

## Preliminary Environmental Discussion Comments Report

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### #14227 Space Coast Gap of the Coast to Coast Connector Trail

**District:** District 5

**County:** Brevard

**Planning Organization:** FDOT District 5

**Plan ID:** Not Available

**Federal Involvement:** Other Federal Permit USCG Bridge Permit

**Phase:** Programming Screen

**From:** Max Brewer Causeway

**To:** Atlantic Ocean

**Financial Management No.:** 437093-1-22-01

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**Snapshot Data From:** Current Draft Data

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## Social and Economic

### Land Use Changes

#### Project Level

**Comments:**

As stated in previous sections, there are extensive local, state and national regulations/protections in place to preserve the existing character of both the Merritt Island National Wildlife Refuge (MINWR) and the Canaveral National Seashore (CANA). Therefore, the existing land uses within the study area, which are primarily conservation and recreation, will stay preserved into the future for these particular uses. The FDOT will continue to monitor any changes outside the limits of the CANA and MINWR and also stay apprised of any changes within this area that may result from the space and private industries utilizing the existing infrastructure for planned commercial space flight, general aviation and other supporting logistical and technical uses.

#### Alternative Level

No Alternative Level PED for Land Use Changes provided for any alternative.

### Social

#### Project Level

**Comments:**

As mentioned in other sections, the intent of the Coast to Coast trail network is to provide access to a wide variety of trail users in addition to integrating features of the surrounding natural, social, cultural and physical environment. In the case of the Space Coast Trail, the social enhancements are directly tied to economic development/enhancements, increased mobility and access to recreation, park lands and other facilities. This portion of the Coast to Coast trail network will result in enhanced social characteristics by providing local, regional, national and global trail users with a facility that is integrated into the surrounding environment. Additionally, the trail project would not impact protected populations covered under Environmental Justice and related legislation.

#### Alternative Level

No Alternative Level PED for Social provided for any alternative.

### Relocation Potential

#### Project Level

**Comments:**

Given the characteristics of the existing and future land uses and the limited footprint of the trail system, residential, business or other relocations are not anticipated for any of the alternatives identified as part of the Programming Screen. At present, the land uses in and around the Merritt Island National Wildlife Refuge and Canaveral National Seashore are not anticipated to change given the protective status afforded to these resources under local, state and federal regulations. While the majority of the east-west alternatives are solely within the MINWR and CANA, the north-south alternative extends north to the vicinity of State Road 3 and US 1; however, at present, no homes or businesses are located in the area and given the nature of the trail facility planned for this area, it is unlikely that any future locations would result from the action.

In addition to the potential for residential and business relocations, the FDOT recognizes the importance of continued coordination for any alternatives that are outside of the operational roadway right of way. The FDOT will work closely with both MINWR and CANA to properly coordinate updates to park and refuge management plans.

#### Alternative Level

No Alternative Level PED for Relocation Potential provided for any alternative.

### Farmlands

#### Project Level

No Project Level PED for Farmlands provided.

#### Alternative Level

**Alternatives:** #1 EW MINWR A

**Degree of Effect:**

**Comments:**

Farmland of Unique Importance: 49.07 acres (33.06%) at 100 ft buffer; 93.96 acres (31.5%) at 200 ft buffer; and 222.14 acres (29.38%) at 500 ft buffer

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## **Alternatives: #2 EW MINWR B**

### **Degree of Effect:**

### **Comments:**

Farmland of Unique Importance: 28.71 acres (19.96%) at 100 ft buffer; 56.01 acres (19.37%) at 200 ft buffer; and 123 acres (16.79%) at 500 ft buffer

## **Alternatives: #3 EW CANA A**

### **Degree of Effect:**

### **Comments:**

Farmland of Unique Importance: 15.96 acres (80.56%) at 100 ft buffer; 31.97 acres (77.88%) at 200 ft buffer; and 77 acres (67.93%) at 500 ft buffer

## **Alternatives: #4 EW CANA B**

### **Degree of Effect:**

### **Comments:**

Farmland of Unique Importance: 15.51 acres (60.75%) at 100 ft buffer; 31.63 acres (60.36%) at 200 ft buffer; and 72.42 acres (51.28%) at 500 ft buffer

