National Park Service
U.S. Department of the Interior

Jefferson National Expansion Memorial
St. Louis, Missouri

FINDING OF NO SIGNIFICANT IMPACT
Environmental Assessment for Implementing CityArchRiver Initiative Elements
Jefferson National Expansion Memorial

April 2013

INTRODUCTION

In compliance with the National Environmental Policy Act (NEPA), and implementing regulations published by the Council on Environmental Quality and the Department of the Interior, the National Park Service (NPS) prepared an environmental assessment for Implementing CityArchRiver Initiative elements at Jefferson National Expansion Memorial (the park) in St. Louis, Missouri. This finding of no significant impact (FONSI) describes the alternative the NPS has selected for implementation, provides the rationale for its selection, and explains why it will not have significant impacts on the human environment. While this finding of no significant impact concludes the NEPA compliance process, other internal and external design review processes must be completed, and funding secured for construction, operations, and maintenance, prior to implementation of the selected alternative.

BACKGROUND

The National Park Service is taking action at this time to fulfill the goal of revitalizing the park by improving connections to downtown St. Louis, Missouri and the riverfront, and expanding programming, facilities, and partnerships, while enhancing the visitor experience. This revitalization was called for by the selected action in the November 2009 Record of Decision (ROD) for the park's General Management Plan (GMP)/Environmental Impact Statement. While the GMP provided direction on the type of projects that could be implemented, the 2009 selected action called for the NPS, in close coordination with partners, to initiate an international design competition that would provide a wide breath of ideas on how to meet this goal, and, ultimately, form the basis for the design of more specific projects.

The design competition (Framing a Modern Masterpiece: The City + The Arch + The River) began in December 2009 and the winning team (led by Michael Van Valkenburgh & Associates) and concept were selected in September 2010. The winning concept and design have been refined since through a series of discussions with the NPS and other stakeholders, including consultations under Section 106 of the National Historic Preservation Act (Section 106), Value Analysis workshops for proposed projects on park lands, and public involvement opportunities associated with the NEPA process.

The NPS completed an environmental assessment (EA) that provides an analysis of the environmental consequences of the proposed concept which have the potential to cause physical changes to the park grounds, including projects proposed for the adjacent Central Riverfront.

SELECTED ALTERNATIVE

The selected alternative is alternative 3, as described and analyzed in the EA. This alternative includes the development of a new primary entrance to the park at the West Gateway. This entrance will consist of a new accessible, ground-level plaza and entrance to the Visitor Center/Museum connected across a landscaped Park Over the Highway over I-70 (to be built by the Missouri Department of Transportation (MoDOT), but landscaped by the NPS) to a new central lawn at Luther Ely Smith Square. These new developments will act as a direct physical link between the park, the Old Courthouse, and downtown St. Louis, creating outdoor spaces for group orientation and gathering, as well as spaces for individual rest and relaxation.

The new West Entrance to the Visitor Center/Museum will include a glass façade to provide light to the lobby and a visual connection to the Old Courthouse. Ticketing, restrooms, and security will be located in the new lobby of the West Entrance. The existing entrances at the Arch legs will become dedicated accessible egress from the Visitor Center/Museum. The Visitor Center/Museum will be expanded 35,000-50,000 square feet to provide additional and improved space for visitor orientation, museum exhibit, and education space. Existing spaces within the museum will also be selectively renovated.

Another prominent feature of the selected alternative is the redevelopment of the North Gateway of the park. In this area, the NPS will demolish the Arch Parking Garage and replace it with a new landscape, including an orientation/event lawn, a welcome center, a heritage-themed explorer's garden, and a shared pedestrian/bicycle path. Washington Avenue east of Memorial Drive will be closed to through traffic and a drop-off area will be established. Demolition of the Arch Parking Garage will occur only after implementation of an alternative parking strategy which facilitates access to easy, secure, accessible, and reasonably priced parking.

The NPS will also provide two to four universally accessible paths integrated into the East Slopes, leading from the park to the Central Riverfront. New universally accessible paths will be developed around the Reflecting Ponds, with subtle grading changes and new planting installed to limit stormwater runoff. Along the processional walks, the NPS will replace the Rosehill ash trees with another species in phases. Soil, irrigation, and drainage systems will be repaired and replaced, while the aggregate concrete surface of the walks will be replaced.

The NPS will also renovate the galleries and new exhibits at the Old Courthouse, along with improved accessible visitor access to the first and second floors of the building via exterior ramps and interior elevators.

