along with any of our directors, principal shareholders, key personnel and agents), as well as subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to a temporary suspension imposed by the IDB pursuant to an agreement for mutually recognition of imposed sanctions signed by the IDB and other development banks.

Further, we are not ineligible under the Employer ’s country laws or official regulations or pursuant to a decision of the United Nations Security Council.

Government-owned enterprise or institution: *[select the appropriate option and delete the other] [We are not a Government-owned enterprise or institution]/[We are a Government-owned enterprise or institution but meet the requirements of ITB 5.5 and we are not in a case of conflict of interest as described in ITB 5.2]*[1].

Cooperation: We will use our best efforts to assist the Bank in any investigation.

---

[1] The Bidder shall indicate as appropriate.

Commissions, gratuities and fees: We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity].*

Name and Address of Recipient	Amount and Currency	Purpose of the commission or gratuity
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

(If none has been paid or is to be paid, indicate "none".)

Best and Final Offer or Negotiations: We understand that if the Employer use the Best and Final Offer method (may be in the presence of an Independent Probity Assurance Authority agreed with the Bank) in the evaluation of Bids, if so specified **in BDS** ITB 34.4, or Negotiations (in the presence of an Independent Probity Assurance Authority agreed with the Bank) in the final adjudication**,** if so specified **in BDS** ITB 34.4, there will be an Independent Probity Assurance Authority hired by the Employer to observe and report on this process.

Prohibited Practices: We, and our subcontractors or suppliers for any component of the contract (including, in all cases, the respective directors, officers, principal shareholders, proposed key personnel and agents) have read and understood the definitions of Prohibited Practices of the Bank and the sanctions applicable to acts as described in this document and we are obliged to observe the relevant norms. In addition, we commit ourselves that within the selection process (and in case of being awarded, in the execution) of the contract, to observe the laws on fraud and corruption, including bribery, applicable in the country of the Employer.

In addition, we, and our subcontractors or suppliers for any component of the contract (including, in all cases, the respective directors, officers, principal shareholders, proposed key personnel and agents) acknowledge that failure to comply with any of these statements is the basis for the imposition by the Bank of one or more of the measures described in ITB 3.1.

Our firm, its parent firm, its affiliates or subsidiaries, subcontractors, or suppliers for any part of the contract (including, in all cases, directors, officers, principal shareholders, proposed key personnel and agents):

We have not been declared ineligible by the Bank, or by any other International Financial Institution (IFI) with which the Bank has signed an agreement for the reciprocal recognition of sanctions, so that we may be awarded contracts financed by any of them; and

We have not engaged and will not engage in any Prohibited Practices in connection with this Bidding process or the performance of this contract and we have taken the necessary measures to ensure that no person acting for us or on our behalf engages in Prohibited Practices.

Prohibited Activities. Statement of Commitment: We declare our commitment to practice environmental and social responsibility and comply with the Bank's Environmental and Social Policy Framework[2] which includes general and specific provisions on human rights, energy and environment, labor safety, labor, ethics, health and safety, management practices and other issues, not only with respect to our firm, which extends to key suppliers of the products and services of our services, products and activities.

Disclosure of Beneficial Ownership Form: We understand that if our Bid is accepted, we will be providing the required information on the Beneficial Ownership Disclosure Form, **if specified in BDS in reference to ITB 41.1.** We state herewith the authorization for the Borrower to publish as part of the Contract Award Notification the Beneficial Ownership Disclosure Form.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Bidder *[insert name of the Bidder, which in the case of a Joint Venture, Consortium or Association (JVCA) shall be the name of the JVCA (whether legally constituted or prospective) or the names of all members thereof]*: _____

_____

Address: _____

[2] IDB Environmental and Social Policy Framework GN-2965-23: (*https://www.iadb.org/en/who-we-are/topics/environmental-and-social-solutions/environmental-and-social-policy-framework*).

2. Technical Proposal

Technical Proposal Forms

Site Organization

Method Statement

Mobilization Schedule

Construction Schedule

Equipment

Personnel

Others

Site Organization

[insert Site Organization information]

Method Statement

[insert Method Statement]

Mobilization Schedule

[insert Mobilization Schedule]

Construction Schedule

[insert Construction Schedule]

Form EQU

Equipment

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, “Evaluation and Qualification Criteria”. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder.

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment ☐ Owned ☐ Rented ☐ Leased ☐ Specially manufactured	

Omit the following information for equipment owned by the Bidder.

Owner	Name of Owner	
	Address of Owner	
	Telephone	Contact name and title
Agreements	Details of rental/lease/manufacture agreements specific to the project	

Form PER-1

Key Personnel Schedule

Bidders should provide the names and details of the suitably qualified Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

Key Personnel

1.	**Title of Position:**	
	Name of candidate:	
	Duration of appointment:	*[insert the whole period (start and end dates) for which this position will be engaged]*
	Time commitment for this position:	*[insert the number of days/week/months/ that has been scheduled for this position]*
	Expected time schedule for this position:	*[insert the expected time schedule for this position (e.g., attach high level Gantt chart]*
2.	**Title of Position:**	
	Name of candidate:	
	Duration of appointment:	*[insert the whole period (start and end dates) for which this position will be engaged]*
	Time commitment for this position:	*[insert the number of days/week/months/ that has been scheduled for this position]*
	Expected time schedule for this position:	*[insert the expected time schedule for this position (e.g., attach high level Gantt chart]*
3.	**Title of Position:**	
	Name of candidate:	
	Duration of appointment:	*[insert the whole period (start and end dates) for which this position will be engaged]*
	Time commitment for this position:	*[insert the number of days/week/months/ that has been scheduled for this position]*
	Expected time schedule for this position:	*[insert the expected time schedule for this position (e.g., attach high level Gantt chart]*
4.	**Title of Position:**	

	Name of candidate:	
	Duration of appointment:	*[insert the whole period (start and end dates) for which this position will be engaged]*
	Time commitment for this position:	*[insert the number of days/week/months/ that has been scheduled for this position]*
	Expected time schedule for this position:	*[insert the expected time schedule for this position (e.g., attach high level Gantt chart]*
	Title of Position:	
	Name of candidate	
	Duration of appointment:	*[insert the whole period (start and end dates) for which this position will be engaged]*
	Time commitment for this position:	*[insert the number of days/week/months/ that has been scheduled for this position]*
	Expected time schedule for this position:	*[insert the expected time schedule for this position (e.g., attach high level Gantt chart]*
5.	**Title of Position:** *[insert title]*	
	Name of candidate	
	Duration of appointment:	*[insert the whole period (start and end dates) for which this position will be engaged]*
	Time commitment for this position:	*[insert the number of days/week/months/ that has been scheduled for this position]*
	Expected time schedule for this position:	*[insert the expected time schedule for this position (e.g., attach high level Gantt chart]*

Form PER-2

Resume and Declaration
Key Personnel

Name of Bidder

Position *[#1]:* *[title of position from Form PER-1]*		
Personnel information	**Name:**	**Date of birth:**
	Address:	**E-mail:**
	Professional qualifications:	
	Academic qualifications:	
	Language proficiency: *[language and levels of speaking, reading and writing skills]*	
Details	**Address of employer:**	
	Telephone:	**Contact (manager/personnel officer):**
	Job title:	**Years with present employer:**

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

Project	**Role**	**Duration of involvement**	**Relevant experience**
[main project details]	*[role and responsibilities on the project]*	*[time in role]*	*[describe the experience relevant to this position]*

Declaration

I, the undersigned *[insert "Key Personnel" member]*, certify that to the best of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications, and my experience.

I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the Bid:

Commitment	Details
Commitment to duration of contract	*[insert period (start and end dates) for which this Key Personnel is available to work on this contract]*
Time commitment	*[insert period (start and end dates) for which this Key Personnel is available to work on this contract]*

I understand that any misrepresentation or omission in this Form may:

be taken into consideration during Bid evaluation;

result in my disqualification from participating in the Bid

result in my dismissal from the contract;

constitute a practice that may be sanctioned by the Bank.

Name of Key Personnel: _____

_____ *[insert name]*

Signature: _____

Date: (day/month/year): _____

Countersignature of authorized representative of the Bidder:

Signature: _____

Date: (day/month/year): _____

Form MSIP-ESHS

Management Strategies and Implementation Plans (MSIP) to manage the ESHS risks and impacts

[The Bidder shall submit demonstrated capabilities in following/adherence to the project specific Environmental and Social Assessment ESA/ Environmental and Social Management Plan (ESMP). The awarded bidder shall develop a Contractor Environmental and Social Management Plan (cESMP). The cESMP will be developed in accordance with the Project's Environmental and Social Assessment (ESA), the Environmental and Social Management Plan (ESMP) and the respective IDB Environmental and Social Action Plan (ESAP) as well as required by BDS ITB 14.1(g). In developing these strategies and plans, the Bidder shall take into account the provisions of the ESHS described in Section VIII, "Specifications & Performance Requirements" which sets forth the minimum requirements.]

3. Bidder's Qualification Information

To establish its qualifications to perform the contract in accordance with Sections I, "ITB" and Section III, "Evaluation and Qualification Criteria" the Bidders shall provide the information requested in the corresponding Information Sheets included in this section. *[The relevant sections in the attached documents must be translated into English. If used for prequalification verification, the Bidder should fill in updated information only.]*

Form ELI-1.1

Bidder Information Form

Date: _____
Bidding No. and title: _____
Page _____ of _____ pages

Bidder's name: _____
In case of JVCA, name of each member: _____
Bidder's actual or intended country of registration: _____ *[indicate country of Constitution]*
Bidder's actual or intended year of incorporation: _____
Bidder's legal address: _____ *[in country of registration]*
Bidder's authorized representative information: Name: _____ Address: _____ Telephone numbers: _____ E-mail address: _____
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above. ☐ In case of JVCA, letter of intent to form JVCA or JVCA agreement, in accordance with ITB 6.4. ☐ In case of state-owned or government-owned enterprise or institution, in accordance with ITB 5.5, documents establishing: Legal and financial autonomy; Operation under commercial law; It is not a case of conflict of interest as described in ITB 5.2; and Establishing that the Bidder is not a dependent agency of the Employer or the Borrower. 2. Included are the organizational chart, a list of Board of Directors.

Form ELI-1.2

Bidder's JVCA Information Form

(to be completed for each member of JVCA's Bidder)

Date: _____
Bidding No. and title: _____
Page _____ of _____ pages

Bidder's JVCA name: _____
JVCA member's name: _____
JVCA member's country of registration: _____
JVCA member's year of constitution: _____
JVCA member's legal address in country of constitution: _____
JVCA member's authorized representative information: Name: _____ Address: _____ Telephone number: _____ E-mail address: _____
1. Attached are copies of original documents of ☐ Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above. ☐ In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not a dependent agency of the Employer or the Borrower, in accordance with ITB 6.4 and should not have a conflict of interest as described in ITB 5.2. 2. Included are the organizational chart, a list of Board of Directors.

Form CON-2

Historical Contract Non-Performance, Pending Litigation and Litigation History

Bidder's Name: _____
Date: _____
JVCA Member's Name_____
RfB No. and title: _____
Page _____of _____pages

Non-Performed Contracts in accordance with Section III, "Evaluation and Qualification Criteria"			
☐ Contract non-performance did not occur since 1st January *[insert year]* specified in "**Table 2. Qualification**", Sub-Factor 2.1 of Section III, "Evaluation and Qualification Criteria". ☐ Contract(s) not performed since 1st January *[insert year]* specified in "**Table 2. Qualification**", Sub-Factor 2.1 of Section III, "Evaluation and Qualification Criteria".			
Year	**Non-performed portion of contract**	**Contract Identification**	**Total Contract Amount (current value, currency, exchange rate and US$ equivalent)**
[insert year]	*[insert amount and percentage]*	Contract Identification: _____ *[indicate complete contract name/number, and any other identification]* Name of Employer: _____ *[insert full name]* Address of Employer: _____ *[insert street/city/ country]* Reason(s) for nonperformance: _____ *[indicate main reason(s)]*	*[insert amount]*

Pending Litigation, in accordance with Section III, "Evaluation and Qualification Criteria"			
☐ No pending litigation in accordance with Section III, "Evaluation and Qualification Criteria", "**Table 2. Qualification**", Sub-Factor 2.3. ☐ Pending litigation in accordance with Section III, "Evaluation and Qualification Criteria", "**Table 2. Qualification**", Sub-Factor 2.3 as indicated below.			
Year of dispute	**Amount in dispute (currency)**	**Contract Identification**	**Total Contract Amount (currency), USD Equivalent (exchange rate)**

		Contract Identification: _____ Name of Employer: _____ Address of Employer: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	
		Contract Identification: _____ Name of Employer: _____ Address of Employer: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	

Litigation History in accordance with Section III, "Evaluation and Qualification Criteria"

☐ No Litigation History in accordance with Section III, "Evaluation and Qualification Criteria", "**Table 2. Qualification**", Sub-Factor 2.4.

☐ Litigation History in accordance with Section III, "Evaluation and Qualification Criteria", "**Table 2. Qualification**", Sub-Factor 2.4, as indicated below.

Year of award	**Outcome as percentage of Net Worth**	**Contract Identification**	**Total Contract Amount (currency), USD Equivalent (exchange rate)**

[insert year]	*[insert percentage]*	Contract Identification: ____ *[indicate complete contract name, number, and any other identification]* Name of Employer: *[insert full name]* Address of Employer: _____ *[insert street/city/country]* Matter in dispute: _____ *[indicate main issues in dispute]* Party who initiated the dispute: _____ *[indicate "Employer" or "Contractor"]* Reason(s) for Litigation and award decision: _____ *[indicate main reason(s)]*	*[insert amount]*

Form CON-3

Environmental, Social, Health, and Safety Performance (ESHS) Declaration

[The following table shall be filled in for the Bidder, each member of a JVCA and each Specialized Subcontractor]

Bidder's Name: *[insert full name]*
Date: *[insert day, month, year]*
JVCA Member's or Specialized Subcontractor's Name: *[insert full name]*
RfB No. and title: *[insert Bidding number and title]*
Page *[insert page number]* of *[insert total number]* pages.

Environmental, Social, Health, and Safety (ESHS) Performance Declaration

In accordance with Section III, "Evaluation and Qualification Criteria"

☐ **No suspension or termination of contract**: An Employer has not suspended or terminated a contract and/or called the performance security for a contract for reasons related to Environmental, Social, Health and Safety (ESHS), (including labor, occupational and community health and safety, natural disasters and climate change, indigenous peoples, vulnerable groups, gender, sexual and gender-based violence (SGBV), stakeholder engagement, and resettlement and livelihood issues), performance since the date specified in Section III, "Evaluation and Qualification Criteria", "**Table 2. Qualification**", Sub-Factor 2.5.

☐ **Declaration of suspension or termination of contract**: The following contract(s) has/have been suspended or terminated and/or Performance Security called by an Employer(s) for reasons related to Environmental, Social, Health and Safety (ESHS), (including labor, occupational and community health and safety, natural disasters and climate change, indigenous peoples, vulnerable groups, gender, sexual and gender-based violence (SGBV), stakeholder engagement, and resettlement and livelihood issues), performance since the date specified in in Section III, "Evaluation and Qualification Criteria", "**Table 2. Qualification**", Sub-Factor 2.5. Details are described below:

Year	**Suspended or terminated portion of contract**	**Contract Identification**	**Total Contract Amount (current value, currency, exchange rate and US$ equivalent)**
[insert year]	*[insert amount and percentage]*	Contract Identification: _____ *[indicate complete contract name/number, and any other identification]* Name of Employer: _____ *[insert full name]*	*[insert amount]*

		Address of Employer: *[insert street/city/country]* Reason(s) for suspension or termination: _____ *[indicate main reason(s) e.g., due to failures to prevent Sexual and Gender-based Violence (SGBV)]*	
[insert year]	*[insert amount and percentage]*	Contract Identification: _____ *[indicate complete contract name/number, and any other identification]* Name of Employer: _____ *[insert full name]* Address of Employer: _____ *[insert street/city/country]* Reason(s) for suspension or termination: _____ *[indicate main reason(s) e.g., due to failures to prevent Sexual and Gender-based Violence (SGBV)]*	*[insert amount]*
...	...	*[list all applicable contracts]*	...

Form FIN-3.1

Financial Situation and Performance

Bidder's Name: _____
Date: _____
JVCA Member's Name_____
RfB No. and title: _____
Page _____of _____pages

1. Financial Data

Type of Financial information in (currency)	**Historic information for previous 5 years, (amount in currency, currency, exchange rate*, USD equivalent)**				
	Year 1	Year 2	Year 3	Year 4	Year 5
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

***** Refer to ITB 16 for the exchange rate.

2. Sources of Finance

Specify sources of finance to meet the cash flow requirements on Works currently in progress and for future contract commitments.

No.	Source of Finance	Amount (US$ equivalent)
1		
2		
3		

3. Financial Documents

The Bidder and its parties shall provide copies of financial statements for 5 years pursuant Section III, "Evaluation and Qualifications Criteria", "**Table 2. Qualification**" Sub-factor 3.1. The financial statements shall:

(a) reflect the financial situation of the Bidder or in case of JVCA member, and not an affiliated entity (such as parent firm or group member).

(b) be independently audited or certified in accordance with local legislation or have financial statements signed off by a Certified Public Accountant.

(c) be complete, including all notes to the financial statements.

(d) correspond to accounting periods already completed and audited.

☐ Attached are copies of financial statements[1] for the __ years required above; and complying with the requirements.

[1] If the most recent set of financial statements is for a period earlier than 12 months from the date of Bid, the reason for this should be justified.

Form FIN-3.2

Average Annual Construction Turnover

Bidder's Name: _____
Date: _____
JVCA Member's Name:_____
RfB No. and title: _____
Page _____of _____pages

Annual Turnover Data (Construction Only)			
Year	**Amount Currency**	**Exchange rate**	**USD equivalent**
[indicate year]	*[insert amount and indicate currency]*		
Average Annual Construction Turnover *			

* See Sub-factor 3.2 of "**Table 2. Qualification**" in Section III, "Evaluation and Qualification Criteria".

Form FIN-3.3

FINANCIAL RESOURCES

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as specified in Section III, "Evaluation and Qualification Criteria".

Financial Resources		
No.	**Source of Financing**	**Amount (US$ equivalent)**
1		
2		
3		

Form FIN-3.4

Current Contract Commitments/Works in Progress

Bidders and each member to a JVCA should provide information on their current commitments on all national and international contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts about to completion, but for which an unqualified, Taking-Over Certificate has yet to be issued.

Current Contract Commitments					
No.	**Name of Contract**	**Employer's Contact Address, Tel.**	**Value of Outstanding Work** ***[Current US$ Equivalent]***	**Estimated Completion Date**	**Average Monthly Invoicing Over Last Six Months** ***[US$/month)]***
1					
2					
3					
4					
5					

Form EXP-4.1

General Construction Experience

Bidder's Name: _____
Date: _____
JVCA Member's Name_____
RfB No. and title: _____
Page _____of _____pages

Starting Year	Ending Year	Contract Identification	Role of Bidder
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of Contract:_____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of Contract:_____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of Contract:_____ Name of Employer: _____ Address: _____	

Form EXP-4.2(a)

Specific Construction and Contract Management Experience

Bidder's Name: _____
Date: _____
JVCA Member's Name_____
RfB No. and title: _____
Page _____of _____pages

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JVCA ☐	Management Contractor ☐	Subcontractor ☐
Total Contract Amount			US$	
If member in a JVCA or Subcontractor, specify participation in total Contract amount				
Employer's Name:				
Address: Telephone number: E-mail:				

Form EXP-4.2(a) (cont.)

Specific Construction and Contract Management Experience

Similar Contract No.	Information
Description of the similarity in accordance with Section III, "Evaluation and Qualification Criteria", "**Table 2. Qualification**", Sub-Factor 4.2(a)	
Amount	
Physical size of required Works items	
Complexity	
Methods/Technology	
Construction rate for key activities	
Other Characteristics	

Form EXP-4.2(b)

Construction Experience in Key Activities

Bidder's Name: _____
Date: _____
Bidder's JVCA Member Name: _____
Subcontractor's Name[2] (as per ITB 31.6(b)(c)): _____
RfB No. and title: _____
Page _____ of _____ pages

All Subcontractors for key activities must complete the information in this form as per ITB 31.6(b)(c) and Section III, "Evaluation and Qualification Criteria", "**Table 2. Qualification**", Sub-Factor 4.2.

1. Key Activity No 1: _____

	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor ☐	Member in JVCA ☐	Management Contractor ☐	Subcontractor ☐
Total Contract Amount			US$	
Quantity (Volume, number or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				
Year 2				
Year 3				
Year 4				

[2] If applicable.

	Information
Employer's Name:	
Address: Telephone number: E-mail:	

	Information
Description of the key activities in accordance with Section III, "Evaluation and Qualification Criteria", "**Table 2. Qualification**", Sub-Factor 4.2(b):	

Key Activity No 2: _____

.....

4. Forms of Bid Security

Bid Securing Declaration

*[The **Bidder** shall fill in this form in accordance with the instructions indicated in brackets]*

Date: *[date (as day, month and year)]*
RfB No.: *[number of RfB process]*
Alternative No.: *[insert identification number if this is an Alternative Bid]*

To: *[complete name of Employer]*

We, the undersigned, declare that:

We understand that, according to your conditions, Bids must be supported by a Bid Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding or submitting bids in any contract with the Employer for the period of time of *[insert number of months or years]* starting on *[insert date]*, if we are in breach of our obligation(s) under the bid conditions, because we:

(1) have withdrawn our Bid prior to the expiry date of the Bid Validity specified in the Letter of Bid or any extended date provided by us; or

(2) have not accepted the correction of arithmetical errors in accordance with the Instructions to Bidders (hereinafter "the ITB") of the bidding document; or

(3) having been notified of the acceptance of our Bid by the Employer prior to the expiry date of the Bid Validity in the Letter of Bid or any extended date provided by us, (i) fail to execute the Contract Agreement, or (ii) fail to furnish the Performance Security and, if required, the ESHS Performance Security, in accordance with the ITB.

We understand this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification informing us that we are not the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.

We understand that if we are a Joint Venture, Consortium or Association (JVCA), the Bid Securing Declaration must be in the name of the JVCA that submits the Bid. If the JVCA has not been legally constituted at the time of bidding, the Bid Securing Declaration shall be in the names of all future members as named in the Letter of Intent mentioned in ITB 18.6.

Name of the Bidder _____

Name of the person duly authorized to sign the Bid on behalf of the Bidder _____

Title of the person signing the Bid _____

Signature of the person named above _____

Dated on *[insert day], [insert month], [insert year]* _____

Section V. Eligible Countries

Eligibility for the Provision of Goods, Works and Services in Bank-Financed Procurement

*[**Note:** In this document, references to Bank include both, the IDB, IDB Lab, as well as any fund administered by the Bank.*

Next, two options of paragraph number "1" are shown, for the User to choose the one that is appropriate, according to the source of financing. This source may be the Inter-American Development Bank (IDB), the IDB Lab or, occasionally, contracts can be financed by funds administered by the Bank that could include different criteria for eligibility to a particular group of member countries. When the last option is selected, the eligibility criteria should be mentioned therein:

----

1) List of Member Countries and Territories when the Inter-American Development Bank is financing:

Argentina, Austria, Bahamas, Barbados, Belgium, Belize, Bolivia, Brazil, Canada, Colombia, Costa Rica, Chile, Croatia, Denmark, Dominican Republic, Ecuador, El Salvador, Finland, France, Germany, Guatemala, Guyana, Haiti, Honduras, Israel, Italy, Jamaica, Japan, Mexico, Netherlands, Nicaragua, Norway, Panama, Paraguay, People's Republic of China, Peru, Portugal, Republic of Korea, Slovenia, Spain, Suriname, Sweden, Switzerland, Trinidad & Tobago, United Kingdom, United States, Uruguay and Venezuela.

Eligible Territories

Guadeloupe, French Guiana, Martinique, Reunion – as Departments of France

U.S. Virgin Islands, Puerto Rico, Guam – as Territories of the USA

Aruba – as a constituent country of the Kingdom of the Netherlands; and Bonaire, Curacao, Saint Marten, Saba, St Eustatius – as Departments of the Kingdom of the Netherlands

Hong Kong – as a Special Administrative Region of the People's Republic of China

----

1) List of Countries in accordance with Administered Funds Agreement

(Include the list of countries)]

----

2) Nationality and origin of Goods and Services Criteria

The following criteria shall be used to determine a) nationality of eligible firms and individuals to bid or participate in contracts financed by the Bank, and b) the country of origin of goods and services:

(A) Nationality.

An individual is a national of a member country of the Bank if he or she meets either of the following requirements:

is a citizen of a member country; or

has established his/her domicile in a member country as a "*bona fide*" resident and is legally entitled to work in the country of domicile.

A firm is considered to have the nationality of a member country if it meets the two following requirements:

is legally constituted or incorporated under the laws of a member country of the Bank; and

more than fifty percent (50%) of the firm's capital is owned by individuals or firms from member countries of the Bank.

All members of a JVCA and all subcontractors must meet the nationality criteria set forth above.

(B) Origin of Goods.

Goods have their origin in a member country of the Bank if they have been mined, grown, harvested, or produced in a member country of the Bank. A good has been produced when through manufacture, processing or assembly another commercially recognized article results that differs substantially in its basic characteristics, function or purpose of utility from its parts or components.

For a good consisting of several individual components that need to be interconnected (either by the supplier, the Employer or by a third party) to make the good operative and regardless of the complexity of the interconnection, the Bank considers that such good is eligible for financing if the assembly of the components took place in a member country, regardless of the origin of the components. When the good is a set of several individual goods that are normally packaged and sold commercially as a single unit, the good is considered to originate in the country where the set was packaged and shipped to the Employer.

For purpose of origin, goods labeled "made in the European Union" shall be eligible without the need to identify the corresponding specific country of the European Union.

The origin of materials, parts or components of the goods or the nationality of the firm that produces, assembles, distributes, or sells the goods, does not determine the origin of the goods.

(C) Origin of Services.

The country of origin of services is that of the individual or firm providing the services as determined under the nationality criteria set forth above. These criteria apply to services ancillary to the supply of goods (such as transportation, insurance, erection, assembly, etc.), to construction services and to consulting services.

Section VI. General Conditions of Contract (GCC)

The General Conditions of Contract (GCC), read in conjunction with the Particular Conditions of Contract (PCC) and other documents listed therein, should be a complete document expressing fairly the rights and obligations of both parties.

The form of General Conditions of Contract that follows has been developed on the basis of considerable international experience in the drafting and management of contracts, bearing in mind a trend in the construction industry towards simpler, more straightforward language.

The form can be used directly for smaller admeasurement contracts and, with the modifications noted in the footnotes, it can be adapted for lump sum contracts.

The use of standard General Conditions of Contract (GCC) for building and civil works in a country shall promote comprehensiveness of coverage, general acceptability of its provisions, savings in cost and time in Bid preparation and review, and the development of a solid background of legal case histories.

Section VI. General Conditions of Contract (GCC)

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General Conditions of Contract

A. General

1. Definitions

1.1 Boldface type is used to identify defined terms.

Bill of Quantities means the priced and completed Bill of Quantities forming part of the Bid.

The **Commencement Date** is **given in the PCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.

Compensation Events are those defined in GCC Clause 44 hereunder.

The **Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC Sub-Clause 55.1.

The **Contract** is the Contract Agreement or Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC Clause 2.3 below.

The **Contractor** is a person or corporate body whose Bid to carry out the Works has been accepted by the Employer.

The **Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer.

The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; months are calendar months.

Dayworks are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.

A **Defect** is any part of the Works that has not been completed according to the Contract.

The **Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor.

The **Defects Liability Period** is the period **named in the PCC** Sub-Clause 35.1 and calculated from the Completion Date.

Drawings include calculations and other information provided or approved by the Project Manager for the execution of the Contract.

The **Employer** is the party who employs the Contractor to carry out the Works, **as specified in the PCC.**

Equipment is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.

ESHS means the Environmental, Social, Health and Safety measures (including labor, occupational and community health and safety, natural disasters and climate change, indigenous peoples, vulnerable groups, sexual and gender-based violence (SGBV), stakeholder engagement, and resettlement and livelihood issues), which the Contractor, and if applicable the Subcontractors are required to adopt in the execution of the contract.

The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is **specified in the PCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.

Materials are all supplies, including consumables, used by the Contractor for incorporation in the Works.

PCC means Particular Conditions of Contract by which the GCC may be amended or supplemented but not over-written.

Plant is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.

The **Project Manager** is the person **named in the PCC** (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.

SGBV means Sexual and Gender-based Violence and refers to any act perpetrated against a person's shall that is based on gender norms and unequal power relations. It encompasses threats of violence, coercion and harassment. It can be physical, emotional, psychological or sexual in nature, and can take the form of a denial of resources or access to resources. It includes sexual exploitation, abuse and harassment. It inflicts harm on people of all genders. It can affect people of any age

across the lifespan and disproportionately affects women, girls, and people of diverse sexual orientations and gender identities.

The **Site** is the area **defined as such in the PCC**.

Site Investigation Reports are those that were included in the bidding document and are factual and interpretative reports about the surface and subsurface conditions at the Site.

Specification means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.

A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.

The **Technical Adjudicator** is the person appointed jointly by the Employer and the Contractor or, failing such appointment, by the Appointing Authority pursuant to GCC Sub-Clause 26.1 hereof, to resolve disputes in the first instance, as provided for in GCC Clauses 24 and 25 hereunder.

Temporary Works are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.

A **Variation** is an instruction given by the Project Manager which varies the Works.

The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, **as defined in the PCC.**

2. Interpretation

2.1 In interpreting these GCC, singular also means plural, male also means female, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.

2.2 If sectional completion is **specified in the PCC**, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

2.3 The documents forming the Contract shall be interpreted in the following order of priority:

Contract Agreement,

Letter of Acceptance,

Contractor's Bid (the last if BAFO or Negotiations were used),

Particular Conditions of Contract,

General Conditions of Contract,

Specifications,

Drawings,

Bill of Quantities,[1] (the last if BAFO or Negotiations were used) and

any other documents, **listed in the PCC,** forming part of the Contract.

3. Language and Applicable Law

3.1 The language of the Contract and the applicable law the Contract are **stated in the PCC**.

4. Project Manager's Decisions

4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Contractor in the role representing the Employer.

5. Delegation of Duties

5.1 The Project Manager may delegate any of his duties and responsibilities to other people, except to the Technical Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

6. Communications

6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.

7. Subcontracting

7.1 The Contractor may subcontract with the approval of the Project Manager but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor's obligations.

8. Other Contractors

8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as **referred to in the PCC.** The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors and shall notify the Contractor of any such modification.

9. Personnel

9.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel, as **referred to in the PCC,** to carry out the functions stated in the Schedule or other personnel approved by the

[1] In lump sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule".

Project Manager. The Project Manager shall approve any proposed replacement of key personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel listed in the Schedule.

9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven (7) days and has no further connection with the work in the Contract. Reasons for dismissing a person include behavior that disregards the ESHS Code of Conduct (such as the spread of contagious diseases, sexual harassment, sexual exploitation and abuse (SEA) gender-based violence (GBV), illegal or criminal activities).

10. Employer's and Contractor's Risks

10.1 The Employer carries the risks which this Contract states are the Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11. Employer's Risks

11.1 From the Commencement Date until the Defects Liability Certificate has been issued, the following are the Employer's risks:

(a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to

(i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or

(ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.

(b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.

11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to

(a) a Defect which existed on the Completion Date,

(b) an event occurring before the Completion Date, which was not itself an Employer's risk, or

(c) the activities of the Contractor on the Site after the Completion Date.

12. Contractor's Risks

12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) that are not risks of the Employer, are risks of the Contractor.

12.2 Contractor's risks are when there is a breach of the environmental, social (including sexual exploitation and abuse (SEA) and gender-based violence (GBV), health and safety (ESHS) obligations established by the applicable law and/or the applicable Contract provisions.

13. Insurance

13.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Commencement Date to the end of the Defects Liability Period, in the amounts and deductibles **stated in the PCC** for the following events which are due to the Contractor's risks:

(a) loss of or damage to the Works, Plant, and Materials;

(b) loss of or damage to Equipment;

(c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and

(d) personal injury or death.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager.

13.5 Both parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports

14.1 The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports **referred to in the PCC,** supplemented by any information available to the Bidder.

15. Queries about the Particular

15.1 The Project Manager shall clarify queries on the **PCC.**

Conditions of Contract

16. Contractor to Construct the Works

16.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

16.2 The Contractor shall not carry out any Works, including mobilization and/or pre-construction activities (e.g., limited clearance for haul roads, site accesses and work site establishment, geotechnical investigations or investigations to select ancillary features such as quarries and borrow pits), unless the Project Manager is satisfied that appropriate measures are in place to address environmental, social, health and safety risks and impacts. The Contractor shall follow the Projects Environmental and Social Assessment (ESA)/Environmental and Social Management Plan (ESMP). The awarded Contractor shall develop the Contractor's Environmental and Social Management Plan (C-ESMP). The C-ESMP shall be approved prior to the commencement of construction activities (e.g., excavation, earth works, bridge and structure works, stream and road diversions, quarrying or extraction of materials, concrete batching and asphalt manufacture). The approved C-ESMP shall be reviewed, periodically, and updated in a timely manner, as required, by the Contractor to ensure that it contains measures appropriate to the Works activities to be undertaken. The updated C-ESMP shall be subject to prior approval by the Project Manager.

17. The Works to Be Completed by the Intended Completion Date

17.1 The Contractor may commence execution of the Works on the Commencement Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date.

18. Approval by the Project Manager

18.1 The Contractor shall comply with the Specifications and Drawings.

18.2 The Contractor shall be responsible for design of Temporary Works.

18.3 The Project Manager's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

18.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

18.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before their use.

19. ESHS

19.1 The Contractor shall be responsible for all Environmental, Social, Health and Safety (ESHS) (including labor, occupational and community health and safety, natural disasters and climate change, indigenous peoples, vulnerable groups, sexual and gender-based violence (SGBV), stakeholder engagement, and resettlement and livelihood issues), of all activities at the Site, in accordance with the Employer's country regulations, and if none exist, in accordance with the provisions of the Contract Conditions and the Specifications & Performance Requirements.

20. Discoveries

20.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager's instructions for dealing with them.

21. Possession of the Site

21.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date **stated in the PCC,** the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.

22. Access to the Site

22.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

23. Instructions, Inspections and Audits

23.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable law where the Site is located.

23.2 The Contractor shall permit the Bank to inspect their accounts, records and other documents relating to the submission of Bids and Contract execution and to have them audited by persons appointed by the Bank. The Contractor shall maintain all documents and records related to the Bank-financed project for seven (7) years after completion of the work. The Contractor shall deliver any document necessary for the investigation of allegations of Prohibited Practices and require to employees or agents with knowledge of the Bank-financed project to respond to questions from the Bank.

24. Disputes

24.1 If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Technical Adjudicator within fourteen (14) days of the notification of the Project Manager's decision.

25. Procedure for Disputes

25.1 The Technical Adjudicator shall give a decision in writing within twenty-eight (28) days of receipt of a notification of a dispute.

25.2 The Technical Adjudicator shall be paid by the hour at the rate **specified in the BDS** and **PCC**, together with reimbursable expenses of the types specified **in the PCC**, and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Technical Adjudicator. Either party may refer a decision of the Technical Adjudicator to an Arbitrator within twenty-eight (28) days of the Technical Adjudicator's written decision. If neither party refers the dispute to arbitration within the above twenty-eight (28) days, the Technical Adjudicator's decision shall be final and binding.

25.3 The arbitration shall be conducted in accordance with the arbitration procedures published by the institution named and, in the place, specified **in the PCC.**

26. Replacement of Technical Adjudicator

26.1 Should the Technical Adjudicator resign or die or should the Employer and the Contractor agree that the Technical Adjudicator is not functioning in accordance with the provisions of the Contract, a new Technical Adjudicator shall be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within thirty (30) days, the Technical Adjudicator shall be designated by the Appointing Authority **designated in the PCC** at the request of either party, within fourteen (14) days of receipt of such request.

Time Control

27. Program

27.1 Within the time **stated in the PCC**, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works.

27.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities.

27.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period **stated in the PCC.** If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount **stated in the PCC** from the next Payment Certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.

27.4 The Project Manager's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program

and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events.

28. Extension of the Intended Completion Date

28.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost.

28.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within twenty-one (21) days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

29. Acceleration

29.1 When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Contractor.

29.2 If the Contractor's priced proposals for an acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation.

30. Delays Ordered by the Project Manager

30.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

31. Management Meetings

31.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure stated in GCC Clause 32.

31.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

32. Early Warning

32.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may

adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible.

32.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

C. Quality Control

33. Identifying Defects

33.1 The Project Manager shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect.

34. Tests

34.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event.

35. Correction of Defects

35.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is **defined in the PCC.** The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

35.2 Every time notice of a Defect is given the Contractor shall correct the notified Defect within the length of time specified by the Project Manager's notice.

36. Uncorrected Defects

36.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager's notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount.

D. Cost Control

37. Bill of Quantities[2]

37.1 The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.

37.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

38. Changes in the Quantities[3]

38.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 1 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change.

38.2 The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Employer.

38.3 If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

39. Variations

39.1 All Variations shall be included in updated Programs[4] produced by the Contractor.

40. Payments for Variations and Value Engineering

40.1 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager, before the Variation is ordered.

40.2 If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in GCC Sub-Clause 38.1 or the timing of its execution do not cause the cost per unit of quantity to

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[2] In lump sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule," and replace GCC Sub-Clauses 37.1 and 37.2, as follows:

"37.1 The Contractor shall provide updated Activity Schedule within fourteen (14) days of being instructed to by the Project Manager. The activities on the Activity Schedule shall be coordinated with the activities on the Program.

37.2 The Contractor shall show delivery of Materials to the Site separately on the Activity Schedule if payment for Materials on Site shall be made separately."

[3] In lump sum contracts, delete "Bill of Quantities" and replace with "Activity Schedule", and replace entire GCC Clause 38 with new GCC Sub-Clause 38.1, as follows:

"38.1 The Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule".

[4] In lump sum contracts, add "and Activity Schedules" after "Programs".

change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.[5]

40.3 If the Contractor's quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager's own forecast of the effects of the Variation on the Contractor's costs.

40.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given, and the Variation shall be treated as a Compensation Event.

40.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

40.6 **Value Engineering**: The Contractor may prepare, at its own cost, a value engineering proposal at any time during the performance of the contract. The value engineering proposal shall, at a minimum, include the following;

the proposed change(s), and a description of the difference to the existing contract requirements;

a full cost/benefit analysis of the proposed change(s) including a description and estimate of costs (including life cycle costs) the Employer may incur in implementing the value engineering proposal;

a description of any effect (s) of the change on performance/functionality; and

a description of the proposed work to be performed, a schedule for its execution, and sufficient information from the ASSS obligations to allow an assessment of ASSS risks and impacts.

The Employer may accept the value engineering proposal if the proposal demonstrates benefits that:

(a) accelerate the contract completion period; or

(b) reduce the Contract Price or the life cycle costs to the Employer; or

[5] In lump sum contracts, delete this Sub-Clause.

(c) improve the quality, efficiency, safety or sustainability of the Facilities; or

(d) yield any other benefits to the Employer,

without compromising the functionality of the Works.

If the value engineering proposal is approved by the Employer and results in:

(i) a reduction of the Contract Price; the amount to be paid to the Contractor shall be the percentage specified **in the PCC** of the reduction in the Contract Price; or

(ii) an increase in the Contract Price; but results in a reduction in life cycle costs due to any benefit described in (a) to (d) above, the amount to be paid to the Contractor shall be the full increase in the Contract Price

41. Cash Flow Forecasts

41.1 When the Program[6] is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates.

42. Payment Certificates

42.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously by the Project Manager according to GCC Sub-Clause 42.2.

42.2 The Project Manager shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

42.3 The value of work executed shall be determined by the Project Manager.

42.4 The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities that have been completed.[7]

42.5 The value of work executed shall include the valuation of Variations and Compensation Events.

42.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

[6] In lump sum contracts, add "or Activity Schedule" after "Program".

[7] In lump sum contracts, replace this Sub-Clause with the following:
"42.4 The value of work executed shall comprise the value of completed activities in the Activity Schedule".

42.7 If the Contractor was, or is, failing to perform any ESHS obligations or work under the Contract, the value of this work or obligation, as determined by the Project Manager, may be withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the Project Manager, may be withheld until rectification or replacement has been completed. Failure to perform includes, but is not limited to the following:

failure to comply with any ESHS obligations or work described in the Specifications and Performance Requirements which may include working outside site boundaries, excessive dust, failure to keep public roads in a safe usable condition, damage to offsite vegetation, pollution of water courses from oils or sedimentation, contamination of land e.g., from oils, human waste, damage to archeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion;

failure to regularly review C-ESMP and/or update it in a timely manner to address emerging ESHS issues, or anticipated risks or impacts;

failure to implement the C-ESMP e.g., failure to provide required training or sensitization;

failure to have appropriate consents/permits prior to undertaking Works or related activities;

failure to implement remediation as instructed by the Project Manager within the specified timeframe (e.g., remediation addressing non-compliance(s).

43. Payments

43.1 Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 28 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made.

43.2 If an amount certified is increased in a later certificate or as a result of an award by the Technical Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

43.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price.

43.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

44. Compensation Events

44.1 The following shall be Compensation Events:

(a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to GCC Sub-Clause 21.1.

(b) The Employer modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.

(c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.

(d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects

(e) The Project Manager unreasonably does not approve a subcontract to be let.

(f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.

(g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.

(h) Other contractors, public authorities, utilities, or the Employer do not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.

(i) The advance payment is delayed.

(j) The effects on the Contractor of any of the Employer's Risks.

(k) The Project Manager unreasonably delays issuing a Certificate of Completion.

44.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion

Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.

44.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager's own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event.

44.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor's not having given early warning or not having cooperated with the Project Manager.

45. Tax

45.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date twenty-eight (28) days before the submission of bids for the Contract and the date of the last Completion Certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC Clause 47.

46. Currencies

46.1 Where payments are made in currencies other than the currency of the Employer's country **specified in the PCC,** the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Contractor's Bid.

47. Price Adjustment

N/A

48. Retention

48.1 The Employer shall retain from each payment due to the Contractor the proportion **stated in the PCC** until Completion of the whole of the Works.

48.2 On completion of the whole of the Works and the Project Manager certification of completion of the works according to GCC Sub-Clause 55.1, half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed, and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected.

48.3 On completion of the whole Works, the Contractor may substitute retention money with an "on demand" Bank Guarantee.

49. Liquidated Damages

49.1 The Contractor shall pay liquidated damages to the Employer at the rate per day **stated in the PCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount **defined in the PCC.** The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

49.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next Payment Certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC Sub-Clause 43.1.

50. Bonus

N/A

51. Advance Payment

The Employer shall make advance payment to the Contractor of the amounts **stated in the PCC** by the date **stated in the PCC,** against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The Guarantee shall remain effective until the advance **payment** has been repaid, but the amount of the Guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment.

The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages.

52. Securities

52.1 The Performance Security, and if so, **specified in the PCC** an ESHS Performance Security, shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount **specified in the PCC**, by a bank or surety

acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date twenty-eight (28) days later than the date of issue of the Certificate of Completion in the case of a Bank Guarantee, and until one year later than the date of issue of the Certificate of Completion in the case of a Performance Bond.

53. Daywork

53.1 If applicable, the Daywork rates in the Contractor's Bid shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way.

53.2 All work to be paid for as Daywork shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within two days of the work being done.

53.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms mentioned in GCC Sub-Clause 53.2.

54. Cost of Repairs

54.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Commencement Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. Finishing the Contract

55. Completion

55.1 The Contractor shall request the Project Manager to issue a Certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the work is completed.

56. Taking Over

56.1 The Employer shall take over the Site and the Works within seven (7) days of the Project Manager's issuing a Certificate of Completion.

57. Final Statement

57.1 The Contractor shall supply the Project Manager with a detailed statement of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within fifty-six (56) days of receiving the Contractor's statement if it is correct and complete. If it is not, the Project Manager shall issue within fifty-six (56) days a schedule that states the scope of the corrections or additions that are necessary. If the Final statement is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a Payment Certificate.

58. Operation Service Manuals

58.1 If "as built" Drawings and/or Operation Service manuals are required, the Contractor shall supply them by the dates **stated in the PCC.**

58.2 If the Contractor does not supply the Drawings and/or manuals by the dates **stated in the PCC,** or they do not receive the Project Manager's approval, the Project Manager shall withhold the amount **stated in the PCC** from payments due to the Contractor.

59. Termination

59.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

59.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:

(a) the Contractor suspends Works for twenty-eight (28) days when the current Program does not plan suspensions and has not either been authorized by the Project Manager;

(b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within twenty-eight (28) days;

(c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;

(d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within eighty-four (84) days of the date of the Project Manager's certificate;

(e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;

(f) the Contractor does not maintain a Security, which is required;

(g) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as **defined in the PCC**;

(h) if, as a result of the application of the Bank's sanctions procedures, the Bank and the Employer determine that the Contractor engaged, during the bidding process or in the execution of the Contract, in Fraud and Corruption or Prohibited Practices as set forth in GCC Clause 60; and

(i) if the Contractor substantially prevents the exercise of the Bank's rights to perform audits, notwithstanding the provisions of GCC Sub-Clause 60.1(f).

59.3 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC Sub-Clause 59.2 above, the Project Manager shall decide whether the breach is fundamental or not.

59.4 Notwithstanding the above, the Employer may terminate the Contract for convenience at any time.

59.5 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

60. Prohibited Practices

60.1 The Bank requires that all Borrowers (including grant Beneficiaries), Executing Agencies and Contracting Agencies, including members of its personnel, as well as all firms, entities and individuals participating in a Bank-financed activity acting as, *inter alia*, bidders, proposers, suppliers, contractors, consultants, subcontractors, sub-consultants, service providers and concessionaires (including their respective officers, employees and representatives or agents, irrespective of whether the agency is expressed or implied), adhere to the highest ethical standards, and report to the Bank[8] all suspected acts of Prohibited Practices of which they have knowledge or become aware both, during the bidding process and throughout the negotiation or execution of a contract. Prohibited Practices are: (i) corrupt practices; (ii) fraudulent practices; (iii) coercive practices; (iv) collusive practices; (v) obstructive practices; and (vi) misappropriation of funds. The Bank has established mechanisms to report allegations of Prohibited Practices. Any allegation shall be submitted to the Bank's Office of Institutional Integrity (OII) for the appropriate investigation. The Bank has also adopted Sanctions Procedures to adjudicate cases. The Bank has also entered into agreements with other International Financial Institutions (IFIs) to mutually recognize sanctions imposed by their respective sanctioning bodies.

In pursuance of the Policies for the Procurement of Goods and Works financed by the Bank, the Bank defines for the purposes of this provision, the terms set forth below:

[8] Information on how to present allegations of Prohibited Practices, the application of rules regarding investigation and sanctions process, and the agreement regulating the mutual recognition of sanctions among the IFI's are available on the Bank's website (*https://www.iadb.org/en/who-we-are/transparency/sanctions-system*).

(i) "*corrupt practice*" is the offering, giving, receiving or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

(ii) "*fraudulent practice*" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii)"*coercive practice*" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(iv)"*collusive practice*" is an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;

(v) "*obstructive practice"* is

i. destroying, falsifying, altering, or concealing of evidence material to an IDB Group investigation, or making false statements to investigators with the intent to impede an IDB Group investigation;

ii. threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to an IDB Group investigation or from pursuing the investigation, or

iii. acts intended to impede the exercise of the IDB Group's contractual rights of audit or inspection provided for under GCC Sub-Clause 60.1(f) below or access to information; and

(vi) "*misappropriation*" is the use of IDB Group financing or resources for an improper or unauthorized purpose, committed either intentionally or through reckless disregard.

If the Bank determines that at any stage of the procurement or implementation of a contract any *party that, directly or indirectly, participates or attempts to participate in an activity financed by the Bank or obtains or attempts to obtain financing for an activity financed by the Bank (including, but not limited to, borrowers, recipients of non-refundable financing, beneficiaries, offerors, suppliers, contractors, subcontractors, consultants, sub-consultants, service providers, agents, financial intermediaries, sponsors, parties to a security agreement, fund managers, obligors, issuers of securities, and recipients of investments, including the respective officers, employees, agents, affiliates and shareholders of any of the parties previously listed, as applicable)* engaged in a Prohibited Practice, the Bank may:

not finance any proposal to award a contract for works, goods, and related services financed by the Bank;

suspend disbursement of the operation if it is determined at any stage that an employee, agent or representative of the Borrower, Executing Agency or Contracting Agency has engaged in a Prohibited Practice;

declare Misprocurement and cancel, and/or accelerate repayment of the portion of a loan or grant earmarked for a contract, when there is evidence that the representative of the Borrower, or Beneficiary of a grant, has not taken the adequate remedial measures (including, *inter alia*, providing adequate notice to the Bank upon learning of the Prohibited Practice) within a time period which the Bank considers reasonable;

issue the firm, entity or individual a reprimand in the form of a formal letter of censure for its behavior;

declare that a firm, entity or individual is ineligible, either permanently or for a stated period of time, to: (i) be awarded or participate in activities financed by the Bank; and (ii) be a nominated[9] sub-consultant, subcontractor, supplier or service provider of an otherwise eligible firm being awarded a Bank-financed contract;

impose other sanctions that it deems to be appropriate, among others, the restitution of funds and of fines equivalent to the reimbursement for costs associated with investigations and proceedings contemplated in the Sanctions Procedures. Such other sanctions may be imposed in addition to or in lieu of the sanctions referred above (the "above mentioned" sanctions are reprimand and debarment/ineligibility);

extend the sanctions imposed on any individual, entity or firm that, directly or indirectly, owns or controls a sanctioned entity, is owned or controlled by a sanctioned entity or is the object of common ownership or control with a sanctioned entity, as well as to officials, employees, affiliates, representatives or agents of a sanctioned entity who also own a sanctioned entity and/or exercise control over a sanctioned entity, even if it has not been concluded that those parties directly incurred in a Prohibited Practice; and/or

refer the matter to appropriate national law enforcement authorities.

The provisions of GCC Sub-Clauses 60.1(b)(i) and (ii) shall also be applicable when such parties have been temporarily suspended to be awarded additional contracts pending a final outcome of a sanction proceeding, or otherwise.

[9] A nominated sub-consultant, subcontractor, supplier, or service provider (different names are used depending on the particular bidding document) is one which has either been: (i) included by the Bidder in its pre-qualification application or selection because it brings specific and critical experience and know-how that allow the Bidder to meet the qualification requirements for the particular selection; or (ii) appointed by the Borrower.

The imposition of any action to be taken by the Bank pursuant to the provisions referred to above may be made public.

In addition, any firm, entity or individual bidding for or participating in a Bank-financed activity including, *inter alia*, applicants, bidders, suppliers, contractors, consultants, personnel, subcontractors, sub-consultants, service providers, concessionaires, may be subject to sanctions pursuant to agreements that the Bank may have with other IFIs regarding the mutual enforcement of debarment decisions. For purposes of this Sub-Clause the term "sanction" shall mean any debarment, conditions on future contracting or any publicly disclosed action taken in response to a violation of an IFI's applicable framework for addressing allegations of Prohibited Practices.

The Bank requires applicants, bidders, suppliers and their representatives or agents, contractors, consultants, subcontractors, sub-consultants, service providers and their representatives or agents and concessionaires permit the Bank to inspect accounts, books or accounting books, records including, for example, invoices, account statements, payroll, contracts or other financial and business data, and other documents relating to the submission of proposals and contract performance as well as to have them audited by personnel appointed by the Bank, , in the event that the Bank determines it necessary. Any bidder, applicant, supplier, and their representatives or agents, contractor, consultant, personnel, subcontractor, sub-consultant, service provider and concessionaire shall fully assist the Bank with its investigation. The Bank also requires that all bidders, applicants, suppliers, and their representatives or agents, contractors, consultants, personnel, subcontractors, sub-consultants, service providers and concessionaires: (i) maintain all documents and records related to the Bank-financed activities for seven (7) years after completion of the work contemplated in the relevant contract; (ii) deliver any document necessary for the investigation of allegations of Prohibited Practices; and (iii) ensure that employees, representatives or agents of the applicants, bidders, suppliers and their representatives or agents, contractors, consultants, personnel, subcontractors, sub-consultants, service providers and concessionaires to respond to questions from Bank personnel or any properly designated investigator, agent, auditor or consultant relating to the investigation. If bidders, applicants, suppliers and their representatives or agents, contractors, consultants, personnel, subcontractors, sub-consultants, service providers or concessionaires fails to cooperate and/or comply with the Bank's request, or otherwise obstructs the investigation, the Bank, discretionally, may take appropriate action against bidders, applicants, suppliers and its agents or representatives, contractors, consultants, personnel, subcontractors, sub-consultants, service providers or concessionaires.

60.2 The Contractor represents and warrants:

that has read and understood the Bank's definition of Prohibited Practices and the applicable sanctions pursuant to the Sanctions Procedures;

that neither they nor their agents, subcontractors, subconsultants, directors, key personnel or principal shareholders have engaged in any Prohibited Practice as set forth herein during the selection, negotiation, award, or execution of this contract;

that has not misrepresented or concealed any material facts during the procurement or contract negotiation processes or during the performance of the contract;

that neither he/she nor its representatives or agents, subcontractors, sub-consultants, suppliers, directors, key personnel or principal shareholders have been declared ineligible to be awarded a contract by the Bank

that all commissions, representatives, or agents' fees, facilitating payments or revenue-sharing agreements related to the Bank-financed activities have been disclosed; and

that he/she acknowledges that the breach of any of these representations may constitute a basis for the adoption by the Bank of one or more of the measures set forth in GCC Sub-Clause 60.1(b).

61. Prohibited Activities

61.1 The Bank requires that all Borrowers (including grant Beneficiaries), implementing agencies and contracting agencies, as well as all firms, entities and individuals engaged in a Bank-financed activity and acting, inter alia, as bidders, proposers, suppliers, contractors, consultants, subcontractors, subconsultants, service providers and concessionaires, shall not knowingly participate, directly or indirectly through Financial Intermediaries, in the production, trade or use of the products and substances or activities listed in Annex I - IDB ENVIRONMENTAL AND SOCIAL EXCLUSION LIST of the Environmental and Social Policy Framework[10], which also allows the insertion of additional exclusions.

61.2 If the Bank determines that, at any stage of contract implementation, the Borrower (including grant Beneficiaries), Executing Agencies and Contracting Agencies, any firm, entity or individual engaged in a Bank-financed activity such as, but not limited to, bidders, proponents, suppliers, contractors, consultants, personnel, subcontractors, subconsultants, service providers and concessionaires used IDB resources

[10] IDB Environmental and Social Policy Framework GN-2965-23: (*https://www.iadb.org/en/who-we-are/topics/environmental-and-social-solutions/environmental-and-social-policy-framework*).

to engage in a Prohibited Activity during contract implementation, the Bank may:

(a) suspend disbursement of the operation if it is determined at any stage of the contract that IDB resources have been used to carry out a Prohibited Activity;

(b) declare Misprocurement and cancel, and/or accelerate the payment of, the portion of a loan or grant earmarked for a contract, when there is evidence that the representative of the Borrower, or grant Beneficiary, has not taken the adequate remedial measures (including, inter alia, providing adequate notice to the Bank upon learning of the Prohibited Activity) within a time period which the Bank considers reasonable;

(c) refer the matter to the appropriate law enforcement authorities.

61.3 The Bank requires that all applicants, bidders, proposers, suppliers and their representatives or agents, contractors, consultants, officers or employees, subcontractors, service providers and concessionaires permit the Bank to inspect accounts, records and other documents relating to the performance of contracts, as well as to have them audited by personnel designated by the Bank.

61.4 Applicants, bidders, proponents, suppliers and their representatives or agents, contractors, consultants, subcontractors, subconsultants, subconsultants, service providers and concessionaires shall fully assist the Bank in their monitoring and supervision.

62. Payment upon Termination

62.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as **indicated in the PCC.** Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer.

62.2 If the Contract is terminated for the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works, and less advance payments received up to the date of the certificate.

63. Property Rights

63.1 If a Contract is terminated for breach by the Employer, all the Materials at the Works Site, the Plant, the Equipment, the temporary Works, and the Works shall be considered the property of the Employer.

64. Release from Performance

64.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which a commitment was made.

65. Payment's Suspension of Bank Loan

65.1 In the event that the Bank suspends the Loan or Credit to the Employer, from which part of the payments to the Contractor are being made:

(a) The Employer is obligated to notify the Contractor of such suspension within seven (7) days of having received the Bank's suspension notice.

(b) If the Contractor has not received sums due it within the twenty-eight (28) days for payment provided for in Sub-Clause 43.1, the Contractor may immediately issue a fourteen-day (14) termination notice.

66. Eligibility

66.1 The Contractor and its Subcontractors shall have the nationality of a Bank's member country. A Contractor or Subcontractor shall be deemed to have the nationality of a country if it complies with the following requirements:

An individual is a national of a member country of the Bank if he or she meets either of the following requirements:

is a citizen of a member country; or

has established his/her domicile in a member country as a "*bona fide*" resident and is legally entitled to work in the country of domicile.

A firm is considered to have the nationality of a member country if it meets the two following requirements:

is legally constituted or incorporated under the laws of a member country of the Bank; and

more than fifty percent (50%) of the firm's capital is owned by individuals or firms from member countries of the Bank.

66.2 All members of a JVCA and all subcontractors must meet the nationality criteria set forth above.

66.3 All the Goods and Related Services to be supplied under the Contract and financed by the Bank shall have their origin in any Bank's member country. Goods have their origin in a member country of the Bank if they have been mined, grown, harvested, or produced in a member country of the Bank. A good has been produced when through manufacture, processing, or assembly another commercially recognized article results that differs substantially in its basic characteristics, function, or purpose of utility from its parts or components.

Section VII. Particular Conditions of Contract (PCC)

Number of GCC Clause	A. General
GCC 1.1(b)	The Commencement Date shall be *December 2026*
GCC 1.1(m)	The Defects Liability Period is *1 year from the Completion Date*
GCC 1.1(o)	The Employer is *The Water and Sewerage Corporation*
GCC 1.1(s)	The Intended Completion Date for the whole of the Works shall be *twelve (12) months from mobilization.*
GCC 1.1(w)	The Project Manager is *Fane Austin Project, Project Execution Unit, Water and Sewerage Corporation, 38 University Drive E., George Moss Bldg., PO Box N-3905, Nassau, N.P., The Bahamas*
GCC 1.1(y)	The Site is located at *South Bimini - Airport Road/Port Royal* and is defined in drawings.
GCC 1.1(ff)	The Works consist of Supply, install, test, and commission new water mains in South Bimini Airport Road/Port Royal.
GCC 2.2	Sectional Completions with different completion date to the completion date for the whole works are: *N/A*
GCC 2.3(i)	The following documents also form part of the Contract and shall be interpreted in the following order of priority: The Contract Agreement (Section XI), Letter of Acceptance (Section XI), Contractor's Bid (Section IV, forms filled by the Contractor in its offer), Particular Conditions of Contract (Section VII), General Conditions of Contract (Section VI), The Scope of Works (Section II), Specifications and Drawings (Sections VIII & IX),

	Annexes (XII): Management Strategies and Implementation Plans (MSIP) to manage the ESHS risks; and ESHS Conduct Code The Environmental and Social Assessment (ESA) and the Environmental and Social Management Plan (ESMP)
GCC 3.1	The language of the contract is*: English* The law that applies to the Contract is the law of *The Bahamas.*
GCC 8.1	Schedule of other contractors: N/A
GCC 9.1	Key Personnel: Pharez Darville (Project Coordinator), Fane Austin (Project Manager)
GCC 13.1	The minimum insurance amounts and deductibles shall be: (a) for loss or damage to the Works, Plant and Materials: *$2,000,000.00*. (b) for loss or damage to Equipment: *$1,000,000.00*. (c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract *$1,000,000.00*. (d) for personal injury or death: of the Contractor's employees: *$100,000.00*. of other people: *$100,000.00*.
GCC 14.1	Site Investigation Reports are: *N/A*
GCC 21.1	The Site Possession Date(s) shall be: *To be agreed at contract signing*
GCC 25.2	Fees and types of reimbursable expenses to be paid to the Technical Adjudicator: TBD
GCC 25.3	**Disputes shall be settled by arbitration in accordance with the following provisions:** 1. Selection of Arbitrators. Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three (3) arbitrators, in accordance with the following provisions: (a) If the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated

	the proceedings, either Party may apply to *the Permanent Court of Arbitration ('the PCA') in accordance with the Arbitration Act 2009 Statute Laws of the Commonwealth of The Bahamas for a list of not fewer than five (5) nominees, the PCA's selection of nominees shall come from very diverse backgrounds and include at least one Member (1-3) from the Chartered Institute of Arbitrators (CIArb) Bahamas Branch, in addition to at least one member (1-3) from the Caribbean Community and Common Market (CARICOM) and, on receipt of such list, the Parties shall alternately strike names therefrom, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, the Permanent Court of Arbitration ('the PCA'), in accordance with the Arbitration Act, Statute Laws of the Commonwealth of The Bahamas shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute. In line with appointments made by the Secretary General of the International Centre for Settlement of Investment Disputes (ICSID), Washington, D.C., and the World Bank Group's commitment to fostering and strengthening diversity and inclusion, the PCA will draw on the pool of arbitrators appointed to the ICSID Panel of Arbitrators and Conciliators by the Commonwealth of The Bahamas and by Member States who are also Members of CARICOM..* (b) If the Parties do not agree that the dispute concerns a technical matter, the Employer and the Consultant shall each appoint one (1) arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two (2) arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by *the Permanent Court of Arbitration ('the PCA') in accordance with the Arbitration Act, 2009 Statute Laws of the Commonwealth of The Bahamas, Statute Laws of the Commonwealth of The Bahamas*. (c) If, in a dispute subject to paragraph (b) above, one Party fails to appoint its arbitrator within thirty (30) days after the other Party has appointed its arbitrator, the Party which has named an arbitrator may apply to *the PCA in accordance with the Arbitration Act, 2009 Statute Laws of the Commonwealth of The Bahamas* to appoint a sole arbitrator for the matter in dispute, and the arbitrator appointed pursuant to such application shall be the sole arbitrator for that dispute. 2. Rules of Procedure. Except as otherwise stated herein, arbitration proceedings shall be conducted in accordance with the rules of procedure for

	arbitration *of the United Nations Commission on International Trade Law (UNCITRAL)* as in force on the date of this Contract. 3. Substitute Arbitrators. If for any reason an arbitrator is unable to perform his/her function, a substitute shall be appointed in the same manner as the original arbitrator. 4. Nationality and Qualifications of Arbitrators. The sole arbitrator or the third arbitrator appointed pursuant to paragraphs 1(a) through 1(c) above shall be an internationally recognized legal or technical expert with extensive experience in relation to the matter in dispute and shall not be a national of the Consultant's home country or of the home country of any of their members or Parties or of the Government's country. For the purposes of this Clause, "home country" means any of: (a) the country of incorporation of the Consultant / or of any of their members or Parties*]*; or (b) the country in which the Consultant's or any of their members' or Parties' principal place of business is located; or (c) the country of nationality of a majority of the Consultant's or of any members' or Parties' shareholders; or (d) the country of nationality of the Sub-consultants concerned, where the dispute involves a subcontract. 5. Miscellaneous. In any arbitration proceeding hereunder: (a) proceedings shall, unless otherwise agreed by the Parties, be held in *The Commonwealth of The Bahamas*; (b) the *English* language shall be the official language for all purposes; and (c) the decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.
GCC 26.1	Appointing Authority for the Technical Adjudicator: *Office of the Attorney General.*
B. Time Control	
GCC 27.1	The Contractor shall submit for approval by the Project Manager a Program for the Works within 14 days from the date of the Letter of Acceptance.
GCC 27.3	The period between Program updates is *14* days.

C. Quality Control	
GCC 35.1	The Defects Liability Period is: *365* days.
D. Cost Control	
GCC 40.1	At the end of 40.1 add after the first sentence: "The Contractor shall also provide information of any ESHS risks and impacts of the Variation."
GCC 40.6	If the Employer approves the value-engineering proposal the amount to be paid to the Contractor shall be N/A of the reduction in the Contract Price.
GCC 46.1	The currency of the Employer's country is: *Bahamian Dollars*
GCC 47.1	The Contract *is not* subject to price adjustment in accordance with GCC Clause 47
GCC 48.1	The proportion of payments retained is: *five percent (5%)*
GCC 49.1	The liquidated damages for the whole of the Works are *0.5%* per day. The maximum amount of liquidated damages for the whole of the Works is *5%* of the final Contract Price.
GCC 50.1	N/A
GCC 51.1	The Advance Payments shall be: *25%* and shall be paid to the Contractor no later than *60 days* after the contract signing.
GCC 52.1	The Performance Security will be in the form of a Performance Bond in the amount of Twenty-five Percent (25%) of the Contract Price and in the same currency(ies) of Contract Price.
E. Finishing the Contract	
GCC 58.1	The date by which operating, and maintenance manuals are required is one week before the completion date. The date by which "as built" drawings are required is four weeks after the Completion date.

