Your EIA in action.

east/west arterial environmental impact assessment

Public Meeting:
DRAFT Environmental Statement for the Environmental Impact Assessment for the East-West Arterial Extension

Thursday, January 23, 2025
6:00pm – 9:00pm
Church of God Chapel Hurricane Shelter
Bodden Town, Grand Cayman

WiFi: BTCCC_Guest
Password: Samson#172

Scan to submit questions

Environmental Impact Assessment Draft Environmental Statement:

EAST-WEST ARTERIAL EXTENSION

SECTION 2
(WOODLAND DRIVE – LOOKOUT ROAD)

SECTION 3
(LOOKOUT ROAD – FRANK SOUND ROAD)

AGENDA

01 PROJECT TEAM & STUDY DISCIPLINES

02 ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

03 THE EWA EIA

04 OBJECTIVES AND CONSTRAINTS

05 PROPOSED PROJECT OVERVIEW & ITS COMPONENTS

06 PROPOSED PROJECT ESTIMATED COSTS & POTENTIAL SAVINGS

07 IMPACTS SUMMARY

08 KEY MITIGATION CONSIDERATIONS

09 INFLUENCES ON TRANSPORTATION & MOBILITY

10 NEXT STEPS & COMMENTS

PROJECT TEAM

Project Sponsors

Ministry of Planning, Agriculture, Housing, Infrastructure, Transport & Development
Cayman Islands Government

NRA NATIONAL ROADS AUTHORITY

Environmental Assessment Board Members

Department of Environment
Cayman Islands Government

Water Authority - Cayman
"Suppliers of the World's Most Popular Drink"

DEPARTMENT OF PLANNING
Cayman Islands Government

Cayman Islands Government
Public Works Department

EIA Consultant Team

WRA

EIA Subconsultant Team

TOWER Stantec res EBP AMR CONSULTING ENGINEERS

Third Party Review Consultant

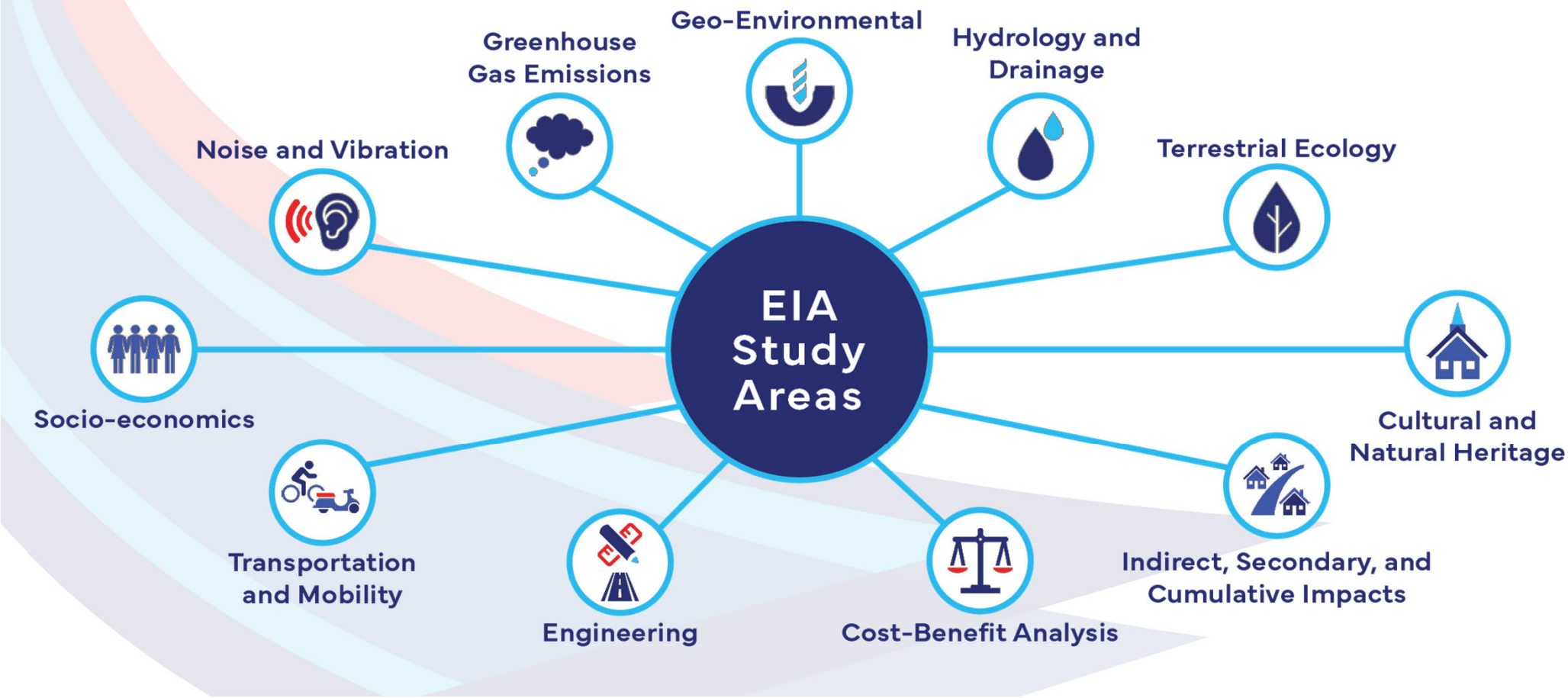
TYLin

External Consultant

Baird. Innovation Engineered.