## **Alternatives: #5 EW CANA C**

### **Degree of Effect:**

### **Comments:**

Farmland of Unique Importance: 1.83 acres (2%) at 100 ft buffer; 3.58 acres (1.94%) at 200 ft buffer; and 8.85 acres (1.9%) at 500 ft buffer

## **Alternatives: #6 NS MINWR A**

### **Degree of Effect:**

### **Comments:**

Farmland of Unique Importance: 263.09 acres (67.53%) at 100 ft buffer; 522 acres (66.9%) at 200 ft buffer; and 1,197.27 acres (61.01%) at 500 ft buffer

Unique Farmland - Abandoned Groves: 2.27 acres (.58%) at 100 ft buffer; 7.34 acres (.94%) at 200 ft buffer; and 23.07 acres (1.18%) at 500 ft buffer and Citrus Groves: 39.9 acres (10.24%) at 100 ft buffer; 74.2 acres (9.5%) at 200 ft buffer; and 156.18 acres (7.96%) at 500 ft buffer

## **Alternatives: #7 MINWR Proposed Interpret Trail**

### **Degree of Effect:**

### **Comments:**

Farmland of Unique Importance: 44.44 acres (43.35%) at 100 ft buffer; 90.84 acres (44.14%) at 200 ft buffer; and 236.54 acres (45.48%) at 500 ft buffer

## **Aesthetic Effects**

### **Project Level**

#### **Comments:**

The intent of the overall Coast to Coast Trail network, including the Space Coast Trail segment, was envisioned to compliment the surrounding environmental features through the area in which it would traverse. The FDOT has given extensive consideration to the surrounding natural, social, cultural and physical environments for the overall system. These natural features have shown to be the primary attractor for trail users, ecotourists and residents and visitors alike. For this particular section of the Coast to Coast Trail, the FDOT recognizes the particular sensitivity related to direct and indirect features to both the Canaveral National Seashore (CANA), the Merritt Island National Wildlife Refuge (MINWR) in addition to the surrounding waterbodies, operational functions related to the past, present and future space flight operations. It is therefore the intent of the FDOT to provide a trail system that best provides users with a truly integrated trail network that compliments and ultimately enhances the extremely unique features present in the study area. At the same time, the FDOT recognizes that the trail system must fully integrate and preserve the aesthetic values of the trail into the natural setting.

#### **Alternative Level**

No Alternative Level PED for Aesthetic Effects provided for any alternative.

## **Economic**

### **Project Level**

#### **Comments:**

All alternatives: The FDOT has worked closely with local, regional and national partners to identify case studies, data analysis and other elements that influence the economic development related to a robust trail system. These considerations have led to the identification of economic enhancements that result from visitors having overall net economic impact to hotel/motel lodging, local restaurants and other local businesses that generally experience an increase in foot traffic, reservations, etc. with the implementation of a trail system. For this particular area of the Coast to Coast trail network, the FDOT recognizes, and local, state and federal regulations support, any increased economic development would likely take place within existing urbanized areas outside of CANA and MINWR, such as Oak Hill, Titusville and other areas in unincorporated Brevard County.

**Alternative Level**

No Alternative Level PED for Economic provided for any alternative.

**Mobility**

**Project Level**

**Comments:**

The goal of the Coast to Coast trail network is to provide a connection from the Gulf of Mexico to the Atlantic Ocean resulting in a 250 miles network that enhances both regional and local mobility. Trail users have the option of utilizing the trail as one system, in the case of long distance cyclists, but also sections of the trail limited to a certain area such as the Space Coast Trail. The trail is therefore envisioned to provide cyclists/bicyclists and other users with increased mobility for recreational modes. In brief, the trail will fully enhance the mobility for visitors and residents alike.

**Alternative Level**

No Alternative Level PED for Mobility provided for any alternative.

