ATTACHMENT B

CENTRAL CORRIDOR FEIS

Mitigation Monitoring Program

The mitigation measures and other project features that reduce adverse impacts, to which FTA and the Metropolitan Council committed in the Final EIS, are summarized in the table below. This summary table is provided in the record of decision to facilitate the monitoring of the implementation of the mitigation measures. However, the FEIS provides the full description of all mitigation measures that are included in the Project and, to the extent that there is an inconsistency in the measures summarized in Attachment B and those provided in the FEIS, the FEIS statement of mitigation measures shall prevail. The Metropolitan Council will establish a program for monitoring and reporting the implementation of the mitigation measures as part of its Project Management Plan.

The Metropolitan Council is prohibited from eliminating or altering any of the mitigation commitments identified in the FEIS for the Project without express written approval by FTA. In addition, any change to the Project that may involve new or changed environmental or community impacts not considered in the FEIS must be reviewed in accordance with FTA environmental procedures (23 CFR Part 771.130). The Metropolitan Council will immediately notify FTA of any change to the Project that differs in any way from what the FEIS says. If a change is needed, the FTA will determine the appropriate level of environmental review (i.e., a written re-evaluation of the FEIS, an environmental assessment of the change, or a supplemental environmental impact statement), and the NEPA process for this supplemental environmental review will conclude with a separate NEPA determination, or, if necessary, an amendment of this ROD.

University of Minnesota Mitigation

The project will generate vibration that is predicted to exceed the existing vibration criteria as reported in the FEIS. As provided in their Memorandum of Understanding dated July 18, 2008, the University of Minnesota and the Metropolitan Council agreed to implement measures to mitigate impacts caused by noise, vibration and electro-magnetic field interferences. The parties agreed to continue to refine project plans and designs to, among other things, the mutual acceptance of the parties. Therefore, based on that commitment, the Metropolitan Council and the University of Minnesota will cooperatively determine acceptable mitigation measures and strategies through final design, construction and operation. This requirement and the mitigation measures agreed to by the parties shall be incorporated into this ROD.

ATTACHMENT B

Summary Table of Impacts and Mitigation Measures

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
Long-Term (Operations) Impacts			
Land use: The Central Corridor LRT (CCLRT) project is expected to have the following impacts: • Existing development trends would continue. • In downtown St. Paul, a new center of activity would be created surrounding the 4th and Cedar Streets station. • In downtown St. Paul, the location of the operations and maintenance facility (OMF) may affect nearby residential and commercial development due to its reuse of the Diamond Products building, which will prevent a portion of this property from being redeveloped. • The placement of traction power substations (TPSS) and signal bungalows is required along the corridor. **Mitigation measures**: • Façade treatments and provisions for street front retail space at the OMF will help ensure that surrounding residential and commercial uses are enhanced. See Section 3.1 of the Final Environmental Impact Statement (FEIS) for details on impacts and mitigation measures.	• In recognition of the stress new development may place on housing costs and opportunities for low income populations, the Metropolitan Council has partnered with Minnesota Housing and the Family Housing Fund to establish a new Land Acquisition for Affordable New Development (LAAND) Initiative. In November 2008, the Council authorized up to $3.6 million in loans to help some metro-area cities buy land now for affordable housing in the future. Of the $3.6 million, $1.0 million will go to help with land acquisition for affordable housing near the CCLRT alignment along University Avenue. • The access ramps to Washington Avenue from I-35W have been refined to limit impacts to development opportunities near the Cedar-Riverside community, and to enhance transit-oriented development potential. • TPSS impacts will be reduced through restricting their sites to underutilized parcels such as surface parking lots. Five of the 13 TPSS are located at the OMF or near LRT stations and these TPSS will be seen as a part of the main transportation system.	Metropolitan Council	Final design

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing

Community facilities:
The following impacts have been identified:
• Access impacts and on-street parking impacts including at community facilities.
Mitigation measures:
• The Metropolitan Council has mitigated access impacts to the fullest possible extent. For example:
  • Metropolitan Council has been in consultation with Central Presbyterian Church to develop an agreement to provide daily access to the south church entrance, and special, but limited, access to the north church entrance.
  • At the U of MTransit/Pedestrian Mall, private vehicles will be diverted to adjacent roadways by information signs.
The Metropolitan Council will continue to work with the City of ST. Paul and affected property owners and tenants for parking measures as identified in the FEIS.
 	
