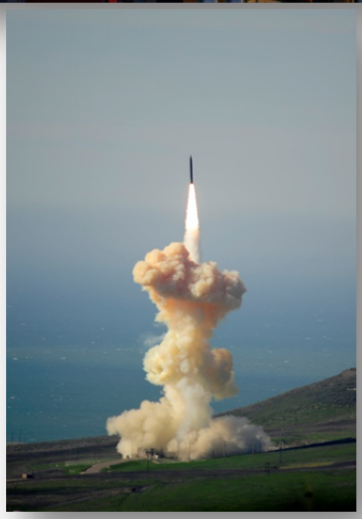
Continental United States (CONUS) Interceptor Site



SECTION 3.6 – Summary of Environmental Consequences, Impacts, and Mitigation Options

Environmental Impact Statement Draft

Department of Defense
Missile Defense Agency
5700 18th Street
For Belvoir, VA 22060-557

May 2016

This page intentionally left blank.

Table of Contents

Appendices

List of Tables

List of Figures

3.6 Summary of Environmental Consequences, Impacts, and Mitigation Options

A comparative summary of the environmental consequences and impacts, along with potential mitigation options to address the impacts for the potential deployment Alternatives at FCTC, CRJMTC, and FTD is presented in Table 3.6-1. Due to the lack of impacts and mitigation options for the No Action Alternative (see Section 3.2) it is not included in the table.

This page intentinally left blank.

Table 3.6-1 Comparative Summary of Environmental Impacts and Potential Mitigations for CIS Candidate Sites