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**Cultural**

**Section 4(f) Potential**

**Project Level**

**Comments:**

As stated in the Code of Federal Regulations, The Department of Transportation Act (DOT Act) of 1966 includes the Section 4(f) provision which stipulates that the Federal Highway Administration (FHWA) and other DOT agencies cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless the following conditions apply:

- There is no feasible and prudent avoidance alternative to the use of land; and
- The action includes all possible planning to minimize harm to the property resulting from such use; or,
- The Administration determines that the use of the property will have a de minimis impact.

The FDOT will be developing the project with state funding; therefore, Section 4(f) will not apply to this action. However, the FDOT recognizes the state statutes in place to protect park lands, recreation areas, etc. and will therefore work closely with land managers to determine a location or locations suitable for a trail alignment that would generally fit under the "net benefit" if Section 4(f) regulations were applicable.

The FDOT is also aware of the extensive involvement with Section 6(f) regulations that are present under the National Park Service's Land Water and Conservation Fund. The potential for Section 6(f) involvement will further be evaluated during the PD&E Study.

**Alternative Level**

No Alternative Level PED for Section 4(f) Potential provided for any alternative.

**Historic and Archaeological Sites**

**Project Level**

No Project Level PED for Historic and Archaeological Sites provided.

**Alternative Level**

**Alternatives:** #1 EW MINWR A, #2 EW MINWR B, #3 EW CANA A, #4 EW CANA B, #5 EW CANA C, #7 MINWR Proposed Interpret Trail

**Degree of Effect:**

**Comments:**

NASA Railroad at Kennedy Space Center BR02931/ BR02932, a Linear Resource Eligible for NRHP, is within a 100 ft buffer of the study area (500 ft for alternative 2-Alternative EW MINWR B). Given the nature of a trail system, the potential impacts of these resources will be evaluated as part of the Cultural Resources Assessment Survey that will be conducted as part of the PD&E Study. However, the trail system will have a considerably smaller footprint and potentially more opportunities for alignment shifts and avoidance and minimization measures that would a result from a typical linear transportation project, such as a roadway widening or a new roadway. The FDOT will focus on avoidance and minimization of sensitive resources.

**Alternatives:** #6 NS MINWR A

**Degree of Effect:**

**Comments:**

According to the GIS data in the EST, historic and archaeological sites present within the study area include the following: Shiloh Sand Hills (potentially eligible for NRHP) and Clifton School House (not evaluated by SHPO) within a 100 ft buffer; Dummett Homestead & Dummett's Grove (potentially eligible for NRHP) and Haulover, Spike Point, & building remains of Dummett's Place (not evaluated by SHPO) within a 200 ft buffer; one cemetery within 100 ft and another within 200 ft (neither has been evaluated by SHPO); Haulover Canal Bridge (BR02957), built in 1965, which is eligible for NRHP; Old Haulover Canal, listed on the NRHP 12/19/78 ; NASA Railroad at Kennedy Space Center and an Archaeological District (Elliot Plantation Complex), which has been evaluated by SHPO as Eligible for NRHP.

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Given the nature of a trail system, the potential impacts of these resources will be evaluated as part of the Cultural Resources Assessment Survey that will be conducted as part of the PD&E Study. However, the trail system will have a considerably smaller footprint and potentially more opportunities for alignment shifts and avoidance and minimization measures that would result from a typical linear transportation project, such as a roadway widening or a new roadway. The FDOT will focus on avoidance and minimization of sensitive resources.

## Recreation Areas

### Project Level

#### Comments:

The Coast to Coast trail network is at its core designed to complement and enhance existing and planned recreation areas. The Space Coast Trail portion of the overall trail would provide a link to/from larger recreation areas such as Merritt Island National Wildlife Refuge (MINWR), Canaveral National Seashore (CANA), Parrish Park, Haulover Canal and other numerous sites currently permitted for public use. The FDOT will coordinate with the lead agencies to identify connections between these resources in addition to considering areas that are clearly prohibited to the general public.

### Alternative Level

No Alternative Level PED for Recreation Areas provided for any alternative.

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## Natural

### Wetlands and Surface Waters

#### Project Level

No Project Level PED for Wetlands and Surface Waters provided.