RVE 1901 REMINGTON & VERNICK ENGINEERS

STUDY DISCIPLINES



ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

1 Proposal/ Project

2 Screening (DoE)

3 Scoping Opinion

i. Scoping Opinion
ii. Consultant Selection
iii. Draft Terms of Reference
iv. Public Consultation Meeting
v. Final Terms of Reference

4 Environmental Impact Assessment (Proponent)

5 Environmental Statement & Environmental Management Plan

i. Draft Environmental Statement (ES)
ii. Public Consultation Meeting
iii. Final ES
iv. Environmental Management Plan
v. Environmental Assessment Board Letter of Final Recommendation

6 Decision

Central Planning Authority/ Development Control Board, Cabinet or other authorizing entity

WE ARE HERE

7 Implementation Based on Environmental Management Plan (Proponent)

**EIA process prescribed in EIA Directive*

DRAFT ENVIRONMENTAL STATEMENT (ES)

DRAFT ES

A comprehensive 694-page document with over 6,000 pages of appendices

Qualitatively and quantitatively evaluated the effects of the selected alternative, referred to as the Proposed Project on Natural and Social Environment.

Evaluated 2 types of effects:

- During construction
- During operation and maintenance

https://www.caymanroads.com/projects

https://www.conservation.ky/eia-reports

NON-TECHNICAL SUMMARY

65-page document

Detailed overview summarizing the Draft ES in less technical terms

THE OUTCOME OF THE EWA EXTENSION EIA

ENVIRONMENTAL MANAGEMENT PLAN – INCLUDED WITH THE FINAL ES

This document will establish the guidance for avoidance, minimisation, and mitigation to be used in the detailed design, construction, and operation of the project.

WHAT IS THE OUTCOME OF THE EIA?

- The outcome of the EIA Process is to identify a proposed project which meets the CSFs
- Refine the proposed project to avoid & minimise effects where possible
- Refine the proposed project to increase benefits or reduce costs where possible
- Determine mitigations for unavoidable effects to be included during detailed design, construction, and operation

OBJECTIVES AND CONSTRAINTS OF THE PROJECT

OBJECTIVES

Critical Success Factors:

- Create Alternative Routes
- Improve Existing Roadway Resiliency
- Support Future Traffic Demand
- Improve Commuter Travel Times
- Accommodate Utility Expansion
- Provide Public Transit Access
- Reduce Tourist Travel Times
- Improve Safety
- Enhance Safe Pedestrian & Bicycle Access

CONSTRAINTS

Natural Environment

- Ecologically valuable habitat
- Protected areas
- National Trust-owned areas

Social Environment

- Areas of cultural and historic significance
- Community / neighborhood cohesion

Engineering

- Provide for sound geometric design conditions
- Plan for areas necessary for construction