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
AIR QUALITY				
Construction: ***Baseline Schedule***				
Impacts	Based on modelled results, minor and temporary impacts from fugitive dust, but small in comparison to those typically generated for Kalamazoo and Calhoun Counties, would be expected. Potential dust impacts would be reduced through dust control best management practices (BMPs). BMPs to reduce dust emissions during construction could consist of use of dust inhibitors; revegetating disturbed areas; proper maintenance of construction vehicles and equipment, use of clean fuels, and application of anti-idling procedures. Estimated greenhouse gases (GHGs) would be below the CEQ reference point of 25,000 metric tons and would not require a full quantitative analysis.	Expected impacts would be similar to FCTC Site 1 (minor and temporary fugitive dust impacts and small in comparison to those typically generated for Kalamazoo County), but would be reduced through dust control BMPs. Similar to FCTC Site 1, a full quantitative analysis would not be required for GHGs.	Based on modelled results, minor and temporary impacts from fugitive dust, but small in comparison to those typically generated for Portage County, would be expected, but would be reduced through dust control BMPs. BMPs to reduce dust emissions during construction could consist of use of dust inhibitors; revegetating disturbed areas; proper maintenance of construction vehicles and equipment, use of clean fuels, and application of anti-idling procedures. Estimated GHGs would be below standards and a full quantitative analysis would not be required.	Based on modelled results, minor and temporary impacts from fugitive dust, but small in comparison to those typically generated for Jefferson County, would be expected. BMPs to reduce dust emissions during construction could consist of use of dust inhibitors; revegetating disturbed areas; proper maintenance of construction vehicles and equipment, use of clean fuels, and application of anti-idling procedures. Estimated GHGs would be below standards and would not require a full quantitative analysis.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Construction: ***Expedited Schedule***				
Impacts	The shorter construction time period would result in increased emissions. However, similar to the baseline schedule, only temporary and minor impacts would be expected. These emissions would be reduced through use of BMPs similar to those defined for the baseline schedule.	Similar to FCTC Site 1, only temporary and minor impacts would be expected that would be addressed through use of BMPs.	The shorter construction time period would result in increased emissions. However, similar to the baseline schedule, only temporary and minor impacts would be expected. These emissions would be reduced through use of BMPs similar to those defined for the baseline schedule.	The shorter construction time period would result in increased emissions. However, similar to the baseline schedule, only temporary and minor impacts would be expected. These emissions would be reduced through use of BMPs similar to those defined for the baseline schedule.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Operation: ***Baseline Schedule***				
Impacts	Minor impacts to air quality emissions would be expected in comparison to typical Kalamazoo and Calhoun Counties emissions. Estimated GHGs do not indicate the need for quantitative analysis. An operating permit would be required.	Impacts would be the same as those for FCTC Site 1 (minor emission impacts, no quantitative analysis required for GHGs, but operating permit required). BMPs that would be implemented to reduce emissions during operations activities would consist of maintaining equipment in working order, limiting number of operation hours, and installation of air emission controls.	Minor impacts to air quality emissions would be expected in comparison to typical Portage County emissions. Estimated GHGs do not indicate need for quantitative analysis. An operating permit would be required.	Minor impacts to air quality emissions would be expected in comparison to typical Jefferson County emissions. Estimated GHGs do not indicate need for quantitative analysis. An operating permit would be required.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	BMPs that would be implemented to reduce emissions during operations activities would consist of maintaining equipment in working order, limiting number of operation hours, and installation of air emission controls.		BMPs that would be implemented to reduce emissions during operations activities would consist of maintaining equipment in working order, limiting number of operation hours, and installation of air emission controls.	BMPs that would be implemented to reduce emissions during operations activities would consist of maintaining equipment in working order, limiting number of operation hours, and installation of air emission controls.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Operation: ***Expedited Schedule*** Impacts	The shorter time period would result in slightly increased emissions during the initial operations. However, overall and similar to the baseline schedule, only temporary and minor impacts are expected for air quality and GHG emissions. Similar to the baseline schedule, these emissions would be reduced through use of BMPs. An operating permit would be required.	The impacts would be the same as those for FCTC Site 1 (minor impacts).	The impacts would be the similar (minor), but higher than the baseline schedule impacts, which would be reduced by BMPs. An operating permit would be required.	The impacts would be the similar (minor), but higher than the baseline schedule impacts, which would be reduced by BMPs. An operating permit would be required.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
General Conformity: ***Baseline Schedule*** Impacts	Based on initial operation and construction activities, no general conformity thresholds would be exceeded, therefore, no general conformity determination would be required.	Similar to FCTC Site 1, no general conformity determination would be required.	Based on initial operation and construction activities, no general conformity thresholds would be exceeded, therefore no general conformity determination would be required.	Based on initial operation and construction activities, no general conformity thresholds would be exceeded, therefore no general conformity determination would be required.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
General Conformity: ***Expedited Schedule*** Impacts	The estimated construction emission for NO_x would exceed the general conformity threshold. In Year 3, this exceedance would trigger the need for a general conformity determination.	Similar to FCTC Site 1, a general conformity determination would be required.	The estimated construction emission for NO_x would exceed the general conformity threshold. This exceedance would trigger the need for a general conformity determination.	The estimated construction emission for NO_x would exceed the general conformity threshold. This exceedance would trigger the need for a general conformity determination.
Potential Mitigation	Based on results of the general conformity determination, mitigation or securing offsets could be required.	Similar to FCTC Site 1, the need for mitigation would be based on the general conformity determination.	Based on results of the general conformity determination, mitigation or securing offsets could be required.	Based on results of the general conformity determination, mitigation or securing offsets could be required.
AIRSPACE				
Construction: ***Baseline Schedule*** Impacts	Impacts would be negligible.	Similar to FCTC Site 1, impacts would be negligible.	Impacts would be negligible.	Impacts would be negligible.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
Construction: ***Expedited Schedule***				
Impacts	Impacts would be negligible.	Similar to FCTC Site 1, impacts would be negligible.	Impacts would be negligible.	Impacts would be negligible.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Operation:				
Impacts	Due to controlled airspace of adjacent airports and airfields, associated airspace impacts would be negligible to minor. Runway incursion with W.K. Kellogg has been identified as a potential safety concern that would need to be coordinated with the local air traffic control to determine appropriate mitigation. An avoidance area over the IDT and SATCOM facilities would need to be established. Impacts would be minor. Although there are numerous air traffic corridors from Michigan, Indiana, and Wisconsin in the vicinity of FCTC, negligible airspace related impacts would occur.	Due to controlled airspace of adjacent airports and airfields, associated airspace impacts would be negligible to minor. Runway incursion with W.K. Kellogg would be of less concern than FCTC Site 1, due to its further distance from W.K. Kellogg Airfield. An avoidance area over the IDT and SATCOM facilities would need to be established. Impacts would be minor. Although there are numerous air traffic corridors from Michigan, Indiana, and Wisconsin in the vicinity of FCTC, negligible airspace related impacts would occur.	Airspace is not controlled by adjacent airports or airfields. Impacts that would interfere with controlled airspace would be negligible. An avoidance area over the IDT and SATCOM facilities would need to be established. Impacts would be minor. Although there are numerous air traffic corridors from Cleveland, OH to Pittsburg, PA in the vicinity of CRJMTC, negligible airspace related impacts would occur.	Due to existing controlled airspace over FTD and Wheeler-Sack Army Airport, airspace issues would need to be coordinated with FTD. Impacts would be minor. An avoidance area over the IDT and SATCOM facilities would need to be established and coordinated with FTD. Impacts would be minor. Due to existing controlled airspace over FTD, there are no air traffic corridors in the airspace over FTD.
Potential Mitigation	Mitigation would need to be addressed for runway incursion with the adjacent airfield (W.K. Kellogg). All other impacts would be negligible to minor; therefore, no mitigation would be required.	Similar to FCTC Site 1, mitigation would need to be addressed for runway incursion with the adjacent airfield (W.K. Kellogg). All other impacts would be negligible to minor; therefore, no mitigation would be required.	Impacts would be negligible to minor; therefore, no mitigation would be required.	Impacts would be negligible to minor; therefore, no mitigation would be required.
BIOLOGICAL RESOURCES				
Construction: ***Baseline Schedule***				
Impacts: *Threatened and Endangered (T&E) Species*	There are no T&E species currently present in the FCTC Site 1 footprint, but loss of suitable habitats would occur for the Northern Long-Eared bat (NLEB) and Indiana bat, Mitchell's Satyr butterfly, copperbelly watersnake, and eastern massasauga rattlesnake. Therefore, impacts would be minor. A bald eagle nest is present at FCTC, but is not within the FCTC Site 1 CIS footprint or regulated buffer distances. Impacts would be negligible.	There are no T&E species currently present in the FCTC Site 2 footprint, but loss of suitable habitats would occur for the NLEB and Indiana bat, Mitchell's Satyr butterfly, copperbelly watersnake, and eastern massasauga rattlesnake. Therefore, impacts would be minor. A bald eagle is present at FCTC, but is not within the FCTC Site 2 CIS footprint or regulated buffer distances. Impacts would be negligible.	The NLEB has been identified at the CRJTMC CIS footprint. Impacts would include loss of roost trees and foraging habitat. To reduce impacts, seasonal restrictions on tree removal would be implemented to the practical extent possible. Therefore, impacts would be minor. Loss of suitable habitat for the Indiana bat, Mitchell's Satyr butterfly, eastern massasauga rattlesnake, and monkshood would occur, but none of these T&E species are currently present.	The NLEB has been identified in the FTD CIS footprint. The Indiana bats are present at FTD in the cantonment area and roost within 5 miles FTD, but are not known to roost in the FTD CIS footprint. However, due to their general presence at FTD, adverse indirect impacts for these two bat species would result from loss of roost habitat and forage. To reduce impacts, seasonal restrictions on tree removal would be implemented to practical extent possible. Therefore, the impacts would be minor.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	Overall, the baseline construction schedule impacts may affect, but would not likely adversely affect the potential T&E species.	Overall, the baseline construction schedule impacts may affect, but would not likely adversely affect the potential T&E species.	A bald eagle nest is present at CRJMTC, but not within the CIS footprint or regulated buffer distances. Impacts would be negligible. Overall, the baseline construction schedule impacts may affect, but would not likely adversely affect other potential T&E species.	Overall, the baseline construction schedule impacts may affect, but would not likely adversely affect, the NLEB and Indiana bat within the FTD CIS footprint.
Potential Mitigation: *T&E Species*	Although habitats may be lost, no T&E species would be directly impacted. Therefore, because the baseline construction schedule impacts would be minor and may affect, but would not likely adversely affect the potential T&E species, no mitigation would be required.	Although habitats may be lost, no T&E species would be directly impacted. Therefore, because the baseline construction schedule impacts would be minor and may affect, but would not likely adversely affect the potential T&E species, no mitigation would be required.	Because the baseline construction schedule impacts would be minor and may affect, but would not likely adversely affect the NLEB or other T&E species, no mitigation would be required.	Because the baseline construction schedule impacts would be minor and may affect, but would not likely adversely affect the NLEB or Indiana bat, no mitigation would be required.
Impacts: *Other Species*	Vegetation: The FCTC Site 1 footprint consists of 1,008 acres; 805 acres would be cleared (230 acres of grassland and 575 acres of forest).	Vegetation: The FCTC Site 2 footprint consists of 1,040 acres; 831 acres would be cleared (primarily forest). The quality of forest, fen habitat, and other vegetation community slightly higher than FCTC Site 1.	Vegetation: The CRJMTC CIS footprint consists of 1,070 acres; 941 acres to be cleared (391 forested acres, 314 shrub acres, and 236 herbaceous acres).	Vegetation: The FTD CIS footprint consists of 1,219 acres; 996 acres to be cleared (846 mixed forested acres, 113 shrub acres, and 37 herbaceous acres).
	Habitat conversion: Loss of vegetation alliances from forested and grassland areas to maintained turf grass areas. Localized wetland and vegetation composition change from changes in hydrology/filling. Birds, Wildlife, Fish, and Reptiles: Direct impacts due to displacement, indirect impacts due to loss of breeding and foraging habitat. BMPs would be implemented to address impacts would consist of practices such as clearing in non-nesting or breeding periods to practical extent and managing erosion/sedimentation. In addition to the BMPs, the military readiness exemption for birds covered by the MBTA would be invoked for the CIS project, as needed, because although takes of individual birds may occur within the CIS footprint, the overall population of species would not be adversely affected.	Similar but slightly elevated impacts over those for FCTC Site 1 for habitat conversion (habitat for FCTC Site 2 slightly higher quality than FCTC Site 1) and slightly elevated impacts to birds, wildlife, fish, and reptiles would occur. Similar to FCTC Site 1, impacts would be minor and addressed through implementation of BMPs. In addition to the BMPs, the military readiness exemption for birds covered by the MBTA would be invoked for the CIS project, as needed, because although takes of individual birds may occur within the CIS footprint, the overall population of species would not be adversely affected.	Habitat conversion: Loss of forested, shrub, and herbaceous vegetation alliances to maintained turf grass areas. Localized wetland and vegetation composition change from changes in hydrology/filling. Birds, Wildlife, Fish, and Reptiles: Direct impacts due to displacement, indirect impacts due to loss of breeding and foraging habitat. BMPs would be implemented to address impacts and would consist of practices such as clearing in non-nesting or breeding periods to practical extent and managing erosion/sedimentation. In addition to the BMPs, the military readiness exemption for birds covered by the MBTA would be invoked for the CIS project, as needed, because although takes of individual birds may occur within the CIS footprint, the overall population of species would not be adversely affected.	Habitat conversion: Loss of forested, shrub, and herbaceous vegetation alliances to maintained turf grass areas. Localized wetland and vegetation composition change from changes in hydrology/filling. Birds, Wildlife, Fish, and Reptiles: Direct impacts due to displacement, indirect impacts due to loss of breeding and foraging habitat. BMPs would be implemented to address impacts and would consist of practices such as clearing in non-nesting or breeding periods to practical extent and managing erosion/sedimentation. In addition to the BMPs, the military readiness exemption for birds covered by the MBTA would be invoked for the CIS project, as needed, because although takes of individual birds may occur within the CIS footprint, the overall population of species would not be adversely affected.
	Overall impacts to other species are likely to be minor.	Overall impacts to other species are likely to be minor.	Overall impacts to other species are likely to be minor.	Overall impacts to other species are likely to be minor.
Potential Mitigation: *Other Species*	Because overall impacts to other species would be minor, no mitigation measures (compensatory, offsetting activities, or otherwise) were identified.	Because overall impacts to other species would be minor, no mitigation measures (compensatory, offsetting activities, or otherwise) were identified.	Because overall impacts to other species would be minor, no mitigation measures (compensatory, offsetting activities, or otherwise) were identified.	Because overall impacts to other species would be minor, no mitigation measures (compensatory, offsetting activities, or otherwise) were identified.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
Construction: ***Expedited Schedule***				
Impacts: *T&E Species*	Impacts would be intensified, as compared to the baseline schedule, due to the compressed schedule and diminished allowances for timing efforts (e.g., clearing efforts during nesting/breeding seasons). Therefore, moderate impacts are likely. However, because no T&E species are present in the FCTC Site 1 footprint, the expedited construction schedule impacts may affect, but not likely adversely affect the NLEB or other potential T&E species.	Similar to FCTC Site 1, impacts would be intensified, as compared to the baseline schedule, due to the compressed schedule and diminished allowances for timing efforts (e.g., clearing efforts during nesting/breeding seasons). Therefore, moderate impacts are likely. However, because no T&E species are present in the FCTC Site 2 footprint, the expedited construction schedule impacts may affect, but not likely adversely affect the NLEB or other potential T&E species.	Impacts would be intensified, as compared to the baseline schedule, due to the compressed schedule and diminished allowances for timing efforts (e.g., clearing efforts during nesting/breeding seasons, cutting of trees for bats). Because of the diminished allowance for timing efforts for the expedited construction schedule, a may affect, and would likely adversely affect determination has been made for the NLEB with a take permit likely (major and significant impact). However, the expedited construction schedule impacts may affect, but not likely adversely affect other T&E species because they are not present in the CRJMTC footprint.	Impacts would be intensified, as compared to the baseline schedule, due to the compressed schedule and diminished allowances for timing efforts (e.g., clearing efforts during nesting/breeding seasons, cutting of trees for bats). Because of the diminished allowance for timing efforts for the expedited construction schedule, a may affect, and would likely adversely affect determination has been made for the NLEB and Indiana bat with a take permit likely (major and significant impact).
Potential Mitigation: *T&E Species*	Although some habitats may be lost, no T&E species are present in the FCTC Site 1 footprint. Therefore, because the expedited construction schedule impacts would be moderate and may affect, but would not likely adversely affect the NLEB or other potential T&E species, no mitigation would occur.	Although some habitats may be lost, no T&E species are present in the FCTC Site 2 footprint. Therefore, because the expedited construction schedule impacts would be moderate and may affect, but would not likely adversely affect the NLEB or other potential T&E species, no mitigation would occur.	Due to the likely adverse impacts to the NLEB (major and significant impact), consultation with USFWS would be conducted to determine if additional conservation measures would be required and likely obtain a take permit.	Due to the likely adverse impacts to the NLEB and Indiana bat (major and significant impact), consultation with USFWS would be conducted to determine if additional conservation measures would be required and likely obtain a take permit.
Impacts: *Other Species*	Impacts from the expedited schedule for species other than T&E species (vegetation, habitat conversion, birds, wildlife, fish, and reptiles) would be similar to those defined for baseline schedule; however, due to the compressed schedule there would be an increased intensity and diminished allowances for timing efforts would occur (e.g., clearing efforts during nesting/breeding seasons). Overall, only moderate impacts would occur. Lighting and noise impacts may also be intensified due to more work being provided during nighttime hours, but efforts to minimize lighting to specific work areas and limit the more noise-intense construction activities would be implemented to reduce additional impacts during nighttime hours to reduce impacts to wildlife and birds.	Impacts from the expedited schedule for species other than T&E species (vegetation, habitat conversion, birds, wildlife, fish, and reptiles) would be similar to those defined for the expedited baseline schedule for FCTC Site 1. As with FCTC Site 1, due compressed schedule for FCTC Site 2, there would be an increased intensity and diminished allowances for timing efforts would occur (e.g., clearing efforts during nesting/breeding seasons). Overall, only moderate impacts would occur. Lighting and noise impacts may also be intensified due to more work being provided during nighttime hours, but efforts to minimize lighting to specific work areas and limit the more noise-intense construction activities would be implemented to reduce additional impacts during nighttime hours to reduce impacts to wildlife and birds.	Impacts from the expedited schedule for species other than T&E species (vegetation, habitat conversion, birds, wildlife, fish, and reptiles) would be similar to those defined for baseline schedule; however, due to the compressed schedule there would be an increased intensity and diminished allowances for timing efforts would occur (e.g., clearing efforts during nesting/breeding seasons). Overall, only moderate impacts would occur. Lighting and noise impacts may also be intensified due to more work being provided during nighttime hours, but efforts to minimize lighting to specific work areas and limit the more noise-intense construction activities would be implemented to reduce additional impacts during nighttime hours to reduce impacts to wildlife and birds.	Impacts from the expedited schedule for species other than T&E species (vegetation, habitat conversion, birds, wildlife, fish, and reptiles) would be similar to those defined for baseline schedule; however, due to the compressed schedule there would be an increased intensity and diminished allowances for timing efforts would occur (e.g., clearing efforts during nesting/breeding seasons). Overall, only moderate impacts would occur. Lighting and noise impacts may also be intensified due to more work being provided during nighttime hours, but efforts to minimize lighting to specific work areas and limit the more noise-intense construction activities would be implemented to reduce additional impacts during nighttime hours to reduce impacts to wildlife and birds.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	Other than timing efforts, other BMPs would still be able to be implemented to address some impacts. Although takes of individual birds may occur within the CIS footprint, the population of species would not be adversely affected and the military readiness exemption for birds covered by the MBTA would be invoked, as needed.	Other than timing efforts, other BMPs would still be able to be implemented to address some impacts. Although takes of individual birds may occur within the CIS footprint, the population of species would not be adversely affected and the military readiness exemption for birds covered by the MBTA would be invoked, as needed.	Other than timing efforts, other BMPs would still be able to be implemented to address some impacts. Although takes of individual birds may occur within the CIS footprint, the population of species would not be adversely affected and the military readiness exemption for birds covered by the MBTA would be invoked, as needed.	Other than timing efforts, other BMPs would still be able to be implemented to address some impacts. Although takes of individual birds may occur within the CIS footprint, the population of species would not be adversely affected and the military readiness exemption for birds covered by the MBTA would be invoked, as needed.