#### Alternative Level

**Alternatives:** #1 EW MINWR A

#### Degree of Effect:

#### Comments:

National Wetlands Inventory, at the 500 ft buffer, shows the following: 744.6 acres of Palustrine; 189.4 acres of Lacustrine; 65.4 acres of Estuarine; and 6.6 acres of Marine. SJRWMD Wetlands 2009, at the 500 ft buffer, shows the following: 279.6 acres of Mixed Wetland Hardwoods; 264.2 acres of Mixed Scrub-Shrub Wetland; 214 acres of Saltwater Marshes; 95.8 acres of Freshwater Marshes, 63.3 acres of Wetland Forested Mixed; 41.1 acres of Cabbage Palm Hammock, 30.8 acres of Mangrove Swamps, 26.8 acres of Cypress, 23.5 acres of Wet Prairies; 7.2 acres of Non-Vegetated Wetland; and 2.7 acres of Emergent Aquatic Vegetation.

**Alternatives:** #2 EW MINWR B

#### Degree of Effect:

#### Comments:

National Wetlands Inventory, at the 500 ft buffer, shows the following: 170.18 acres of Lacustrine; 151.52 acres of Palustrine; and 13.67 acres of Estuarine. SJRWMD Wetlands 2009, at the 500 ft buffer, shows the following: 130.68 acres of Mixed Wetland Hardwoods; 72.3 acres of Mixed Scrub-Shrub Wetland; 69.34 acres of Saltwater Marshes; 10.54 acres of Freshwater Marshes; 6.23 acres of Non-Vegetated Wetland; 2.24 acres of Cypress; 1.4 acres of Wet Prairies; and 1.25 acres of Mangrove Swamps.

**Alternatives:** #3 EW CANA A

#### Degree of Effect:

#### Comments:

National Wetlands Inventory, at the 500 ft buffer, shows 23.08 acres of Palustrine. SJRWMD Wetlands 2009, at the 500 ft buffer, shows the following: 13.5 acres of Mixed Scrub-Shrub Wetland; 4.72 acres of Cypress; 0.98 acres of Freshwater Marshes; 0.76 acres of Wet Prairies; and 0.21 acres of Mixed Wetland Hardwoods.

**Alternatives:** #4 EW CANA B

#### Degree of Effect:

#### Comments:

National Wetlands Inventory, at the 500 ft buffer, shows 32.24 acres of Palustrine. SJRWMD Wetlands 2009, at the 500 ft buffer, shows the following: 18.81 acres of Mixed Scrub-Shrub Wetland; 8.44 acres of Wet Prairies; 7.44 acres of Cypress; 3.03 acres of Freshwater Marshes; and 1.4 acres of Mixed Wetland Hardwoods.

**Alternatives:** #5 EW CANA C

#### Degree of Effect:

#### Comments:

National Wetlands Inventory, at the 500 ft buffer, shows the following: 215.64 acres of Palustrine; 74.44 acres of Lacustrine; and 14.5 acres of Marine. SJRWMD Wetlands 2009, at the 500 ft buffer, shows the following: 115.33 acres of Saltwater Marshes; 53.32 acres of Mixed Scrub-Shrub Wetland; 31.71 acres of Mangrove Swamps; 2.72 acres of Emergent Aquatic Vegetation; and 0.28 acres of Freshwater Marshes.

**Alternatives:** #6 NS MINWR A

**Degree of Effect:**

**Comments:**

National Wetlands Inventory, at the 500 ft buffer, shows the following: 188.82 acres of Palustrine; 13.18 acres of Estuarine; and 2.87 acres of Lacustrine. SJRWMD Wetlands 2009, at the 500 ft buffer, shows the following: 78.01 acres of Mixed Scrub-Shrub Wetland; 67.48 acres of Wetland Forested Mixed; 61.02 acres of Mixed Wetland Hardwoods; 41.89 acres of Freshwater Marshes; 11.33 acres of Cabbage Palm Hammock; 10.83 acres of Saltwater Marshes; 8.7 acres of Wet Prairies; and 4.49 acres of Mangrove Swamps.