See Section 3.2 of the FEIS for detailed information about impacts and mitigation measures.
	• Alternate routes, additional traffic signals, and modifications to traffic lanes will help minimize the impact of additional traffic on local streets near the Transit/Pedestrian Mall.
	• Emergency vehicles will have access to the Transit/Pedestrian Mall maintaining existing access to critical health facilities. Metropolitan Council will install directional signs directing automobile traffic to alternate routes.
	• All fire stations will have surmountable curbs installed by Metropolitan Council.
	• A surmountable curb will allow special event access for St. Louis King of France and Central Presbyterian churches from 10th Street.
		Metropolitan Council	Final design

Displacements and relocations: Operation of the CCLRT requires a mix of permanent acquisition of portions of both public and private properties, utility easements, and property access closures. • Three privately owned properties would be taken in their entirety.	The Minnesota Department of Transportation (Mn/DOT), acting for the Metropolitan Council, will acquire all lands, easements, and other property rights required for the CCLRT. Although some lands will be acquired through fee purchase, other property will be acquired through temporary or permanent easements.	Metropolitan Council, MnDOT	Final design

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
• Permanent private takings on 63 parcels would range in size from five square feet to 249,599 square feet (7.65 acres). • Permanent use (property within project construction limits) of existing public property would impact 42 parcels ranging from 500 square feet to 157,645 square feet (26.67 ac). • Three utility easements would be required on private property together with two easements on public property. • Twenty-four accesses, 15 private and 9 public, would be affected by project construction. **Mitigation measures:** • Where private property is to be acquired, the Metropolitan Council, with the assistance of MnDOT, will acquire that property in full compliance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended (42 U.S.C. Sec. 4601 et seq.), and 49 CFR Part 24. FTA Circular 5010.1D dated November 1, 2008, as amended, will apply to CCLRT real estate acquisitions. See Section 3.3 of the FEIS.			
Archaeological and Historic resources: In consultation with the Minnesota State Historic Preservation Officer (MnSHPO) and other parties, an Area of Potential Effect was defined for the project and historic properties listed in or eligible for the National Register of Historic Places were identifed. Since a determination on all effects on historic properties could not be made at the time the NEPA process would conclude, the FTA, the Advisory	• The CCLRT Programmatic Agreement commits to reporting to all consulting parties on a quarterly basis details on how measures stipulated in the Agreement are being implemented.	Metropolitan Council	Final design

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
Council on Historic Preservation and MnSHPO developed and executed a Programmatic Agreement to assess effects on historic properties and to identify measures to avoid, minimize or mitigate adverse effects. **Mitigation measures**: • Metropolitan Council will comply with the stipulations contained in the CCLRT Programmatic Agreement. See Section 3.4 of the FEIS for detailed information about impacts. A copy of the Programmatic Agreement is included in Attachment A.			
Section 4(f) Resources • Permanent use of the following resources will occur: o St. Paul Urban Renewal Historic District o Lowertown Historic District (portion of lawn in front of St. Paul Union Depot) o Capitol Mall Historic District o *De minimis* use of Leif Erikson Lawn (as a parkland resource). **Mitigation measures:** • Metropolitan Council will comply with stipulations contained in the CCLRT Programmatic Agreement (See Attachment A). See Section 3.5 of the FEIS for detailed information about impacts and mitigation**.**	Use of Section 4(f) protected properties has been evaluated in accordance with Section 4(f) of the U.S. Department of Transportation Act of 1966. Details on Section 4(f) impacts are provided in Chapter 7 of the FEIS. No mitigation is required for the *De minimis* use of Leif Erikson lawn (as a parkland resource).	Metropolitan Council	Final design
Visual and Aesthetic conditions: The project is expected to have the following impacts: • Overhead Contact System (OCS), LRT tracks,	• The overall impact on the visual environment along University Avenue would be positive because the Preferred Alternative, described in	Metropolitan Council	Final design

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
TPSS, stations, and other system elements will add new visual elements to the streetscape. • A new bridge will be constructed over I-35W to provide a connection of CCLRT to the existing Hiawatha LRT line. • The OMF will reuse a portion of the existing Diamond Products Building. **Mitigation measures**: Although the elements listed above would be designed and constructed to maintain visual consistency with existing transportation uses, specific design elements will be incorporated during final design to mitigate potential effects. • To the extent practicable, stations will be designed to ensure compatibility with its setting. • Where TPSS placement will alter visual quality, the Metropolitan Council will work with the respective neighborhoods and business districts to develop appropriate screening. • Measures for façade improvements on the southern and western edges of the Diamond Products building (the OMF site) will be taken, identifying and installing treatments that fit the character of the surrounding neighborhood. • Existing boulevard trees removed due to the construction of the CCLRT will be replaced consistent with local ordinances. See Section 3.6 of the FEIS for details about impacts and mitigation.	the FEIS, will include a complete rebuilding of the street, curbs, and sidewalks. • The Metropolitan Council hired artists and established station art committees to develop and install station art reflecting the culture and character of the adjacent community. • The Preferred Alternative includes installing improved pedestrian crossings at signalized intersections, and installing non-signalized pedestrian crossings at many of the other street intersections.		
Environmental justice: The Central Corridor LRT FEIS included an analysis	• Off-setting benefits of the Central Corridor LRT project have been identified for all but three	Metropolitan Council	Final design