Potential Mitigation: *Other Species*	No mitigation measures (compensatory, offsetting activities, or otherwise) would be required for other species.	No mitigation measures (compensatory, offsetting activities, or otherwise) would be required for other species.	No mitigation measures (compensatory, offsetting activities, or otherwise) would be required for other species.	No mitigation measures (compensatory, offsetting activities, or otherwise) would be required for other species.
Operation: Impacts	Impacts for maintenance activities would primarily be attributed to maintenance of landscape, mowing, application of herbicides, or similar activities. BMPs would be implemented to address impacts (e.g., product application management, spill cleanup provisions), and any impacts would be minor. Impacts for operations would primarily be attributed to facility and security lighting and some noise due to the impacts from backup power generation equipment. Impacts from lighting would be minimized by the use of fully recessed lighting that directs lighting downward. Noise impacts would occur during temporary back-up situations (power outages or during test and maintenance activities). Overall, these impacts would be minor.	Impacts for maintenance activities would primarily be attributed to maintenance of landscape, mowing, application of herbicides, or similar activities. BMPs would be implemented to address impacts (e.g., product application management, spill cleanup provisions), and any impacts would be minor. Impacts for operations would primarily be attributed to facility and security lighting and some noise due to the impacts from backup power generation equipment. Impacts from lighting would be minimized by the use of fully recessed lighting that directs lighting downward. Noise impacts would occur during temporary back-up situations (power outages or during test and maintenance activities). Overall, these impacts would be minor.	Impacts for maintenance activities would primarily be attributed to maintenance of landscape, mowing, application of herbicides, or similar activities. BMPs would be implemented to address impacts (e.g., product application management, spill cleanup provisions), and any impacts would be minor. Impacts for operations would primarily be attributed to facility and security lighting and some noise due to the impacts from backup power generation equipment. Impacts from lighting would be minimized by the use of fully recessed lighting that directs lighting downward. Noise impacts would occur during temporary back-up situations (power outages or during test and maintenance activities). Overall, these impacts would be minor.	Impacts for maintenance activities would primarily be attributed to maintenance of landscape, mowing, application of herbicides, or similar activities. BMPs would be implemented to address impacts (e.g., product application management, spill cleanup provisions), and any impacts would be minor. Impacts for operations would primarily be attributed to facility and security lighting and some noise due to the impacts from backup power generation equipment. Impacts from lighting would be minimized by the use of fully recessed lighting that directs lighting downward. Noise impacts would occur during temporary back-up situations (power outages or during test and maintenance activities). Overall, these impacts would be minor.
Potential Mitigation	No mitigation measures (compensatory, offsetting activities, or otherwise) were identified.	No mitigation measures (compensatory, offsetting activities, or otherwise) were identified.	No mitigation measures (compensatory, offsetting activities, or otherwise) were identified.	No mitigation measures (compensatory, offsetting activities, or otherwise) were identified.
CULTURAL RESOURCES				
Construction: ***Baseline Schedule*** Impacts	No historic properties identified in APE; therefore, there would be no impacts.	No historic properties identified in APE; therefore, there would be no impacts.	No historic properties identified in APE; therefore, there would be no impacts.	Several potential areas of suspected prehistoric and historic sites are within the FTD CIS footprint. Therefore, adverse (moderate/major) impacts may occur. Also, due to revision to the FTD CIS footprint, an additional 340 acres not previously surveyed for historic properties, is also located within the FTD CIS footprint.
Potential Mitigation	No mitigation would be required.	No mitigation would be required.	No mitigation would be required.	Prior to implementation of any mitigation, an evaluation of the sites and additional surveys (approximately 340 acres) to determine eligibility for inclusion on the NRHP would need to be completed.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
				Although it is policy of FTD cultural resources program to leave archeological properties in-situ, alternative mitigation could consist of the following options or combination thereof: 1. Review of data in partnership with Tribes and SHPO and selection of a portion of sites for data recovery. 2. Monitoring of remaining sites during ground disturbance activities. 3. Development and implementation of regional educational outreach curriculum in partnership with Tribes.
Construction: ***Expedited Schedule*** Impacts	No historic properties identified in APE; therefore, there would be no impacts.	No historic properties identified in APE; therefore, there would be no impacts.	No historic properties identified in APE; therefore, there would be no impacts.	Impacts (adverse [moderate/major]) would be similar to baseline schedule, but the implementation of the surveys and evaluation for NRHP eligibility would need to be conducted in an expedited manner.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	Mitigation would be similar to those listed for the baseline schedule, but would be required to be conducted in an expedited manner.
Operation: Impacts	No (negligible) impacts would occur.	No (negligible) impacts would occur.	No (negligible) impacts would occur.	No (negligible) impacts would occur.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
ENVIRONMENTAL JUSTICE				
Construction: ***Baseline Schedule*** Impacts	No areas are present within the near vicinity of FCTC Site 1 that qualifies as minority or low-income areas. Thus, any negative impacts on minority or lower populations would be negligible. Use of construction-related BMPs to address impacts on other resources would also minimize community health impacts.	Similar to FCTC Site 1, negligible and no negative environmental justice impacts are anticipated from FCTC Site 2 construction activities.	No areas are present within the near vicinity of the CRJMTC CIS footprint that qualifies as minority or low-income areas. Thus, any negative impacts on minority or lower populations would be negligible. Although AOCs are currently present in the CIS footprint, soil remedial efforts are planned to be completed prior to start of construction activities. Therefore, community health concerns related to existing contamination would be negligible. Use of construction-related BMPs to reduce impacts on other resources would also minimize community health impacts.	No areas are present within the near vicinity of the FTD CIS footprint 1 that qualify as minority or low-income areas. Thus, any negative impacts on minority or lower populations would be negligible. Use of construction-related BMPs to reduce impacts on other resources would also minimize community health impacts. The CIS footprint at FTD would result in the closure of NY 3A and traffic would have to use NY 3 through towns of Herrings and Carthage. Neither of these towns or areas along this route qualifies as minority or low-income areas. Therefore, impacts on minority or low-income populations from this reroute activity would be negligible.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
Potential Mitigation	Because no disproportionate environmental justice or community health impacts would occur, no mitigation would be required.	Similar to FCTC Site 1, because no disproportionate environmental justice or community health impacts are anticipated for FCTC Site 2, no mitigation would be required.	Because no disproportionate environmental justice or community health impacts would occur, no mitigation would be required.	Because no disproportionate environmental justice or community health impacts would occur, no mitigation would be required.
Construction: ***Expedited Schedule*** Impacts	Although impacts would occur at a greater intensity because of the compressed schedule, due to the lack of minority or low income areas within the vicinity of the FCTC Site 1 footprint, no negative (negligible) environmental justice impacts related to the expedited construction schedule would be anticipated.	Similar to FCTC Site 1, no negative (negligible) environmental justice impacts would occur for FCTC Site 2 expedited construction activities.	Although impacts would occur faster and with greater intensity because of the compressed schedule, due to the lack of minority or low income areas within the vicinity of the CRJMTC CIS footprint, no negative (negligible) environmental justice impacts related to the expedited construction schedule would occur.	Although impacts would occur faster and with greater intensity because of the compressed schedule, due to the lack of minority or low income areas within the vicinity of the FTD CIS footprint, no negative (negligible) environmental justice impacts related to the expedited construction schedule would occur.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Operation: Impacts	Because no areas that qualify as minority or low income are present within the vicinity of the FCTC Site 1 footprint, no disproportionate or negative (negligible) environmental justice impacts would occur.	Similar to FCTC Site 1, no negative (negligible) environmental justice impacts would occur for FCTC Site 2 operations.	Because no areas that qualify as minority or low income are present within the vicinity of the CRJMTC CIS footprint, no disproportionate or negative (negligible) environmental justice impacts would occur.	Because no areas that qualify as minority or low income are present within the vicinity of the FTD CIS footprint, no disproportionate or negative (negligible) environmental justice impacts would occur.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
GEOLOGY AND SOILS				
Construction: ***Baseline Schedule*** Impacts	Potential moderate impacts could occur due to the substantial land clearing (805 acres) and large quantities of topography grading (potential estimate of 10 to15 MCY cut; 10 to 15 MCY fill) would be implemented in the FCTC Site 1 CIS footprint.	Similar to FCTC Site 1, potential moderate impacts for geology and soil would be present at FCTC Site 2. The primary differences from FCTC Site 1 are that FCTC Site 2 has a slightly larger area to be cleared (830 acres), larger quantities of topography grading materials to be managed (potential estimate of 15 to 20 MCY cut; 15 to 20 MCY fill), and shallower depth to groundwater (typically less than 50 ft bgs for FCTC Site 2 and greater than 50 ft bgs for FCTC Site 1).	Potential moderate to major impacts could occur due to the substantial land clearing (941 acres) and large quantities of topography grading (potential estimate of 15 to 20 MCY cut; 15 to 20 MCY fill) to be implemented in the CRJMTC CIS footprint.	Potential moderate to major impacts could occur due to the substantial land clearing (996 acres) and large quantities of topography grading (potential estimate of 10 to 15 MCY cut; 10 to 15 MCY fill) to be implemented in the FTD CIS footprint.
	Moderate impacts would occur because construction activities would be limited to soils, rather than both soil and rock (bedrock depth greater than 100 ft bgs).	Moderate impacts would occur because construction activities would be limited to soils, rather than both soil and rock (bedrock depth greater than 100 ft bgs).	Moderate to major impacts would occur because construction activities would be in both soil and rock (bedrock typically less than 25 ft bgs), rather than just soil.	Moderate to major impacts would occur because construction activities would be in both soil and rock (bedrock typically less than 20 ft bgs on eastern portion of CIS), rather than just soil.
	Groundwater depths are typically greater than 50 ft bgs, so limited dewatering would occur.	Groundwater depths are typically less than 50 ft bgs, so some dewatering for shallow excavations, as well as deep excavations, would occur.	Groundwater depths are typically less than 20 ft bgs, so dewatering for shallow excavations, as well as deep excavations, would occur.	Groundwater depths are typically less than 20 ft bgs, so dewatering for shallow excavations, as well as deep excavations, would occur.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	Potential impacts could result from soil erosion, hydrogeology impacts from dewatering for deeper excavations, and low potential spill impacts from use/generation of hazardous materials/waste from construction activities. These potential impacts would be minimized to minor impacts through the implementation of construction BMPs such as limiting simultaneous ground disturbance activities and use of soil stabilizing techniques for erosion control; minimizing infiltration water into deeper excavations by use of low permeable shoring systems; and implementation of site-specific spill plans and procedures for management of hazard materials and wastes.	Potential impacts could result from soil erosion, hydrogeology impacts from dewatering for deeper excavations, and low potential spill impacts from use/generation of hazardous materials/waste from construction activities. Similar to FCTC Site 1, these potential impacts would be minimized to minor impacts through implementation of construction BMPs as discussed for FCTC Site 1.	Potential impacts could result from soil erosion, dewatering, and low potential impact from spills of hazardous materials/waste from construction activities. These potential impacts would be minimized to moderate impacts through the implementation of construction BMPs such as limiting simultaneous ground disturbance activities and use of soil stabilizing techniques for erosion control; minimizing infiltration water into deeper excavations by use of low permeable shoring systems; and implementation of site-specific spill plans and procedures for management of hazard materials and wastes. Soil remedial work within AOCs would be completed prior to CIS construction; however, contaminated groundwater could be encountered during dewatering.	Potential impacts could result from soil erosion, dewatering, and low potential impact from spills of hazardous materials/waste from construction activities. These potential impacts would be minimized to moderate impacts through the implementation of construction BMPs such as limiting simultaneous ground disturbance activities and use of soil stabilizing techniques for erosion control; minimizing infiltration water into deeper excavations by use of low permeable shoring systems; and implementation of site-specific spill plans and procedures for management of hazard materials and wastes.
<u>Potential Mitigation</u>	Based on minimizing impacts through use of construction BMPs, the overall construction impacts for soil and geology at FCTC Site 1 would be minor. Therefore, no mitigation would be required.	Based on minimizing impacts through use of construction BMPs, the overall construction impacts for soil and geology at FCTC Site 2 would be minor. Therefore, no mitigation would be required.	Based on minimizing the typical impacts to geology and soil through use of BMPs, only moderate impacts would be anticipated. However, due to the presence of the AOCs, groundwater encountered during construction activities would need to be characterized to determine whether or not treatment would be required prior to discharge, and if required, treated.	Based on minimizing impacts through use of construction BMPs, the overall construction impacts for soil and geology at FTD would be moderate. Therefore, no mitigation would be required.
Construction: ***Expedited Schedule*** <u>Impacts</u>	The type of impacts to geology and soils would be similar to those defined for the baseline schedule. Moderate impacts would increase due to the potential for larger expansions of cleared and disturbed areas at one time and higher volumes of soil being managed during the shortened schedule. BMPs would be implemented to minimize moderate impacts.	The type of impacts to geology and soils would be similar to those defined for the baseline schedule. Moderate impacts would increase due to the potential for larger expansions of cleared and disturbed areas at one time and higher volumes of soil being managed during the shortened schedule. BMPs would be implemented to minimize moderate impacts.	The type of impacts to geology and soils would be similar to those defined for the baseline schedule. Moderate to major impacts would increase due to the potential for larger expansions of cleared and disturbed areas at one time and higher volumes of soil being managed during the shortened schedule. BMPs would need to be more aggressively implemented to minimize impacts to moderate. The volume of potentially contaminated groundwater encountered from dewatering could increase during the shortened schedule.	The type of impacts to geology and soils would be similar to those defined for the baseline schedule. Moderate to major impacts would increase due to the potential for larger expansions of cleared and disturbed areas at one time and higher volumes of soil being managed during the shortened schedule. BMPs would need to be more aggressively implemented to minimize impacts to moderate.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
Potential Mitigation	Based on minimizing impacts through use of construction BMPs, the overall impacts for soil and geology at FCTC Site 1 would be moderate. Therefore, no mitigation would be required.	Based on minimizing impacts through use of construction BMPs, the overall impacts for soil and geology at FCTC Site 2 would be moderate. Therefore, no mitigation would be required.	Based on minimizing typical impacts through use of construction BMPs, the overall impacts for soil and geology at the CRJMTC CIS footprint would be moderate; therefore, no mitigation would be required. Due to the presence of the AOCs, groundwater encountered during construction activities would need to be characterized to determine whether or not treatment would be required prior to discharge, and if required, treated.	Based on minimizing impacts through use of construction BMPs, the overall impacts for soil and geology at the FTD CIS footprint would be moderate. Therefore, no mitigation would be required.
Operation: Impacts Potential Mitigation	Primary impacts would be related to erosion control which would be minimized through use of BMPs. There would be negligible impacts for geology and soils; therefore, no mitigation would be required.	Primary impacts would be related to erosion control which would be minimized through use of BMPs. There would be negligible impacts for geology and soils; therefore, no mitigation would be required.	Primary impacts would be related to erosion control which would be minimized through use of BMPs. There would be negligible impacts for geology and soils; therefore, no mitigation would be required.	Primary impacts would be related to erosion control which would be minimized through use of BMPs. There would be negligible impacts for geology and soils; therefore, no mitigation would be required.
HAZARDOUS MATERIALS/HAZARDOUS WASTE				
Construction: ***Baseline Schedule*** Impacts	Construction activities would use/generate limited construction-related hazardous materials/hazardous waste (HM/HW) that would be addressed through implementation of HazCom and Hazardous Waste HazWst programs and plans established by the construction contractor and coordinated with existing FCTC plans and policies. Therefore, negligible impacts would occur.	Impacts would be similar to those defined for FCTC Site 1 (negligible impacts).	Construction activities would use/generate limited construction-related HM/HW that would be addressed through implementation of HazCom and HazWst programs and plans established by the construction contractor and coordinated with existing CRJMTC plans and policies. Therefore, negligible impacts would occur. Soil remedial work within AOCs would be completed prior to construction actions to protect workers and the environment; however, contaminated groundwater could be encountered during dewatering. This impact would be moderate.	Construction activities would use/generate limited construction-related HM/HW that would be addressed through implementation of HazCom and HazWst programs and plans established by the construction contractor and coordinated with existing FTD plans and policies plans and policies. Therefore, negligible impacts would occur.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required for construction HW/HW related activities for the deployment of the CIS, other than those potentially associated with groundwater characterization and treatment, if required, during dewatering activities.	No mitigation would be required.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
Construction: ***Expedited Schedule***				
Impacts	Similar to the baseline schedule, limited construction HM/HW use/generated during the expedited schedule would be minimized to negligible impacts by implementation of contractor and FCTC HazCom /HazWst programs, plans, and BMPs.	Impacts would be similar to those defined for FCTC Site 1 (negligible impacts).	Similar to the baseline schedule, limited construction HM/HW use/generated during the expedited schedule would be minimized to negligible impacts by implementation of contractor and CRJMTC HazCom/HazWst programs, plans, and BMPs. The amounts of potentially contaminated groundwater from dewatering in a shorter timeframe could increase. These impacts would be moderate.	Similar to the baseline schedule, limited construction HM/HW use/generated during the expedited schedule would be minimized to negligible impacts by implementation of contractor and FTD HazCom/HazWst programs, plans, and BMPs.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required for general HM/HW impacts. Groundwater from dewatering would need to be characterized and treated, if required.	No mitigation would be required.
Operation:				
Impacts	New hazardous materials would be introduced to the site, including additional fuel, small quantities of interceptor (KV device) fuel [hydrazine and oxidizer (nitrogen tetroxide)] and small explosive components. The potential for accidental release and exposure of toxic materials onsite would be minimized to negligible impacts by the implementation of newly developed CIS HazCom/HazWst plans and programs and coordination with FCTC plans and policies currently in place.	Impacts would be similar to those defined for FCTC Site 1 (negligible impacts).	New hazardous materials would be introduced to the site, including additional fuel, small quantities of interceptor (KV device) fuel [hydrazine and oxidizer (nitrogen tetroxide)] and small explosive components. The potential for accidental release and exposure of toxic materials onsite would be minimized to negligible impacts with the implementation of CIS HazCom/HazWst Plans and programs and coordination with CRJMTC plans and policies currently in place.	New hazardous materials would be introduced to the site, including additional fuel, small quantities of interceptor (KV device) fuel [(hydrazine and oxidizer (nitrogen tetroxide)] and small explosive components. The potential for accidental release and exposure of toxic materials onsite would be minimized to negligible impacts with the implementation of CIS HazCom/HazWst Plans and programs and coordination with FTD plans and policies currently in place.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
HEALTH AND SAFETY				
Construction: ***Baseline Schedule***				
Impacts	Minor hazards inherent to general construction activities would be addressed by preparation and implementation of health and safety planning documentation (safety plans and job hazard assessments) and training. The perceived low risk for onsite construction personnel of encountering unexploded ordnance would be addressed through unexploded ordnance awareness training. Hazards related to the offsite and onsite transportation of materials would be addressed through preparation and implementation of transportation safety	Minor hazards would be similar to those defined for FCTC Site 1.	Minor hazards inherent to general construction activities would be addressed by preparation and implementation of health and safety planning documentation (safety plans and job hazard assessments) and training. The perceived low risk for onsite construction personnel of encountering unexploded ordnance would be addressed through unexploded ordnance awareness training. Hazards related to the offsite and onsite transportation of materials would be addressed through preparation and implementation of transportation safety	Minor hazards inherent to general construction activities would be addressed by preparation and implementation of health and safety planning documentation (safety plans and job hazard assessments) and training. The perceived low risk for onsite construction personnel of encountering unexploded ordnance would be addressed through unexploded ordnance awareness training. Hazards related to the offsite and onsite transportation of materials would be addressed through preparation and implementation of transportation safety