**Alternatives:** #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

National Wetlands Inventory, at the 500 ft buffer, shows 137.28 acres of Palustrine. SJRWMD Wetlands 2009, at the 500 ft buffer, shows the following: 82.36 acres of Mixed Wetland Hardwoods; 57.01 acres of Freshwater Marshes; 28.74 acres of Mixed Scrub-Shrub Wetland; 17.79 acres of Cypress; 8.16 acres of Cabbage Palm Hammock; and 6.62 acres of Wet Prairies.

## **Water Quality and Quantity**

### **Project Level**

No Project Level PED for Water Quality and Quantity provided.

### **Alternative Level**

**Alternatives:** #1 EW MINWR A, #2 EW MINWR B, #3 EW CANA A, #4 EW CANA B, #6 NS MINWR A, #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

Canaveral National Seashore, Merritt Island National Wildlife Refuge, & the Indian River lagoon are all located within 500 feet of this alternative. Stormwater treatment and attenuation facilities will be evaluated during the PD&E study phase in order to minimize potential impacts to these environmentally sensitive waterbodies.

**Alternatives:** #5 EW CANA C

**Degree of Effect:**

**Comments:**

The Atlantic Ocean, Canaveral National Seashore, Merritt Island National Wildlife Refuge, Indian River, & Mosquito Lagoon are all located within 500 feet of this alternative. Stormwater treatment and attenuation facilities will be evaluated during the PD&E study phase in order to minimize potential impacts to these environmentally sensitive waterbodies.

## **Floodplains**

### **Project Level**

No Project Level PED for Floodplains provided.

### **Alternative Level**

**Alternatives:** #1 EW MINWR A

**Degree of Effect:**

**Comments:**

There are 201.12 acres of 100-year floodplain (AE), 756.18 acres of flood hazardous zones (AE & X), and 205.84 acres of special flood hazard areas (AE) within the 500-ft buffer.

**Alternatives:** #2 EW MINWR B

**Degree of Effect:**

**Comments:**

There are 275.28 acres of 100-year floodplain (AE), 733.51 acres of flood hazardous zones (AE & X), and 299.87 acres of special flood hazard areas (AE) within the 500-ft buffer.

**Alternatives:** #3 EW CANA A

**Degree of Effect:**

**Comments:**

There are 113.35 acres of flood hazardous zones (X) within the 500-ft buffer.

**Alternatives:** #4 EW CANA B

**Degree of Effect:**

**Comments:**

There are 141.23 acres of flood hazardous zones (X) within the 500-ft buffer.

**Alternatives:** #5 EW CANA C

**Degree of Effect:**

**Comments:**

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There are 193.4 acres of 100-year floodplain (AE, AO, & VE), 466.68 acres of flood hazardous zones (AE, AO, VE, & X), and 175.11 acres of special flood hazard areas (AE, AO, & VE) within the 500-ft buffer.

**Alternatives:** #6 NS MINWR A

**Degree of Effect:**

**Comments:**

There are 455.62 acres of 100-year floodplain (A, AE, & VE), 1,962.03 acres of flood hazard zones (A, AE, VE, & X), and 658.82 acres of special flood hazard areas (A, AE, & VE) within the 500-ft buffer.

**Alternatives:** #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

There are 21.21 acres of 100-year floodplain (AE), 520.04 acres of flood hazard zones (AE & X), and 21.14 acres of special flood hazard areas (AE) within the 500-ft buffer.

### Wildlife and Habitat

#### Project Level

No Project Level PED for Wildlife and Habitat provided.

#### Alternative Level

**Alternatives:** #1 EW MINWR A

**Degree of Effect:**

**Comments:**

The closest bald eagle's nest is over 500 feet from this proposed alternative but within the 1 mile buffer. There are 0.37 acres of critical habitat for the West Indian manatee in the 100 ft buffer. The FWC and the FNAI have documented occurrences of the willet, short-billed dowitcher, marbled godwit, dunlin, and mole snake within the 500 ft buffer. There are 26.56 acres of habitat that is within the Florida scrub-jay service area, including 3.32 acres of xeric oak scrub habitat, within the 100 ft buffer. Nine scrub-jay occurrences are recorded outside of the 500 ft buffer but within the 1 mile buffer.