GCC 58.2	The amount to be withheld for failing to produce "as built" drawings and/or Operation Service by the date required in GCC 58.1 is *2.5% of the contract sum.*
GCC 59.2(g)	The maximum number of days is: *one hundred (100) days; consistent with clause GCC 49.1 on liquidated damages.*
GCC 62.1	The percentage to apply to the value of the work not completed is *10%*

Section VIII. Specifications & Performance Requirements

Project Specifications
IDB BH-L1061 – Water Supply and Sanitation Systems Upgrade Program
Access to Potable Water Supply – South Bimini – Airport Road/Port Royal

Background

The Water and Sewerage Corporation (WSC) is responsible for the provision of potable water throughout the Commonwealth of The Bahamas. Through its effort, WSC is actively increasing its potable water service coverage throughout New Providence as well as The Family Island, to ensure that residents of the Bahamas enjoy clean, safe and reliable services.

Objectives

The **general objective** of this project is to supply, install, test, and commission new water mains in South Bimini Airport Road and Port Royal.

Scope of Work

The selected Contractor in accordance with the project documents, drawings and specifications will be responsible for the following:

- Mobilization of equipment, personnel, and materials to the site;
- Trenching and excavation for water main installation;
- Supply and installation of water mains and service laterals;
- Installation of valves, fittings, hydrants, air release valves, and other appurtenances;
- Pressure testing and disinfection of all installed mains;
- Tie-ins to existing distribution infrastructure;
- Restoration of roads, sidewalks, and other affected surfaces to their original condition or better;
- Submission of as-built drawings and final project documentation.

All trench to be backfilled daily as per WSC's technical specifications and restored to useable condition (i.e. roads made drivable, and natural ground such as grassed or bare earth verges, to a stable and tidy state suitable for normal use), final restoration to its original condition to be completed by the end of the project.

Deliverables

The contractor shall deliver the following:

- Detailed work plan and schedule;
- Weekly progress reports;
- Pressure test and disinfection certificates;
- Final report with as-built drawings (CAD and PDF format);
- Completion/Takeover certificate signed off by WSC's project manager.

Duration

The expected duration of the contract is 12 months from the date of contract signing. The contractor shall submit a detailed schedule of activities upon mobilization.

Eligibility and Qualifications

Interested bidders must meet the following criteria:

- Proven experience in water main installation projects of similar size and complexity;
- Valid contractor's license and registration with the relevant authorities;
- Qualified technical staff, including a project manager, site supervisor, and certified welders/fitters;
- Access to necessary machinery and equipment (excavators, pipe laying tools, etc.);
- Demonstrated capacity to manage safety, environmental, and traffic control plans;
- Proven experience of implementing and executing an Environmental and Social Management Plan.
- Financial and technical capacity to undertake the project.

Other requirements

The Contractor must be a citizen of one of IDB 48 member countries.

Type of Contract and Duration

- **Type of Contract:** Contractor, Lump Sum
- **Length of Contract**: 12 months

EXHIBIT "A"

WATER AND SEWERAGE CORPORATION

SPECIFICATION FOR SUPPLY AND INSTALLATION OF WATER DISTRIBUTION PIPES IN SUBDIVISIONS AND OTHER REAL ESTATE DEVELOPMENTS

A. GENERAL

A.I DESIGN

Developments shall be provided with properly designed water transmission and distribution system prepared by a Corporation approved Chartered or Registered Professional Engineer.

A.2 MATERIALS

All Pipes and fittings used for water distribution shall be Class 'C' or better and shall conform to the following AWWA Standards (latest revision):

Ductile Iron	AWWA - C100
PVC	AWWA C900 - 89

Pipes and fittings of B.S., Canadian, International Standard (ISO) or other manufacture to equivalent specification may be used where the outside diameters are equal to those of AWWA C100 pipes. Specifications and dimensional data for pipes of such manufacture shall be submitted for approval to the Water and Sewerage Corporation along with the proposal.

Prior to ordering materials the Developer shall submit to the Water and Sewerage Corporation for approval, Shop Drawings - specifications and/or relevant information for all pipes, fittings and other materials that are to be installed in the Subdivision

A.3 DUCTILE IRON PIPE

Where Ductile Iron pipe is used it shall be cement lined and in accordance with specifications AWWA-C104, C110, C111, and C151.

Where Ductile Iron Pipes are to be laid in or at the surface of brackish ground water

the pipes shall be protected with polyethylene encasement in accordance with AWWA C105, from the adverse external aggressive soil and or ground water conditions.

A.4 PVC

A.4.I JOINTS

Joints in PVC pipes shall be of the rubber-ring push-fit type, either spigot and socket, or double bell coupling.

A.4.2 SERVICE CLAMPS

Service clamps shall be of a type recommended for use with PVC pipe by PVC pipe manufacturers.

A.5 PIPE SIZES

All pipe sizes shall conform to the standard sizes used by the Water and Sewerage Corporation i.e. 2", 4", 6", 8", 10" etc.

2" diameter pipes shall be the minimum size used for distribution and their use shall be limited to:

1) Lengths not exceeding 300' if dead-ended.
2) Lengths not exceeding 600' if supplied from both ends.
3) Lengths servicing not more than 16 single family houses.

The use of the 4" diameter pipes shall be limited to:-

1) Lengths not exceeding 1,200' if dead-ended,
2) Lengths nor exceeding 2,000' if supplied both ends,

6" diameter pipes shall be the minimum size provided where the installation of fire hydrants is required.

B. INSTALLATION

B.I ALIGNMENT AND GRADE

All pipes shall be laid and maintained to the required line and gradients with fittings, valves and hydrants at the required locations.

B.2 DEPTH OF PIPES

All pipes shall be laid to such depth as will provide the minimum cover over them as follows: -

New Providence	***Family Islands***
ALL PIPE IS TO BE LAID WITH A 3’ 0’’ MINIMUM COVER	ALL PIPE IS TO BE LAID WITH A 2’ 6’’ MINIMUM COVER

B.3 TRENCHING

Trenches shall be excavated to a minimum width of 12" plus the nominal pipe diameter (6” each side), and to a depth 4" deeper than the pipe invert for 4” diameter pipe or less, and 6” for all others. The bottom of the trenches shall be properly cleaned and leveled, and selected granular material or sand provided under the pipes. The Corporation's Engineer may approve the use of alternative fine material for bedding in certain circumstances.

Bell holes shall be provided at each joint to permit proper jointing and to avoid the possibility of bridging between joints.

B.4 PIPE LAYING

Every precaution shall be taken to ensure that no foreign material enters the pipe while being laid and that rubber-rings are properly in the pipe bell.

B.5 VALVES

Gate or butterfly valves may be used and variety shall be provided where shown on the plan. Valves shall be provided on all branch mains at their junctions with principal mains. The following standards apply:

AWWA C-509 - Resilient seated gate valves for water and sewerage system.

AWWA C-504 - Rubber seated butterfly valves.

All valves must be square-nut operated, non-rising stem fitted with O-Ring seals.

All standards refer to the latest revision unless otherwise noted.

B.6 WASHOUT

Dead-end lines must be avoided where possible. Where dead-ends cannot be avoided, a wash-out shall be provided.

The outlet of a washout valve shall be placed so that no damage can occur in the valve chamber, or to the road surface, and that no flooding of private property can take place when the wash-out valve is opened.

B.7 VALVE BOXES

All buried valves shall have cast iron two- or three-piece valve boxes with cast iron covers. Valve boxes shall be provided with suitable heavy bonnets and to extend to such elevation at or slightly above the finished grade surface. The barrel shall be one- or two-piece, screw type, having 5 ¼ inch shaft. Covers shall have "WATER" cast into the top for all water mains. All valves shall have actuating nuts extended to within six inches of the top of the valve box cover.

Valve boxes shall be provided with concrete bases.

B.8 FIRE HYDRANTS AND WELLS

B.8.l Fire wells of approved Ministry of Works design shall be provided where indicated on the plans (at 800' to 1,000' apart). Where ground water levels permit, firewells shall be used except where the Corporation's Engineer considers hydrants necessary.

B.8.2 Fire hydrants must be in accordance with AWWA C502. Hydrants should have 2-2 ½" outlet nozzles and 1-4 1/2", pumper nozzle with standard hose threads. Caps must be provided on nozzles and attached by chains. A standard AWWA operating nut with O-Ring type seal is required. Hydrants should also be installed with break-away flange at base. Two operating keys shall be provided with each hydrant installed.

B.9 ANCHORAGE

Concrete anchor blocks shall be provided at all tees, bends, caps, plugs etc. to prevent reaction movements. The concrete shall be placed between solid ground and the fitting to be anchored. In conditions where modifications are necessary, alternative proposals may be made to the Corporation's Engineer for consideration.

B.10 BACKFILLING

Backfilling shall be carried out with suitable fine material in order to provide a firm and continuous support for the pipe, shall be placed by hand fully compacted; in layers not exceeding 6" thick for the first 12" over the pipe. Approved mechanical methods may be employed for backfilling the remainder of the trench.

If suitable fine material is not available in sufficient quantity from the trench, the necessary material shall be imported to complete backfilling.

Where PVC pipe is being laid, sand or other approved material shall be used for bedding and surround, and for the first 12" above the pipe. It shall be placed by hand and be fully compacted in 6" layers before the remainder of the trench is backfilled in the usual manner.

B.11 SERVICE CONNECTIONS

B.11.1 MATERIALS

Polyethylene service pipes shall be SDR 11, PC 160psi, IPS, OD-Controlled in accordance with AWWA C901 and ASTM D3035 *(See A.W.W.A. C-901, Table 5)*, and shall be compatible with Talbot Push-Fit fittings. Pipe must also bear the National Sanitation Foundation (NSF) seal for potable water.

B.11.2 CONNECTIONS

The service lines shall be connected to the mains by the insertion of corporation cocks, ferrules or angle valves of a type approved by the Corporation.

B.11.3 SIZES

A 3/4" diameter service shall be used for a single residential connection, and for serving two houses. For three or four houses a 1" diameter service line shall be used.

B.11.4 LOCATION

The service line to each lot shall terminate in a meter box with a corporation stop at a point 2'0" inside the lot boundary, 3'0" from the boundary of the adjacent lot, and with a minimum of 12" cover.

B.11.5 COVER

Service lines shall have a minimum cover of 2 feet in the carriageway and be

protected by 2" PVC ducting.

B.11.6 TESTING

(See Exhibit C)

LH/dts 31.7.96
GFL/CAG/RD 05.05.00

EXHIBIT "B"

WATER AND SEWERAGE CORPORATION

SEWERAGE REQUIREMENTS FOR SUBDIVISIONS AND OTHER DEVELOPMENTS

A. SUBMISSION REQUIREMENTS

A.1 GENERAL

Developments shall be provided with a properly designed sewage collection and disposal system prepared by a Chartered or Registered Professional Engineer.

A.2 DATA

Submission for approval shall give all data on which the design is based and shall include:

a) Statement of problem.
b) Present and future areas to be served with population data for these areas.
c) Character and quantity of sewage.
d) Character and quantity of industrial waste, if any.
e) Proposed site of disposal or treatment plant.
f) Treatment process proposed, if any, with a table listing type and capacity of all major elements.
g) Description of effluent disposal and receiving waters.

A.3 SUPPORTING DATA

In addition to the above the following documents shall be submitted:

I) Drawings of the work to be done in sufficient detail to make clear the work to be carried out. These drawings must conform to the requirements outlined in Exhibit D.

ii) Complete Specifications as necessary to supplement the drawings.

B. TECHNICAL REQUIREMENTS

B.1 COLLECTION

B.1.1. **GENERAL**

Any design that includes materials other than those recommended, grades less than the listed minimums, and any variance from accepted practice must be supported by appropriate engineering study.

B.1.2. **SEWERS**

Sewer pipes and fittings shall be PVC SDR 35 with factory bonded, resilient joints which shall attain water tightness by compression of the gasket material around the entire periphery of the pipe.

B.1.3. **LEAKAGE**

Leakage for new construction, or systems that have never been commissioned, must be zero. Leakage inward or outward from existing sewers shall not exceed 300 gallons per inch diameter per mile per day.

B.1.4. **SIZE**

The minimum allowable size of sewers other than house connections shall be eight (8) inches diameter.

B.1.5. **GRADES**

The following minimum grades be provided: -

8"	diameter sewers		0.40%
10"	"	"	0.28%
12"	"	"	0.22%
15"	"	"	0.15%
18"	"	"	0.12%
21"	"	"	0.10%
24"	"	"	0.08%

The mean velocity, when flowing full or half-full shall be not less than two (2) feet per second. The energy gradient shall be maintained through manholes.

B.1.6. **ALIGNMENT**

Sewers shall be laid with uniform slopes and alignment between manholes and on completion shall show a full circle of light when lamped between manholes.

B.1.7. **MANHOLES**

Manholes shall be installed at all changes of grade, alignment or size of sewer, at all intersections and at distances not greater than 400 feet. The minimum inside diameter of manholes shall be 48 inches.

B.1.8. **FLOW CHANNEL**

The manhole floor shall have a flow channel made to conform in shape and carrying capacity to that of the sewers.

B.1.9. **FORCE MAINS**

Force mains shall be ductile iron or PVC pressure pipe with rubber-ring, push fit joints. Minimum velocity in the force main shall be 2.5 feet per second. The following standards will apply:

Ductile Iron - AWWA C100
PVC - AWWA C900

B.2 **PUMPING**

B.2.1 **PUMPING STATION**

Sewage pumping stations shall be concrete wet well pumping station incorporating easily removable close-coupled submersible pumps.

B.2.2. **PUMPS**

Two or more pumps compatible with the standard models (FLYGT) used by the Corporation, shall be provided in each pumping station. Where only two pumps are provided each must be capable of handling twice the peak flow and be the same model and impeller size.

B.2.3. **METERING**

At all pumping stations devices for measuring sewage flows and power consumption shall be installed.

B.2.4. **POWER SUPPLY**

Approved standby power equipment or facilities to allow the quick connection of standby power equipment shall be provided at pumping stations.

B.3 TREATMENT

B.3.1. SEWAGE TREATMENT PLANTS

Provision for treatment shall be made with all new sewer installations. The degree of treatment will depend largely on local conditions, however, screening and sedimentation shall generally be the minimum degree of treatment considered for approval. Where the Water and Sewerage Corporation considers that local conditions warrant it, secondary treatment with satisfactory disposal of effluent and sludge shall be provided. Where effluent reuse is required tertiary treatment shall be provided.

B.3.2. QUALITY OF EFFLUENT

The effluent requirements shall be based on the flow, character and use of the receiving water body. The effluent from a secondary treatment plant shall, in any case satisfy the following criteria.

I) Max. 5 day B.O.D. - 20mg/l
II) Max. Total Suspended Solids - 20mg/l

It is suggested, however, that the Design Engineer consult with the Water and Sewerage Corporation, and establish the quality of effluent required in each particular case, prior to development of the design of detailed plans.

B.3.3. DISPOSAL OF EFFLUENT

Disposal of effluent must be via a deep disposal well or another approved method. All disposal wells must be constructed in accordance with the Corporation's Disposal Well Technical Specifications.

B.3.4. TYPE OF PLANT

Careful consideration shall be given to the selection of treatment plant. Only plant and treatment methods, which have been thoroughly tested in full-scale plant conditions under competent supervision, will be considered for approval.

For the introduction of new technologies, the Design Engineer shall give a breakdown of the estimated operating costs and shall indicate the number and calibre of operators and supervisors required for the efficient operation of the plant.

B.3.5. HYDRAULIC LOADING

Since the design of different elements in a treatment plant is based on different rates of flow, the Design Engineer shall specify the particular flow rate used in the design of the various components.

B.3.6. SITE SELECTION

Sufficient area for convenient arrangement of proposed and possible future plant elements is essential. The site selected shall be as far from dwellings, offices, commercial establishments and public thoroughfares as practicable in order to guard against odor nuisance. Local preference shall be given all consideration consistent with other requirements. In subdivisions and small communities sewage treatment plants should be located not nearer than 300 feet, and preferably more distant, from inhabited buildings.

Large installations shall be carefully investigated to ensure an adequate buffer zone around the plant and the direction of prevailing winds shall be considered. Locations in areas known to be liable to flooding will not be permitted.

B.3.7. MECHANICAL EQUIPMENT

Some items of mechanical equipment shall be of a type and manufacture approved by the Water and Sewerage Corporation to ensure standardization.

B.3.8. BY PASSES & DRAINS

Suitable by-pass lines or other satisfactory emergency routing in case of multiple units, shall be provided so that each plant unit can be removed from service independently. Each unit shall be provided with dewatering means, and pressure relief devices shall be provided wherever needed.

B.3.9. CONSTRUCTION MATERIALS

The selection of materials, particularly metals and paints, shall be given careful consideration due to the common presence of hydrogen sulphide and other corrosive gases, greases, oils and similar constituents usually present in sewage. The particularly corrosive ground conditions in the Bahamas shall also be considered. Paints containing lead shall be avoided in sewage works.

B.3.10. **OPERATING EQUIPMENT**

The specifications shall provide for equipping the plant with a complete set of tools and accessories for the plant operators use, such as wrenches, valve keys, rakes, shovels, water hose, ladders, etc.. Storage space and workbench shall also be provided if required by the Corporation.

B.3.11. **LANDSCAPING**

Upon completion of construction the ground shall be graded and landscaped to the satisfaction of the Water and Sewerage Corporation.

B.3.12. **EMERGENCY POWER**

A standby power source shall be provided where power failure may reasonably be expected to cause discharge of raw or partially treated sewage endangering public health or causing serious damage.

B.3.13. **SANITARY FACILITIES**

Sanitary facilities such as toilet, shower, and lavatory shall be provided for the use of operators if required by the Corporation.

B.3.14. **FLOW MEASUREMENTS**

Facilities for measuring treatment plant influent and effluent shall be provided in all plants. Meters to determine instantaneous rates and total flow volumes as well as recording devices shall be installed if required by the Corporation.

B.3.15. **SPARES**

Spares shall be provided for all items of plant as recommended by the Manufacturer and where deemed necessary for the continued operation of the plant.

B.3.16. **LABORATORY EQUIPMENT**

Laboratory equipment shall be provided to carry out the following tests:

1. Chlorine Residual
2. Ph
3. Settleable Solids
4. Suspended Solids

5. Total Solids
6. Dissolved Oxygen

B.3.17. AS-BUILT PLANS

The designer shall be engaged to prepare as-built drawings which shall be available for viewing during construction and submitted to the Water and Sewerage Corporation within seven (7) days of project completion. Final inspections and approvals will not be granted without the same

B.3.18. CONSTRUCTION & INSTALLATION

All construction works shall be carried out by competent contractors experienced in the construction of sewerage works and all machinery installation shall be supervised, tested and/or certified by the manufacturer's representative.

B.3.19. INSPECTION AND TESTING

All works shall be open to inspection by the Water and Sewerage Corporation Engineers throughout construction. Final testing of all elements and commissioning of the plant shall be carried out in the presence of and to the satisfaction of the Water and Sewerage Corporation.

:mvc
20.12.95

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05.05.00

EXHIBIT "C"

WATER AND SEWERAGE CORPORATION

TESTING PROCEDURES

A. WATER DISTRIBUTION PIPES

HYRDOSTATIC (PRESSURE) TEST

1. Service lines shall be shown to be free from leaks before backfilling is carried out and on completion of the work the Corporation cock at the main shall be left in the open position.

2. All mains shall be tested to a minimum of 100 psi and shall maintain the test pressure (zero drop) for not less than two (2) hours. Should the main not maintain the test pressure for at least two (2) hours, then all leaks must be located and repaired, and the main retested.

3. *Pressurization of Water Main:* The hydrostatic test pressure should be a minimum of 100 psi. Each valved section of pipe shall be slowly filled with water to the specified test pressure, based on the elevation of the highest point of the line or section under test and corrected to the elevation of the test gauge. Test pressure shall not exceed the rated pressure of the valves when the pressure boundary of the test section includes closed, resilient seated gate valves or butterfly valves (maximum 150 psi.)

4. Notices (written) for all testing are to be received and confirmed, within 48 hours (96 hours for Family Islands), and of proposed test, and are to be confirmed by the Corporation. All test are to start within 15 minutes of the agreed time.

5. The following requirements also apply:
   (i) Guages are to be a maximum of 150 to 200 psi. (oil filled) and graduated in a maximum of 2 psi. increments.
   (ii) A minimum of 2 guages are required for all sections. Sections longer than 1,000 feet should have a minimum of one gauge per 1000feet or any part thereof.
   (iii) Road base course and survey/lot markers must be in place prior to commencing.

6. If further construction works are believed to have affected the integrity of a previously tested section, that section shall be re-tested at the Developer's expense in accordance with the procedure outlined above.

DISINFECTION (BACTERIOLOGICAL TEST)

7. The water mains must be disinfected after passing the hydrostatic test. Water from the existing distribution system must be used to fill the water main. At a point not more than 10 ft downstream from the beginning of the new water main, a dose of chlorine feed must be provided such that the water will not have less than 25 mg/l free chlorine.

8. The main must be super-chlorinated for a period not less than 24 hours. After 24 hours the line must be flushed with water from the existing water distribution system until such time as the concentration in the water leaving the main is not higher than what is acceptable for domestic use.

9. After the line is flushed samples must be collected by the Environmental Health Public Analyst Lab and, the Water and Sewerage Corporation Lab personnel, at points decided by the Corporation and the Engineer-of-Record. The samples shall be tested for bacteriological quality, and shall show the absence of coliform organisms.

10. The water used for bacteriological testing must be metered and the cost of the connection and water borne by the developer. For smaller systems, the Corporation will complete the chlorination and bacteriological testing as a part of the water distribution system tie-in.

B. SEWERAGE SYSTEM TESTING

SEWER ALIGNMENT TEST

1. Sewers when lamped between manholes must show a full circle of light. During the test, manholes will be inspected for evidence of dampness, proper benching and channel sweeps, internal painting, and other features.

INFILTRATION-EXFILTRATION TESTING

2. *Infiltration:* Where the water table is above the top of the sewer, and there is evidence of possible leakage during the lamp test and inspection of the manholes, an infiltration test is required.

3. *Exfiltration:* An exfiltration test is required for all sewers where the water table is below the invert. The test would be conducted by an air pressure or water test. The sections between each manhole should be closed with a rubber stopper and that section filled with air to approximate 5 psi. The line should maintain the gauge pressure for 30 minutes. Alternatively, isolated sections can be filled with water and the level in the manhole checked over a –hour period.

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GFL/CAG/RD 5/4/2000

EXHIBIT “D”

WATER AND SEWERAGE CORPORATION

GUIDELINES FOR PREPARATION OF WATER AND SEWER DESIGN AND AS-BUILT DRAWINGS

PART I.

DESIGN DRAWINGS:

A. GENERAL

The following drawings are required:-

1. **Cover Sheet**: This must include:-

   I. An easily understood location plan.
   II. Name and address of subdivision including name of island on which the subdivision is located.
   III. The Engineer-of-Record name and address.
   IV. A listing of all drawings attached and their respective page numbers.

2. **System Layout**: A layout plan of the complete water and sewerage system for the subdivision must be included. If phasing is proposed, the boundaries of each phase should be clearly indicated and a listing of the lots provided for each phase

3. **Sectional Layout/Profile Drawings:** The latter is only necessary where sewers are to be installed.

4. **Standard Details:** water (valve, trench, hydrant, washout, service connections, etc) and sewerage (manhole, laterals, etc.) system details must be included.

5. **Sewerage:** the following must be included;
   - ***Lift Station****:* Design calculations, pump selection/specification data, plan/elevation and, control panel wiring and components (see Attachment A) must be attached/included.

- ***Treatment/Disposal****:* Design calculations, specifications, plan/elevation, phasing (if applicable) must be attached/included

6. Each sheet must be stamped, signed and dated by a WSC approved Professional Engineer

7. Each sheet submitted must be clearly numbered and caption block information included indicating sheet title.

Note: *If the Detailed Design Drawings are manually prepared, the writing must be legible.*

B. SYSTEM LAYOUT DRAWING

GENERAL

1. If possible, this drawing should be on one (1) sheet. However, an acceptable scale to allow for easy reading must be used *(i.e. no less than 1in = 200ft.)*

2. All lots should be numbered and all streets/roads labeled.

3. Direction/north arrow must be shown.

4. If phasing is proposed, the boundaries of each phase must be clearly indicated and a listing of the lots for each phase provided. The following should also be noted with respect to phasing:-

   I. At a minimum, a Lift Station (LS) with screening basket, and disposal well must be included in phase one to accommodate the sewage flows. This disposal well, even if intended for temporary use, must meet all WSC technical specifications for disposal wells.

   II. If the installation of the WWTP will be phased, the phasing details must be submitted with the Detailed Design.

5. The access road(s) to the subdivision must be included.

6. If any property easements are required, including for the placement of AN LS, this must be clearly stated and all dimensions given. (***Note****: The conveyance of the easements to the Corporation at the Developer's expense will be required.)*

WATER SYSTEM

7. All water mains [transmission & distribution] must be shown. These mains must be labeled inclusive of pipe diameter, type and specification *(6" PVC C-900)*. The pipe sizing must be in accordance with WSC's Exhibit "A" and all other applicable technical specifications [AWWA, etc.].

8. All valves (i.e. GV, BFV, ARV etc) must be shown (MJ valves are preferred).

9. All fire wells, hydrants and wash-outs must be shown:-

   I. Hydrants and wash-outs must be shown connected to the water distribution system.

   II. Each dead-end must have an above ground wash-out.

   III. Hydrants/Fire-wells should be placed within 800' to 1000' of each other.

   IV. Fire-wells should be used where ground water levels permit

SEWER SYSTEM

10. ***Gravity Sewers****:* The gravity sewers must be shown and labeled inclusive of pipe diameter, type and specification *(8" PVC SDR 35).*

11. ***Flow Direction****:* The direction of sewage flow through each segment of the gravity system must be indicated using direction arrows.

12. ***Manholes****:* All manholes must be shown and labeled using either numbers or letters:-

    I. Terminal inspection/clean-outs will not be accepted.

    II. The maximum allowable spacing is 400-feet.

    III. Whatever there is a change in direction of sewer flow, a manhole must be used; bends are not allowed.

    IV. Changes in flow direction of more than 90^0 are not allowed

13. *Lift Stations*: must be shown and labeled using either numbers or letters.

14. *Force Mains:* must be shown and labeled inclusive of pipe diameter, type and specification *(8" PVC C-900)*

    I. The termination point [manhole, disposal well, WWTP] of the force main must be clearly shown.

    II. Force mains should not terminate into shallow manholes [5'-0" or less].

    III. Force mains should run in the verge on the opposite side of the road with respect to the water main.

WASTEWATER TREATMENT FACILITY (WWTP)

15. The location of the WWTP facility must be shown on the layout plan. The site should be located to minimize odor nuisance with a minimum 150' buffer to the nearest residence.

16. If an existing/proposed WWTP is nearby (i.e. within ½ mile) sewage should be pumped to the existing/proposed. This is contingent on:-

    I. The capacity of the existing plant, its operational condition and other factors.

    II. The installation schedule of the proposed plant, its capacity, and other factors.

LATERALS

17. Water service and sewer laterals must be;
    - shown for each lot;
    - located near to, and on opposite sides of, the property boundary;
    - *(for sewers)* connected to the gravity sewer not a manhole, and;
    - *(for commercial or multi-family lots)* appropriately sized.

C. SECTIONAL LAYOUT/PROFILE DRAWING

SECTIONAL LAYOUT

1. **North arrow** must be shown.

2. Clearly labeled **match lines** must be used.

3. The **lot numbering and street/road labeling system** must be consistent with overall layout plan must be used.

4. **All water and sewerage systems** shown on the layout drawing must be shown on the sectional drawings. The following additional are required:-

   I. *Sewer:* The slope and length of the gravity sewer must be indicated (***Note:*** *The slopes used must be in accordance with WSC's Exhibit "B" unless satisfactory engineering justification is provided and approved by WSC.)*

   II. *Manhole:* The rim and invert levels, and the invert directions *(i.e. N, S, NE, SW etc.)* must be included.

PROFILE DRAWINGS

5. ***Manhole:***
   - the rim and invert levels, invert directions and station numbering must be indicated.
   - a minimum of elevation change of 0.1 feet must be maintained for any change in direction of flow through a manhole.
   - *Drop Manholes:* invert levels must be shown for both inlets.

6. ***Sewer:***
   - must be shown in profile
   - the labeling criteria outlined above under Item C 4(I) must be used
   - profiles must be included for short gravity sewer segments between manholes and liftstations.
   - 3-foot minimum pipe depth for the gravity sewer must be maintained **throughout** the system.

7. ***Water:*** It is not required that the water main be shown in profile unless it crosses a sewer. *(**Note:** An **18" vertical** and a **10ft horizontal** separation must be maintained between water and sewer lines unless satisfactory engineering justification is provided and approved by WSC.)*

8. The **ground level** shown must be the proposed finish asphalt surface level.

D. LIFTSTATION CALCULATIONS *(to be attached/included)*

1. ***Design Data***:-

- No. of contributory lots
- Estimated no. of persons/lot *(typically 4-6 persons)*

2. ***Flows****:*

    - Average Daily Inflow (ADF) *(typically based on 50gallons per person per day*)
    - Peak Flow (PF) *(typically PF = 2 x ADF)*
    - Design Flow (DF) *(typically DF = 2 x PF or 4 x ADF)*

3. ***LS Effective Volume****:* In the calculation of the minimum volume, the internal diameter of the wet well must be indicated. Using the calculated minimum volume, the operating range should be determined and stated and the; (i) Pump on and off inverts, and; (ii) high level alarm invert, shown.

4. ***System Curve****:*

    - present design data (ie flow, force main diameter and length, static head and friction factor) and calculations (ie friction losses, and total head) in tabular form
    - plot on the pump curve from the ITT Flygt manual and indicate **operating point**

5. ***Pump Operation:***

    - Effective Volume: indicate LS diameter, volume per foot, and calculate.
    - Using the operating point and the PF, calculate the pump -on and -off time. The following criteria must be met:-
        I. Cycle Time 6 - 10 Mins.
        II. No. of starts/hour 6 – 10

    The effective volume should be adjusted to ensure the above criteria are satisfied. Also calculate cycle time using ADF instead of PF.

E. STANDARD DETAILS

Please use the Corporation's Standard Detail Sheets as a guide in the preparation of Standard Details for the Design Drawings. These sheets include:-

- Standard Water Details
- Standard Sewer Details

- Standard Liftstation Details

PART II

AS-BUILT DRAWINGS:

A. REFERENCE POINTS: (Please use one or more of the following particularly (1) and (2)).

1. B.E.C and or BATELCO Poles and Chambers numbered. (If no numbering exist, create numbering system).

2. Center Line (CL) of existing roadways.

3. Establish a permanent W&SC Marker (i.e. CON. PAD)

4. Control Survey Markers (CSM) numbered

5. Permanent Concrete Structure

B. INFORMATION REQUIRED: (Relative to reference points using horizontal/perpendicular offset distance)

1. Pipe location (size and type).

2. Service connections

3. Valves (including Air Release Valves)

4. Branches, Junctions, Hydrants, Wash-outs, etc.

5. Fitting used at each detail (item c and d).

C. METHOD:

1. Establish starting point from road CL (for junctions CL of intersecting roads to be used and do continuous chainage.

2. Chainage and off-set from perpendicular reference points

3. Triangulation of junctions

4. North arrow (director, must be shown (approx.)

5. Specify general location of main (north, south, east, west side of road).

Sketches should note what method of reference was used. All sketches must be checked and signed by a licensed Land Surveyor or person approved by WSC in accordance with CL.2.6(a) of the Waiver Agreement. An example of the information required is attached (see Attachment B).

D. PRESENTATION

1. Main services, junctions, reference points (where scale permits) must be plotted in their general location on layout plan and profiles.

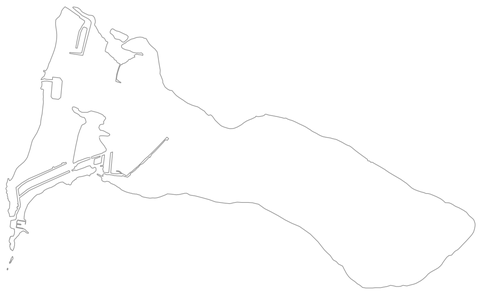
2. Size and material of main must also be shown on layout plan and profiles.

3. Cut sheets detailing reference point and offsets for main and appurtenances must be numbered and shown on layout plan.

4. Cut sheets may be tabular, diagrammatic, or a combination of both methods.

Section IX. Drawings

WATER & SEWERAGE CORPORATION



SOUTH BIMINI ISLAND



PROPOSED WATER MAINS IMPROVEMENTS

FOR

LOT 2 - PORT ROYAL MAINS EXTENSION

SOUTH BIMINI

BAHAMAS

INDEX OF SHEETS

SHEET No		SUBJECT
1	C-1	COVER SHEET
2	C-2	GENERAL LOCATION PLAN
3	P-1	LAYOUT PLAN - BIMINI COVE ROAD
4	P-2	LAYOUT PLAN - PORT ROYAL
5	P-3	LAYOUT PLAN - PORT ROYAL
6	J-1	JUNCTION DETAILS
7		JUNCTION DETAILS
8		STANDARD WATER DETAILS (WSC)

SCOPE OF WORKS - SOUTH BIMINI

WATER MAINS INSTALLATION	6" PIPE (ft.)	4" PIPE (ft.)	2" PIPE (ft.)
MAIN ROADS	40	4,531	0
SIDE STREETS (ROADS A - E)	0	13,894	0
*( ) DENOTES OPTIONAL ITEMS			
	40	18,425	0

TOTAL MAINS = 18,465 ft (3.49 mi)

TOTAL SERVICE LATERALS = 121

JUNCTION DETAILS

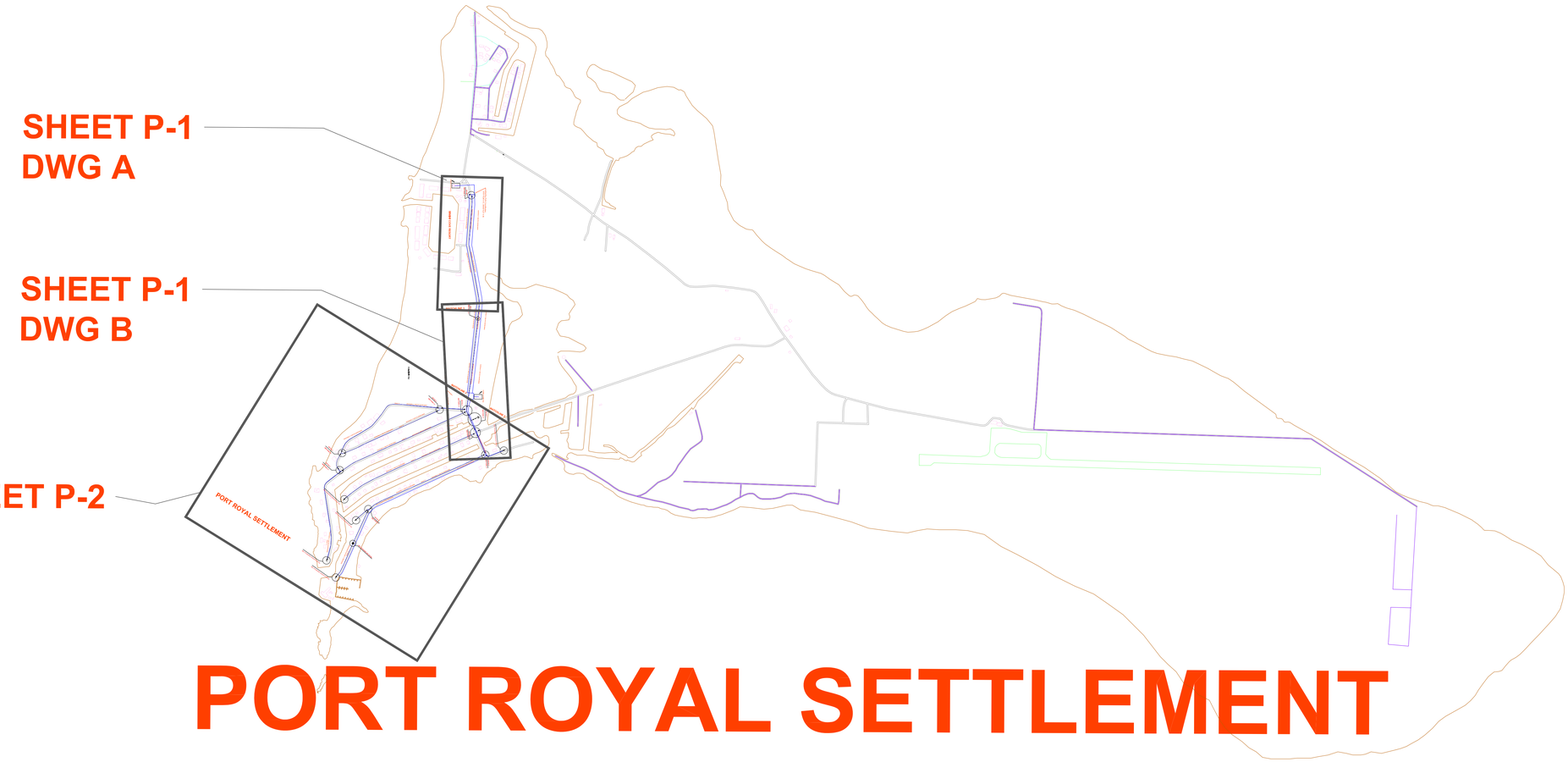
DETAIL No.	DETAIL QUANTITIES
DETAIL 1	1
DETAIL 2	1
DETAIL 3	1
DETAIL 4	1
DETAIL 5	1
DETAIL 6	5
2" STANDARD WASHOUT DETAIL	5
2" COMBINATION AIR RELEASE/VACUUM VALVE	1

PROJECT No.:

WSC JOB No.:

DATE: SEPTEMBER 2025

LOT 2 - PORT ROYAL

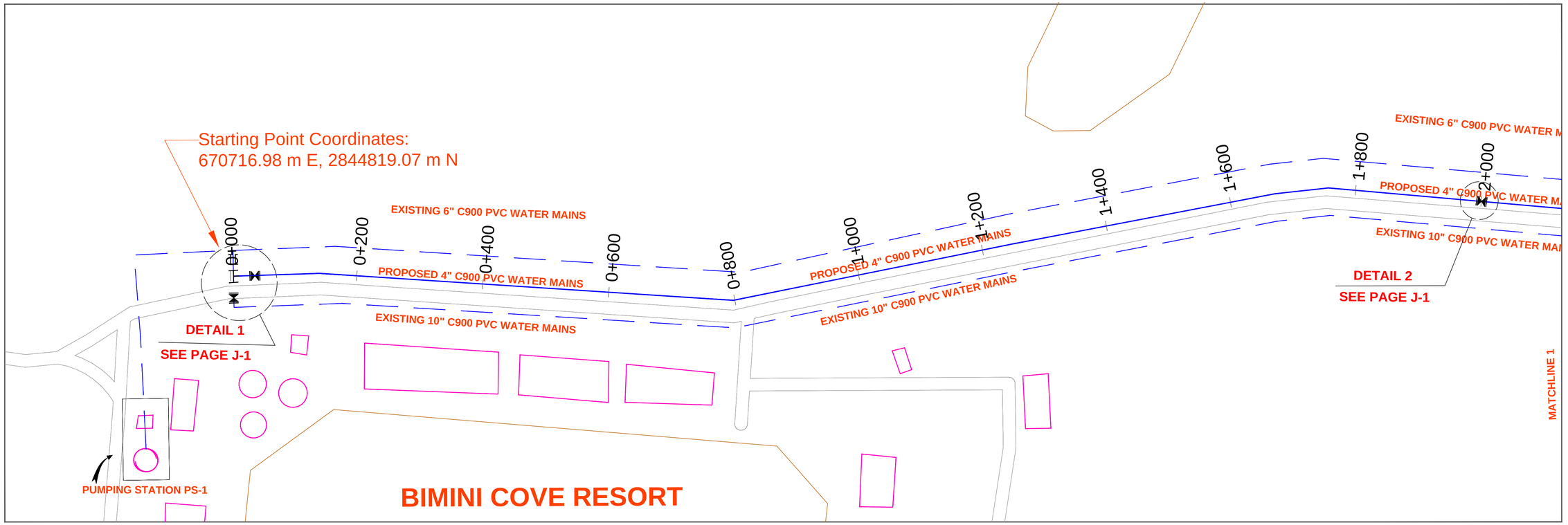


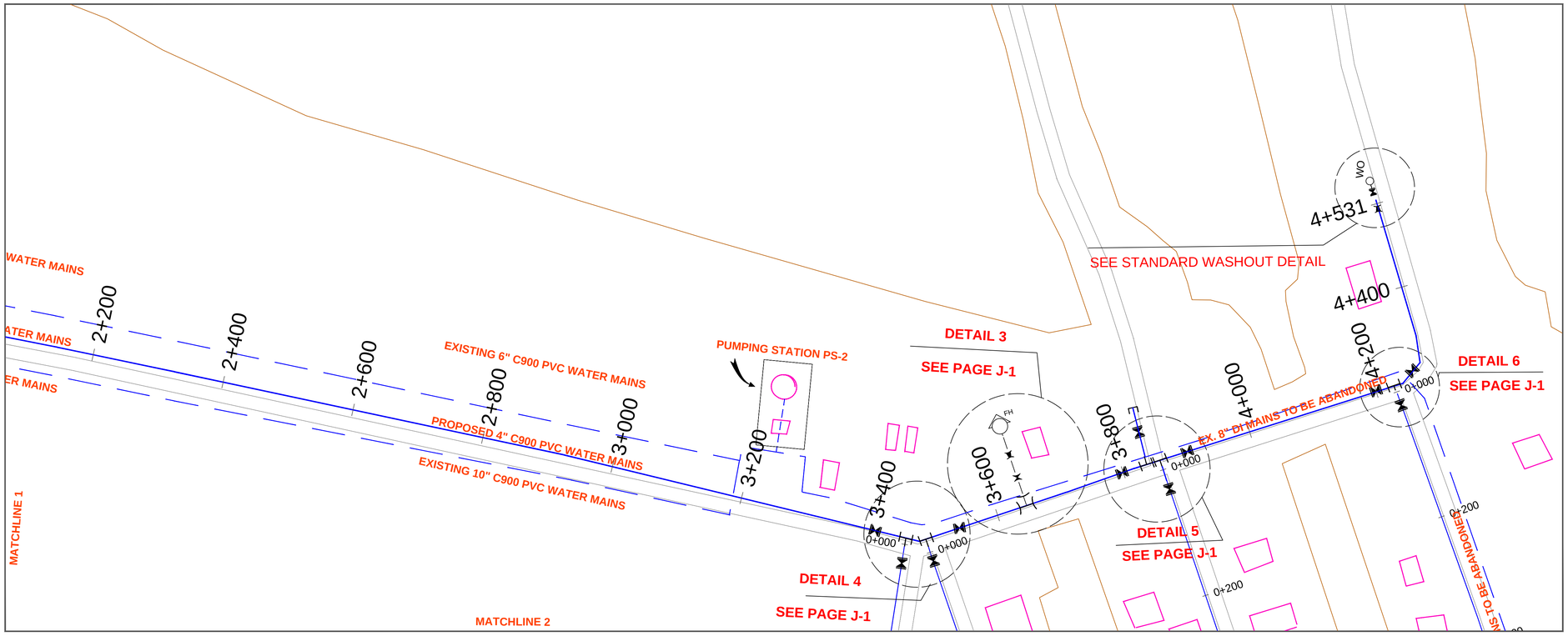
PORT ROYAL SETTLEMENT

NTS

SOUTH BIMINI WORKS

C2 - SITE LOCATION PLAN





WATER & SEWERAGE CORPORATION

#87 THOMPSON BLVD.
P.O. BOX N-3905
NASSAU, N.P. BAHAMAS

TEL: (242) 302-5500

EMAIL: wscorp@batelnet.bs

PROJECT

IDB ACCESS TO POTABLE WATER - SOUTH BIMINI
LOT 2 - PORT ROYAL MAINS EXTENSION

TITLE (S)

LAYOUT PLAN
SHEET LOCATION PLAN

SCALES: AS-NOTED

DESIGNED	KEYSHAWN WRIGHT	AUGUST 2025
Checked	FANE AUSTIN	AUGUST 2025
DRAWN	KEYSHAWN WRIGHT	AUGUST 2025
Checked	FANE AUSTIN	AUGUST 2025

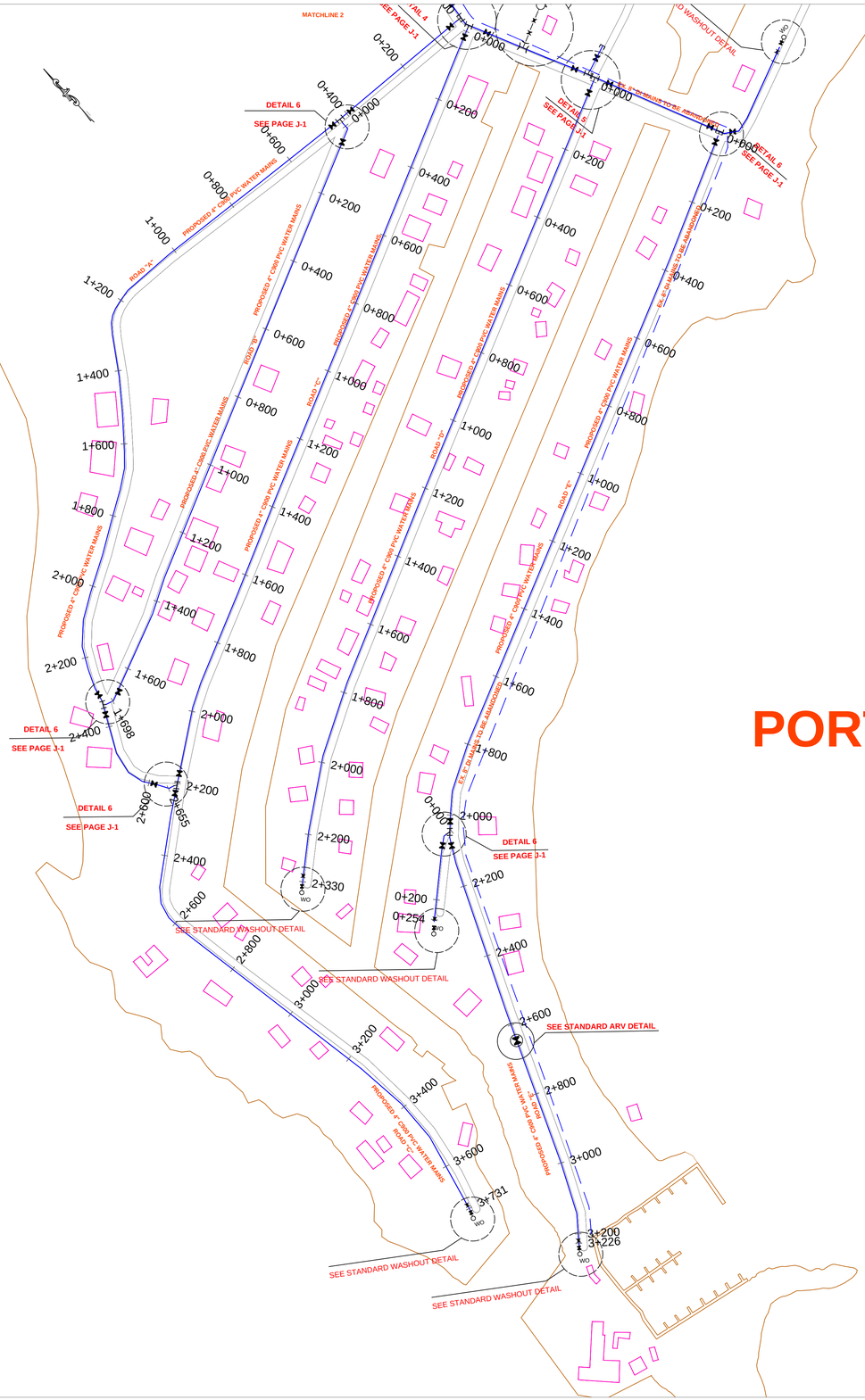
JOB NUMBER

APPROVAL

ASST. GEN. MGR. EGN. & PLANNING		
ASST. GEN. MGR. N.P. OPERATIONS		

SHEET NUMBER: P2

REV	DATE
1	23/06/2025



PORT ROYAL SETTLEMENT

WATER & SEWERAGE CORPORATION

#87 THOMPSON BLVD.
P.O. BOX N-3905
NASSAU, N.P. BAHAMAS

TEL: (242) 302-5500

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PROJECT

IDB ACCESS TO POTABLE WATER - SOUTH BIMINI
LOT 2 - PORT ROYAL MAINS EXTENSION

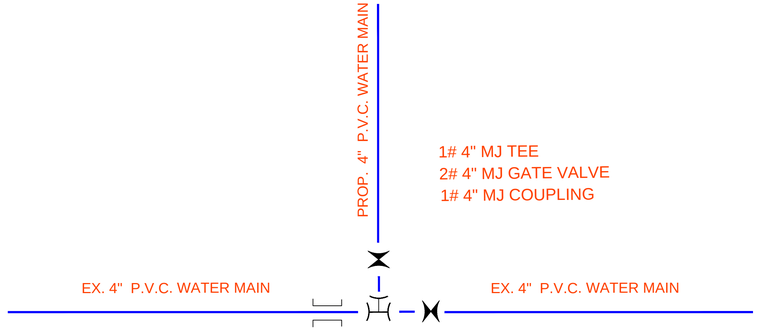
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LAYOUT PLAN SHEET LOCATION PLAN	AS-NOTED

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Checked	FANE AUSTIN	AUGUST 2025	
DRAWN	KEYSHAWN WRIGHT	AUGUST 2025	
Checked	FANE AUSTIN	AUGUST 2025	

APPROVAL		
ASST. GEN. MGR. EGN. & PLANNING		
ASST. GEN. MGR. N.P. OPERATIONS		

SHEET NUMBER: **P3**

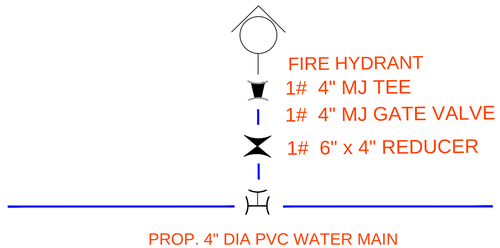
REV	DATE
1	23/06/2025



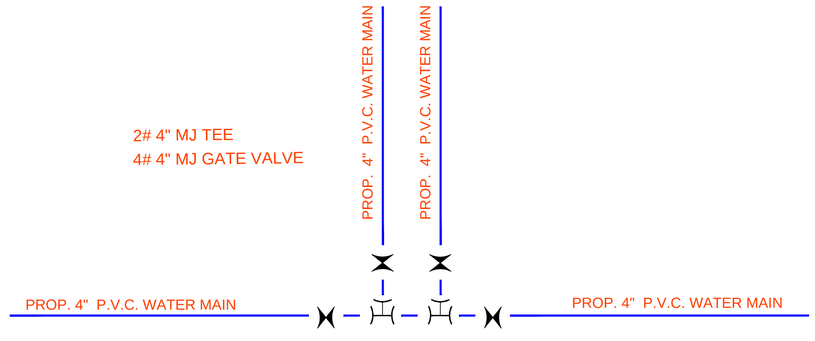
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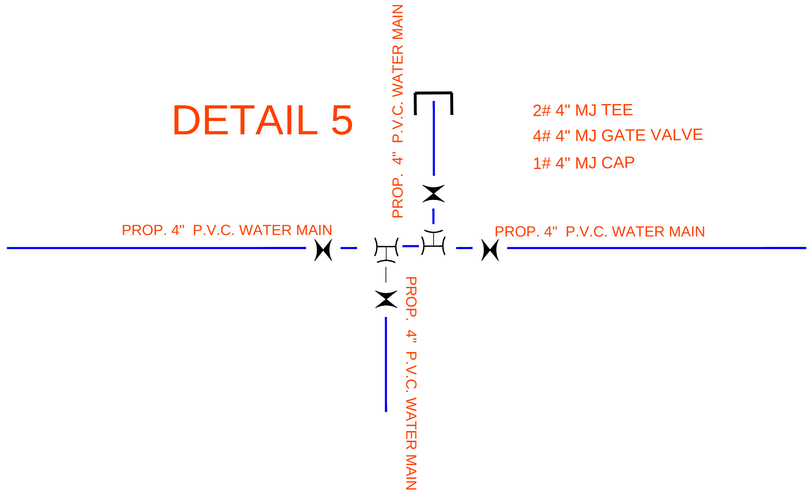
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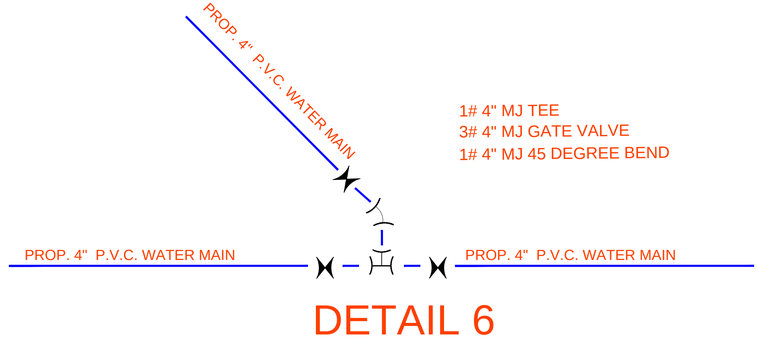
DETAIL 3



DETAIL 4



DETAIL 5



DETAIL 6

WATER & SEWERAGE CORPORATION

#87 THOMPSON BLVD.
P.O. BOX N-3905
NASSAU, N.P. BAHAMAS

TEL: (242) 302-5500

EMAIL: wscorp@batelnet.bs

PROJECT

IDB ACCESS TO POTABLE WATER - SOUTH BIMINI
LOT 2 - PORT ROYAL MAINS EXTENSION

TITLE (S)

LAYOUT PLAN
SHEET LOCATION PLAN

SCALES: AS-NOTED

DESIGNED	KEYSHAWN WRIGHT	AUGUST 2025	JOB NUMBER
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DRAWN	KEYSHAWN WRIGHT	AUGUST 2025	
Checked	FANE AUSTIN	AUGUST 2025	

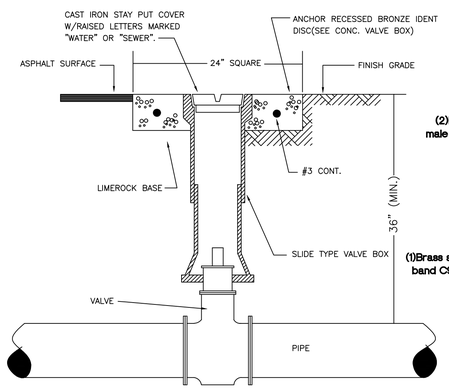
APPROVAL

ASST. GEN. MGR. EGN. & PLANNING		
ASST. GEN. MGR. N.P. OPERATIONS		

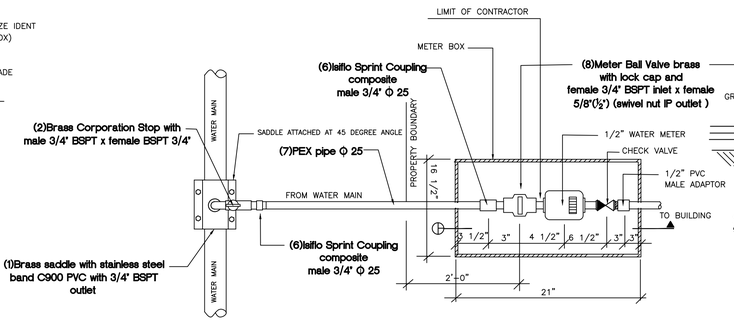
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REV: 1

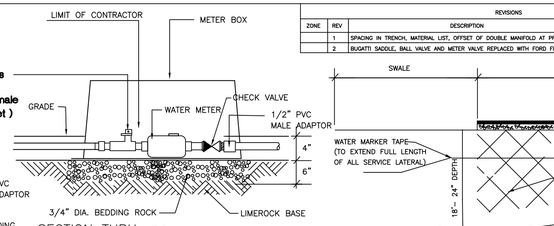
DATE: 23/06/2025



VALVE AND BOX N.T.S.



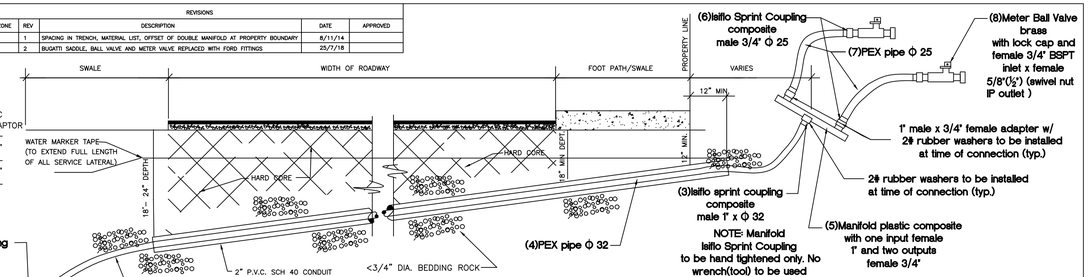
STANDARD SINGLE SERVICE CONNECTION N.T.S.



SECTION THRU N.T.S.

TYPICAL METER CONNECTION N.T.S.

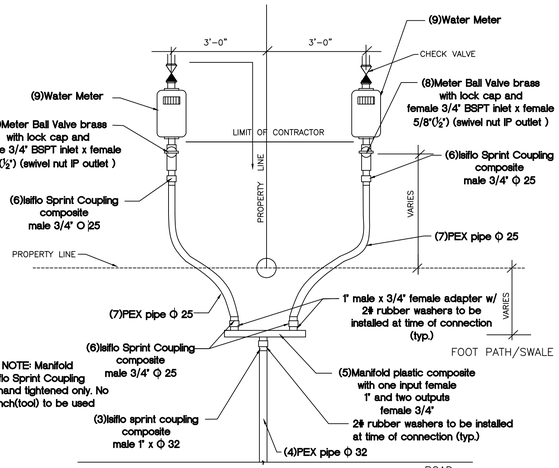
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	SPACING IN TRENCH, MATERIAL LIST, OFFSET OF DOUBLE MANIFOLD AT PROPERTY BOUNDARY	8/11/14	
	2	BUGATTI SADDLE, BALL VALVE AND METER VALVE REPLACED WITH FORD FITTINGS	25/7/18	



STANDARD (SINGLE) SERVICE DUPLEX CONNECTION (1/2" METER) N.T.S.

NOTE:

1. FOR STANDARD (SINGLE) SERVICE CONNECTION (1/2" METER) USE 3/4" PEX PIPE AND 3/4" CORRESPONDING FITTINGS
2. FOR STANDARD (SINGLE) SERVICE CONNECTION (1" METER) USE 1" PEX PIPE AND CORRESPONDING 1" FITTINGS



STANDARD DOUBLE SERVICE CONNECTION N.T.S.

NOTE– SERVICE LATERAL TESTING:

1. ALL SERVICE LATERALS INSTALLED AT THE TIME OF THE WATER MAIN INSTALLATION SHALL BE TESTED WITH WATER IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION.
2. ALL SERVICE LATERALS INSTALLED AFTER THE WATER MAIN INSTALLATION SHALL BE TESTED WITH AIR IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION. AN ACCEPTANCE WILL TAKE PLACE BY PRESSURIZING THE SERVICE LINE (WATER OR AIR) FOR AT LEAST 15 mins UP TO A PRESSURE OF 120 psi IN ORDER TO TEST THE INSTALLATION OF THE SERVICE CONNECTION AND THE WATER TIGHTNESS OF THE FITTINGS.

Number	Description	Manufacturer
1	Brass saddle with stainless steel band C900 PVC with 3/4" or 1" BSPT outlet	USA
2	Brass Corporation Stop with male 3/4" BSPT x female BSPT 3/4" or 1" BSPT x female BSPT 1"	USA
3	Iaiflo sprint coupling composite male 3/4" x Φ 25 or 1" x Φ 32	Iaiflo Raufoss, Norway
4	PEX pipe Φ 32	Golan Plastics, Israel
5	Manifold plastic composite with one input female 1" and two outputs female 3/4"	Technima Valvosanitaria, Italy
6	Iaiflo Sprint Coupling composite male 3/4" Φ 25	Iaiflo Raufoss, Norway
7	PEX pipe Φ 25 or Φ 32	Golan Plastics, Israel
8	Meter Ball Valve brass with lock cap and female 3/4" BSPT inlet x female 5/8"(½") (swivel nut BSPT outlet) or female 1" BSPT inlet x female 1" (swivel nut IP outlet)	USA
9	Water Meter	Existing Water meters

GENERAL NOTES

1. CONTRACTOR IN CHARGE SHALL CONFIRM WITH BEC, WSC, MOW, BTC AND CABLE BAHAMAS THE LOCATION OF THEIR BURIED CABLES AND UTILITIES PRIOR TO CONSTRUCTION.
2. PROPOSED WATER MAIN SHALL HAVE THE FOLLOWING:
   (a). MAIN HIGHWAY AND THROUGHFARE 3'– 0" MIN. COVER.
   (b). VERGES AND FOOTPATH 2'– 6" MIN. COVER.
3. PROPOSED SERVICE CONNECTIONS SHALL HAVE A MIN. OF 12" COVER AT PROPERTY BOUNDARY.
4. NS. #5 FR. SEWER(OLD)
5. NS. #5 FR. SEWER(OLD & NEW)
6. MEGALUG RESTRAINING GLANDS SHALL BE PLACED ON ALL MECHANICAL JOINT FITTINGS. BELL RESTAINTS SHALL BE USED IN ACCORDANCE WITH EBAA IRON INC. GUIDELINES.
7. EXACT LOCATION OF PROPOSED WATER MAINS AND SERVICE LATERALS TO BE DETERMINED ON SITE BY WSC ENGINEER.

MINISTRY OF PUBLIC WORKS SUMMARY ON PROCEDURES AND STANDARDS SPECIFICATION

CONSTRUCTION PROCEDURES

THE BACKFILL FOR THE FIRST AND SECOND STAGES SHALL BE PLACED IN 6" LAYERS (COMPACTED THICKNESS) AND SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T–99.

STAGE 1
THE CONTRACTOR SHALL PROVIDE ADEQUATE COMPACTED FILL BENEATH THE HAUNCHES OF THE UTILITY LINE/PIPE/DUCT, USING MECHANICAL TAMPS SUITABLE FOR THIS PURPOSE. THIS COMPACTION APPLIES TO THE MATERIAL PLACED BENEATH THE HAUNCHES OF THE UTILITY LINE/PIPE/DUCT AND ABOVE ANY BEDDING REQUIRED.

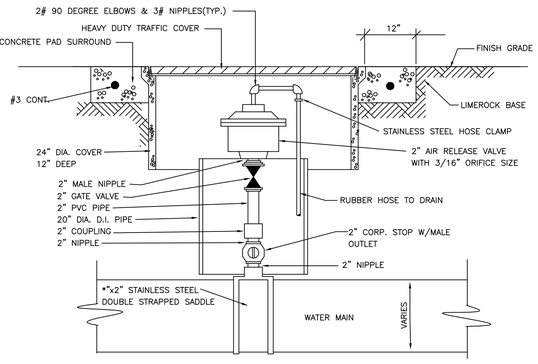
STAGE 2
THE CONTRACTOR SHALL OBTAIN A WELL–COMPACTED BED AND FILL ALONG THE SIDES OF THE UTILITY LINE/PIPE/DUCT AND TO A POINT INDICATING THE TOP OF SUB–GRADE MATERIAL.

GENERAL NOTES

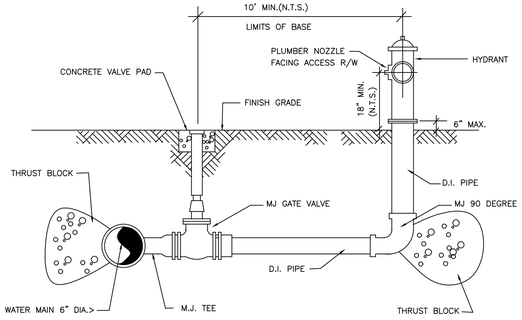
A. ALL ROADWAY REPAIR WORK SHALL BE PERFORMED IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
B. DENSITY TESTS SHALL BE TAKEN IN 1 ft LIFTS ABOVE THE PIPE AT INTERVALS OF 400 ft MAXIMUM (1 SET MINIMUM) OR AS DIRECTED BY THE CONSTRUCTION COODINATION DIVISION. RESULTS SHALL BE SUBMITTED TO CONSTRUCTION COODINATION DIVISION AS PART OF THEIR FIELD REVIEW.
C. ENGINEER–OF–RECORD WILL PROVIDE FULL–TIME INSPECTION DURING THE ENTIRETY OF THE OPEN–CUT OPERATION. BEGINNING WITH THE EXCAVATION AND CONTINUING THROUGH THE COMPLETION OF THE PAVING.
D. IF THE PAVEMENT IS NOT COMPLETELY RESTORED IMMEDIATELY FOLLOWING THE OPEN CUT, A SMOOTH TEMPORARY PATCH (MINIMUM 1.25" ASPHALT) SHALL BE INSTALLED. PROPERLY MATCHING THE EXISTING GRADING OF THE ROADWAY. THE TEMPORARY PATCH SHALL BE ALLOWED TO REMAIN IN PLACE AND BE MAINTAINED FOR A PERIOD NO LONGER THAN 45 DAYS. THE COUNTY RETAINS THE RIGHT TO USE POSTED SURETY TO COMPLETE ANY RESTORATION WORK THAT HAS NOT BEEN COMPLETED IN 45 DAYS PERIOD. ALTERNATIVE TEMPORARY TRENCH PROTECTION (STEEL PLATES OR OTHERS) MAY BE APPROVED BY THE CONSTRUCTION COORDINATION DIVISION.
e. APPROVED MAGNETIC TAPE IS REQUIRED FOR ALL MAIN PRESSURE PIPES AND CONDUIT IN THE DESIGNATED RIGHT–OF–WAY. INSTALL TAPE 24" BELOW FINISHED GRADE.
f. CONTINOUS 4" WIDE PAINT STRIPING REQUIRED BY THE UTILITY COMPANIES.