PROPOSED PROJECT OVERVIEW

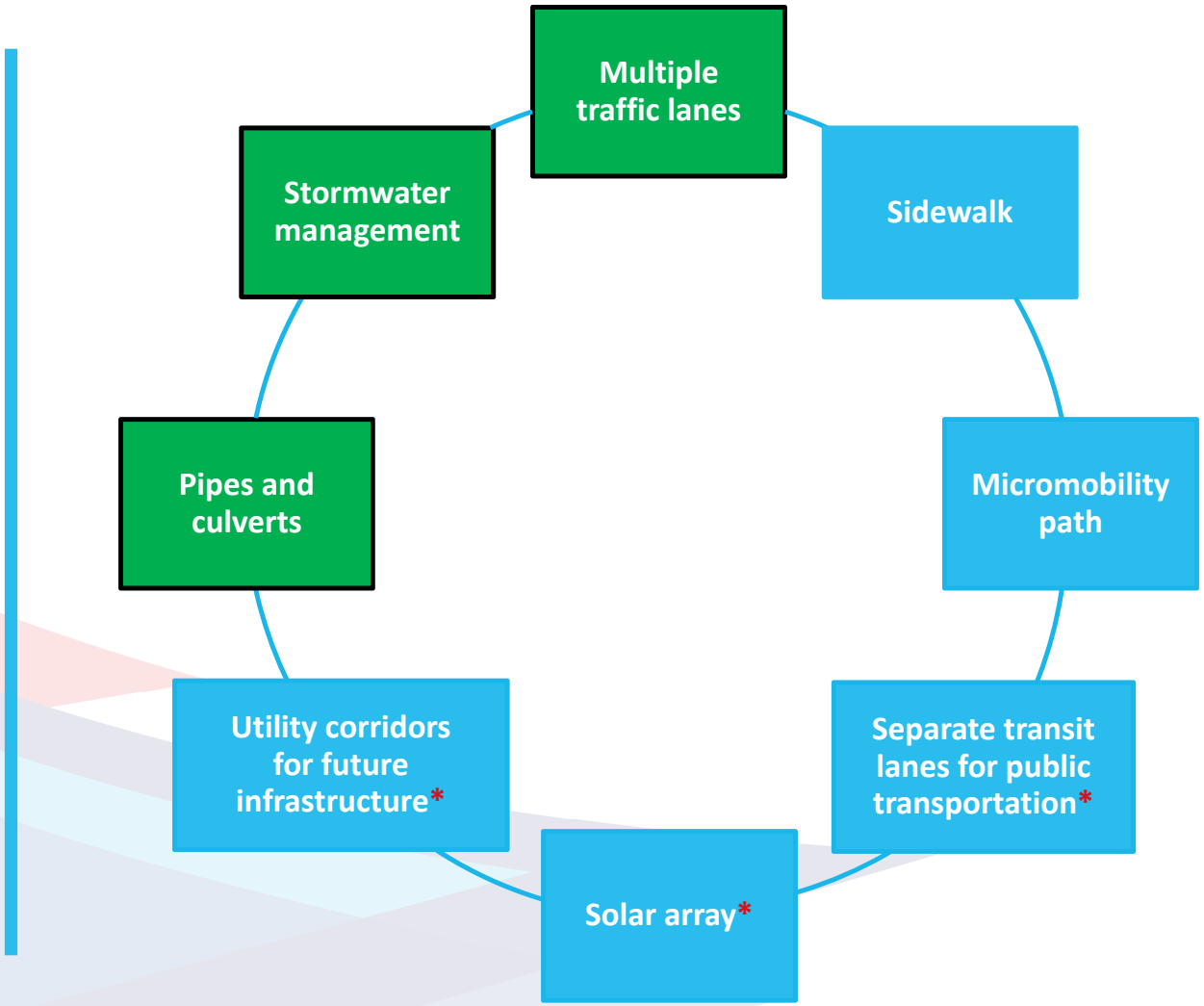
8 mile long (13 km), multi-use corridor

Section 2
Woodland Drive to Lookout Road

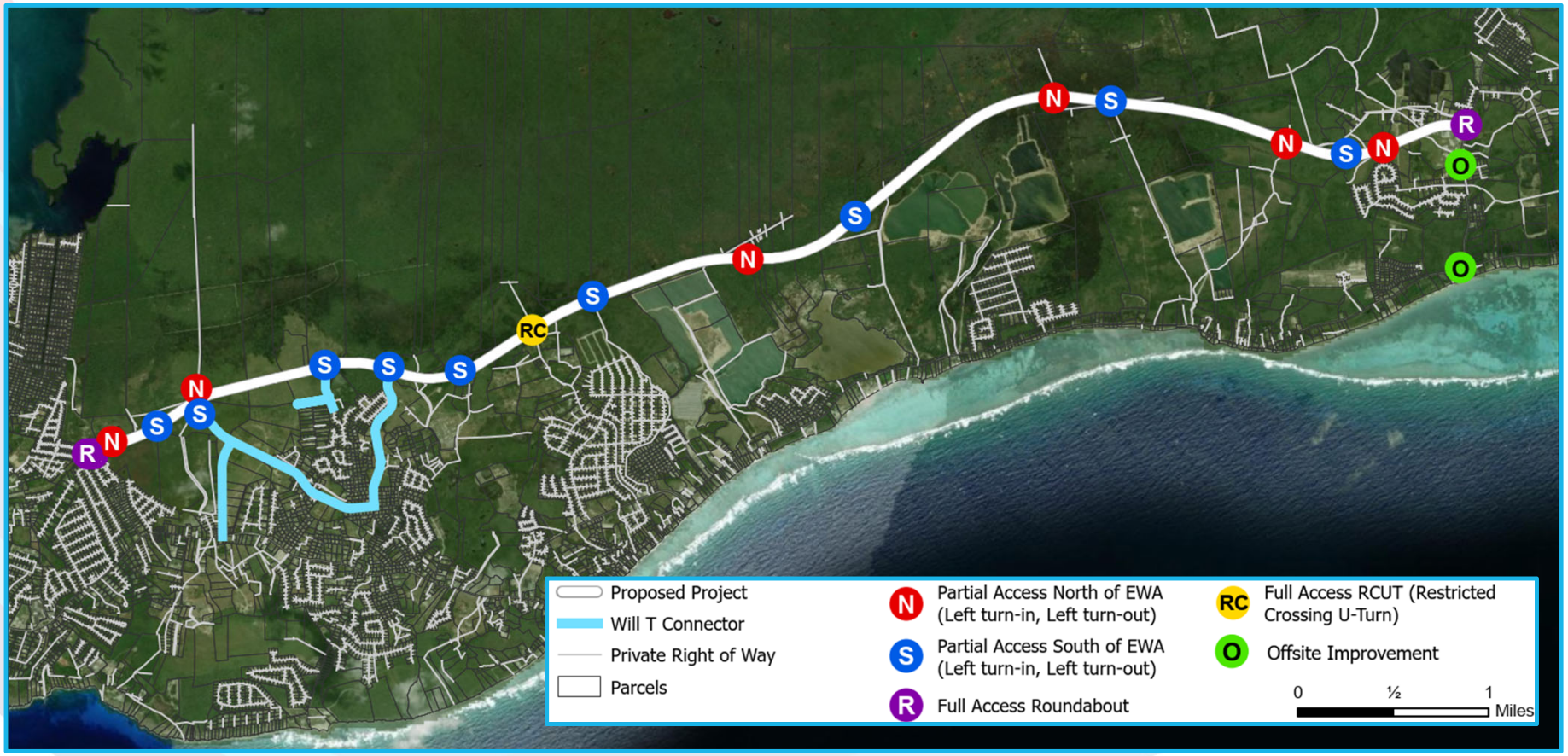
Section 3
Lookout Road to Frank Sound Road