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	procedures, training, and adherence to DOT regulations and requirements.		procedures, training, and adherence to DOT regulations and requirements. Minor safety hazards due to the potential presences of MEC and UXO would be addressed by the standard practice of performing a UXO survey and removal prior to start of construction.	procedures, training, and adherence to DOT regulations and requirements.
Potential Mitigation	Health and safety impacts would be addressed through common safety practices; therefore, no mitigation would be required.	Health and safety impacts would be addressed through common safety practices; therefore, no mitigation would be required.	Health and safety impacts would be addressed through common safety practices; therefore, no mitigation would be required.	Health and safety impacts would be addressed through common safety practices; therefore, no mitigation would be required.
Construction: ***Expedited Schedule*** Impacts	Enhanced, but minor, health and safety impacts would occur for implementation of the expedited construction schedules due to the increased number of personnel onsite, longer working hours, and night work. Similar to the baseline schedule, these issues would be addressed by the implementation of common and some enhanced health and safety practices.	Similar to FCTC Site 1, enhanced, but minor, health and safety impacts would occur for implementation of the expedited construction schedules and be addressed by the implementation of common and some enhanced health and safety practices.	Enhanced health and safety issues would occur for implementation of the expedited construction schedules due to the increased number of personnel onsite, longer working hours, and night work. Similar to the baseline schedule, these issues would be addressed by the implementation of common and some enhanced health and safety practices.	Enhanced, but minor, health and safety impacts would occur for implementation of the expedited construction schedules due to the increased number of personnel onsite, longer working hours, and night work. Similar to the baseline schedule, these issues would be addressed by the implementation of common and some enhanced health and safety practices.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Operation: Impacts	Overall, minor impacts would occur. Increased emergency services may be required. Final facility design would provide requirements and the need for enhanced emergency services and adequate fire protection. Additional small explosive risk would be related to GBI functions. This risk would be addressed during the facility design by placing the facilities at appropriate explosive safety arcs.	Overall, minor impacts would occur. Increased emergency services may be required. Final facility design would provide requirements and the need for enhanced emergency services and adequate fire protection. Additional small explosive risk would be related to GBI functions. This risk would be addressed during the facility design by placing the facilities at appropriate explosive safety arcs.	Overall, minor impacts would occur. Increased emergency services may be required. Final facility design would provide requirements and the need for enhanced emergency services and adequate fire protection. Additional small explosive risk would be related to GBI functions. This risk would be addressed during the facility design by placing the facilities at appropriate explosive safety arcs.	Overall, minor impacts would occur. Increased emergency services may be required. Final facility design would provide requirements and the need for enhanced emergency services and adequate fire protection. Additional small explosive risk would be related to GBI functions. This risk would be addressed during the facility design by placing the facilities at appropriate explosive safety arcs.
Potential Mitigation	Other than the potential need to enhance emergency services, no mitigation would be required.	Other than the potential need to enhance emergency services, no mitigation would be required.	Other than the potential need to enhance emergency services, no mitigation would be required.	Other than the potential need to enhance emergency services, no mitigation would be required.
LAND USE				
Construction: ***Baseline Schedule*** Impacts	Impacts to regional land use plans (land use conversion and recreation) would be minor.	Similar to FCTC Site 1, impacts to regional land use plans (land use conversion and recreation) would be minor.	Impacts to regional land use (recreation) would be minor.	Impacts to regional land use would be minor (no conflicts with regional plans, minor land conversion; transportation impacts are addressed under Transportation resource).