CONSTRUCTION NOTES

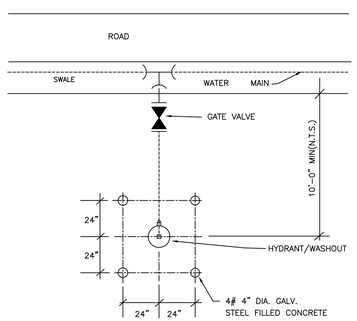
1. BEDDING SHALL CONSIST OF IN–SITU GRANULAR MATERIALS OR WASHED AND GRADED LIMEROCK 3/8" – 7/8" SIZING WITH EQUAL OR GREATER STRUCTURAL ADEQUACY AS EXISTING. UNSUITABLE IN–SITU MATERIALS SUCH A MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED.
2. REPLACED BASE MATERIAL OVER DITCH SHALL BE 16" MINIMUM FOR THOROUGHFARE PLAN ROADS.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED AND BUTT–JOINTED.
4. BASE MATERIALS (PER ROADWAY PRODUCTION DESIGN STANDARDS) SHALL BE PLACED IN TWO OR THREE LAYERS (6" MAX. PER LAYER) AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO SPECIFIED DENSITY.
5. 1" SIII ASPHALTIC CONCRETE OVER 1 1/2" SI ASHALTIC CONCRETE WITH RC–70 PRIME COAT AT 0.10 GAL/SQ. YD.
6. PIPE SHALL BE PLACED IN A DRY TRENCH.



AIR RELEASE VALVE DETAIL N.T.S.

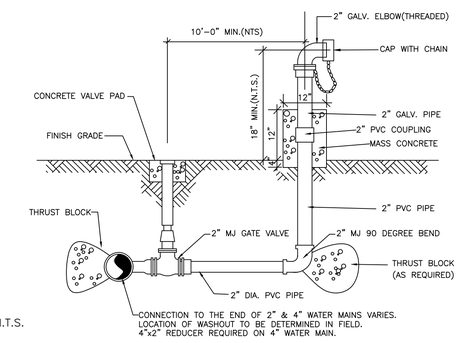


TYPICAL FIRE HYDRANT DETAIL N.T.S.

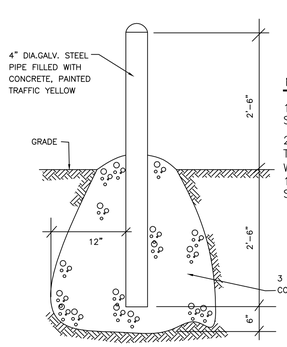


PLAN SHOWING GUARD POST N.T.S.

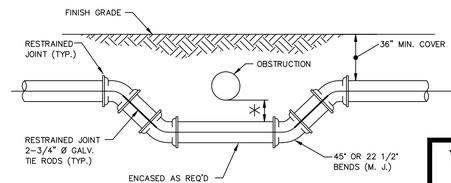
(TYPICAL FOR HYDRANT & WASHOUT)

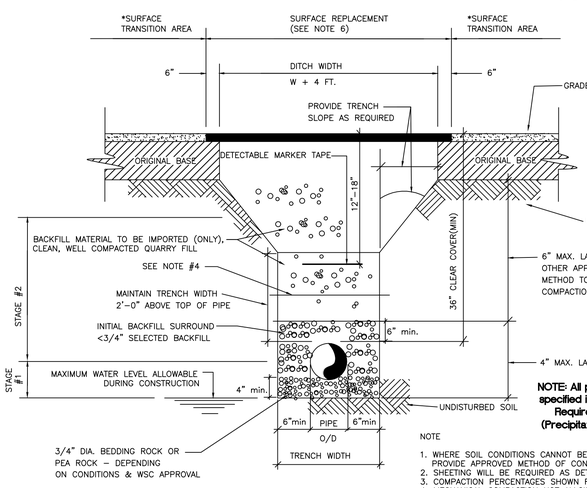


TYPICAL WASHOUT DETAIL N.T.S.



GUARD POST N.T.S.



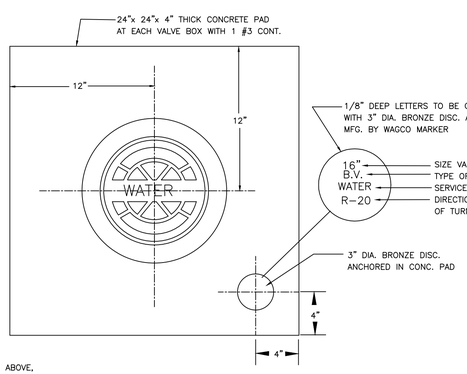


NOTE: All pipe to be laid as specified in the Employer,s Requirements 15.17.1 (Precipitation) VI (Erosion)

TRENCH DETAIL N.T.S.

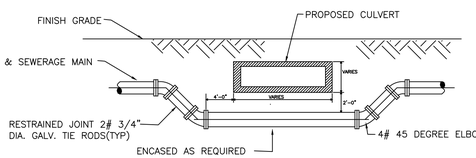
NOTE

1. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED METHOD OF CONSTRUCTION.
2. SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD.
3. COMPACTION PERCENTAGES SHOWN REFER TO AASHTO T–99.
4. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL.
5. TRENCH COMPACTION & REINSTATEMENT TO BE IN ACCORDANCE WITH THE MINISTRY OF PUBLIC WORKS TRENCH REINSTATEMENT REQUIREMENTS.



CONCRETE VALVE PAD N.T.S.

NOTE: FOR VALVES 8" DIA. AND LARGER



SPECIAL UTILITY CROSSING N.T.S.

SPECIAL UTILITY CROSSING – FITTING TYPE

*18" MIN. CLEARANCE REQUIRED FOR WATER AND SEWER MAIN CROSSINGS. 12" MIN. CLEARANCE REQUIRED FOR OTHER TYPE UTILITIES CROSSING. SEE WATER AND SEWER SEPARATION STATEMENT ON THIS SHEET.

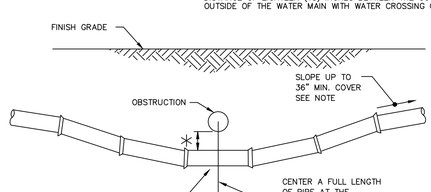
STANDARD WATER AND SEWER SEPARATION STATEMENT

1. STORM AND SANITARY SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NOT LESS THAN TEN (10) FEET BETWEEN ANY TWO JOINTS AND BOTH PIPES SHALL BE D.I.P., OR THE SEWER PIPE MUST BE ENCASED IN CONCRETE WITH A MINIMUM THICKNESS OF 4" FOR A DISTANCE OF 20 FEET CENTERING ON THE CROSSING WHERE THERE IS NO ALTERNATIVE TO SEWER PIPES CROSSING OVER A WATER MAIN, THE CRITERIA FOR MINIMUM SEPARATION BETWEEN LINES AND JOINTS IN THE ABOVE, SHALL BE REQUIRED AND BOTH PIPES SHALL BE D.I.P. IRRESPECTIVE OF SEPARATION. D.I.P. IS NOT REQUIRED FOR STORM SEWERS.
2. MAINTAIN TEN (10) FEET HORIZONTAL DISTANCE BETWEEN WATER MAIN AND STORM OR SANITARY SEWER MAIN, AS A MINIMUM.
3. FORCE MAIN CROSSING WATER MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND OUTSIDE OF THE WATER MAIN WITH WATER CROSSING OVER THE FORCE MAIN.

STANDARD UTILITY CROSSING – DEFLECTION TYPE

NOTE:

1. THE DEFLECTION TYPE CROSSING SHALL BE USED WHERE EVER POSSIBLE. ONLY UNDER SPECIFIC ORDERS BY THE ENGINEER SHALL THE FITTING TYPE CROSSING BE ALLOWED.
2. CONSTRUCT STANDARD CROSSING USING 75% OF MANUFACTURERS MAXIMUM JOINT DEFLECTION (MAX.)
3. COAT TIE RODS WITH A COAL TAR ENAMEL AFTER ASSEMBLY. (2 COATS MIN.)
4. TIE RODS MAY BE OMITTED WHEN OTHER APPROVED METHODS OF RESTRAINING ARE UTILIZED.



UTILITY CROSSING NTS

WATER & SEWERAGE CORPORATION

#87 THOMPSON BLVD.
P.O. BOX N–3905
NASSAU, BAHAMAS

TEL.(242)302– 5500

EMAIL:wscorp@batelnet.bs

PROJECT

TITLE (S)

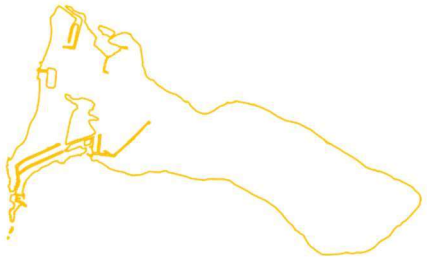
STANDARD DETAILS– WATER

SCALES

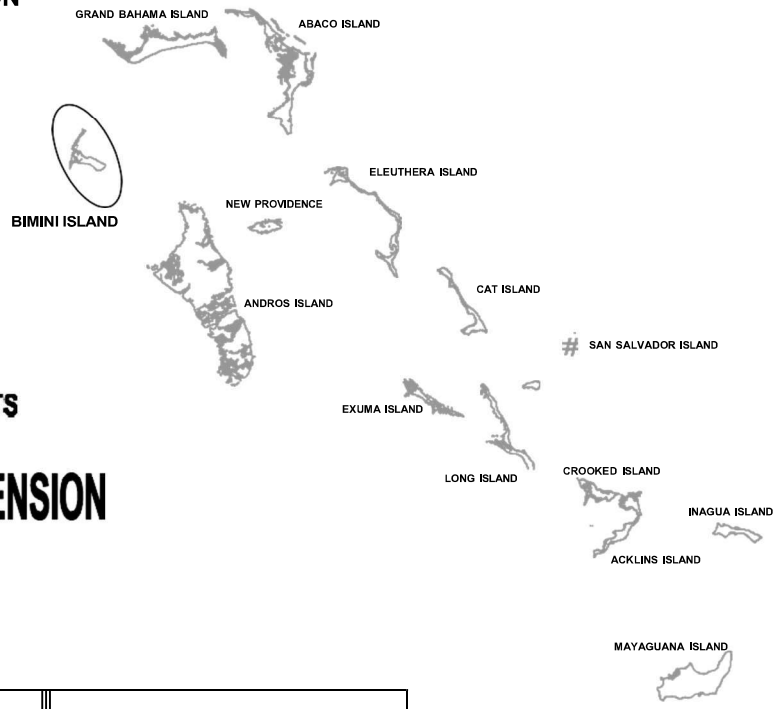
AS-NOTED

DESIGNED			JOB NUMBER
Checked			
DRAWN	VINCENT McDONALD	JANUARY 2015	
Checked			
APPROVAL			SHEET NUMBER
SENIOR MANAGER EGN. & PLANNING			
DPT. GEN. MGR. NPD/E&P DIVISION			

WATER & SEWERAGE CORPORATION



SOUTH BIMINI ISLAND



PROPOSED WATER MAINS IMPROVEMENTS

FOR

LOT 1 - AIRPORT ROAD MAINS EXTENSION

SOUTH BIMINI

BAHAMAS

INDEX OF SHEETS

SHEET No		SUBJECT
1	C-1	COVER SHEET
2	C-2	GENERAL LOCATION PLAN
3	P-1	LAYOUT PLAN - AIRPORT ROAD
4	P-2	LAYOUT PLAN - AIRPORT ROAD
5	J-1	JUNCTION DETAILS
6	J-2	JUNCTION DETAILS
7	W-1	STANDARD WATER DETAILS (WSC)

SCOPE OF WORKS - SOUTH BIMINI

WATER MAINS INSTALLATION	6" PIPE (ft.)	4" PIPE (ft.)	2" PIPE (ft.)
MAIN ROADS	20	9,300	0
SIDE STREETS	0	0	680
*( ) DENOTES OPTIONAL ITEMS			
	20	9,300	680

TOTAL MAINS = 10,000 ft (1.89 mi)

TOTAL SERVICE LATERALS = 12

JUNCTION DETAILS

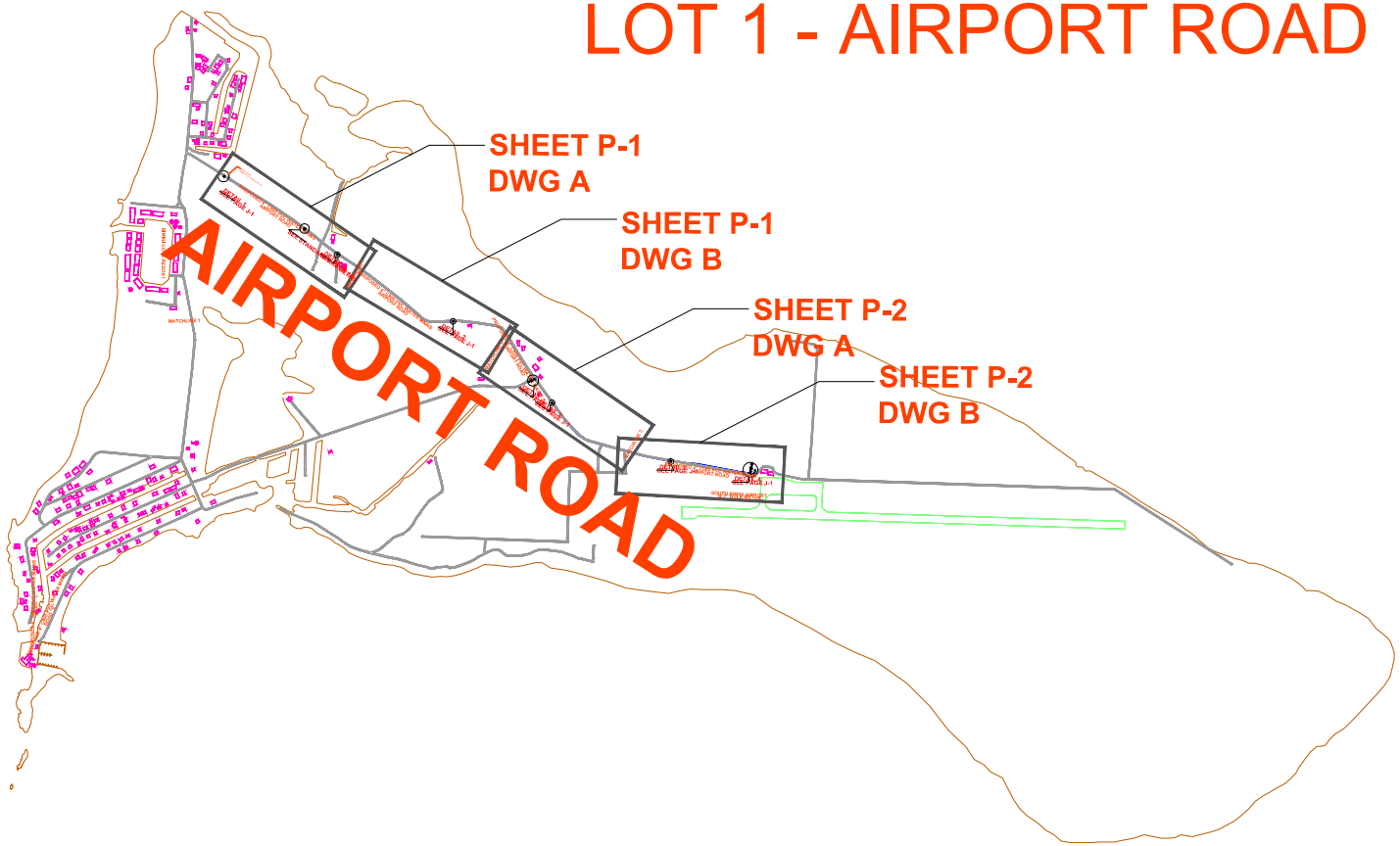
DETAIL No.	DETAIL QUANTITIES
DETAIL 1	1
DETAIL 2	3
DETAIL 3	1
DETAIL 4	1
DETAIL 5	3
DETAIL 6	1
DETAIL 7	1
DETAIL 8	0
DETAIL 9	0
DETAIL 10	0
2" STANDARD WASHOUT DETAIL	2
2" COMBINATION AIR RELEASE/VACUUM VALVE	3 (4" Saddle)

PROJECT No.:

WSC JOB No.:

DATE: AUGUST 2025

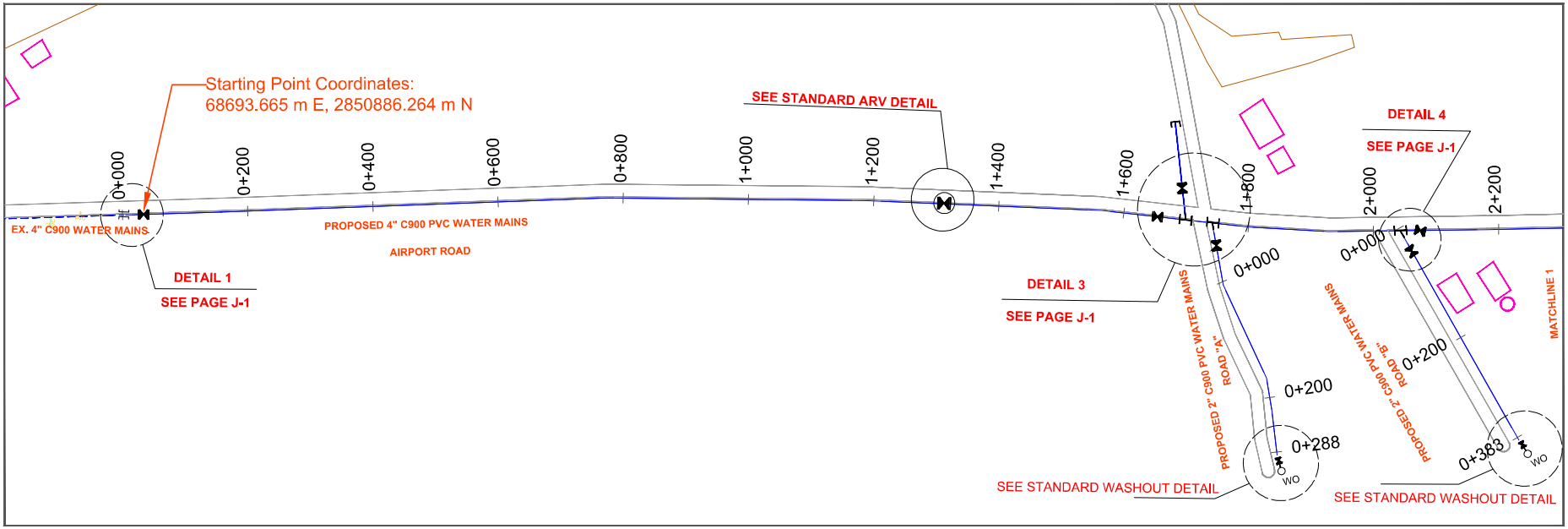
LOT 1 - AIRPORT ROAD

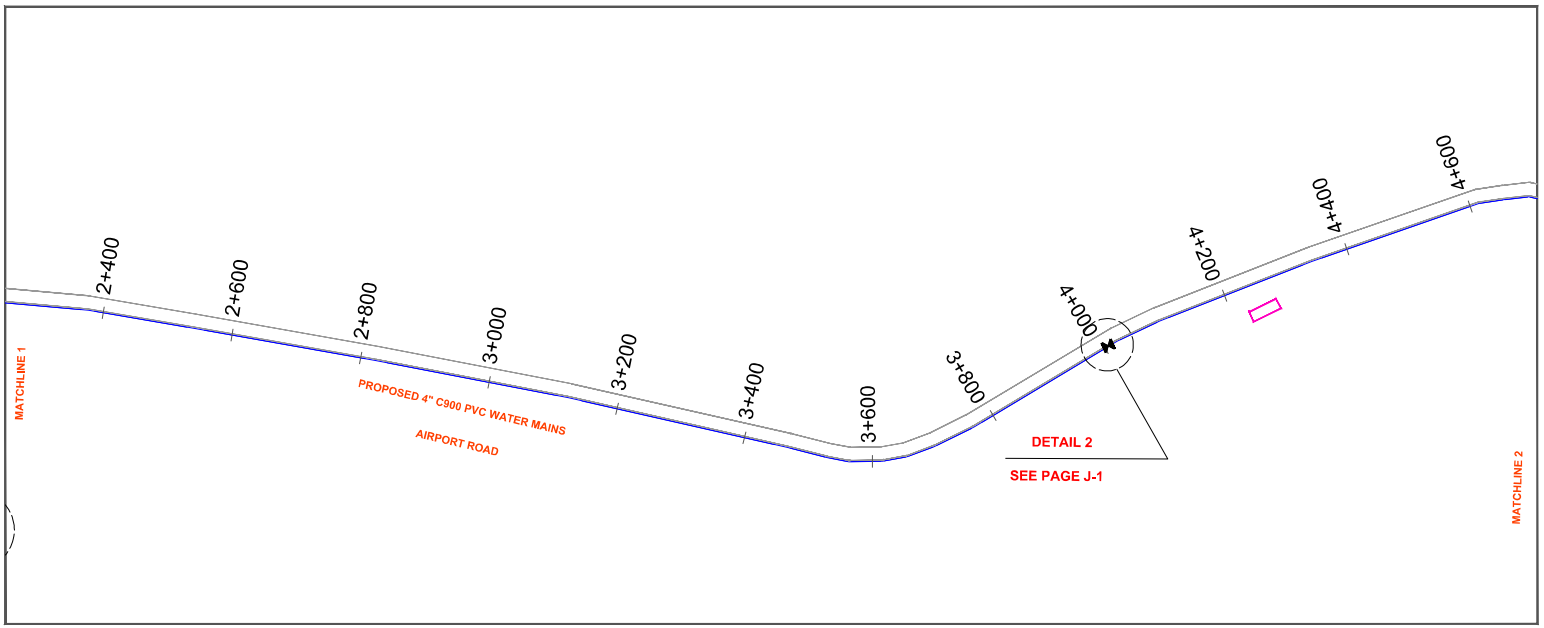


NTS

SOUTH BIMINI WORKS

C2 - SITE LOCATION PLAN





WATER & SEWERAGE CORPORATION

#67 THOMPSON BLVD.
P.O. BOX N-3905
NASSAU, N.P. BAHAMAS

TEL: (242) 302-5500

EMAIL: wscorp@batelnet.bs

PROJECT

IDB ACCESS TO POTABLE WATER - SOUTH BIMINI
LOT 1 - AIRPORT ROAD MAINS EXTENSION

TITLE (S)

LAYOUT PLAN
SHEET LOCATION PLAN

SCALES: AS-NOTED

DESIGNED	KEYSHAWN WRIGHT	AUGUST 2025	JOB NUMBER
Checked	FANE AUSTIN	AUGUST 2025	
DRAWN	KEYSHAWN WRIGHT	AUGUST 2025	
Checked	FANE AUSTIN	AUGUST 2025	

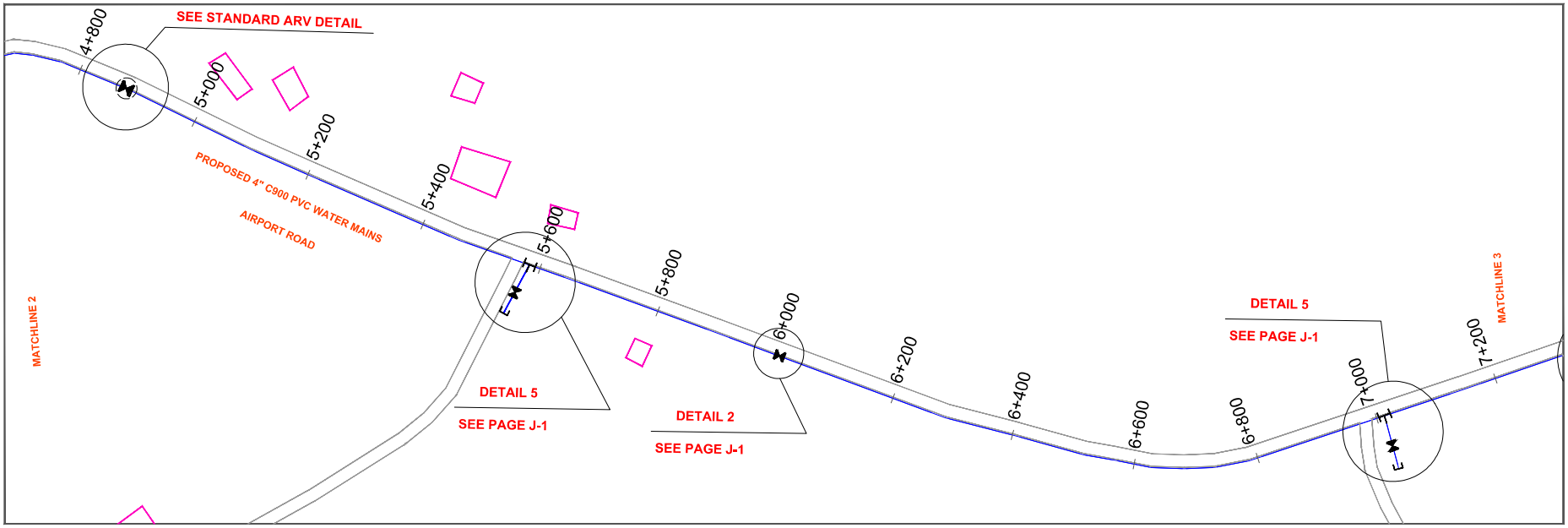
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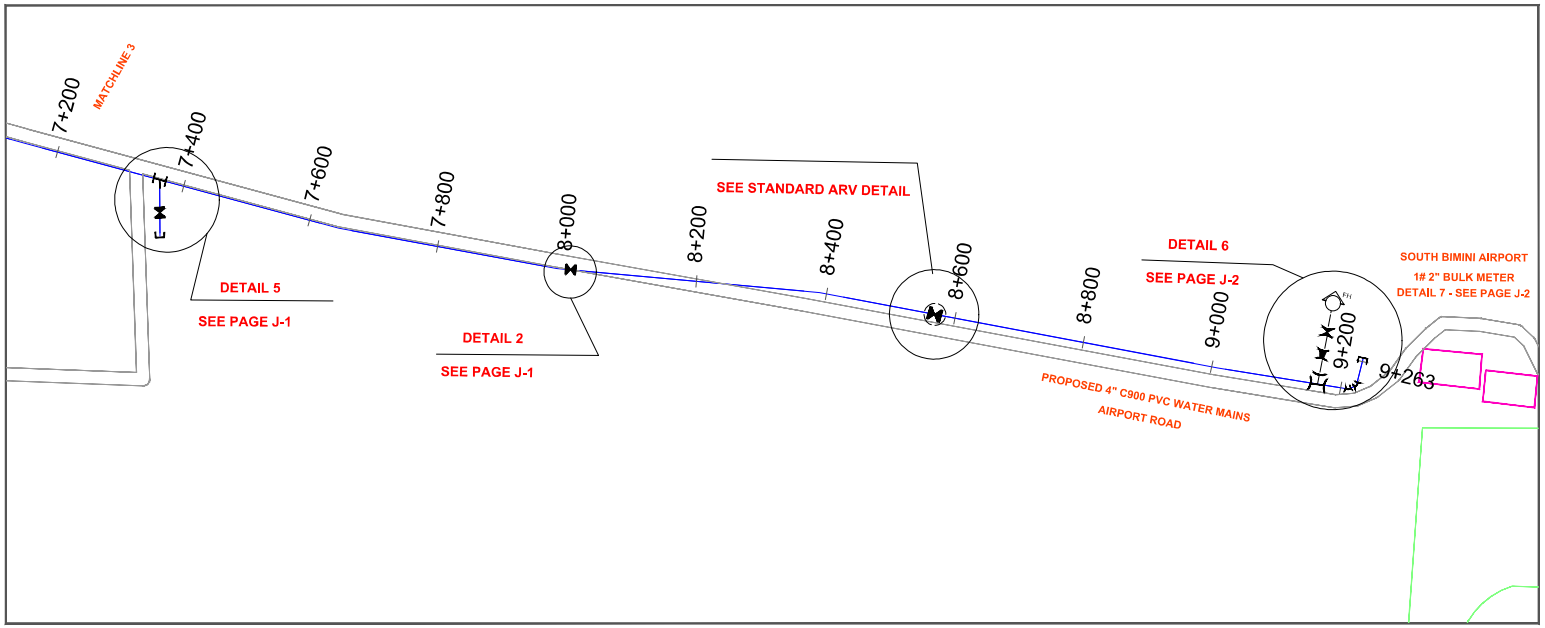
ASST. GEN. MGR. EGN. & PLANNING		
ASST. GEN. MGR. N.P. OPERATIONS		

SHEET NUMBER: P1

REV: 1

DATE: 23/05/2025





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#67 THOMPSON BLVD.
P.O. BOX N-3905
NASSAU, N.P. BAHAMAS

TEL: (242) 302-5500

EMAIL: wscorp@batelnet.bs

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IDB ACCESS TO POTABLE WATER - SOUTH BIMINI
LOT 1 - AIRPORT ROAD MAINS EXTENSION

TITLE (S)

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SHEET LOCATION PLAN

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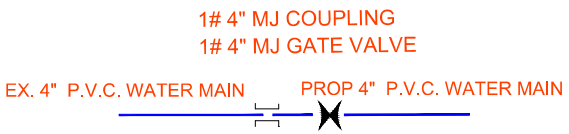
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ASST. GEN. MGR. EGN. & PLANNING		
ASST. GEN. MGR. N.P. OPERATIONS		

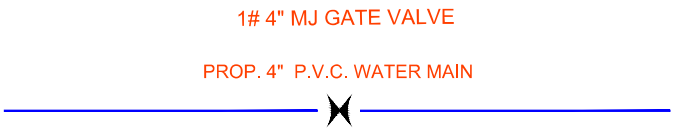
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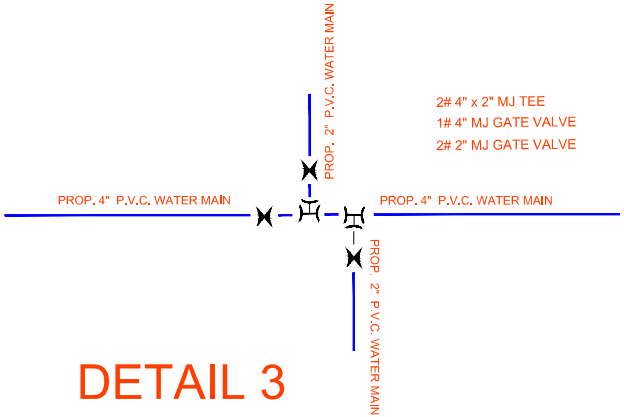
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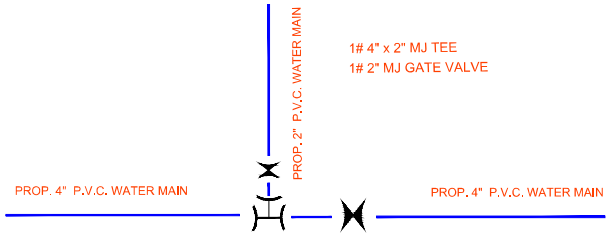
DETAIL 1



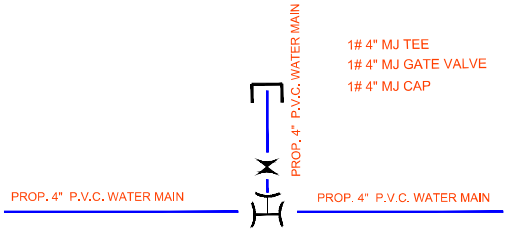
DETAIL 2



DETAIL 3



DETAIL 4



DETAIL 5

WATER & SEWERAGE CORPORATION
#67 THOMPSON BLVD.
P.O. BOX N-3905
NASSAU, N.P. BAHAMAS
TEL: (242) 302-5500
EMAIL: wscorp@batelnet.bs

PROJECT
IDB ACCESS TO POTABLE WATER - SOUTH BIMINI
LOT 1 - AIRPORT ROAD MAINS EXTENSION

TITLE (S)
LAYOUT PLAN
SHEET LOCATION PLAN

SCALES
AS-NOTED

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Checked	FANE AUSTIN	AUGUST 2025	
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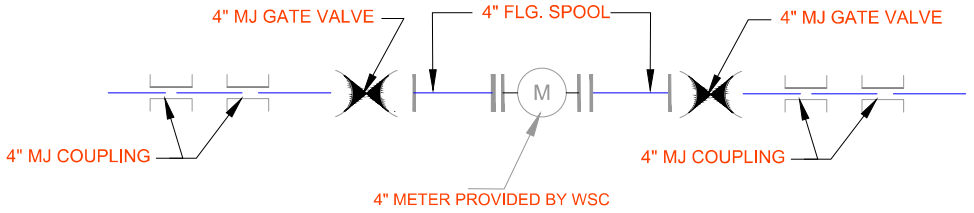
APPROVAL

ASST. GEN. MGR. EGN. & PLANNING		
ASST. GEN. MGR. N.P. OPERATIONS		

SHEET NUMBER
J1

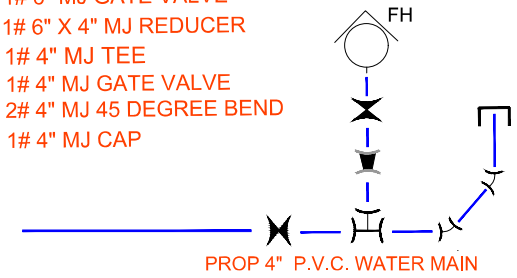
REV
1
DATE
23/09/2025

2# 4" MJ GATE VALVES
4# 4" MJ COUPLINGS
2# 4" FLG x FLG SPOOLS
2# 4" FLG x PE
1# 4" METER



DETAIL 7
BULK METER DETAIL

1# 6" FIRE HYDRANT
1# 6" MJ GATE VALVE
1# 6" X 4" MJ REDUCER
1# 4" MJ TEE
1# 4" MJ GATE VALVE
2# 4" MJ 45 DEGREE BEND
1# 4" MJ CAP



DETAIL 6

WATER & SEWERAGE CORPORATION
#67 THOMPSON BLVD.
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NASSAU, N.P. BAHAMAS
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PROJECT
IDB ACCESS TO POTABLE WATER - SOUTH BIMINI
LOT 1 - AIRPORT ROAD MAINS EXTENSION

TITLE (S)
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SHEET LOCATION PLAN

SCALES
AS-NOTED

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DRAWN	KEYSHAWN WRIGHT	AUGUST 2025
Checked	FANE AUSTIN	AUGUST 2025

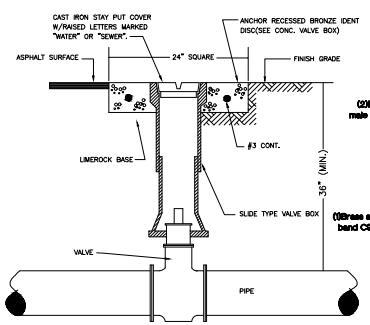
JOB NUMBER

APPROVAL

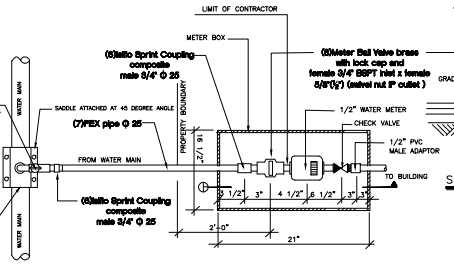
ASST. GEN. MGR. ENG. & PLANNING		
ASST. GEN. MGR. N.P. OPERATIONS		

SHEET NUMBER
J2

REV
0
DATE
23/09/2025

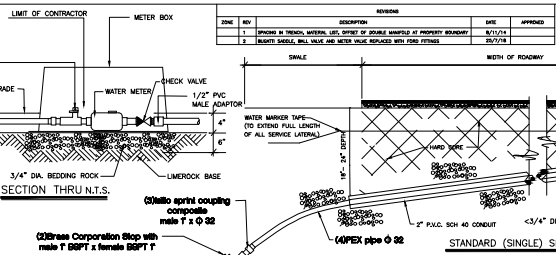


VALVE AND BOX N.T.S.



STANDARD SINGLE SERVICE CONNECTION N.T.S.

TYPICAL METER CONNECTION N.T.S.



SECTION THRU N.T.S.

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	SPACING IN TRENCH, MATERIAL LIST, OFFSET OF DOUBLE MANIFOLD AT PROPERTY BOUNDARY	8/11/14	
	2	BUSHITT SADDLE, BALL VALVE AND METER VALVE REPLACED WITH FORD FITTINGS	25/7/18	

STANDARD (SINGLE) SERVICE DUPLEX CONNECTION (1/2" METER) N.T.S.

NOTE:

1. FOR STANDARD (SINGLE) SERVICE CONNECTION (1/2" METER) USE 3/4" PEX PIPE AND 3/4" CORRESPONDING FITTINGS
2. FOR STANDARD (SINGLE) SERVICE CONNECTION (1" METER) USE 1" PEX PIPE AND CORRESPONDING 1" FITTINGS

Number	Description	Manufacturer
1	Brass saddle with stainless steel band C900 PVC with 3/4" or T BSPT outlet	USA
2	Brass Corporation Stop with male 3/4" BSPT x female BSPT 3/4" or T BSPT x female BSPT T	USA
3	Ielllo sprint coupling composite male 3/4" x ◊ 25 or T x ◊ 32	Ielllo Paulosa, Norway
4	PEX pipe ◊ 32	Golan Plastics, Israel
5	Manifold plastic composite with one inpu female T and two outputs female 3/4"	Technirma Valvosanitaria, Italy
6	Ielllo Sprint Coupling composite male 3/4" ◊ 25	Ielllo Paulosa, Norway
7	PEX pipe ◊ 25 or ◊ 32	Golan Plastics, Israel
8	Meter Ball Valve brass with lock cap and female 3/4" BSPT inlet x female 5/8"(1/2") (swivel nut BSPT outlet) or female T BSPT inlet x female T (swivel nut IP outlet)	USA
9	Water Meter	Existing Water meters

MINISTRY OF PUBLIC WORKS SUMMARY ON PROCEDURES AND STANDARDS SPECIFICATION

CONSTRUCTION PROCEDURES

THE BACKFILL FOR THE FIRST AND SECOND STAGES SHALL BE PLACED IN 6" LAYERS (COMPACTED THICKNESS) AND SHALL BE COMPACTED TO 100% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99.

STAGE 1
THE CONTRACTOR SHALL PROVIDE ADEQUATE COMPACTED FILL BENEATH THE HAUNCHES OF THE UTILITY LINE/PIPE/DUCT, USING MECHANICAL TAMPS SUITABLE FOR THIS PURPOSE. THIS COMPACTION RELATES TO THE MATERIAL PLACED BENEATH THE HAUNCHES OF THE UTILITY LINE/PIPE/DUCT AND ABOVE ANY BEDDING REQUIRED.

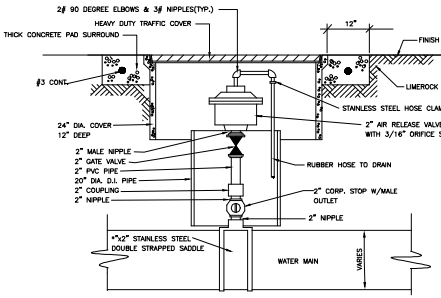
STAGE 2
THE CONTRACTOR SHALL OBTAIN A WELL-COMPACTED BED AND FILL ALONG THE SIDES OF THE UTILITY LINE/PIPE/DUCT AND TO A POINT INDICATING THE TOP OF SUB-GRADE MATERIAL.

GENERAL NOTES

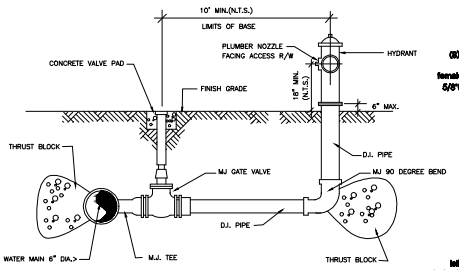
A. ALL ROADWAY REPAIR WORK SHALL BE PERFORMED IN CONFORMANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
B. DENSITY TESTS SHALL BE TAKEN IN 1 FT LIFTS ABOVE THE PIPE AT INTERVALS OF 400 ft MAXIMUM (1 SET MINIMUM) OR AS DIRECTED BY THE CONSTRUCTION COODINATION DIVISION. RESULTS SHALL BE SUBMITTED TO CONSTRUCTION COODINATION DIVISION AS PART OF THEIR FIELD REVIEW.
C. ENGINEER-OF-RECORD WILL PROVIDE FULL-TIME INSPECTION DURING THE ENTIRETY OF THE OPEN-CUT OPERATION, BEGINNING WITH THE EXCAVATION AND CONTINUING THROUGH THE COMPLETION OF THE PAVING.
D. IF THE PAVEMENT IS NOT COMPLETELY RESTORED IMMEDIATELY FOLLOWING THE OPEN CUT, A SMOOTH TEMPORARY PATCH (MINIMUM 1.25" ASPHALT) SHALL BE INSTALLED, PROPERLY MATCHING THE EXISTING GRADING OF THE ROADWAY. THE TEMPORARY PATCH SHALL BE ALLOWED TO REMAIN IN PLACE AND BE MAINTAINED FOR A PERIOD NO LONGER THAN 45 DAYS. THE COUNTY RETAINS THE RIGHT TO USE POSTED SURETY TO COMPLETE ANY RESTORATION WORK THAT HAS NOT BEEN COMPLETED IN 45 DAYS PERIOD. ALTERNATIVE TEMPORARY TRENCH PROTECTION (STEEL PLATES OR OTHERS) MAY BE APPROVED BY THE CONSTRUCTION COODINATION DIVISION.
e. APPROVED MAGNETIC TAPE IS REQUIRED FOR ALL MAIN PRESSURE PIPES AND CONDUIT IN THE DESIGNATED RIGHT-OF-WAY. INSTALL TAPE 24" BELOW FINISHED GRADE.
f. CONTINOUS 4" WIDE PAINT STRIPING REQUIRED BY THE UTILITY COMPANIES.

CONSTRUCTION NOTES

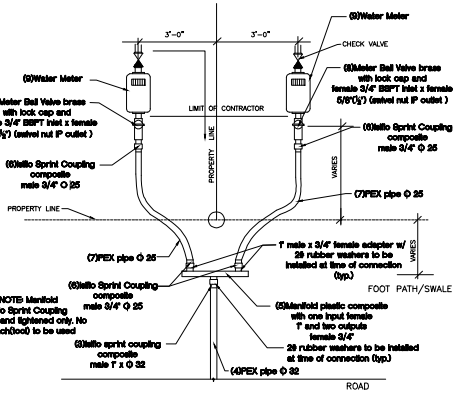
1. BEDDING SHALL CONSIST OF IN-SITU GRANULAR MATERIALS OR WASHED AND GRADED LIMEROCK 3/8" - 7/8" SIZING WITH EQUAL OR GREATER STRUCTURAL ADEQUACY AS EXISTING. UNSUITABLE IN-SITU MATERIALS SUCH A MUCK, DEBRIS AND LARGER ROCKS SHALL BE REMOVED.
2. REPLACED BASE MATERIAL OVER DITCH SHALL BE 16" MINIMUM FOR THOROUGHFARE PLAN ROADS.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED AND BUTT-JOINTED.
4. BASE MATERIALS (PER ROADWAY PRODUCTION DESIGN STANDARDS) SHALL BE PLACED IN TWO OR THREE LAYERS (6" MAX. PER LAYER) AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO SPECIFIED DENSITY.
5. 1" SII ASPHALTIC CONCRETE OVER 1 1/2" SI ASHALTIC CONCRETE WITH RC-70 PRIME COAT AT 0.10 GAL/SQ. YD.
6. PIPE SHALL BE PLACED IN A DRY TRENCH.



AIR RELEASE VALVE DETAIL N.T.S.



TYPICAL FIRE HYDRANT DETAIL N.T.S.



STANDARD DOUBLE SERVICE CONNECTION N.T.S.

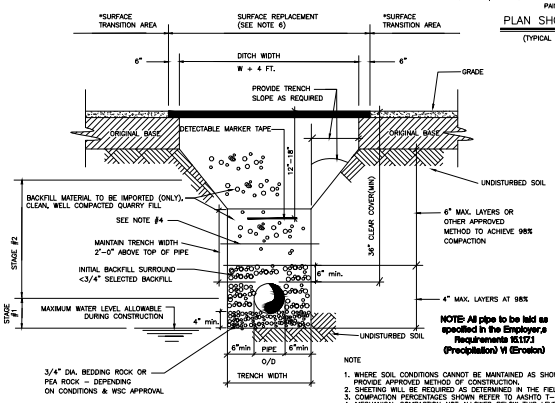
NOTE- SERVICE LATERAL TESTING:

1. ALL SERVICE LATERALS INSTALLED AT THE TIME OF THE WATER MAIN INSTALLATION SHALL BE TESTED WITH WATER IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION.

2. ALL SERVICE LATERALS INSTALLED AFTER THE WATER MAIN INSTALLATION SHALL BE TESTED WITH AIR IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION. AN ACCEPTANCE WILL TAKE PLACE BY PRESSURIZING THE SERVICE LINE (WATER OR AIR) FOR AT LEAST 15 mins UP TO A PRESSURE OF 120 psi IN ORDER TO TEST THE INSTALLATION OF THE SERVICE CONNECTION AND THE WATER TIGHTNESS OF THE FITTINGS.

GENERAL NOTES

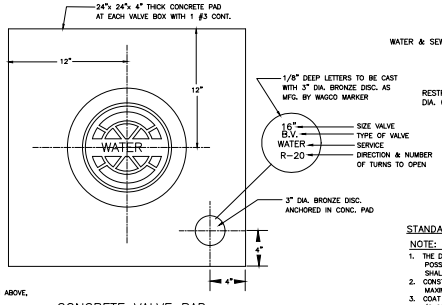
1. CONTRACTOR IN CHARGE SHALL CONFIRM WITH BEC, WSC, MOW, BTC AND CABLE BAHAMAS THE LOCATION OF THEIR BURIED CABLES AND UTILITIES PRIOR TO CONSTRUCTION.
2. PROPOSED WATER MAIN SHALL HAVE THE FOLLOWING:
(a). MAIN HIGHWAY AND THROUGHFARE 3'- 0" MIN. COVER.
(b). VERGES AND FOOTPATH 2'- 6" MIN. COVER.
3. PROPOSED SERVICE CONNECTIONS SHALL HAVE A MIN. OF 12" COVER AT PROPERTY BOUNDARY.
4. NS. #5 FR. SEWER(OLD)
5. NS. #5 FR. SEWER(OLD & NEW)
6. MEGALUG RESTRAINING GLANDS SHALL BE PLACED ON ALL MECHANICAL JOINT FITTINGS. BELL RESTAINTS SHALL BE USED IN ACCORDANCE WITH EBAA IRON INC. GUIDELINES.
7. EXACT LOCATION OF PROPOSED WATER MAINS AND SERVICE LATERALS TO BE DETERMINED ON SITE BY WSC ENGINEER.



TRENCH DETAIL N.T.S.

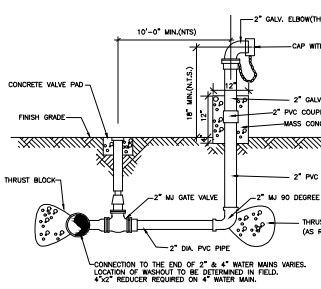
NOTE: All pipe to be laid as specified in the Employer,s Requirements 101173 (Precipitation) VI (Erosion)

NOTE
1. WHERE SOIL CONDITIONS CANNOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED METHOD OF CONSTRUCTION.
2. SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD.
3. COMPACTION PERCENTAGES SHOWN REFER TO AASHTO T-99.
4. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL.
5. TRENCH COMPACTION & REINSTATEMENT TO BE IN ACCORDANCE WITH THE MINISTRY OF PUBLIC WORKS TRENCH REINSTATEMENT REQUIREMENTS.

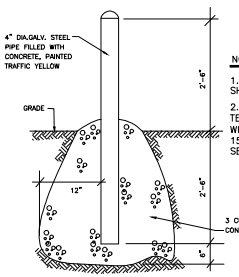


CONCRETE VALVE PAD N.T.S.

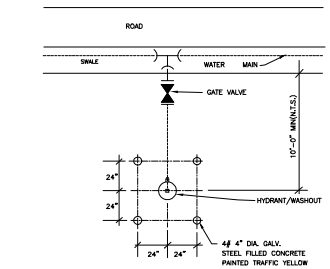
NOTE: FOR VALVES 8" DIA. AND LARGER



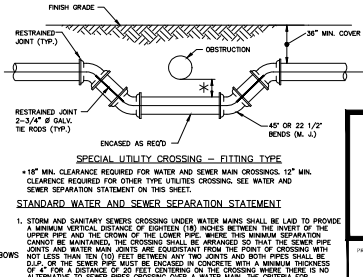
TYPICAL WASHOUT DETAIL N.T.S.



GUARD POST N.T.S.



PLAN SHOWING GUARD POST N.T.S.
(TYPICAL FOR HYDRANT & WASHOUT)



SPECIAL UTILITY CROSSING - FITTING TYPE

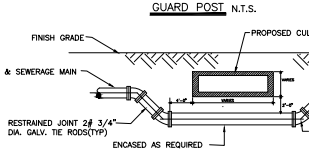
*18" MIN. CLEARANCE REQUIRED FOR WATER AND SEWER MAIN CROSSINGS. 12" MIN. CLEARENCE REQUIRED FOR OTHER TYPE UTILITIES CROSSING. SEE WATER AND SEWER SEPARATION STATEMENT ON THIS SHEET.

STANDARD WATER AND SEWER SEPARATION STATEMENT

1. STORM AND SANITARY SEWERS CROSSING UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER PIPE JOINTS AND WATER MAIN JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NOT LESS THAN TEN (10) FEET BETWEEN ANY TWO JOINTS AND BOTH PIPES SHALL BE D.I.P.; OR THE SEWER PIPE MUST BE ENCASED IN CONCRETE WITH A MINIMUM THICKNESS OF 4" FOR A DISTANCE OF 20 FEET CENTERING ON THE CROSSING WHERE THERE IS NO ALTERNATIVE TO SEWER PIPES CROSSING OVER A WATER MAIN. THE CRITERIA FOR MINIMUM SEPARATION BETWEEN LINES AND JOINTS IN THE ABOVE, SHALL BE REQUIRED AND BOTH PIPES SHALL BE D.I.P. IRRESPECTIVE OF SEPARATION. D.I.P. IS NOT REQUIRED FOR STORM SEWERS.

2. MAINTAIN TEN (10) FEET HORIZONTAL DISTANCE BETWEEN WATER MAIN AND STORM OR SANITARY SEWER MAIN, AS A MINIMUM.

3. FORCE MAIN CROSSING WATER MAIN SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN (18) INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND OUTSIDE OF THE WATER MAIN WITH WATER CROSSING OVER THE FORCE MAIN.

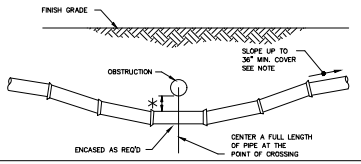


SPECIAL UTILITY CROSSING N.T.S.

STANDARD UTILITY CROSSING - DEFLECTION TYPE

NOTE:

1. THE DEFLECTION TYPE CROSSING SHALL BE USED WHERE EVER POSSIBLE. ONLY UNDER SPECIFIC ORDERS BY THE ENGINEER SHALL THE FITTING TYPE CROSSING BE ALLOWED.
2. CONSTRUCT STANDARD CROSSING USING 75% OF MANUFACTURERS MAXIMUM JOINT DEFLECTION (MAX.)
3. COAT TIE RODS WITH A COAL TAR ENAMEL AFTER ASSEMBLY. (2 COATS MIN.)
4. TIE RODS MAY BE OMITTED WHEN OTHER APPROVED METHODS OF RESTRAINING ARE UTILIZED.



UTILITY CROSSING NTS

WATER & SEWERAGE CORPORATION
#87 THOMPSON BLVD.
P.O. BOX N-3905
NASSAU, BAHAMAS
TEL.(242)302- 5500
EMAIL:wscorp@batelnet.bs

PROJECT

TITLE(S)
STANDARD DETAILS- WATER

SCALES
AS-NOTED

DESIGNED			JOB NUMBER
Checked			
DRAWN	VINCENT MCDONALD	JANUARY 2015	
Checked			
APPROVAL			SHEET NUMBER
SENIOR MANAGER EGN. & PLANNING			
DPT. GEN. MGR. NPD/E&P DIVISION			

Section X. Bill of Quantities[1]

[1] In Lump sum contracts, the “Bill of Quantities” is prepared for information; it is not contractual. The contractual document prepared by the Bidder shall be a “Schedule of Activities”.

Bill of Quantities/Schedules of Prices

The works to be undertaken are for the furnishing of the necessary labour, materials and equipment and services, for the works indicated in the Employer's Requirements, Scope of Works and Specifications, as follows:

Supply & Construction of Potable Water Distribution System in South Bimini, The Bahamas – *(Airport Road/Port Royal Mains Extension)*

The works include the supply and installation of approximately 60 feet of 6-inch C900 DR 18 water mains, 27,725 feet of 4-inch C900 DR 18 water mains, 680 feet of 2-inch SDR 21 PVC water mains, 133 service connections, and all associated appurtenances as shown in the drawings.

South Bimini

Supply & Construction of Potable Water Distribution System:
(Airport Road/Port Royal Mains Extensions)

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Furnish and install 6-inch C 900 PVC DR 18 pressure pipe with 3ft clear cover *(in accordance with contract drawings)*.	60	LF		
2	Furnish and install 4-inch C 900 PVC DR 18 pressure pipe with 3ft clear cover *(in accordance with contract drawings)*.	27,725	LF		
3	Furnish and install 2-inch C 900 PVC SDR 21 pressure pipe with 3ft clear cover *(in accordance with contract drawings)*.	680	LF		
4(1)	**Furnish and Install Details as per drawings – Airport Road**				
4a	**Detail 1**	1			
4b	**Detail 2**	3			
4c	**Detail 3**	1			
4d	**Detail 4**	1			
4e	**Detail 5**	3			
4f	**Detail 6**	1			
4g	**Detail 7** – Bulk Meter Detail	1			

4(2)	**Furnish and Install Details as per drawings – Port Royal**				
4a	**Detail 1**	1	No.		
4b	**Detail 2**	1	No.		
4c	**Detail 3**	1	No.		
4d	**Detail 4**	1	No.		
4e	**Detail 5**	1	No.		
4f	**Detail 6**	5	No.		
5	**Culvert Crossing** – Allow for crossing above all drains, culverts (boxes & circular) of all dimensions as detailed in Contract Drawings.		No.		
6(1)	Airport Road – Service Laterals and Wash outs				
6a	Furnish and install 2-inch standard washout as detailed on the Contract Drawings.	2	No.		
6b	Install 4-inch x 3/4-inch single water service laterals (Materials will **NOT** be supplied by the Corporation	12	No.		
6c	Install 4-inch x ¾-inch service lateral ducts.	30	No.		
6d	Furnish and install meter boxes on each lateral as detailed on the Contract Drawings.	12	No.		$ -
6e	Furnish and install 2-inch combination air release vacuum valve, as specified by WSC standard detail.	3	No.		
6(2)	Port Royal – Service Laterals and Wash outs				
6a	Furnish and install 2-inch standard washout as detailed on the Contract Drawings.	5	No.		
6b	Install 4-inch x 3/4-inch single water service laterals (Materials will **NOT** be supplied by the Corporation) as detailed on the Contract Drawings.	121	No.		$ -
6c	Furnish and install meter boxes on each lateral as detailed on the Contract Drawings.	121	No.		$ -
6d	Furnish and install 2-inch combination air release vacuum valve, as specified by WSC standard detail.	1	No.		

7	Permanent Reinstatement including but not limited to Concrete pavements, asphalt, chip and sand seal and brick in accordance with the Employer's Requirements. The rate will be based on per linear foot per 2 feet width reinstatement	up to 18,000	LF		$ -
8	Testing, Chlorination and Commissioning of the Transmission/ Distribution Main	1	Lump Sum		$ -
9	**CLIMATE RESILIENCE ADAPTATION MEASURES**				
9a	**Vulnerable pipeline locations, Type II & Type III** - 4 ft. clear cover to pipeline, Extra over to 'Item 2' for additional 1 ft depth excavation and backfilling of pipe trench. (in accordance with WSC Guidelines)		LF.		
9b.	**Most vulnerable pipeline locations, Type III** - use of concrete pipe anchors, Furnish and install mass concrete pipe anchors at 10ft o/c along pipe. (in accordance with contract drawings)		no.		
10	**MITIGATION MEASURES FOR KARST FEATURES** *(Cavities)*				
10a	Provisional sum for treatment of cavities utilizing type I, II or II *(in accordance with WSC Guidelines)*		Lump Sum		
11	**SUB-TOTAL – WORKS** *(Total items 1-10)*				
12	**INSURANCE**		Lump Sum		
13	**As-Built Drawings** *(in accordance with GCC 58.1)*		Lump Sum		
14	**Implementing the Project's Environmental and Social Management Plan, developing the Contractor's Environmental and Social Management Plan (c-ESMP)**		Lump Sum		
15	**Provisional Sum (10% of item 11)**				
16	**SUB-TOTAL (Total items 11+(12-15))**				
17	**VAT***(10% Item 16)*				
18	**TOTAL WORKS** *(Total items 16+17)*				

Section XI. Contract Forms

Beneficial Ownership Disclosure Form

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form ("Form") is to be completed by the successful Bidder. In case of Joint Venture, Consortium or Association (JVCA), the Bidder must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Bidder is any natural person who ultimately owns or controls the Bidder by meeting one or more of the following conditions:

- *directly or indirectly holding 25% or more of the shares*
- *directly or indirectly holding 25% or more of the voting rights*
- *directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder*

RfB No.: *[insert number of RfB process]*
Request for Bid No.: *[insert identification]*

To: *[insert complete name of Employer]*

In response to your request in the Letter of Acceptance *dated [insert date of letter of Acceptance]* to furnish additional information on beneficial ownership: *[select one option as applicable and delete the options that are not applicable]*

(i) we hereby provide the following beneficial ownership information.

Details of Beneficial Ownership

Identity of Beneficial Owner	**Directly or indirectly holding 25% or more of the shares** **(Yes/No)**	**Directly or indirectly holding 25 % or more of the Voting Rights** **(Yes/No)**	**Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Bidder** **(Yes/No)**
[include full name (last, middle, first), nationality, country of residence]			

OR

(i) We declare that there is no Beneficial Owner meeting one or more of the following conditions:

- directly or indirectly holding 25% or more of the shares;
- directly or indirectly holding 25% or more of the voting rights;
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder.

OR

(i) We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. *[If this option is selected, the Bidder shall provide explanation on why it is unable to identify any Beneficial Owner]*

- directly or indirectly holding 25% or more of the shares;
- directly or indirectly holding 25% or more of the voting rights;
- directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder.

Name of the Bidder: * _____ *[insert complete name of the Bidder]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ** _____ *[insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid: _____ *[insert complete title of the person signing the Bid]*

Signature of the person named above: _____ *[insert signature of person whose name and capacity are shown above]*

Date signed _____ *[insert date of signing]* **day of** _____ *[insert month], [insert year]*

*In the case of the Bid submitted by a Joint Venture, Consortium or Association (JVCA) specify the name of the JVCA as Bidder. In the event that the Bidder is a JVCA, each reference to "Bidder" in the Beneficial Ownership Disclosure Form (including this Introduction thereto) shall be read to refer to the JVCA member.

**Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.

LETTER OF ACCEPTANCE

[letterhead paper of the Employer]

[The Letter of Acceptance shall be the basis for formation of the Contract as described in ITB 41 and 42. This Standard Form of Letter of Acceptance shall be filled in and sent to the successful Bidder only after evaluation of bids has been completed, subject to any review by the Bank required under the Loan Agreement.]

[insert date]

Identification No and Title of Contract: *[insert identification number and title of the Contract]*

To: *[insert name and address of the successful Bidder]*

This is to notify you that your Bid dated *[insert date]* for execution of the *[insert name of the Contract and identification number, as given in the PCC]* for the Contract Price of the equivalent[52] of *[insert amount in numbers and words] [insert name of currency]*, as corrected and modified[53] in accordance with the Instructions to Bidders.

[select one of the following options (a) or (b) and delete the other].

(a) We accept that *[insert name proposed by bidder]* be appointed as the Technical Adjudicator.[54]

(b) We do not accept that *[insert name proposed by bidder]* be appointed as Technical Adjudicator, and by sending a copy of this Letter of Acceptance to *[insert name of the Appointing Authority]*, we are hereby requesting *[insert name]*, the Appointing Authority, to appoint the Technical Adjudicator in accordance with ITB 44.1.[55]

You are hereby instructed to (a) proceed with the execution of the said Works in accordance with the Contract Documents, (b) sign and return the attached Contract Documents, and (c) forward the Performance Securities pursuant to ITB 42.1, i.e., within 28 days after receipt of this Letter of Acceptance, and pursuant to GCC Sub-Clause 52.1; and (d) additional information on Beneficial Ownership **if specified in BDS in reference to ITB 41.1,** within the next 8 (eight) business days using the Beneficial Ownership Disclosure Form of Section XI, "Contract Forms" ***(Eliminate reference to Beneficial Ownership Disclosure Form if is not required)***

[52] Delete "of the equivalent" if the Contract Price is expressed in only one currency.

[53] Delete "corrected and" or "and modified" if not applicable. See Notes on Standard Form of Agreement, next page.

[54] To be used only if the Contractor disagrees in the Bid with the Technical Adjudicator proposed by the Employer in the Instructions to Bidders and has accordingly offered another candidate.

[55] To be used only if the Contractor disagrees in the Bid with the Technical Adjudicator proposed by the Employer in the ITB, has accordingly offered another candidate, and the Employer does not accept the counterproposal.

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

CONTRACT AGREEMENT

[The Contract Agreement shall incorporate any corrections or modifications to the Bid resulting from corrections of errors (ITB 29), price adjustment during the evaluation process (in accordance with ITB 15.5), selection of an alternative offer (ITB 19), acceptable deviations (ITB 28), BAFO or the outcome of the Negotiations (if any, pursuant to ITB 34) or any other mutually-agreeable changes allowed for in the Conditions of Contract, such as changes in key personnel, subcontractors, scheduling, and the like.]

This Contract Agreement made the *[insert day]* day of *[insert month]*, *[insert year]* between *[insert name and address of Employer]* (hereinafter called "the Employer") and *[insert name and address of Contractor]* (hereinafter called "the Contractor") of the other part.

Whereas the Employer is desirous that the Contractor execute *[insert name and identification number of Contract]* (hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

Now this Contract Agreement witnessed as follows:

1. In this Contract Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Contract Agreement.

2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN TESTIMONY WHEREOF the parties thereto have signed this Contract Agreement to be executed the day and year first before written.

The Common Seal of *[Witness entity]* was hereunto affixed in the presence of:

Signed, Sealed, and Delivered by the said _____

in the presence of:

Binding Signature of Employer

[signature of an authorized representative of the Employer]

Binding Signature of Contractor

[signature of an authorized representative of the Contractor]

PERFORMANCE SECURITY

Performance Bond

*[The **Surety/successful Bidder** providing the Bond shall fill in this form in accordance with the instructions indicated in brackets, if the Employer requires this type of security]*

By this Bond, *[insert name and address of Contractor, which in the case of a Joint Venture, Consortium or Association (JVCA) shall be the name of the JVCA],* as Principal (hereinafter called "the Contractor") and *[insert name, legal title, and address of surety, bonding company, or insurance company]* as Surety (hereinafter called "the Surety"), are held and firmly bound unto *[insert name and address of Employer]* as Obligee (hereinafter called "the Employer") in the amount of *[insert amount of Bond] ([insert amount of Bond in words])*, for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS the Contractor has entered into a written Agreement with the Employer dated, the *[insert number]* day of *[insert month]*, *[insert year]* for *[insert the name of Contract and brief description of the Works]* in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Employer to be, in default under the Contract, the Employer having performed the Employer's obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

(1) complete the Contract in accordance with its terms and conditions; or

(2) obtain one or more Bids from qualified Bidders and submit them to the Employer for completing the Contract in accordance with its terms and conditions, and then arrange for the Employer to execute a contract with the Bidder whose Bid the Employer and Surety consider to be the Most Advantageous Bid, and shall secure sufficient funds to pay, as the work progresses (even in the event of a breach of contract or a succession of breaches of the term(s) of said Contract(s) provided for in this paragraph), the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "Balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by the Employer to the Contractor under the Contract, less the amount properly paid by the Employer to the Contractor; or

(3) pay the Employer the amount required by the Employer to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of one year from the date of issuance of the Certificate of Completion.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Employer named herein or the heirs, executors, administrators, successors, and assigns of the Employer.