PROPOSED PROJECT

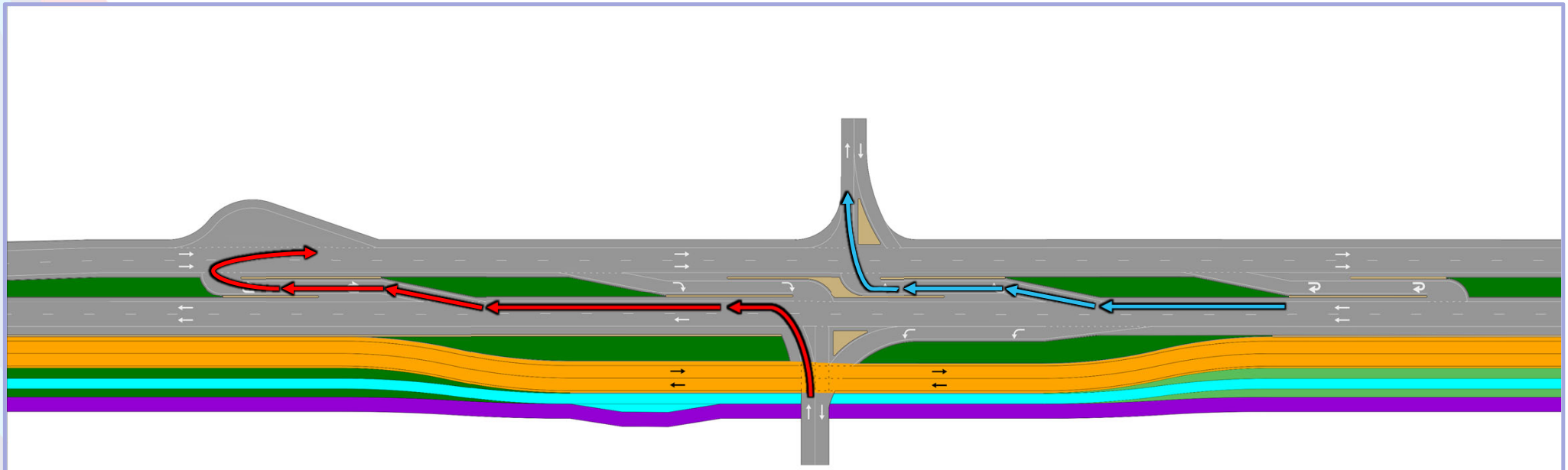
**The Proposed Project is to provide opportunities to accommodate these features. It is outside the ambit of the NRA to provide public transportation or utilities.*



INTERSECTIONS



HOW INTERSECTIONS WILL WORK

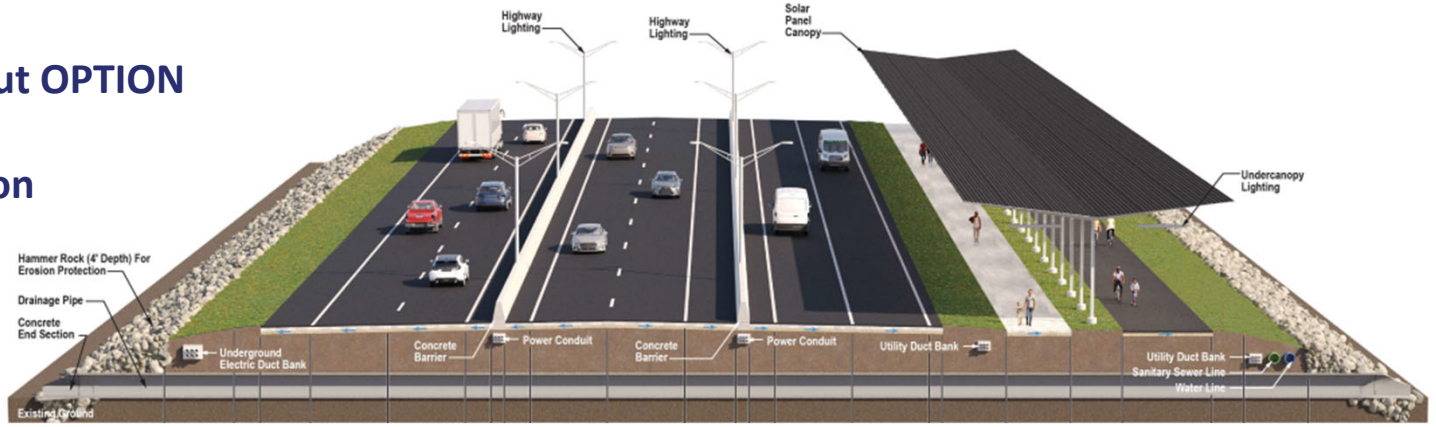


Not to Scale

PROJECT PHASING

First Phase of the Project
Sections 2 & 3
2026 Typical Section

Potential Ultimate Build Out OPTION
Sections 2 & 3
2060 Typical Section



EXCELLENT, GOOD, ACCEPTABLE FITS

Excellent Fit

- **All lanes fully elevated (~15-20 ft. elevation) in ultimate build out**
- Provides a fully resilient corridor for more moderate storm events
- Quickest recovery for full corridor and lowest maintenance from storm event
- Provides improved resiliency for incidents
- Represents current EIA cost estimates

Good Fit

- **All lanes lesser elevated (~10-15 ft. elevation) in ultimate build out**
- Provides a fully resilient corridor for lesser moderate storm events
- Quicker recovery for full corridor and lower maintenance from storm event
- Provides improved resiliency for incidents
- ~15-20% potential cost savings

Acceptable Fit

- **Only 2 lanes fully elevated (~15-20 ft. elevation) in ultimate build out (all other lanes at ~7-9 ft. elevation)**
- Provides a partially resilient corridor for more moderate storm events
- Quickest recovery for partial corridor and highest maintenance from storm event
- Provides improved resiliency for incidents
- ~40-60% potential cost savings

COST REDUCTION OPTIONS

Elevate Only Two Travel Lanes for Resiliency [40%-60%]	Change Concrete Median Barrier to Guard Rail System [1%-5%]	Reduce Structure Height [1%-5%]
25-Year Design Storm [15%-20%]	Use of Geosynthetic Solutions to Address Peat Area [1%-5%]	Reduction of Travel Lane Width [1%-5%]
Use of Alternative Structure Type (Box Culvert) [10%-15%]	Change Paved Shoulder to Paved and Graded Aggregate [1%-5%]	Reduce Width of Sidewalk and Micromobility Path [1%-5%]

ESTIMATED PROJECT COST (2024 CI$)

Section 2 + Section 3 Includes Will T Connector & 15 Structures	Estimated Total Project 50-Year Lifecycle Cost
Excellent Fit	~ $916,080,000
Acceptable Fit	~ $466,585,000

Note that all cost estimates provided are calculated in 2024 Cayman Island dollars, without adjustments for inflation and rounded.