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
of environmental justice impacts of the project in compliance with Title VI of the Civil Rights Act of 1964 and the intent of Executive Orders 12898 and 13166, along with the USDOT Final Order on Environmental Justice and FTA Circular 49 CFR 21.5. This analysis identified the presence of minority and low-income populations and the effects of the project borne by these populations. Impacts of the CCLRT project which are not completely off-set by other benefits have been identified for three census blocks near Western Avenue. These three census blocks could experience a decrease in overall transit service. **Mitigation measures**: • Metropolitan Council has committed to preparing a targeted transit service plan for the affected environmental justice community identified in the Title VI analysis of proposed service changes for the CCLRT. This plan will also provide for community input into the process and measures of need as expressed by and as tailored for this transit-dependent community. • This plan will be completed at least six months prior to CCLRT beginning revenue service operations and will be implemented concurrent with the start of LRT service. • The Metropolitan Council has committed to working toward resolution of community concerns that don't rise to the level of state or federal standards of adverse impacts. See Section 3.8 of the FEIS for details about impacts and mitigation.	census blocks near Western Avenue. • Mitigation of impacts not offset by identified project benefits is committed to by the Metropolitan Council to address decreases in access to transit service experienced in isolated areas along the Central Corridor.		
Geology, Groundwater Resources, and Soils	• The project will require coordination and	Metropolitan	Final design,

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
• No long-term impacts to geology, groundwater resources or soils have been identified. See Section 4.1 of the FEIS for details about impacts and mitigation.	permitting from local, state, and federal water resource agencies. The proposed project will comply with applicable state, federal, and local regulations, and will implement best management practices (BMPs) to control and minimize erosion and potential impacts to surface water resources.	Council	operation
Biota and Habitat • No long-term impacts to biota and habitat Wetlands have been identified. See Section 4.3 of the FEIS for details.	No mitigation is required.	Metropolitan Council	N/A
Threatened and Endangered Species • No long-term impacts to threatened and endangered species have been identified. See Section 4.4 of the FEIS for details.	No mitigation is required.	Metropolitan Council	N/A
Contribution to Regional Air Quality Goals • The project will have no adverse impacts on air quality as a result of CO emissions. See Section 4.5 of the FEIS for details.	No mitigation is required.	Metropolitan Council	Operation
Noise • There are 16 "severe" Category 2 impacts within the CCLRT project corridor. **Mitigation measures**: • Metropolitan Council commits to mitigation of severe noise impacts by moving special trackwork associated with identified impacts to less noise sensitive locations. In locations where this will not address all severe impacts, receiver-based mitigation has been identified. Finally,	The "severe " Category 2 impact remaining after mitigation is located at a City of St. Paul fire station in which firefighters sleep during their shift. Because it is used for sleeping, the fire station is categorized as a "residential" land use. Receiver-based mitigation (treatment of windows to increase sound resistance) has been committed to in the FEIS. An agreement with MPR committing to noise and vibration mitigation has been executed and is included in Appendix F1 of the FEIS. Also included in	Metropolitan Council	Final design, construction, operation

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
administrative measures to limit the sounding of high horns to emergency situations have been committed. See Section 4.6 of the FEIS for details about impacts and mitigation and the statement of required mitigation provided at page 1 of Attachment B.	Appendix F1 are commitments made to Central Presbyterian church that address noise and vibration concerns.		
Vibration: • Impacts have been identified to a total of 21 structures along the Central Corridor. **Mitigation measures**: • Metropolitan Council commits to mitigation of vibration impacts due to crossovers by moving them to locations where they will not impact sensitive receptors. • Metropolitan Council commits to mitigation of wheel-rail vibration with a floating slab at some impact locations, or high-resilience track fasteners at other impact locations. See Section 4.7 of the FEIS for details about impacts and mitigation and the statement of required mitigation provided at page 1 of Attachment B.	Where installation of treatments below the LRT trackway is being made to mitigate vibrations caused by wheel-rail interface, the Metropolitan Council will test such installations during pre-revenue service and after LRT begins revenue service operations to ensure that mitigations measures are working as specified.	Metropolitan Council	Final design, construction, operation
Hazardous materials: • A Phase I Environmental Site Assessment (ESA) completed and described in the FEIS identified the likely presence of contaminated soils and hazardous materials at several sites along the corridor. **Mitigation measures**: • Phase II ESAs will be conducted for specific areas along the alignment that have the potential for	No mitigation is required.	Metropolitan Council	Construction