IN TESTIMONY WHEREOF, the Contractor has hereunto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its legal representative, this *[insert day]* day of *[insert month]*, *[insert year]*.

Signed by _____
[insert signature(s) of authorized representative(s)]

on behalf of _____
[name of Contractor] in the capacity of *[insert title(s)]*

In the presence of _____
[insert name and signature of witness]

Date _____
[insert date]

Signed by _____
[insert signature(s) of authorized representative(s) of Surety]

on behalf of _____
[name of Surety] in the capacity of *[insert title(s)]*

In the presence of _____
[insert name and signature of witness]

Date _____
[insert date]

Note: *All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final document.*

ADVANCE PAYMENT SECURITY
Bank Guarantee

[Guarantor letterhead or SWIFT identifier code]

*[The **bank/successful bidder** providing the Guarantee shall fill in this form in accordance with the instructions indicated in brackets if an Advance Payment is to be provided under the Contract]*

Guarantor: *[insert name and address of place of issue, unless indicated in the letterhead]*

Beneficiary: *[insert name and address of Employer]*

Date: *[insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[insert guarantee reference number]*

We have been informed that *[insert name of Contractor, which in the case of a Joint Venture, Consortium and Association (JVCA) shall be the name of the JVCA]* (hereinafter called "the Contractor") has entered into Contract No. *[insert reference number of the contract]* dated *[insert date]* with the Beneficiary, for the execution of *[insert name of contract and brief description of Works]* (hereinafter called "the Contract").

FURTHERMORE, we understand that, according to the conditions of the Contract, an advance payment in the sum of *[insert amount in figures]* (*[insert amount in words]*) is to be made against an Advance Payment Guarantee.

At the request of the Contractor, we *[insert name of bank]*, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[insert amount in figures]* (*[insert amount in words]*)[56] upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Contractor:

(1) has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or

(2) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Contractor has failed to repay.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the advance payment referred to above has been credited to the Contractor on its account number *[insert number]* at *[insert name and address of Contractor´s bank]*.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as specified in copies of interim statements or

[56] *The Guarantor shall insert an amount representing the amount of the Advance Payment and denominated either in the currency(ies) of the Advance Payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.*

payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that eighty percent (80%) of the Contract Price, less provisional sums, has been certified for payment, or on the *[insert day]* day of *[insert month]*, *[insert year]*[5], whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

_____

[insert signature(s) of authorized representative(s) of bank]

Note: *All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.*

[5] *Insert the date twenty-eight days after the expected completion date as described in GCC Sub-Clause 55.1. The Employer should note that in the event of an extension of the expected completion date of the Contract, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months] [one year], in response to the Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

Request for Bids

REQUEST FOR BIDS (RfB)
Access to Potable Water Supply – South Bimini Airport Road & Port Royal Water Main Extension
5959/OC-BH/BH-L1061-P00069
Issued: September 29th, 2026

The Water and Sewerage Corporation (WSC), with financing from the Inter-American Development Bank (IDB) under the Water Supply and Sanitation Systems Upgrade Program (Loan No. BH-L1061), invites sealed bids from eligible contractors for the Supply and Construction of Potable Water Distribution System in South Bimini (Airport Road Mains Extension, and Port Royal Mains Extension).

Works include the supply and installation of approximately 60 feet of 6-inch C900 DR 18 water mains, 27,725 feet of 4-inch C900 DR 18 water mains, 680 feet of 2-inch SDR 21 PVC water mains, 133 service connections, and all associated appurtenances as shown in the drawings. Contract duration is 12 months under a Lump Sum Contract.

Eligible bidders must be nationals of IDB member countries, demonstrate proven experience in similar water infrastructure projects, and meet technical, financial, and ESHS requirements.

Deadline for submission: November 16th 2026, at 4:00 PM
Submission method: Bahamas Bonfire e-Procurement Portal https://bahamas.bonfirehub.com

For further information and to view the complete bid documents visit: Bahamas Bonfire e-Procurement Portal https://bahamas.bonfirehub.com

ANNEX XII

THE BAHAMAS WATER SUPPLY AND SANITATION SYSTEMS UPGRADE PROGRAM

(BH-L1061)

Component 3 - Access to Potable Water Supply

Environmental and Social Assessment (ESA) &

Environmental and Social Management Plan (ESMP)

Bimini Port Royal

December 2025

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EXECUTIVE SUMMARY

This Environmental and Social Assessment and Environmental and Social Management Plan (ESA/ESMP), prepared under the IDB-funded Water Supply and Sanitation Systems Upgrade Program (BH-L1061) and implemented by the Water and Sewerage Corporation (WSC), evaluates the potential environmental and social impacts of the Port Royal water mains installation in South Bimini. The project will enhance access to safe and reliable piped water, improving public health, equity, and community resilience. Short-term impacts such as dust, noise, vegetation disturbance, and temporary access restrictions may occur during construction. These impacts will be effectively managed through site-specific mitigation and monitoring measures designed to ensure environmental protection and community safety. The ESA/ESMP also includes supporting management plans for environmental protection, community health and safety, stakeholder engagement, and grievance redress to promote transparency and responsiveness. With these safeguards in place, the Port Royal water mains installation is expected to have low environmental and social risk while delivering lasting public health and socio-economic benefits for the South Bimini community.

Abbreviations

AMI	Advanced Metering Infrastructure
AoI	Area of Influence
BPL	Bahamas Power and Light
CoC	Code of Conduct
DAoI	Direct Area of Influence
DCC	Disaster Consultative Committee (DCC)
DEPP	Department of Environmental Planning and Protection
DMAs	District Metered Areas
EA	Executing Agency
E&S	Environmental and Social
EHSS	Environmental, Health, Safety and Social
ESAP	Environmental and Social Action Plan
ESF	Emergency Support Function
ESMPc	Environmental and Social Management Plan at the Construction Stage
ESPF	Environmental and Social Policy Framework
ESPS	Environmental and Social Performance Standards
FIA	Family Island Administrators
GHG	Greenhouse Gas
GoTB	Government of The Bahamas
GRM	Grievance Redress Mechanism
IAoI	Indirect Area of Influence
IDB	Inter-American Development Bank
IWA	International Water Association
KBA	Key Biodiversity Area
LMP	Labour Management Procedure
LS	Lift Station
NEMA	National Emergency Management Agency
NRW	Non-Revenue Water
PA	Protected Areas
PEU	Project Execution Unit
PMH	Princess Margaret Hospital
PPE	Personal Protective Equipment
SESA	Strategic Environmental and Social Assessment
SESMP	Strategic Environmental and Social Management Plan
URCA	Utilities Regulation and Competition Authority
USD	United States Dollars
WSC	Water and Sewerage Corporation
WWTP	Wastewater Treatment Plant

1 INTRODUCTION

1.1 BACKGROUND

This Environmental and Social Assessment (ESA) forms part of the broader Environmental and Social Management Framework under the Inter-American Development Bank (IDB)-funded Water Supply and Sanitation Systems Upgrade Program in The Bahamas (BH-L1061), implemented by the Water and Sewerage Corporation (WSC). This document specifically addresses environmental and social risks, mitigation strategies, and compliance requirements associated with the Port Royal water mains installation works in South Bimini, a key activity under *Component 3: Access to Potable Water Supply*.

Port Royal, located in South Bimini, is a small, seasonally active residential community characterized by unpaved but compacted sand and rock roads, naturally vegetated shoulders, and low-lying terrain. Water pooling often occurs in certain sections after rainfall due to the absence of formal drainage infrastructure. These baseline conditions require careful planning to prevent erosion, manage runoff, and avoid disturbance to natural landforms during trenching and pipe-laying operations.

Socially, the project is expected to deliver substantial improvements to household well-being, equity, and quality of life. Residents currently rely on private wells, bottled water, and rainwater catchment systems, which are costly and unreliable. By expanding piped water access, this project directly enhances public health, household savings, and social resilience, while strengthening community stability during peak seasonal occupancy. Although Port Royal has limited commercial activity, the improved water infrastructure will contribute to long-term sustainability, reducing service disruptions and supporting residential growth.

Port Royal is a canal-based community, with homes surrounded by vegetated buffers and inland access roads. While the project area does not overlap with designated protected areas or ecologically sensitive zones, the community's layout near waterways calls for careful environmental management. Roadways and natural vegetation buffers reduce the risk of storm water runoff entering canals, but good housekeeping, material stockpile control, and storm-preparedness protocols are essential to maintain environmental integrity and climate resilience.

1.2 OBJECTIVES

The main objectives of this Environmental and Social Assessment (ESA) are to:

- Conduct an expedited diagnosis of the environmental and social baseline of the project intervention area;
- Identify and assess the main environmental and social impacts and risks across the construction, operation, and closing stages of the project; and
- Define the mitigation measures and management procedures required to minimize these impacts and outline the structure of the Project's Environmental and Social Management Plan (ESMP).

This assessment evaluates the potential physical, biological, and social impacts of construction activities along the project corridor and outlines the measures required to ensure compliance with The Bahamas' national environmental legislation, including the *Environmental Planning and Protection Act (2019)* and

the *Environmental Impact Assessment Regulations (2020)*, as well as the Inter-American Development Bank's (IDB) Environmental and Social Performance Standards (ESPS).

The ESA serves as the foundation for contractor obligations under the Contractor's Environmental and Social Management Plan (ESMPc), which guides the site-specific implementation of mitigation actions, monitoring, and social safeguards throughout the construction and operational phases.

1.3 STRUCTURE OF THE REPORT

The structure of this report is designed to align with IDB safeguards requirements and national regulatory frameworks. The report includes:

- A detailed description of the project scope and area of influence;
- Baseline environmental and social conditions, including physical, biological, and socio-economic context;
- Assessment of potential environmental and social risks and impacts;
- Mitigation measures and environmental management procedures;
- A dedicated Environmental and Social Management Plan (ESMP), including monitoring, supervision, and grievance redress mechanism;
- Institutional roles, responsibilities, and reporting requirements.

The analysis focuses on key environmental aspects such as:

- Air quality and dust control, particularly during dry and windy conditions;
- Soil erosion and stormwater management, given the sandy and unpaved character of the area;
- Vegetation disturbance, especially of roadside native plants;
- Noise which may affect the flora and fauna in and around the project area

It also considers key social risks and opportunities, including:

- Temporary disturbances to communities during construction, such as road access disruptions or noise;
- Roadway health and safety, potential traffic congestion as well as risks of vehicular and pedestrian accidents along this essential corridor.
- The importance of transparent communication and stakeholder engagement;
- Long-term gains in public health, service delivery, and institutional functionality;
- The role of water access in advancing social equity, community resilience, and local development.

This assessment also reinforces the need for structured environmental and social supervision by WSC and its contractors, including:

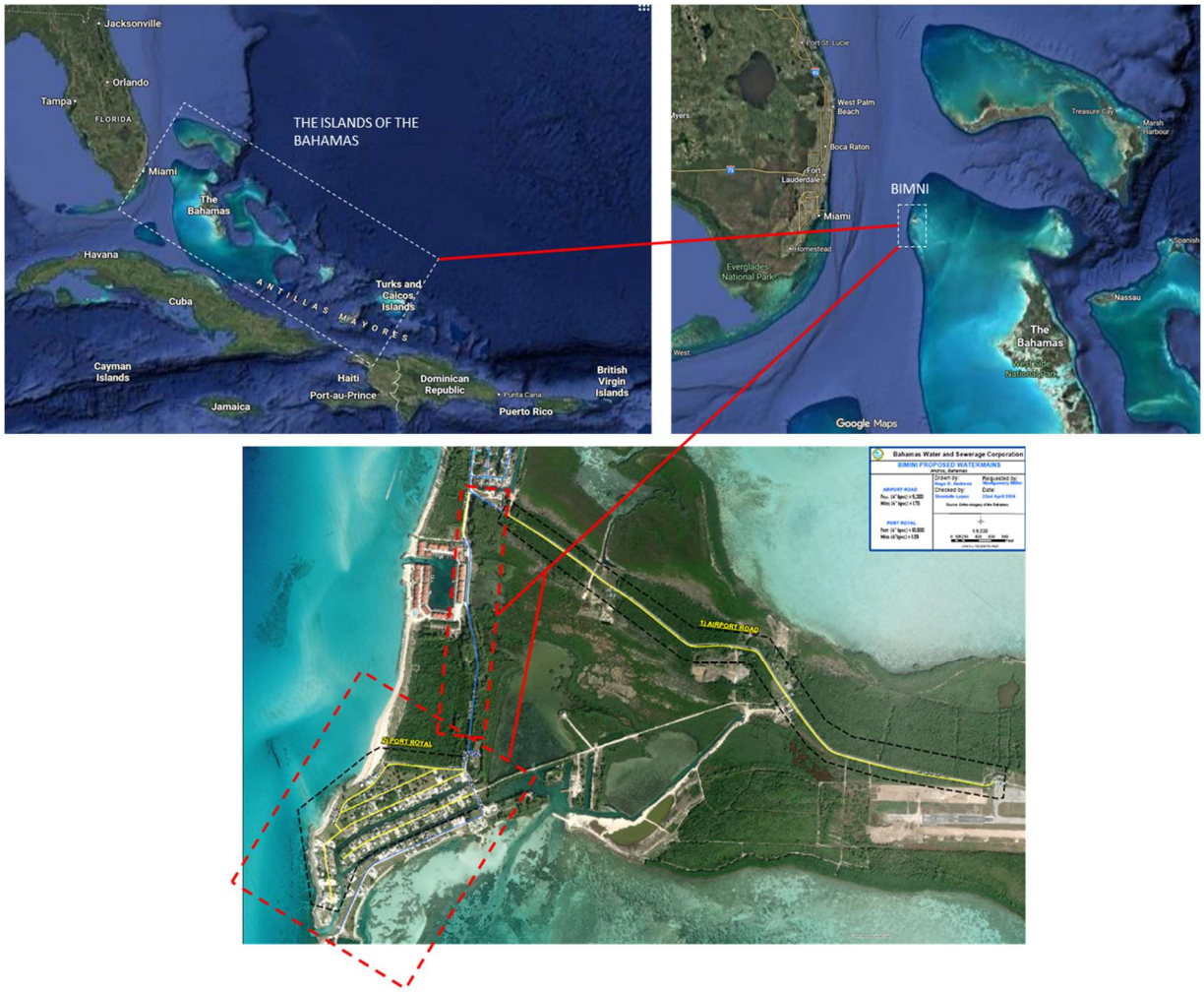
- Clear monitoring responsibilities;
- Documentation of compliance with environmental and social safeguards;
- Integration with national disaster and emergency response protocols, particularly during hurricane season;

- Use of a functioning Grievance Redress Mechanism (GRM) to ensure that community, employees and workers concerns are addressed in a timely and transparent manner.

With appropriate mitigation measures, social engagement protocols, and consistent monitoring and evaluation Port Royal works are expected to have low residual environmental and social risks and bring substantial long-term improvements to water security, community health, service equity, and infrastructure reliability for residents, visitors, and businesses in Bimini.

2 DESCRIPTION OF THE PROGRAM AND PROJECT

Component 3 aims to expand water supply infrastructure across islands with historically limited access to piped potable water. In Bimini, the works are divided into two implementation corridors: Airport Road and Port Royal, with this environmental and social assessment specifically addressing the Port Royal alignment in South Bimini.



The Port Royal alignment includes an access road that provides the primary vehicular route for residents. This roadway is narrow and lightly trafficked, serving mainly Port Royal residential homes and The Bimini Cove Resort and Marina property. Throughout this report the Project will be referred to as Port Royal, which includes the residential community and the access road leading up to the community. Road conditions vary along the alignment, with some sections semi-paved and others showing noticeable surface wear resulting from periodic inundation during heavy rainfall and routine daily use.

Photo 1. Port Royal Access Road (P-1)



Port Royal subdivision is a small, low-density residential subdivision in South Bimini, comprising approximately 145 buildings and a single church, largely characterised by vacation homes rather than permanent, high-density settlements. The intervention will benefit an estimated 100 lateral connections (roughly 300 persons) in the area. The road infrastructure is modest, with no formal sidewalks, limited commercial infrastructure, and many occupants relying on alternative water sources, including private wells and rainwater catchment.

Trenching activities will extend beyond the internal road network of Port Royal to include the entrance road leading into the subdivision, beginning in front of Bimini Cove Resort. This section of trenching is required to connect to the existing water main that serves as the source of the project tie-in. As a result, the entrance road and frontage area adjacent to Bimini Cove Resort are included within the project's Direct Area of Influence.

Despite this inclusion, the proposed works will not affect the operations, access, or water service of Bimini Cove Resort. No interruptions to resort services are anticipated, and construction activities will be managed to ensure continued access and minimal inconvenience. The scope of works in this area is limited to the water main connection and does not involve modifications to resort infrastructure or utilities.

Unique to this community, the residential structures are elevated built on reinforced stilts or piers. These homes are designed to reduce flood exposure by raising the living quarters above the ground level, which is especially useful in areas with variable terrain and localized water pooling. The ground level is typically left open or used for parking and storage. Located along the canal, these properties provide direct waterway access for boating and recreational use. Surrounding lots often include natural vegetation buffers, with driveways and roads composed of compacted sand and rock rather than formal paving.

Photo 2. Port Royal Community (P-2)



The planned activities include:

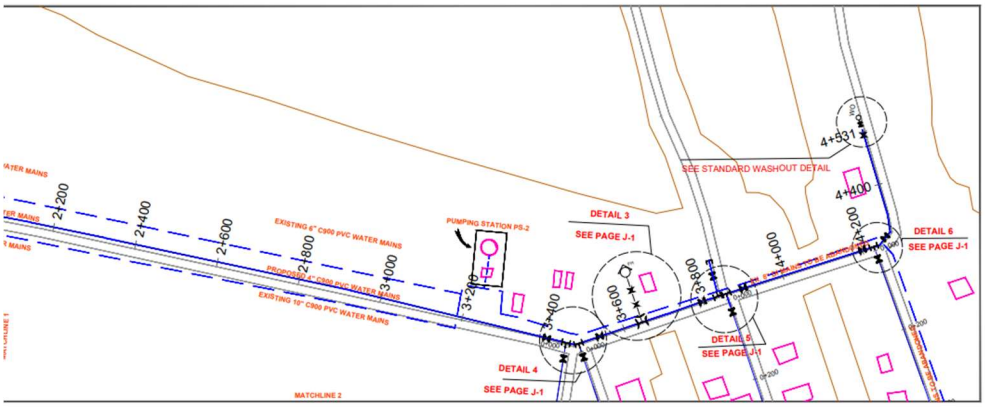
- Trenching of approximately 18,485 linear feet for 4-inch and 6-inch PVC water mains;
- Installation of service lateral connections;
- Backfilling, site restoration, and reinstatement of affected areas.

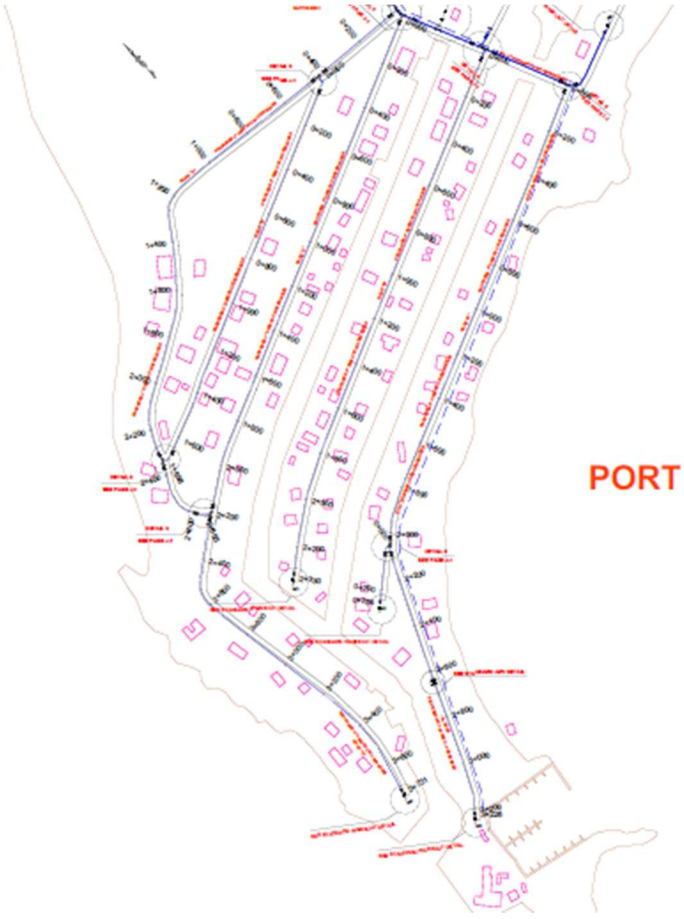
The project will have a designated, fenced in, lay down area, close to the site, where materials and equipment will be stored and refuelling can take place.

Photo 3. Proposed Laydown Area









PORT ROYAL SETTLEMENT

Trenching (16 inches) will be conducted along the edge of existing compacted sand and rock roadways, adjacent to residential properties and vegetated setbacks, as per the drawing specifications in *Appendix C*. While the area is not formally paved, the corridor features stable yet permeable road surfaces. Environmental sensitivities include the absence of engineered drainage infrastructure, localized terrain variation, and the potential for water pooling in depressions following heavy rainfall. These conditions will influence construction phasing, equipment mobility, and the need for active erosion and sediment control measures during implementation.

From a social standpoint, the project is expected to bring substantial public health and equity benefits to the community. The area currently lacks connection to the central water distribution network, and residents primarily depend on private wells, bottled water, and rainwater harvesting systems to meet their daily needs. These sources are often inconsistent, costly, and susceptible to contamination, particularly during periods of heavy rainfall or extended dry spells. By extending piped water infrastructure to Port Royal, the project will significantly enhance the reliability, affordability, and quality of potable water for residents.

2.1.1 Project Implementation, Supervision, and Management

The implementation of activities under Component 3: Access to Potable Water in Port Royal, South Bimini will be carried out collaboratively between the Water and Sewerage Corporation (WSC) and the appointed contractor. The contractor will be responsible for the direct execution of all construction and installation works, including trenching, pipe-laying, reinstatement, and associated environmental and social management measures. The contractor will also be responsible for ensuring adherence to environmental, occupational health and safety (OHS), and community engagement requirements as outlined in the Environmental and Social Management Plan (ESMP) and the Site Environmental and Social Management Plan (SESMP).

The WSC Site Supervisor will have overall oversight of field implementation and compliance with safety, environmental, and social standards. This individual will serve as the primary liaison between the WSC Project Management Unit (PMU) and the contractor, conducting regular site inspections, verifying the proper use of Personal Protective Equipment (PPE), ensuring that mitigation and monitoring measures are implemented as planned, and certifying adherence to performance and safety requirements. The Site Supervisor will also coordinate with the WSC Social and Environmental Specialists, who will monitor grievance management, stakeholder engagement, and social performance indicators.

The WSC Project Management Unit (PMU) will be responsible for the overall coordination, supervision, and reporting of project activities. The PMU will review all contractor submissions, including daily safety reports, monitoring logs, and compliance documentation, to ensure conformity with national regulations and IDB safeguard requirements. The PMU will also oversee the contractor's performance in implementing the Occupational Health and Safety Subprogram, Community Health and Safety Subprogram, Labor Management Procedure, Disaster Risk Management, Community Information and Participation, Coordination with Service Providers, Chance Find Procedure, and Traffic and Pedestrian Management Plan.

The contractor will be required to hold daily toolbox meetings and ensure continuous supervision of all work activities, while the WSC Site Supervisor will perform weekly inspections and report to the PMU on progress, safety compliance, and social or environmental issues observed in the field. The Social

Specialist will oversee the Grievance Redress Mechanism (GRM), ensuring that community complaints are received, documented, and resolved promptly.

Overall, project management will operate through a three-tier structure:

1. Contractor – Implements construction works and ESMP measures.
2. WSC Site Supervisor – Provides on-site supervision, compliance verification, and reporting.
3. WSC PMU (Environmental and Social Specialists) – Provides overall project oversight, coordination, and reporting to IDB.

2.1.2 Costs and Financing

This structure ensures accountability, consistency, and compliance with both national regulations and IDB Environmental and Social Policy Standards (ESPS), while promoting safe, transparent, and efficient project execution throughout the Port Royal and Airport Road works in South Bimini.

The budget allocation for the Bimini Water Main Extension Project under Component 3 reflects the scale and logistical requirements of extending service across South Bimini. The Port Royal extension is estimated at $1,206,000.00 supporting both residential needs and infrastructure serving the tourism and transport sectors.

The works are expected to be completed within approximately eight months of continuous work.

2.1.3 Expected Benefits

In addition to improving household access, the new water mains will strengthen essential community resilience by supporting safe and dependable water delivery to nearby facilities and service providers. Although Port Royal is largely residential and sparsely populated, the area accommodates seasonal tourism and small-scale rental properties that contribute to the local economy. Reliable water service is therefore critical not only to public health but also to maintaining the attractiveness of the area for visitors and investors.

Overall, the project is anticipated to foster improved living standards, promote equity in service delivery, and enhance the social and economic stability of Port Royal. By reducing dependency on unregulated water sources, the initiative will also contribute to long-term sustainability and community well-being across South Bimini.

The new infrastructure also enables the interconnection of South Bimini's supply system with the broader island network, reducing reliance on isolated systems and supporting network redundancy and climate resilience.

In summary, the planned works in Port Royal, South Bimini represent a strategic investment in climate-resilient water infrastructure, delivering long-term social, environmental, and public health benefits. By improving service equity and strengthening access to potable water in one of the country's most exposed communities, the project advances both national development priorities and local quality of life.

3 LEGAL AND INSTITUTIONAL FRAMEWORK

The legal and institutional framework that was reviewed include The Bahamas Environmental Health Services Act, the Planning and Subdivision Act, and environmental permitting procedures required by the Department of Environmental Planning and Protection (DEPP).

This assessment and management plan aligns with the requirements of the IDB's Environmental and Social Policy Framework (ESPF), which addresses risk management, labour conditions, pollution control, community health and safety, biodiversity, gender equality, stakeholder engagement, and involuntary resettlement.

3.1 NATIONAL LEGAL FRAMEWORK

The first section of the chapter describes the national legal framework applicable to the Program. The most relevant national legislation, which governs the project are summarised below:

3.1.1 Environmental Licensing

The environmental licensing framework governing this project is established under The Bahamas' Environmental Planning and Protection Act (2019), Environmental Impact Assessment (EIA) Regulations (2020), and the Ministry of the Environment Act (2019). Together, these instruments form the foundation for environmental oversight, pollution control, and sustainable resource management within the country.

In accordance with these regulations, all major infrastructure projects, such as the water mains works in South Bimini, are subject to environmental review and approval through the Certificate of Environmental Clearance (CEC) process, administered by the Department of Environmental Planning and Protection (DEPP). The CEC ensures that project design, implementation, and operation adhere to national environmental standards and safeguard both ecological and community well-being.

For this project, the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) required by DEPP to support the issuance of the CEC are being developed in partnership with a recognized and DEPP-approved consulting firm. This collaboration ensures that the assessment and management measures align with national regulatory expectations, international best practice, and the IDB's ESPS.

Act/Policy Title	Summary
Environmental Planning and Protection Act, 2019	The Act provides for the prevention or control of pollution, the regulation of activities and the administration, conservation and sustainable use of the environment and for connected purposes. The Act establishes the Department of Environmental Planning and Protection (DEPP) which in addition to the preceding, manages multilateral environmental agreements, and is responsible for the development and implementation of policies, programmes, and plans for the effective management and conservation of the physical environment within The Bahamas.
Environmental Planning and Protection (Extension of application) Order, 2020	The Environmental planning and protection (Extension of application) order applies throughout The Bahamas, including all islands and cays.

Environmental Impact Assessment Regulations, 2020	To provide procedures for a Certificate of Environmental Clearance (CEC). The Regulations provide procedures for the review of proposed projects inclusive of monitoring and compliance requirements. The Regulations dictate the requirements for a Certificate of Environmental Compliance (CEC).
Ministry of the Environment Act, 2019	This Act establishes the Ministry of the Environment to oversee the integrity of the environment of The Bahamas, to make the minister responsible therefore a corporation sole, to establish the environmental administration fund and the environmental trust fund and for matters connected thereto.

3.1.2 Potable Water, Quality, Supply

Act/Policy Title	Summary
Water and Sewerage Corporation Act, 1976	An Act to establish a Water and Sewerage Corporation for the grant and control of water rights, the protection of water resources, regulating the extraction, use and supply of water, the disposal of sewage and for connected purposes.
Water Supplies (Out Islands) Act, 1953	An Act to regulate and control public water supplies in the Out Islands. This Act makes provision for the water supply in the Out Islands. It mainly concerns the construction and maintenance of water supply systems and the conditions of supply of water to private consumers.
Water Supplies (Out Islands) Rules (Cap. 197)	These Rules concern the public supply of water to consumers at the Out Islands and related matters such as the construction of water supply works, rates, and repairs. The Minister may, on application, agree to supply water for domestic or other purposes in accordance with the provisions of the Water and Sewerage Act and these Rules. The Rules also concern requirements for plumbing and metering, prohibit illegal consumption and waste of water supplied through the public system and prescribe charges for water-related services.
Environmental Health Services Act, 1987	Provides the framework for environmental regulations that will ensure compliance for the Project. The Act authorized the DEHS to develop regulations that prevent and control air pollution, soil contamination and preserve water quality.
Environmental Planning and Protection Act (No. 40 of 2019)	The Director shall maintain within the Environmental Registry data on the sources of water, air and noise pollution, particularly data that identifies the quantity, conditions or concentrations relevant to the identification of each pollutant.
Out Islands Utilities Act	An Act to encourage the construction of water supply and sewerage disposal systems on Out Islands by providing

	for the refund of customs duties and certain other concessions to the developer of such systems. This Act makes provision with respect to the enhancement of public utilities construction works on the Out Islands such as water supply systems and sewerage systems. A developer who wishes to develop a utility project may apply to the Minister. The Minister may, through an agreement, license the developer to construct, maintain and operate the utility project at specified conditions. No utility project shall be constructed without the approval of the Minister.
Reclamation and Drainage Act	An Act to provide for reclamation and drainage of swampy areas. This Act makes provision for land reclamation and drainage of land ordered by the State. The Act shall apply in parts of the Bahamas that are declared by the Minister to be a reclamation area for purposes of this Act. The Minister may order landowners in a reclamation area to conduct land reclamation works and in case of neglect or refusal in respect of such order the Minister may direct a reclamation officer to carry out the work. The Act grants regulation making powers for purposes of the Act to the Minister.
Licensed Plumbers Rules	When undertaking any work for which a licensed plumber is authorized under the provisions of the Act, one must adhere to the requirements of this Regulation. In any premises intended for human habitation or occupation with a pure water supply, it shall not be connected to any impure water supply, nor shall it intersect through any plumbing fixture with the drainage system. Every building designated for human habitation that has a toilet or other plumbing fixture must have a water supply adequate in volume and pressure to flush said toilet or plumbing fixture. Furthermore, any pipe leading water to such toilet must be of an appropriate size to supply water at a rate necessary for proper flushing without unduly reducing the pressure in any other fixture.
Sewerage Rates Regulations	In determining the sum payable under regulation for sewerage services the building fixture specified in the first column of the Schedule shall be classified under the number of units set out respectively in the second column of the Schedule against each fixture.
Water Supply Rules	The Minister when requested in writing may agree to supply water to a consumer for domestic purposes or any other purpose in accordance with the Water and Sewerage Act. Water will not be supplied through any one metered connection with the supply main to more than two water closets. Where more than two water closets are installed in any new building on one proposed metered water connection or in any part of any new building such part

	being on one proposed metered water connection, then no water connection will be made until an independent water supply system has been installed to supply all the water closets in such new building or such part of a new building. If a third water closet is installed in a building or part of a building on an existing water connection, then the connection will be cut off unless an independent water supply system is installed to supply all the water closets in the said building or part of a building.

3.1.3 Effluent Discharge

Act/Policy Title	Summary
Environmental Health Services Act, 1987	Any individual who, contrary to the provisions of this Act and its regulations, releases or allows the release of any pollutant into the environment is committing an offense. Anyone who (a) discharges a pollutant or contaminating agent into the environment or (b) oversees a source that results in such discharge beyond regulatory limits must immediately notify the Director of such release. No person shall (a) modify or establish any facility or equipment capable of emitting pollutants; (b) change or undertake a production process that results in emissions; or (c) modify a production rate that alters the emission rate or manner, without prior certification approval from the Director endorsing the methods or devices used to control such emissions.

3.1.4 Solid Waste Management

Act/Policy Title	Summary
Environmental Health Services (Collection and Disposal of Waste) (Amendment) Regulations, 2013	These Regulations amend the Environmental Health Services (Collection and Disposal of Waste) Regulations, 2004 by repealing and replacing the Schedule. The Schedule, made under regulation 49, determines waste disposal charges for waste brought to a waste management facility. A waste disposal fee shall be assessed and shall be paid by all private collectors for each load of waste.
Environmental Protection (Control of Plastic Pollution) Act, 2019	An act to prohibit single use plastic food ware and non-biodegradable, oxo-biodegradable and biodegradable single use plastic bags; prohibit the release of balloons; regulate the use of compostable single use plastic bags, and for connected matters.
Environmental Health Services (Control of Plastic Pollution) Regulations, 2020	Where an environmental health officer, having inspected premises of a business pursuant to section 10 of the Environmental Protection (Control of Plastic Pollution) Act 2019, has reason to believe that the business has failed

	to comply with any provision of that Act, the officer may issue a notice of non-compliance.
Environmental Health Services Act, 1987	"Solid waste" includes ashes, garbage, refuse, litter, and other discarded solid material resulting from domestic, industrial, commercial, and agricultural operations and from community activities but does not include sewage. The Minister may prescribe regulations to effectuate and fulfill the purpose, intent, and provisions of this Act and, without prejudice to the generality of the foregoing, such regulations may provide for: subject to the provisions of Article 27 of the Constitution, the use, regulation, and control of beaches and coastal areas, both above and below the high-tide line, the removal of solid waste from them, and the cleaning and maintenance of the aforementioned beaches and areas, and generally for preserving the amenities thereof.

3.1.5 Hazardous Waste Management

Act/Policy Title	Summary
Environmental Health Services Act, 1987	"Solid waste" includes ashes, garbage, refuse, litter, and other discarded solid material resulting from domestic, industrial, commercial, and agricultural operations and from community activities but does not include sewage. The Minister may prescribe regulations to effectuate and fulfill the purpose, intent, and provisions of this Act and, without prejudice to the generality of the foregoing, such regulations may provide for: subject to the provisions of Article 27 of the Constitution, the use, regulation, and control of beaches and coastal areas, both above and below the high-tide line, the removal of solid waste from them, and the cleaning and maintenance of the aforementioned beaches and areas, and generally for preserving the amenities thereof.
International Regulations	
International Convention for the Prevention of Pollution from Ships (MARPOL), 1973, as modified by the Protocol of 1978 and Protocol of 1997 (Annexes I, II, III, IV, V & VI)	The Convention includes regulations aimed at preventing and minimizing pollution from ships - both accidental pollution and that from routine operations - and currently includes six technical Annexes. Special Areas with strict controls on operational discharges are included in most Annexes.
Stockholm Convention on Persistent Organic Pollutants, 2004	It aims to eliminate or restrict the production and use of persistent organic pollutants (POPs).

3.1.6 Occupational Health, Hygiene, and Safety

Act/Policy Title	Summary
Environmental Health Services Act, 1987	Legislation to advance the conservation and maintenance of the environment in the interest of public health, for proper sanitation concerning food and beverage matters, and more broadly, for the provision and oversight of services, activities, and other matters connected or incidental thereto. The Minister may issue regulations to effectuate and realize the purpose, intent, and provisions of this Act and, without limiting the scope of the foregoing, such regulations might provide for the establishment of standards for the hygienic maintenance and use of public sanitary facilities, restrooms, sinks, laundries, and dry cleaning establishments.
Health and Safety at Work Act	Law establishing provisions relating to occupational health and safety and other related purposes.
Health and Safety at Work (amendment)	The Health and Safety at Work Act has undergone an amendment targeting section 17. This revision establishes that any individual interfering with an inspector's duties, falsely claiming to be an inspector, altering official documents, or violating any aspect of the Act or its associated regulations is committing an offense. Penalties, upon summary conviction, range from a fine of five thousand dollars for a first-time offense (and additional charges for continuous offenses) to ten thousand dollars for recurrent violations. Legal action for these offenses can only commence with the Attorney General's direct involvement or endorsement.
Environmental Health (Fees for Services) Regulations, 1989	These Regulations, made under section 17 the Environmental Health Services Act, prescribe fees in respect of the services set out in the Schedule to these Regulations. Any fee or charge incurred in the performance of any service rendered may be recoverable summarily by the Minister and fees and charges shall be paid into the Consolidated Fund. Services include: inspection of cargos of ships and deratization of ships; analysis of drinking water; analysis of treatments involving pesticides; tests analysis of dairy products and food items; and hazardous waste analysis.
Health Rules Chapter 231	These Regulations make provision with respect to a wide variety of matters regarding public health in the Bahamas, including: abatement of nuisances (as defined); the keeping of animals (including birds, goats, pigs, horses and cattle) on premises; waste disposal and littering; discharge of wastewater in public drains; sewerage; digging and construction of wells and cisterns; protection of containers for the storage of water from mosquitoes; handling of food by diseased persons; notification of diseases affecting animals; sanitary conditions for the

	production, transportation, handling, storage and sale of foods and drugs (including drugs for animals; inspection of food establishments; special matters regarding dairies and the production and sale of (adulterated) milk and milk products; and labelling of dairy products.

3.1.7 Noise

Act/Policy Title	Summary
Environmental Health Services	The Minister may make regulations to give effect to and carry out the purpose, intent and provisions of this Act and, without prejudice to the generality of the foregoing, such regulations may provide for -the prevention and control of air pollution, including the control of emissions of smoke, gases, dust, dust, particulates, fumes or any combination thereof, offensive odors or excessive noise from factories, vessels, vehicles or any other premises or thing.

3.1.8 Historical Pollution

Act/Policy Title	Summary
Environmental Planning and Protection Law (Act N°40 of 2019)	Section 28 refers to the Liability for Historical Pollution, determining that the Director may require a person who has polluted the environment to take measures to rehabilitate the site by notice. If more than one person is found responsible, the liability shall be assessed against those persons on a pro rata basis. Section 36 refers to the Environmental Restoration Order, establishing that the Director may issue an environmental restoration order that requires a person to restore the environment as near as they can to the state it was in before. Moreover, the order shall award compensation to a person whose environment, property or livelihood has been harmed by the action which is the subject of the order.

3.1.9 Labor Legislation

Act/Policy Title	Summary
Apprenticeship Act Chapter 320	An Act to make provision for the regulation of the training of trade apprentices.
Employment Act, 2001	Act establishing the minimum working hours and paid vacations for workers; the provision of maternity and family leave; severance compensation; provisions concerning notice periods for termination of employment contracts;

	stipulations related to summary dismissals and wrongful terminations; regulations regarding the employment of children and young people; provisions concerning workers' wages; regulations on fingerprinting and lie detection; and for related purposes.
Health and Safety at Work Act Chapter 321 C	An Act to make provisions relating to health and safety at work and for connected purposes.
Public Works Act	An Act to provide for the construction, management, and development of public works, buildings and roads.
Industrial Relations (Validation of Trade Unions) Act, Chapter 321D	An Act to validate certain Trade Unions deemed not to exist in consequence of failure to comply with transitional requirements of the Industrial Relations Act upon the repeal by it of the Trade Union and Industrial Conciliation Act.
Industrial Relations Act Chapter 321	An Act to provide for the registration and control of trade unions; for the recognition of trade unions by employers; for the registration of certain Industrial Agreements; for the establishment of an Industrial Tribunal and the regulation of trade disputes; for the repeal of certain parts of the Trade Union and Industrial Conciliation Act; and for other matters connected with or incidental to the aforesaid purposes.
Minimum Wages Act Chapter 321B	An Act to make provisions for minimum wages in employments and for connected purposes.
Recruiting of Workers Act Chapter 318	An Act to regulate the recruitment of workers.
International Regulations	
Forced Labor Convention, 1930 (No. 29)	It prohibits the use of forced or compulsory labor in all its forms, considering that the term “forced or compulsory labor” shall mean all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily.
Freedom of Association and Protection of the Right to Organize Convention, 1948 (No.87)	It states workers and employers, without distinction whatsoever, shall have the right to establish and, subject only to the rules of the organization concerned, to join organizations of their own choosing without previous authorization.
Right to Organize and Collective Bargaining Convention, 1949 (No. 98)	It states workers shall enjoy adequate protection against acts of anti-union discrimination in respect of their employment.
C100 - Equal Remuneration Convention, 1951 (No. 100)	It states men and women workers shall be equally remunerated for work of equal value. It refers to rates of remuneration established without discrimination based on sex.

Abolition of Forced Labor Convention, 1957 (No. 105)	It states the obligation to suppress and not to make use of any form of forced or compulsory labor-- (a) as a means of political coercion or education or as a punishment for holding or expressing political views or views ideologically opposed to the established political, social or economic system; (b) as a method of mobilizing and using labor for purposes of economic development; (c) as a means of labor discipline; (d) as a punishment for having participated in strikes; (e) as a means of racial, social, national or religious discrimination.
Discrimination (Employment and Occupation) Convention, 1958 (No. 111)	It states the obligation to declare and pursue a national policy designed to promote equality of opportunity and treatment in respect of employment and occupation, with a view to eliminating any discrimination in respect thereof. The term discrimination includes (a) any distinction, exclusion or preference made based on race, color, sex, religion, political opinion, national extraction, or social origin, which has the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation.
Minimum Age Convention, 1973 (No. 138)	It states the obligation to pursue a national policy designed to ensure the effective abolition of child labor and to raise progressively the minimum age for admission to employment or work to a level consistent with the fullest physical and mental development of young persons.
Worst Forms of Child Labor Convention, 1999	It states the obligation to take immediate and effective measures to secure the prohibition and elimination of the worst forms of child labor as a matter of urgency. For the purposes of this Convention, the term child shall apply to all persons under the age of 18, and the term the worst forms of child labor comprises: (a) all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom and forced or compulsory labor, including forced or compulsory recruitment of children for use in armed conflict; (b) the use, procuring or offering of a child for prostitution, for the production of pornography or for pornographic performances; (c) the use, procuring or offering of a child for illicit activities, in particular for the production and trafficking of drugs as defined in the relevant international treaties; (d) work which, by its nature or the circumstances in which it is

	carried out, is likely to harm the health, safety or morals of children.
Maritime Labor Convention, 2006, as amended (MLC, 2006)	It states the obligation to secure the right of all seafarers to decent employment.

3.1.10 Flora, Fauna, and Native Forest

Act/Policy Title	Summary
Forestry Act, 2010	Provides regulatory framework for the management of forestlands and protected species of trees and other plants, which are either threatened, endangered, or endemic to The Bahamas.
Forestry Amendment Act	Regulation 36 of the principal Regulations is amended by inserting immediately after the sub-regulation the following new subregulation (3A) -- "(3A) The Minister, acting on the advice of the Director of Forestry, may where a hurricane, tornado or any other natural disaster has occurred on any island, islet or cay in The Bahamas which causes serious damage to any forest or non-forest product in any designated forest, forest estate, forest reserve, conservation forest or protected forest, reserve the right to make special provision for the reduction of fees payable as specified in the Second Schedule, for royalties, permits and licenses for the purposes of these regulations".
Declaration of Protected Trees Order, 2021	This Order declares protected trees for the management, development, and protection of the forest resources of The Bahamas. The Schedule of this Order lists the trees which are endemic or endangered or threatened in Part I and trees which are of cultural or historical or economic significance in Part II.
Forestry Regulations	The Minister may grant leases to Bahamian governmental and nongovernmental bodies for a period not exceeding 99 years for the use of land within a forest reserve, protected forest, and conservation forest for purposes other than the utilization of forest produce under section 17 (1) (a), 17 (1) (b) and 17 (1) (c) of the Act. All applications for leases in respect of Crown land vested in the Minister within forest reserves, protected forests and conservation forests shall be submitted to the Director of Forestry, who shall forward the applications with his recommendations to the Minister.

Wildlife Conservation and Trade	Law implementing the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), focused on the protection of wild species and the damage caused by unsustainable exploitation.
Accidental Fires Act (Cap. 74)	This Act provides for relief from liability for accidental fires. However, this relief shall not affect the civil liability of any person for any negligent or willful act or omission or the criminal or contractual liability of any person.
Wild Animals Protection Act, 1968	Prohibits the taking, capturing, or hunting of any animal without a permit.
Wild Birds Protection Act, 1952	Prohibits the taking, capturing, or hunting of any animal without a permit. Protects birds and eggs during closed season.
Marine Mammal Protection Act, 2005	This Act sets forth provisions to protect marine mammals, including prohibiting the import of marine mammals and barring illegal taking, harassing, and otherwise harming marine mammals, among other guidelines.
Conservation and Protection of the Physical Landscape of The Bahamas Act, 1997	Protects physical landscape from environmental degradation, flooding, and removal of hills; regulates filling of wetlands, drainage basins or ponds; prohibits digging or removing sand from beaches and sand dunes; prevents harvesting or removing protected trees. In order to perform activities that may affect the physical landscape of The Bahamas, permits must be obtained for these activities. The Department of Physical Planning issues the permits and enforces the regulations.
Coast Protection Act, 1968	This Act makes provision for the protection of the coast against erosion and encroachment by the sea and for purposes connected therewith.
National Policies and Reports	
National Invasive Species Strategy, 2003	Provides a national framework for the prevention, control, and eradication of invasive plant and animal species in The Bahamas.
National Biodiversity Strategy and Action Plan (NBSAP)	Outlines goals for the conservation and sustainable use of biodiversity in The Bahamas. Encourages protection of native ecosystems, restoration of disturbed areas, and integration of biodiversity safeguards into infrastructure development. Supports the project's commitment to flora/fauna protection and buffer zone restoration.

3.1.11 Gaseous Emissions Management

National Policies and Reports

Third National Communication (TNC) of The Commonwealth of The Bahamas to the United Nations Framework Convention on Climate Change (UNFCCC), 2024	The TNC outlines The Bahamas' greenhouse gas emissions profile, national vulnerabilities, and adaptation priorities. It highlights water scarcity, saltwater intrusion, and infrastructure damage as key risks, especially in low-lying islands. The report calls for improved climate-resilient water systems and better data for adaptation planning—directly supporting the design rationale of the Port Royal water mains project.
Vision 2040 – National Development Plan (Climate Adaptation Chapter)	This long-term development framework incorporates climate resilience across economic, environmental, and infrastructural pillars. The plan calls for robust disaster risk governance, sustainable water management, and reduced vulnerability in Family Island communities.
State of the Environment Report (Draft)	Although not finalized, the draft provides baseline information on climate-related pressures and vulnerabilities across sectors, including freshwater availability, infrastructure exposure, and land degradation. It reinforces the importance of environmental monitoring and safeguards in Family Island infrastructure projects.
National Policy for the Adaptation to Climate Change, 2005	The National Climate Change Policy (2005) was The Bahamas' first formal policy framework aimed at addressing the causes and impacts of climate change. It was developed to fulfill national commitments under the United Nations Framework Convention on Climate Change (UNFCCC) and sets the foundation for integrating climate change into national development planning.
Act/Policy Title	**Summary**
Disaster Risk Management Act, 2022	This Act establishes the legal framework for disaster risk governance, preparedness, response, recovery, and resilience building in The Bahamas. It also creates the Disaster Risk Management Authority (DRMA) as the lead coordinating body and executor of the Act.
Environmental Health Services	The Minister may make regulations to give effect to and carry out the purpose, intent and provisions of this Act and, without prejudice to the generality of the foregoing, such regulations may provide for -the prevention and control of air pollution, including the control of emissions of smoke, gases, dust, dust, particulates, fumes or any combination thereof, offensive odors or excessive noise from factories, vessels, vehicles or any other premises.
Climate Change and Carbon Market Initiatives Act, 2022 (Act No. 15 of 2022)	Gives effect to the Paris Agreement, to aid in the global response to the threat of climate change

	and to create and implement the initiatives to offset carbon emissions.
International Regulations	
Montreal Protocol on Substances that Deplete the Ozone Layer, 1987	It was designed to stop the production and import of ozone depleting substances and reduce their concentration in the atmosphere to help protect the earth's ozone layer. It regulates the production and consumption of nearly 100 man-made chemicals referred to as ozone depleting substances.
Kyoto Protocol, 1992	It commits state parties to reduce greenhouse gas emissions, based on the scientific consensus that global warming is occurring and that human-made CO2 emissions are driving it.
The Paris Agreement, 2015	One of the primary goals of the Agreement is to pursue a development trajectory characterized by low greenhouse gas emissions, ensuring that food production remains uncompromised. The Agreement aims to contain the global average temperature increase well below 2°C relative to pre-industrial levels, with continued efforts to further limit this increase to 1.5°C. To achieve this, the signatories intend to peak global greenhouse gas emissions as soon as possible. It is acknowledged that developing nations will require more time to reach this zenith, and once achieved, there will be a swift decline in emissions. Developing nations are expected to augment their mitigation measures. Over time, they are encouraged to adopt comprehensive emission reduction or limitation objectives, considering their distinct national circumstances. Least developed countries and small island developing states have the provision to devise and convey strategies, plans, and actions for low greenhouse gas emission development, reflecting their unique situations.
United Nations Framework Convention on Climate Change (UNFCCC)	The United Nations Framework Convention on Climate Change (UNFCCC) established an international environmental treaty to combat "dangerous human interference with the climate system". All parties should promote and support the development, application, and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all sectors, including energy, transport, industry, agriculture, forestry and waste management. In addition, they should promote sustainable management and

	cooperatively support the conservation and enhancement of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans, as well as other terrestrial, coastal and marine ecosystems. Each party should submit to the Conference of the Parties a national inventory, within its capabilities, of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies to be promoted and approved by the Conference of the Parties.

3.1.12 Energy

Act/Policy Title	Summary
Bahamas Electricity Corporation (Vesting Of Land) Act No. 2 of 1958	Act Granting the Bahamas Electricity Corporation a land extension located on the Southern Side of New Providence Island, which constitutes a portion of Clifton Estate, with said land being separated by an existing thirty-foot-wide public roadway.
Electricity Act, 2015	Its objective is to overhaul the country's energy sector and edict policy targets, among others: 1) security and diversification of power supply and distribution, 2) access to cheap and reliable environmentally sustainable electricity, 3) and the establishment of the Utilities Regulations and Competition Authority (URCA) as the independent regulator of the sector. The Act encourages a higher capacity of renewables electricity generation under several ways. It seeks a reorganization of the electricity sector, so that public suppliers shall increase the proportion of renewables in their generation mix. It also promotes residential renewable energy generation for connection to the grid, and for self-generation. All stages are regulated by Utilities Regulation & Competition Authority (URCA).
The Bahamas National Energy Policy (2013 – 2033)	Sets out a long-term vision for a modern, diversified, efficient and resilient energy sector; emphasizes affordability, low-carbon technologies, and reducing reliance on imported fossil fuels.
Draft The Bahamas National Energy Policy (2025-2030)	Updates the previous policy; prioritizes renewable energy deployment, battery storage, micro-grids for Family Islands, and incentives for clean technology.

3.1.13 Vehicular Traffic

National Regulations	
Road Traffic Act	An Act to declare, amend and codify the law relating to motor vehicles, and to regulate traffic on highways and of motor vehicles; to establish a Road Traffic Authority; to protect third parties against risks arising from the use of motor vehicles; to amend the law with respect to the licensing of motor vehicles operated for hire or reward, and to regulate public transportation services; and to regulate matters relating to the above matters.
Road Traffic (vehicle inspection)	The owner of a motor vehicle applying for the registration of such vehicle shall present the vehicle to the Inspector for inspection and shall provide him with the data required in the application for registration of a motor vehicle.

3.1.14 Cultural Heritage, Archaeological and Historical Sites

National Regulations	
The Bahamas National Trust Act, Chapter 391	An Act to incorporate and confer powers upon The Bahamas National Trust for Places of Historic Interest or Natural Beauty.
Antiquities, Monuments and Museum Act, 1998	This law provides for the preservation, conservation, and restoration of historical, paleontological and archaeological resources.

3.1.15 Other Laws/ Regulations

Act/Policy Title	Summary
Bahamas National Maritime Policy, 2015	This Policy was established in 2015 and updated in 2017 to ensure the sustainable development of the Maritime sector, protection of the marine environment, and to utilize the valuable resources efficiently and effectively within The Bahamas.
Port Authorities Act, 2006	This Act sets forth provisions appointing port authorities to all ports and harbors of the Bahamas to better regulate and control port operations.
Planning and Subdivision Act, 2010	An Act to combine, consolidate and revise the law relating to town planning and the law relating to the development of subdivisions and to provide for matters connected thereto. The purposes of this Act include ensuring the efficient and orderly provision of infrastructure

	and services to the built environment and promoting sustainable development in a healthy natural environment.
Local Government Act, 1996	This Act divides the Family Islands into 23 districts, each administered by a District Council. With this Act, much authority has devolved from Central Government to the District Councils. The Council and their respective Town Committees are responsible for town planning, licensing and administering budgets. They are also mandated to create open spaces for community use, including recreational parks and to provide community services, such as water, health care, sanitation, and waste collection and disposal.

4 IDB ENVIRONMENTAL AND SOCIAL POLICY FRAMEWORK

This section presents a summary of the Environmental and Social Performance Standards (ESPS) that are relevant to the project.

ESPS 1: Assessment and Management of Environmental and Social Risks and Impacts

ESPS 1 is the basis of the ESMP, requiring systematic identification, assessment, and management of potential risks throughout the project life cycle. In Port Royal, anticipated risks include construction-related dust, noise, localized water pooling during rain events, vegetation clearance along road verges, and short-term access disruptions for residents and property owners.

The Port Royal alignment passes through a canal-based residential subdivision with compacted rock and sand roadways, natural vegetation buffers, and a mix of elevated seasonal and permanent homes. While the area is not formally urbanized, it includes utility easements and well-defined property boundaries, which require careful coordination to avoid nuisance impacts and ensure right-of-way access is respected.

From a social perspective, the project addresses long-standing water security gaps in the South Bimini community. Many homes depend on private wells, rainwater catchment, or bottled supplies. Timely installation of the water mains will reduce household vulnerability, support public health, and enhance resilience for both permanent residents and seasonal visitors. The ESMP embeds clear community engagement protocols, including grievance redress, to ensure residents remain informed and concerns are addressed throughout implementation.

This plan builds upon the Strategic Environmental and Social Assessment (SESA) and contextualizes those findings for the terrain, settlement pattern, and environmental sensitivities unique to Port Royal.

ESPS 2: Labour and Working Conditions

This standard ensures that all workers engaged in the project are treated fairly, operate under safe conditions, and have access to grievance redress mechanisms. For this project, ESPS 2 requires that the contractor provide proper Personal Protective Equipment (PPE), training on equipment and safety procedures, and fair terms of employment to both WSC staff and contracted workers. It prohibits child or forced labour and requires measures to prevent discrimination, harassment, or gender-based violence in the workplace. In the context of South Bimini, ESPS 2 also underscores the importance of hiring locally where possible, thus providing income opportunities while ensuring workers are safeguarded under a clear Labour Management Procedure (LMP).

ESPS 3: Resource Efficiency and Pollution Prevention

ESPS 3 is applicable to the Port Royal Water Mains works due to the nature of construction activities involved namely, excavation, material handling, vehicle and equipment operation, and temporary storage of supplies, which inherently generate solid waste, noise, dust, and pose risks of fuel or lubricant spills. The applicability of this standard is based on the potential for environmental degradation linked to pollution and inefficient resource use.

While the project's physical footprint is narrow and localized along a roadside corridor, site conditions such as unpaved shoulders, sandy soils, and the lack of formal drainage infrastructure elevate the risk of erosion, sedimentation, and surface runoff during rainfall events. Without proper mitigation, these conditions could lead to particulate emissions, water quality degradation, and short-term disruption of nearby drainage channels.

To comply with ESPS 3, contractors will be required to implement resource efficiency and pollution prevention measures, into the Contractor's Environmental and Social Management Plan (ESMPc), with oversight from WSC and the supervising engineer. Additionally, all machinery must be regularly serviced to reduce emissions, and fuel or chemical storage must follow national environmental guidelines to prevent accidental releases. Given the scale and nature of the works, with appropriate mitigation, the residual environmental impacts are expected to be low, localized, and fully manageable.

ESPS 4: Community Health, Safety, and Security

Port Royal is a low-traffic residential community where roadways are shared by pedestrians, vehicles, and seasonal property owners. ESPS 4 is triggered due to the need to protect community members from construction-related risks. This includes maintaining access to homes, controlling dust and noise, and ensuring that excavation zones are clearly marked and secured. Although heavy machinery use will be limited, safety signage, work zone barricades, and daily supervision will be implemented to safeguard residents and workers.

The community's proximity to the canal means that extra care must be taken to prevent construction debris or contaminants from reaching the waterway. While direct runoff is unlikely due to the positioning of homes and vegetation buffers between the road and canal, proper housekeeping will be essential. The project will also promote sanitation, and hygiene measures on site (workers will be required to access chemical toilets at laydown yard).

By applying ESPS 4, the project ensures a proactive approach to minimizing disturbance, enhancing safety, and protecting the well-being of the Port Royal community during the construction phase.

ESPS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

The Port Royal works trigger ESPS 6 due to the presence of native roadside vegetation and proximity to canal-side ecological buffers. While the project's area of influence is not in protected areas, Key Biodiversity Areas (KBAs), or Important Bird Areas (IBAs), it contains vegetation typical of coastal shrublands, classified under the Caribbean Vegetation Classification System (Areces-Mallea et al., 1999) as "Coastal Scrub and Shrubland of Developed Areas."

Vegetation along the road shoulders includes salt-tolerant plants, shrubs, and other native plants that help stabilize the soil and provide minimal habitat for fauna such as birds, insects, and small reptiles. Tree removal is not expected, and no endangered species have been recorded during baseline surveys.

To comply with ESPS 6, contractors must limit clearance to the minimum required footprint and apply restoration practices post-installation. All vegetation management will follow national environmental regulations, including those under the Forestry Act (2010), and be coordinated with the Department of Environmental Planning and Protection (DEPP) where relevant. With proper implementation, residual biodiversity impacts will be negligible.

ESPS 9: Gender Equality

ESPS 9 emphasizes equitable access to project benefits and opportunities for both men and women. In the Bahamas, men traditionally dominate construction-related employment, while women bear a disproportionate share of responsibility for household water management. By applying ESPS 9, the project can actively promote women's participation in employment opportunities and ensure that contract documents include equal pay and non-discrimination provisions.

ESPS 10: Stakeholder Engagement and Information Disclosure

This standard requires transparent, inclusive, and continuous engagement with affected communities and stakeholders. For this project, ESPS 10 involves providing timely information about works, water service interruptions, and anticipated benefits; holding community meetings; distributing notices through accessible channels; and operating a functional Grievance Redress Mechanism (GRM). By implementing ESPS 10, the project ensures accountability, builds trust with communities, and creates space for local feedback to shape project delivery.

5 ENVIRONMENTAL AND SOCIAL BASELINE

5.1 INTRODUCTION

The baseline assessment identified that the Port Royal community borders a canal system lined with sporadic mangroves, which are ecologically sensitive; however, these mangrove areas are buffered by existing residential structures, effectively shielding the trenching zones and roadways from direct ecological impact.

The baseline assessment includes an overview of physical, biological, and environmental characteristics that may influence or be impacted by the construction and operation of the water infrastructure. As part of this assessment, the access road, which consists of compacted limestone and sand surfaces bordered by mixed coastal vegetation was also evaluated. This roadway forms the primary alignment for the proposed water mains installation and plays a key role in determining construction access, equipment movement, dust generation potential, and interactions with adjacent residential properties.

The social baseline assessment examines the existing demographic, infrastructural, and socioeconomic conditions within the Port Royal area of South Bimini. It focuses on patterns of settlement, community infrastructure, and access to basic services—particularly potable water—as well as local livelihoods that may be influenced by the project. The assessment also considers aspects of public health, safety, accessibility, and equity to establish a baseline for evaluating the project's potential social impacts and benefits. This baseline provides the foundation for identifying environmental and social risks and for defining appropriate mitigation and monitoring measures within the ESMP.

The area primarily comprises open land and natural vegetation, with approximately 145 residential buildings, one church, and one institutional structure, the Bimini Biological Field Station. The community is characterised by low-density residential development interspersed with landscaped properties and undeveloped parcels. Trenching activities will occur along the shoulders of single-carriageway roads within the Port Royal community, where roadway edges transition into private driveways, canal and dock access paths, and intermittently manicured yards featuring ornamental vegetation such as palm trees (Photo 1). Vegetation along the roadway is discontinuous and consists mainly of native shrubs, grasses, and maintained landscaping.

In addition to works within the Port Royal internal road network, trenching will also take place along the entrance road to the subdivision, beginning in front of Bimini Cove Resort, to facilitate connection to the existing water main that serves as the project's tie-in point. This segment of the entrance road and the adjacent frontage of the resort are therefore included within the project's Direct Area of Influence. However, the baseline assessment confirms that this activity will not affect the operations, access, or water service of Bimini Cove Resort. No service interruptions or changes to resort infrastructure are anticipated, and construction activities in this area will be limited in scope and duration.

No protected flora or fauna have been identified within the immediate project footprint, and the alignment does not intersect any formally designated critical habitats or ecologically sensitive zones. The baseline conditions indicate that potential social impacts are primarily related to temporary construction activity and access management, rather than long-term changes to land use, livelihoods, or community structure.

Photo 4. Port Royal Roadways and vegetated outlook



The project area is subject to environmental constraints that require adaptive construction approaches. Soils are primarily composed of loose sand and shell aggregate, which may reduce ground stability during excavation. The absence of engineered drainage systems contributes to localized pooling during rainfall events, with terrain variability affecting water retention in some areas. Although Port Royal has not experienced severe flood damage in recent history, Bimini as a whole sustained surge-related infrastructure impacts during Hurricane Irma (2017). These community vulnerabilities have been factored into the project's disaster risk planning, construction scheduling, and site management protocols.

Given the lack of formal pedestrian infrastructure, the project will implement temporary barriers, signage, and clearly marked walking paths to ensure the safety of residents, pedestrians, and workers during the construction phase.

In terms of social impact, the proposed works are expected to deliver substantial public health, equity, and service reliability benefits. Many households in South Bimini continue to rely on private wells, bottled water, or rainwater harvesting systems, which are often costly, inconsistent. By extending piped potable water through the Port Royal area, the project will enhance the quality, affordability, and security of water supply for residents, the church, and public institutions. Improved access to reliable water will contribute

to higher living standards, reduced household expenditure on alternative water sources, and better overall community health outcomes.

5.2 DEFINITION OF AREA OF INFLUENCE

This section defines the Direct and Indirect Areas of Influence (DAoI and IAoI) in South Bimini, specifically within the Port Royal area. These areas reflect the localized scale and environmental sensitivity of the works based on final project designs and site inspections.

5.2.1 Direct Area of Influence (DAoI)

The Direct Area of Influence (DAoI) is defined as the immediate zone where direct environmental and social impacts are expected to occur during construction and operation of the water mains. It refers to the spaces, households, institutions and community activities that are located immediately along or adjacent to the project footprint that may experience direct, immediate, and measurable social and environmental effects resulting from construction or operational activities. This includes the physical footprint of excavation, staging areas, pipe installation, excavated trench material, and access for machinery and workers. It also includes people and properties exposed to temporary disruptions such as changes in access, noise, dust, utility interruptions, work-crew presence, and short-term traffic modifications.

With respect to social impacts, the direct area encompasses those residents, community facilities, and local institutions whose daily routines, mobility, and interaction with public services may be directly altered by the project's physical works.

Given the residential layout of Port Royal, with narrow single-lane roads, canal-side access paths, and landscaped or naturally vegetated buffers, the environmental DAoI is conservatively set at 6–8 meters from the trench centerline, which aligns with the edge of the paved road and adjacent unpaved shoulders. This captures all areas subject to excavation, compaction, and physical disturbance.

- For Port Royal, the DAoI includes the unpaved roadway leading up to the community and throughout the community, extending to the vegetated roadside where trenching, excavated trench material, and temporary access routes will occur.

The defined DAoI also includes:

- The trench alignment and immediate buffer for equipment maneuvering and material placement.
- Temporary construction zones used for short-term activities such as trench material.
- The unpaved roadway leading up to the community and throughout the community, extending to the vegetated roadside where trenching, excavated trench material, and temporary access routes will occur.
- Sections of the roadway where unpaved surfaces may be temporarily altered during works, including localized reinstatement areas.
- Residences, community facilities, and institutions located immediately adjacent to the alignment, including households that may experience direct short-term disturbances such as noise, dust, or temporary access changes.
- Paths and informal pedestrian routes commonly used by residents, especially schoolchildren, elderly persons, and pedestrians without vehicles that may be temporarily affected by trenching or equipment movement.
- Driveways, property entrances, and yard spaces that require temporary coordination with residents for access, material placement, or connection works.