INITIAL 2026 CONSTRUCTION PHASE (CI$ Millions)

2026 Initial Phase	Section 2 (~2.84 miles)	Section 3 (~5.08 miles)
Excellent Fit	~ $120	~ $114
Excellent Fit (Without Will T)	~ $105-115	~ $114
Good Fit (With Will T)	~ $75-85	~ $75-85
Good Fit (Without Will T)	~ $65-75	~ $75-85
Acceptable Fit (With Will T)*	~ $40-45*	~ $35-40*
Acceptable Fit (Without Will T)*	~ $30-35*	~ $35-40*

- *Note that all cost estimates provided are calculated in 2024 Cayman Island dollars, without adjustments for inflation and rounded.*
- *Good Fit and Acceptable Fit account for Value Engineering Options including Geosynthetic Solutions to Peat Removal, Reduction of Travel Lane Width to 11', and Changing Median Barrier from Concrete to a Guard Rail System.*

** Acceptable Fit Estimate provided by the NRA, will be refined during the Final ES*

IMPACTS SUMMARY

NATURAL ENVIRONMENT

Impacts

- Habitat Loss
- Habitat fragmentation
- Change of surface water flows and drainage patterns/flood risk
- Surface water pollution potential
- Subsurface impacts
- Peat removal
- Wildlife/roadway collisions
- Noise
- Light pollution
- Spread of invasive species

SOCIAL ENVIRONMENT

Improvements

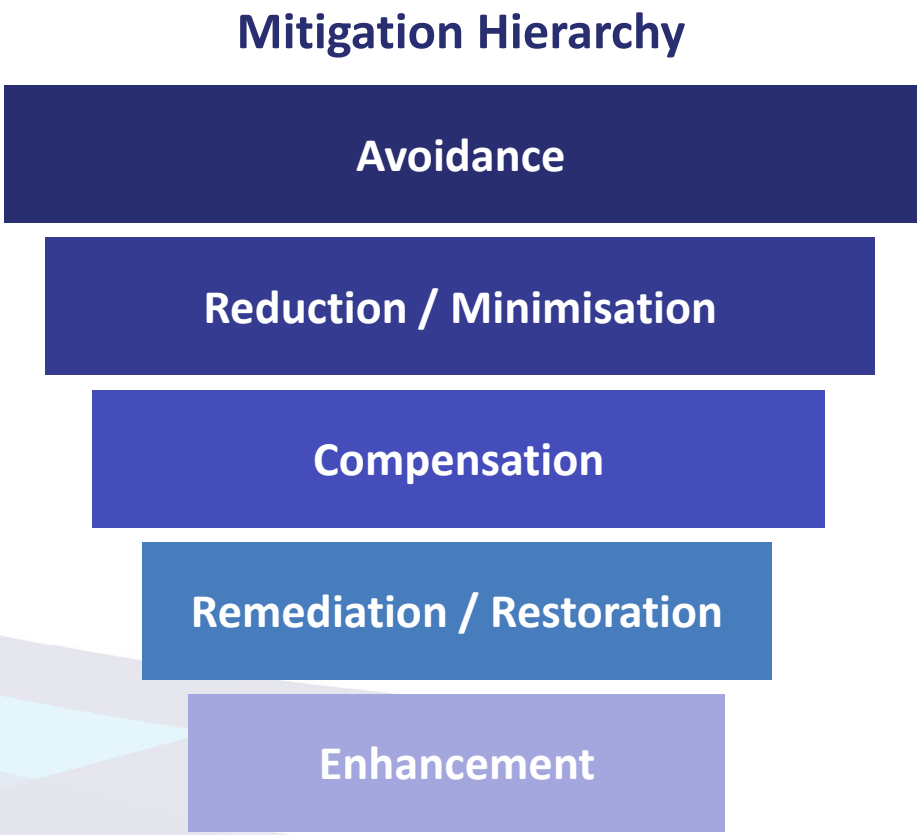
- Accessibility
- Resiliency
- Intersection delay
- Journey quality
- Community connectivity
- Options for other modes of travel
- Local workforce utilization

Impacts

- Flooding in developed areas
- Right-of-Way acquisition/relocations
- Viewshed impacts
- Noise and vibration impacts
- Traffic disruptions due to construction