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	There would be some conflicts with the INRMP from loss of some training areas (including 7.62 mm firing range), and some reduction in recreation lands. However, the 7.62 mm range would move to an existing range at another MIARNG facility with adequate training capability for the increased training (no perceived impacts). The CIS impacts would be compatible and consistent with the overall land use designation for FCTC (military/training) and secondary recreational use. Overall impacts would be minor.	Similar to FCTC Site 1 for site land use, conflicts with INRMP, from loss of some training areas and reduction in recreation lands. For FCTC Site 2, there would not be any training loss impacts from relocating the 7.62 mm firing range (not in FCTC Site 2 footprint). However, similar to FCTC Site 1 for the remaining conflicts identified, overall impacts would be minor due to the compatibility with overall land use designation (military/training) and secondary recreational use.	There would be some possible conflicts with existing INRMP due to training land loss. However, the INRMP would be revised, as needed, to support the military mission (including the CIS). Several facilities would be relocated from within the CRJMTC CIS footprint to other locations at CRJMTC. However, land use for the CIS within CRJMTC would be compatible with overall CRJTMC land use designation (military/training). No impacts were noted for designed relocation facility areas. Overall impacts would be minor.	There would be some possible minor conflicts with INRMP (loss of training area and natural resources) and areas for recreational use. Concern also with impact for closure and rerouting of Highway 3A traffic; however, this would probably not impact land use designations. Land use for the CIS would be compatible with overall FTD land use designation (military/training). Recreation use is secondary. Available land versus land use losses would be minor. Overall impacts would be minor.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Construction: ***Expedited Schedule*** Impacts	Similar to the baseline schedule, regional and site land use impacts would be minor.	Similar to the FCTC Site 1 expedited schedule and the FCTC Site 2 baseline schedule impact, regional and site land use impacts would be minor.	Similar to the baseline schedule, regional and site land use impacts would be minor.	Similar to the baseline schedule, regional and site land use impacts would be minor.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Operation: Impacts	Conflicts with regional and site land use impacts would be minor (primarily secondary recreation loss).	Similar to FCTC Site 1, conflicts with regional land use plans would be minor (land use conversion and recreation).	Conflicts with regional and site land use impacts would be minor (primarily secondary recreation loss).	Conflicts for regional and site land use impacts would be minor (primarily to closure/traffic rerouting of Hwy 3A traffic and secondary recreation loss).
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
NOISE				
Construction: ***Baseline Schedule*** Impacts	Background sound levels were at or above established standards. Construction impact results were determined based on a worst-case qualitative assessment of sound level increases to potential receptors from construction versus background levels. The potential increase determined for FCTC Site 1 to the nearest receptor would be unnoticed to very noticeable (minor/moderate); whereas the furthest of the next three receptors would be unnoticed (negligible impacts). These impacts are conservative and would be addressed by BMPs.	Results would be similar to FCTC Site 1 (minor impacts), except noise at the closest receptor would be increased to very noticeable.	Background sound levels were at or above established standards. Construction impact results were determined based on a worst-case qualitative assessment of sound level increases to potential receptors from construction versus background levels. The potential increase determined for the CRJMTC CIS footprint to the nearest receptor would be tolerable to objectionable (moderate impacts); whereas the furthest of the next three receptors would be unnoticed (negligible impacts). These impacts are conservative and would be addressed by BMPs.	Background sound levels were at or above established standards. Construction impact results were determined based on a worst-case qualitative assessment of sound level increases to potential receptor at site from construction versus background levels. The potential increase determined for the FTD CIS footprint to the nearest receptor would be tolerable to objectionable (moderate impacts); whereas the furthest of the next four receptors would be unnoticed (negligible impacts). These impacts are conservative and would be reduced by BMPs.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	Standard noise-reducing BMPs would consist of using vibratory versus pile-driving equipment, use of equipment with mufflers/silencers and techniques, such as limiting construction times, especially at nighttime. BMPs would address noise to minor impacts.	Similar to FCTC Site 1, BMPs would address noise to minor impacts.	Standard noise-reducing BMPs would consist of using vibratory versus pile-driving equipment, use of equipment with mufflers/silencers and techniques, such as limiting construction times, especially at nighttime. BMPs would address noise to minor/moderate impacts.	Standard noise-reducing BMPs would consist of using vibratory versus pile-driving equipment, use of equipment with mufflers/silencers and techniques, such as limiting construction times, especially at nighttime. BMPs would address noise to minor/moderate impacts.
Potential Mitigation	No mitigation would be required.	No mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Construction: ***Expedited Schedule*** Impacts	Daytime results would be similar to baseline schedule. Qualitative impact results were also determined for nighttime work. The nighttime background levels were typically less than established standards. The potential nighttime increase to the nearest receptor would be intrusive to objectionable (moderate impacts); whereas the furthest of the next three receptors would be intrusive (minor impacts). These impacts are conservative and would be addressed by BMPs. BMPs would be similar to baseline schedule, with limiting the noisier activities to daytime hours as much as possible. BMPs would address noise impacts to minor/moderate.	Results would be similar to FCTC Site 1, except for the noise at the closest receptor would be increased to very noticeable. Similar to FCTC Site 1, BMPs would address noise to minor/moderate impacts.	Daytime results would be similar to baseline schedule. Qualitative impact results were also determined for nighttime work. The nighttime background levels were typically less than established standards. The potential nighttime increase to the nearest receptor would be objectionable to very objectionable/intolerable (moderate impacts); whereas the furthest of the next three receptors would be intrusive (minor impacts). These impacts are conservative and would be addressed by BMPs. BMPs would be similar to baseline schedule, with limiting the noisier activities to daytime hours as much as possible. BMPs would address noise to minor/moderate impacts.	Daytime results would be similar to baseline schedule. Qualitative impact results were also determined for nighttime work. The nighttime background levels were typically less than established standards. The potential nighttime increase to the nearest receptor would be objectionable to very objectionable (moderate impacts); whereas the furthest of the next four receptors would be intrusive (minor impacts). These impacts are conservative and would be addressed by BMPs. BMPs would be similar to baseline schedule, with limiting the noisier activities to daytime hours as much as possible. BMPs would address noise to minor/moderate impacts.
Potential Mitigation	No mitigation would be required.	No mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Operation: Impacts	Operation impact results were determined based on a worst-case qualitative assessment of sound level increases to potential receptors (operation to background). Background values were based on day/night averages which were less than established standards. The potential increase to the nearest and farthest receptors would be unnoticed (no increase). Although noise impacts would be negligible, they would be further reduced by BMPs. Standard noise reducing BMPs measures would consist of using mufflers/silencers for air handling/exhaust (power plant) stacks.	Results would be similar to FCTC Site 1, with negligible impacts (unnoticeable).	Operation impact results were determined based on a worst-case qualitative assessment of sound level increases to potential receptors (operation to background). Background values were based on day/night averages which were less than established standards. The potential increase to the nearest and the farthest receptors would be unnoticed (no increase). Although noise impacts would be negligible, they would be further reduced by BMPs. Standard noise reducing BMPs measures would consist of using mufflers/silencers for air handling/exhaust (power plant) stacks.	Operation impact results were determined based on a worst-case qualitative assessment of sound level increases to potential receptors (operation to background). Background values were based on day/night averages which were less than established standards. The potential increase to the nearest and farthest receptors would be unnoticed (no increase). Although noise impacts would be negligible, they would be further reduced by BMPs. Standard noise reducing BMPs measures would consist of using mufflers/silencers for air handling/exhaust (power plant) stacks.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	Overall noise impacts from operations would be negligible.	Overall noise impacts from operations would be negligible.	Overall noise impacts from operations would be negligible.	Overall noise impacts from operations would be negligible.
Potential Mitigation	No mitigation would be required.	No mitigation would be required.	No mitigation would be required.	No mitigation would be required.
SOCIOECONOMICS				
Construction: ***Baseline Schedule*** Impacts	The following moderate and positive economic impacts would occur: • Approximately 400 to 600 construction (direct) jobs would be provided throughout the construction period. • An estimated total positive (increase) sales tax revenue of approximately $0.925 million per year would occur during the construction period. Based on modelled results, the following moderate and positive economic impacts would occur: • The estimated increase in total value added of $193 million for the entire project. • Approximately 2,008 indirect jobs would be created during the construction period. Some short-term, moderate negative impact on traffic would occur during peak construction months. See Transportation for more information on traffic impacts and potential mitigations. Although health care facilities are present, pre-existing concerns with healthcare access would be increased resulting in additional minor negative impacts. No negative impacts to education services would occur. Impacts to emergency preparedness services would be minor. Overall moderate and largely positive socioeconomic construction impacts would occur.	Impacts would be similar to FCTC Site 1, overall moderate and largely positive.	The following major (due to the depressed economies in the surrounding counties) and positive economic impacts would occur: • Approximately 400 to 600 construction (direct) jobs would be provided throughout the construction period. • An estimated total positive (increase) sales tax revenue up to approximately $0.9 million per year would occur during the construction period. Based on modelled results, the following major and positive economic impacts would occur: • The estimated increase in total value added would be $224 million for the entire project. • Approximately 2,351 indirect jobs would be created during the construction period. Some short-term, minor/moderate negative impact on traffic would occur during peak construction months. See Transportation for more information on traffic impacts and potential mitigations. Although health care facilities are present, pre-existing concerns with healthcare access would be increased resulting in additional minor negative impacts. No negative impacts to education services would occur. Impacts to emergency preparedness services would be minor. Overall major (due to the depressed economies in the surrounding counties) and largely positive socioeconomic construction impacts would occur.	The following moderate and positive economic impacts would occur: • Approximately 400 to 600 construction (direct) jobs would be provided throughout the construction period. • An estimated total positive (increase) sales tax revenue of $1.1 million per year would occur during the construction period. Based on modelled results, the following moderate and positive economic impacts would occur: • The estimated increase in total value added of $190 million for the entire project. • Approximately 1,836 indirect jobs would be created during the construction period. Some short-term, minor/moderate negative impact on traffic would occur during peak construction months. See Transportation for more information on traffic impacts and potential mitigations. Although health care facilities are present, pre-existing concerns with healthcare access would be increased resulting in additional minor negative impacts. No negative impacts to education services would occur. Impacts to emergency preparedness services would be minor. Overall moderate and largely positive socioeconomic construction impacts would occur.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
Construction: ***Expedited Schedule*** Impacts	Similar to baseline construction, overall moderate and largely positive impacts would occur. The following moderate and positive economic impact and differences from the baseline schedule would occur: • The number of construction jobs would be approximately double, 800 to 1200 construction (direct) jobs, throughout the construction period. • The estimated total positive (increase) tax revenue on an annual basis would double. Based on modelled results the following moderate and positive economic impacts and differences from the baseline construction schedule would occur: • The estimated total value would remain the same (based on project, not schedule duration). • The number of indirect jobs (which are based on project, not schedule duration) created would remain the same. Additional around-the-clock traffic concerns would occur. See Transportation for more information on traffic impacts and potential mitigations. In comparison with the baseline schedule changes, additional minor negative impact to pre-existing healthcare concerns; additional, but minor, negative impact to education services; and additional negative, but up to moderate, impact on emergency preparedness services would occur.	Impacts would be similar to FCTC Site 1, overall moderate and largely positive.	Similar to baseline construction, overall major (due to the depressed economies in the surrounding counties) and largely positive impacts would occur. The following major and positive economic impact and differences from the baseline schedule would occur: • The number of construction jobs would be approximately double, 800 to 1200 construction (direct) jobs, throughout the construction period. • The estimated total positive (increase) tax revenue on an annual basis would double. Based on modelled results the following major and positive economic impacts would occur: • The estimated total value would remain the same (based on project, not schedule duration). • The number of indirect jobs (which are based on project, not schedule duration) created would remain the same. Additional around-the-clock traffic concerns would occur. See Transportation for more information on traffic impacts and potential mitigations. In comparison with the baseline schedule changes, additional minor negative impact to pre-existing healthcare concerns; additional, but minor, negative impact to education services; and additional negative, but up to moderate, impact on emergency preparedness services would occur.	Similar to baseline construction, overall moderate and largely positive impacts would occur. The following economic moderate and positive impact and differences from the baseline schedule would occur: • The number of construction jobs would be approximately double, 800 to 1200 construction (direct) jobs, throughout the construction period. • The estimated total positive (increase) tax revenue on an annual basis would double. Based on modelled results the following moderate and positive economic impacts and differences from the baseline construction schedule would occur: • The estimated total value would remain the same (based on project, not schedule duration). • The number of indirect jobs (which are based on project, not schedule duration) created would remain the same. Additional around-the-clock traffic concerns would occur. See Transportation for more information on traffic impacts and potential mitigations. In comparison with the baseline schedule changes, additional minor negative impact to pre-existing healthcare concerns; additional, but minor, negative impact to education services; and additional negative, but up to moderate, impact on emergency preparedness services would occur.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Operation: Impacts	The following moderate and positive economic impacts would be incurred: • Approximately 650 to 850 operations (direct) jobs would be provided. • The estimated total positive (increase) sales tax revenue would be approximately $1.4 million per year.	Similar to FCTC Site 1, overall moderate and largely positive impacts would occur.	The following major (due to the depressed economies in the surrounding counties) and positive economic impacts would be incurred: • Approximately 650 to 850 operations (direct) jobs would be provided. • The estimated total positive (increase) sales tax revenue would be approximately $1.35 million per year.	The following moderate and positive economic impacts would be incurred: • Approximately 650 to 850 operations (direct) jobs would be provided. • The estimated total positive (increase) sales tax revenue would be $1.65 million per year.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	Based on modelled results, the following moderate and positive economic impacts would occur: • The estimated increase in total value added would be $29 million for each year of operation. • Approximately 416 indirect jobs would be created in a year during operations (above operating staff). An increase in the daily traffic could result in major impacts. See Transportation for more information on traffic impacts and potential mitigations. Although health care facilities are present, pre-existing concerns with healthcare access would be increased resulting in additional minor negative impacts. No negative impact to education services would occur. Negative impacts on emergency preparedness and response services would be minor. Overall moderate and largely positive socioeconomic operation impacts would occur.		Based on modelled results, the following major (due to the depressed economies in the surrounding counties) and positive economic impacts would occur: • The estimated increase in total value added would be $27 million for each year of operation. • Approximately 340 indirect jobs would be created in a year during operations (above operating staff). An increase in the daily traffic could result in major impacts. See Transportation for more information on traffic impacts and potential mitigations. Although health care facilities are present, pre-existing concerns with healthcare access would be increased resulting in additional minor negative impacts. No negative impact to education services would occur. Negative impacts on emergency preparedness and response services would be minor. Overall major and largely positive socioeconomic operation impacts would occur.	Based on modelled results, the following moderate and positive economic impacts would occur: • The estimated increase in total value added would be $27 million for each year of operation. • Approximately 340 indirect jobs would be created in a year during operations (above operating staff). An increase in the daily traffic could result in minor/moderate impacts. See Transportation for more information on traffic impacts and potential mitigations. Although health care facilities are present, pre-existing concerns with healthcare access would be increased resulting in additional minor negative impacts. A very slight impact to education services would occur. Negative impacts on emergency preparedness and response services would be minor. Overall moderate and largely positive socioeconomic operation impacts would occur.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
TRANSPORTATION				
Construction: ***Baseline Schedule*** Impacts	Negligible impacts for heavy haul of equipment would occur. Suitable ports, over-road routes, and airfields have been identified. Several state highways, interstates, and roads are available to address traffic to/from the CIS. Based on the assessment of additional traffic, major delays would occur for traffic exiting I-94 at Exit 92 as traffic turns to travel on I-94BL/M 37 (backup down the off ramp) during peak hours of traffic. To improve peak traffic to moderate impacts, practices such as staggered work shift could be implemented.	Similar to FCTC Site 1, negligible impacts are expected for heavy haul traffic. Several state highways, interstates, and roads are available to address traffic to/from the CIS. Based on the assessment of additional traffic, minor impacts would occur due to the slight decrease in the level of service, for traffic exiting I-94 at Exit 88 as traffic turns to travel on 40th Street. Practices such as staggered work shift could be implemented to address peak traffic impacts.	Negligible impacts for heavy haul of equipment would occur. Suitable ports, over-road routes, and airfields have been identified. Several state highways, interstates, and roads are available to address traffic to/from the CIS. Based on the assessment of additional traffic, minor impacts would occur due to the decreases in the level of service during peak hours. Practices such as staggered work shift could be implemented to address peak traffic impacts.	Negligible impacts for heavy haul of equipment would occur. Suitable ports, over-road routes, and airfields have been identified. The location of CIS footprint would result in the closure of NY 3A. Rerouting of traffic to NY 3 would occur, which would increase travel time through the area. Several state highways, interstates, and roads are available to address traffic to/from the CIS (including consideration of closing NY 3A). Based on the