- Sections of the roadway that support daily community services, including waste collection, deliveries, school transport, and emergency access, which may be directly influenced by construction activities.
- Zones with vulnerable or mobility-restricted individuals whose daily routines may be more directly impacted by temporary access limitations or construction-related obstacles.

Within this zone, the following activities will occur**:**

- Trenching and installation of 4- and 6-inch PVC water mains;
- Placement of service laterals;
- Temporary excavated trench material and backfill preparation;
- Movement of materials and machinery.
- Due to the proximity of driveways, pedestrian paths, and canal access points, this DAoI also encompasses key residential interfaces where safety measures and communication protocols will be prioritized.
- Roadway reinstatement and temporary surface disturbance resulting from trenching across semi-paved and unpaved segments of the access road leading up to the community.

5.2.2 Indirect Area of Influence (IAoI)

The environmental Indirect Area of Influence (IAoI) captures the broader area that may experience temporary or secondary impacts during the construction phase. For the Port Royal works, the IAoI extends approximately 20 meters from the trench alignment, encompassing adjacent properties, yard spaces, roadside vegetation, and canal-facing lots. These effects may arise through changes in traffic flow, community connectivity, service reliability, economic activity, or the use of shared public spaces and infrastructure.

For social considerations, the indirect area includes individuals, businesses, and institutions that rely on the same transportation routes, community services, or utility networks as those in the direct area, and whose routines or social dynamics may be influenced indirectly by project-related activities or long-term improvements. Although the Bimini Cove Resort is located within the wider vicinity of the project area, its location is significantly removed from the defined scope of works. Project activities will not extend into, intersect with, or impose any operational, economic, or infrastructural impacts on the Resort, including its water distribution network or related utilities. Therefore, while it is recognized as a neighboring facility on the island, Bimini Cove Resort remains outside the Project's Indirect Area of Influence.

Within the IAoI, potential temporary impacts may include:

- Intermittent noise and dust generation during excavation and machinery operation;
- Visual disturbances related to construction signage, equipment staging, and road reinstatement;
- Minor delays or restricted access to driveways and paths during active works.
- This also includes portions of the access road leading to the community where indirect effects such as temporary narrowing of the roadway, construction-related presence of machinery, or minor dust dispersion may occur, although no meaningful traffic delays are anticipated due to the low volume of vehicular and golf cart activity in South Bimini and Port Royal.

While these impacts are short-term and localized, the presence of seasonal residents and waterfront properties requires a heightened level of community engagement and phased scheduling to avoid peak occupancy periods where feasible.

There are no known critical habitats, protected areas, or formally recognized sensitive ecosystems within the defined DAoI or IAoI in Port Royal. However, environmental safeguards and risk mitigation measures will be implemented to minimize residual effects and maintain community wellbeing throughout the construction period.

5.3 SITE CONDITIONS ANALYSIS

Port Royal in South Bimini is a low-density, canal-based residential community characterized by narrow single-lane roads, private dock access, and a mix of seasonal and permanent homes. The area is not traditionally paved but features compacted limestone and sand roads that transition directly into residential driveways and access paths. These roads form the primary access corridor for the planned water mains alignment and fall fully within the direct area of influence. While some yards are landscaped with ornamental trees and lawn areas, others retain native vegetation along the roadside. The direct area of influence for the planned water mains runs adjacent to these mixed-use verges, which serve as buffers between the roadway and private properties. Port Royal's layout offers a linear and accessible alignment for trenching, though space is constrained, requiring careful planning to minimize disturbance. Road conditions vary along the alignment, with portions that are semi-paved or compacted and others showing surface wear due to periodic inundation and routine daily use. These characteristics will influence construction sequencing, trench stability, and reinstatement requirements.

Site visits were conducted on July 15 and 16, 2025, to assess the physical and biological characteristics of the Port Royal community in South Bimini. The field studies aimed to document the local topography, geology, soil conditions, surface hydrology, vegetation composition, and fauna presence within the direct and indirect area of influence. Observations of the access road leading up to the community were also recorded, including road width, surface composition, drainage patterns, and proximity to residential lots, all of which inform equipment movement and trench alignment feasibility. Vegetation types were mapped and verified on-site, guided by the classification framework established by Areces et al. (1999), while plant species identification followed the taxonomy of Correll and Correll (1982).[1] [2]

During the survey, the presence and relative abundance of vascular plant species were documented, with specific attention to flora listed under the Protected Trees Order (2021) and invasive species flagged in the National Invasive Species Strategy for The Bahamas (2013). This baseline assessment supports the evaluation of potential environmental impacts associated with trenching and water mains installation and informs the mitigation strategies outlined in the ESMP. The condition and orientation of the roadway were also noted as key physical features influencing construction access, staging areas, and resident/visitor interface during the works.

[1] Areces-Mallea, A. E., Weakley, A. S., Li, X., Sayre, R. G., Parrish, J. D., Tipton, C. V., & Boucher, T. (1999). A Guide to Caribbean Vegetation Types: Preliminary Classification System and Descriptions. The Nature Conservancy.

[2] Correll, D., & Correll, H. (1982). The Flora of the Bahama Archipelago: Including Turks & Caicos Islands. J. Cramer.

5.4 DIRECT AREA OF INFLUENCE (DAOI) BASELINE

5.4.1 Topography and Erosion Potential

The topography of the Port Royal corridor and the access road to Port Royal in South Bimini is moderately variable, with a mix of slightly elevated lots, gently sloping yards, and lower-lying compacted roadway areas. The roads are unpaved but well-maintained, comprised of compacted sand and shell aggregate that accommodates seasonal use by vehicles, golf carts, and pedestrians (Photo 5). While the general elevation does not exceed 3 meters above sea level, some residential lots are built on raised pads or stilts, reducing direct exposure to surface water pooling.

Photo 5. Port Royal topography



Unlike areas with engineered slopes or stormwater channels, Port Royal lacks formal drainage infrastructure, and surface water pooling can occur after heavy rainfall, particularly in depressions and flat sections of the corridor (Photo 6). However, widespread or prolonged flooding is rare. The surrounding terrain features a mix of landscaped residential yards and open green spaces, with both ornamental and native vegetation providing natural buffers that reduce runoff and limit sediment transport. Observed plant species include Sea Grape (*Coccoloba uvifera*), Coconut Palm (*Cocos nucifera*), and Casuarina (*Casuarina equisetifolia*), the latter of which is an invasive species in The Bahamas. Additionally, fruit-bearing trees such as Mango (*Mangifera indica*) are present in private lots, alongside a variety of tropical shrubs, grasses, and decorative palms. This varied vegetation cover contributes to informal erosion control and enhances visual quality along the corridor.

Photo 6. Port Royal roadway, showing water logging and vegetative buffers



The risk of erosion is considered low due to the absence of steep gradients and the coarse-textured soils, which minimize sediment displacement. However, localized waterlogging and soft ground may affect trenching timelines, especially during or shortly after rainfall. Construction schedules and backfilling methods should therefore remain adaptive to site conditions. No formal roadside swales or culverts exist, and mitigation measures must emphasize erosion control through good housekeeping, compacted backfill, and material stabilization.

Vegetation disturbance will be avoided where possible and managed in accordance with the Forestry Act (2010) and DEPP guidance.

Photo 7. Access Road leading up to the community showing vegetative buffers



The Port Royal access road lies on flat to gently sloping coastal terrain, typical of South Bimini's low-lying limestone platform. Elevations across the road appear uniform with no significant grade changes or visible depressions. The flat topography minimizes large-scale erosion; however, the lack of engineered draining and the predominance of loose, compacted sad and marl surfaces increased the likelihood of surface washouts after heavv rainfall, localized rutting in areas where vehicles routinely pass, and minor sediment displacement along unvegetated edges.

During site visits, it was observed where the road widens and where tire tracks create shallow depressions in the roadway, indicating light erosion from wind, vehicle movement, and periodic inundation. Although erosion risk is low in scale, the unpaved surface is susceptible to softening and temporary instability during wet conditions, requiring targeted mitigation during trenching works.

5.4.2 Geology and Soil Profile

The geology of Port Royal access road and community in South Bimini is primarily composed of Quaternary-aged carbonate limestone bedrock, typical of the Bahamian archipelago. Overlying this bedrock is a thin surface layer of unconsolidated sandy soils mixed with crushed coral, shell fragments, and occasional rocky substrate. These soils are light-colored, loosely compacted, and highly porous, offering low structural cohesion unless artificially stabilized through compaction or reinforcement.[3]

Field observations from the July 2025 site visit confirmed that road shoulders and unpaved carriageways throughout the Port Royal community consist of white, fine-to-medium grain sand interspersed with exposed rock fragments and shell-based aggregate. These conditions are clearly visible in the site photos (Photo 5 and Photo 6), where several road segments display shallow soil profiles, minimal vegetative

[3] Government of The Bahamas (2024). Third National Communication of The Commonwealth of The Bahamas to the United Nations Framework Convention on Climate Change (UNFCCC). Nassau, The Bahamas. https://unfccc.int/sites/default/files/resource/2024%20The%20Bahamas%20TNC%20to%20the%20UNFCCC.pdf

ground cover, and visible material transitions between natural sand and compacted road base. Along the primary access road, these materials have been shaped into a loosely consolidated driving surface with areas of rutting and surface wear, reflecting routine vehicle use and the absence of form grading or engineered stabilization. The access road's soil composition, dominiated by calcareous and marl, contributes to its softness when wet, increased dust generation during dry periods, and susceptibility to minor erosion along the exposed margins.

Due to the fragile nature of this substrate, trenching must be carefully sequenced, with immediate backfilling and compaction to prevent trench wall slippage or collapse. The lack of engineered slopes and formal drainage infrastructure increases the risk of localized ponding after rainfall, which can soften soil bearing capacity and delay excavation or pipe-laying activities if not actively managed.

No signs of soil contamination, buried refuse, or anthropogenic fill material were observed within the project footprint. However, scattered natural and ornamental vegetation and tropical shrubs, line sections of the roadway and must be protected from unnecessary root disturbance during trenching. A site-specific Soil and Vegetation Management Plan will guide all excavation activities to ensure environmental protection, slope stability, and construction safety.

5.4.3 Hydrology

The hydrological profile of Port Royal is defined by the area's coastal geology, porous sandy soils, and absence of engineered stormwater infrastructure. The community consists of unsealed limestone and sand-based roadways, with some sections slightly elevated or gently sloped. However, the general terrain is flat to mildly undulating, contributing to localized water pooling during and after moderate rainfall events.

Unlike other parts of the island, Port Royal does not intersect any mapped blue holes or wetland systems. However, the community lies adjacent to a canal-based waterfront system, which provides direct access to the sea but is not hydrologically connected to the roadways due to the buffering effect of residential structures, landscaped yards, and perimeter vegetation. As such, stormwater runoff from the roadways does not flow directly into the canal but instead infiltrates slowly into the sandy and shell-based soil or is retained in low-lying depressions.

According to national hydrogeological assessments, including The Bahamas' Third National Communication to the UNFCCC (2024), the archipelago lacks perennial rivers and instead depends entirely on direct rainfall infiltration as the sole means of freshwater recharge. The freshwater resources occur as thin, lens-shaped bodies that float above saline groundwater, typically situated 0.3 to 1.5 meters below the surface in inland areas. These lenses are highly susceptible to salinization, particularly due to sea level rise, tidal movement, and surface contamination from anthropogenic activities.

During site visits, surface water accumulation was observed in flatter segments and driveways where drainage is impeded by poor soil permeability, compacted surfaces, and a lack of natural swales or culverts. These conditions contribute to temporary waterlogging and may delay construction activities or equipment movement if unaddressed. Despite these challenges, widespread flooding is uncommon, and pooled water typically dissipates within 24–48 hours unless exacerbated by prolonged rainfall. Seasonal storm events, particularly during the Atlantic hurricane season (June–November), may temporarily elevate the water table to above-ground levels, turning portions of the corridor into ephemeral wetland

areas.[4] Given these characteristics, construction logistics must account for intermittent surface pooling, low soil infiltration rates, and the need for careful material staging to avoid compaction or disruption in saturated zones. No formal stormwater catchment areas or drainage features are present within the alignment footprint.

National climate change projections underscore the long-term fragility of The Bahamas' freshwater regime. With declining rainfall, increasing drought frequency, and elevated temperatures, groundwater recharge is expected to decrease. Meanwhile, the risk of saltwater intrusion and pollution from surface runoff is rising. These factors are compounded in smaller islands like Bimini, where freshwater lenses are thinner and more vulnerable to over-abstraction and contamination.

As summarized in the National Communication and previous water sector assessments, Bimini's freshwater lens is among the smallest in The Bahamas, covering only 395 acres and a lens area size of 0.06 (Table 1). This limitation reinforces the importance of climate-resilient water infrastructure, such as the Airport Road mains extension, to reduce dependency on vulnerable private wells and ensure potable water access through centralized, treated supply systems.

In response, this project incorporates environmental safeguards to manage hydrological exposure during construction. These include staged excavation, weather-responsive scheduling, protective backfill selection, and erosion-resistant materials. While no significant operational hydrological risks are anticipated post-installation, pre-emptive planning during construction is essential to avoid exposure-related setbacks or degradation of the surrounding environment.

Table 1. Freshwater Resources of The Bahamas 2007

Island	Size (Acres)	Freshwater Lens (Acres)	Lens/Area Size
Abaco	415,360	116,280	0.28
Acklins	96,000	15,783	0.16
Andros	1,472,000	338,585	0.23
Bimini	**7,040**	**395**	**0.06**
Cat Island	96,000	14,774	0.15
Crooked Is.	58,900	5,923	0.10
Eleuthera	128,000	16,599	0.13
Exumas	71,680	6,586	0.09
Grand Bahama	339,200	147,884	0.44
Gr. Inagua	383,360	3,571	0.01
Long Island	147,200	9,301	0.06
Mayaguana	70,400	--	0.03
New Providence	51,200	2,340	0.34
Totals	**3,336,340**	**678,021**	**2.08**

[4]Government of The Bahamas (2024). Third National Communication of The Commonwealth of The Bahamas to the United Nations Framework Convention on Climate Change (UNFCCC). Nassau, The Bahamas. https://unfccc.int/sites/default/files/resource/2024%20The%20Bahamas%20TNC%20to%20the%20UNFCCC.pdf

5.4.4 Hazards, Vulnerability, and Island Risks

The Commonwealth of The Bahamas is one of the most hazard-prone countries in the Atlantic region, primarily due to its geographical characteristics and exposure to multiple natural hazards. As a flat, low-lying archipelago of over 700 islands and cays, The Bahamas faces frequent and intensifying threats from tropical cyclones, storm surges, coastal flooding, and climate-induced extremes. The national risk profile, as outlined in recent assessments by the Pacific Disaster Center and ThinkHazard, identifies hurricanes and tropical storms as the most significant hazards, followed closely by storm surge, coastal flooding, high winds, and rain-induced erosion. While seismic risk is minimal, the combination of climate-related hazards presents ongoing challenges for infrastructure, public services, and community resilience.

Historically, The Bahamas has experienced numerous severe storm events with widespread impacts. Hurricane Matthew in 2016 caused major flooding and wind damage in New Providence and Grand Bahama. In 2017, Hurricane Irma delivered widespread wave action and flooding to several islands including Bimini. This was followed by Hurricane Dorian in 2019, a catastrophic Category 5 storm that devastated Abaco and Grand Bahama and exposed significant gaps in national preparedness, response capacity, and infrastructure resilience. Together, these events underscore the need for robust, climate-resilient design in all infrastructure projects, particularly those serving the Family Islands.

From a climate change perspective, The Bahamas faces a range of acute and chronic environmental threats that disproportionately affect small island nations. As a low-lying archipelago, the country is particularly vulnerable to slow-onset climate hazards such as sea level rise, saltwater intrusion into freshwater reserves, and shifts in rainfall patterns that contribute to extreme precipitation events. These phenomena threaten critical infrastructure, reduce groundwater quality, and undermine the reliability of potable water supply, particularly in remote Family Island communities like Bimini, where infrastructure is limited and highly exposed. Rising sea levels further increase the likelihood of saltwater intrusion into freshwater lenses, compounding long-term water insecurity. Intensifying rainfall events also increase runoff and erosion along unpaved or poorly drained corridors, such as Airport Road, posing operational challenges for buried water infrastructure.

Given these risks, it is imperative that all infrastructure investments, especially in climate-vulnerable zones, undergo site-specific climate and disaster risk assessments that inform resilient design. This approach aligns with the IDB's ESPS and the strategic priorities outlined in The Bahamas' National Climate Change Adaptation Policy, which calls for enhanced planning and design of water supply systems to reduce climate risks, increase adaptive capacity, and promote long-term sustainability. The policy further emphasizes the importance of integrating adaptation considerations into all development planning, including efforts to safeguard water infrastructure, diversify freshwater sources, and ensure equitable access in the face of growing environmental pressures.

5.4.4.1 Island-Specific Profile: Bimini

Bimini is among the smallest and most exposed islands in The Bahamas, situated approximately 50 miles east of Florida. Its geography, characterized by a narrow landmass, low elevation, and lack of natural high ground, makes it especially susceptible to storm surge, flooding, and erosion. Much of Bimini lies less than one meter above sea level, with limited infrastructure to divert floodwaters or resist wind-driven hazards.[5] These physical vulnerabilities are compounded by long-term climate risks, including sea-level rise and saltwater intrusion, which pose growing threats to water security and community infrastructure.

[5] Pacific Disaster Center (PDC). (2019). *The Bahamas: Island Risk Profiles- Multi-Hazard Exposure and Vulnerability Assessment*. State of Hawaii, USA: Pacific Disaster Center.

Over the past two decades, Bimini has been impacted by several notable hurricanes, each highlighting different aspects of the island's vulnerability. In 2005, Hurricane Wilma (Category 3) caused severe beach erosion and infrastructure damage.[6] Most significantly, Hurricane Irma (Category 5) in 2017 delivered widespread coastal flooding, storm surge, and damage to coastal roadways. Irma also prompted the evacuation of 365 persons from Bimini specifically, along with other islands in the southern Bahamas.[7] Although Bimini was spared the direct impact of Hurricane Dorian in 2019, the event catalyzed national-level reassessments of climate and disaster risk across all islands, reinforcing the urgency of resilience-building efforts even in areas not traditionally considered high-risk.

Bimini experiences a tropical marine climate moderated by easterly trade winds, with warm, humid conditions prevailing year-round. Seasonal rainfall occurs primarily between May and October, coinciding with the Atlantic hurricane season.[8] Annual precipitation exceeds 1,200 mm and is often delivered in short, intense bursts that lead to localized flooding. This is especially true along compacted, unpaved roadways such as Airport Road, where poor drainage and water pooling are persistent concerns.

The island's hazard exposure is well-documented in global and regional assessments. According to Think Hazard, there is a greater than 20% chance that Bimini will experience damaging cyclone-force winds within the next decade, underscoring the importance of integrating disaster-resilient design even for inland infrastructure like water mains. [9] Data from the Pacific Disaster Center (PDC) further reinforces this risk profile. The entire population and capital assets of Bimini are considered exposed to tropical cyclone winds, with 15.8% vulnerable to storm surge. While exposure to flooding, wildfires, and landslides is minimal, sea level rise remains a key concern, with projections indicating that even small increases could affect vital infrastructure and habitability. These risks contribute to Bimini's multi-hazard risk score of 0.287, one of the lowest among 17 Bahamian islands, but do not negate the need for site-level resilience measures.[10]

Despite the relatively low multi-hazard score, Bimini ranks 10th of 17 islands in overall vulnerability, driven by socio-economic and infrastructure-related stressors. Approximately 61% of the population lacks access to private transportation, and 22.5% live in crowded housing, which complicates emergency response and evacuation logistics. Environmental vulnerability is also elevated, with 100% of coral reefs exposed to local and thermal stress and limited designated conservation areas.[11] Although access to piped water (97.1%) and electricity (94.9%) is high, Bimini ranks 13th in Island Capacity, reflecting deficiencies in healthcare services, emergency response infrastructure, and economic resilience.[12]

Water infrastructure in Port Royal, South Bimini, is essential to improving living conditions and strengthening resilience in a small, coastal settlement that experiences seasonal population increases and limited freshwater resources. Existing physical, social, and environmental conditions underscore the

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[6] Neely, W. (2019). The greatest and deadliest hurricanes to impact The Bahamas. URLink Print & Media, LLC.USA.

[7] The Tribune. (2017, September 8). PM warns: Stay indoors and heed all warnings. The Tribune 242. https://www.tribune242.com/news/2017/sep/08/pm-warns-stay-indoors-and-heed-all-warnings/

[8] Government of The Bahamas (2024). Third National Communication to the UNFCCC

[9] Think Hazard (n.d.). *Bahamas-Natural hazard risk overview*. Global Facility for Disaster Reduction and Recovery (GFDRR). Think Hazard - The Bahamas

[10] Pacific Disaster Center (PDC). (2019). *The Bahamas: Island Risk Profiles- Multi-Hazard Exposure and Vulnerability Assessment*. State of Hawaii, USA: Pacific Disaster Center.

[11] Pacific Disaster Center (PDC). (2019). *The Bahamas: Island Risk Profiles- Multi-Hazard Exposure and Vulnerability Assessment*. State of Hawaii, USA: Pacific Disaster Center.

[12] Pacific Disaster Center (PDC). (2019). *The Bahamas: Island Risk Profiles- Multi-Hazard Exposure and Vulnerability Assessment*. State of Hawaii, USA: Pacific Disaster Center.

community's vulnerability to climate-related hazards and the importance of carefully planned, climate-resilient infrastructure. For this project, applying a comprehensive disaster and climate risk lens is critical to safeguard public investment, maintain reliable service delivery, and ensure the long-term sustainability and functionality of water infrastructure under evolving climate conditions.

5.4.5 Biotic Environmental Baseline

5.4.5.1 Flora

Vegetation along the Port Royal alignment reflects a mix of disturbed coastal vegetation, ornamental landscaping, and native plant communities typical of developed canal-front residential zones in The Bahamas. The immediate trenching zone is bordered by sandy verges, residential driveways, manicured lawns, and occasional clusters of native shrubbery. Vegetation is sporadic rather than continuous and tends to be shaped by individual lot landscaping preferences. Along the access road leading up the community, vegetation becomes denser and more naturalized, with stretches of roadside shrubland, overhanging tree canopies, and unmanaged coastal vegetation bordering the unpaved road surface. These areas show typical coastal-edge assemblages adapted to sandy, calcaerous soils and intermittent disturbance from vehicle movement.

Field observations from the July 2025 site visit identified the following common and/or dominant species within or near the DAoI:

- Sea Grape (*Coccoloba uvifera*): native, legally protected under the Protected Trees Order (2021)
- Coconut Palm (*Cocos nucifera*): widely planted ornamental species
- Australian Pine (*Casuarina equisetifolia*): invasive tree species per National Invasive Species Strategy (2013)
- Mango Tree (*Mangifera indica*): non-native fruit tree seen in some yards
- Florida Thatch Palm (*Thrinax radiata*): native, occasionally used in residential landscaping
- Bougainvillea spp. and other decorative shrubs, found throughout maintained parcels
- Buttonwood (Conocarpus erectus) and mixed coastal shrubs observed along the road shoulder, particularly in sections with minimal residential clearing
- Low-growing grasses and herbaceous groundcover typical of disturbed roadside habitats

Importantly, healthy mangrove vegetation is present along segments of the canal buffer zone, including Red Mangrove (*Rhizophora mangle*) and Black Mangrove (*Avicennia germinans*) shrubs, within the IAoI. These mangroves are outside of the construction footprint but contribute to the ecological character and resilience of the Port Royal area. While not part of the trenching zone, their presence reinforces the importance of managing construction runoff and material storage to avoid indirect impacts on canal-side vegetation.

The roadside areas along the access road also host a mix of native and invasive species, with Casuarina stands forming shaded coordiors in several locations and dense shrub growth providing natural buffers between the roadway and adjacent residential parcels. These habitats, although modified, support typical small fauna and contribute to dust suppression and soil stabilization.

No vegetation clearance is anticipated beyond the narrow excavation path. The works are confined to previously disturbed margins, and no protected trees are expected to be removed. If incidental pruning or relocation becomes necessary, DEPP and the Forestry Unit will be consulted, and restoration measures, using native, salt-tolerant species, will follow backfilling and surface reinstatement in line with national regulations.

5.4.5.2 Fauna

The faunal composition of Port Royal corridor includes common terrestrial and low-lying coastal species known throughout Bimini. Within the direct area of influence, typical fauna includes:

- *Leiocephalus carinatus* (Northern Curly-tailed Lizard)
- *Zenaida aurita* (Zenaida Dove)
- *Mimus polyglottos* (Northern Mockingbird)
- *Anolis sagrei* (Brown Anole)
- Rodents (e.g., *Rattus norvegicus*) and feral cats
- Insects and arthropods including ants, wasps, butterflies, and flies
- Land crabs and other small invertebrates commonly found along vegetated road edges

No evidence of protected terrestrial species, nesting grounds, burrows, or critical habitat was observed during the July 2025 field assessment. The area holds low to moderate ecological value, as fauna tend to be transient and well adapted to anthropogenic disturbance. Species noted are neither endemic nor restricted to the works corridor, and the alignment does not intersect any mapped wildlife corridors.

Faunal presence along the access road leading up to the community is consistent with lightly disturbed residential environments, where small reptiles, insects, birds and occasional feral mammals occupy roadside vegetation. The absence of freshwater bodies and the narrow, unpaved nature of the road limit overall fauna diversity, though shaded areas with denser vegetation provide microhabitats for lizards, small birds, and insects.

Although minimal impact is expected, fauna presence in the indirect area of influence, particularly within the adjacent scrub habitat may lead to occasional encounters with wildlife. Chance encounters during trenching will be addressed through pre-clearance inspections, with any significant findings reported to WSC and DEPP.

No direct impact to aquatic fauna is expected, as the trenching zone is inland and does not intersect coastal wetlands or canal waterways. Reference is made to *Smith et al. (2014)* who documented aquatic biodiversity in North Bimini's coastal lagoon system, which lies well outside the zone of influence of this project.[13]

5.4.5.3 Protected Areas and Biodiversity Sensitivity

The direct and indirect areas of influence (DAoI/IAoI) of the Port Royal works alignment do not intersect any formally designated Protected Areas, Key Biodiversity Areas (KBA), or Important Bird Areas (IBA). Spatial overlays and national datasets from the Bahamas Protected Areas Fund (BPAF) confirm the absence of legally protected conservation zones within or immediately adjacent to the pipeline corridor. No sensitive ecological zones, wildlife sanctuaries, or species-specific conservation areas are present along the access road leading up to the community or the adjacent residential community, reflecting the already modified character of the area.

However, the Port Royal community lies immediately adjacent to the South Bimini lemon shark nursery, a recognized ecological feature with significant biodiversity value (Figure 1). According to Knowles et al. (2024), this nursery functions as a critical juvenile habitat for Lemon Sharks (*Negaprion brevirostris*), and it is one of the most studied coastal shark nurseries in the Caribbean. The nursery is connected to a broader system of mangroves, seagrass beds, and shallow coastal flats, which together support a range of

[13] Smith, M.L., Hargrove, J., Harborne, A.R., & Pitt, J. (2014). Aquatic biodiversity of a threatened coastal lagoon at Bimini, Bahamas. BioRisk, 9, 1–18. https://doi.org/10.1007/s11852-012-0211-6

aquatic biodiversity[14] [15] Although these habitats are outside DAoI/IAoI, their presence elevates regional ecological sensitivity and reinforces the importance of preventing construction-related runoff or sedimentation from reaching canal or coastal waters.

Although the project alignment in Port Royal is located inland along existing residential roads and separated from the canal system by vegetation and private lots, its proximity to interconnected waterways and coastal habitats underscores the importance of preventing indirect ecological disturbance. Previous development activities in South Bimini, including canal excavation, residential expansion, and associated vegetation clearance, have already altered natural drainage patterns and contributed to localized sedimentation within canal systems.[16] While the full extent of previous impacts remains unquantified, these findings elevate the sensitivity of the Port Royal area and underscore the need for cautious planning, especially around vegetation interactions, material staging, and runoff management.

Vegetation along the canal edge within Port Royal includes patches of healthy mangroves, which provide shoreline stabilization and ecological value. No critical habitats, coral reef zones, or mapped wildlife corridors fall within the defined DAoI. The flora and fauna present are typical of residential, human-modified landscapes and are expected to be resilient to localized construction disturbance, especially with the implementation of vegetative buffer practices and construction-phase safeguards. The unpaved access road and nearby roadside vegetation do not support any known protected species or priority habitats; however, these areas function as minor ecological buffers that help reduce dust, stabilize soils, and filter runoff before it reaches any waterway.

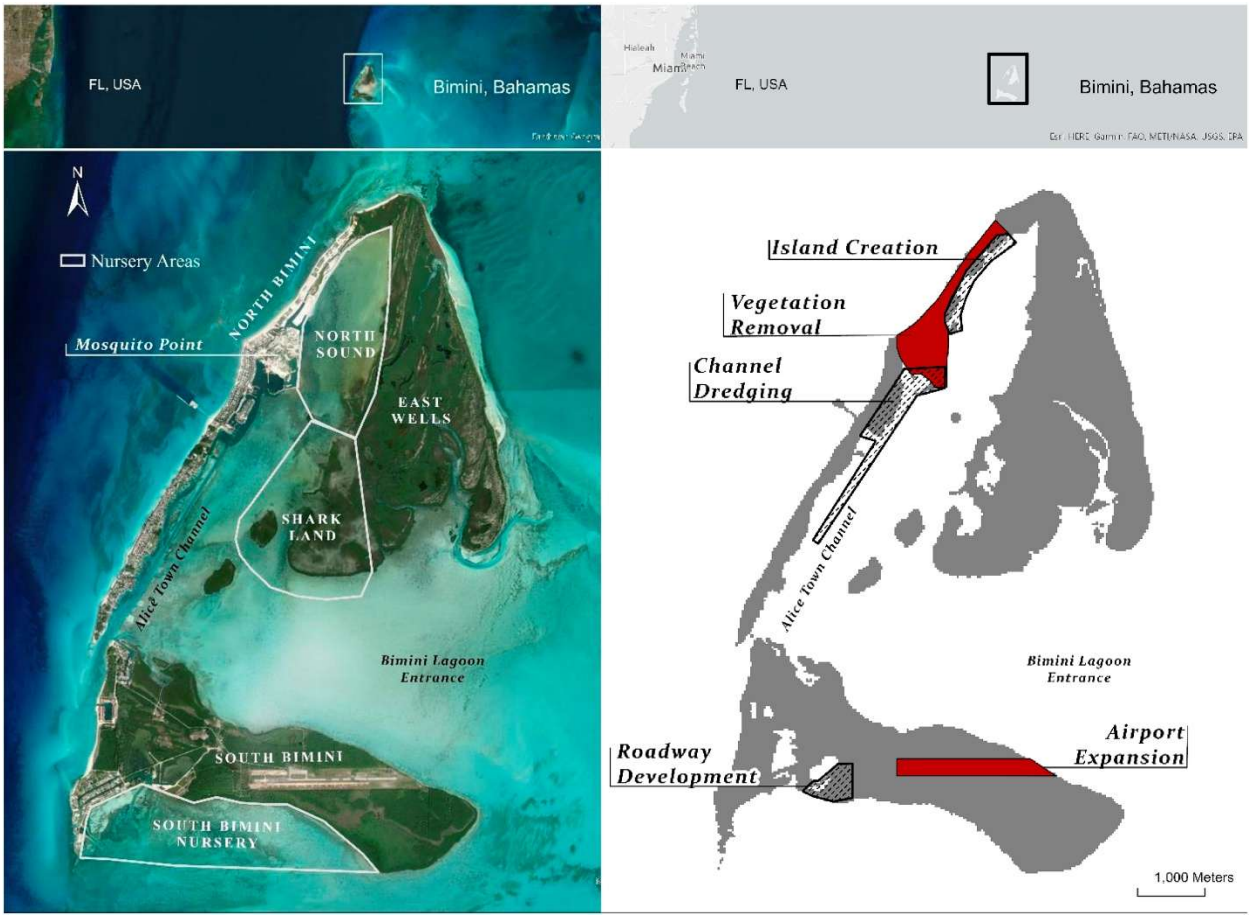
A pre-clearing ecological walkthrough, combined with a chance-find protocol and avoidance of canal-edge vegetation, will guide on-site environmental sensitivity screening. While no significant biodiversity risks are anticipated, the project will adopt a precautionary approach due to its proximity to ecologically significant coastal systems. Mitigation measures will prioritize erosion control, restricted material stockpiling, and careful management of trenching activities along the access road to ensure that no indirect impacts occur.

[14] Emily C. Cormier, Emmanuel Devred, Kristen L. Wilson, Matthew J. Smukall, Mariana M.P.B. Fuentes, and Heike K. Lotze. 2025. Analysis of two decades of Landsat satellite images reveals long-term changes in aquatic and terrestrial vegetation in Bimini, The Bahamas with coastal development. FACETS. 10: 1-18. https://doi.org/10.1139/facets-2024-0020

[15] Emily C. Cormier, Emmanuel Devred, Kristen L. Wilson, Matthew J. Smukall, Mariana M.P.B. Fuentes, and Heike K. Lotze. 2025. Analysis of two decades of Landsat satellite images reveals long-term changes in aquatic and terrestrial vegetation in Bimini, The Bahamas with coastal development. FACETS. 10: 1-18. https://doi.org/10.1139/facets-2024-0020

[16] Emily C. Cormier, Emmanuel Devred, Kristen L. Wilson, Matthew J. Smukall, Mariana M.P.B. Fuentes, and Heike K. Lotze. 2025. Analysis of two decades of Landsat satellite images reveals long-term changes in aquatic and terrestrial vegetation in Bimini, The Bahamas with coastal development. FACETS. 10: 1-18. https://doi.org/10.1139/facets-2024-0020

Figure 1. A 2020 true-color satellite image of Bimini, highlighting three major lemon shark nursery areas: North Sound, Shark Land and South Bimini, as well as major island areas: North Bimini, East Wells, and South Bimini. The South Bimini Nursery boarders the Port Royal Community in South Bimini.[17]



5.4.6 Summary of Environmental Baseline (Port Royal, South Bimini)

The Port Royal community in South Bimini is characterized by low-lying coastal terrain, sandy and rocky soils, and naturally vegetated road shoulders that provide limited but important ecological functions. Field observations indicate that the project alignment follows existing residential roadways and previously disturbed areas, including the unpaved access road leading up to the community that forms the primary cooridor for trenching and construction access. No wetlands, mangroves, or formally protected habitats intersecting the direct area of influence. Vegetation consists primarily of native coastal shrubs, grasses, and small trees, interspersed with ornamental species planted along residential lots. While no sensitive or endangered flora were identified within the direct area of influence, select native species provide habitat value and contribute to shoreline stabilization.

Faunal presence in Port Royal is consistent with common, non-threatened coastal and residential species, such as small reptiles, birds, and invertebrates adapted to human-modified environments. The access road leading up to the community and its vegetated margins support typical roadside fauna but do not contain any critical wildlife features or sensitive ecological zones. No evidence of nesting sites, migratory

[17] Emily C. Cormier, Emmanuel Devred, Kristen L. Wilson, Matthew J. Smukall, Mariana M.P.B. Fuentes, and Heike K. Lotze. 2025. Analysis of two decades of Landsat satellite images reveals long-term changes in aquatic and terrestrial vegetation in Bimini, The Bahamas with coastal development. FACETS. 10: 1-18. https://doi.org/10.1139/facets-2024-0020

pathways, or critical habitats was recorded within or adjacent to the alignment. The community's climate and hydrological conditions reflect Bimini's broader exposure to storm surge, saltwater intrusion, and seasonal flooding, compounded by the absence of formal drainage infrastructure and the area's proximity to the canal network.

These environmental conditions emphasize the need for site-specific safeguards during construction, particularly in managing runoff, preventing erosion, and minimizing vegetation disturbance. Special consideration will also be required along the access road leading up to the community, where loose calcareous soils, limited drainage, and variable vegetation cover may influence trench stability and equipment movement. Post-construction site restoration and good housekeeping practices will be essential to maintain local ecological balance and support the long-term resilience of the Port Royal environment.

6 BASELINE SOCIAL CONDITIONS

Social conditions across The Bahamas reveal a contrast between urbanized areas such as New Providence, where infrastructure and public services are more concentrated, and the Family Islands, where service gaps persist. In Bimini, access to potable water remains uneven, with many households still dependent on private wells, rainwater collection, bottled water, or tanker services. This baseline provides an overview of key social indicators for Bimini and provides insights into the benefits of Component 3 to the local community.

6.1 DEMOGRAPHIC PROFILE OF BIMINI

Bimini remains one of the smallest island communities in The Bahamas in terms of absolute population but ranks among the most densely populated after New Providence. According to the 2022 Census, Bimini had a total population of 2,361 residents, comprising 1,332 males and 1,029 females (Table 2 and Table 3).[18] This reflects a continued population share of approximately 0.6% of the national total, a proportion that has remained stable since 2000.

Table 2. 2022 Population Data for New Providence, Grand Bahama and Bimini

	2000	% of Total	2010	% of Total	2022	% of Total
All Bahamas	**303,611**		**351,461**		**398,165**	
New Providence	210,832	69%	246,329	70%	296,732	75%
Grand Bahama	46,994	15%	51,368	15%	46,740	12%
Bimini	**1,717**	**0.6%**	**1,988**	**0.6%**	**2,361**	**0.6%**

Table 3. 2022 Population by Sex for New Providence, Grand Bahama, and Bimini

	2000		2010		2022	
	Male	Female	Male	Female	Male	Female
All Bahamas	**147,715**	**155,896**	**170,257**	**181,204**	**191,667**	**206,498**
New Providence	101,558	109,274	117,909	128,420	141,337	155,395
Grand Bahama	23,024	23,970	24,996	26,372	22,361	24,379
Bimini	**886**	**831**	**1,063**	**925**	**1,332**	**1,029**

The population distribution by gender has shown a consistently higher number of males than females in Bimini over the last three census periods. The sex ratio increased from 114.92 males per 100 females in 2010 to 129.45 in 2022, significantly higher than the national average of 92.86.[19] This gender imbalance

[18] Bahamas National Statistical Institute. (2022). 2022 Census of population and housing: Official census results and data highlights summary. Nassau, The Bahamas. 2022-Census-Report-1st-Release-12-February-2025-FINAL-20250526040559.pdf

[19] Bahamas National Statistical Institute. (2022). 2022 Census of population and housing: Official census results and data highlights summary. Nassau, The Bahamas. 2022-Census-Report-1st-Release-12-February-2025-FINAL-20250526040559.pdf

may be influenced by employment patterns related to tourism, fisheries, and construction, sectors that traditionally attract more male labor.

6.1.1 Household Characteristics

In 2022, Bimini had 1,130 households, up from 751 in 2010, marking a 50% increase in households over the 12-year period.[20] The average household size in Bimini declined from 2.7 persons in 2010 to 2.1 in 2022, which is now among the smallest household sizes in The Bahamas. This suggests a growing trend toward smaller household units, which may reflect changes in family structure, an aging population, or a higher number of seasonal or single-occupancy dwellings related to tourism.

Table 4. Population and Household Characteristics for 2010 and 2022

	2010			2022		
Island	**Population**	**# of Households**	**Average Household Size**	**Population**	**# of Households**	**Average Household Size**
All Bahamas	351	102,862	3.4	398,165	119,138	3.3
New Providence	246,329	70,222	3.5	296,732	79,659	3.7
Grand Bahama	51,368	15,140	3.4	46,740	17,821	2.6
Bimini	**1,988**	**751**	**2.7**	**2,361**	**1,130**	**2.1**

	2010			2022		
Island	**Population**	**# of Households**	**Average Household Size**	**Population**	**# of Households**	**Average Household Size**
All Bahamas	351	102,862	3.4	398,165	119,138	3.3
New Providence	246,329	70,222	3.5	296,732	79,659	3.7
Grand Bahama	51,368	15,140	3.4	46,740	17,821	2.6
Bimini	**1,988**	**751**	**2.7**	**2,361**	**1,130**	**2.1**

Despite its small size, Bimini has one of the highest population densities in the country, rising from 180.7 persons per square mile in 2010 to 214.6 in 2022.[21] This density places additional strain on basic infrastructure such as water supply, sanitation, and waste management, issues that the current water mains project aims to address.

[20]Bahamas National Statistical Institute. (2022). 2022 Census of population and housing: Official census results and data highlights summary. Nassau, The Bahamas. 2022-Census-Report-1st-Release-12-February-2025-FINAL-20250526040559.pdf

[21] Bahamas National Statistical Institute. (2022). 2022 Census of population and housing: Official census results and data highlights summary. Nassau, The Bahamas. 2022-Census-Report-1st-Release-12-February-2025-FINAL-20250526040559.pdf

7 IDENTIFICATION AND ASSESSMENT OF ENVIRONMENTAL AND SOCIAL IMPACTS & RISKS

This section presents an assessment of the anticipated environmental and social impacts associated with the construction and operation of the proposed water mains along the Port Royal corridor in South Bimini. The analysis is based on a qualitative, criteria-based methodology that considers the type, magnitude, duration, reversibility, and spatial extent of each impact.

The assessment draws on field observations, site-specific baseline data, and relevant national and international safeguards frameworks. Emphasis is placed on the construction phase, where most impacts are expected to occur, with consideration also given to long-term operational risks.

7.1.1 Data Sources and Tools

The assessment used a combination of desktop review, site inspections conducted on July 15 and 16, 2025, and reference to the national SESA methodology and relevant Bahamian legislation. Supporting sources included but not limited to:

- The Third National Communication to the UNFCCC (March 2024)
- Think Hazard risk profiles
- Bahamas Protected Area Registry
- Pacific Disaster Center Island Risk Profiles
- Vegetation and biodiversity reference texts
- The National Invasive Species Strategy (2013)
- Protected Trees Order (2021)
- 2022 Census of Population and Housing: Official Census Results and Data Highlights Summary

7.2 ASSESSMENT METHODOLOGY

This ESMP follows the standardized methodology outlined in the SESA for this project. The methodology is designed to identify, evaluate, and manage the potential impacts of water infrastructure projects across both construction and operational phases.

7.2.1 Impact and Risk Assessment Process

The process for assessing environmental and social risks and impacts consists of four core steps:

1. **Impact Identification:**
   This step determines what environmental and social changes may result from the proposed activities. For this project, the main construction activities include trench excavation, pipe installation, and backfilling. The operational phase includes the continued use and maintenance of the potable water network.

2. **Impact Assessment:**
   Each identified impact is evaluated based on its expected magnitude, geographic scope (direct or indirect area of influence), probability of occurrence, sensitivity of the receiving environment, and whether the impact is temporary or permanent. The assessment considers both the physical and biological environment (e.g., soils, hydrology, flora, fauna) and the socio-economic context (e.g., access, safety, infrastructure services).

3. **Mitigation and Enhancement Measures:**
   Appropriate environmental and social mitigation measures are proposed to eliminate or reduce negative impacts and to enhance potential benefits. Measures are prioritized based on the mitigation hierarchy: (i) avoid, (ii) minimize, (iii) restore/rehabilitate, and (iv) offset or compensate.

4. **Residual Impact Determination:**
   After mitigation measures are applied, residual impacts are re-evaluated to assess their significance. This considers the effectiveness of the proposed mitigation and the likelihood of lingering risks or benefits.

7.2.2 Project Activity Phases Considered

Impacts and risks are assessed across two main project phases:

- **Construction Phase:**
  Activities include material storage, movement of machinery and vehicles affected by the work, cleaning of the land, excavations, movement of soils, civil works for infrastructure upgrades (i.e. trenching, pipe laying, backfilling, and site clean-up). These may result in temporary air quality disturbances, dust, noise, minor soil displacement, and disruption to roadside vegetation.

- **Operation and Maintenance Phase:**
  This involves operation and maintenance of the infrastructure. Activities conducted during infrastructure maintenance may involve excavations for repairs due to leaks or losses.

Decommissioning was not included in this assessment.

7.2.3 Environmental and Social Components Evaluated

The following components were considered in the impact assessment:

- **Physical Environment:** Air quality, noise and vibration, hydrology and groundwater, soils, flora and fauna, waste generation, existing contamination, and climate/disaster sensitivity.

- **Biological Environment:** Flora (including protected trees), fauna (including common and expected species), and sensitive habitats.

- **Socio-Economic Environment:** Community access and mobility, Occupational Health and Safety, Community information and participation, Coordination with service providers, Chance Find Procedure.

For the impact identification, the **interactions between the project phases a**nd **the environmental components** (physical, biological, and socioeconomic environment) were analysed. Table 5 presents the identified impacts of the project.

Table 5. Environmental Impacts Matrix

Environmental Component	Construction Phase Impact	Operational Phase Impact	Residual Risk (Post-Mitigation)
Air Quality	Temporary dust generation during trenching, backfilling, and spoil handling in dry and windy	No emissions; water mains are underground and passively operated.	Low

	conditions. Minor emissions from construction equipment.		
Noise & Vibration	Intermittent noise and minor ground vibration from excavation equipment and vehicle movement. Limited receptors in vicinity reduce sensitivity.	No noise or vibration anticipated during routine operations.	Low
Hydrology and groundwater	Localized pooling and waterlogging may occur due to compacted soils, flat topography, and absence of drainage. No risk of direct discharge or interaction with water bodies.	Improves long-term potable water access; no operational hydrological impacts.	Low
Soils	Sandy, unconsolidated soils are prone to collapse and disturbance if left exposed. Temporary loss of structure due to trenching and staging.	Stable after backfilling; minor impact only during maintenance or emergency repair.	Low
Flora & Fauna	Limited clearance of roadside vegetation; no protected species observed in direct work zone. Temporary disturbance of small fauna possible.	No anticipated impact under normal operation.	Low
Waste Generation	Vegetation debris, packaging, and minor domestic waste. Risk of dispersal due to lack of containment and windy conditions.	No significant waste generated post-construction.	Low
Existing Contamination	No evidence of contaminated soils, buried waste, or hazardous materials in project footprint. Sites for staging avoid waterlogged or sensitive areas.	Not applicable.	Negligible
Climate/Disaster Sensitivity	Corridor subject to seasonal heavy rainfall, high winds, and occasional flooding during hurricanes. May affect trench stability and material staging.	Infrastructure is climate-resilient and designed for low-elevation settings; minimal exposure.	Low

7.2.4 Summary of Social Impacts

The expansion of potable water access to South Bimini Port Royal is expected to generate substantial positive social impacts for the island. As one of the main residential communities a reliable water supply will improve hygiene, sanitation, standard of living and wellbeing of the residents.

The project also contributes to public health outcomes by reducing dependence on intermittent or poor-quality water sources and ensuring compliance with food safety and sanitation standards.

Potential social risks during the construction phase include temporary noise, dust, and minor disruptions to access for residents. However, these risks are short-term, localized, and manageable through mitigation strategies such as phased work schedules, public notices, and stakeholder engagement.

Social Component	Construction Phase Impact	Operational Phase Impact	Residual Risk (Post-Mitigation)
Community Access and Mobility	No direct change during construction	Improved access to reliable potable water for airport staff and travellers	**None**: benefits sustained post-installation
Occupational Health and Safety	Heat stress, dust inhalation, noise, vibration, machinery-related hazards and sanitation risks near work zones	Consistent water supply improves hygiene, reduces reliance on unsafe sources	**Low**: mitigated through proper construction protocols
Service Delivery and Public Health	Exposure to dust/noise; minor work disruptions	Better sanitation and working conditions for airport personnel	**Low**: if temporary impacts are managed
Community Livelihoods	Small disruption to residential flow and access	Enables future residential and tourism growth, and economic diversification	**None**: long-term socioeconomic benefit
Equity and Service Distribution	No direct impact during works	Supports more equitable access to reliable services in South Bimini	**None**: improves service delivery gap

7.3 PHYSICAL ENVIRONMENT IMPACTS

This section outlines the anticipated physical environmental impacts associated with the construction and operation of the potable water mains infrastructure within the Port Royal area in South Bimini. The analysis focuses on key components of the physical environment, air quality, noise and vibration, soil stability, water resources, and waste generation, during all phases of project execution, including mobilization, trenching, installation, and post-construction.

Although the project footprint is modest in scale and its operational function is passive, site conditions in Port Royal present specific sensitivities. These include loosely compacted sandy soils, irregular ground elevation, seasonal surface water pooling, and residential proximity to the canal network. The trenching works will occur along unmarked, unpaved road shoulders, many of which are bordered by landscaped yards, canal-access paths, and patches of native or ornamental vegetation. The access road leading up to the community, forms the primary construction coordior and introduces additional sensitivities related to dust generation, surface stability, and equipment access. While no protected ecological zones fall within the works footprint, healthy mangrove stands and canal-side vegetation lie beyond the trench zone and require indirect consideration during construction planning.

Identified impacts are expected to be localized, short-term, and reversible, with most concentrated within the DAoI and managed using standard environmental controls. Risks to surrounding vegetation or private property will be minimized through clear demarcation of work zones and equipment access planning. The nature of the terrain, particularly the mix of sandy substrate and occasional rocky patches, requires phased excavation and timely backfilling to avoid trench instability and water retention delays. Along the access road, the lack of formal drainage and the loose calcareous road base may increase susceptibility to rutting and temporary softening during wet conditions, requiring adaptive construction sequencing.

During the operational phase, no significant environmental risks are anticipated. The mains will be fully buried, operate without emissions, and will not require above-ground infrastructure. Importantly, the alignment avoids any mangrove systems, aquatic habitats, or protected tree species, and no critical ecological or hydrological features will be disturbed.

All environmental impacts have been assessed based on magnitude, duration, probability, and likelihood of recovery, and have been addressed through targeted mitigation and monitoring measures included in the ESMP, ensuring compliance with The Bahamas' national environmental regulations and the IDB's ESPS.

7.3.1 Air Quality: Dust, Emissions, and Historical Contamination Risks

Temporary degradation in air quality may occur during trenching and earthworks due to dust emissions from the sandy, loosely compacted soils that characterize Port Royal's road shoulders. Dust generation is expected to be greatest along the access road leading up to the community, where vehicle movement and excavation activities disturb the dry calcareous surface. To control dust, contractors will be required to wet active work zones and stockpiled materials, particularly during dry or windy conditions. Vehicles transporting aggregates or excavated soils must be covered with tarpaulins, and vehicle speeds must be limited on unpaved surfaces. With these controls in place, residual air quality impacts are expected to remain **low and temporary**.

There are no known sources of legacy soil contamination or hazardous airborne emissions within the area of influence, and no cumulative air quality risks have been identified. **With mitigation measures in place, air quality impacts are expected to be of low magnitude, short-term in duration, and highly probable during the construction phase.** These impacts will remain localized to the immediate work zone and are fully reversible upon demobilization. No residual air quality impacts are expected during the operational phase, as the water mains are fully underground and non-emitting.

7.3.2 Noise and Vibration Impacts

Short-term noise and vibration will result from trench excavation, pipe laying, equipment movement, and backfilling activities. Port Royal is a tranquil, residential community with canal-front homes located near the trench alignment, which increases sensitivity to construction-related noise. Noise levels may also fluctuate along the access road leading up to the community, where machinery will move between work segments and operate in closer proximity to vegetated buffers and property entrances. However, works will be phased in short segments, restricted to daytime hours, and executed with small to mid-sized machinery suitable for narrow roadside corridors. Pre-construction notifications will be issued to residents to ensure awareness of potential disturbances.

There are no vibration-sensitive facilities or historical structures in the vicinity, and the construction techniques do not involve pile driving or heavy impact equipment, keeping vibration levels well within acceptable thresholds. **Overall, noise and vibration impacts are classified as low to moderate in magnitude, temporary in duration, and highly probable during the construction period.** Impacts

will be confined to the direct area of influence and are considered fully reversible. During the operational phase, no noise or vibration impacts are anticipated, as the installed infrastructure does not involve mechanical systems or emit operational sound.

7.3.3 Water Resources: Groundwater, Surface Water, and Coastal Areas

Port Royal experiences intermittent surface water pooling after heavy rainfall, primarily due to its unpaved compacted roads, variable terrain, and the absence of formal drainage infrastructure. Along the access road leading up to the community, shallow depressions and low-lying segments further contribute to temporary ponding, which may affect construction schedules and soil stability if unmanaged. While widespread flooding is uncommon, field observations confirm that depressions in the roadway and uneven gradients contribute to localized water retention. Although the project does not involve direct abstraction from groundwater or discharge into the nearby canal system, unmanaged runoff during construction, especially during the rainy season, could result in sediment-laden water pooling within work zones, potentially reducing soil stability and delaying trenching activities.

The area is underlain by porous limestone with a shallow freshwater lens, which increases susceptibility to infiltration-based contamination if waste or fuel is improperly stored. However, the project design includes no hazardous discharge points or effluent-generating activities. **Given these site-specific conditions, potential impacts to water resources during construction are assessed as low to moderate in magnitude, short-term in duration, and highly probable in the absence of mitigation.** These impacts will be limited to the immediate trench alignment and are fully reversible through standard drainage controls and site housekeeping. No operational-phase impacts to water resources are anticipated, as the mains will operate passively and will not affect local hydrology or groundwater dynamics. The long-term effect is considered neutral to positive, given the enhanced reliability of water access and reduced reliance on rain catchment systems during drought or storm events.

7.3.4 Soil: Erosion, Contamination, and Compaction

Soils in Port Royal are primarily composed of loosely compacted sandy substrate with occasional shell fragments and limestone outcrops. These conditions, typical of many Bahamian coastal communities, present moderate vulnerability to erosion, rutting, and surface degradation, particularly when exposed during construction. The access road leading up to the community exhibits visible signs of rutting and uneven compaction, particularly in high-use sections, which may be temporarily exacerbated by equipment movement and trenching activities. Site inspections confirmed that unpaved segments of the roadway are prone to pothole formation and uneven surfaces, which may worsen with excavation and vehicle movement if stabilizing measures are not implemented.

The construction process will involve trenching through road shoulders and staging in unpaved or grassed roadside areas. Spoil piles placed too close to vegetated areas or left uncovered may also contribute to sediment dispersal by wind or storm runoff. Additionally, unprotected trench walls in sandy soils can be unstable, especially under saturated conditions following rainfall. Despite these risks, the corridor lacks steep slopes or gullies, reducing the likelihood of large-scale sediment transport.

According to the assessment methodology, soil impacts are expected to be moderate in magnitude, highly probable, and short to medium in duration, primarily during trenching, backfilling, and heavy equipment movement. These impacts are confined to the direct work zone and are reversible through proper compaction, stabilization, and restoration of disturbed areas. Once construction is complete, no significant soil-related impacts are anticipated during the operational phase, as the pipeline will be buried, and the road shoulders reinstated using native materials.

7.3.5 Waste Management

Construction activities within the Port Royal community are expected to generate a range of non-hazardous waste streams, including excavated spoil, minor vegetation debris, packaging from construction materials, and domestic waste produced by site personnel. Because the access road leading up to the community is unpaved and bordered by vegetation, lightweight waste is more likely to disperse into roadside areas if not properly contained. The community's limited formal waste infrastructure further elevates the importance of effective waste control.

Given the existing environmental conditions, lightweight materials such as plastics, packaging, or sediment, could easily disperse into adjacent vegetated areas, residential yards, or canal buffers during wind or rainfall events. Accumulated waste may also obstruct property access, degrade the visual environment, and attract pests if not routinely removed. In a canal-based community, poor waste handling poses an additional risk of indirect runoff or litter migration into waterways, potentially affecting water quality, marine life, and nearshore aesthetics.

No chemical or hazardous waste is anticipated; however, limited quantities of hazardous or regulated waste may arise during construction, including used oils and filters, spill-contaminated soils, oily rags, and personal protective equipment (PPE) contaminated with fuel or lubricants, all of which must be properly contained, labeled, and disposed of through approved waste management channels.

The anticipated waste impacts are considered low in magnitude since the materials generated are non-toxic, limited in volume, and short-term in nature. However, without structured management, the likelihood of localized impacts could increase, especially along unpaved corridors where debris dispersal is more likely. To prevent these issues, timely collection, containment, and off-site disposal at authorized facilities will be essential. All waste handling should follow the procedures outlined in the Contractor's Environmental and Social Management Plan (ESMPc), including segregation of waste streams, daily site housekeeping, and post-construction cleanup to restore the community's natural and residential setting.

7.4 BIOLOGICAL ENVIRONMENT IMPACTS

This section assesses the potential impacts of water mains construction on local biological resources in Port Royal, including vegetation, fauna, and general habitat conditions. Unlike Airport Road, the Port Royal community features a mix of landscaped residential yards, canal-edge vegetation, and patches of native flora. While the area does not intersect any formally designated ecological reserves, KBAs, or IBAs, the project alignment runs adjacent to vegetated roadside verges and informal green spaces, many of which provide habitat functions or ecological buffering along this canal-based community. This includes the access road leading up to the community, which is bordered by naturally regenerated shurbs, grasses, and small trees that contribute to mircohabitat value and provide ecological connectivity along the unpaved corridor.

Although the corridor is developed, vegetated setbacks between roadways and the canal, along with scattered native plants and occasional protected tree species, contribute to microhabitat conditions that support small fauna, soil stabilization, and aesthetic value. The access road leading up to the community, in particular, features vegetated margins that stabilize sandy soils and support common reptile, bird, and invertebrate species. These vegetative buffers are especially important in maintaining local ecological function in a community where natural and residential features blend. **The expected impacts to biological resources are low to moderate in magnitude, short in duration, and highly probable during active construction.** However, with proper site controls and restoration, these impacts are

localized and fully reversible. Site-level measures to manage these risks are included in the ESMP, ensuring compliance with the Forestry Act (2010), the Protected Trees Order (2021), and the DEPP permitting requirements.

7.4.1 Flora and Vegetation Cover

Vegetation along the Port Royal corridor is discontinuous and consists of a mosaic of ornamental landscaping, native shrubs, scattered fruit trees, and canal-side flora. The access road leading up to the community also supports roadside vegetation typical of disturbed but functioning coastal environments. Field visits identified common native and ornamental species, and fruit-bearing trees. The edges of some canal zones also support healthy patches of mangroves, though these remain outside the trenching zone and are not expected to be directly impacted.

Roadside vegetation is typical of disturbed but functioning residential environments, with natural buffers transitioning into driveways, canal paths, and manicured lawns. Along the access road leading up to the community, these buffers also serve as minor ecological corridors that support small fauna and help reduce dust and surface erosion. Given the linear nature of the works, trenching must be carefully coordinated to avoid ornamental plantings, driveways, and any naturally occurring protected species. Pre-construction walkthroughs will be conducted to identify and document any species listed under the Protected Trees Order (2021). Where pruning or removal is unavoidable, national permitting under the Forestry Act (2010) and clearance from the Department of Environmental Planning and Protection (DEPP) will be required.

Vegetation disturbance is expected to be minimal and confined to previously altered road shoulders. Post-construction restoration will prioritize replanting with salt-tolerant native species, aligned with existing roadside vegetation. **The anticipated impacts to flora are therefore low in magnitude, highly probable during trenching, and short in duration, with all effects considered reversible through revegetation and natural recovery.**

7.4.2 Fauna and Wildlife Disturbance

While no critical terrestrial habitats or known wildlife corridors were identified within the trenching zone, the canal-edge vegetation and adjacent shrubbery offer habitat for commonly encountered fauna such as Brown Anole (*Anolis sagrei*) and the Northern Curly-tailed Lizard (*Leiocephalus carinatus*). Feral cats and rodents may also be present. Vegetated margins along the access road leading up to the community similarly support small reptiles, ground-feeding birds, insects, and occasional land crabs, reflecting a typical assemblage of fauna adapted to lightly disturbed roadside environments. These species are adaptable and not considered sensitive to temporary construction-related disturbances.

During excavation, noise, vibration, and worker activity may temporarily displace these animals from the immediate area. However, due to the patchy nature of the vegetation and the residential layout, fauna are expected to return once works are complete. Short-term disturbances may be more apparent along the access road leading up to the community, where fauna often use the roadside vegetation as cover, but these impacts remain minor and reversible. **The impact to fauna is assessed as low in magnitude and short in duration, with moderate probability of encounters during early morning or post-rain periods. Impacts are localized to the direct work zone and fully reversible post-construction.**

Standard site protocols will include pre-clearing inspections, worker orientation to avoid wildlife disturbance, and incident reporting procedures if nests, burrows, or injured animals are discovered. Feeding, hunting, or trapping of fauna by workers will be strictly prohibited.

7.5 SOCIAL IMPACTS

7.5.1 Community Access and Mobility

Temporary and localized access restrictions may occur during trenching, pipe installation, and backfilling in Port Royal. As works will take place primarily within the roadside verge, only short sections of one lane may be partially obstructed at a time on the two-lane roadway. Minimal disruption to traffic flow, pedestrians, and local access is therefore expected. Work sequencing will be planned to minimize delays and avoid full lane closures, ensuring continuous access to key facilities such as the airport, ferry terminal, and nearby businesses.

The anticipated impact on community access and mobility is considered **low to moderate in magnitude**, **short-term in duration**, occurs in the direct area of influence, **highly probable during construction**, but **localized and fully reversible** upon completion. No adverse impacts are expected during operation, as the water mains will be buried and non-intrusive.

7.5.2 Occupational Health and Safety

Construction activities present potential occupational health and safety (OHS) risks to site workers, including exposure to heat stress, dust inhalation, noise, vibration, and machinery-related hazards. Additional risks may arise from trench instability, vehicle movements, and manual handling of pipes and fittings.

Contractors are required to prepare and implement a **Health, Safety, and Environmental (HSE) Plan**, consistent with national labor standards and IDB Environmental and Social Performance Standard 2 (ESPS 2). The plan must include:

- Mandatory use of personal protective equipment (PPE);
- Daily safety briefings and task-specific training;
- Heat stress management protocols, including rest breaks and hydration stations;
- Emergency response procedures and first-aid provisions on site.

The OHS impact is assessed as **moderate in magnitude**, **short-term in duration**, occurs in the direct area of influence and **highly probable** without proper management. However, with the application of standard health and safety protocols, residual risks are expected to be **low** and **fully manageable**. No operational OHS impacts are anticipated, as the infrastructure is passive and will require only routine inspection.

7.5.3 Service Delivery and Public Health

During construction, minor interruptions to local utilities or temporary inconvenience to road users may occur. However, the long-term effect of the project is **strongly positive**, as it will extend reliable access to potable water for residents, businesses, and public institutions in South Bimini. The improvement in water quality and availability will directly enhance public health, reduce household costs associated with bottled water or rainwater catchment, and support hygienic practices in schools, clinics, and hospitality establishments.

Coordination with utility providers and public agencies will ensure that any temporary disruptions are minimized. Communication with affected communities, through notices, public briefings, and the **Grievance Redress Mechanism (GRM)**, will help manage expectations and maintain transparency throughout implementation.

Service delivery impacts are classified as **low to moderate in magnitude**, **short-term** during construction, and **highly beneficial in the long term**. The operational phase will yield sustained social benefits through improved water reliability, equity, and institutional functionality.

8 DISASTER AND CLIMATE CHANGE RISK ASSESSMENT

This section presents the results of the Disaster and Climate Change Risk Assessment (DRA) for Port Royal water mains project in Bimini. The objective is to evaluate the extent to which the proposed works may be exposed to, or exacerbate, natural hazards, and to determine the overall risk classification to inform resilience planning and mitigation.

8.1.1 Legal Framework

The primary regulation relevant to risk management for the Program is:

Disaster Risk Management Act (2022): The Disaster Management Plan of 2022 for the Bahamas outlines a comprehensive approach to disaster risk management, aiming to mitigate socio-economic and environmental impacts, including those exacerbated by climate change. It promotes the active involvement of all societal sectors and stakeholders in planning, financing, and executing disaster response and recovery efforts. Key provisions include the establishment of critical infrastructure such as the National Disaster Emergency Operations Centre (NEOC), early warning systems (EWS), and humanitarian assistance standards. The Act also defines the roles and responsibilities of the Disaster Risk Management Authority (DRMA), a body responsible for disaster risk management in The Bahamas that merges the former National Emergency Management Agency (NEMA) and Disaster Reconstruction Authority (DRA), local administrators for Family Islands, public institutions, and the Minister of Finance across all phases of disaster management, from alert to rehabilitation and recovery, and establishes funds for disaster response, risk reduction, and Risk Management Plan, and the National Disaster Emergency Plan, to be prepared by the authority, as well as requiring every local administrator to prepare, after consultation with the Disaster Risk Management Consultative Committee a Local Disaster Risk Management Plan and a Local Disaster Emergency Plan. Additionally, it outlines procedures for international assistance, ensuring a coordinated and inclusive approach to disaster resilience and mitigation in the Bahamas.

ESPS 4, 'Community Health and Safety,'. In compliance with this standard, all projects involving infrastructure works financed with Program funds must undergo a Disaster Risk Analysis using the IDB Methodology.

8.2 REFERENCE FRAMEWORK AND METHODOLOGY

The methodology employed for this evaluation is delineated in the IDB document “Disaster and Climate Change Risk Assessment Methodology for IDB Projects”. This methodology is structured around three core pillars:

- Identification of Hazards and Vulnerabilities: This involves pinpointing the natural hazards that may impact a project, as well as assessing the physical, social, and economic characteristics that could render it vulnerable to these hazards.
- Risk Assessment: This entails estimating the likelihood of adverse events occurring and evaluating the potential consequences for the project.
- Risk Management: This includes implementing measures to reduce the risk from disasters and climate change, such as prevention, mitigation, and preparedness strategies.