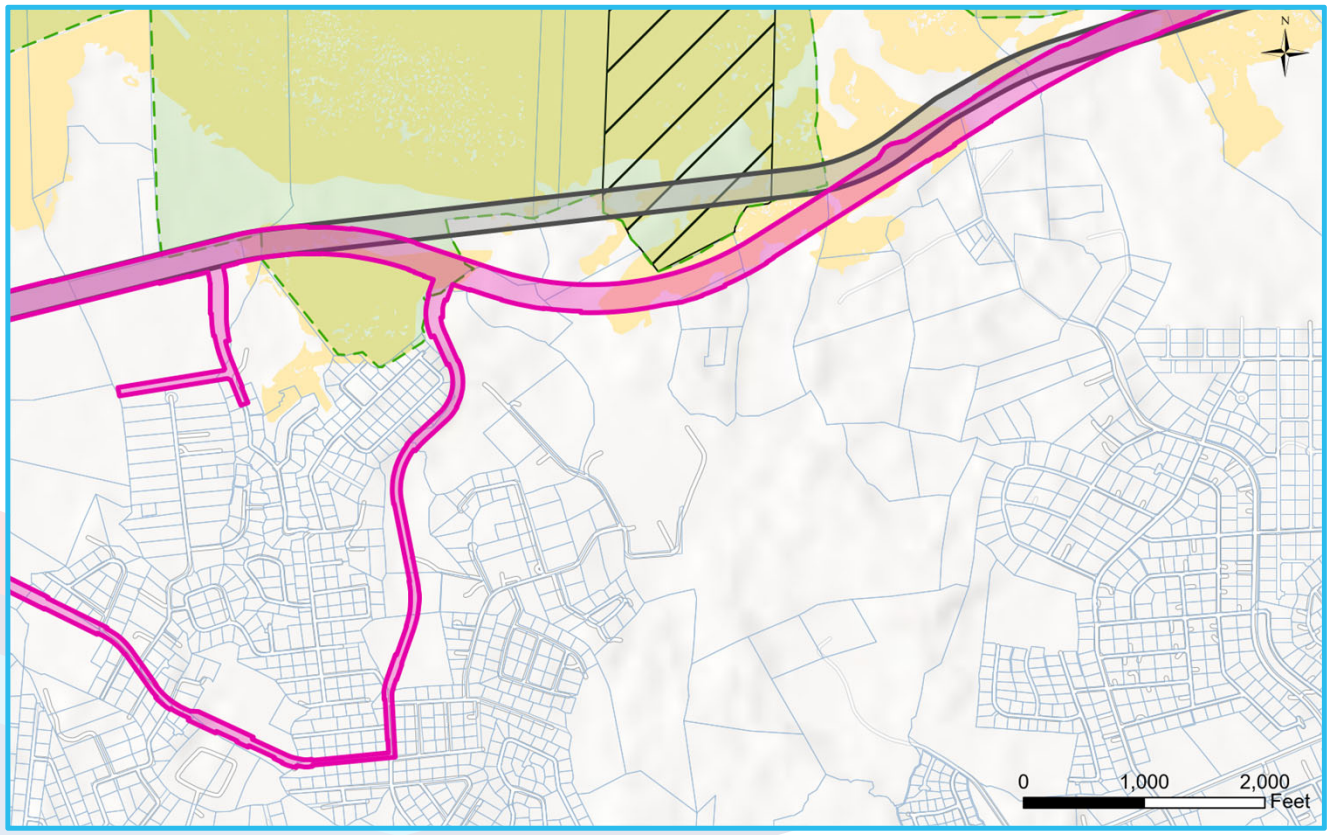
KEY MITIGATION CONSIDERATIONS

- Inclusion of roadway openings and culverts to maintain hydrology
- Best management practices during construction and maintenance to reduce potential impacts, such as erosion and sediment control, spill prevention, and flagging sensitive habitat areas
- Achieving No Net Loss of Biodiversity through terrestrial ecology mitigation
- Traffic noise barriers where feasible and reasonable
- Minimising or reusing excavated peat

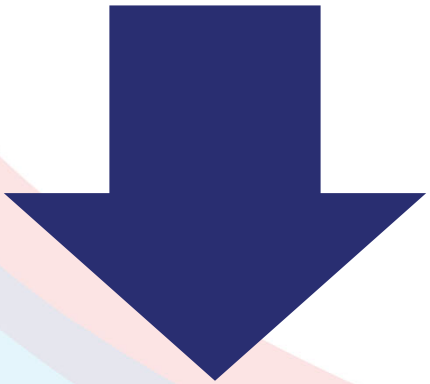


HOW THE PROJECT AVOIDS & MINIMISES

The alignment was shifted to avoid impacts to the National Trust Land, Mastic Reserve, and Mastic Trail as well as minimise impacts to Parrot Nesting Habitat.



FACTORS THAT INFLUENCE TRANSPORTATION



Reduce Congestion - Improve Mobility

- Resilient Transportation Infrastructure
- Improved Transit System
- Employment included in Eastern Districts
- Walking/Biking/Micromobility for Short Trips

Increase Congestion - Degrade Mobility

- Only 1 Transportation Route
- Status Quo Transit
- Employment Concentrated in George Town
- Requiring Cars for Short Trips

HOW THE EWA INFLUENCES MOBILITY

PROPOSED PROJECT BENEFITS

Provides alternate route for daily travel and in the event of road closures or flooding along the coastal road.

Provides resiliency to the coastal road by shifting traffic to the safer EWA facility, proportionally reducing crashes and resulting road closures.

Supports current/future traffic demand and improves travel times when compared to the Future No-Build condition.

Accommodates dedicated transit lanes.

Improves nonvehicular access to key destinations.

FUTURE CONSIDERATIONS

To further improve transportation travel time benefits (outside the ambit of the NRA):

Increased ride share to reduce the number of vehicles on the road.

Increased mode shift:
Use of transit or other nonvehicular modes of travel to reduce the number of vehicles on the road.

Changes in land use development, zoning, and demographic distributions – for example, more employment on the eastern side of the island.