**Alternatives:** #2 EW MINWR B

**Degree of Effect:**

**Comments:**

The closest bald eagle's nest is over 500 feet from this proposed alternative but within the 1 mile buffer. There are 10.69 acres of critical habitat for the West Indian manatee in the 100 ft buffer. The FWC has documented occurrences of the willet, short-billed dowitcher, marbled godwit, and dunlin within the 200 ft buffer. The FNAI has documented occurrences of the eastern indigo snake, Florida pine snake, Florida scrub-jay, and gopher tortoise within the 100 ft buffer and the mole snake within the 500 ft buffer. There are 24.80 acres of habitat that is within the scrub-jay service area, including 7.79 acres of xeric oak scrub habitat, within the 100 ft buffer. Eight scrub-jay occurrences are recorded outside of the 500 ft buffer but within the 1 mile buffer.

**Alternatives:** #3 EW CANA A

**Degree of Effect:**

**Comments:**

The FNAI has documented occurrences of the eastern indigo snake, Florida pine snake, Florida scrub-jay, gopher tortoise, hand fern, and sand dune spurge within the 1 mile buffer. One scrub-jay occurrence was noted in the 1992-1993 data as occurring within 100 ft of the alignment. There is 1.32 acres of xeric oak scrub habitat within the 100 ft buffer.

**Alternatives:** #4 EW CANA B

**Degree of Effect:**

**Comments:**

The FNAI has documented occurrences of the eastern indigo snake, Florida pine snake, Florida scrub-jay, gopher tortoise, hand fern, and sand dune spurge within the 1 mile buffer. One scrub-jay occurrence was noted in the 1992-1993 data as occurring within 100 ft of the alignment. There are 2.02 acres of xeric oak scrub habitat within the 100 ft buffer.

**Alternatives:** #5 EW CANA C

**Degree of Effect:**

**Comments:**

The FWC has documented occurrences of the least tern, royal tern, great crested flycatcher, and warblers within the 1 mile buffer. The FNAI has documented occurrences of the Atlantic Coast Florida lantana, Florida pine snake, and coastal vervain within the 1 mile buffer. One scrub-jay occurrence was noted in the 1992-1993 data as occurring within 100 ft of the alignment. There is 0.67 acre of xeric oak scrub habitat within the 100 ft buffer.

**Alternatives:** #6 NS MINWR A

**Degree of Effect:**

**Comments:**

The closest bald eagle's nest is within the 200 ft buffer of the project. There are 1.03 acres of critical habitat for the West Indian manatee in the 100 ft buffer. The FNAI has documented occurrences of sand dune spurge within the 100 ft buffer; coastal vervain within the 200 ft buffer; hand fern within the 500 ft buffer; and nodding pinweed, curtiss' sandgrass, eastern indigo snake, Florida

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scrub-jay, and giant orchid within the 1 mile buffer. There are 171.91 acres of habitat that is within the Florida scrub-jay service area, including 19.97 acres of xeric oak scrub habitat, within the 100 ft buffer. Three scrub-jay occurrences are recorded within the 100 ft buffer.

**Alternatives:** #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

The closest bald eagle's nest is over 500 feet from this proposed alternative but within the 1 mile buffer. The FNAI has documented occurrences of curtiss' sandgrass, eastern indigo snake, Florida pine snake, Florida scrub-jay, gopher tortoise, hand fern, mole snake, sand pine scrub ataenius, sand dune spurge, and wood stork within the 1 mile buffer. Three scrub-jay occurrences are recorded within the 1 mile buffer. There are 5.78 acres of xeric oak scrub habitat within the 100 ft buffer.

### Coastal and Marine

#### Project Level

No Project Level PED for Coastal and Marine provided.