The IDB methodology is designed to be flexible, allowing it to be tailored to the specific needs of each project. It encompasses various phases and steps, with efforts and resources allocated according to then identified risk levels. The steps outlined in the IDB methodology are illustrated in the accompanying figure.

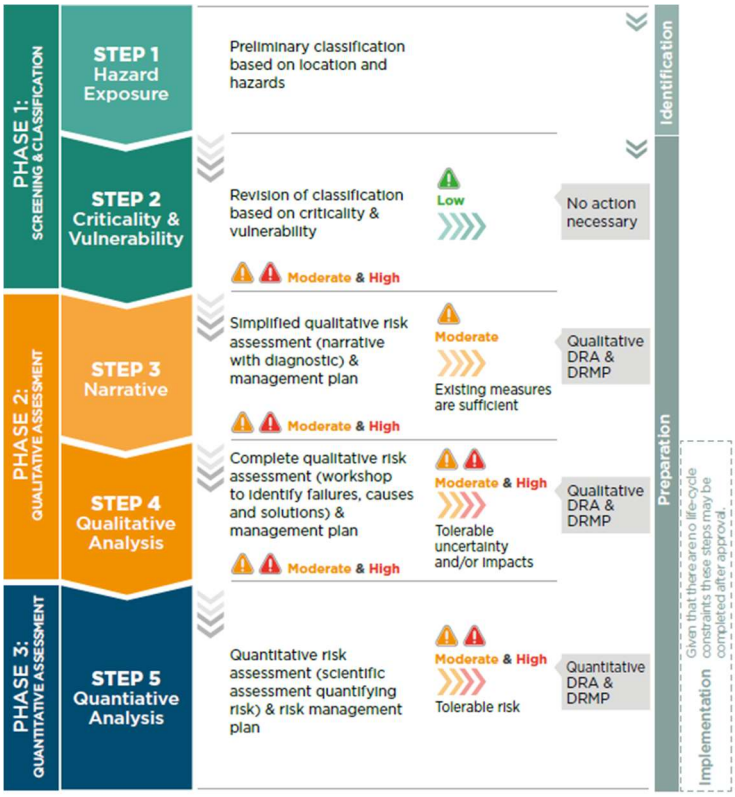
The analysis follows the five-step process outlined in the IDB's 2019 guidance document, which includes (Figure 2)[22]:

- **Hazard Exposure**: preliminary classification based on location and hazards
- **Criticality and Vulnerability**: revision of classification based on criticality and vulnerability
- **Narrative Assessment**: simplified qualitative risk assessment (narratives with diagnostic) & management plan
- **Qualitative Analysis:** Complete qualitative risk assessment (workshop to identify failures, causes and solutions) & management plan
- **Quantitative Analysis**: Quantitative risk assessment (scientific assessment quantifying risk) & risk management plan

Each risk is rated qualitatively as low, moderate, or high based on the severity of impacts and likelihood of occurrence.

[22] Inter-American Development Bank (IDB). Disaster and Climate Change Risk Assessment Methodology for IDB Projects: Technical Reference Document. 2019. https://publications.iadb.org/en/disaster-and-climate-change-risk-assessment-methodology-idb-projects-technical-reference-document

Figure 2. Disaster and Climate Change Risk Assessment Methodology[23]



8.2.1 Procedure

In accordance with the IDB Methodology, the process is developed through the following steps:

Step 1: Exposure to Threats

Current and future threats are identified, and the level of exposure of the project to each threat is determined.

Step 2: Criticality and Vulnerability

The level of vulnerability and criticality is assessed by considering the potential for losses and damages that could result from project activities in the event of failure, in relation to the existing physical, environmental, and socioeconomic conditions.

A simplified and qualitative analysis of the project risk is conducted, considering the previous steps and available information about the project design and the environment.

Based on this analysis, mitigation measures for the identified risks are proposed and structured within the Disaster Risk Management Plan (DRMP).

The activities undertaken as part of the risk assessment and the findings of this procedure are detailed below.

[23] Inter-American Development Bank (IDB). Disaster and Climate Change Risk Assessment Methodology for IDB Projects: Technical Reference Document. 2019. https://publications.iadb.org/en/disaster-and-climate-change-risk-assessment-methodology-idb-projects-technical-reference-document

8.2.1.1 Step 1: Hazard Exposure

The Port Royal water mains project in South Bimini is located in a low-lying, canal-based residential community in South Bimini characterized by flat terrain, sandy and rocky soils, and limited drainage infrastructure. These conditions, combined with the area's coastal exposure and low elevation, increase susceptibility to flooding, stormwater accumulation, and hurricane-related hazards. Construction activities will occur along narrow residential corridors adjacent to waterways, including the access road leading up to the community, which consists of unpaved, compacted sand and marl surfaces that are prone to rutting, heat exposure, and temporary water pooling. These road conditions introduce additional sensitivities related to trench stability, equipment mobility, and worker safety during rainfall or high-heat periods. Runoff management, trench stability, and heat exposure present additional operational and occupational safety considerations.

The table below summarizes the primary hazard exposures, their contributing factors, and the potential effects on construction activities and worker safety:

Table 6. Relevant hazards for the Port Royal Community and Access Road Water Mains works

Hazard	Contributing Factors	Potential Impacts	Hazard Risk Level
Flooding and Stormwater Accumulation	Flat, low-lying terrain; compacted sandy soils; absence of formal drainage; proximity to canals; unpaved access road leading up to the community prone to surface ponding	Water pooling, trench collapse, restricted access, equipment delays, and increased vector risks	Moderate
Tropical Cyclones and Storm Surge	Coastal location within the Atlantic hurricane belt; seasonal storm activity	Wind damage, heavy rainfall, debris hazards, temporary work stoppage, and risk to worker safety	Moderate
Extreme Heat	High ambient temperatures and limited shade	Worker heat stress, dehydration, reduced productivity, and occupational health risks	Low
Soil Erosion and Trench Instability	Unconsolidated sandy soils and rainfall during excavation; loose access road substrate vulnerable to rutting and sloughing	Trench wall failure, sediment displacement, construction delays, and injury risk	Moderate
Runoff and Canal Interaction	Improper containment of spoil or materials near vegetated buffers	Sediment transport toward canal edges, temporary turbidity, and visual degradation	Low

Although the project alignment is not directly exposed to marine wave action, secondary storm impacts, such as rainfall-induced runoff, sediment movement, and temporary waterlogging, require proactive management. This is particularly important along the access road leading up to the community, where unpaved surfaces and shallow depressions can increase localized flood risk. These risks will be mitigated through stormwater diversion, secured material storage, and adherence to the project's Disaster Risk Management Plan (*Section 6.1.2*).

An internal hazard risk analysis was conducted to better characterize specific exposures and guide the development of targeted mitigation strategies. This supplementary analysis identified flooding/stormwater accumulation and soil erosion/trench instability as moderate-level hazards requiring close attention during site preparation and execution. Other hazards, such as extreme heat, tropical cyclones, and runoff interaction with canals, were assessed as lower risk but remain important from an environmental protection and occupational safety standpoint.

This hazard profile guides both design considerations (e.g., erosion control, pipe bedding stability, and drainage planning) and construction practices (e.g., weather preparedness, trench protection, worker hydration, and safety monitoring). Special measures will be required along the access raid to stabilize work surfaces and manage dust and heat exposure. Together, these measures strengthen the climate resilience, environmental protection, and operational reliability of the Port Royal water supply infrastructure.

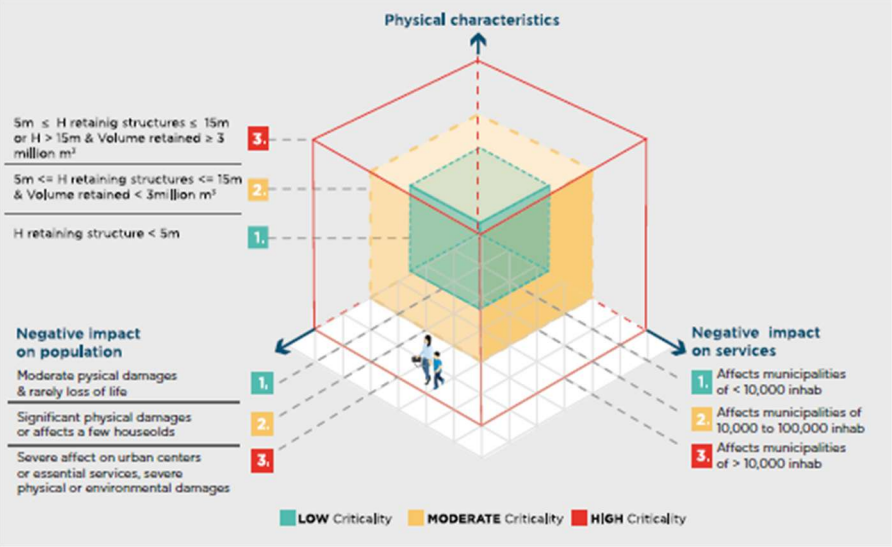
8.2.1.2 Step 2: Project Criticality and Vulnerability

The Port Royal water mains installation represents a critical intervention to strengthen potable water access for households that currently relies heavily on rainwater catchment, bottled water, and private wells. Although the project area is not densely populated or highly urbanized, it supports an essential public service in a location with limited alternative water infrastructure.

Failure or significant delay in completing the installation could:

- Prolong existing challenges in safe and reliable water access, particularly during the dry season or post-disaster recovery periods.
- Disrupt mobility or emergency access within the community if excavation areas or equipment restrict road use during storm preparation or response.
- Lead to increased costs and material losses if construction is affected by flooding or adverse weather conditions.
- Exacerbate public health and sanitation risks associated with prolonged dependence on untreated or costly water sources.

Figure 3. Criticality and Vulnerability Table for Drainage and Water and Wastewater Infrastructure[24]



8.2.1.2.1 Thresholds for Dimension 1: Impact on Service Functionality

The Port Royal potable water mains installation will serve a small segment of the South Bimini population. In the event of a system failure or temporary disruption, only a limited number of residents would be affected, and restoration could be achieved quickly through existing maintenance protocols. Given the localized nature and limited-service area, the **impact on service functionality** is classified as **Low** (*Table 7*). The alignment along the access road leading up to the community also limits broader service disruptions, as any localized excavation damage or isolation-valve shutoff would only affect a short segment of the community and can be rapidly repaired due to ease of access along the roadway.

8.2.1.2.2 Thresholds for Dimension 2: Impacts on Population and Environment

Given the project's limited scale, linear alignment along previously disturbed roads, and absence of nearby protected habitats, any installation or operational failure would have minimal consequence for the population or surrounding environment. The works do not intersect with sensitive ecological areas, and potential leaks or water loss can be contained and remediated without broader environmental impact. Along the access road leading up to the community, any break or leak would infiltrate the porous sandy substrate and remain confined to the roadway corridor, reducing risks of wider environmental impacts and preventing flow from reaching canal-edge vegetation or mangrove buffer. Accordingly, **the impact on population and environment is rated as Low (***Table 7***)**.

8.2.1.2.3 Thresholds for Dimension 3: Physical Characteristics

The proposed system consists of underground PVC pipelines that operate passively and do not rely on mechanical or electrical components. Routine maintenance is limited to periodic valve checks, pressure testing, and pipeline flushing. These straightforward operations require minimal technical complexity or daily oversight. The access road leading up to the community provides direct and uncomplicated access

[24] Inter-American Development Bank (IDB). Disaster and Climate Change Risk Assessment Methodology for IDB Projects: Technical Reference Document. 2019. https://publications.iadb.org/en/disaster-and-climate-change-risk-assessment-methodology-idb-projects-technical-reference-document

for future inspections and maintenance, lowering operational vulnerability and reducing the likelihood of delayed response times during repairs or emergencies.

The primary exposure risks relate to seasonal flooding or high winds, which may damage above-ground fittings such as fire hydrants and valve boxes. Such incidents, however, would not pose significant threats to public safety or ecological integrity. **Based on these considerations, the physical characteristics are classified as Low, consistent with simple maintenance needs and low operational complexity (***Table 7***).**

Table 7. Summary of the Criticality Assessment.

Project Type	Dimension 1 Impact on Service Functionality	Dimension 2 Impacts on Population and Environment	Dimension 3 Physical Characteristics	Classification
Access to Potable Water Supply	**Low** Equipment failures do not impact the delivery of the service	**Low** Equipment failures do not impact the population or the environment	**Low** The equipment doesn't require periodic O&M tasks	**Low**

8.2.1.3 Step 3: Risk Narrative

The hazards present in the project area are flooding and stormwater accumulation, tropical cyclones and storm surge, extreme heat, soil erosion and trench instability, and runoff and canal interaction. For this project, flooding and stormwater accumulation is classified as Moderate, and tropical cyclones and storm surge is classified as Moderate.

The criticality and vulnerability of the infrastructure component of the project is classified as Low, following the criteria shown in the criticality chart for water and sanitation infrastructure:
(i) physical characteristics are Low,
(ii) the impact on service functionality is Low, and
(iii) level of impact on population and environment is Low.
Therefore, the overall criticality is rated as Low.

The inclusion of the access road leading up to the community in the construction alignment slightly increases exposure to surface flooding, rutting, and heat stress; however, these risks remain manageable given the short linear extent, ease of access for emergency response, and the absence of steep grades or vulnerable drainage structures. Climate change has been considered as it may intensify hydrometeorological hazards, particularly increased rainfall intensity and storm surge from tropical cyclones. Such changes may exacerbate water pooling and soil instability along the access road leading up to the community, further reinforcing the need for adaptive construction sequencing and temporary stabilization measures.

Design considerations to manage risks include:

- Appropriate pipe anchoring to reduce risk of displacement from water flow;
- Erosion and sediment control measures to protect trench integrity;

- Storm-preparedness protocols for equipment staging and material containment;
- Strategic placement of hydrants and fittings to minimize exposure.
- Considerations to address exacerbation of risk include:
- Adherence to a Disaster Risk Management Plan (DRMP);
- Implementation of pre-storm inspections and emergency response procedures;
- Avoidance of construction during peak hurricane season where possible.

No significant gaps were identified. The primary uncertainty is the potential for extreme weather variability due to climate change, which will be addressed through flexible scheduling, on-site risk monitoring, and coordination with local emergency response systems.

Overall, the presence of the access road leading up to the community enhances logistical efficiency during construction and maintenance but requires careful management of localized flooding, dust, and erosion to maintain safe access and protect installed infrastructure.

The narrative concluded that for this Moderate risk project there is no need to continue to a complete qualitative risk assessment for the operation, Step 4 of the Disaster and Climate Change Risk Assessment Methodology (DCCRAM), as there are no significant gaps, appropriate measures have been identified and documented in a DRMP, and it is possible to attain a tolerable risk level from these.

The risks identified can be effectively managed through the existing mitigation measures, as outlined in the ESMP and the project's Disaster Risk Management Plan (DRMP) (*Section 6.1.2*). Continued monitoring of the access road leading up to the community, particularly after heavy rainfall or during hurricane season, will help identify early signs of erosion, trench instability, or surface degradation that could affect construction logistics or long-term access to pipeline infrastructure. Adaptive management should be maintained if hazard conditions intensify or community exposure increases.

8.2.2 Disaster Risk Management Plan (DRMP)

This Disaster Risk Management Plan (DRMP) outlines site-specific mitigation measures to address the priority hazards identified for Port Royal water mains project in South Bimini. It is structured according to IDB's 2019 methodology and draws on best practices outlined in the program-wide Disaster Risk Mitigation Measures Table in the Project's SESA.

The DRMP focuses on minimizing risks across all phases of the project, engineering design, construction, and operation and maintenance (O&M), with clearly assigned responsibilities and a distinction between structural and non-structural measures. Because construction will also occur along the access road leading up to the community, several mitigation measures also address the road's unique flood, erosion, dust, and access-related vulnerabilities.

Table 8. Disaster Risk Mitigation Measures for the Port Royal Community (Access to Piped Water Supply)

Hazard Type	Measure Description	Project Phase	Type of Measure	Responsible Entity
Flooding / Surface Water Accumulation	Select valve boxes, washouts, and hydrant locations in slightly elevated or well-drained areas to minimize exposure to pooled water. Where feasible, position components away from depressions along the access road leading up to the community.	Design	Structural	WSC Design Team, Contractor
	Anchor and secure all above-ground components (hydrants, valve boxes) to prevent displacement or floatation during flooding.	Construction	Structural	Contractor, WSC Supervision
	Establish shallow side drains or graded shoulders along the corridor to channel runoff away from open trenches. This is particularly important along the access road leading up to the community, where stormwater frequently pools due to unpaved sandy surfaces.	Construction	Structural	Contractor, verified by WSC
	Implement periodic clearing of vegetated and canal-edge buffers to maintain surface water flow paths and prevent waterlogging.	O&M	Non-Structural	WSC, PEU, Local Government
Extreme Rainfall / Soil Erosion	Limit open trench exposure during the wet season; schedule excavation and backfilling to align with forecasted dry periods. Segment trenching along the access road leading up to the community to reduce exposure of loose sandy material.	Construction	Non-Structural	Contractor
	Cover stockpiles, use silt fencing, and stabilize disturbed areas using compacted fill or native groundcover vegetation. Stockpiles near the access road leading up to the community must be contained to prevent sediment dispersion by wind and vehicle movement.	Construction	Structural	Contractor, supervised by WSC

Tropical Cyclones / Storm Surge (Indirect Exposure)	Secure loose materials, piping, and machinery ahead of storms; activate contractor storm-preparedness protocol. Special staging plans will be required along the access road leading up to the community to prevent windborne debris or blocked access.	Construction	Non-Structural	Contractor, WSC
	Incorporate thrust blocks and reinforced joints at all bends and terminal points to reduce uplift or separation during extreme rainfall or flooding.	Design	Structural	WSC Design Team, Contractor
Heat Stress (Occupational)	Adjust work hours to avoid peak sun; provide shaded rest areas and hydration. Heat exposure is expected to be highest along the open sections of the access road leading up to the community with limited natural shade.	Construction	Non-Structural	Contractor
Trench Collapse / Worker Safety	Use trench boxes or shoring methods in deeper or unstable sections	Construction	Structural	Contractor, WSC
Fire Risk (Minor)	Keep work area free of dry vegetative debris and flammable materials. This applies particularly to road-edge vegetation along the access road leading up to the community.	Construction	Non-Structural	Contractor
Runoff and Canal Interaction	Maintain vegetated buffers between trenching zones and canal edges; avoid stockpiling near waterways.	Construction	Non-Structural	Contractor, WSC
System Redundancy / Supply Interruption	Allow bypass valves to isolate sections during repairs without shutting down entire network	Design	Structural	WSC Design Team
Regular Monitoring	Conduct periodic maintenance checks and walk-through inspections.	O&M	Non-Structural	WSC, Local Government

8.3 SUMMARY OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

This Environmental and Social Impact Assessment for the proposed water mains installation within the Port Royal community identifies overall low, short-term, and manageable impacts during construction, with long-term environmental and social benefits once operational. The principal environmental impacts anticipated include temporary dust generation, construction noise, soil disturbance, minor vegetation removal, and waste generation from trenching and material handling. Impacts along the access road leading up to the community are expected to mirror these conditions, with additional attention required to manage dust and temporary surface degradation given its unpaved, sandy substrate. These effects are localized and reversible, and will be effectively managed through measures such as dust suppression, erosion control, waste containment, and limited vegetation clearance. No protected habitats or sensitive species are present within the project direct footprint, and the operational phase will have negligible environmental impacts, as the water mains will be underground, passively operated, and non-emitting.

Socially, the project will deliver substantial positive outcomes by improving access to safe, reliable, and affordable potable water for residents and seasonal occupants of Port Royal. This enhancement will strengthen public health, household stability, and service reliability, while supporting the broader community's climate and disaster resilience. Temporary inconveniences may occur along the access road leading up to the community, including limited driveway access and short-term pedestrian disruptions, though these will be mitigated through phased works, community notification, and clear signage. Occupational health and safety risks will be controlled through worker safety training, provision of PPE, and heat stress management protocols.

The Disaster and Climate Change Risk Assessment classifies the project as moderately vulnerable, given its low-lying coastal setting and limited drainage infrastructure, with potential hazards including flooding, trench instability, tropical storms, and heat exposure. These hazards are particularly relevant along the access road leading up to the community, where unpaved surfaces and shallow depressions may increase susceptibility to localized flooding or soil instability during construction. These risks are confined primarily to the construction phase and will be mitigated through the implementation of the DRMP, which outlines measures such as drainage maintenance, slope reinforcement, storm preparedness, and occupational safety procedures.

Overall, the Port Royal water mains installation is considered environmentally sound, socially beneficial, and climate-resilient, with no significant residual impacts expected following the application of mitigation and management measures. The project will provide lasting improvements in water security, public health, and community well-being for residents and visitors to South Bimini.

9 ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN (ESMP) FOR WATER MAINS WORKS

This Environmental and Social Management Plan (ESMP) provides a structured and actionable framework for implementing environmental mitigation, monitoring, and compliance activities associated with Component 3: Water Mains Works under the broader water supply and sanitation program. The works designed for Port Royal addresses distinct environmental characteristics, construction contexts, and levels of sensitivity. A key feature of the Port Royal alignment is the unpaved access road leading up to the community, which serves as the primary construction corridor and introduces additional

considerations related to dust generation, soil erosion, equipment mobility, resident access, and drainage during and after works.

The EMP supports the operationalization of the findings and recommendations from the Environmental and Social Assessment and is intended for use by the WSC, project contractors, and the supervising WSC staff. It provides a set of site-specific mitigation measures, organized into thematic environmental management programs, alongside defined institutional responsibilities, reporting protocols, and monitoring mechanisms that align with national environmental laws and the IDB's ESPF. Specific controls are included to address the unique environmental and social conditions of the access road leading up to the community, including its sandy substrate, limited drainage features, and close proximity to residential properties.

Key environmental risks addressed in this EMP include:

- Dust emissions and air quality impacts due to trenching through sandy, loose soils in a residential setting; and particularly along the access road leading up to the community where dust generation is highest due to unsealed surfaces;
- Soil instability, erosion, and surface water pooling in low-lying or poorly drained road segments; including depressions and runoff-prone areas along the access road leading up to the community;
- Noise and vibration near occupied homes and community-use buildings such as the local church; with additional intermittent exposure along the access road leading up to the community where equipment will move between work zones;
- Construction-related waste generation in an area with limited roadside containment; with elevated risk of wind dispersal along the open access road leading up to the community corridor;
- Disturbance to native and ornamental vegetation, including protected species and mangrove buffers near the canal; plus trimming or short-term disturbance to vegetation bordering the access road leading up to the community;
- General construction hazards due to extreme weather exposure, flat terrain, and lack of engineered drainage; all of which influence trench stability and access road usability during rainfall events.

Key social risks addressed in this ESMP include:

- Lack of Community access and mobility; including temporary constraints along the access road leading up to the community, which provides the sole vehicular and pedestrian route in several areas;
- Road and traffic impacts;
- Occupational and Community health and safety risks;
- Lack of community information and participation
- Lack of coordination with service providers
- Potential risk of a chance find in the project area -

This plan applies to both construction and early operational phases, with particular emphasis on:

- Site establishment and clearance;
- Trenching and pipe laying activities;
- Backfilling and restoration of road surfaces;
- Sanitary testing and final commissioning.

9.1 ROLES & RESPONSIBILITIES

9.1.1 Design

During the design phase of the interventions, WSC will prepare the bidding documents for the works, and the environmental and social specialist from WSC will incorporate the necessary environmental, social, and occupational health and safety clauses and requirements, both general and specific to the projects, which arise from this ESA and ESMP. These aspects will then be included in the Environmental and Social Technical Specifications of the bidding documents. The bidding documents must outline the minimum content of the Environmental and Social Management Plan for the Construction Stage (*Table 9*).

The proposals received during the bidding process for the works must contain a budget that includes the cost of implementation and compliance with the environmental, social, and occupational health and safety mitigation measures required by the project, to guarantee compliance with the IDB ESPF and applicable national and local regulations.

9.1.2 Construction phase

Prior to the start of the works, WSC will conduct the due diligence with, the DEPP, to obtain the national required Certificate of Environmental Clearance, and the respective nationally accepted EIA and EMP, for the works.

During the Construction Phase, the Contractor Company will be responsible for preparing and implementing the Environmental and Social Management Plan at the construction level (ESMPc) of the project, as well as obtaining the environmental and occupational health and safety qualifications and insurances required according to the national regulatory framework.

The Contractor will also need to obtain others applicable permits, as needed, which could include tree cutting permits for protected trees according to the Protected Trees Act, although not anticipated, excavation and construction permits from the Ministry of Works (MoW).

Before the start of the works, the Contractor must submit to the PEU, for its approval, an Environmental and Social Management Plan at the construction level (ESMPc). The ESMPc of the project will contain, as a minimum, the programs described in Section 9 of this ESA.

Once the ESMPc is approved, the Contractor Company will be responsible for its compliance, using the necessary means to implement the Programs that are formulated within its framework. The Contractor Company must have an environmental and social representative and a person responsible for health and safety matters, who will be responsible for conducting the implementation of the ESMPc. Likewise, the contractor must comply with and ensure that the operators comply with all the provisions contained in said Plan, national and local environmental legislation, appropriate construction codes and best practices and the IDB Environmental and Social Policy Framework, during all stages of the execution of the works.

The Contractor Company will prepare monthly reports to the PEU, detailing the actions and results of the ESMPc implementation.

The inspection, control, and monitoring activities of the ESMPc will be conducted by WSC. WSC may conduct inspection visits, prepare reports for internal use for the Project, and determine and impose corrective measures based on the stipulations of the bidding documents. The environmental and works authority may also conduct control audits of the work.

At the finalization of the works, the Contractor must submit a *Final Environmental and Social Report*, which includes the information corresponding to the implementation of ESMPc, including records of implementation of plans and programs, and a report on compliance with all environmental and social indicators considered at various stages of the project cycle.

9.1.3 Operation and Maintenance

During the operational stage, WSC will be responsible for the operation and maintenance of the infrastructure built under the Project, in accordance with its current environmental policies and environmental and social management systems, including the ESMP for the operational and maintenance stage.

9.1.4 Role of IDB

The IDB will oversee and supervise the implementation of the environmental and social management system for this water mains project. This includes the review and approval of the semi-annual environmental and social compliance reports submitted by WSC, as well as conducting environmental and social supervision missions. This is expected to last throughout project implementation.

Table 9. Roles and Responsibilities for E&S Management of the Projects

Project Cycle Phase	Activity	Responsible Party	Monitoring	Supervision
Design	Grievance Redress Mechanism (for the duration of the Program)	WSC	-	IDB
	Environmental Permits as required by The Department of Environmental Planning and Protection	WSC	-	DEPP
	Executive Project / Engineering Design	WSC	-	IDB
	Environmental and Social Assessment / ESMP	WSC	-	IDB
	Public Consultation / Public Information Campaigns	WSC	-	IDB
	Preparation of E&S Technical Specifications for Bidding Documents	WSC	-	IDB
Construction	ESMPc: Preparation and Implementation Contractors WSC IDB	Contractors	WSC	IDB

	E&S Progress Reports	Contractors to WSC (monthly)	WSC	
	E&S Progress Reports	WSC to IDB (bi-annually)	-	IDB
	Final E&S Report	Contractors	WSC	-
	Final E&S Report	WSC		IDB
Operation	Operation and maintenance of the water and sewage infrastructure	WSC	WSC	IDB (for a period of 3 years after commissioning)

9.2 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLANS

Mitigation measures for both environmental and social impacts were grouped into two different ESMPs, each one targeting different phases of the project:

Construction/installation ESMP: aimed at mitigating the impacts and risks of construction activities.

Operation/maintenance ESMP: measures to be implemented during operation and maintenance activities.

9.2.1 Construction Environmental and Social Management Plans

This ESMP presents the minimum environmental and social guidelines that must be implemented during the construction activities of the project's infrastructure.

The *Table 10*. below presents the requirements of programs included in the ESMP.

Table 10. ESMP for the construction phase of the project.

Program Number	ESMP Plan
1	Monitoring and Control of Compliance with Mitigation Measures
2	Construction Sites Management
3	Air Quality, Noise and Vibrations Management
4	Erosion Control
5	Flora and Fauna Management
6	Waste Management
7	Effluent Management

8	Chemical Substances Management
9	Occupational and Community Health and Safety
10	Traffic and Pedestrian Management
11	Pest and Vector Control
12	Socio-Environmental Training for Site Personnel
13	Disaster Management and Emergency Response
14	Community Information and Participation
15	Coordination with Service Providers
16	Environmental Liabilities Program
17	Chance Find Procedure
18	Works Closure

9.3 MONITORING AND CONTROL OF COMPLIANCE WITH MITIGATION MEASURES

Objective: To ensure that all environmental mitigation measures outlined are systematically implemented, tracked, and corrected as needed during the construction and operational phases of the Water Mains Works. The goal is to maintain compliance with national regulations, safeguard community and environmental health, and align with IDB ESPS.

Summary: This plan establishes a structured monitoring framework that outlines how environmental controls will be implemented in Bimini. Contractors will be responsible for conducting routine inspections, keeping compliance logs, and reporting on environmental mitigation actions. The WSC will oversee verification of compliance through site visits and monthly reviews. In cases where non-compliance is observed, prompt corrective actions will be triggered in accordance with the project's corrective action procedures.

9.3.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline
Compliance Verification	Contractors will be responsible for conducting routine site inspections using standardized checklists to verify implementation of air quality, waste, noise, erosion, and vegetation measures.	Retraining of staff; intensified site supervision; resubmission of corrected inspection reports.	Continuous during construction activities

Inspection Protocols	Contractors will document site compliance through weekly inspections, supported by dated photographs and logs. Field engineers must review compliance forms before payment milestones.	Follow-up inspections within 5–7 days; documentation of deficiencies; escalate to WSC if unresolved.	Weekly during active trenching periods
Reporting	Contractors will submit monthly compliance reports (with summaries of mitigation performance, non-compliance issues, and corrective actions) to WSC.	Issue formal non-compliance notice; suspend payment or works for persistent failures.	Monthly, throughout construction phase
WSC Oversight	WSC will assign a site supervisor to monitor the works daily and the WSC PEU or Project Management Team will conduct monthly verification visits and random spot checks across all sites, including Abaco and Bimini.	Request immediate corrective actions; coordinate with IDB for high-risk violations or environmental harm.	Daily/Monthly (random checks in Family Islands)
Non-Compliance Protocol	In cases of significant deviation, Works Inspector or WSC may issue stop-work orders.	Written corrective action plan required within 5 days. Re-inspection required before resumption of work.	As needed, within 5–7 days of infraction
Grievance-linked Monitoring	All community feedback submitted through the project grievance mechanism must be reviewed weekly for any flagged environmental concerns.	Immediate site inspection; issue warning or correction order if claim verified.	Weekly review of grievance logs

9.3.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
Compliance with mitigation measures	Percentage of measures implemented at each work front	Weekly field inspections using standardized checklist	WSC; Contractor (HSE Officer)
Field supervision reports	Number of non-conformities recorded; trends in observations	Weekly summary reports from contractor and WSC	Contractor; WSC Field Supervisor
Corrective action implementation	Timeliness and completeness of corrective actions	Verified within 7 days of deviation occurrence	Contractor; verified by WSC
Safety and environmental signage	Proper placement, visibility, and maintenance of signage	Checked during each weekly inspection	Contractor
Documentation and reporting	Up-to-date reports, logs, photos, and compliance documentation	Reviewed monthly as part of compliance submissions	Contractor; submitted to WSC

9.4 CONSTRUCTION SITES MANAGEMENT

Objective: To ensure that all construction sites are maintained in a clean, safe, and environmentally responsible manner across all work fronts in Bimini. This plan minimizes environmental degradation, safeguards worker health and safety, and ensures preparedness for potential emergencies throughout the construction phase.

Summary: This management plan outlines site-level protocols that contractors must implement to maintain orderly and environmentally compliant work areas. The plan emphasizes sanitation, materials handling, fire safety, erosion control, and post-construction demobilization. Site-specific measures must be adapted based on conditions such as road layout and vegetation. Contractors are fully responsible for implementing all required protocols, while WSC and its supervising engineer will monitor compliance through scheduled inspections and escalate corrective actions as needed.

9.4.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Site layout and setup	Contractors will designate and mark secure areas for material storage and staging, ensuring safety and containment.	Reorganize storage layout; implement secondary containment; suspend deliveries until corrected.	Prior to mobilization; weekly reviews	Contractor Site Manager; WSC oversight
Waste management area	Contractors will set up labelled bins and maintain a collection schedule; hazardous and non-hazardous waste must be separated.	Immediate cleanup and sorting; reinforce worker training.	Daily checks; weekly disposal log	Contractor
Sanitation and hygiene	Contractors will provide and maintain clean toilets and handwashing facilities with adequate water.	Halt construction if hygiene is compromised; install temporary services.	Daily	Contractor
Safety signage and fencing	Contractors will install and maintain warning and informational signs, reflectors, and secure fencing around active work zones.	Replace missing/damaged signs and fences within 24 hours.	Initial setup; checked weekly	Contractor; verified by WSC
Emergency response readiness	Contractors will equip each site with a stocked first aid kit, fire extinguishers, and reliable communication tools (radio or phone).	Restock kits; replace expired or missing equipment; retrain crew.	Weekly kit check; comms checked daily	Contractor

Fire safety preparedness	Fire extinguishers must be fully functional, accessible, and inspected regularly.	Install before works begin; inspect monthly.	Prior to works and monthly thereafter	Contractor
Drainage and runoff control	Contractors will use berms, silt fences, or other erosion controls to protect nearby drainage paths.	Reinforce barriers; halt trenching during heavy rainfall.	Continuous during trenching	Contractor; monitored by WSC
Emergency training and awareness	Contractors will train all personnel in hygiene, emergency response, fire safety, and site protocols.	Retrain affected workers; require refresher sessions and induction training logs.	Pre-mobilization and quarterly	Contractor HSE Officer
Site demobilization and cleanup	Contractors will remove waste, signage, and temporary structures at the end of each work phase, restoring the area to pre-existing condition.	Delay handover sign-off; require photographic proof of cleanup.	End of construction at each site	Contractor; signed off by WSC

9.4.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
Site setup and storage layout	Presence of clearly demarcated organized storage and staging areas	Weekly visual inspections; photo documentation	WSC; Contractor
Waste bin availability and use	Labelled bins present; waste is separated and not overflowing	Daily site checks; weekly waste disposal log	Contractor Site Manager
Sanitation facilities functionality	Toilets and handwashing stations present and hygienic	Daily inspections; restocking logs	Contractor
Safety signage and fencing	Signs posted, reflectors visible, fencing intact around all active sites	Weekly checklist inspections	Contractor; verified by WSC
Emergency readiness	Accessible first aid kits, fire extinguishers, and communication devices	Weekly inspections; emergency equipment inventory checklist	Contractor HSE Officer
Drainage and runoff control	Absence of standing water; berms/silt fences functioning	Observations during rainfall; weekly walkthroughs	Contractor; monitored by WSC
Staff emergency preparedness	Number of trained workers; records of induction sessions	Pre-mobilization and quarterly refresher training logs	Contractor (HSE Officer)
Site demobilization compliance	Complete removal of equipment, signage, waste, and restoration performed	Final site walkthrough with photographic evidence	Contractor; signed off by WSC Site Inspector

9.5 AIR QUALITY, NOISE AND VIBRATIONS MANAGEMENT

Objective: To minimize the environmental and community-level impacts associated with dust emissions, vehicle exhaust, and construction-related noise and vibrations during the installation of potable water mains in Port Royal. These impacts are particularly relevant due to the proximity of occupied residences, canal-side homes, and a community church, as well as the unpaved and sandy character of local roadways which increases dust generation.

Summary: Construction activities such as trenching, earthmoving, hauling, and the operation of heavy machinery pose risks to air quality and ambient noise levels. This plan outlines emission controls, dust suppression measures, noise mitigation protocols, and contractor responsibilities. WSC and the supervising engineer will verify field compliance through inspections, community feedback tracking, and review of contractor reports.

9.5.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Equipment emissions	Maintain equipment per manufacturer specs to reduce emissions	Remove or repair malfunctioning machinery	Weekly maintenance log review	Contractor Site Manager
Dust control	Water dusty roads and trenches; limit material drop heights	Apply additional suppression; retrain workers	Daily during dry conditions	Contractor
Haul truck loading	Cover loads with tarpaulin; avoid overfilling	Stop transport until load secured	Continuous	Contractor
Construction timing	Schedule noisy works during business hours	Reschedule non-compliant activities	BiWeekly planning meetings	Contractor; approved by WSC
Stakeholder communication	Implement Construction Communications Plan	Distribute notices; meet with affected stakeholders	Before noisy activities	WSC
Grievance response	Track and resolve dust/noise complaints through(GRM)	Investigate and respond in 3 business days; update log	Within 48–72 hrs of complaint	Contractor/WSC
Noise Levels	High-noise activities will be limited to standard working hours, and advance notice will be provided to adjacent users.	Reschedule noisy activities; notify affected parties; log deviation	Daily during construction	Contractor; approved by WSC
Noise Levels/ Equipment Maintenance	Ensure maintenance of all construction equipment in accordance with manufacturer's specifications to minimize noise emissions	Review equipment logs; repair or replace noisy machinery	Weekly maintenance reviews	Contractor Site Manager
Noise Levels	Discourage unnecessary idling of construction equipment and trucks to	Brief site staff; monitor and issue reminders;	Continuous monitoring	Contractor Site

	minimize noise emissions and environmental impact.	document repeated non-compliance		Manager/Supervisor

9.5.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
Dust suppression	Work areas are visibly damp; no visible airborne dust during activities.	Daily visual inspections with photo logs.	Contractor; verified by WSC
Equipment emissions	Low or no visible exhaust; up-to-date equipment servicing logs.	Weekly log review and spot checks.	Contractor Site Manager
Noise near receptors	Noise during construction	Ensure works are done during normal working hours and provide advance notice of works commencement to stakeholders in the direct area of influence,	WSC Site Manager
Stakeholder engagement	Notices distributed that specify construction schedule; communication records maintained Consideration will also be given to vulnerable groups and methods of engagement	Reviewed before each new work phase; maintain records of outreach.	WSC
Complaint resolution	Timely resolution of complaints with log updates and feedback to complainants.	Weekly grievance log review and summary of monthly site reports.	WSC

9.6 EROSION CONTROL PLAN

Objective: To prevent soil erosion, sediment displacement, and runoff-related environmental impacts during water mains installation in Port Royal. The plan ensures that soil stability is maintained in an environment characterized by loosely compacted sandy soils, uneven terrain, and localized pooling after rainfall. Given the residential setting and proximity to canals, effective erosion control is critical to prevent sediment dispersion into private yards, roadways, and vegetated areas, while maintaining safe and orderly construction conditions.

Summary: Excavation and trenching along Port Royal's compacted sand and rock roads present short-term risks of erosion and sediment movement, especially following heavy rainfall. Although widespread runoff is unlikely due to limited surface gradients and yard-level vegetation that absorbs excess water, exposed trenches and spoil piles may become unstable or spread fine sediment if not properly managed.

This plan establishes proactive measures to stabilize exposed soils, cover stockpiles, and maintain erosion control features during and after construction. These measures will minimize soil loss, protect nearby properties and vegetation, and prevent sedimentation within the canal margins or roadside drainage depressions.

9.6.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Phasing of works	Schedule trenching in short, phased sections to limit the area of open excavation.	Adjust sequencing; close or backfill exposed sections sooner.	Weekly planning and review	Contractor; verified by WSC
Work zone delineation	Clearly mark trenching zones with cones or temporary fencing to confine equipment and vehicles.	Re-mark boundaries; relocate materials placed outside limits.	Before mobilization and weekly	Contractor Site Supervisor
Excavation limits	Restrict excavation and material stockpiling within designated work zones.	Halt works; retrain personnel on excavation boundaries.	Continuous during trenching	Contractor
Erosion controls	Use small berms or sandbags around excavation points to divert runoff and stabilize slopes.	Repair or replace controls immediately after rain.	During excavation and post-rainfall	Contractor; verified by WSC
Stockpile protection	Cover soil or sand piles with tarpaulin and avoid placing stockpiles near canal edges or residential boundaries.	Replace covers or relocate stockpiles to stable ground.	Daily during excavation	Contractor
Drainage management	Keep roadways and canal-side verges free from sediment; ensure no runoff enters canals.	Sweep and remove sediment; document action in logbook.	After ≥10 mm rainfall or weekly	Contractor
Vegetation preservation	Retain existing lawn, ornamental vegetation where possible.	Replant with native species	Immediately post-construction	Contractor; verified by WSC
Documentation	Maintain a logbook with records, photos, and corrective actions for erosion control activities.	Update logbooks and submit a summary to WSC.	Weekly updates and monthly reporting	Contractor; reviewed by WSC

9.6.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/ Frequency	Responsible Entity
Erosion control structures	Berms, sandbags, and covers in place and intact post-rainfall.	Weekly inspections and after ≥10 mm rainfall.	Contractor; oversight by WSC
Trench exposure	No prolonged open trenches; backfilled sections stabilized promptly.	Weekly inspection with photos in logbook.	Contractor; verified by WSC
Sediment containment	No sediment runoff beyond work area or into canal-side vegetation.	Daily visual checks during works; post-rain inspection.	Contractor
Documentation compliance	Logbook includes inspection records, photos, and corrective actions.	Weekly review and monthly submission to WSC.	Contractor; reviewed by WSC
Vegetation protection	No unnecessary vegetation removal or damage to lawns/ornamentals.	During layout and weekly verification.	Contractor; verified by WSC
Post-rain cleanup	Roads and access paths cleared of sediment within 24 hours of rainfall.	Post-rain inspection and log entry.	Contractor; verified by WSC

9.7 Flora and Fauna Management Plan

Objective: The objective of this plan is to avoid, minimize, and mitigate impacts on native coastal vegetation and any incidental fauna within Port Royal community and internal roadways, that may be affected by trenching and installation of water mains infrastructure. The program emphasizes both preventative actions and restoration commitments in line with good international practices and national requirements.

Summary: Port Royal is a low-density residential community with a mix of manicured yards, scattered ornamental landscaping, native vegetation along verges, and healthy patches of mangroves along the canal. The project area does not intersect with protected areas or mapped critical habitats, and no protected species were observed within the direct footprint. Vegetation along the access road leading up to the community consists of roadside shrubs, grasses, and small trees that may require limited trimming during construction. Contractors must respect flagged boundaries, avoid vegetation removal beyond the trench line, and allow incidental fauna to vacate naturally. Good housekeeping practices must be enforced to avoid unnecessary disturbance to vegetation near docks, driveways, or canal access points.

9.7.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity

Vegetation boundary marking	Flag trench line clearly and limit any clearing to the immediate work zone.	Reflag zones; retrain workers on vegetation limits.	Prior to site mobilization	Contractor; verified by WSC
Vegetation protection	Avoid clearing ornamental trees, palms, and vegetation near yards, canal edges or roadways.	Pause works; issue non-conformance notice and rebrief site crew.	During site prep and trenching	Contractor
Minimize habitat disturbance	Allow birds, reptiles, or small fauna to vacate naturally; avoid trapping or handling.	Record in fauna log; notify WSC and DEPP if protected species encountered.	Continuous during works	Contractor
Buffer and verge protection	Do not store equipment, fuel, or spoil in vegetated canal buffers, lawns, or soft verges.	Remove material immediately; clean area; log and report deviation.	Ongoing during construction	Contractor Site Manager; verified by WSC
Revegetation and restoration	Backfill and regrade disturbed areas; allow natural regrowth or reseed if needed.	Inspect site 4–6 weeks post-construction; stabilize areas as needed.	Post-construction	Contractor; reviewed by WSC

9.7.1.2 Monitoring, Indicators and Responsibilities

Monitoring Parameter	Indicator	Method/ Frequency	Responsible Entity
Vegetation clearance limits	No excessive clearing beyond flagged trench alignment.	Weekly visual inspections; geo-tagged photo documentation.	Contractor; verified by WSC
Canal-side buffer protection	No materials or vehicles placed within 3–5 ft of mangrove or waterway edge or property entrances along the	Spot checks during construction; log any buffer encroachment.	Contractor Site Supervisor; WSC

	access road leading up to the community.		
Fauna encounters	No evidence of trapped or handled wildlife; fauna vacate site freely.	Continuous observation; log if nests, burrows, or unusual species found.	Contractor
Revegetation progress	Natural regrowth observed or erosion-controlled surfaces maintained.	Visual checks 2–4 months post-works.	Contractor; verified by WSC
Verge and yard integrity	Yards, driveways, and vegetated setbacks restored to pre-construction condition.	Final walkover with homeowner (where relevant); photographic comparison.	End of construction

9.8 AQUATIC HABITAT MANAGEMENT

Objective: To prevent sedimentation, water quality degradation, and physical disturbance to canal-side aquatic habitats, including healthy patches of mangroves, resulting from trenching, spoil stockpiling, altered overland drainage, and equipment movement near waterfront areas.

Summary: Port Royal lies adjacent to a residential canal that supports patches of mangroves, which provide important shoreline stabilization and ecological functions. While the trench alignment avoids direct entry into canal areas, driveway connections, canal paths, and stormwater runoff from unpaved roads pose a risk of indirect sedimentation and debris wash-off into the canal system, especially during rainfall events.

No trenching or excavation is planned within mangrove patches or directly at the water's edge, but site-level erosion controls, buffer zone protection, and equipment restrictions are required to prevent unintended encroachment or runoff-related degradation of water quality. These measures are consistent with the Environmental Planning and Protection Act (2019), Forestry Act (2010), and IDB's ESPS 6 on Biodiversity Conservation.

9.8.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Canal buffer protection	Maintain a minimum 20 ft buffer from mangroves and water's edge; no stockpiling or staging in buffer zone.	Remove material or machinery immediately; re-flag buffer zone and retrain crew.	Continuous during works	Contractor Site Manager; verified by WSC

Mangrove root zone avoidance	Prohibit vehicle or worker movement within root zones of canal-side mangroves.	Restrict access; record incident; report to DEPP if damage occurs.	Ongoing	Contractor
Sediment control near drainage paths	Install silt barriers, sandbags, or berms near known runoff channels leading to the canal.	Replace damaged controls; reinforce with additional sediment traps.	Pre-rainfall and weekly checks	Contractor; verified by WSC
Material storage restrictions	Store aggregates and spoil piles at least 20 ft from any surface drainage or canal pathway.	Relocate material; apply tarpaulin cover and diversion berms.	Daily during construction	Contractor
Response to water quality risk	Cease work and implement spill containment or erosion repairs if sediment or debris enters canal.	Notify WSC and DEPP; document and implement cleanup protocol.	Immediate response required	Contractor; reviewed by WSC
Worker briefings on aquatic buffers	Conduct staff briefings to talk about canal protection and prohibited activities near mangroves.	Reinforce protocols; document attendance.	Weekly or before work near buffer zones	Contractor

9.8.1.2 Monitoring, Indicators and Responsibilities

Monitoring Parameter	Indicator	Method/ Frequency	Responsible Entity
Buffer zone compliance	No disturbance or entry within 20 ft of mangrove or water's edge.	Daily inspections; photos logged if work occurs near canal.	Contractor; verified by WSC
Sediment containment near canal paths	No visible sediment runoff into canal areas or driveways leading to canal.	After rainfall and during trenching near slope edges.	Contractor; WSC spot checks
Mangrove root zone protection	No trampling, cutting, or equipment in	Weekly inspections; incident log if damage observed.	Contractor

	mangrove root zones.		
Material placement compliance	All materials >20 ft from waterfront areas.	Field checks during site visits; marked storage zones.	Contractor Site Manager
Worker awareness	Toolbox talks held weekly; attendance logs maintained.	Review records weekly; verify pre-work briefings.	Contractor; monitored by WSC

9.9 WASTE MANAGEMENT PLAN

Objective: To ensure the safe and environmentally responsible handling, segregation, storage, and disposal of all waste types generated during the construction of water mains infrastructure. The objective is to prevent pollution of land, water, or air and minimize risks to human health, wildlife, and surrounding communities. This program addresses both non-hazardous and hazardous waste streams.

Summary: This section outlines the minimum waste management standards required during construction activities under the water mains infrastructure program in Bimini. It provides clear guidance on the segregation, storage, and disposal of both hazardous and non-hazardous waste. All contractors are required to prepare site-specific Waste Management Plans (WMPs) as part of their ESMPc, aligned with the baseline requirements in this ESMP. The Waste Management component emphasizes pollution prevention, proper waste tracking, spill response, and worker training. WSC will be responsible for oversight, including monitoring contractor compliance through regular inspections and documentation review.

Types of Waste Expected:
Construction activities will generate a variety of waste types, including:

- **Non-hazardous waste:** excavated soils, vegetation debris, plastic pipe packaging, and general domestic waste;
- **Hazardous or regulated waste:** used oils and filters, spill-contaminated soils, and PPE contaminated with fuel or lubricants.

Contractors must plan for the safe handling, segregation, containment, and disposal of both hazardous and non-hazardous materials, using licensed haulers and designated disposal sites approved by the Department of Environmental Planning and Protection (DEPP).

Minimum Requirements for Contractor WMPs:
Contractor-developed Waste Management Plans (WMPs), as part of their ESMPc, must:

- Clearly describe waste types expected at their site;
- Identify waste collection points, labeled containers, and impermeable storage areas;
- Outline collection frequency, disposal methods, and final disposal locations;
- Include spill prevention protocols and response procedures for accidental release;
- Include training and supervision plans to ensure proper waste segregation and handling;
- Provide reporting templates for waste volumes, incidents, and disposal logs.

WSC will review and approve all Contractor WMPs prior to mobilization. Non-compliance will result in corrective actions, withheld payments, or suspension of works.

9.9.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Waste identification and categorization	Classify all waste generated by type and characteristics (e.g., solid, liquid, hazardous) using a site-specific system	Update WMP; retrain team; update signage	Weekly	Contractor; verified by WSC
Waste Documentation	A comprehensive record of the waste generated at each construction site must be diligently maintained, documenting the type, volume, and detailed characterization of the waste produced.	Update WMP; launch investigation on reason for non compliance retrain team;	Daily	Contractor; verified by WSC
Waste segregation and storage	Set up labeled containers for hazardous, recyclable, organic, and general waste; store on impermeable surfaces	Reorganize storage area; retrain crew; notify WSC	Daily checks	Contractor
Personnel training	Train workers to recognize, handle, and segregate different waste streams	Repeat training; maintain attendance logs	Pre-mobilization and quarterly	Contractor
Effluent and liquid waste	Collect any effluent from tools, machinery, or material washing in designated tanks; remove to approved facility	Suspend works if leaking observed; install containment systems	Continuous during works	Contractor
Disposal of hazardous waste	Store hazardous waste in secure containers; remove via licensed waste transporters	Immediate removal; escalate to WSC and DEPP if delays occur	Weekly or as needed	Contractor; verified by WSC
Domestic and C&D waste	Ensure regular pickup and transport to authorized disposal facilities	Remove accumulated waste within 48	Daily to weekly	Contractor

		hours; report to WSC		
Special/hydrocarbon waste	Use spill kits and other tools as directed by DEPP; isolate contaminated soils; record incidents and disposal method	Initiate cleanup and notify WSC within 12 hours	Immediately upon incident	Contractor; WSC oversight
Equipment decontamination	Restrict washing of machinery to designated impermeable areas with drainage controls	Cease activities; relocate washing stations	Prior to works	Contractor
Final site cleanup	Remove all containers, leftover material, and debris at demobilization; restore site	Delay project sign-off until verified by WSC	End of works at each site	Contractor; certified by WSC
Waste Disposal	No form of waste generated during the construction phase, whether it is of household or other type of waste, solid or liquid, may be incinerated, buried, or discharged into water bodies or the soil. Strict adherence to these prohibitions is mandatory.	Update WMP; launch investigation on reason for non compliance retrain team;	Daily	Contractor; verified by WSC

9.9.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
Waste segregation and container setup	Clearly labeled containers for general, recyclable, and hazardous waste	Daily visual inspection	Contractor; reviewed by WSC
Waste collection frequency	Regular removal of on-site waste to avoid buildup or overflow	Weekly checklists; daily log for active work fronts	Contractor
Hazardous waste disposal	Presence of secure storage and licensed disposal (if applicable)	Waste manifest (if generated); visual check weekly	Contractor; verified by WSC
Worker training on waste handling	Number of workers trained; records of refresher sessions	Training logbook updated quarterly	Contractor HSE Officer

Incident and spill response	Number of spill incidents and actions taken	Incident log; immediate follow-up within 24 hrs	Contractor; monitored by WSC
Site condition post-demobilization	Evidence of final cleanup; absence of residual waste	Photographic evidence and WSC inspection before sign-off	Contractor; approved by WSC

9.10 EFFLUENT MANAGEMENT

Objective: To ensure that effluent generation and disposal during construction are properly managed, avoiding contamination of soils, groundwater, or surrounding areas.

Summary: This section is not applicable to the Port Royal site, as no sanitation or equipment washing facilities will be established within the work zone. Site personnel will access designated restroom facilities located at the laydown yard. No effluent will be generated, stored, or discharged on-site. The project area's flat terrain and lack of drainage infrastructure reinforce the importance of avoiding localized wastewater accumulation.

This plan therefore applies only as a procedural safeguard to confirm that workers are informed of proper sanitation arrangements and that no greywater or blackwater discharge occurs at the construction corridor.

9.10.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Worker sanitation access	Workers will use existing restroom facilities at the laydown yard.	Remind workers of designated sanitation site; implement enforcement through daily briefings.	Continuous during construction	Contractor; verified by WSC
On-site effluent control	No portable toilets, washing, or effluent storage will be permitted at the worksite.	Stop noncompliant activity; report to WSC.	Ongoing	Contractor Site Supervisor
Equipment washing	All machinery washing will be prohibited on-site; maintenance must occur at approved off-site facilities.	Suspend activity; relocate equipment.	Ongoing	Contractor; monitored by WSC
Site inspections	Confirm no wastewater, greywater, or effluent release in active or staging areas.	Issue corrective order; re-inspect.	Weekly	WSC Field Supervisor
Chemical Toilet Placement and Installation	Install toilets on level, stable ground away from drainage lines, watercourses, stormwater inlets, and high-traffic areas.	Relocate units if placed too close to drainage or unstable areas. Re-secure or stabilize if units become unstable.	At installation; monitor weekly	Contractor; monitored by WSC

	Ensure toilets are secured to prevent tipping.			
Servicing and Waste Removal	Contract licensed waste service provider for regular pumping and cleaning. Maintain servicing logs.	Increase servicing frequency if overflows or odor issues occur. Investigate cause of inadequate servicing.	Weekly	Contractor; monitored by WSC

9.10.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
Sanitation compliance	Workers using designated restroom facilities; no unauthorized on-site use	Weekly inspections; worker briefings	Contractor; verified by WSC
Effluent absence	No pooling, runoff, or discharge observed in active or staging areas	Visual inspections after rainfall	Contractor; monitored by WSC
Equipment washing compliance	No evidence of on-site machinery washing or fluid disposal	Weekly inspections	Contractor; verified by WSC

9.11 CHEMICAL SUBSTANCES MANAGEMENT

Objective: To prevent pollution, spills and proper storage of machine fuel in compliance with national chemical safety regulations.

Summary: Contractors are required to follow strict protocols for the use and storage of chemicals on-site, particularly petroleum-based products used during equipment fueling and maintenance. Priority will be placed on safe storage, proper storage containment clear labeling, emergency preparedness, and compliance with occupational health and environmental protection standards. Training, safety data sheets, and appropriate signage must be provided and maintained throughout the construction period.

Spill procedure: This procedure outlines the steps to be taken in the event of a diesel or fuel spill to minimize risks to human health, safety, and the environment during construction activities in Port Royal. It applies to all project personnel responsible for handling, storing, or using fuel for vehicles, or construction equipment.

In the event of a spill, the first priority is to stop the source of the leak, provided it is safe to do so. This may involve shutting off valves, pumps, or engines and isolating the damaged hose, tank, or container. Personnel must immediately alert the Site Supervisor or HSE Officer and ensure that no ignition sources, such as smoking or open flames, are present within at least 100 feet of the spill area.

Once safety has been ensured, the spill must be contained to prevent fuel from entering nearby soils. Sand should be placed around the spill to create a barrier. For spills occurring on bare soil, small berms of sand or soil should be formed to limit spreading. All soil should be collected utilizing gloves and placed in sealed, labeled containers for safe disposal at the waste facilities on island. The affected area should then be cleaned and inspected to ensure no residual contamination remains before normal operations resume.

Refueling should take place only in designated, well-ventilated areas equipped with spill kits. Hoses, fittings, and tanks should be inspected regularly for leaks or wear, and any damaged equipment replaced promptly. Sand and waste bags maintained at each fuel storage and refueling location. Routine toolbox talks and EHS briefings will reinforce staff awareness and preparedness for spill response.

9.11.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Refueling protocols	Follow proper procedures for vehicle/machinery fueling (turn off engine, fire extinguisher nearby, no ignition sources, use spill trays)	Stop refueling immediately; retrain staff; report incident	Ongoing during fuel activities	Contractor Site Supervisor
Storage of fuels and chemicals	Store flammables >6m away from structures; use ventilated and labeled containers; place storage on impermeable surfaces	Relocate substances; label appropriately; conduct compliance inspection	Weekly inspections	Contractor; verified by WSC
Emergency response	Maintain emergency spill kits, fire extinguishers, and first responder training on all sites where fuel/chemicals are stored or used	Replenish kits; retrain staff; submit incident reports	Monthly review and post-incident	Contractor
Documentation and labelling	Maintain inventory of all stored chemical substances with labels and Safety Data Sheets (SDS) visible and accessible	Update logs; re-label containers; hold refresher training	Prior to mobilization and monthly	Contractor HSE Officer
Disposal of contaminated materials	Treat contaminated soil as hazardous waste and remove in coordination with DEPP per Environmental Liabilities protocols	Isolate area; conduct lab testing if required; dispose via licensed provider	Within 48–72 hours of detection	Contractor with DEPP coordination
Fuel transfer authorization	All refueling events must be logged and approved in advance by authorized personnel	Investigate any unauthorized activity; apply disciplinary action	As needed per fuel delivery	Contractor
Training and awareness	Provide training on chemical handling, PPE, emergency procedures, and incident reporting	Retrain personnel; document participation logs	Pre-mobilization and semi-annually	Contractor; monitored by WSC

9.11.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
Chemical substance compliance	% of compliance in inspections conducted on chemical substance management	Bi-weekly inspections of storage areas and chemical use logs	WSC
Training documentation	Registration forms for key personnel in chemical substance management	Prior to works and updated quarterly	Contractor HSE Officer
Chemical substance inventory and storage	Registration forms for all chemical substances stored on site	Initial inventory + monthly updates	Contractor

Transportation of Hazardous Materials Subprogram

- The Contractor shall adopt strict protocols for the safe transport and handling of hazardous materials used during construction, such as fuels, lubricants, and chemicals:
- Ensure all hazardous materials are labeled, packaged, and transported in compliance with international best practice and national regulations.
- Maintain updated Safety Data Sheets (SDS) on-site and during transport for immediate reference.
- Train personnel in spill prevention, containment, and cleanup procedures.
- Designate specific routes for the movement of hazardous materials to minimize risks to the community.
- Develop a spill response plan and ensure spill kits are available in all vehicles transporting hazardous materials.

9.12 Occupational and Community Health and Safety

- The contractor shall regularly ensure compliance with relevant standards and regulations, including international best practices.
- All personnel are required to receive training on equipment operation, machinery use, and vehicle operation in accordance with prevailing regulations within protected areas.
- Clear and permanent identification of all available elements must be conducted, alongside the use of signage and instructional materials for educational purposes.
- The contractor must supply Personal Protective Equipment (PPE) and provide comprehensive induction training to workers, covering PPE types, proper usage, characteristics, and limitations.

Occupational Health and Safety Subprogram

A comprehensive assessment of risk factors associated with each job role, including an enumeration of the workforce exposed to these risks, must be conducted. The following measures are recommended to enhance workplace safety:

- The Contractor is responsible for conducting daily 5-Minute Safety Talks before commencing work. Topics should be tailored to the specific risks associated with ongoing activities.

- The Contractor is responsible for developing and implementing Safe Work Procedures for the safe execution of activities. Emphasize adherence to established safety protocols.
- The Contractor should regularly inspect and ensure the proper functioning of equipment, machinery, and essential safety apparatus such as fire extinguishers.
- The Contractor is responsible for applying Safety Data Sheets for hazardous products, ensuring that relevant information is readily accessible to workers.
- The Contractor must provide necessary Personal Protective Equipment (PPE) to all workers on the construction site in accordance with the specific requirements of their tasks.
- The contractor shall be responsible for providing adequate portable sanitation and handwashing facilities at all active work sites to ensure proper hygiene and safeguard worker health in accordance with occupational health and safety standards.
- Workers must demarcate work areas using appropriate signalling to promote awareness and help prevent accidents.
- The Contractor and WSC must conduct proper Waste Management by exercising control over the collection, treatment, and disposal of residues and waste, while adhering to basic sanitation standards.
- The Contractor is responsible for verifying that personnel operating equipment possess the necessary licenses and certifications.
- The Contractor is responsible for training in Environmental, Health, Hygiene, and Occupational Safety.
- The Contractor is responsible for understanding the Grievance Redress Mechanism that WSC is responsible for deploying and have cards/flyers which will specify how complaints should be submitted.
- The Contractor must implement the emergency preparedness and response plan outlined in this ESMP. Maintain first aid kits and fire extinguishers at all work sites.

The WSC site supervisor and contractors must implement an emergency preparedness and response plan and WSC's hurricane preparedness plan.. Maintain first aid kits and firefighting equipment such as extinguishers at all work sites. Machinery maintenance has the potential to introduce hazards like electrical hazards (maintenance of electrical components, such as pumps, generators, or control panels, may expose workers to live circuits), and fuel hazards (spill and leaks can lead to environmental contamination, and fire/explosion risks if ignited). It is therefore classified as high-risk within the occupational context of Component 3, and require a high level of commitment to safety protocols, continuous training, and strict adherence to established guidelines to mitigate potential hazards and ensure the well-being of personnel involved.

9.12.1.1 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
PPE usage and compliance	100 % of workers properly equipped with PPE	Weekly spot checks, photo documentation	WSC Site Supervisors/Contractor
Safety talks and training	Number of daily safety talks conducted; training attendance logs	Daily toolbox talks; training logs	WSC Site Supervisors/Contractor

Emergency preparedness	Presence of functional first aid kits and emergency equipment Presence of climate and weather protocols	Monthly checks	WSC Site Supervisors/Contractor
Accidents and incidents	Number of Work accident and incident registration forms received.	Monthly	WSC Site Supervisors/Contractor
Fire Prevention Readiness	Availability and functionality of extinguishers at every active staging zone, #1 drill per month	Equipment checklists; Monthly audits, Monthly drills	Contractor HSE Officer;

Community Health and Safety Subprogram

This subprogram is designed to address potential risks and impacts on the health and safety of communities affected by the project. The key aspects to consider are:

- All workers must implement clear and effective signalling and delineation measures at work sites to enhance safety and minimize potential hazards.
- If hazardous materials are to be used during activities, rigorous management and safety protocols should be in place to prevent any harm to the health and safety of the communities.
- The Contractor is responsible for the development and implementation of a comprehensive emergency preparedness and response plan, ensuring swift and effective actions in the event of unforeseen circumstances.

The Contractor is expected to integrate these measures into the project's execution, reflecting a commitment to responsible and conscientious project management.

Labor Management Procedure (LMP) Subprogram

The primary objective of the LMP is to establish and maintain employment relationships grounded in the principles of equal opportunities and equitable treatment. The employment of child or forced labor is strictly prohibited. The WSC, contractor, along with its subcontractors, are expressly prohibited from engaging individuals below the minimum age of employment as prescribed by relevant legal statutes, with a minimum threshold of no less than 15 years of age.

The LMP will include the creation of a grievance redress mechanism. This mechanism is designed to provide a channel through which workers, and where applicable, their affiliated organizations, can voice concerns related to the workplace. Additionally, it serves as a platform for the lodging of complaints pertaining to instances of sexual and gender-based violence. The contractor is tasked with ensuring the effectiveness and accessibility of this grievance redress mechanism to facilitate a transparent and responsive resolution process.

The WSC and contractors shall develop and implement the code of conduct and provide training for its knowledge and understanding. See Appendix A for the proposed content of the code of conduct. This Code is aimed at ensuring respectful and harmonious ties in the workplace in which the Program and its

projects are developed in such a way as to ensure a work environment free of discrimination and/or violence based on gender, gender identity, sexual orientation, cultural identity, religion, ethnic or national origin, trade union membership, disability or any other discrimination typified in current legislation.