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
impact from contaminated sites, including but not necessarily limited to all of the sites identified in the FEIS. See Section 4.8 of the FEIS for details about impacts and mitigation.			
Utilities: • No long-term impacts to utilities are anticipated. See Section 4.9 of the FEIS for details about impacts and mitigation.	The MnDOT Utility Manual and the CCPO Utility Relocation Management Plan process will be followed to identify and facilitate relocation of utilities. The project will obtain agreements or permits, as necessary, for the relocation of public utilities. Met Council and utility owners may enter an agreement delineating each entity's responsibilities in compliance with Minnesota Statutes, Minnesota Rules, and Federal Regulations.	Metropolitan Council	Final design, construction
Electromagnetic interference (EMI) • Impacts to nuclear magnetic resonating machines (NMRs) and other sensitive research equipment located on the U of M's East Bank campus have been identified. **Mitigation measures**: • Metropolitan Council commits to mitigation of EMI impacts for research equipment affected by the operation of Central Corridor LRT on Washington Avenue. The mitigation design will reduce the impact to sensitive equipment to acceptable levels. See Section 4.9 of the FEIS for details about impacts and mitigation and the statement of required mitigation provided at page 1 of Attachment B.	The Metropolitan Council continues to work with the U of M and their EMI consultant, and will continue to work through the process of final design, to identify potentially impacted equipment and mitigation strategies that address potentially sensitive research equipment along Washington Avenue.	Metropolitan Council	Final design, operation

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
Energy • The Preferred Alternative would result in an increase in total energy used annually by a very small amount compared to the No-Build Alternative described in the FEIS. See Section 4.10 of the FEIS.	No mitigation is required.	Metropolitan Council	Construction, operation
Transportation: The following impacts have been identified: ***TRANSIT*** • Route 16 – all-day service frequency is modified to 20-minute peak period, 30-minute midday, evening, and weekend service. **Mitigation measures**: • Metro Transit would follow standard procedures for route changes and deletions. Metro Transit would communicate service changes along the corridor as part of its community outreach program. ***ROADS*** • The implementation of the Preferred Alternative will impact traffic operations on roadways where the LRT is proposed to operate and on streets the LRT crosses. • Some intersections are forecast to operate at level of service (LOS) "E" or "F" in the future. • The Transit/Pedestrian Mall at U of M will affect secondary roadways. **Mitigation measures**:	The following mitigation measures will be implemented to address impacts on signalized intersections throughout the corridor: • Optimized signal timing splits at each intersection. • Interconnected coordinated traffic signal system along each section. • Detection of the light rail vehicle (LRV) will be provided at every signalized intersection with priority treatment at the signals for LRVs. • Adding traffic signals on University Avenue. • New traffic signal controllers, pedestrian controls, and signage at signalized intersections. • Protected left- and right-turn lanes at specific intersections. The Metropolitan Council will work with the City of Minneapolis to develop traffic signal timing to accommodate joint operations of the CCLRT and the Hiawatha LRT in downtown Minneapolis, particularly at the intersection of North 5th Street and 2nd Avenue North. All CCLRT vehicles will be capable of accommodating travelers with bicycles. Reconstruction of the portion of the Hiawatha LRT Bicycle Trail requiring relocation due to CCLRT	Metropolitan Council	Final design, construction, operation

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
• For impacts at intersections forecast to operate at LOS "E" or "F," mitigation measures include: Optimization of signal timing splits, integration into the coordinated traffic signal systems, protected left- and right-turn lanes, expansion of turn lanes and/or extension of turning bay lengths, and new signal phasing on some cross streets. • The Metropolitan Council has worked with the U of M, the City of Minneapolis, and Hennepin County to define mitigation commitments for intersections in the U of M area affected by the conversion of Washington Avenue to a transit/pedestrian mall. • Lane geometrics at the intersection of Cedar Avenue and Riverside Avenue will be reconfigured. ***PARKING*** • Parking spaces will be removed in the State Capitol area, along University Avenue between 29th Avenue and Rice Street, and along Washington Avenue. **Mitigation measures**: • The Metropolitan Council will work with the City of St. Paul on a Parking Solutions Team to identify parking mitigation strategies. • The Metropolitan Council and the City of St. Paul will work with the affected property owners and tenants to maximize parking on and near University Avenue.	operations will be concurrent with construction of the Central Corridor LRT.		