#### Alternative Level

**Alternatives:** #1 EW MINWR A

**Degree of Effect:**

**Comments:**

Although this alignment uses existing land features, there are some coastal and marine habitats located within the 100 ft buffer. These include 2.31 acres of bays and estuaries, 16.87 acres of enclosed saltwater ponds within a salt marsh, 153.63 acres of salt and brackish water marsh, 244.61 acres of exposed tidal flats/sand flats, 296.41 acres of beaches, and 0.43 acres of seagrass beds. Also, there are 148.42 acres designated as part of the coastal barrier resource system.

**Alternatives:** #2 EW MINWR B

**Degree of Effect:**

**Comments:**

Within the 100 ft buffer there are 0.85 acres of bays and estuaries, 20.98 acres of enclosed saltwater ponds within a salt marsh, 15.02 acres of saltwater marsh, 242.12 acres of exposed tidal flats/sand flats, 995.64 acres of scrub-shrub wetlands, 138.11 acres of vegetated low banks, and 0.31 acres of seagrass beds. Also, there are 108.81 acres designated as part of the coastal barrier resource system.

**Alternatives:** #3 EW CANA A

**Degree of Effect:**

**Comments:**

This alignment uses existing land features, and there are no marine habitats or habitats specific to a coastal environment within the 500 ft buffer. There are 19.81 acres designated as part of the coastal barrier resource system.

**Alternatives:** #4 EW CANA B

**Degree of Effect:**

**Comments:**

There are no marine habitats or habitats specific to a coastal environment within the 500 ft buffer. There are 14.68 acres designated as part of the coastal barrier resource system.

**Alternatives:** #5 EW CANA C

**Degree of Effect:**

**Comments:**

Although, this alternative consists of shared lane markings along the existing roadway of CR 402, there are coastal and marine habitats within the 100 ft buffer. These include 3.01 acres of mangrove swamps, 27.03 acres of saltwater marshes, and 1.35 acres of swimming beach. Also, there are 91.54 acres designated as part of the coastal barrier resource system.

**Alternatives:** #6 NS MINWR A

**Degree of Effect:**

**Comments:**

Within the 100 ft buffer there are 0.9 acres of bays and estuaries, 0.47 acres of mangrove swamp, 133.00 acres of saltwater and brackish marsh, and 95.93 acres of vegetated low banks. Also, there are 385.73 acres designated as part of the coastal barrier resource system.

**Alternatives:** #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

This alignment uses existing land features, and there are no marine habitats or habitats specific to a coastal environment within the 500 ft buffer. There are 99.69 acres designated as part of the coastal barrier resource system.

## Physical

### Noise

#### Project Level

**Comments:**

N/A

#### Alternative Level

No Alternative Level PED for Noise provided for any alternative.

### Air Quality

#### Project Level

**Comments:**

N/A

#### Alternative Level

No Alternative Level PED for Air Quality provided for any alternative.

### Contamination

#### Project Level

No Project Level PED for Contamination provided.

#### Alternative Level

**Alternatives:** #1 EW MINWR A, #3 EW CANA A

**Degree of Effect:**

**Comments:**

There are no contamination sites located within the 500 ft buffer. The only source of potential contamination would be associated with the railroad.

**Alternatives:** #2 EW MINWR B

**Degree of Effect:**

**Comments:**

There is one Hazardous Waste Facility (EPA ID FLR000214866 -Site ID: 116622-CSS Dynamic) within the 100 ft buffer.

**Alternatives:** #4 EW CANA B

**Degree of Effect:**

**Comments:**

There are no sites or potential sources of contamination located within the 500 ft buffer.

**Alternatives:** #5 EW CANA C

**Degree of Effect:**

**Comments:**

This alternative consists of shared lane markings along the existing roadway of CR 402.

**Alternatives:** #6 NS MINWR A

**Degree of Effect:**

**Comments:**

There are two active onsite sewage sites within the 100 ft buffer.

**Alternatives:** #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

There are no sites or potential sources of contamination located within the 500 ft buffer.

### Infrastructure

#### Project Level

No Project Level PED for Infrastructure provided.

#### Alternative Level

**Alternatives:** #1 EW MINWR A

**Degree of Effect:**

**Comments:**

The infrastructure in and around Alternative 1 generally includes SR 402, the NASA railroad, and the MINWR Visitor's Center.