9.12.1.2 Monitoring and Compliance

Indicators	Description	Responsibility
Number of workers with Medical and Labor Insurance	Total number of workers in the project	WSC Social Specialist/Contractor
Grievances received	Monthly report on number of grievances received and attended	WSC Social Specialist
Code of Conduct signed	Code of conduct signed by all workers	WSC Site Supervisor/Project Manager/Social Specialist/Contractor

Protection of Community Critical Infrastructure Subprogram

For all works under the Program, the following measures will be implemented to protect sensitive receptors in the area of works (such as hospitals, schools or residents):

- **Identification and Mapping**: Clearly identify and map all sensitive receptors in the project area, including hospitals, schools, and residences.
- **Communication and Notification:** Inform affected communities and institutions about the project timeline, potential impacts, and planned mitigation measures. Provide regular updates through community meetings, flyers, and digital platforms.
- **Noise and Vibration Control:** When applicable, implement noise barriers and schedule noisy activities during less sensitive times (e.g., avoiding school hours and hospital visiting hours). Use low-vibration equipment and techniques to minimize disturbances.

Protection Measures for Historical Sites Subprogram

For all works under the Program, the following measures will be implemented to protect historical sites:

- **Identification and Documentation:** Conduct thorough surveys to document all historical sites within the project area.
- **Physical Protection Measures:** Install protective barriers around historical sites to prevent accidental damage during construction. Restrict construction activities within a defined buffer zone around each site.
- **Monitoring and Reporting:** Regularly monitor the condition of historical sites throughout the construction process. Document any changes or damages and report them to relevant authorities.
- **Stakeholder Engagement:** Involve local heritage organizations and community groups in the planning and monitoring process. Provide opportunities for stakeholders to give input on protection measures.
- **Training and Awareness:** Train construction personnel on the importance of preserving historical sites and the specific measures in place. Raise awareness among workers about the cultural significance of these sites.

To minimize risks related to the spread of communicable diseases, particularly influenza and other respiratory illnesses, the Contractor shall enforce preventive health and hygiene measures for all workers:

- Ensure all workers' hygiene practices are compliant with national regulations.
- Provide handwashing stations with soap and clean water at worksites and ensure their regular maintenance.
- Encourage and enforce the use of facemasks in situations where close contact is unavoidable.
- Conduct awareness sessions for workers on respiratory hygiene, handwashing practices, and reporting symptoms early.
- Implement policies to ensure that sick workers are not required to report to work, thereby reducing the risk of workplace transmission.
- Regularly clean and disinfect high-contact surfaces and shared tools or equipment.

9.13 TRAFFIC AND PEDESTRIAN MANAGEMENT

An assessment of the vehicular and pedestrian traffic needs to be first completed. Then the Contractors will prepare the Traffic and Pedestrian Management Program. Consultation with key stakeholders will be conducted in accordance with ESPS#10. The Contractors will ensure implementation of this Program.

The Traffic and Pedestrian Management Program shall:

- Notify communities about upcoming works
- Identify the sensitive location (religious facility, educational facility, heath facility, commercial areas) along the site access roads.
- Identify the road condition, traffic congestion areas and peak traffic load period.
- Identify the traffic hotspots like road junctions, market areas, school areas.
- Provision of traffic marshal (signal person) in identified traffic sensitive locations.
- Identify any major road repairing requirement along the site access road.
- Prepare the Traffic and Pedestrian Management Program based on local sensitivity (religious gathering, school timing, market timing and peak traffic timings);
- Implement procedure to follow road safety requirements by the drivers & helpers.
- Implement procedure to check fit certificates of the vehicles to minimize the emission of air and noise.
- Monitor road conditions to identify any damage of road or structures and remedy immediately to reduce the potential for significant impacts to the local communities.

Contractors will provide instructions to drivers to maintain the speed as per Traffic and Pedestrian Management Program.

Contractors will provide induction/training to all drivers for safe driving. Contractors will require drivers to follow all legal and project related safety requirements applicable in respect of road safety.

9.13.1.1 Monitoring and Compliance

Indicators	**Monitoring Measure**	**Responsible Entity**
Number of work fronts marked with signs in accordance with the approved Traffic and Pedestrian Management Program /Number of work fronts that require signage in accordance with Traffic and Pedestrian Management Program.	Weekly inspections/Monthly inspections	Contractor; reviewed by WSC

Number of road accidents.	Road safety accident records	Contractor; reviewed by WSC

9.14 PEST AND VECTOR CONTROL

Objective: To prevent the spread of disease, minimize environmental health risks, and ensure clean and sanitary construction sites by managing pests and vectors such as rodents, insects, and snakes. This program outlines responsibilities and required actions to reduce infestations, particularly those caused by poor waste management and stagnant water.

Summary: Port Royal's canal-side location and presence of manicured vegetation increase the risk of pest issues such as mosquitoes, rodents, and insects, particularly after rainfall or improper waste handling. Construction activities must actively manage stagnant water, food waste, and green debris to reduce vector attraction. Contractors are required to implement basic pest prevention measures and coordinate with certified pest control providers if infestations occur. These actions are essential to protect worker and community health during trenching and installation works.

9.14.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Waste management	Prompt removal of waste containers and green debris; monitor for rodent activity and signs of infestation	Increase collection frequency; apply additional control measures	Daily waste check	Contractor
Municipal coordination	Collaborate with municipal or local sanitation teams to prevent vector migration from adjacent neighbourhoods	Document communication; implement joint actions if needed	Weekly during construction	Contractor; reviewed by WSC
Food handling protocols	Ensure food waste is securely disposed of; avoid open food or ash that may attract rodents, snakes, or pests	Enforce crew training and penalties for non-compliance; secure food storage areas	Daily inspections	Contractor Site Supervisor

9.14.1.2 Monitoring, Indicators, and Responsibilities

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Waste management	Prompt removal of waste containers and green debris; monitor for rodent	Increase collection frequency; apply additional control measures	Daily waste check	Contractor

	activity and signs of infestation			
Municipal coordination	Collaborate with municipal or local sanitation teams to prevent vector migration from adjacent neighborhoods	Document communication; implement joint actions if needed	Weekly during construction	Contractor; reviewed by WSC
Food handling protocols	Ensure food waste is securely disposed of; avoid open food or ash that may attract rodents, snakes, or pests	Enforce crew training and penalties for non-compliance; secure food storage areas	Daily inspections	Contractor Site Supervisor

9.15 SOCIO-ENVIRONMENTAL TRAINING FOR CONSTRUCTION PERSONNEL

Objective: To ensure that all construction personnel are equipped with the knowledge, awareness, and behavioral standards required to protect the environment, maintain occupational safety, and uphold respect for human rights, gender equality, and community safety during project implementation.

Summary: To conduct the training process, informative sessions will be conducted prior to the commencement of work and as needed throughout project duration. Trainings must cover environmental management, health and safety protocols, familiarization and adherence with the organization's Code of Conduct, the Project's General GRM and Worker's GRM and addressing gender-related issues (Sexual Exploitation and Abuse (SEA) and Prevention of Gender-Based Violence (GBV)). These activities will be monitored, logged and reported in monthly reports to the WSC for compliance verification.

9.15.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Pre-mobilization Training	Deliver environmental, health, and safety training to all site workers before mobilization.	Delay work start until training is completed.	Pre-construction	Contractor; verified by WSC
Quarterly Refreshers	Conduct training sessions on safety, environmental compliance, SEA/GBV, and emergency procedures.	Schedule make-up sessions; reinforce via toolbox talks.	Quarterly	Contractor; verified by WSC
Gender-Based Violence (GBV) Training	Provide GBV prevention sessions that include protocols for reporting, support, and zero-tolerance enforcement.	Retrain staff; address specific incidents with targeted training.	Yearly and/or post-incident	WSC
Code of Conduct Awareness	All workers must receive and sign the Code of Conduct addressing SEA,	Retrain workers and enforce disciplinary actions if breached.	Pre-mobilization and onboarding	WSC Social Specialist

	non-discrimination, safety, and behavior.			
Records and Evaluation	Maintain detailed training logs, attendance sheets, and evaluation reports after each session.	Submit missing documentation; revalidate participation.	Ongoing	Contractor

9.15.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
Training Participation	Percentage of personnel trained in accordance with the Training Program	Review of attendance logs and monthly reports	WSC Project Manager/Social Specialist
Training Coverage	Percentage of training sessions given out of total required sessions	Comparison of sessions conducted vs. sessions planned	WSC Project Manager/Social Specialist
SEA/GBV Protocol Implementation	Compliance with SEA/GBV protocols, including reporting, support, and grievance mechanisms	Review of documented SEA protocols, grievance logs, and resolution timelines	WSC Project Manager/Social Specialist/Contractor
Code of Conduct Acknowledgement	Percentage of workers who signed the Code of Conduct	Review of signed acknowledgment forms and personnel files	WSC Project Manager/Social Specialist

9.16 Disaster Risk Management and Emergency Response

Objective: To ensure that construction activities under Component 3 are resilient to natural hazards and emergencies, safeguard workers and the surrounding communities, and do not obstruct local emergency operations. This program supports hazard monitoring, preparedness, and emergency coordination in line with national disaster frameworks and local disaster committees.

Summary: Bimini's flat terrain, low elevation, unpaved roads, and lack of formal drainage infrastructure make it highly vulnerable to stormwater pooling, erosion, and access disruptions during heavy rainfall or tropical storm events. Climate-related risks such as saltwater intrusion, extreme rainfall, and heat waves also threaten workforce safety and project timelines. This Disaster Risk Management and Emergency Response Plan provides site-level operational safeguards, early warning triggers, and escalation procedures to mitigate and respond to these risks. It applies to all works in the direct and indirect area of influence of the project and emphasizes pre-storm preparedness, flood-safe staging, fire and heat response, and emergency coordination with local agencies (e.g., DEPP, DRA, Ministry of Works).

9.16.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Hazard Monitoring	Monitor Met Office, DRA, and global alert systems; activate storm protocol for any severe weather advisories.	Suspend works immediately; secure equipment and excavations; notify staff.	Daily (especially May–Nov)	Contractor Site Lead; WSC Field Supervisor
Flood Preparedness	Identify or establish elevated staging zones in advance; do not store materials in low-lying or compacted areas prone to pooling.	Relocate materials within 6 hrs of forecast; restrict access to flood-affected zones.	Pre-storm & post-rainfall	Contractor; WSC Operations Team
Fire and Heat Risk Response	Install fire extinguishers in all staging areas; post heat advisory signage; provide water stations and shaded zones.	Replace missing equipment; restrict strenuous activity during heat advisories.	Weekly checks	Contractor HSE Officer; WSC
Emergency Preparedness	Maintain updated emergency contact lists and evacuation routes; conduct safety briefings quarterly.	Retrain staff; reschedule drills; update contact logs.	Quarterly	Contractor; Verified by WSC
Asset & Equipment Protection	Secure or tie-down loose materials; cover trenches pre-storm; anchor light equipment; store fuel above-ground.	Implement emergency securing protocols; document storm losses.	Continuous	Contractor Logistics Lead; WSC
Access and Mobility Safeguards	Maintain open road shoulders and at least one accessible corridor for emergency vehicles and utilities.	Reroute traffic; implement temporary road plates or bypass detours.	Daily	Contractor Site Supervisor; WSC Field Staff
Incident Response Protocol	Report environmental, health, or safety incidents within 24 hours; maintain an incident and corrective action log.	Investigate cause; apply remedial actions; submit incident report to WSC and IDB if required.	Within 24 hrs of incident	Contractor (NP); WSC (Bimini, Abaco)

9.16.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
Emergency Readiness	Availability of updated contact list, evacuation maps, and quarterly safety briefings	Log review; Quarterly safety audit	Contractor; Verified by WSC
Hazard Suspension Compliance	% of severe weather alerts where works were suspended and sites secured	Incident logs; Site inspections post-storm	Contractor Site Lead; WSC
Flood Prevention Measures	Pre-storm relocation of materials and proper site drainage setup	Site walkovers pre- and post-rainfall	Contractor; WSC Site Supervisor
Fire Prevention Readiness	Availability and functionality of extinguishers at every active staging zone	Equipment checklists; Monthly audits	Contractor HSE Officer; WSC
Heat Risk Safeguards	Presence of shade, hydration stations, and heat signage in open work areas	Weekly observation report	Contractor HSE; WSC
Access Route Availability	Unobstructed travel lane or alternative access maintained along Port Royal residential roads to ensure continuous movement for residents, service vehicles, and emergency access during construction.	Daily field checks and construction layout logs	Contractor; WSC Field Operations
Incident Reporting & Logging	All safety/environmental incidents logged, investigated, and closed within 48 hours	Review of logbook; Corrective action report	Contractor; Verified by WSC and IDB

Life and Fire Safety Subprogram

- The Contractor shall assess the risk of fire hazard within the project activities
- A plan should be then developed and enforced on protocols to prevent and respond to fire hazards, particularly those associated with the storage and handling of flammable materials such as oily rags, solvents, or fuels. The following measures shall be implemented:
- Collect and dispose of oily rags and similar waste in sealed, fire-resistant containers at the end of each work shift.
- Prohibit the accumulation of flammable waste in work areas and storage zones.
- Ensure fire extinguishers and firefighting equipment are strategically placed, clearly marked, and inspected regularly.
- Provide training to workers on fire prevention, emergency response, and safe handling of flammable materials.
- Incorporate fire hazard awareness into daily toolbox talks and emergency drills.

9.17 COMMUNITY INFORMATION AND PARTICIPATION

Objective: To ensure timely, transparent, and inclusive communication between the WSC, project contractors, and all affected communities.

Socio-environmental effects to be prevented or corrected: Misinformation of the public regarding the progress and tasks of the project.

The identified stakeholders for Component 3 include but are not limited to:

- Residential property owners and tenants in project areas
- Businesses, especially water-intensive operations (hospitality, laundromats, restaurants)
- Community institutions (churches, schools, clinics)
- Local government and district councils
- Tourism operators and industry associations
- Civil society organizations and non-governmental organizations (NGOs)
- Vulnerable or marginalized groups, including elderly residents, persons with disabilities, and low-income households

9.17.1.1 Management measures

WSC's Responsibilities:

Project Reporting: Collect and maintain timely and updated records on the project's implementation and progress in New Providence and Family Islands.
Community Information and Participation: Implement the Community Information and Participation Program consistently throughout the project's lifecycle. Give special attention to ensuring clear, transparent, and timely communication with all individuals benefiting from the program.
Communication Channels: Provide the public with a transparent and accessible means of communication. Establish and implement a Grievance Redress Mechanism. Make available a 24-hour contact telephone number, an email address for the community to submit their claims, complaints, and suggestions. Ensure that all submitted comments are promptly analyzed and receive a swift response.
Access to Information: Facilitate equal access to information, with a commitment to promoting gender equity among all interested social sectors. These responsibilities underscore the contractor's commitment to effective communication, community engagement, and transparency throughout the project.
Community Engagement: Establish a mode of engagement with the community affected by the project's development. Inform the community about the project's schedule and progress to foster transparency.

Key Information to be shared with stakeholders through the Programs Communication Management Consultancy:

- Project purpose, benefits and scope of works
- Locations and schedules for installation activities
- Potential short-term social and environmental impacts (ex. Temporary water disruptions, property access, noise)
- Social and environmental mitigation measures
- Waste management
- Procedures for lodging complaints or feedback via the **Grievance Redress Mechanism (GRM)** and general modes of communication should also be covered

Contractor's Responsibilities:

Project Reporting: Maintain timely and updated records on the project's implementation and progress.
Communication Channels: Provide information to users, if needed, regarding contact information (telephone number, an email address) for submitting their claims, complaints, and suggestions.

9.17.1.2 Monitoring and Compliance

Indicators	Description	Responsibility
Community meetings/town halls	List of attendees from meetings/town halls, records of communication channels used for project information Before work starts in each community; mid-project updates	WSC
Flyers and door-to-door notices	Provide advance notice of installation or disruptions At least 48 hours before activity	WSC
Grievance Redress Mechanism	Percentage of complaints managed properly during the month according to the defined mechanism over the total number of complaints generated.	WSC
Social media posts (WSC accounts)	Real-time updates, photos, schedule changes, Central reference point for all information Continuous, updated weekly	WSC

9.18 COORDINATION WITH SERVICE PROVIDERS

9.18.1.1 Management Measures

The Contractor will establish coordination with utility service providers to address the interferences that the execution of the Work will cause with existing infrastructure. To comply with this, and with the agreement of the Site Inspection, they will plan and propose the most appropriate solution and reach consensus with the respective company responsible for executing it, minimizing inconvenience to users. Additionally, actions will be scheduled so that the Contractor promptly resolves any unforeseen interference that may jeopardize service provision.

From the start of the project, the Contractor will manage the appropriate permits, coordinating with the technical teams of the service providers. The Contractor shall inventory existing public utility networks in accordance with the contract specifications and plans to identify and locate lines that may be affected.

Each utility company shall appoint a coordinator to attend project oversight committees, ensuring cordial management of all expansion, repair, or replacement work within the project intervention area. If removal or relocation of structures is required, the Contractor shall first locate public utility lines within the construction area, as indicated by the project design plans and information provided by the utility companies. Simultaneously, approval of the plans by the respective utility companies shall be obtained.

9.18.1.2 Monitoring and Compliance

Indicators	Monitoring Measure	Responsible Entity
Number of network service interruptions caused by construction activities with interferences / Number of network service interruptions caused by construction activities with interferences coordinated with network service providers.	Daily inspections and logs	WSC Site Supervisor/Contractor

9.19 ENVIRONMENTAL LIABILITIES PROGRAM

Objective: To ensure that any pre-existing environmental or social liabilities within the project's direct work zone are identified, documented, and appropriately addressed prior to excavation, trenching, or material staging. This includes the detection and management of contaminated soils, hydrocarbons, legacy construction waste, and informal waste deposits that may pose risks to human health, groundwater, or surrounding vegetation. The program also considers environmental vulnerabilities such as flood-prone depressions and erosion-prone soils that could worsen if unaddressed.

Summary: Preliminary site observations in the Port Royal community, including the access road leading up to the community, identified compacted sandy soils, localized water pooling in depressions, and minor informal waste accumulation near roadside verges and private driveways. While no known contamination was identified, these conditions may pose environmental risks during trenching. Prior to mobilization, contractors must conduct a site walkthrough to identify and document any legacy waste, hydrocarbon stains, or drainage issues. All findings must be logged and addressed through safe removal, stabilization, or reporting to WSC and DEPP if necessary. Site clearance must be confirmed before excavation begins to ensure a clean, hazard-free work zone.

9.19.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Site Condition Screening	Conduct a visual inspection with photographic documentation to confirm absence of contamination, legacy waste, or informal encroachments.	Escalate to WSC Environmental Officer if unanticipated concerns are identified.	Prior to mobilization	Contractor; verified by WSC
Risk Flagging and Documentation	Use a standardized checklist to flag and document any unanticipated issues (e.g., buried debris, stained soils, or dumped materials).	Pause site activity in affected zone; initiate internal review process.	Ongoing during mobilization	Contractor
Contingency Action (if needed)	If risks are flagged, engage third-party specialist for sampling, classification, and safe removal/disposal per Waste and OHS protocols.	Implement site-specific Remediation Action Plan (RAP) if required.	Before excavation in flagged areas	Contractor; WSC Environmental Unit
Site Clearance Confirmation	Maintain site logbook confirming cleared status of each zone prior to excavation. Use photo evidence and signed forms.	Site cannot proceed to trenching until zone is verified "clear".	Pre-excavation per zone	Contractor; approved by WSC

9.19.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
Environmental Liability Status	% of work areas verified as free of legacy risks or liabilities	Pre-mobilization screening and visual inspection	Contractor; verified by WSC
Risk Documentation and Reporting	Number of unexpected issues identified and documented	Incident log, photo record, and weekly report	Contractor
Response to Unexpected Liabilities	Response time to investigate and manage flagged environmental risks	Within 48 hours of identification	Contractor; escalated to WSC
Site Clearance Validation	Signed logbooks and pre-excavation photo evidence submitted per site	Weekly validation prior to trenching activities	Contractor; reviewed by WSC

9.20 CHANCE FIND PROCEDURE

9.20.1.1 Management measures

This program will be systematically implemented throughout the duration of the project, with the following key provisions:

Continuous Monitoring: A permanent monitoring initiative will be conducted across the entire area directly impacted by the project to identify any archaeological elements.

Immediate Action on Discovery: Should any property of potential archaeological significance be discovered; the construction team is obligated to promptly cease activities that may impact the identified area. Adequate surveillance measures will be implemented to prevent unauthorized access and looting.

Alternative Worksite Consideration: If necessary, the project team will explore alternative locations for project activities to mitigate any potential impact on archaeological finds.

Notification of Competent Authority: The relevant national authority will be promptly notified, and the project will adhere to their instructions for further action in response to the archaeological discoveries.

Salvage Operations: In the event of cultural remains emerging during activities such as ditching, earth removal, or excavations, salvage operations will be promptly initiated. Recognized archaeologists, under supervision, will conduct these operations with the utmost consideration for preserving the contextual integrity of the archaeological remains. Work will resume only upon the archaeologist's determination of an appropriate timeframe and location.

Comprehensive Reporting: Upon completion of the project, a comprehensive final report will be prepared. This report will detail the quantity and nature of the recovered materials and will be submitted to the competent authority.

Consultation with Competent Authority: The competent authority will be consulted regarding the proper procedures for delivering archaeological materials as part of the project's commitment to compliance and transparency.

9.20.1.2 Monitoring and Compliance

Indicators	Monitoring Measure	Responsible Entity
Number of archaeological and cultural resources found in the project and managed according to the defined procedures / Number of archaeological and cultural resources found in the project.	Daily inspections and logs	WSC Site Supervisor/Contractor

9.21 WORKS CLOSURE

Objective: To ensure that all construction sites under Component 3 are systematically decommissioned in a manner that eliminates environmental liabilities, restores ecological and community conditions, and leaves no residual impact upon completion of works.

Summary: Closure of construction sites in Bimini must be executed with care to avoid leaving behind physical waste, safety risks, or unresolved environmental and social liabilities. Contractors must follow proper dismantling, waste removal, and site restoration protocols. Sites must be returned to a stable and aesthetically acceptable condition, with all cleared vegetation replaced and no legacy issues left unresolved. Photographic documentation before and after works is mandatory to support closure verification.

9.21.1.1 Management Measures

Action Area	Management Measure	Corrective Action if Deviations Occur	Timeline	Responsible Entity
Site Systematic Removal	All project installations must be removed systematically and completely post-works.	Notify contractor; delay closure sign-off until resolved.	At demobilization	Contractor; verified by WSC
Final Environmental & Social Review	Conduct a final review to identify and remediate unresolved liabilities.	Correct issues identified; submit updated closure plan.	End of works per site	Contractor with WSC oversight
Waste Disposal	Dispose of waste per SESMP guidelines using approved disposal facilities.	Submit disposal manifests; withhold final payment if violations occur.	Continuous during dismantling	Contractor
Vegetation Restoration	Replant with original/native species	Require replanting and	Within 2 weeks of site closure	Contractor; monitored by WSC

	in cleared or disturbed zones.	photo evidence of survival.		Environmental Officer
Site Appearance and Integration	Restore site to a clean, safe, and natural condition. No visible waste or infrastructure remnants.	Delay closure approval until standard met; require cleanup.	Final site inspection	Contractor; validated by WSC Inspector

9.21.1.2 Monitoring, Indicators, and Responsibilities

Monitoring Parameter	Indicator	Method/Frequency	Responsible Entity
Final Site Restoration	Absence of claims or complaints from community, local government, or regulators	Post-closure inspections; stakeholder confirmation	Works Director
Visual Closure Evidence	Photographic records of sites before and after dismantling	Site-by-site review at end of works	Works Inspector

9.22 Operational Environmental and Social Management Plan

This plan outlines the mitigation measures designed to address potential adverse impacts and risks during the operational and maintenance phase of the projects' implementation.

Throughout the operational phase, the WSC will assume responsibility for the operation and maintenance of the infrastructure, following the prescribed guidelines provided herein.

Table 11. Operational SESMP requirement for the Bimini Port Royal Water Mains Project.

ESMP Programs	Access to Piped Water Supply
Waste Management Program	x
Occupational Health and Safety Program	x
Grievance Redress Mechanism	x
Capacity Building Program for WSC Personnel	x
Contingency Plan	x
Socio-Environmental Training Program	x
Road Safety and Traffic Management Program	x

Plan/Program	Impact to Avoid	Minimum Mitigation Measures	Responsible Party	Indicators and Compliance Records	Supervision
Waste Management Program	Contamination due to inadequate management of waste.	Development and implementation of a Waste Management Program	WSC	Environmental Audit of the Site	DEPP
Occupational Health and Safety Program	Occupational risks due to the operation and maintenance of infrastructure	Compliance with current national regulations and international best practices	WSC	-Frequency Index (number of accidents x 200,000/person-hours worked in the period). -Severity Index (number of serious accidents x 200,000/person-hours worked in the period). -Fatal Accident Incidence Rate (Number of fatal accidents x 200,000/Number of exposed workers).	WSC/ DEPP
Grievance Redress Mechanism	Impacts on local community and workers of the work for the non-attention to the claims and complaints.	There must be an efficient tool for receiving, registering, monitoring, and resolving claims.	WSC	Registration of claims and complaints	DEPP
Capacity Building Program for WSC Personnel	Lack of knowledge on new equipment and systems to be in place.	Minimum training: - Introduction to SCADA Systems and AMI - Operation of SCADA, DMAs and AMI - SCADA and AMI Data Management and Reporting	WSC	Percentage of operators trained according to Training Program Training Registration Sheets	WSC

Contingency Plan	Poor management of environmental/occupational contingencies	**Strategic Plan** Define the structure and organization for emergency response, the roles and responsibilities of the people in charge of executing the plan, the necessary resources, and the preventive and operational strategies to be applied in each of the possible scenarios, defined from the evaluation of the risks associated with construction. **Action Plan** Establish the procedures to be followed in case of emergency.	WSC	Number of environmental and safety accidents managed according to the defined procedure / Total number of environmental and health accidents occurring in the project.	WSC/DEPP
Socio-Environmental Training Program	Lack of knowledge regarding the personnel's role in preserving, protecting, and conserving the environment, as well as ensuring occupational safety in the performance	Training on waste management, contingency plans, use of PPE, spill prevention and management, effective sludge handling, fire safety protocols, and environmental regulations and compliance.	WSC	Percentage of personnel trained in accordance with the Training Program.	WSC/DEEP
Road Safety and Traffic Management Program	Accidents and incidents that affect occupational and community health and safety	Identify sensitive locations, implement road safety requirements, implement procedures of marking work fronts	WSC	-Number of road accidents -Number of work fronts with signs/Number of work fronts that require signs	DEPP

9.23 BUDGET FOR IMPLEMENTATION OF THE ESMP

The table below includes the estimated costs, schedules, and responsible entities for the implementations of the ESMP.

Measure	Description	Estimated Cost	Schedule	Responsible
Implementation of Mitigation Measures and Programs of Construction ESMP	Preparation of the ESMP at the construction level and implementation during the construction of the project; socio-environmental monitoring of the works.	1.5% of the total cost of the Project	From the beginning of the works, until their finalization	Contractor

The cost for the implementation of the ESMP mitigation measures and programs is indicative and does not constitute a prescriptive element of contractual obligation. The implementation of the ESMP is monitored exclusively in terms of its performance (results) and not based on the inputs used (resources expended by the contractor).

10 CONCLUSIONS

Throughout the works of these characteristics, there are potential impacts and risks, mainly in the construction phase, such as negative impacts due to the risk of occupational accidents during the works, air pollution due to emissions from vehicles and machinery affected by the work, noise and vibrations, risk of soil and water contamination due to accidental spills, risk of soil erosion and sediment runoff, and risk of contamination due to poor management of the solid waste generated.

These negative impacts of the construction phase are limited in time, occur during the work period, and affect only the direct area of influence of the projects. The application of adequate mitigation measures previously detailed along with the application of good construction practices that guarantee compliance with national regulations, and the IDB Environmental and Social Performance Standards, ensures that these measures objectively will mitigate all the identified impacts and risks.

In the operational phases, the project is expected to yield long-term positive impacts on communities by providing enhanced access to potable water. This will contribute to an improved quality of life for residents and visitors alike. Therefore, the operation is considered feasible, without significant negative socio-environmental risks or impacts that cannot be mitigated.

11 ANNEX 1: LABOUR MANAGEMENT PROCEDURE (LMP)

Introduction

The purpose of this Labor Management Procedure (LMP) is to establish the scope and application of ESPS 2 "Labor and Working Conditions" for the BH-L1061 Program.

The Labor Management Procedure will be managed as part of the Environmental and Social Management Plan (ESMP). The requirements included in the LMP will be systematically integrated into the legal requirements of the Program, the tender documents and the contracts of the contracting companies and suppliers.

The LMP is a dynamic document and should therefore be revised and updated as necessary during the life cycle of the Program.

The LMP presents the guidelines, guidelines and minimum contents for the labor management and working conditions of the works of the Program to be fulfilled by the main contractor, the companies involved and the executing agency. The responsibility for ensuring compliance with this procedure shall be the responsibility of EA.

The LMP is governed by the principles of equality, opportunity and fair treatment ensuring that no employment decisions will be made based on personal characteristics outside the requirements inherent to the job, refraining from discrimination in any aspect of the employment relationship, such as recruitment and hiring, remuneration (wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, dismissal or retirement and disciplinary practices. Measures shall be taken to prevent and address violence, harassment, intimidation, or exploitation, especially regarding women, persons of diverse sexual orientations and gender identities, persons with disabilities, and migrant workers. Under no conditions shall child or forced labour be permitted.

A safe and healthy work environment shall be ensured, considering the risks inherent in the Program and specific hazards for women, persons of diverse sexual orientations and gender identities, elderly persons, persons with disabilities, children (of working age, in accordance with this Performance Standard), and migrant workers. Measures shall also be taken to prevent accidents, injuries and illnesses that may arise from, be associated with, or occur during work, minimizing, to a reasonable extent practicable, the causes of hazard factors.

Scope of the Labor Management Procedure (LMP)

Environmental and Social Performance Standard 2 "Labor and Working Conditions" of the IDB's Environmental and Social Policy Framework pursues the following objectives:

Respect and protect the fundamental principles and rights of workers.

Promote fair treatment, non-discrimination, and equal opportunities for workers.

Establish, maintain, and improve relations between workers and the employer.

Ensure compliance with national legislation on employment and labor.

Protect workers, including those in vulnerable situations, such as women, persons of diverse sexual orientations and gender identities, persons with disabilities, children (of working age, in accordance with this Performance Standard) and migrant workers, workers hired by third parties and workers in the main supply chain.

Promote safe and healthy working conditions and promote workers' health and prevent the use of child labour and forced labour (as defined by the ILO).

This standard applies to:

- **Direct workers**: are persons employed or hired directly by the borrower to work specifically in relation to the Program. The direct worker is employed or hired by the borrower, is paid directly by the borrower, and is subject to the borrower's instructions and day-to-day control.
- **Contract workers**: Persons engaged through third parties to perform work related to core functions of the Program for a considerable period of time where that third party exercises continuous control over the work, working conditions and treatment of the worker in relation to the project.
- **Main supply chain workers**: Workers in the main supply chain, provides goods and materials to the project, where the supplier exercises control over this worker for the work, working conditions and treatment of the worker.

Where public employees are working in connection with the Project on either full-time or part-time basis, they will be subject to the terms and conditions of their existing public sector employment agreement or arrangement, unless their employment or hiring has been effectively legally transferred to the Project.

Requirements relating to gender equality and stakeholder participation (including a grievance mechanism) should also be considered in the implementation of this Performance Standard in accordance with ESPS 9 and 10. In no case and under no circumstances shall child and forced labor be permitted.

Description of the Project's Workforce.

Identification and characterization of workers involved in the project:

Depending on the activities foreseen in the project, it is estimated that the organization of the workforce involved will be as follows:

1. **Direct workers**: In accordance with the organizational structure foreseen for this Program, it is considered that the direct hiring of personnel under the modality of contracting services will be coordinated by WSC and are mostly linked to the hiring of personnel to carry out the supervision and technical inspections (environmental and social) of works.
2. **Project workers**: It is expected that the largest number of staff will be employed under this category. The contracting companies will conduct the construction works foreseen for each project.
3. **Workers in the main supply chain**: Personnel employed by the companies supplying inputs and infrastructure linked to the works foreseen by the Program. The Program must conduct due diligence to ensure that inputs produced under conditions of forced labor are not procured and that the working conditions of suppliers comply with current regulations with their personnel.

Table 45. Summary Table of Type of Workers Linked to the Project

Type of Worker	Characteristics
Direct Workers	Individual Consultants directly hired by the Program
Contract workers	Workers hired by the contracting firms hired by the project. It is expected by the type of works that the largest number of people involved in the Program be incorporated under this modality of contracting.
Primary Supplier Workers	The number of workers to be hired under this modality and the specific characteristics will be information provided by the contractor awarded the work.

Assessment of possible occupational hazards

Depending on the activities to be conducted by the staff in the project, the main risks for each of the most relevant jobs must be identified.

The existing risks involve adopting measures for the prevention of accidents and incidents with the development of safe working methods, with a correct choice and training of personnel to perform such work, in addition to using the appropriate tools and personal protection elements (PPE).

The following table provides a summary of the main activities, with the possible risks identified and those responsible.

Table 46. Example of activities and risks identified in the project

Activity	**Location**	**Risks Identified**	**Responsible**
Planning, design, execution and implementation, evaluation, and monitoring of Projects	Office: WSC	No specific and significant risks are identified. Risks related to occupational health and safety in internal environments (ergonomic risks, accidents, stress, mental load, psychophysical factors)	WSC
Train, inform and raise awareness especially among construction personnel both orally and in writing about the expected environmental and social problems, the implementation and control of environmental and social protection measures and the specific and relevant aspects applicable to the execution of projects in accordance with current	Workshops/Office	No specific and considerable risks are identified if the facilities of the workshops comply with current regulations. Possible risks linked to occupational health and safety in internal environments (accidents, stress, mental load, psychophysical factors).	Contractor (Environmental and Social Manager)

environmental and social regulations and regulations. Conduct gender-sensitive training and code of conduct for all contracted personnel, including the management staff of the contractor company. Have updated the technical file of the personnel with the training conducted and the elements of security and personal protection delivered			
Conducting interventions for improvement of water and sewage systems	[Project Locations]	Specific risks are identified that can be avoided with the corresponding security measures and protocols. **In workshops and place of work**: • Risks of gender-based violence • Occupational and community accident risks **In the recruitment processes**: • Risk of exclusion of vulnerable groups • Exclusion of local labor and discrimination • Influx of labor from outside the place. **In the execution of the planned works:** **Occupational hazards**: • Accidents and falls of different levels • Falling objects • Road accidents (circulation of trucks and machinery) • Temporary hearing loss due to operation of equipment and machinery. **Ergonomic risks**: • Forced posture; Repetitive motion; Cargo handling; Application of forces: Overexertion	Contractor Company

Construction supervision	Supervise the strategic environmental and social management plan, occupational safety and health; monitor environmental, social, health and safety risks, their impacts and actions taken (including in the field, if necessary).	Office / Field activities at the site of implementation of the works	**In Office:** No specific and considerable risks are identified. Possible risks linked to occupational health and safety in internal environments (accidents, stress, mental load, psychophysical factors). **In the field:** Risks linked to accidents in the work area. They can be minimized if PPE is properly used.	WSC / Construction Inspection

Description of prevention and mitigation measures to address possible risks in the workplace

Based on the identification of the main risks by activity group, the priority measures to prevent and minimize the risks identified are detailed below, by way of example:

- Prevention and mitigation measures in the workshops:
- Implement hygiene, safety and health standards and conditions.
- Install workshops of size according to the number of people employed and as required by Laws and Decrees.
- Training and awareness on health and safety, non-discrimination, and prevention of gender-based violence, prevention of child exploitation, forced labor, prevention of discrimination and / or violence against people from indigenous communities or vulnerable groups in compliance with the code of conduct.

Prevention and mitigation measures in staff recruitment processes:

- The contractor will seek to approach its recruitment process with a gender perspective, seeking to make equal opportunities for men and women effective.
- Personnel with criminal records related to sexual crimes, sexual harassment, prostitution, and trafficking in persons will not be hired in order to protect the integrity of the population linked to the work.
- The contractor will try to prioritize the local skilled and unskilled local labor, especially of the beneficiary parties of the works and surrounding localities.
- Non discrimination requires that the contractor/ WSC not make employment-related decisions based on personal characteristics, such as gender, race, ethnic, social and indigenous origin, religion, political opinion, nationality, disability and sexual orientation that are not related to job requirements. They cannot affect equality of opportunity or treatment in employment.

- The contractor shall develop and implement the code of conduct and provide training for its knowledge and understanding. See Appendix A for the proposed content of the code of conduct. This Code is aimed at ensuring respectful and harmonious ties in the workplace in which the Program and its projects are developed in such a way as to ensure a work environment free of discrimination and/or violence based on gender, gender identity, sexual orientation, cultural identity, religion, ethnic or national origin, trade union membership, disability or any other discrimination typified in current legislation.

Prevention and mitigation measures in the execution of civil works of infrastructure and equipment of the project:

Review the environment in which the tasks will be developed. If power poles, hazardous materials tanks or other items are present in adjacent areas, they could catch fire or fall on workers in the event of evacuation.

- Provision of personal protection elements (PPE) and tools and machinery in perfect working order.
- Training and advisory programs for the people employed by the contractor on the inherent risks of their tasks and the mitigation measures, actions and good practices to be implemented to ensure the health, safety and hygiene of the employees, the population, and the protection of the environment
- Code of conduct.
- Evaluate the state of gas, electricity, and water facilities near the intervention area.
- Examine the distribution of workspaces verifying that there are no elements that could interfere with a rapid evacuation.
- Identify safe areas.
- Determine accessibility to fire protection equipment, emergency lights, first aid equipment, etc. (they should always be in place of easy access).
- Define the resources available to avoid and respond to an emergency.
- Make an inventory of those security elements that the organization has (fire extinguishers, first aid kit, etc.).
- In the case of works conducted in the vicinity of routes, traffic management measures, signaling and communication program to the community must be extreme.

Protocols and procedures to address cases of gender-based violence during the life cycle of the project.

The Contractor will establish reporting procedures, protocol for responses to unacceptable conduct and internal accountability measures in situations of gender-based violence within the framework of the operation.

In terms of prevention, in addition to urging the development of actions aimed at dismantling all types of situations of inequality, discrimination and exclusion in the workplace, actions can be implemented to raise awareness and train on gender issues. The training program will be defined according to the demands of the different work teams.

To address cases of gender violence, immediate and confidential contact should be made with local authorities who are experts in the field if the victim gives clear and enthusiastic consent to do so, to ensure adequate treatment of the victim of violence, providing specific advice and accompaniment. The

identity of the complainant should be kept confidential in order to protect against retaliation, stigmatization, revictimization or other consequences that frequently can happen.

Grievance Redress Mechanism (GRM) for Project Labor Management

The Program has a Grievance Redress Mechanism (GRM), and at the same time the LMP has a simultaneous mechanism that aims to arbitrate the means and mechanisms to facilitate the reception of concerns exclusively (queries, claims, complaints, suggestions) of workers linked to the Projects of the Program, and respond to them to solve them, and to anticipate potential conflicts.

Likewise, workers may appeal directly to the courts, applying the general system in force in the country.

Principles of the GRM for the Labor Management Procedure

Each project will have a feedback/claims management system that includes input/reception, analysis, monitoring, resolution and return to the people who are working linked to the projects.

The principles that the system will observe are the same as those that govern the general GRM of the Program:

- The interaction/claims management system will have mechanisms in accordance with the local context and the sociocultural characteristics of the people involved in each project, with special consideration and respect for the most vulnerable groups (young people, women, people with disabilities, migrants, among others).
- The complaint procedures, the process that will follow, the deadline and the resolution mechanisms will be widely disseminated for your knowledge by the interested parties, that is, by direct workers, contractors, and primary suppliers.
- In all cases, a record will be kept of the reception, analysis and resolution of claims and conflicts.

GRM Guidelines

In general, the mechanism will follow the following guidelines:

- **Proportional**: The Mechanism will proportionally consider the level of risk and possible negative impacts on the affected areas.
- **Culturally appropriate**: The Mechanism will be designed to consider the local customs of the area.
- **Accessible**: The Mechanism will be designed in a clear and simple way so that it is understandable to all people. There will be no cost related to it.
- **Anonymous**: The complainant may remain anonymous, as long as it does not interfere with the possible solution to the complaint or problem. Anonymity is distinguished from confidentiality in that it is an anonymous complaint, the personal data (name, address) of the complainant are not recorded.
- **Confidential**: The Program will respect the confidentiality of the complainant. Information and details about a confidential report will only be shared internally, and only when it is necessary to report or coordinate with the authorities.
- **Transparent**: The process and operation of the Mechanism will be transparent, predictable, and readily available for use by the population.

Management of the specific GRM for the Labor Management of the projects of the Program

The procedure begins with the presentation of the consultation, claim, complaint and / or suggestions (orally or written) by any worker linked to the works. The process ends with the closure and agreement in the resolution of both parties (the claimant and the contractor). The process will be documented by means of a record (in a physical and/or digitized file).

Complaints received by all means of receipt enabled during the implementation of the Project must be attended and classified.

The claims received via the contractors of each work, or agencies of the municipal authority (if applicable) must be redirected to WSC for management.

Reception and registration of claims for the labor management of the project

- Office of contractors (specific modality for operators and employees)
- Suggestion box / complaints book available in the workshops (Specific for operators and employees).

Claims Evaluation

All claims that enter through the various channels must be registered and managed considering the criterion of proportionality (level of risk and possible negative impacts).

In the case of a claim related to employees of the contractor, it will be considered and responded to by the Contractor Company with supervision of WSC.

The file must include, together with the complaint, a summary of the procedures and steps taken. Registration information will be updated periodically to reflect the status of the case until the complaint has been finalized.

Conflict resolution

In all cases, the contractor company must ensure that the attention of claims and the resolution of conflicts are conducted in an adequate and timely manner, and that all workers linked to the project of the Program have a satisfactory management of their claim.

Responding to Complaints

Low-importance claims will be dealt with within a maximum of 30 calendar days, medium importance claims will be dealt with within 15 calendar days and high-importance claims will be dealt with within a maximum of 7 calendar days. The established deadlines can be adjusted by the contractor company.

Monitoring and documentation

The contractor company will be responsible for maintaining an up-to-date database with all documentation and information related to complaints that are submitted as part of labor management. This team is also responsible for following up on the complaint processing process, in coordination with the areas involved, and for facilitating the participation of the worker in the process.

The complaint registry must demonstrate that all of these actions and processes were conducted in accordance with this document.

It will include:

- Date on which the complaint was registered;
- Person responsible for the complaint;
- Information on the corrective measures proposed/communicated by the complainant (if applicable);
- Date on which the complaint was closed; and
- The date of the reply was sent to the complainant.

Deadlines

All complaints must be registered, and the proposed solution must be communicated to the interested party within a stipulated period. The deadlines set can be adjusted.

Monitoring

Any complaint closed with compliance by the complainant must be monitored for a reasonable period in order to verify that the reasons for the complaint or claim were effectively resolved. The estimated period for this purpose is 6 (six) months from the response and / or solution to the claim.

As initially indicated, this document is dynamic in nature, therefore the specific procedures for the implementation of the Grievance Mechanism for Labor Management will be strengthened with the implementation of each project.

12 ANNEX 2: STAKEHOLDER ENGAGEMENT PLAN

Introduction

This Stakeholder Engagement Plan was developed to describe the socialization process of the Bahamas Water Supply and Sanitation Systems Upgrade Program (BH-L1061) Program.

This Plan sets out the general principles of participation and a collaborative strategy to identify stakeholders and plan a participatory process in line with Environmental and Social Performance Standard 10: "Stakeholder Engagement and Information Disclosure" along with ESPS 1 "Assessment and Management of Environmental and Social Risks and Impacts" and ESPS 9 "Gender Equality".

Stakeholder engagement is an inclusive, continuous, and iterative process that takes place throughout the project lifecycle (preparation, implementation, and closure). The process must be properly designed and conducted, sustained by the establishment of solid, constructive, and responsive relationships that are important for the satisfactory management of the environmental and social risks and impacts of the Program/Project.

The nature, scope and frequency of stakeholder engagement is commensurate with the nature and scale of each project, its development and implementation schedule, and its potential risks and impacts. WSC as the Executing Agency will be responsible for defining and evaluating the necessary instances of participation and dissemination of the works.

The entire participation process must be properly documented. WSC shall take steps to maintain confidentiality where required and where necessary to protect personal data.

It is in this context, the following Stakeholder Engagement Plant is proposed, which presents the minimum guidelines and criteria to conduct the consultation process.

Objective

The objective of the consultation process is to present to the affected population and other interested parties the description of the Project, its potential environmental and social impacts and the mitigation measures planned to ensure adequate environmental and social management during the execution of the works, and their subsequent operation.

This instance of participation aims to respond to the doubts and concerns that may arise, and to collect suggestions which will be evaluated to determine the possibility of incorporating them into the design of the Project, when appropriate.

Institutional Arrangements for Plan Implementation

WSC as the Borrower is responsible for leading and implementing the Stakeholder Engagement Plan.

Consultation Process

The programming and dissemination of the consultation should be conducted in such a way as to ensure the participation of stakeholders. Every effort will have to be made to involve groups likely to be affected

by the activities of the project, and those groups that have been identified as stakeholders, regardless of whether they do not belong to the affected population.

It is important to recognize the reduced accessibility to these consultation spaces by populations with greater vulnerabilities such as women, original communities, people in situations of immobility, people in street situations, LGBTIQ + populations (lesbian, gay, bisexual, trans, intersex, queer), among others. With this, it must be ensured that the call is made considering the obstacles that these populations may face for participation.

The consultation process shall consider at least the following elements:

- Stakeholder Mapping
- Documents to disclose and availability of information
- Dissemination of the consultation process through the WSC website, social media, and other means
- Development of content and documentation to be socialized
- Public consultation procedure
- Report of the public consultation process

Below is a brief description of the requirements to be considered at each stage of the consultation process.

Stakeholder Mapping

Stakeholder mapping consists of identifying the directly affected population and organizations relevant to the consultation.

From a preliminary identification, it emerges that, at a minimum, the stakeholders presented Table 44 should be included in the process.

It is important to note that the proposed stakeholder mapping is preliminary, and that the final selection of the stakeholders can be adjusted by WSC. Therefore, any other stakeholders that the authorities consider appropriate to invite to contribute to guaranteeing a broad, representative, and meaningful participatory process may then join.

Table 44 - Stakeholder

Mapping Type of Stakeholder	Stakeholder	Relationship with the Program/ Project	Stakeholder Interest in the Project (High / Medium / Low)	Stakeholder Influence on Project (High / Medium / Low)
Institutional Stakeholders	Water and Sewerage Corporation (WSC)	Executing Agency	High	High
	Department of Environmental Health Services (Family Islands Subdivisional Offices)	Interested Party	Low	Low
	Department of Environmental Planning and Protection	Interested Party	Low	Medium

	Stakeholders related to other infrastructure and services in the project areas (e.g., Bahamas Power and Light Company, Cable and Internet Companies, etc.)	Affected Party	Medium	Low
Civil Society Stakeholders	Population living in the direct area of influence of the projects	Affected Party	High	Medium
	Businesses and informal workers in the direct area of influence of the projects	Affected Party	High	Medium
	Representatives from institutions in the direct area of influence of the projects (e.g., schools, health centers, etc.)	Affected Party	Medium	Medium
	Civil Society Organizations (in particular, those working in environmental and social issues)	Interested Party	Medium	Low
Community	Population of the communities reached by the Project and community in general (indirect area of influence)	Interested Party	Medium	Low

Documents to Disclose and Availability of Information

Below are the documents to be socialized, which must be published on WSC's website and other means, and available to the public for at least 10 days prior to the consultation events.

- Strategic Environmental and Social Assessment, including the Strategic Environmental and Social Management Plan (first draft, Fit for Disclosure)
- Summary information on the Project (description of objectives, works, etc.)

Once the information is available on the website, the consultation process will be disseminated to interested parties.

Public Consultation Events

The consultation process will be conducted before the commencement of the project. It will consist of a single consultation event, conducted in in-person format, (town hall meeting), on the island of the proposed works. The final date and venue, as well as the streaming platform to be used, will be defined by WSC.

This consultation event will be complemented with community information campaigns, to be conducted prior to the start of the works, on each work location, once the engineering design details of the projects are known.

WSC will be responsible for the invitations to the consultation event. The invitation to the event will be made directly to the interested parties identified in the stakeholder mapping, 10 days in advance of the event date.

To ensure maximum stakeholder participation, the event will also be disclosed to the public starting at least 10 days prior to the event date, through publication in relevant information media, such as radio,

local TV and / or digital media, important newspapers, and on the institutional website and social network profiles of WSC. Also, personal email submissions and brochure handouts can be used, to ensure adequate dissemination of the process.

Proposed content of the invitation

The following information shall be detailed in the invitation to the consultation event:

- Project Proponent: WSC
- Project/Program
- Website with the publication of the documentation (ESA/ESMP) and as a space for sending queries or concerns about the Project.
- Procedure of the consultation process
- Duration of the consultation process
- Topics to be addressed, including: Program and main works to be conducted, benefits associated with the operation of the Project, Parties involved and institutional responsibilities, Outline of the applicable regulatory framework and relevant standards, Main environmental and social impacts identified, main environmental and social management measures, and grievance redress mechanism.
- Documentation available

Development of the Public Consultation Process

Disclosure of Documents

WSC must publish the ESA/ESMP for a minimum of 14 days prior to the event.

The consultation process announcement should explain the objective of the consultation, clarifying that, although it is not in itself legally binding, the questions and proposals arising from the persons participating will be considered, where relevant, the proposed amendments will be incorporated.

Then the context in which the consultation takes place will be explained, and the description of the Project will be made, including its objectives, main characteristics and alternatives considered.

The presentation then follows with the environmental and social impacts and risks identified, both in the construction and operation stages, as well as the mitigation measures designed for an adequate environmental and social management of the Project.

The Grievance Redress Mechanism and the available channels for filing complaints or consultations on the Project will also be disclosed. The explanation should be clear, and the language used should allow the community to understand the main aspects of the project and its impacts.

After the presentation, adequate time will be allowed for questions and suggestions from participants, including both in-person as well as virtual attendees.

WSC shall disclose the estimated date and how the consultation report will be published so that all stakeholders can read it and make their observations, if any.

The development of the event, including questions from participants, replies given, and commitments made, will be properly documented to include in the consultation report [see next Section].

Proposed Structure of the Consultation Report

A report will be prepared containing the main concerns raised (both during the consultation process and any prior or subsequent requests that may be received), indicating how they were addressed at the time or, where appropriate, what responses were subsequently prepared and how they were communicated to stakeholders and the public.

Although, as mentioned, the consultation is not legally binding, the proposals received should be evaluated and the explanation of their relevance or not included in the report. If these are relevant, the consultation report will result in proposals for changes to the Project and/or the ESMP, specifically recommendations for: (i) project design; (i) mitigation measures and (iii) mechanism for dealing with complaints and grievances.

The consultation report, to be prepared by the PEU based on information gathered at the public consultations, will also include the invitation process, the links to the web pages where the project has been published and the corresponding environmental and social documentation, the description of the call mechanism used, the list of participants, photos or screenshots of the process, informative banners, publications made in local media, and other dissemination materials used.

The following is a minimum content outline / proposed structure of the Consultation Report:

1. Participation strategy: Description of how the consultation process was developed (prior coordination with authorities, key stakeholders, methodology, selection of topics to be addressed, etc.).
2. Stakeholder mapping (groups, institutions or people who were invited) and selection criteria of the invited stakeholders, Invitation mechanism.
3. Dissemination: Invitations issued and publications of the event on institutional websites and media.
4. Website used for disclosure of information.
5. Analysis of the people who participated compared to the invitees.
6. Gender-disaggregated data of participants.
7. Materials disclosed during the consultation process.
8. Questions and answers (suggestions, claims or questions made by the different stakeholders during the process, and how they were addressed).
9. Indication of how the suggestions and/or complaints received were incorporated/or will be incorporated into the design of the project. Any formal agreement reached with the persons consulted.
10. The main conclusions on positive or negative perception of the project by the participants, including the agreements.
11. Feedback collected from the consultations and included in the final version of the ESIA and ESMP.
12. ANNEX. Copy of the presentations made (it must be ensured that the impacts and mitigation measures of the specific project have been presented).
13. ANNEX. Sample copy of invitation letters sent.
14. ANNEX. Copy of the RSVPs of the invitation letters.

15. ANNEX. List of invited people.
16. ANNEX. List of participants: interested persons/affected persons, governmental, institutional, and general population participants.
17. ANNEX. Photographs of the activity / screenshots of online event.

The consultation report must be published on the institutional website of EA, as communicated to the persons participating in the consultation meeting.

13 ANNEX 3 GRIEVANCE REDRESS MECHANISM (GRM)

The Program and its projects will have a feedback / claims management system that includes their entry / reception, analysis, monitoring, and resolution.

GRM Guidelines

In general, the Mechanism will follow the following guidelines:

- Proportional: The Mechanism will proportionally consider the level of risk and possible negative impacts on the affected areas.
- Culturally appropriate: The Mechanism will be designed to consider the local customs of the area.
- Accessible: The Mechanism will be designed in a clear and simple way so that it is understandable to all people. There will be no cost related to it.
- Anonymous: The complainant may remain anonymous, as long as it does not interfere with the possible resolution of the complaint or problem. The GRM need to ensure that complaints can be raised anonymously. Anonymity is distinguished from confidentiality in that it is an anonymous complaint, the personal data (name, address) of the complainant are not recorded.
- Confidential: The Program will respect the confidentiality of the complaint. Information and details about a confidential report will only be shared internally, and only when it is necessary to report or coordinate with the authorities.
- Transparent: The process and operation of the Mechanism will be transparent, predictable, and readily available for use by the population.

Management of the GRM

The procedure begins with the presentation of the consultation, claim, complaint and / or suggestions (orally or written) by any person linked to the actions of the Program. The process ends with the closure and agreement in the resolution of both parties. The process will be documented by means of a record (in a physical and digitized file). Complaints received by WSC must be addressed and classified. Complaints received at the level of individual projects to be financed by the Program (via the contractors of each work, or departmental or municipal agencies) must be redirected to WSC for management and follow-up.

Scope

The GRM applies and may be used by any person (general population) who expresses any type of claim, complaint or query related to the activities planned by the projects to be financed by the Program.

- Point of Contact: projectcomplaints@wsc.com.bs
- Complaints acknowledged within 3 working days
- Standard resolution time of 15 working days; escalation to senior management if unresolved
- Monthly reporting on number, type and resolution of grievances

13.1.1 Dissemination of the Grievance Redress Mechanism

Information on these means of receiving complaints must be disseminated through the various communication channels used by the Program, among which are:

1. Social Media Sites
2. Verbal communications given to customers who have complaints in the field
3. Consultation Process

13.1.2 Receipt and Registration of Claims

The following mechanisms and channels will be available for the reception of concerns. Once a concern/comment is received, it will be logged into an Excel document:

- Receiving email: projectcomplaints@wsc.com.bs

- Complaints entered by WSC's usual means of contact: online form on webpage and hotline (242-302-5500)
- Claims received by the Contractor will also be logged into the Excel log to maintain complete records

13.1.3 Claims Evaluation

In the case of a claim related to the works, it will be considered and responded to by the Contractor Company or WSC.

If the claim or complaint is rejected, the complainant will be informed of the decision and the reasons for it. To this end, relevant and understandable information will be provided in accordance with the sociocultural characteristics of the claimant.

Complaints received will be categorized according to the following:

NOT ADMISSIBLE: Complaints or claims that do not meet one or more of these requirements:

- It is not directly related to the work, its contractors, or the actions of the project.
- Its nature exceeds the scope of GRM.
- There is no real cause of the action.
- There are other formal mechanisms and institutions for filing complaints according to the nature of the complaint.
- Related to labor issues must be addressed to the corresponding instances of the construction company.

LOW IMPORTANCE: This category corresponds to complaints that do not require resolution, but only require information or a certain clarification that must be provided to the complainant. This category includes complaints that have been previously evaluated and received a definitive response from the Program.

MEDIUM IMPORTANCE: Complaints and claims related to health, the environment, transportation, and contractors and subcontractors.

HIGH IMPORTANCE: Includes complaints related to the safety of personnel, as well as those related to the health and safety of construction workers.

Within a period not exceeding ten working days, the social manager of the contractor or the unit in which the complaint is registered will have to evaluate the documentation presented by the claimant.

Where possible, if additional information is required for the proper evaluation of the complaint, the executing agent (EA) will contact the complainant within a maximum of ten working days, to obtain the necessary information. Once the complaint is completed and reviewed, project staff will proceed to register the complaint.

13.1.4 Grievance Closure and Monitoring Mechanism

The resolution of claims will be conducted through two instances:

1. **Internal.** The management of reception of claims and resolution of conflicts is the responsibility of WSC and will be referred to the competent agency in the subject according to the complaint / claim.
2. **Mediation**. Cases of claims and conflicts not resolved in the first instance will be dealt with under the mediation mechanism. The person in charge of this instance must have

sufficient authority to mediate for the resolution of claims and conflicts, and sufficient independence to project credibility in the parties.

Conflict Resolution

If there is no agreement between WSC and a complainant, either because of a rejected concern or because there is no agreement on the solution to be implemented, the means to reach a joint agreement between the parties must be arbitrated. This may include, among others: promoting the participation of technical third parties, inviting dialogue tables, mediations, conciliations, etc.

WSC shall ensure that claims handling and dispute resolution are conducted in an appropriate and comprehensive manner.

In the event that the complaint cannot be managed within the scope of the work, the interested party may present his claim through the regular Justice procedures.

The IDB's Independent Consultation and Investigation Mechanism (ICIM), available on its website https://www.iadb.org/mici/, is also available.

Deadlines for Response to Claims

All complaints must be registered, and the proposed solution must be communicated to the interested party within the following deadlines: low importance complaints will be dealt with within a maximum period of 30 calendar days, medium-importance complaints will be dealt with within 15 calendar days, and high importance complaints will be dealt with within a maximum period of 7 calendar days. The deadlines set can be adjusted by WSC.

In all cases, a complaint response report will be drawn up and signed by the person who filed the complaint in accordance with the attention of the complaint. WSC will systematize the complaint records and the minutes of attention of these.

The information provided will be relevant and understandable according to the sociocultural characteristics of the person who consults. Likewise, it will oversee supervising the process, detecting deviations, and ensuring its solution.

Monitoring and Documentation

WSC will be responsible for maintaining an up-to-date database with all documentation and information related to complaints submitted. It will also be responsible for following up on the complaint processing process, in coordination with the areas involved, and for facilitating the complainant's participation in the process.

A follow-up form will be completed for each case. Once an agreement is reached, follow-up will be followed up to confirm that the relevant resolution measures are being implemented.

The complaint registry must demonstrate that all these actions and processes were conducted in accordance with this document.

It will include:

- Date on which the complaint was registered;
- Person responsible for the complaint;
- Information on the remedies proposed/communicated by the complainant (if applicable);

- Date on which the complaint was closed; and
- The date of the response was sent to the complainant.

In the Semiannual Compliance Reports, WSC will report to the IDB on the status and follow-up of the management of complaints and grievances received in the framework of the execution of the Program's projects.

Monitoring

Any complaint closed with conformity by the complainant must be monitored for a reasonable period in order to verify that the reasons for the complaint or claim were effectively resolved. The estimated period for this purpose is 6 (six) months from the response and / or solution to the claim.

Implementation Timeline

The GRM will be available throughout the execution of the Program.

IDB Program Grievance Mechanism

In addition to the Grievance Redress Mechanism (GRM) of the Program implemented by EA, the IDB, on the Project page, will present a public access mechanism with which complaints and claims that have not been resolved with the mechanism of each project can be managed.

IDB's Independent Consultation and Investigation Mechanism

The IDB also has an Independent Consultation and Investigation Mechanism (MICI, more info at https://www.iadb.org/en/mici/mici-independent-consultation-and-investigation-mechanism), which can also be accessed to process complaints that could not be resolved at the previous two levels of grievance mechanisms.

MICI is a grievance office independent of the project teams, which facilitates dispute resolution processes to resolve concerns raised. In addition, it conducts independent investigations to determine whether the IDB Group has met its standards and improve the Group's practices.

Keep in mind that the handling of a complaint must start at the local level to be eligible at the next level. All grievance mechanisms will be available throughout the duration of the Program.

14 APPENDIX A - CODE OF CONDUCT - MODEL AND SUGGESTED CONTENT

Model Standard Code of Conduct for Workers

Introduction

The company is committed to ensuring a work environment which minimizes any negative impacts on the local environment, communities, and its workers. The company also strongly commits to creating and maintaining an environment in which Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH) have no place, and where they will not be tolerated by any employee, sub-contractor, supplier, associate, or representative of the company. The purpose of this Code of Conduct is to:

1. Create a common understanding of what constitutes Sexual exploitation and abuse, and sexual harassment.

2. Create a shared commitment to standard behaviors and guidelines for company employees to prevent, report, and respond to SEA and SH.

3. Create understanding that breach of this code of conduct will result in disciplinary action.

Definitions

Sexual Exploitation and Abuse (SEA)

Is defined as any actual or attempted abuse of a position of vulnerability, differential power, or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another.

Sexual Abuse: “The actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions.”

Sexual Harassment:

Unwelcome sexual advances, request for sexual favors, and other verbal or physical conduct of sexual nature.

Sexual Harassment versus SEA

SEA occurs against a beneficiary or member of the community. Sexual harassment occurs between personnel/staff of an organization or company and involves any unwelcome sexual advance or unwanted verbal or physical conduct of a sexual nature. The distinction between the two is important so that agency policies and staff trainings can include specific instruction on the procedures to report each.

Consent is the choice behind a person’s voluntary decision to do something. Consent for any sexual activity must be freely given, ok to withdraw, made with as much knowledge as possible, and specific to the situation. If agreement is obtained using threats, lies, coercion, or exploitation

of power imbalance, it is not consent. Under this Code of Conduct consent cannot be given by anyone under the age of 18, regardless of the age of majority or age of consent locally. Mistaken belief regarding the age of the child is not a defense.

- There is no consent when agreement is obtained through:
- the use of threats, force or other forms of coercion, abduction, fraud, manipulation, deception, or misrepresentation
- the use of a threat to withhold a benefit to which the person is already entitled, or
- a promise is made to the person to provide a benefit.

While all forms of violence against a community resident or a co-worker are forbidden, this code of conduct is particularly concerned with the prevention and reporting of sexual exploitation and abuse (SEA) and sexual harassment which constitute gross misconduct, is grounds for termination or other consequences related to employment and employment status:

(1) Examples of sexual exploitation and abuse include, but are not limited to:

- A project worker tells women in the community that he can get them jobs related to the work site (cooking and cleaning) in exchange for sex.
- A worker that is connecting electricity input to households says that he can connect women headed households to the grid in exchange for sex.
- A project worker gets drunk after being paid and rapes a local woman.
- A project worker denies passage of a woman through the site that he is working on unless she performs a sexual favor.
- A manager tells a woman applying for a job that he will only hire her if she has sex with him.
- A worker begins a friendship with a 17-year-old girl who walks to and from school on the road where project related work is taking place. He gives her moto rides to school. He tells her that he loves her. They have sex.

(2) Examples of sexual harassment in a work context include, but are not limited to:

- Male staff comment on female staffs' appearances (both positive and negative) and sexual desirability.
- When a female staff member complains about comments male staff are making about her appearance, they say she is "asking for it" because of how she dresses.
- A male manager touches a female staff members' buttocks when he passes her at work.
- A male staff member tells a female staff member he will get her a raise if she sends him naked photographs of herself.

Individual signed commitment:

I, _____, acknowledge that sexual exploitation and abuse (SEA) and sexual harassment, are prohibited. As an (employee/contractor) of (contracted agency / subcontracted agency) in (country), I acknowledge that SEA and SH activities on the work site, the work site surroundings, or the surrounding community constitute a violation of this Code of

Conduct. I understand SEA and SH activities are grounds for sanctions, penalties or potential termination of employment. Prosecution of those who commit SEA and SH may be pursued if appropriate.

I agree that while working on the project I will:

- Treat all persons, including children (persons under the age of 18), with respect regardless of sex, race, color, language, religion, political or other opinion, national, ethnic or social origin, gender identity, sexual orientation, property, disability, birth or other status.
- Commit to creating an environment which prevents SEA and SH and promotes this code of conduct. In particular, I will seek to support the systems which maintain this environment.
- Not participate in SEA and SH as defined by this Code of Conduct and as defined under (country) law (and other local law, where applicable).
- Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual contact or activity with anyone below the age of 18. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense. I will not participate in actions intended to build a relationship with a minor that will lead to sexual activity.
- Not solicit/engage in sexual favors in exchange for anything as described above.
- Unless there is the full consent by all parties involved, recognizing that a child is unable to give consent and a child is anyone under the age of 18, I will not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual" under this Code.

I commit to:

- Adhere to the provisions of this code of conduct both on and off the project site.
- Attend and actively partake in training courses related to preventing SEA and SH as requested by my employer.

If I am aware of or suspect SEA and SH, at the project site or surrounding community, I understand that I am encouraged to report it to the Grievance Reporting Mechanism (GRM) or to my manager. The safety, consent, and consequences for the person who has suffered the abuse will be part of my consideration when reporting. I understand that I will be expected to maintain confidentiality on any matters related to the incident to protect the privacy and security of all those involved.