NEXT STEPS

- Collect and evaluate comments on Draft ES
- Prepare Final ES and Environmental Management Plan
- Appropriate funding for detailed design and construction
- Inform detailed design and construction
- Complete detailed design of roadway and mitigation commitments
- Acquire land/properties
- Relocate existing utilities where present
- Clear area for initial phase of the construction
- Construct project including mitigation commitments
- Open project to traffic

COMMENTS

How to leave a public comment:

1. Submit a written comment to NRA and DoE staff present this evening
2. Email the Environmental Assessment Board at DOE@gov.ky
3. Mail a comment to:
   - *Department of Environment*
     PO Box 10202, KY 1-1002
     Grand Cayman, Cayman Islands
4. Hand deliver a comment to:
   - *Environmental Centre*
     580 North Sound Road
     George Town, Grand Cayman

*Deadline for comments on the Draft Environmental Statement is **Monday, 3 February 2025**.*

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east/west arterial environmental impact assessment

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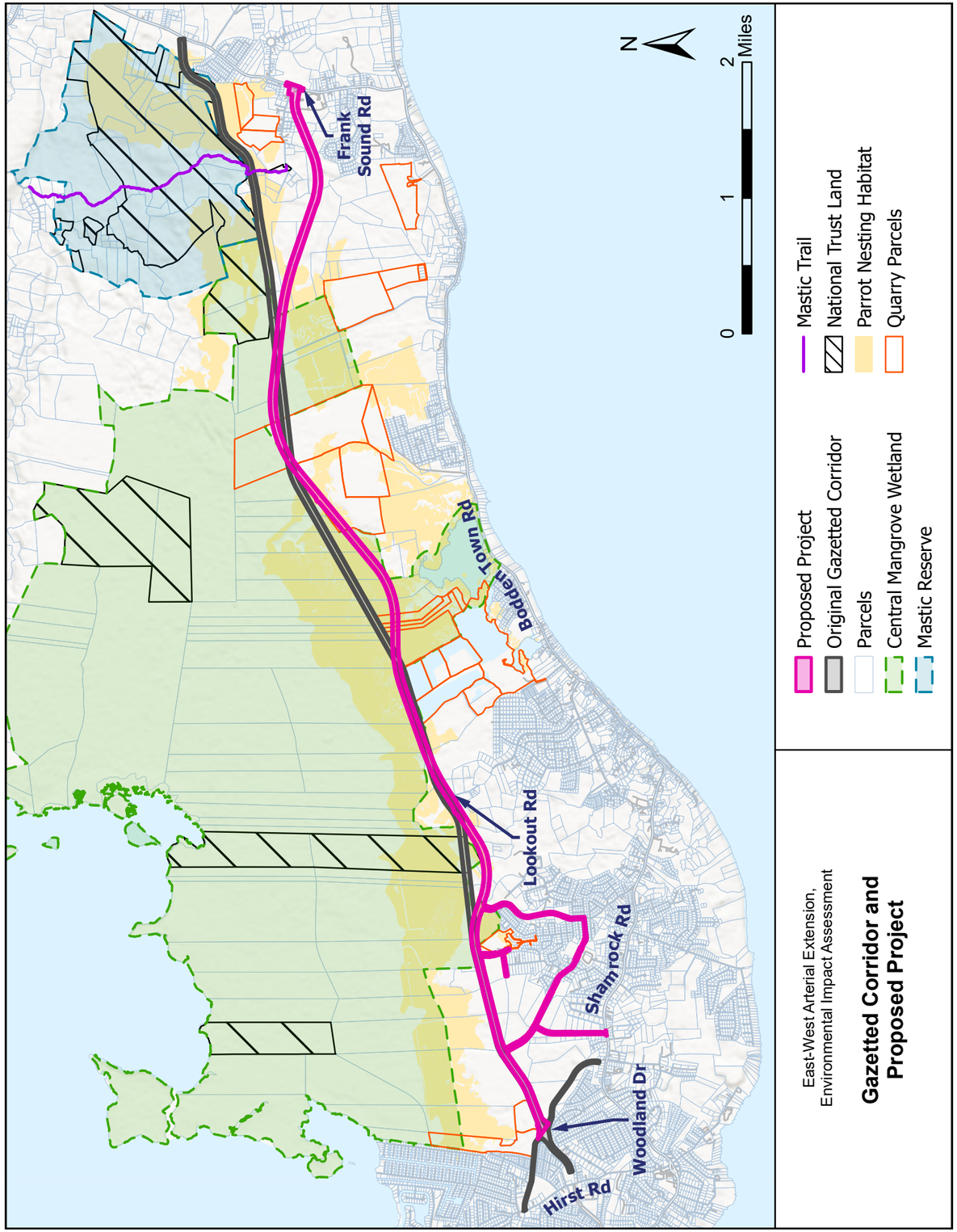


January 2025 Public Meetings for the Draft Environmental Statement for the East-West Arterial Extension EIA, Sections 2 and 3

In-Person Public Meetings:

The National Roads Authority invites you to learn more about the project and provide your thoughts on the proposed East-West Arterial Extension - Section 2 and Section 3. This meeting provides an opportunity to review the project information, talk with the NRA staff and the Project Team, and provide comments on the proposed project in accordance with the EIA Process defined by the Cayman Islands EIA Directive

Meeting Format:

The format of this meeting will follow a hybrid meeting style. The first part of the meeting will be held in an open-house format where various display boards and table maps will be available for you to view. Additionally, representatives from the NRA and the Project Team will be stationed at these displays to answer any questions you may have.

Following the open-house part of the meeting, a formal presentation given by project staff will start at 7:30 PM. At the conclusion of this presentation, there will be a Q&A session where project representatives will respond to your questions, followed by continued open-house format that will allow further interaction with project team members. The Public Consultation will conclude at 9:00pm.

Public Comment:

The Draft Environmental Statement, Non-Technical Summary, and associated appendices are available for review and download on the following NRA and NCC websites:

https://www.caymanroads.com/projects https://conservation.ky/eia-reports/

Physical copies are available at the NRA office and DoE office. The Non-Technical Summary only is also available at the North Side Post Office, Bodden Town Post Office, Savannah Post Office, Vernon L. Jackson Public Library and Learning Centre, and East End Public Library.

Comments on the Draft Environmental Statement can be submitted to the NRA staff present at the meeting, or in writing to the Environmental Assessment Board c/o the Department of the Environment via email (DOE@gov.ky), post, or hand delivery to the Department of Environment Office.