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
PEDESTRIANS AND BICYCLES • No long-term adverse effects requiring mitigation have been identified. • The operation of the Central Corridor LRT will require a portion of the currently HLRT bicycle trail to be relocated just north of its current configuration.			
Short-Term (Construction) Impacts			
Land use The following short-term/construction impacts have been identified: • One skyway bridge in downtown St. Paul will be removed to allow for construction of the diagonal alignment between 4th and Cedar Streets and the 4th and Cedar Streets Station platform. **Mitigation measures**: • The project includes funds for a temporary skyway bridge connection to be reconstructed to reconnect the downtown St. Paul skyway system between 4th and 5th Streets. This connection will be permanently restored with redevelopment of this site by the City of St. Paul.	• Short-term impacts will be minimized by using standard construction best management practices (BMPs):	Metropolitan Council	
Neighborhoods and Community Facilities The following short-term/construction impacts have been identified: • Inconvenience to patrons of businesses, clients of community facilities, patients of medical clinics and hospitals, and those attending schools and places of worship along the corridor.	BMPs would be implemented, including the following: • Work with residents and business-owners to provide an alternate access to their neighborhoods and businesses • Maintenance of access for fire stations, hospitals, emergency vehicles, day care, schools, etc. • Maintenance of traffic and sequence of	Metropolitan Council	

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
• Where the grid pattern of streets is discontinuous, residents and patrons may experience some delays in gaining access to homes and businesses near construction. **Mitigation measures**: • Residents and patrons, as well as medical and emergency service responders, will be directed to alternate routes to gain access to homes and businesses.	construction would be planned and scheduled to minimize traffic delays and inconvenience. • Access to all neighborhoods would be maintained throughout the construction period.		
Acquisitions and Displacements/Relocations The following short-term/construction impacts have been identified: • Temporary construction easements would be required on 173 parcels for installation of project features. • Three privately owned parcels would be affected by utility easements. • Temporary easements are needed on 10 parcels of public property and two easements for utility work. **Mitigation measures**: • Impacts related to temporary changes to parking and access will be mitigated by developing a Construction Outreach Coordination Plan during final design. The plan will detail planned activities during construction, partnerships, and specific programs to assist local businesses and residents affected by construction and methods to minimize impacts during construction of the project.	BMPs would be implemented: • Work with residents and business-owners to provide an alternate access to their neighborhoods and businesses • Maintenance of access for fire stations, hospitals, emergency vehicles, day care, schools, etc. • Maintenance of traffic and sequence of construction would be planned and scheduled to minimize traffic delays and inconvenience. • Access to all neighborhoods would be maintained throughout the construction period.	Metropolitan Council	
Cultural Resources	Mitigation for construction related impacts would be	Metropolitan	

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
The following short-term/construction impacts have been identified: • Temporary vibration, noise, traffic, and visual impacts will affect all NRL and NRE properties, except Minnesota Historical Society (NRL), including parts of Prospect Park Residential HD, University of Minnesota Campus Mall HD, Washington Avenue Bridge, East River Parkway, and Pioneer Hall (all NRE). **Mitigation measures**: • Metropolitan Council will comply with the stipulations contained in the Central Corridor LRT Programmatic Agreement. See Section 3.4 of the FEIS and the PA, which is included in Attachment A to this ROD.	implemented as for all other portions of the project. Additional or specific mitigation measures for construction impacts will be implemented through consultation as specified in the PA (see Attachment A).	Council	
Visual/Aesthetic Conditions The following short-term/construction impacts have been identified: • Construction staging areas will be viewable from sensitive uses such as residences and recreational areas. • Construction activities would be noticeable to area residents and others traveling through the corridor. • Existing trees and vegetation could be injured during construction activity. **Mitigation measures**: • Metropolitan Council would ensure that construction crews working at night direct any artificial lighting onto the work site to minimize "spill over" light or glare in adjacent residential	Mitigation for construction-related impacts would be implemented as for all other portions of the project.	Metropolitan Council	