Sanctions: I understand that if I breach this Individual Code of Conduct, my employer will take disciplinary action which could include:

- Informal warning or formal warning

- Additional training.
- Loss of salary.
- Suspension of employment (with or without payment of salary)
- Termination of employment.
- Report to the police or other authorities as warranted.

I understand that it is my responsibility to adhere to this code of conduct. That I will avoid actions or behaviors that could be construed as SEA and SH. Any such actions will be a breach this Individual Code of Conduct. I acknowledge that I have read the Individual Code of Conduct, do agree to comply with the standards contained in this document, and understand my roles and responsibilities to prevent and potentially report SEA and SH issues. I understand that any action inconsistent with this Individual Code of Conduct or failure to act mandated by this Individual Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

15 APPENDIX B – WSC HURRICANE PREPAREDNESS PLAN


GA
Bermuda
2 AM Tue
2 AM Sun
2 AM Sat
2 PM Fri
2 AM Fri
5 AM Thu
2 AM Mon
FL
Bahamas
Cuba
Haiti
Dominican Republic
Puerto Rico
H
M
X

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INTRODUCTION

1.1 Hurricane Season

Although tropical storms or hurricanes develop over the period June to November each year, the hurricane season in the Bahamas is usually taken as early May to mid-November.

1.2 Description

The term Tropical Storm denotes a cyclonic storm, which has developed over tropical regions with highest sustained wind speeds of 34knots (39mph) to 63 knots (55mph); if these speeds exceed 74 mph or 63 knots, it is termed a Hurricane.

Winds blow anticlockwise round the center of low pressure, known as the eye of the storm, and may extend from 50 to 400 miles in diameter and have speed of 100 knots (115mph) or more in a mature hurricane.

Saffir-Simpson Scale

Categories	***Wind speed mph***	***Wind speed knots***	***Damage Potential***
1	***74-95***	***64-82***	***Minimal***
2	***96-110***	***83-95***	***Moderate***
3	***111-130***	***96-112***	***Extensive***
4	***131-155***	***113-136***	***Extreme***
5	***>155***	***137 or greater***	***Catastrophic***

Over the sea area, the winds will produce high swells and a surge of 5 to 10 feet in the level of the sea is usual in coastal waters near the center of the storm.

1.3 Hurricane Predictions for 2024

The 2024 Atlantic hurricane season runs from June 1 to November 30. The areas covered include the North Atlantic Ocean, Gulf of Mexico and the Caribbean Sea.

The National Weather Service defines a hurricane as "an intense tropical weather system with well- defined circulation and sustained winds of 74 mph (64 knots) or higher."

Hurricanes are rated according to intensity on the Saffir-Simpson Hurricane Wind Scale. The 1-5 scale estimates potential property damage. A Category 3 or higher is considered a major hurricane. The National Hurricane Center advises preparedness:

A hurricane watch indicates the possibility that a region could experience hurricane conditions within 48 hours. A hurricane warning indicates that sustained winds of at least 74 mph are expected within 36 hours.

Predictions: 2024 according to Colorado State University

.Number of Named Storms	Number of Hurricanes	Number of Major hurricanes
23	11	5

Atlantic Storm Names for 2024:

Alberto	***Kirk***	***William***
Beryl	***Leslie***	****Alpha***
Chris	***Milton***	****Beta***
Debby	***Nadine***	****Gamma***
Ernesto	***Oscar***	****Delta***
Francine	***Patty***	****Epsilon***
Gordon	***Rafael***	
Helene	***Sara***	
Isaac	***Tony***	
Joyce	***Valarie***	

****These names will only be used all of the predicted names have been exhausted***

1.4 Combating Hurricane Damage

The perils associated with a hurricane are, first the flooding due to torrential rains, surge in sea levels near the center of the hurricane, and when it strikes land the high waves produced on the sea, which may wash away houses in low lying districts, make roads impassable and break water mains and service connections.

Secondly, there is the danger of high winds which may damage buildings, damage and uproot trees, break power and telephone lines and turn loose objects into dangerous missiles. Strong winds may also adversely impact infrastructure associated with municipal water provision. Damage may occur as a direct or indirect result of said conditions.

Sound proactive and reactive measures must be employed to mitigate against damage which might result from the above conditions.

1.5 Advisory Information

Advisories warn of impending danger from severe weather. We need to listen to them so that we can do the right things at the right times.

Tropical Storm Alert: *Within 48 hours, a tropical storm (34-73 mph) is likely to hit.*

Tropical Storm Watch: *Within 36 hours, a tropical storm (34-73 mph) is likely to hit.*

Tropical Storm Warning: *Within 24 hours, a tropical storm (34-73 mph) is likely to hit.*

Tropical Storm All- Clear: *The storm has left the area, but caution should prevail.*

1.5.1 Hurricane Alert

Within 48 hours, a hurricane (winds over 73 mph) is likely to hit.

1.5.2 Hurricane Watch

Within 36 hours, a hurricane (winds over 73 mph) is likely to hit.

1.5.3 Hurricane Warning

Within 24 hours, a hurricane (winds over 73 mph) is likely to hit.

Hurricane All- Clear: *The hurricane has left the area but caution should prevail. You must wait to hear an all-clear before you leave your house or shelter accommodations.*

(Caution: The times given above are guidelines; sudden changes in the storm can cause variations.)

1.5.4 Post-Hurricane Conditions

When the threat of hurricane conditions in a particular area has passed, this information together with the precautions still considered necessary will be passed at the beginning of any Hurricane Alert message but following any Hurricane Warning, which may be issued.

1.5.5 Dissemination of Information

Hurricane Alert messages are broadcast over most private and public Bahamas based Radio Networks including but not limited to: 1540, 1240 and 810 Kcs. As well as via marine broadcast on VPN2 (2558 Kcs) on receipt from the Meteorological Office and at frequent intervals thereafter. As well as social media, SMS text messaging, WhatsApp, Facebook, twitter, Instagram, National Emergency Management Agency (NEMA), etc.

2. Hurricane Procedures

General

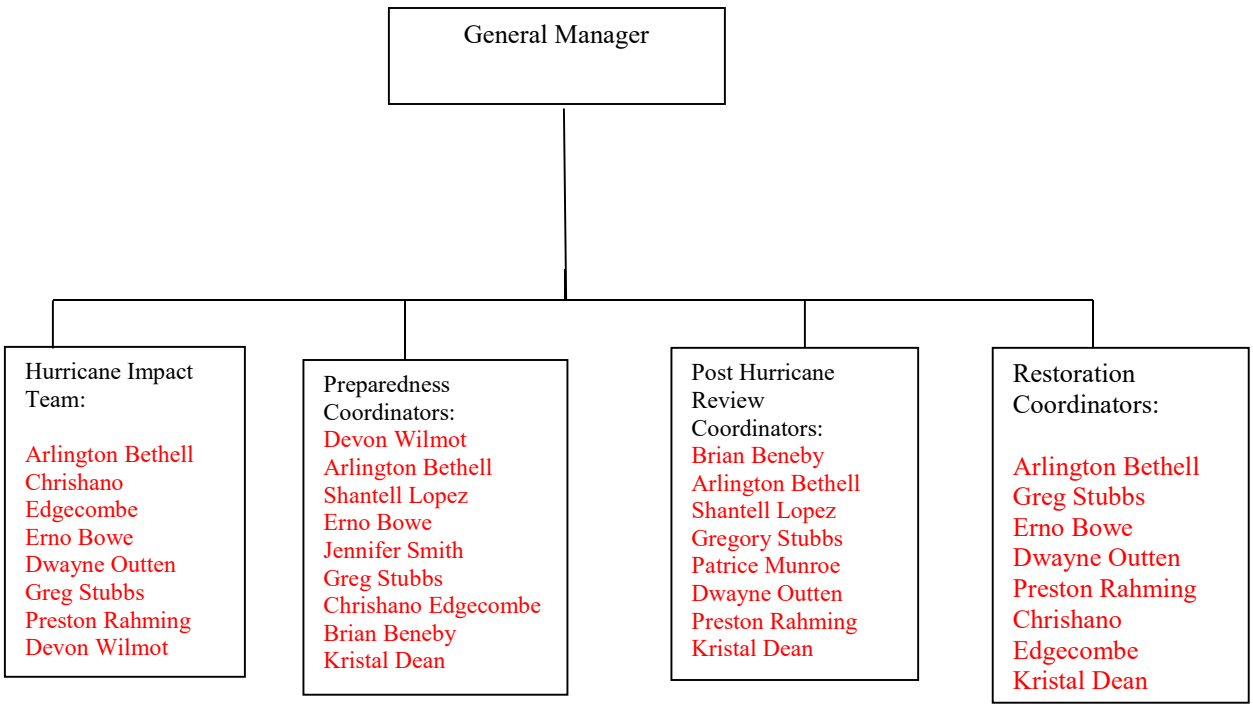
This section outlines the overall procedures and steps to be taken before, during and after a hurricane. It is therefore divided into four (4) relevant categories as follows: -

- *Hurricane Preparedness* — *Pre- Hurricane Procedures*
- *Hurricane protocol* — *Procedures employed during actual hurricanes*
- *Post Hurricane Review* — *Post-Hurricane Procedures*
- *Restoration* — *Post- Hurricane Procedures*

A Hurricane meeting will be convened one month prior to the beginning of each season for the purpose of discussing preparations and to review, upgrade (where necessary) existing procedures.

Reporting/Organizational Structure

Fig. 1. Organizational Chart



***The General Manager** and the Executive Committee make up the "Executive Hurricane Committee" and direct the Corporation's overall Hurricane Preparedness and restoration efforts, see Figure 1.*

***The Hurricane Coordinator** will coordinate the local hurricane efforts. He or she will report to the Executive Hurricane Committee and liaise directly with the Bahamas National Emergency Management Agency (NEMA) on behalf of the Corporation.*

***Hurricane Coordinators** are assigned specific functions (outlined below) and will report directly to the Hurricane Committee Chairman.*

The NEMA representative of 2024 are: Arlington Bethel, Chrishano Edgecombe, Erno Bowe

Coordinator Responsibilities:

*Each year the General Manager will appoint the Hurricane Committee Chairman and Coordinators from the Management Pool Listing in **Appendix E**. Once appointed, The Hurricane Committee Chairman will direct the Hurricane mitigation strategy on behalf of the Water & Sewage Corporation's GM. He or she shall have overall/general responsibility for convening and directing all hurricane related meetings. This with the specific aim of updating, when necessary, the Corporation's Hurricane Plan and guiding the implementation of all policies/procedures therein.*

***Appointed Hurricane Coordinators shall be responsible for submitting annually to the Facilities Manager, a Hurricane Preparedness Report. This report should be submitted on or before March 31st**. This report shall indicate the readiness, faults, repair costs and repair schedules of the equipment, plant and machinery within their care. Further, Coordinators or responsible officers will be required to effectively secure all buildings and assets as per **Appendix B** of this document.*

Facilities Coordinator

The Facilities Coordinator will be responsible for the following:

a. *Inspect in conjunction with the respective Department Head all buildings by March 31 and ensure that all roofs, windows, doors and the structural integrity are in good standing.*
b. *Submit to the Hurricane Committee's Chairman for approval by the General Manager a comprehensive Hurricane Preparedness Report of findings in Item "a" detailing faults, repair costs, repair schedules and recommending approval of purchases where necessary.*
c. *Coordinating all efforts required to secure the Corporation's buildings.*
d. *Coordinate the securing of emergency personnel homes once requested and the materials are provided.*

Mechanical Maintenance Coordinator

The Mechanical Maintenance Coordinator will be responsible for the following:

a. *Inspect all buildings and equipment by March 31 to ensure that all mechanical and electrical services are in good standing.*
b. *Ensure that all emergency generator tanks are filled with fuel, adequately serviced and functional.*
c. *Determine by June 1 and arrange acquisition prior to a hurricane in conjunction with the Sewerage Coordinator the number of portable generators required for Sewerage Operations.*

Garage & Heavy Plant Coordinator

The Garage & Heavy Plant Coordinator will be responsible for the following:

a. *Ensure that all vehicles are filled with fuel, adequately serviced and functional.*
b. *Ensure that all emergency vehicles and portable generators are delivered to designated sites.*
c. *Prepare a list of emergency vehicles that will be used for the hurricane season for inclusion in the Hurricane Plan by June 1.*
d. *Retrieve all available vehicle keys and vehicles from Department Heads and coordinate issuance where appropriate for hurricane activities.*

Communications Coordinator

The Communications Coordinator will be responsible for the following:

a. *Ensure that all communications equipment is distributed to the appropriate centers.*
b. *Coordinating the setup and testing of all communications equipment.*
c. *Coordinating the effort required to test all Satellite telephones and radios*
d. *Collect and secure all communications equipment at the end of the hurricane season.*
e. *Coordinate the purchase and issuance of phone cards.*
f. *Process and submission of cellular phone bills where appropriate.*
g. *Purchase and maintain in good standing by June 1 the appropriate number of satellite telephones in consultation with the Chief Family Island Coordinator.*

Human Relations Coordinator

The Human Relations Coordinator will be responsible for the following:

a. *Ensure that adequate supply of drinking water is available at designated sites.*
b. *Ensure that non-perishable food items are available at designated sites.*
c. *Deliver emergency supplies to designated sites.*
d. *Establish expense codes in conjunction with Management Accounts Department to which hurricane related expenses are charged.*

e. *Establish a designated caterer to provide hot meals during hurricane activities.*
f. *Establish a delivery service to deliver meals to personnel at the designated sites.*
g. *Determine by liaison with the various Coordinators, the numbers of personnel required for their emergency crews and establish a pool of personnel from throughout the Corporation (Emergency Duty List), to be assigned to assist emergency crews/Command Centre personnel with hurricane activities.*
h. *Establish "Sleeping Quarters" at each Command or Manned Center out fitted with sufficient folding beds, blankets, pillows, sheets, etc.*

NEMA & Inter-Agency Coordinator

The Inter-Agency Coordinator will work closely with NEMA and will be responsible for the following:

a. *Enquire by March 31 and reaffirm by June 1 with Operations Departments that proper protocol/strategy exists to maintain where possible or quickly restore where not, electrical power and telephone services to key areas.* ***See Appendix G & H*** *respectively.*
b. *Acquire the contact numbers by March 31 and reaffirm by June 1 of the appropriate senior personnel at BPL, Ministry of Works and BTC to ensure that WSC's repairs are promptly addressed by the particular agency of concern.*
c. *Submit to the Hurricane Committee's by April 30, a copy for inclusion into the Hurricane Plan of items "a" and "b" and submit any up-dates of these items as they become available.*
d. *Submit by June 1 a copy of the Priority List of Facilities to BPL and BTC. Negotiate and agree with the senior personnel at the respective agency the terms of the Priority List and reaffirm in the event of a Hurricane.*
e. *Follow up with the respective agencies to ensure that WSC's repairs are being adequately addressed in accordance with the Priority Listing.*
f. *Conduct ongoing and active communications with the National Emergency Management Agency (NEMA).*
g. *Ensure that the Executive Hurricane Committee and relevant personnel are appraised of NEMA related matters.*
h. *By June 1, provide NEMA with a listing of personnel available to assist with WSC related responsibilities under the National Disaster Plan (Food & Water, and Damage Assessments).*
i. *By June 1, provide NEMA with a listing of all resources (equipment and supplies) available to assist in the National Disaster Response effort.*
j. *Ensure that timely updates are provided to NEMA as necessary, and likewise WSC is appraised of matters, which affect its response.*

Sewerage Coordinator

The Sewerage Coordinator will be responsible for the following:

a. *Ensure that all Pumping Stations have been pumped down prior to a hurricane.*
b. *Ensure in conjunction with the Mechanical Maintenance Coordinator that all Waste Water Facilities equipment are operable by June 1 and reaffirmed in the event of a hurricane.*
c. *Ensure that the "Hurricane Power Restoration Priority Nassau Listing – Sewerage Facilities" is up-dated and submitted to the Hurricane Committee Chairman for inclusion into the Hurricane Plan by June1 and reaffirmed in the event of a hurricane.*
d. *Ensure that all Waste Water Treatment Plants Emergency Generators have been serviced by June 1, are operable, and reaffirm their operability in the event of a hurricane.*
e. *Determine by June 1 and arrange acquisition prior to a hurricane in conjunction with the Mechanical Maintenance Coordinator the number of portable generators required during the Hurricane Emergency for Waste Water Operations.*
f. *Determine by June 1 for submission to the Human Relations Coordinator the number of crews required to man or rotate to Sewerage Facilities to ensure operability of the same in the wake of a hurricane.*
g. *Ensure that all sewer mains & service connection blockage complaints have been resolved prior to a hurricane.*
h. *Ensure that all sewer mains & service connection leak complaints have been resolved prior to a hurricane.*
i. *Ensure that sufficient Chlorine Cylinders are rotated to each Waste Water Treatment Plant in the event of a hurricane*
j. *Ensure that in the wake of the hurricane all facilities are pumped down and operable.*

Water Supply Coordinator

The Water Supply Coordinator will be responsible for the following:

a. *Ensure in conjunction with the Mechanical Maintenance Coordinator that all major Potable Water Pumping Station Plant equipment are operable by June 1 and reaffirmed in the event of a hurricane.*
b. *Ensure that all Portable Water Pumping Station's Emergency Generators have been serviced by June 1, are operable, and reaffirm their operability in the event of a hurricane.*
c. *Ensure that all Portable Water Tanks are filled as much as possible by June 1 and reaffirm in the event of a hurricane.*
d. *Ensure that all Chlorine Treatment Plant Equipment are serviced by June 1 and reaffirm their operability in the event of a hurricane.*
e. *Ensure that sufficient Chlorine is rotated to each Portable Water Pumping Station in the event of a hurricane.*
f. *Ensure that electrical power lines in the Well Fields are cleared of major trees by June 1.*

g. *Increase Potable Water Pumping Station flows and pressures where applicable to ensure that high demand requirements are met prior to a hurricane. This will allow the general public to fill containers, etc.*
h. *Ensure in conjunction with the Mechanical Maintenance Coordinator the removal and securing of all System Control and Data Acquisition (SCADA) antennae from all buildings and tanks prior to a Category 2 Hurricane.*
i. *Determine by June 1 for submission to the Human Relations Coordinator the number of crews required to man or operate the Portable Water Systems (Well Fields/Transfer Systems/Stations) to ensure operability of the same during and in the wake of a hurricane.*

Distribution Services & Leakage Coordinator

The Distribution Services & Leakage Coordinator will be responsible for the following:

a. *Ensure that all major main leaks are repaired within the designated period as per the Standard Operating Procedures.*
b. *Retrieve from the field and secure all Data Logger 36 hours prior to a hurricane.*
c. *Determine by June 1 for submission to the Human Relations Coordinator the number of crews required to man or operate the Field Command Center (FCC) during and in the wake of a hurricane.*
d. *Determine by June 1 for submission to the Human Relations Coordinator the number of crews required to form emergency repair crews to be located at the Field Command Center (FCC) for quick dispatch during and in the wake of a hurricane.*

Public Relations Coordinator

The Public Relations Coordinator will be responsible for the following:

a. *Compile information on hurricane activities for Press Releases for the approval by the General Manager.*

Staff/Welfare Coordinator (Nurse)

The Staff/Welfare Coordinator will be responsible for the following:

a. *Liaise with the Safety Committee and ensure that all First Aid kits at all sites are replenished and that emergency crews have small First Aid kits.*
b. *Establish and maintain contact with families of emergency duty staff.*
c. *Coordinate moving emergency duty staff families to safer locations if necessary.*
d. *Keep emergency duty staff informed of conditions at their homes.*

e. *Coordinate emergency services for staff and their families in the event of an injury.*
f. *Establish direct communication with hospitalized staff members and their families or care giver.*
g. *Establish counseling services for personnel whom may have suffered physical or emotional loss.*

Stores & Supplies Coordinator

The Stores & Supplies Coordinator will be responsible for the following:

a. *Purchase/have on hand all the necessary tools, plywood, nails, and large heavy-duty plastic garbage bags required for hurricane preparedness and restoration activities.*
b. *Ensure that as a minimum the following items are acquired and on hand by June 1 and reaffirmed in the event of a hurricane:*

10 Axes	*5 Hammers*
8 Ladders	*40 Rubber Boots (Knee high)*
20 Flash Lights	*3 Hand Lanterns*
40 Raincoats	*12 Storm Lights*
3 Sledge Hammer	*3 Chain Saws*

100 Large garbage bags (30 lbs - 40 lbs)

c. *Purchase/have on hand all the necessary extreme weather gear (knee high water boots, heavy duty rain coats, heavy duty workman leather & rubber boots).*
d. *Coordinate the issuance and retrieval of tool items.*
e. *Coordinate the issuance of extreme weather gear to emergency personnel.*
f. *Be on-hand to coordinate the issuance of Stores items to emergency personnel.*

Records Coordinator

The Records Coordinator will be responsible for the following:

a. *Secure or ensure that the "Status Board" is in good standing. The Status Board should have a section that depicts all of the Family Islands to allow for updates.*
b. *Establish a color code system that allows for quick updating and prioritizing of damages/faults on the Status Board.*
c. *Maintaining a log of all activities in the Command Centre.*
d. *Prepare a summary report for the Executive Committee as required.*
e. *Prepare a comprehensive report, by December 31, of all hurricane activities for presentation to the Hurricane Committee Chair review and forwarding to the General Manager and the Executive Committee.*

IT Coordinator

The IT Coordinator will be responsible for the following:

a. *Ensure that all systems data is backed up and secured*

b. *Ensure that all personal computers are placed above floor level in secured plastic bags.*
c. *Ensure that network systems and telephone systems are in place as soon as practical in the wake of a hurricane.*

Family Island Coordinators

The person responsible for each Family Island will coordinate the Corporation's hurricane efforts on their respective Island. They may appoint other staff members to act as coordinators.

The Family Island Coordinator will be responsible for the following:

a. *Develop and submit a hurricane plan relative to all aspects of safe and continuous provision of water and sewage services for their respective island/region of responsibility. Plan should be forwarded to the Hurricane Committee Chairman on or before March 31.*
b. *Determine and submit to the Hurricane Committee's Chairman by March 31, a list of Family Island Coordinators and their respective contact numbers for inclusion into the Corporate Hurricane Plan.*
c. *Update the "Hurricane Power Restoration Priority Listing" for the Family Islands for response by BPL Aliv and BTC by March 31 and reaffirm by June1.*
d. *Acquire the contact numbers by March 31 and reaffirm by June 1 of the appropriate senior personnel with responsibility to the Family Islands, at BPL, Ministry of Works and BTC to ensure that WSC's repairs are promptly addressed by the particular agency of concern.*
e. *Submit to the Hurricane Committee's Chairman by April 30, a copy for inclusion into the Hurricane Plan of items "a" and "b" and submit any up-dates of these items as they become available.*
f. *Submit Hurricane Preparedness Report to the Hurricane Committee Chairman by June 1.*
g. *Arrange with Heavy Plant Operating Companies for the appropriate heavy equipment services to mitigate damage and restore services via "Pre-contractual Agreements" where necessary. Arrangements and formal agreement are to be in place by June 1st.*
h. *Coordinate Hurricane Preparedness and Restoration though the respective Family Island Coordinators and through liaison with the appropriate New Providence Preparedness Coordinators.*
i. *Submit information of all Hurricane Preparedness, Damage Reports and Restoration activities to the Records Coordinator in the Command Centre.*

III Hurricane Preparedness

General

It will be necessary for each Coordinator to document and or update specific procedures that relate to their responsibilities, instigate regular checks of emergency supplies and equipment and educate emergency personnel.

Each coordinator must review the general hurricane procedures and assign essential staff as required. The following sections indicate various activities that should be adhered to and should be utilized as a Check List by the respective responsible officer or Coordinator.

General Precautions

The following precautions will be taken at the beginning of the Hurricane season.

ACTIVITY	***ACTION***
Ensure that all external areas surrounding all W&SC buildings and infrastructure are free of loose items, Garbage and trees with potential to cause Damage.	*Facilities Coordinator*
Ensure that all hurricane shutters are in good order and clearly marked for quick installation.	*Facilities Coordinator*
Submit Hurricane Preparedness Report to the Hurricane Committee Chairman by April 30 for submission to the General Manager	*Facilities Coordinator*
Ensure that all standby generators are in good working order and the fuel tanks filled.	*Mechanical Maintenance Coordinator* *Water Supply Coordinator* *Sewerage Coordinator*
Ensure that all portable pumps, portable saws etc., are repaired by March 31 and re-affirmed proper operation by June 1 and for hurricane preparedness.	*Mechanical Maintenance Coordinator*
Purchase all necessary hoses and appurtenances for portable equipment where required by March 31 and reaffirm their good standing by June 1 and for hurricane preparedness.	*Mechanical Maintenance Coordinator*
Prepare a list of Emergency Vehicles that will be used for the hurricane season for inclusion in the Hurricane Plan.	*Garage & Heavy Plant Coordinator*
Ensure that all Satellite Telephones/ Cellular telephones are in good working order.	*Communications Coordinator*
Establish a schedule for Satellite Telephones to be tested (calling into and out of) during the hurricane season.	*Communications Coordinator*

Secure and test communications equipment (Trunking Radios, etc.) to be used by emergency staff.	*Communications Coordinator*
Prepare a comprehensive list of emergency supplies and non-perishable food items.	*Human Relations Coordinator*
Secure adequate supply of emergency supplies for the hurricane season.	*Human Relations Coordinator*
Establish a designated caterer to provide hot meals during the hurricane activities.	*Human Relations Coordinator*
Determine by liaison with the various Coordinators, the numbers of personnel required for emergency crews and establish a pool of personnel to be assigned from throughout the Corporation to assist emergency crews/Command Centre personnel with hurricane activities.	*Human Relations Coordinator* *All Coordinators*
Prepare a comprehensive list of emergency duty staff and their addresses.	*Staff/Welfare Coordinator*
Ensure adequacy of "Plugs" to mitigate storm Surge into North Andros Well Fields by March 31 and reaffirm by June 1	*North & Central Andros Coordinator*
Up-date in conjunction with Operations Departments by March 31 and reaffirm by June 1 The "Priority Listing" for BPL & BTC response	*Inter-Agency Coordinator*
Acquire Key Senior Personnel contact numbers at BPL BTC & MOW by March 31 & re-affirm by June 1 for quick response for repair purposes	*Inter-Agency Coordinator*
Submit by April 30 to the Hurricane Committee Chairman a copy of "Priority Listing" and Key Personnel contact numbers at BPL, BTC & MOW	*Inter-Agency Coordinator*
Submit by June 1 a copy of "Priority Listing" to BPL & BTC and negotiate the terms of the same with Senior Personnel at these agencies	*Inter-Agency Coordinator* *Water Supply Coordinator* *IT/Communications Coordinator*

Ensure the operability of all major Waste Water Treatment Plants and Potable Water Pumping Stations by June 1 & reaffirm in the event of a hurricane.	*Sewerage Coordinator* *Mechanical Maintenance Coordinator* *Water Supply Coordinator*
Determine by June 1 & arrange acquisition prior to a hurricane the number of portable generators required for Waste Water Treatment Plants	*Sewerage Coordinator* *Mechanical Maintenance Coordinator*
Ensure that all sewer mains & service connection leak complaints have been resolved prior to a hurricane	*Sewerage Coordinator*
Ensure that all Portable Water Tanks are filled as much as is practicable by June 1 & reaffirm by the event of a hurricane	*Water Supply Coordinator*
Ensure that Chlorine Treatment Plants are operable by June 1 and reaffirm by the event of a hurricane.	*Water Supply Coordinator*
Ensure that sufficient Chlorine are Stored to each Portable Water Pumping Station and Waste Water Treatment Plants	*Water Supply Coordinator* *Sewerage Coordinator*
Ensure that electrical power lines in Well Fields are cleared of major trees by June 1	*Water Supply Coordinator*
Increase Portable Water Pumping Station flows & pressures where applicable to meet high demand 48 hours prior to a hurricane	*Water Supply Coordinator*
Removal & securing of SCADA antennae from tanks (category 2 or greater)	*Mechanical Maintenance buildings and Coordinator* *Water Supply Coordinator*
Ensure that all major mains leaks are repaired as per SOP & reaffirm in the event of a hurricane	*Distribution Services & Leakage Coordinator* *Sewerage Coordinator*
Maintain active communications with National Emergency Management Agency	*NEMA Coordinator*
Provide by June 1 to NEMA an up-dated List of Key Personnel in WSC & Related Responsibilities for National Disaster Plan	*NEMA Coordinator*
Provide by June 1 to NEMA a Listing of all resources available to assist with the National Disaster Response effort	*NEMA Coordinator*

IV Hurricane Alert (48 Hours)

A Hurricane Alert indicates that hurricane conditions are expected within 48 hours.

The following activities will be performed when a hurricane alert is issued by the Bahamas Meteorological Department:

ACTIVITY	*ACTION*
An initial meeting is held by the Hurricane Committee to begin preparations.	*Committee Chairman*
Setup the Command Center and advise the General Manager and the Executive Committee.	*Committee Chairman*
Setup the Field Command Center and advise the Chairman	*Distribution Services & the Committee Leakage Coordinator* *Chief Family Island Coordinators* *Family Island Coordinators* *North Andros Coordinators*
Prepare shift schedule for the Command Center & Field Command Center	*Committee Chairman* *Distribution Services & Leakage Coordinator* *Chief Family Island Coordinator* *Family Island Coordinators North & Central Andros Coordinators*
Setup and test communications equipment in the Command Center.	*IT/Communications Coordinator* *Chief Family Island Coordinators* *Family Island Coordinators* *North & Central Andros Coordinators*
Record all hurricane preparedness activities from Coordinators.	*Records Coordinator*
*Secure all buildings in accordance with **Appendix B** of this manual, and ensure that all loose objects are removed from the premises.*	*Facilities Coordinator* *All Department Heads* *All Division Heads*

Fill all vehicles and emergency generators with fuel.	*Garage & Heavy Plant Coordinator* *Family Island Coordinators*
Test all emergency vehicles and Heavy Plant to ensure that they are in good working order.	*Garage & Heavy Plant Coordinator*
Test all emergency generators, portable pumps, saws, etc. to ensure that they are in good working order.	*Mechanical & Electrical Coordinator*
Re-check list of emergency supplies for possible distribution to essential sites.	*Human Relations Coordinator*
Advise all personnel of their reporting areas and their respective Coordinator (Issue Emergency Duty List).	*Human Relations Coordinator*
Issue Heavy Weather Gear to Emergency Duty Personnel where appropriate.	*Stores & Supplies Coordinator*
Review procedures with emergency duty staff.	*All Coordinators*
Re-check list of emergency staff families for correctness of contact numbers.	*Staff/Welfare Coordinator*
Stock/restock First Aid Kits at the Command Center, Field Command Center and emergency vehicles.	*Staff/Welfare Coordinator*
Fill all Portable Water Storage Tanks	*Water Supply Coordinator*
Pump down all Waste Water Treatment Plants' Storage Tanks.	*Sewerage Coordinator*
Ensure that all major main leaks are repaired.	*Distribution Services & Leakage Coordinator* *Sewerage Coordinator*
Secure away from windows & in the highest possible location all files, documents, computers and peripherals.	*All Division & Department Heads*
Liaise with BPL & BTC Senior Personnel With respect to the "Priority List".	*Inter-Agency Coordinator* *NEMA Coordinator*
Ensure timely up-dates are provided to NEMA & Appraise WSC on matters that affect its response	*Inter-Agency Coordinator* *NEMA Coordinator*

V Hurricane Watch (36 Hours)

A Hurricane Watch indicates that hurricane conditions are expected within 36 hours.

The following activities will be performed when a hurricane watch is issued by the Bahamas Meteorological Department:

ACTIVITY	***ACTION***
Ensure that the Command Center is fully manned, activate shift schedule and advise the executive committee.	*Committee Chairman*
Ensure that the Field Command Centers are fully manned, activate shift schedule and advise the Hurricane Committee Chairman.	*Chief Family Island Coordinators* *Family Island Coordinators* *Distribution Services & Coordinator*
Activate shift schedule for emergency duty staff.	*All Coordinators*
Follow-up to ensure that all premises, loose items are secured. Check guy wires and lightened if necessary.	*Facilities Coordinators* *Family Island Coordinators* *All Department/Division Heads*
Record all activities from Coordinators as they are reported.	*Records Coordinator*
Advise the Command Center on state of readiness and hurricane conditions every three hours.	*Family Island Coordinators*
Make test calls into the Command Center every three hours using Satellite Telephones/Cellular phones or Trunk Radio System	*Family Island Coordinators* *Field Command Center*
Fill all vehicles, heavy plant and emergency generators with fuel.	*Garage & Heavy Plant Coordinator* *All Coordinators (vehicles)*

	All Department Heads
Ensure that emergency supplies, drinking water and non-perishable food items are on site.	*Human Relations Coordinator*
Ensure that all emergency vehicles and Heavy plant are delivered to the designated location.	*Garage & Heavy Plant Coordinator*
Ensure that all portable generators, saws, etc, are delivered to the designated location.	*Mechanical Maintenance Coordinator*
Emergency staff should be allowed to go home to secure their premises if requested, or the Facilities Coordinator will arrange to have their premises secured (staff must provide material)	*All Coordinators* *Facilities Coordinator* *All Department Heads*
Make initial contact with emergency staff families.	*Staff/Welfare Coordinator*
Remove and secure all SCADA equipment Antennae	*Mechanical Maintenance Coordinator* *Water Supply Coordinator*
Remove from the field and secure all Data Loggers.	*Distribution Services & Coordinator*
Ensure timely up-dates are provided to NEMA & Appraise WSC on matters that affect its response	*Inter-Agency Coordinator* *NEMA Coordinator*

VI Hurricane Warning (24 Hours)

A Hurricane Warning indicates that hurricane conditions are expected within 24 hours.

The following activities will be performed when a hurricane Warning is issued by the Bahamas Meteorological Department:

ACTIVITY	***ACTION***
Hurricane Committee to meet	*Committee Chairman*
All Command Centers are fully manned in accordance with shift schedule.	*Committee Chairman* *Family Island Coordinators* *North & Central Andros Coordinator*
All emergency personnel should be in place and to report to the Central Command Center every five hours.	*All Coordinators*
Provide communication to non-emergency staff.	*Staff/Welfare Coordinator*
Ensure that all hurricane watch activities are completed.	*All Coordinators* *All Department/Division Heads*
Ensure that all non-emergency vehicles are parked at the designated location.	*Garage & Heavy Plant Coordinator* *All Department/Division Heads*
Ensure that all data systems are backed – up and secured.	*IT/Com Coordinator*
Ensure that all personal computers and other equipment are unplugged and placed floor level in secured plastic garbage bags.	*IT Coordinator* *All Department/Division heads above*
Ensure that all material and supplies are placed above floor level.	*All Coordinators* *All Department/Division Heads*
Fill all Portable Water Storage Tanks and boost	*Water Supply*

Pumping Station flows, pressures and Chlorine System injection.	*Coordinator*
Pump down all Waste Water Treatment Plants' Storage Tanks.	*Sewerage Coordinator*
Ensure that food, ice containers, ice, drinks, etc. are delivered to emergency personnel at the designated areas or sites.	*Human Resources Coordinator*
Ensure that vulnerable Well Fields Trenches are plugged to prevent salt-water inundation.	*North & Central Andros Coordinator*
Lower level in reservoirs to 7 feet, pumping into the sea if necessary.	*North Andros Coordinators*
Ensure timely up-dates are provided to NEMA & Appraise WSC on matters that affect its response	*Inter-Agency Coordinator* *NEMA Coordinator*
Turn off all water supplies at Pumping Stations and close all major production or supply valves to prevent waste in the event of a leak caused by uprooted trees.	*Chief Family Island Coordinators* *Family Island Coordinators* *North Andros Coordinators*
Secure Well Field and Pumping Station electrical power supplies as a safety precaution	*Chief Family Island Coordinators* *Family Island Coordinators* *North Andros Coordinator*
Park vehicles in a safe location away trees and areas with the potential for flooding.	*All*

Hurricane Protocol

There are to be two established Command Centers, the Central Command Center (CCC) and the Field Command Center (FCC). The Central Command Center and the Field Command Centers will be established at building #8 John F. Kennedy Drive & the Mechanical & Electrical section.

The Executive Committee, the Hurricane Committee's and all relevant Coordinators are to position themselves at the Central Command Center once it is established. The NEMA Coordinator will be located at the NEMA's Command Center once it is established.

The Field Command Center will be under the direction of the Central Command Center. Sleeping quarters (quiet area) and food provisions are to be established at both the CCC and FCC.

VII Post Hurricane Review

General

As soon as the emergency abates to the point where restoration of services should begin, the Hurricane Committee will meet to plan the course of action to be taken.

The following activities will be performed during the post hurricane review phase:

ACTIVITY	***ACTION***
Convene a meeting of the Hurricane Committee to plan course of action.	*Committee Chairman*
Prepare damage assessments reports as soon as possible. These reports will assist the Committee with its post review plans.	*All Coordinators All Department Heads*
Activate the Post Review Coordinator to lead teams to assess major damages. This team should include staff from Engineering and Accounts Departments.	*Hurricane Committee*
Prepare damage assessment reports and develop a plan of action for restoration of services. These reports must detail extent of damages, estimated cost and time required to replace or repair.	*Post Review Coordinator*
Contact or visit the family of each Emergency Personnel to ensure that they are safe. This will eliminate a mass exodus of emergency Staff to check on their families.	*Staff/Welfare Coordinator*
Ensure that hot meals, water & drinks are delivered to emergency personnel.	*Human Relations Coordinator*
Liaise with Coordinators to determine whether any emergency personnel has received any injuries. Make appropriate arrangements for medical assistance, follow-up on their recovery process and keep their family members up-dated.	*Staff/Welfare Coordinator*
Contact all off-duty personnel and request that they return to their normal workstation.	*Human Relations Coordinator*

Test Well Field Sources for salt water & other sources of contamination, Record conductivity & other parameters and report to Family Island AGM.	*Family Island Coordinators*
Resume Well Field & Pumping Station services once water is proven safe and mechanical and electrical systems prove to be safe	*Family Island Coordinators Chief Family Island Coordinator*
Inspect Water Supply Systems, re-instate supply in Family Islands as appropriate and report activities to Family Island AGM	*Family Island Coordinators*
Inspect electrical outlets for water damage prior to connecting computers & other equipment	*All Department/Division Heads*
Utilize manual procedure for requisitioning of supplies in the absence of Computer Processing Capability	*All Department/Division Heads*
Inspect Water Supply Systems, re-instate supply in Family Islands as appropriate and report activities to Family Island AGM	*Family Island Coordinators*
Utilize WSC's Satellite Telephones or BTC Satellite Telephones or Administrator's Satellite Telephone to submit Damage Report Up-dates at 10 a.m. and 2 p.m. daily in the event local landline systems have failed.	*Family Island Coordinators*

VIII RESTORATION

Once the damage assessments are completed, the Post Hurricane Review Coordinator will present the Hurricane Committee with a report, with a view to prepare and implement a restoration plan.

NOTE: The General Manager shall give instructions to the response, restoration and recovery teams.

Priorities

In the absence of any instruction to the contrary, the following priorities will automatically take effect

a. *Re-establish communications where required.*
b. *Inspect all Facilities to determine operable status and structural integrity.*
c. *Reinstate portable water supplies to customers where appropriate.*
d. *Reinstate sewerage services to customers where appropriate.*
e. *Inspect distribution mains.*
f. *Inspect Well Fields and test for conductivity and other contaminates.*
g. *Reinstate Well Fields production where appropriate.*
h. *Coordinators to submit daily updates by 11:00a.m and 3:00p.m.*

APPENDIX A
COMPOSITION OF HURRICANE COMMITTEE

Executive Committee *General manager* *Financial Controller* *Deputy General Managers* *Senior AGM/ HR* *AGM Family Island Division* *HOD/ Engineering and Planning* *HOD/ IC&C*	***Human Resources*** *Senior Manager* *Supervisor* *Nurse* ***Sewerage*** *Manager* *Supervisor*
Financial/ Customer Services *Financial Accountant* *Revenue Manager* *Senior Manager (Business Office)* *Purchasing Officer* *Information System Officer*	***Stores*** *Store Keeper*
Andros Operations *Supervisor* *Assistant Supervisor*	***Training Center*** *Senior Manager*
Technical Support *Senior Engineer (Mech/ Elect.)* *Senior Engineer (Garage)* *Mechanical Work Shop Superintendent* *Electrical Supervisor* *Garage Supervisor*	***Construction & Emergency Repairs*** *Senior Manager- Distribution Construction* *Engineer (Construction)* *Construction Supervisor*
Family Island *Family Island Engineer* *Supervisor*	***Internal Control and Compliance*** *Technical Auditor* *Financial Auditor*
Water Supply *Senior Engineer* *Supervisor* *Foremen*	***Distribution*** *Senior Manager* *Supervisor*

APPENDIX B
Schedule of Stations to be Protected and the Designated Responsible Officer.

STATION	***TYPE/ LOCATION OF SHUTTERS***	***OFFICER RESPONSIBLE***
Windsor New Pumping Station	*Fitted wooden shutters to be closed*	*Brian Beneby*
Winton Pumping Station	*Fitted wooden shutters to be closed*	*Brian Beneby*
Fox Hill Sewerage Plant	*Fitted wooden shutters to be closed*	*Erno Bowe / Barret Clarke*
New Providence Operations- Ministry of Public Works Compound	*Windows to be boarded and ground cleared up.*	*Preston Rahming*
Garage	*Fitted wooden shutters (if avail-able) to be closed on builds. Ensure other appurtenances are secured.*	*E. Nottage*
Stores - Building #9	*Same as garage.*	
Technical Support Office Building (Administration Office)	*Same as garage.*	
Summerset House		

*Note: * (Individual deputizing permitted if warranted)*

APPENDIX C

SCHEDULE OF DIESEL STANDBY PLANT

STATION	***No***	***Type of Plant***
Andros Pumping Station	*3* *1*	*Diesel Driven Pump-sets* *Standby Generator for local Pumping and lighting.*
Blue Hills Pumping Station	*1*	*Standby Diesel Generator installation)*
Windsor Pumping Station	*1*	*Diesel Driven pump-set to pump to Prospect, Cable Beach and Gambier. (Standby Generator Purchase Engaged)*
Yellow Elder Garden Treatment Plant		*-*
Airport Treatment Plant		*-*
Fox Hill Treatment Plant		

APPENDIX D

Schedule of names and telephone numbers of those occupying posts in Appendix A
Note: *Office numbers are extension to 302-5500 except where otherwise stated **

	Employee	***Office/ Extension Number***	***Cellphone/ Home Number***
Executives	*Robert Deal*	*302-5504*	*4225312*
	Patrice Munroe	*302-5738*	*422-4833*
	Cyprian Gibson	*302-5546*	*376-8463*
	Mr. Selvin Basden	*302-5519*	*823-7249*
	Greg Stubbs		*3593236*
			457-4641
Engineering, Planning	*Deidre Taylor*	*302-5544*	*3273131*
		302-5707	*457-1960*
Waste and Leaks		*302-5799*	*359-3219*
Finance/Business Office	*Patrice Munroe*	*302-5738*	*422-4833*
		302-5517	*427-7682*
Information Technology	*Dwayne Dorsett*	*302-5581*	*376-3082*
New Providence Operations		*302-5740*	*556-4176*
	Preston Rahming	*302-5704*	*3593224*
Technical Support			
	Gregory Stubbs		*3593236*
	Dwayne Outten		*4274411*
Family Island Administration			
	Chrishano Edgecombe	*302-5605*	*447-8927*

North Andros	*Ketisha Miller*	*329-2028*	*357-2029*
Abaco	*Javasco Curry*	*367-2995*	*475-2519/825-9064*
Eleuthera	*Governor's Harbour Office*	*332-2370*	
	Rock Sound Office	*334-2680*	*334-2302*
	Bogue Station Office	*335-1250*	
Moore's Island			*4750825*
Long Island	*Silas Turnquest*	*337-0972*	*8230841*
Bimini	*Alphonso Rigby*	*347-3454*	*554-4777*
Acklins	*Kenwood Collie*	*344-3690*	*456-0055*
	Edison Rose		*8230853*
San Salvador	*Alphege Butler*		*464-9082*
	Cockburn Town Office	*331-2150*	
Ragged Island/ Exuma	*Karen Rolle*	*336-2867*	*336-2864*
Berry Island	*Calvin Pinder*	*367-8253*	*8230899*
South Andros	*Charmaine Bain*	*369-4674*	*4349164*
Mangrove Cay	*Christopher Smith*	*369-0888*	*471-1120*
Mayaguana	*Kevin Rolle*	*824-5531*	*823-0861*
Crooked Is.	*Moses Forbes*	*822-5244*	*8259038*
Inagua	*Elrico Gardiner*	*4576366*	

APPENDIX E
HURRICANE MANAGEMENT POOL

MANAGEMENT ROTATION POOLS

Selection of Coordinators & Assistant Coordinators

In January of each year, the General Manager shall select the respective coordinators and assistant coordinators from the management pools listed below.

The pools have been organized to ensure that all facets of the Corporation are covered during a hurricane and in most cases, in accordance with the respective skills and expertise of all managers and executives. Additionally, the purpose is to assist with developing managerial skills and cross training of managers.

To ensure that decisions are made in a timely manner executives have been assigned to each pool based on their respective areas of responsibilities and are expected to be present during a hurricane to oversee the various activities.

Where a husband and wife are in the employment of the Corporation as managers, both parties are not to be scheduled on the same rotation within the same hurricane year.

POOL LISTINGS

Mechanical Maintenance Pool
Megan Wilson
Dwayne Outten
Thurman Kemp

Garage & Heavy Plant Pool
Cyprian Gibson (Executive)
Eduardo Nottage
Walter Neymour

Communications Pool
Robert Deal (General Manager)
Nikolette Elden
Dwayne Dorsett
Sabastian Carey

Staff Welfare & Human Relations Pool

Robert Deal (General Manager)
Jennifer Smith
Nurse Roberts

North and Central Andros Operations Pool
Greg Stubbs (Executive)
Ketisha Miller
Daquin Scott
Anton White

Inter-Agency & NEMA Coordinator Pool
Cyprian Gibson (Executive)
Arlington Bethell
Chrishano Edgecombe

Sewerage & Waste Water Pool
Cyprian Gibson (Executive)
Erno Bowe
Barret Clarke

Water Supply Pool
Brian Beneby
Kevin Carey
Kenyan Ferguson
Krisnoff Albury

Distribution System Pool
Robert Deal (Executive)
Preston Rahming

Stores & Supplies Pool
Edwin Burrows

Records
Patrice Munroe (Executive)
Robert Deal (Executive)
Jennifer Smith

Public Relations Pool
Robert Deal (Executive)
Jennifer Smith
Nikolette Elden

IT Pool
Robert Deal (Executive)
Dwayne Dorsett
Diego Godet
Beverley Smith
D'Chaz MOSS

Chief Family Island Coordinator
Greg Stubbs (Executive)
Chrishano Edgecombe

Respective Family Islands Coordinator
Robert Deal (Executive)
Chrishano Edgecombe
Daquin Scott/ Ketisha Miller
Greg Stubbs
Karen Rolle
Silas Turnquest

Post Review Coordinator
Robert Deal (General Manager)
Cyprian Gibson
Arlington Bethel
Greg Stubbs
Patrice Munroe
Preston Rahming
Erno Bowe
Chrishano Edgecombe

APPENDIX F

HURRICANE PRIORITY LISTING FOR RESTORATION OF ELECTRICAL SERVICES

WATER AND SEWERAGE CORPORATION

HURRICANE POWER RESTORATION FAMILY ISLAND

PRIORITY LISTING - WATER FACILITIES

PRIORITY	AREA	NAME & FACILITY TYPE	FACILITY LOCATION	UT. POLE #	STAND-BY POWER	REMARKS
ELEUTHERA						
1	NORTH	Bogue well field WF & PS				
		Spanish Well WF				
2	CENTRAL					
3	SOUTH	Tarpum Bay & Rock Sound				
		WF & PS				
ABACO MAIN LAND						
1	CENTRAL	Marsh Harbour WF & PS				
2	NORTH	Treasure Cay WF & PS				
3	NORTH	Blackwood WF & PS				
4	NORTH	Cedar Harbour WF & PS				
5	SOUTH	Sandy Point WF & PS				
6	CENTRAL	Spring City WF & PS				
7	SOUTH	Crossing Rocks WF & PS				
8		Casuarinas Point WF & PS				
ABACO CAYS						
1		Moores Island RO Plant				
EXUMA MAIN LAND						
1		George Town RO Plant				
EXUMA CAYS						
1		Black Point RO Plant				
1		Farmers Cay RO Plant				
1		Staniel Cay RO Plant				

APPENDIX G
SERVICE AGREEMENT

WATER AND SEWERAGE CORPORATION
87 Thompson Blvd., P. O. Box N-3905, Nassau, Bahamas
Website: www.wsc.com.bs
Striving to Serve You with Excellence

SERVICE AGREEMENT FOR THE PROVISION OF HEAVY EQUIPMENT SERVICE TO THE WATER AND SEWERAGE COPORATION IN THE WAKE OF A HURRICANE

Agreement Date: _____

This standing service agreement is made between

_____ (Company's name) and the Water and Sewerage Corporation and acknowledges that the Corporation will be given first priority should it require the use of heavy equipment in the aftermath of a storm.

This agree further acknowledges the hourly rate of $_____ for the required equipment and operator that the Corporation will pay during the Agreement year _____. This agreement terminates at the end of Hurricane season for the service agreement year.

The equipment to be used in this agreement is a _____ (insert type of equipment). Should the named equipment fail, the Contractor shall provide a similar equipment to complete the work contracted to perform.

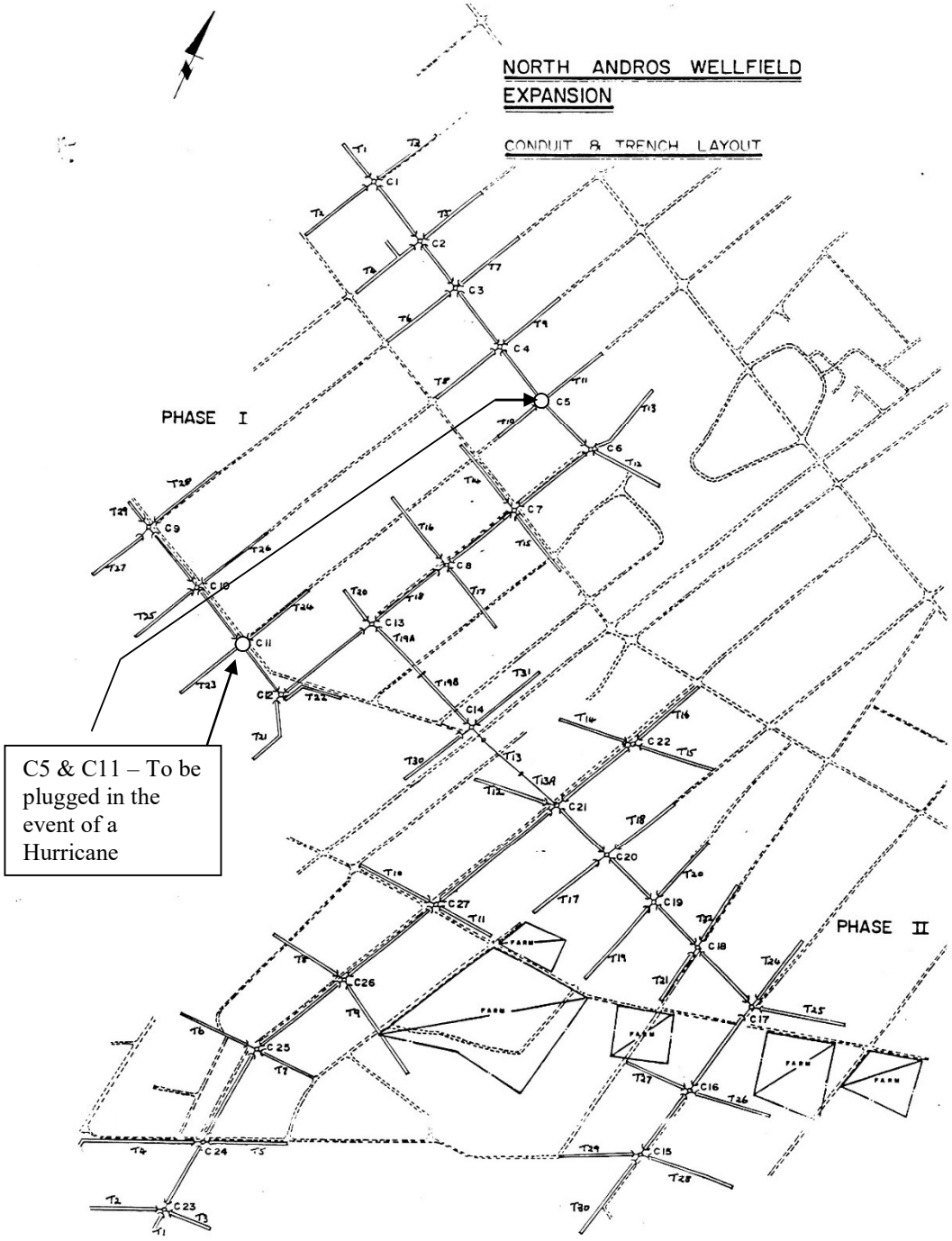
In acknowledgement of the terms of this agreement, kindly sign in the space provided below.

Contractor's Representative: _____
Date: _____

Water and Sewerage Corporation's Representative: _____
Date: _____

APPENDIX H

North Andros Well field - Salt Water Intrusion Hurricane Procedure


NORTH ANDROS WELLFIELD
EXPANSION
CONDUIT & TRENCH LAYOUT
PHASE I
PHASE II
C5 & C11 – To be plugged in the event of a Hurricane

2024 OFFICIAL HURRICANE SHELTER LIST

ABACO, CENTRAL DISTRICT

NO.	NAME OF SHELTER	ADDRESS
1	**Central Abaco Primary School**	Dundas Town
2	**Friendship Tabernacle**	Dundas Town
3	**Guana Cay Primary School**	Guana Cay
4	**Man-O-War Primary School**	Man-O-War Cay
5	**Hope Town Primary School**	Hope Town
6	**Murphy Town Community Centre**	Murphy Town

ABACO, NORTH DISTRICT

NO.	NAME OF SHELTER	ADDRESS
1	**Amy Roberts Primary Pre-School**	Green Turtle Cay
2	**Faithwalk Church of God, Community Centre**	Cooper's Town
3	**Grand Cay All Age School Pre-school Block**	Grand Cay

ABACO, SOUTH DISTRICT

NO.	NAME OF SHELTER	ADDRESS
1	**Crossing Rocks Primary School**	Crossing Rocks
2	**Moore's Island School**	Moore's Island
3	**Sandy Point Community Centre**	Earnest Dean Highway
4	**Soul Seeking Ministry**	Moore's Island

ACKLINS

NO.	NAME OF SHELTER	ADDRESS
1	**Joshua Kingdom Ministries**	Pine field

ANDROS, CENTRAL DISTRICT

NO.	NAME OF SHELTER	ADDRESS
1	**Bowen Sound Pentecostal Church**	Bowen Sound
2	**Church of God**	Cargill Creek
3	**Mt. Ethel Baptist**	Love Hill

ANDROS SOUTH DISTRICT & MANGROVE CAY

NO.	NAME OF SHELTER	ADDRESS
1	**Rev. Euthurl Rodgers Primary School**	Deep Creek
2	**Friendship Baptist Church**	The Bluff
3	**Cleora McKenzie Pre-school**	Long Bay Cays
4	**Mount Olive Baptist Church**	Smith's Hill
5	**Burnt Rock Primary School**	Burnt Rock
6	**Mangrove Cay High School**	Swains, Mangrove Cay

ANDROS, NORTH DISTRICT

NO.	NAME OF SHELTER	ADDRESS
1.	**B. A. Newton Primary School**	Red Bays
2.	**BAMSI Training Centre**	BARC Community
3.	**Nicholls Town Primary & Clara Evans Primary Schools**	Nicholl's Town

BERRY ISLANDS, GREAT HARBOUR CAY

NO.	NAME OF SHELTER	ADDRESS
1.	**Church of God of Prophecy**	Great Harbour Cay
2.	**Berry Islands Community Centre**	Bullocks Harbour

BIMINI

NO.	NAME OF SHELTER	ADDRESS
1.	**Gateway Gymnasium**	Bailey Town
2.	**Louise McDonald High School (4 class rooms)**	Alice Town
3.	**Urban Renewal (Special Needs Shelter)**	Alice Town

CAT ISLAND

NO.	NAME OF SHELTER	ADDRESS
1.	**St. Mark's Anglican Church**	Port Howe
2.	**Zion Baptist Church**	McQueens
3.	**Seaview Seventh Day Adventist Church**	Wilson Bay
4.	**Holy Redeemer Catholic Church**	New Bight
5.	**Mt. Sinai Baptist Church**	Douds
6.	**Lovely Zion Baptist Church**	The Bluff

CROOKED ISLAND & LONG CAY

NO.	NAME OF SHELTER	ADDRESS
1.	**All Saints Anglican Church, Priest Residence (Colonel Hill and Church Grove Residents)**	Church Grove, Crooked Island
2.	**Church of God of Prophecy (Landrail Point, Richmond, Moss Town and Cripple Hill Residents)**	Cripple Hill, Crooked Island
3.	**Landrail Point Community Centre**	Landrail Point (60 persons seated)

ELEUTHERA, CENTRAL DISTRICT

NO.	NAME OF SHELTER	ADDRESS
1.	**Wesley Methodist Church Hall**	Palmetto Point
2.	**Church of The Nazarene**	Palmetto Point
3.	**The Salvation Army**	Palmetto Point
4.	**Emily G. Petty Primary School**	Governor's Harbour
5.	**George E. Johnson Memorial Centre**	Hatchet Bay
6.	**Bahamas Methodist Habitat Camp Symonette**	James Cistern
7.	**Bahamas Methodist Habitat**	James Cistern

ELEUTHERA, NORTH DISTRICT

NO.	NAME OF SHELTER	ADDRESS
1.	**Charles Wesley Methodist Church**	Lower Bogue
2.	**Mission Church of God**	Upper Bogue
3.	**The Current Community Centre**	The Current
4.	**The Haitian Baptist People Church**	The Bluff
5.	**Zion Methodist Church**	Current Island
6.	**New Jerusalem Church**	Blackwood

ELEUTHERA, SOUTH DISTRICT

NO.	NAME OF SHELTER	ADDRESS
1.	**Church of God of Prophecy**	Tarpum Bay
2.	**Deep Creek Primary School**	Deep Creek
3.	**Green Castle Primary School**	Green Castle
4.	**Rock Sound Primary School**	Rock Sound
5.	**Wemyss Bight Primary School**	Wemyss Bight

EXUMA & RAGGED ISLAND

NO.	NAME OF SHELTER	ADDRESS
1.	**Bethel Union Baptist Church**	Ramsey
2.	**Ebenezer Union Baptist Church**	Farmer's Hill
3.	**Ebenezer Union Baptist Church**	Barraterre
4.	**Exuma Resource Centre**	Hoopers' Bay
5.	**Forbes Hill Cultural Centre**	Forbe's Hill
6.	**Gethsemane Baptist Church**	Black Point
7.	**Mt. Carmel Mission Baptist Church**	Rolletown
8.	**Mt. Herman Union Baptist Church**	Mt. Thompson
9.	**St Johns The Baptist Anglican Church**	Moss Town
10.	**St. Lukes Baptist Church**	Black Point
11.	**The New Mt. Olive Union Baptist Church**	Hartswell
12.	**Mt. Olivet Baptist Church**	Staniel Cay
13.	**Palestine Union Baptist Church**	The Forest
14.	**St. Andrew's Community Centre**	George Town
15.	**St. Margaret's Anglican Church**	Harts/Steventon
16.	**St. Mary's Magdalene Anglican Church**	Williams Town
17.	**St. Theresa's Catholic Church**	George Town
18.	**St. Peter's Union Baptist Church**	Forbe's Hill
19.	**Mt. Sinai Union Baptist Church**	Stuart Manor
20.	**Holy Innocents Anglican Church**	Ragged Island, Duncan Town
21.	**Calvary Mission Baptist Church**	Rolleville

WEST GRAND BAHAMA

NO.	NAME OF SHELTER	ADDRESS
1.	**Bethany Baptist Church**	Hanna Hill
2.	**Bethel Deliverance Centre**	Jones Town
3.	**Church of Prophecy (COGOP)**	Seagrape
4.	**Central Zion Baptist Church**	Pinedale
5.	**Bethel Baptist Church**	Pinedale
6.	**Church of God of Prophecy (COGOP)**	Pinedale
7.	**New Mount Olivet Baptist**	Holmes Rock
8.	**Eight Mile Rock Gymnasium**	Eight Mile Rock

CENTRAL GRAND BAHAMA

NO.	HURRICANE SHELTER	ADDRESS
1.	**Foster B. Pestina Hall (Special Needs Shelter)**	East Atlantic Drive
2.	**Church of Ascension**	West Beach Dr. & Arden Forest Road
3.	**Central Church of God**	Coral Rd. & Pioneer's Way
4.	**First Baptist Church**	Columbus Drive
5.	**Shiloh Seventh Day Adventist Church**	Sandcombe Road
6.	**Revelations Apostolic International**	Jobson Ave
7.	**New Life Worship Center**	Coral Road
8.	**Calvary Temple Assembly of God**	Clive Avenue
9.	**Bishop Michael Eldon School Auditorium**	Beach Way & Gambier Drive
10.	**COGOP Community at Heart** *(Reserved for use of aftermath)*	Coral Road
11.	**Universal Household of Faith** *(Reserved for use of aftermath)*	Andros Way & Grand Bahamian Way
12.	**Flame of Fire** *(Reserved for use of aftermath)*	Williams Town
13.	**Maurice Moore Primary School**	Torcross Rd. & Sandcombe Drive
14.	**First Holiness Church of God (Reserved for Youth of aftermath)**	Young Husband Avenue
15.	**Miracle Bible Fellowship** *(Reserved for aftermath)*	Eleuthera Drive, Hawksbill
16.	**Sir Jack Haywood Junior High School**	Settlersway

HARBOUR ISLAND

NO.	NAME OF SHELTER	ADDRESS
1.	**Harbour Island Public Library**	Harbour Island
2.	**Lighthouse Church of God**	Harbour Island
3.	**New Alliance Church of God**	Harbour Island

INAGUA

NO.	NAME OF SHELTER	ADDRESS

1.	**New Life Seventh-Day Adventist Church**	Matthew Town
2.	**St. Phillips Anglican Community Centre**	Matthew Town
3.	**Zion Baptist Church**	Matthew Town

LONG ISLAND

NO.	NAME OF SHELTER	ADDRESS
1.	**Assemblies of God**	Salt Pond
2.	**Community Centre**	Clarence Town
3.	**Highway Church of God**	Doctors Creek
4.	**Holy Cross Anglican Church**	Hamiltons
5.	**Holy Family Anglican Church**	Mortimers
6.	**Salem Baptist Church**	Millers
7.	**St. John's Anglican Church**	Buckleys
8.	**Seymour's Gospel Chapel**	Seymour's

MAYAGUANA

NO.	NAME OF SHELTER	ADDRESS
1.	**St. James Native Baptist Church**	Abraham's Bay
2.	**Betsy Bay Community Centre**	Betsy Bay
3.	**Mayaguana Comprehensive K- School**	Pirate's Well

NEW PROVIDENCE

NO.	NAME OF SHELTER	ADDRESS
1	**Agape Full Gospel Baptist Church**	Kennedy Subdivision
2	**Berea Seventh-Day Adventist Church**	Baillou Hill Road South
	Canon Neil E. Roach Hall, Holy Cross Anglican Church	Highbury Park
4	**Church of God Convention Centre (for use by SRC)**	Joe Farrington Road
5	**Epworth Hall, Ebenezer Methodist Church (for use by Homeless and People with Physical Disabilities)**	Shirley Street
6	**Grants Town Seventh-Day Adventist Church**	Wellington Street
7	**Hillview Seventh-Day Adventist Church**	Tonique Williams Darling Highway
8	**Maranatha Seventh-Day Adventist Church**	Prince Charles Drive
9	**New Bethlehem Baptist Church**	Independence Drive
10	**New Dimensions Ministries**	Joe Farrington Road
11	**New Providence Community Centre**	Blake Road
12	**Pilgrim Baptist Temple**	St. James Road
13	**St. Barnabas Anglican Church**	Wulff Road and Baillou Road
14	**Rev. Dr. O. A. Pratt Educational Building, St. John's Native Baptist Church**	Augusta and Meeting Streets
15	**Samuel and Cornella Williams Community Centre, The Salvation Army**	Meadow Street
16	**Living Waters Kingdom Ministries**	Warren Street
17	**The Anglican Church of the Epiphany**	Prince Charles Drive
18	**The Salvation Army**	Mackey Street

SAN SALVADOR AND RUM CAY

NO.	NAME OF SHELTER	ADDRESS
1.	**Fellowship in Christ Church**	Cockburn Town
2.	**Gerace Research Center**	United Estates Settlement
3.	**Idell Jones Community Hall**	Cockburn Town
4.	**St. James Native Baptist Church**	North Victoria Hill
5.	**St. John's Native Baptist Church**	United Estates
6.	**St Peters Native Baptist Church**	Long Bay
7.	**Rum Cay All Age School**	Rum Cay

@ 13 May, 2024 DOSS, Disaster Management Unit
DRM Authority

Please note that this list is subject to change; where necessary.