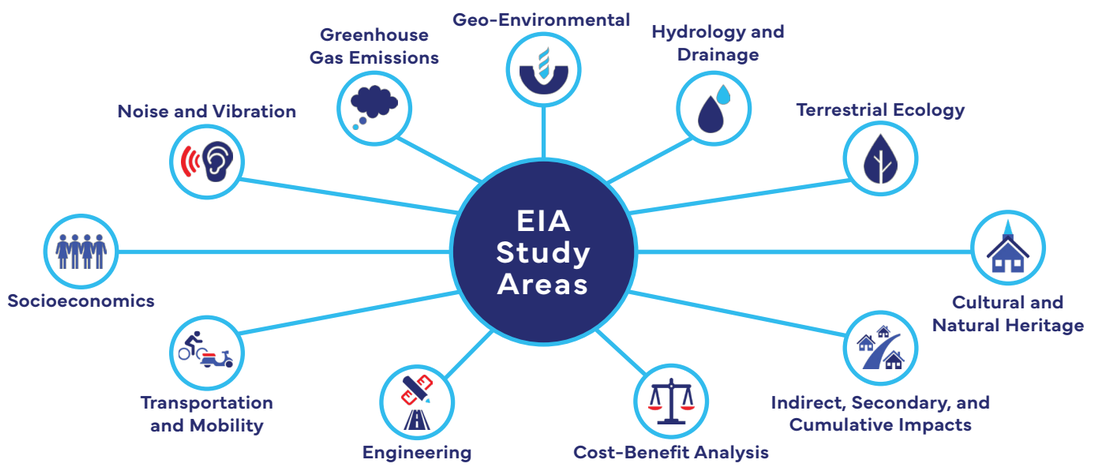
Mailing Address	Physical Address
Department of Environment PO Box 10202, KY1-1002 Grand Cayman, Cayman Islands	Environmental Centre 580 North Sound Road George Town, Grand Cayman

PROJECT OVERVIEW: A multi-modal and multi-tiered corridor

(see back page for a figure of the Proposed Project)

- **Section 1 (under construction-outside EIA)** – Hirst Road to Woodland Drive
- **Section 2** – Woodland Drive to Lookout Road
- **Section 3** – Lookout Road to Frank Sound Road
- **Will T Connector** – Improvements to the local road network providing access to Section 2

Types of studies applied during the Environmental Impact Assessment included: agency consultations, field investigations, evaluations, modelling, and analyses in the following disciplines:



The EIA evaluated the potential Natural and Social impacts that result from the Proposed Project. The EIA process helped avoid impacts wherever possible, minimise impacts when avoidance wasn't possible, and identified mitigations for the remaining impacts.

Natural Environment

Potential Effects:

- **Habitat loss:**
  - Man-modified land uses – 90 acres
  - Upland habitats – 5 acres
  - Wetland habitats – 150 acres
  - Cayman parrot habitat – 81 acres
  - Central Mangrove Wetland – 76 acres (overlaps with wetland habitats)
  - Habitat functional loss – 93.27 to 189.24 functional units
- **Habitat fragmentation** – 571 acres of CMW fragmented, leaving 8,000 acres of contiguous CMW remaining (92%)
- **Peat removal** – 441,579 cubic yards
- **Drainage wells affected** – 1 well
- **Added impervious surface area** – 145 acres
- **Lower valley freshwater lens recharge area** – 10 acres
- **Change of surface water flows and drainage patterns / flood risk**
- **Surface water pollution**
- **Wildlife / roadway collisions**
- **Light pollution**

Natural Environment Continued

- **Spread of invasive species**
- **Greenhouse gas emissions**
  - Habitat and peat removal – 73,589 metric tonnes CO_2e
  - Annual carbon storage loss – 424.2 metric tonnes CO_2e per year starting when construction begins

Social Environment

Potential Benefits:

- **Improve resiliency by providing a storm-resistant east-west roadway**
- **Improve overall travel times and congestion at intersections**
- **Aid in accessing areas for development**
- **Increase community connectivity**
- **Provide more reliable transportation journey**
- **Accommodate options for other modes of travel**
- **Utilize local workforce for construction**

Potential Effects:

- **Relocations** – 3 structures
- **Property** – 249 acres required
- **Noticeable noise increase at 963 receptors; adverse impact at 279 receptors**
- **Construction-related traffic disruptions**
- **Changes to surface water patterns in developed areas**
- **Changes to natural viewshed**
- **Greenhouse gas emissions:**
  - Construction tailpipe emissions – 32,388 metric tonnes CO_2e
  - Bulk materials emissions – 97,953 metric tonnes CO_2e

Mitigations will be included in an Environmental Management Plan that will be developed following public consultation and as part of the Final ES. This document will outline mitigation measures for both the construction and operational phases of the project.

Critical Success Factors (CSF) Achieved

The main objectives (critical success factors) that the project is designed to accomplish include:

Create Alternative Routes	✓	**Provide Public Transit Access***	✓
Improve Existing Roadway Resiliency	✓	**Reduce Tourist Travel Times**	✓
Support Future Traffic Demand	✓	**Improve Safety**	✓
Improve Commuter Travel Times	✓	**Enhance Safe Pedestrian & Bicycle Access**	✓
Accommodate Utility Expansion*	✓		

*These criteria are to provide opportunities to accommodate these features.
It is outside the ambit of the NRA to provide utilities or public transportation.

The project is assumed to be constructed in phases over multiple years with the initial phase, anticipated for 2026, to include two vehicular travel lanes, one in each direction. After the initial phase, construction of subsequent phases will occur based on a combination of travel demand and available funding. The phasing of the construction has been carefully developed to minimise environmental impact and optimise the placement of features within the corridor.