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
areas. • The Metropolitan Council will develop a plan for protecting existing trees and vegetation. • The Metropolitan Council will assess the need for additional landscaping to mitigate potential visual intrusion or privacy vegetation-clearing.			
Parklands The following short-term/construction impacts have been identified: • f air, noise, vibration, visual, and access impacts to parks and recreation resources that are within 350 feet of the CCLRT. • Detours or short-term closure of some park access points. • Construction activities may interfere with normal park use and access. **Mitigation measures**: • Short-term impacts will be minimized by using standard construction BMPs such as dust control, erosion control, and proper mufflers.	Impacts related to temporary changes to access will be mitigated by working through appropriate permitting processes and coordinating with the Minneapolis Park Board and St. Paul Parks and Recreation Department.	Metropolitan Council	
Geology, Groundwater Resources, and Soils • Groundwater could be contaminated by spill of hazardous or regulated materials in proximity to karst features. **Mitigation measures**: • During construction, Metropolitan Council will establish engineering controls and safety measures as described in Section 4.8 that will limit spills of hazardous substances that could potentially affect groundwater, particularly in areas	Standard operating procedures and BMPs will be developed to minimize spills and expeditiously and appropriately respond to spill events in light of karst potential.	Metropolitan Council	

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
identified as having high sensitivity to pollution. As part of the final design and permitting, a Stormwater Pollution Prevention Plan and spill prevention plan will be developed in compliance with local, state and federal regulations. • BMPs, such as sub-soiling in compacted areas and establishing permanent vegetation in areas where erosion may be a concern, will be used to mitigate construction impacts to soil resources.			
Water Resources • Construction activities will expose soils and may result in the generation of sediment laden stormwater within the construction area. **Mitigation measures**: Construction BMPs will be used to protect other water resources. • Inlet protection of catch basins – filters, bio-bags, and catch basin drop filters • Excavation silt control – silt fence and bio-bags as appropriate • Temporary seeding of open excavations and stockpiles – as appropriate for surface soil areas that remain exposed for several weeks or longer • Swales with check dams – surface waterways with periodic check dams for silt removal • Temporary paving of area to receive traffic prior to final restoration • Infiltration of storm water runoff after removal of heavy sediments	• The project will require coordination and permitting from local, state and federal water resource agencies. The proposed project will comply with applicable federal, state, and local regulations and will install BMPs to control and minimize erosion and potential impacts to surface water resources. • The project will be monitored under grading permits issued by the Capitol Region Watershed District (CRWD) as well as the cities of St. Paul and Minneapolis.	Metropolitan Council	

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
• Temporary re-routing of storm water away from exposed slopes and stockpiles • Vehicle tracking pads to reduce the amount of mud transported offsite			
Biota and Habitat • No short-term/construction impacts to biota and habitat have been identified.	No mitigation is required.		
Threatened and Endangered Species • No short-term/construction impacts to threatened and endangered species have been identified.	No mitigation is required.	Metropolitan Council	
Air Quality Short-term emissions due to construction operations will include emissions from vehicles due to traffic detours, operations of construction vehicles, and fugitive dust generated within the construction site. **Mitigation measures**: Emissions due to construction operations for the Preferred Alternative would be mitigated by implementation of BMPs including the following: • The contractor would be required to follow Minnesota air quality regulations • A construction traffic control plan would be developed to minimize vehicle emissions due to traffic issues caused by construction activities • Construction, operation, and maintenance vehicles would be maintained to make sure that engines remain tuned and emission-control	Air quality issues related to construction activities are subject to Minnesota Pollution Control Agency (MPCA) standards. Best management practices will be implemented to ensure compliance with MPCA standards.		

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
equipment is functioning properly • No unnecessary idling of vehicles or construction equipment will be allowed. • Fugitive dust will be minimized or avoided by using BMPs			
Noise The following short-term/construction impacts have been identified: • Construction noise impacts from multiple types of machinery (diesel) during the daytime and nighttime • Potential for some impact pile driving and pavement breaking **Mitigation measures**: • Most construction activities will take place during daytime hours; however, it is possible that some work will have to be performed at nighttime and the Metropolitan Council will require its contractors to use BMPs to minimize intrusive levels of construction noise. • Use well-maintained construction equipment, and effective and well-maintained mufflers or silencers on loud equipment. • Loud construction activities will be prohibited during nighttime in areas near the U of M dormitories, near student housing apartments near the U of M campus, and near residences along University Avenue and on East 4th Street in downtown St. Paul. • Construction noise has potential to interfere with	The noise ordinances of both the cities of Minneapolis and St. Paul are applicable to this project; however both defer to the MPCA noise standards for maximum allowable noise levels. Metropolitan Council commits to coordinating with affected project stakeholders to minimize intrusive construction noise.	Metropolitan Council	