**Alternatives:** #2 EW MINWR B

**Degree of Effect:**

**Comments:**

The infrastructure in and around Alternative 2 generally includes SR 402, Kennedy Parkway, and several parking areas and trail heads.

**Alternatives:** #3 EW CANA A

**Degree of Effect:**

**Comments:**

The infrastructure in and around Alternative 3 primarily includes the NASA railroad.

**Alternatives:** #4 EW CANA B

**Degree of Effect:**

**Comments:**

The infrastructure in and around Alternative 4 generally includes SR 402 and the NASA railroad.

**Alternatives:** #5 EW CANA C

**Degree of Effect:**

**Comments:**

The infrastructure in and around Alternative 5 generally includes the entrance road into CANA and Playalinda Beach parking area 1.

**Alternatives:** #6 NS MINWR A

**Degree of Effect:**

**Comments:**

The infrastructure in and around Alternative 6 generally includes Kennedy Parkway, Haulover Canal and the associated bridge and trail heads.

**Alternatives:** #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

The infrastructure in and around Alternative 7 is generally limited due to this being a disturbed, yet undeveloped area comprising primarily of the NASA railroad and SR 402 to the south.

**Navigation**

**Project Level**

No Project Level PED for Navigation provided.

**Alternative Level**

**Alternatives:** #1 EW MINWR A, #2 EW MINWR B, #3 EW CANA A, #4 EW CANA B, #5 EW CANA C, #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

N/A

**Alternatives:** #6 NS MINWR A

**Degree of Effect:**

**Comments:**

Atlantic Intracoastal Waterway

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**Special Designations**

**Special Designations: Outstanding Florida Waters**

**Project Level**

No Project Level PED for Special Designations: Outstanding Florida Waters provided.

**Alternative Level**

**Alternatives:** #1 EW MINWR A, #2 EW MINWR B

**Degree of Effect:**

**Comments:**

Outstanding Waters include the Merritt Island National Wildlife Refuge (within a 100 ft buffer) and Canaveral National Seashore (within a 500 ft buffer).

**Alternatives:** #3 EW CANA A, #4 EW CANA B, #6 NS MINWR A, #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

Outstanding Waters within a 100 ft buffer include the Merritt Island National Wildlife Refuge and Canaveral National Seashore.

**Alternatives:** #5 EW CANA C

**Degree of Effect:**

**Comments:**

Outstanding Waters include the Merritt Island National Wildlife Refuge; Canaveral National Seashore; and Mosquito Lagoon Aquatic Preserve (within a 100 ft buffer).

**Special Designations: Aquatic Preserves**

**Project Level**

No Project Level PED for Special Designations: Aquatic Preserves provided.

**Alternative Level**

**Alternatives:** #1 EW MINWR A, #2 EW MINWR B, #3 EW CANA A, #4 EW CANA B, #6 NS MINWR A, #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

N/A

**Alternatives:** #5 EW CANA C

**Degree of Effect:**

**Comments:**

Mosquito Lagoon Aquatic Preserve is within a 100 ft buffer.

**Special Designations: Scenic Highways**

**Project Level**

No Project Level PED for Special Designations: Scenic Highways provided.

**Alternative Level**

**Alternatives:** #1 EW MINWR A, #2 EW MINWR B, #4 EW CANA B, #7 MINWR Proposed Interpt Trail

**Degree of Effect:**

**Comments:**

Indian River Lagoon National Scenic Byway is within a 100 ft buffer.

**Alternatives:** #3 EW CANA A, #5 EW CANA C

**Degree of Effect:**

**Comments:**

Indian River Lagoon National Scenic Byway is within a 500 ft buffer.

**Alternatives:** #6 NS MINWR A

**Degree of Effect:**

**Comments:**

N/A

**Special Designations: Wild and Scenic Rivers**

**Project Level**

**Comments:**

N/A

**Alternative Level**

No Alternative Level PED for Special Designations: Wild and Scenic Rivers provided for any alternative.