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	Minor impacts would occur due to road improvements and new road construction within FCTC Site 1.	Minor impacts would occur due to road improvements and new road construction within FCTC Site 2.	Minor impacts would occur due to road improvements and new road construction within CRJMTC.	assessment of additional traffic, moderate decreases in the level of services would occur for two lane highways, but would not drop below acceptable design levels. In addition, there would be major impacts to motorists within the Village of Carthage at the signalized intersection of School Street (North and South) and NY 3/126 (State Street) during the evening peak traffic hour. Practices such as staggered work shift could be implemented to address peak traffic impacts. Minor impacts would occur due to required modifications and improvements to onsite FTD roads (removal of some existing roundabouts for equipment delivery, and upgrades to roads) within the CIS footprint.
	Overall, impacts to transportation would be major.	Overall, impacts to transportation would be minor.	Overall, impacts to transportation would be minor.	Overall, impacts to transportation would be moderate/major.
<u>Potential Mitigation</u>	No mitigation would be required for heavy haul transport. An access permit would require a traffic impact study be conducted. Traffic signals at the ramp termini of I-94 WB and EB off ramps at I-94BL/M 37 would be required to facilitate the movement of traffic through these intersections. In addition, staggered work shifts not to coincide with existing peak hour traffic could also be considered to lessen impacts. Modifications to the existing traffic signals (phasings and timings) at the I-94BL/M 37 and CIS gate and Columbia Avenue/Skyline Drive would be required. No mitigation would be required for existing road improvements or new road construction within FCTC Site 1.	No mitigation would be required for heavy haul transport. Once the new tight diamond interchange improvements are completed and traffic flow is normalized at the I-94 and 40th Street interchange, a traffic impact study would be required to re-assess the CIS-generated traffic at this interchange. Results of that study may require additional mitigation such as the addition of a traffic light or dedicated turn lane at the 40th Street and CIS Gate intersection. In addition, staggered work shifts not to coincide with existing peak hour traffic could also be considered to lessen impacts. The scheduled improvements to 40th Street due to the new interchange project at Exit 88 should be extended north a few hundred feet to the CIS gate location off of 40th Street. No mitigation would be required for existing road improvements or new road improvements within FCTC Site 2.	No mitigation would be required for heavy haul transport. An access permit would require a traffic impact study be conducted. Results of that study may require additional mitigation such as the addition of a traffic light or dedicated turn lane. In addition, staggered work shifts not to coincide with existing peak hour traffic could also be considered to lessen impacts. No mitigation would be required for existing road improvements or new road construction within CRJMTC.	No mitigation would be required for heavy haul transport. An access permit would require a traffic impact study be conducted. Results of that study may require additional mitigation such as the addition of a traffic light. The signal timing at the School Street (North and South) and NY 3/126 (State Street) would require modification. Consideration of a dedicated left turn lane for N. School Street south bound traffic, along with protected phasing, could be another mitigation option. Staggered work shifts could also be considered. In addition, staggered work shifts not to coincide with existing peak hour traffic could also be considered to lessen impacts. No mitigation would be required for upgrades and modifications of existing roads within FTD.
Construction: ***Expedited Schedule*** <u>Impacts</u>	For the expedited schedule, two shifts with similar personnel and a staggered 2-hour transition period	For the expedited schedule, two shifts with similar personnel and a staggered 2-hour transition period	For the expedited schedule, two shifts with similar personnel and a staggered 2-hour transition period	For the expedited schedule, two shifts with similar personnel and a staggered 2-hour transition period