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
use of Studio M, Studio P, and the Forum at MPR. The scheduling of the construction activities with the potential to interfere with these uses will be coordinated with MPR so as to minimize potential disruptions. • Use of loud construction equipment in the immediate vicinity of St. Louis King of France and Central Presbyterian churches will be coordinated with the churches to ensure minimal disruption of activities inside the churches. • Construction contractors will be required to develop a noise mitigation plan. • See also the statement of required mitigation provided at page 1 of Attachment B.			
Vibration The following short-term/construction impacts have been identified: • Construction activities with the potential for generating high levels of vibration have been identified and include pile driving, demolition using jackhammers and hoe rams, and operation of heavy tracked equipment such as bulldozers and backhoes. • Use of high-vibration construction equipment at distances of less than approximately 0.5 mile from research labs may interfere with use of vibration sensitive equipment. • Use of high-vibration construction equipment at distances of less than approximatley 1,000 feet from recording studios may interfere with use of the studios.	The following measures are recommended to mitigate vibration impacts (see more detail in Section 4.7 of the FEIS). • A standard pre-construction survey will be performed to document the existing condition of all structures in the vicinity of sites where major construction will be performed. • Three sets of vibration limits are recommended for various building types and usages. • The contractor will be required to monitor vibration to verify that no construction activities exceed the vibration limits to minimize the potential for damage to structures. • Stakeholders will be consulted and notified of the schedule in advance of high vibration	Metropolitan Council	

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
Mitigation measures: • Whenever construction will be performed near U of M research facilities, the MPR studios, or the Fitzgerald Theater, coordination with these entities will take place to minimize potential disruption to building and/or equipment usage. • Vibration monitoring is a crucial requirement when construction will be within 150 ft of fragile historic buildings. If vibration from the test approaches or exceeds the limits, the force of the pile driver will be reduced until the vibration amplitudes at all sensitive buildings are below the applicable limit. • See also the statement of required mitigation provided at page 1 of Attachment B.	construction activities. • Where feasible and cost effective, low vibration construction procedures will be required. • A Vibration and Noise Management and Remediation Plan (VNMRP) will be developed to address issues related to construction noise and vibration affecting historic properties.		
Hazardous Materials The following short-term/construction impacts have been identified: • Section 4.8 of the FEIS includes the descriptions and locations of sites where contamination or hazardous materials could be encountered during construction or demolition. **Mitigation measures**: • Phase II ESAs will be conducted for specific areas along the alignment that have the potential for impact from contaminated sites, including but not necessarily limited to all of the sites identified in the FEIS. • Upon Metropolitan Council and MPCA approval of the mitigation plans, cleanup of identified contamination will commence prior to or concurrent with project excavation and or drilling	• Track bed construction will be closely monitored to mitigate any migrating contaminants that may unexpectedly occur. A Construction Contingency Plan will be prepared prior to the start of construction to account for the discovery of unknown sites. Contamination removal and disposal will be in accordance with this plan, monitored by qualified inspectors, and documented in final reports for submittal to the Metropolitan Council and MPCA. • An application will be made to enroll the project into the MPCA Voluntary Investigation and Clean-up (VIC) and/or Voluntary Petroleum Investigation and Clean-up (VPIC) Brownfields (Petroleum Remediation) programs upon initiation of Phase II ESA studies.	Metropolitan Council	

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
activities. • Any existing structures will be surveyed for the presence of hazardous/regulated materials such as asbestos-containing materials, lead-based paint, chemical storage, etc., prior to their demolition or modification. These structures will include the modifications to the Gillette/Diamond Products building at the OMF, the demolition of 360 Cedar Street for the diagonal alignment, and the demolition or modification of any buildings on properties acquired for the TPSS. See Section 4.8 of the FEIS.			
Electromagnetic Interference No EMI impacts are anticipated during construction.	No mitigation is required.	Metropolitan Council	
Utilities The following short-term/construction impacts have been identified: • In general, underground utilities that parallel the proposed CCLRT alignment for some distance may need to be relocated. • Manholes, valves, vaults, hydrants, etc. located within the construction area would generally be relocated or access restricted. • All overhead or subsurface utility crossings, where physical conflicts occur, would be relocated, including those associated with the U of M campus. • Construction of station facilities, traction power supply systems, as well as civil construction (roads, sidewalks, walls, traffic signals, etc.) would	• The Metropolitan Council commits to continuing to work in coordination with District Energy through advancing preliminary engineering and final design to identify solutions throughout downtown St. Paul to minimize impacts to District Energy's utilities. • A potential impact is possible, but no longer anticipated to a large 96-inch-diameter metropolitan interceptor sewer which crosses Washington Avenue at Oak Street. Any possible need to relocate this pipe would require the project staff to work with the Metropolitan Council Environmental Services, as well as the City of Minneapolis to gain relocation approval. • The project will continue efforts to minimize and mitigate impacts with existing utilities during final design.	Metropolitan Council	