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
	between shifts was assumed. The overall impacts would be similar to the baseline schedule impacts (major).	between shifts was assumed. The overall impacts would be similar to the baseline schedule impacts (minor).	between shifts was assumed. The overall impacts would be similar to the baseline schedule impacts (minor).	between shifts was assumed. The overall impacts would be similar to the baseline schedule impacts (moderate/major).
Potential Mitigation	Mitigation similar to the baseline construction schedule would occur.	Mitigation similar to the baseline construction schedule would occur.	Mitigation similar to the baseline construction schedule would occur.	Mitigation similar to the baseline construction schedule would occur.
Operation: Impacts	For operations, three shifts with higher personnel for the first (normal daytime shift) and lower personnel for the next two shifts were assumed. With these assumed conditions, major delays would occur for those exiting I-94 at Exit 92 similar to the baseline construction schedule for roads around FCTC Site 1.	For operations, three shifts with higher personnel for the first (normal daytime shift) and lower personnel for the next two shifts were assumed. With these assumed conditions, minor impacts, similar to the baseline construction schedule for roads around FCTC Site 2, would occur.	For operations, three shifts with higher personnel for the first (normal daytime shift) and lower personnel for the next two shifts were assumed. With these assumed conditions, minor impacts, similar to the baseline construction schedule for roads around CRJMTC, would occur.	For operations, three shifts with higher personnel for the first (normal daytime shift) and lower personnel for the next two shifts were assumed. With these assumed conditions, moderate impacts would occur on the two-lane highways, but not below acceptable design levels. In addition, there would be major impacts to motorists within the Village of Carthage at the signalized intersection of School Street (North and South) and NY 3/126 (State Street) during the evening peak hour.
Potential Mitigation	Mitigation similar to the baseline schedule would occur.	Similar to FCTC Site 1, mitigation similar to the baseline schedule would occur.	Mitigation similar to the baseline schedule would occur.	Mitigation similar to the baseline schedule would occur.
UTILITIES				
Construction: ***Baseline Schedule*** Impacts	Utility services are available from commercial sources or through the construction contractor; therefore, negligible impacts would occur.	Similar to FCTC Site 1, negligible impacts would occur.	Utility services are available from commercial sources or through the construction contractor; therefore, negligible impacts would occur. To avoid potential impacts, onsite groundwater water sources would be avoided due to the potential need to treat contaminated water near AOCs.	Utility services are available from commercial sources or through the construction contractor; therefore, negligible impacts would occur. Potential negligible to minor impacts would occur due to running service lines from long distances. However, impacts would be minimized by using pre-developed road right-of-ways.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Construction: ***Expedited Schedule*** Impacts	Similar to the baseline schedule, negligible impacts would occur.	Similar to FCTC Site 1, and baseline schedule, negligible impacts would occur.	Similar to the baseline schedule, negligible impacts would occur.	Similar to the baseline schedule, negligible to minor impacts would occur.
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1 and baseline schedule, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Operation: Impacts	Utility services are available from commercial sources. An onsite groundwater aquifer source is also available and a supply facility would be developed for emergency situations. Overall negligible to minor impacts would occur.	Similar to FCTC Site 1, negligible to minor impacts would occur.	Utility services are available from commercial sources, negligible impacts would occur. For emergency/backup water sources, contaminated groundwater may be encountered from AOCs. Minor	Utility services are available from commercial sources. An onsite groundwater aquifer source is also available and a supply facility would be developed for emergency situations. Overall negligible to minor impacts would occur.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
			to moderate impacts could occur, but would be minimized to minor with methods consisting of an evaluation of well location/placement and cased well installation.	
Potential Mitigation	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required for utilities used for routine operations. However, the potential impact from contaminated groundwater would need to be addressed by the evaluation and location of groundwater well, installation of cased wells, and/or treatment if required.	No mitigation would be required.
WATER RESOURCES				
Construction: ***Baseline Schedule*** Impacts: *Surface Water/ Streams*	Other than wetlands (addressed separately), there are limited surface water bodies in the CIS footprint.	Similar to FCTC Site 1, limited surface water in CIS footprint.	Surface water identified in the CIS footprint consists of wetlands (addressed separately), several ponds, and approximately 5.2 miles of unnamed streams. The approximate 5.2 miles of unnamed streams consists of: 1.4 miles of perennial streams (continuous flow throughout year), 1.8 miles of intermittent streams (flows during wet seasons), and 2 miles of ephemeral streams (flows briefly after rainfall).	Surface water identified in the CIS footprint consists of wetlands (addressed separately) and approximately 6 miles of streams. The approximate 6 miles of streams consist of 1.2 miles of perennial (continuous flowing) named streams (West Branch Black Creek) and 4.8 miles of intermittent streams (flows during wet seasons).
	Minor other surface water impacts would result from: – Clearing, grading, and addition of fill could affect surface water hydrology and artificially divert stream flows. – Disturbance of land would result in soil erosion and sedimentation. – Inadvertent releases of construction pollutants could impact surface water quality.	Similar to FCTC Site 1, minor impacts to other surface water would occur at FCTC Site 2. These impacts would be addressed through implementation of BMPs.	Major (significant) impacts to surface water hydrology would occur due to modifications of streams that traverse the CRJMTC CIS footprint.	Major (significant) impacts to surface water hydrology would occur due to modifications (rerouting, enclosing, and/or filling) of surface water streams that traverse the FTD CIS footprint. Modification may not only have major hydrologic impacts to wetlands and other surface water bodies, it may also affect wildlife and plant habitats.
	BMPs would address these minor impacts through the development and implementation of a SWPPP, SPCC Plan, and associated BMPs.		Minor other surface water impacts would occur due to soil erosion and sedimentation and inadvertent pollutants. BMPs would address these minimal impacts through development and implementation of SWPPP and SPCC plans.	Minor other surface water impacts would occur due to soil erosion and sedimentation and inadvertent pollutants. BMPs would address these minimal impacts through development and implementation of SWPPP and SPCC plans.
Groundwater	Some short-term, but minor impacts to site hydrology from dewatering during installation of deeper excavations and foundations would occur. Techniques would be implemented to minimize dewatering withdrawal such as installation of liners, concrete plugs/columns or cementation.	Similar to FCTC Site 1, minor impacts to groundwater would occur. These impacts would be addressed through implementation standard dewatering minimization techniques.	Some short-term, but minor impacts to site hydrology from dewatering during both shallow and deeper excavations and foundations would occur. Techniques would be implemented to minimize dewatering withdrawal such as installation of liners, concrete plugs/columns or cementation.	Some short-term, but minor impacts to site hydrology from dewatering during both shallow and deeper excavations and foundations would occur. Techniques would be implemented to minimize dewatering withdrawal such as installation of liners, concrete plugs/columns or cementation.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
			Due the presence of AOCs within the CIS footprint, contaminated groundwater may be encountered. Therefore, moderate impacts could occur.	
Potential Mitigation: *Surface Water/ Streams*	Minor storm water, sedimentation/erosion, and pollutant impacts to surface water would be addressed through implementation of BMPs; therefore, no mitigation would be required.	Similar to FCTC Site 1, Minor storm water, sedimentation/erosion and pollutant impacts to surface water would be addressed through implementation of BMPs; therefore, no mitigation would be required.	Major (significant) impacts to surface water hydrology would be analyzed during facility design and mitigation options such as rerouting the streams could be implemented.	Major (significant) impacts to surface water hydrology would be analyzed during facility design and mitigation options such as routing major tributaries below ground or around the CIS footprint to downgradient discharge points, or splitting the site into two sites enclosed by a security fence (leaving the existing streams in place) would be further evaluated during the design for implementation.
			Minor storm water, sedimentation/erosion, and pollutant impacts to surface water would be addressed through implementation of BMPs; therefore, no mitigation would be required to address these impacts.	Minor storm water, sedimentation/erosion, and pollutant impacts to surface water would be addressed through implementation of BMPs; therefore, no mitigation would be required to address these impacts.
Groundwater	Minor dewatering impacts to groundwater would be addressed by standard techniques to reduce water withdrawals. Therefore, no mitigation would be required.	Similar to FCTC Site 1, implement techniques to limit dewatering quantities would be provided; therefore, no mitigation would be required.	Due to AOCs, groundwater generated during dewatering activities would need to be characterized, and then treated as needed.	Minor dewatering impacts to groundwater would be addressed by standard techniques to reduce water withdrawals. Therefore, no mitigation would be required.
Construction: ***Expedited Schedule*** Impact: *Surface Water/ Streams*	Impacts would be similar to those defined for the baseline schedule, but would be intensified. However, by addressing impacts with BMPs in a more aggressive manner, impacts would be minor.	Similar to FCTC Site 1 and the baseline schedule, impacts would be slightly increased, but would remain minor through implementation of BMPs.	Major (significant) impacts to surface water hydrology, similar to the baseline schedule would occur and would require mitigation. Other surface water impacts, due to erosion, sedimentation, and inadvertent pollutants, would be similar to those defined for the baseline schedule, but would be intensified. However, by addressing impacts with BMPs in a more aggressive manner, impacts would be minor.	Major (significant) impacts to surface water hydrology, similar to the baseline schedule would occur and would require mitigation. Other surface water impacts would be similar to those defined for the baseline schedule, but would be intensified. However, by addressing impacts with BMPs in a more aggressive manner, impacts would be minor. Clearing and grading (erosion/sedimentation control) constraints of 5 acres would need to be addressed.
Groundwater	Impacts would be similar to baseline schedule, with some increased intensity in quantities of dewatering generated. Impacts would remain minor through implementation of dewatering minimization techniques.	Similar to FCTC Site 1 and the baseline schedule, impacts would be slightly increased, but would remain minor through implementation dewatering minimization techniques	Groundwater generated, especially near AOCs, would need to be characterized, and disposed or treated as needed.	Impacts would be similar to baseline schedule, with some increased intensity in quantities of dewatering generated. Impacts would remain minor through implementation of dewatering minimization techniques
Potential Mitigation: *Surface Water/ Streams and Groundwater*	Similar to baseline schedule, no mitigation would be required.	Similar to FCTC Site 1 and the baseline schedule, no mitigation would be required.	Mitigations would be similar to baseline schedule.	Mitigations would be similar to baseline schedule.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
Operation:				
Impacts:				
Surface Water/ Streams	Minor impacts would occur due to storm water runoff (site and impervious surfaces), soil erosion and sedimentation, and from operational pollutants. BMPs would address these impacts through development and implementation of SWPPP and SPCC plans.	Similar impact to FCTC Site 1, minor impacts would occur.	Minor impacts would occur due to storm water runoff (site and impervious surfaces), soil erosion and sedimentation, and from operational pollutants. BMPs would address these impacts through development and implementation of SWPPP and SPCC plans.	Minor impacts would occur due to storm water runoff (site and impervious surfaces), soil erosion and sedimentation, and from operational pollutants. BMPs would address these impacts through development and implementation of SWPPP and SPCC plans.
Groundwater	Groundwater would be withdrawn and used as an alternative water source and/or as an emergency backup water source. Impacts for this use are discussed under the Utilities resource section.	Groundwater would be withdrawn and used as an alternative water source and/or as an emergency backup water source. Impacts for this use are discussed under the Utilities resource section.	Groundwater would be withdrawn and used as an alternative water source and/or as an emergency backup water source. Impacts for this use are discussed under the Utilities resource section.	Groundwater would be withdrawn and used as an alternative water source and/or as an emergency backup water source. Impacts for this use are discussed under the Utilities resource section.
Potential Mitigation:				
Surface Water/ Streams	No mitigation would be required.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Groundwater	Groundwater mitigation related to groundwater sources used for utilities is discussed under the Utilities resource section.	Similar to FCTC Site 1, groundwater mitigation related to groundwater sources used for utilities is discussed under the Utilities resource section.	Groundwater mitigation related to groundwater sources used for utilities is discussed under the Utilities resource section.	Groundwater mitigation related to groundwater sources used for utilities is discussed under the Utilities resource section.
WETLANDS				
Construction: ***Baseline Schedule*** Impacts	Permanent major (significant) direct impact from filling, draining, and trenching would result in the loss of approximately 20 acres of wetlands within the CIS footprint. No high quality fens or wetlands are located in the FCTC Site 1 footprint. Some permanent indirect hydrologic connection to wetlands outside the CIS footprint would lower the quality as a natural feature. Vegetation changes/quality changes from filling degraded or introduction of invasive species. Some temporal indirect impacts could occur from erosion/sedimentation to wetlands outside the footprint. These impacts would be addressed by BMPS such as soil erosion and sediment control devices.	Permanent major (significant) direct impact from filling, draining, and trenching would result in the loss of approximately 78 acres within the CIS footprint. Some wetlands in the footprint are part of fen complex; however, two of three fens are low quality fens. Indirect and temporal indirect impacts would be similar to those defined for FCTC Site 1.	Permanent major (significant) direct impact from filling, draining, and trenching would result in the loss of approximately 20.2 acres within the CIS footprint consisting of: Category 3 (high quality) -12.4 acres; Category 2/modified Category 2 - 7.4 acres; and Category1 (lowest quality) - 0.4 acres. Some permanent indirect impacts to wetlands outside the CIS footprint would occur from changes by erosion/sedimentation, changes in hydrology, and permanent vegetation changes. Permanent major impacts would occur to approximately 1 acre. Some temporal indirect impacts could occur from erosion/sedimentation to wetlands outside the footprint. These impacts would be addressed by BMPs such as soil erosion and sediment control devices and buffered for impacts by other large wetlands. These potential impacts would be minor and short-term.	Permanent major (significant) direct impact from filling, draining, and trenching would result in the loss of approximately 26 acres within the CIS footprint consisting of both high quality wetlands and lower quality wetlands associated with disturbed areas (training areas, timber harvest locations, and roadsides). Some permanent indirect impacts to wetlands outside of the CIS footprint would be impacted by changes by erosion/sedimentation, changes in hydrology, and permanent vegetation changes. Potentially major impacts would occur to an estimated 60 acres. Some temporal indirect impacts could occur from erosion/sedimentation (downstream of the footprint) and hydrology changes (upgradient of the footprint) to wetlands outside the footprint. These impacts would be addressed by BMPs such as soil erosion and sediment control devices and buffered for impacts by other large wetlands. These potential impacts would be minor and short-term.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
				Substantial efforts were made during the site consolidation activities to avoid and minimize wetland losses.
Potential Mitigation	Unavoidable wetland impacts in Michigan of greater than 5 acres of wetlands is considered essential to conservation of state's natural resource would require mitigation to replace lost wetland acreage and wetland functions. Mitigation for wetland loss could consist of the following or combined thereof: wetland creation in off-installation uplands, purchase of mitigation bank credits or in-lieu fee program benefits). The specific types and amount of mitigation would not be determined until a CIS deployment and site is selected, and a permit application under Section 404 and the Michigan water quality certification process under Section 401 are initiated.	Similar mitigation to FCTC Site 1 would be required, with exception that some of the portions of the FCTC Site 2 wetlands would have a higher quality; therefore, would require a higher mitigation ratio than FCTC Site 1 wetlands.	Unavoidable wetland impacts in Ohio of greater than 1 acre would require mitigation to replace lost wetland acreage and wetland functions. Mitigation for wetland loss could consist of onsite mitigation for value and function and offsite mitigation provided in the same watershed, or through banking sites (in-lieu fee program) which is available and the preferred option by CRJMTC. The specific types and amount of mitigation would not be determined until a CIS deployment and site is selected and a permit application under Sections 404 and 401 and the Ohio Isolated Wetlands Permit Program processes are initiated.	Unavoidable wetland impacts in New York of greater than 1 acre would require mitigation to replace lost wetland acreage and wetland functions. Mitigation for wetland loss could consist of onsite mitigation for value and function and offsite mitigation provided in the same watershed, or through banking sites (in-lieu fee program) which is the preferred option. Currently, only FTD has a wetland mitigation bank for this watershed although an in-lieu fee program sponsored by others may be a viable option, which is available and the preferred option by FTD. The specific types and amount of mitigation would not be determined until a CIS deployment and site is selected, and a permit application under Sections 404 and 401 and the USACE and NYSDEC permit program processes are initiated.
Construction: ***Expedited Schedule*** Impacts	Similar major (significant) impacts to the baseline schedule would occur with the potential for higher intensive impacts, earlier loss of wetland habitat and groundwater flow, and higher degree of sedimentation to manage due to the compressed schedule. BMPs would need to be implemented more aggressively.	Similar major (significant) impacts to baseline schedule would occur with the potential for higher intensive impacts, earlier loss of wetland habitat and groundwater flow, and higher degree of sedimentation to manage due to the compressed schedule. BMPs would need to be implemented more aggressively.	Similar major (significant) impacts to the baseline schedule would occur with the potential for higher intensive impacts. Earlier loss of wetland habitat and groundwater flow, and higher degree of sedimentation to manage due to the compressed schedule. BMPs would need to be implemented more aggressively.	Similar major (significant) impacts to the baseline schedule would occur with the potential for higher intensive impacts, earlier loss of wetland habitat and groundwater flow, and higher degree of sedimentation to manage due to the compressed schedule. BMPs would need to be implemented more aggressively.
Potential Mitigation	Mitigation similar to the baseline schedule would be required.	Mitigation similar to FCTC Site 1 and the FCTC 2 baseline schedule would be required.	Mitigation similar to the baseline schedule would be required.	Mitigation similar to the baseline schedule would be required.
Operation: Impacts	Limited impacts would occur, other than the potential for erosion and sedimentation of wetland areas adjacent to the CIS footprint. However, these impacts would be temporary and short-term and addressed by erosion control BMPs. Therefore, impacts would be negligible.	Similar to FCTC Site 1, negligible impacts would occur.	Limited impacts would occur, other than the potential for erosion and sedimentation of wetland areas adjacent to the CIS footprint. However, these impacts would be temporary and short-term and addressed by erosion control BMPs. Therefore, impacts would be negligible.	Limited impacts would occur, other than the potential for erosion and sedimentation of wetland areas adjacent to the CIS footprint. However, these impacts would be temporary and short-term and addressed by erosion control BMPs. Therefore, impacts would be negligible.
Potential Mitigation	No compensatory mitigation would be required.	Similar to FCTC Site 1, no compensatory mitigation would be required.	No compensatory mitigation would be required.	No compensatory mitigation would be required.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
VISUAL/AESTHETICS				
Construction: Baseline Schedule Impacts:	Overall minor to moderate impacts would occur.	Overall minor to moderate impacts would occur.	Overall minor to moderate impacts would occur.	Overall moderate impacts would occur.
Daylight	Offsite minor to moderate visual impacts would occur from utilities installation and increased traffic; with a slight potential for heavily screened glimpses of structure construction. Minor to moderate onsite impacts would occur due to forest removal and clearing, and potential for fugitive dust.	Offsite minor to moderate visual impacts would occur from utilities installation and increased traffic. Low potential for visible changes to water views offsite. Minor to moderate onsite impacts would occur due to forest removal and clearing, and potential for fugitive dust.	Offsite minor to moderate visual impacts would occur from utilities installation and increase traffic. Minor to moderate onsite impacts would occur due to forest removal and clearing, and potential for fugitive dust.	Offsite visual impacts would occur from utilities installation and greatly increase traffic at the west CIS entrance (moderate impact). Moderate onsite impacts would occur due to forest removal and clearing, and potential for fugitive dust.
Night View/Skyglow	Minor impacts would occur because construction would mainly be during the daytime. Greater potential for skyglow and visibility of heavily screened lighting impact during winter season when lighting needed at start and end of each day.	Minor impacts would occur because construction would mainly be during the daytime. Greater periods of lighting extending into darkness possible because of the greater cut and fill required. Greater potential for skyglow and visibility of heavily screened lighting impact during winter season when lighting needed at start and end of each day.	Minor impacts would occur because construction would mainly be during the daytime. Greater potential for skyglow and visibility of heavily screened lighting impact during winter season when lighting needed at start and end of each day.	Moderate impacts would occur because of the lack of screening from several residences outside the west boundary and the contrast between existing and construction lighting conditions.
Potential Mitigation: *Daylight*	Maintaining a forest buffer; limiting tree removal.	Maintaining a forest buffer; limiting tree removal.	Maintaining a forest buffer; limiting tree removal.	Maintaining a forest buffer in existing forested areas; planting of vegetated screening area, if practicable, near the west CIS entrance.
Night View/Skyglow	No mitigation. Minimization measures could include fully recessed lighting and use of lighting only when, where, and for duration needed.	No mitigation would be required. Minimization measures could include fully recessed lighting and use of lighting only when, where, and for duration needed.	No mitigation would be required. Minimization measures could include fully recessed lighting and use of lighting only when, where, and for duration needed.	Minimization measures could include fully recessed lighting and lighting only when, where, and for duration needed. Vegetated screening area, if practicable, would also mitigate lighting impacts to nearby residences.
Construction: *Expedited Schedule* Impacts: *Daylight and Night View/Skyglow*	Moderate impacts would occur with the greater intensity of construction activities and vehicle traffic from the compressed/expedited schedule and more skyglow from use of construction lighting all night, every night.	Similar to FCTC Site 1, moderate impacts, with greater potential for observable skyglow at FCRA.	Moderate impacts would occur with the greater intensity of construction activities and vehicle traffic from the compressed/expedited schedule and more skyglow from use of construction lighting all night, every night..	Moderate impacts would occur similar to the baseline schedule with increased intensity of construction activities and vehicle traffic from the compressed/expedited schedule and more directly observable lighting and skyglow (at residences outside west CIS boundary) from use of construction lighting all night, every night.
Potential Mitigation: *Daylight and Night View/Skyglow*	No mitigation would be required. Minimization measures could include fully recessed lighting and downward directed construction lighting.	Similar to FCTC Site 1, no mitigation would be required.	No mitigation would be required. Minimization measures could include fully recessed lighting and downward directed construction lighting.	Planting vegetated screening area, if practicable, near the west CIS entrance would mitigate day and night impacts with the exception of skyglow. Skyglow minimization measures would be the same as for the baseline schedule.