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
have site specific impacts. • eating and cooling pipelines would be affected. • Along the alignment, public water, storm, and sanitary sewer lines would be affected. • Short-term impact to existing pipelines for natural gas transmission **Mitigation measures**: • Disruptions to utility service, to the extent possible, will be planned for periods of no-usage or minimal usage. • All consumers affected by such operation shall be notified by the contractor a minimum of twenty-four hours before the operation and advised of the probable time when the service will be restored. • If larger services or commercial properties are affected by the shut-offs, a minimum of three days notice shall be given.			
Energy • Energy use will be localized and temporary, and would not be expected to substantially impact regional energy consumption. **Mitigation measures**: No mitigation has been identified or recommended.	Because the operation of the Preferred Alternative would use slightly more energy than the operation of a No-Build Alternative, the energy used in construction would not be recouped as a result of the project.	Metropolitan Council	
Transportation The following impacts have been identified: ***TRANSIT*** • Some disruption of Route 16 and Route 50 service on University Avenue would occur during construction.	• Project outreach coordinators began surveying business and property owners in the spring of 2008 for details on their points of access to help engineers design the line and plan construction. Additional sequencing, along with close coordination with all of the project stakeholders, community groups, and local businesses, will be	Metropolitan Council	

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
Mitigation measures: • Information would be posted at bus-stops. Detour information would also be placed on Metro Transit's web site and updated daily. • Metro Transit would follow standard procedures for route changes and deletions. • Metro Transit would communicate service changes along the corridor as part of its community outreach program described in Chapter 11 of the FEIS. ***ROADS*** • Construction of the Preferred Alternative will involve subsurface and at-grade construction along the project route and relocation of existing utlities. • Partial closures of existing streets where the LRT line will be located for construction operations. • There will be additional congestion and delays in areas of street closures including adjacent parallel streets and cross-streets. **Mitigation measures**: • Access for delivery vehicles will be maintained including access for businesses without alleyway access. • Notification of roadway disruptions will be provided to neighboring property owners/operators. • In cases of roadway blockages, neighboring property owners/operators will be notified and provided with descriptions of alternative routes. • Access to local businesses and to off-street	implemented to effectively deal with and minimize the impacts that may occur. • City/county permits will be acquired by project contractors from the appropriate city offices for roadway disruptions and blockages. • Maintenance of traffic details will be finalized during final design and may be modified by the contractor with permission from the CCPO and project partners. • For construction, specific mitigation will be developed during final design to determine maximum number of lanes closed during peak traffic hours, maintenance and removal of traffic control devices, efficient traffic rerouting measures, and scheduling of construction activities within the roadways for times other then peak traffic periods. • The Metropolitan Council and the City of St. Paul will work with the affected property owners and tenants to maximize parking on and near University Avenue during construction periods.		

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
parking will be maintained. ***PEDESTRIANS AND BICYCLES*** • There will be temporary closures or detours for bike and pedestrian facilities, including a relocation of the Hiawatha LRT trail between 15th and 11th avenues in Minneapolis. **Mitigation measures**: • A detour route for the HLRT bicycle trail will be identified and signed during construction. • Notifications would be managed according to the traffic management plan developed during final design. • Bicyclists would be notified through signage and public notice that bike lanes are detoured. • Where construction activities affect sidewalk areas, special facilities, such as temporary handrails, fences, ramps, barriers, walkways and bridges may be provided for the safety of pedestrians. • If crosswalks are temporarily closed, pedestrians will be directed to use alternative crossings. • All sidewalk and crosswalk surfaces will meet minimum standards for accessibility and be free of slipping and tripping hazards. ***WASHINGTON AVENUE BRIDGE*** To accommodate the proposed CCLRT project, and achieve current code standards, improvements must be made to the Washington Avenue Bridge. • The inside lane in each direction on the lower deck would be converted to exclusive LRT use,			

Impact/Mitigation Measure	Implementation and Monitoring	Responsible Party	Timing
• One lane of vehicular traffic would remain in each direction on the outside lanes. **Mitigation measures**: • The Central Corridor Project Office (CCPO) anticipates that for most of the construction period, one lane of traffic in each direction will be maintained. • Portions of the pedestrian bridge are also expected to remain open during most of the construction. • It is likely that short term closures of traffic lanes and the pedestrian deck will be required. • All of the work proposed by the CCPO could be constructed from the lower bridge deck with the exception of the bridge pier work which would likely require short term water access. ***PARKING*** • Some on-street parking facilities will be temporarily unavailable to allow for construction equipment and vehicles to park or be located near construction sites. **Mitigation measures**: • The Metropolitan Council is working collaboratively with the City of St. Paul on a Parking Solutions Team to identify parking mitigation strategies that will address impacts and mitigation of impacts during construction.			