Impacts/ Potential Mitigation	FCTC Site 1	FCTC Site 2	CRJMTC Site	FTD Site
Operation:				
Impacts:	Overall negligible to minor impacts would occur.	Overall negligible to minor impacts would occur.	Overall negligible to minor impacts would occur.	Overall minor to moderate impacts would occur.
Daylight	Negligible impacts would occur.	Negligible impacts would occur.	Negligible impacts would occur.	Minor impacts would occur.
Night View/Skyglow	Operation and facility lighting impacts would be negligible; minor skyglow would be created.	Similar to FCTC Site 1 negligible to minor impacts would occur. Operation and facility lighting would create a greater potential for observable skyglow at FCRA.	Operation and facility lighting impacts would be negligible; minor skyglow would be created.	Operation and facility lighting impacts would be similar to construction and would be a moderate increase in lighting levels compared to those that existed before construction.
Potential Mitigation:				
Daylight	No mitigation would be required.	No mitigation would be required.	No mitigation would be required.	No mitigation would be required.
Night View/Skyglow	Fully recessed light fixtures that direct all light downward. Positioning of facilities in the design phase to minimize offsite light pollution.	Fully recessed light fixtures that direct all light downward. Positioning of facilities in the design phase to minimize offsite light pollution.	Fully recessed light fixtures that direct all light downward. Positioning of facilities in the design phase to minimize offsite light pollution.	Consideration of planting of vegetated screening area, if practicable, near the west CIS entrance. Fully recessed light fixtures that direct all light downward. Positioning of facilities in the design phase to minimize offsite light pollution.

This page intentionally left blank.