Along the Central Riverfront, Great Rivers Greenway will work with partners to raise the Leonor K. Sullivan Boulevard to reduce the frequency and impact of flood events. The roadway will also be reconfigured for multi-modal access, including a dedicated two-way bike path, a pedestrian promenade, and two vehicular lanes.

Park-wide, the NPS will implement security improvements (e.g., ram barrier walls and bollards), various additional accessibility improvements (e.g., making paths throughout the park accessible), changes to topography and grading to enable access and reduce maintenance-related issues, and planting changes to strengthen the spatial organization of the park as intended by the original planning concepts.

The NPS selected this alternative for implementation over the other alternatives because it best accomplishes the goals set out in the recently completed GMP to revitalize the park by expanding visitor experience and creating connections with downtown St. Louis and the riverfront. It also best meets other objectives described in the EA by creating the most welcoming and accessible environment; providing the most opportunities for new and expanded exhibits; providing more opportunities to experience the park's stories and interpretive themes; minimizing impacts of flooding on the Central Riverfront; and contributing the most to the overall socioeconomic benefits of the projects. Additional benefits will also be realized through the use of more sustainable landscape and facility management practices which will improve the health of vegetation at the park, improve stormwater management, and minimize the impact of the projects on water and energy consumption and long-term operation and maintenance needs.

OTHER ALTERNATIVES CONSIDERED

The EA prepared for this project also analyzed a no-action alternative (alternative 1) and alternative 2, Moderate Change.

Alternative 1 – No Action

Under the no-action alternative, the Park Over the Highway would be installed (by MoDOT), and would provide access to the park from Luther Ely Smith Square across the structure, which would be landscaped by the NPS. The existing underground museum exhibit space would be retained and interpretive and educational programs continued.

At the North Gateway to the park, the Arch Parking Garage, its surrounding landscape, and ranger station would be retained. Part of Washington Avenue would be closed between 1st Street and Memorial Drive. The Arch Park Garage would be accessed via a slip lane off of I-70 onto Washington Avenue, as well as via Laclede's Landing and from Leonor K. Sullivan Boulevard.

The East Slopes, Reflecting Ponds, exhibits and access to the Old Courthouse, and the Central Riverfront would remain unchanged under alternative 1. The processional walks through the park grounds would be maintained, and the Rosehill ash trees replaced with another species in accordance with the 2010 Emerald Ash Borer Environmental Assessment.

Alternative 2 – Moderate Change

Alternative 2 includes several elements described under the selected action, but varies primarily in its treatment of the West Gateway, Visitor Center/Museum, and North Gateway. Alternative 2 would include changes to the West Gateway, in conjunction with the landscaping of the Park Over the Highway, creating a major point of arrival for visitors to the park. Accessible ingress/egress would be provided at the Arch legs, and the existing Visitor Center/Museum exhibit space would be renovated and exhibits would be updated.

At the North Gateway, the Arch Parking Garage and ranger station would be retained, with aesthetic improvements. Part of Washington Avenue would be closed between 1st Street and Memorial Drive, with Arch Parking Garage access provided via a slip lane off of I-70 onto Washington Avenue, through Laclede's Landing, and from Leonor K. Sullivan Boulevard. A new pedestrian crossing would be created at the intersection of the new slip lane and Washington Avenue.

Elements of the selected alternative that would also occur under alternative 2 include: universally accessible paths integrated into the East Slopes and around the Reflecting Ponds; changes along the processional walks; renovations to the galleries and new exhibits at the Old Courthouse; improved accessible visitor access to the first and second floors of the Old Courthouse via exterior ramps and interior elevators; changes to the Central Riverfront; and the other park-wide improvements to security, access, maintenance requirements, and plantings.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The Council on Environmental Quality (CEQ) regulations implementing NEPA require that "the alternative or alternatives which were considered to be environmentally preferable" be identified (40 CFR Part 1505.2). The Department of Interior regulations implementing NEPA state the environmentally preferable alternative is the alternative "that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic, cultural, and natural resources" (43 CFR Part 46.30).

Because it only involves landscaping of the Park Over the Highway, the no-action alternative (alternative 1) would have the least impact on the biological and physical environment and would best protect and preserve historic and cultural resources. The no action alternative also avoids the majority of impacts the other alternatives would have on the integrity of cultural resources in and near the park. As a result, the NPS has identified alternative 1 as the environmentally preferable alternative.

Despite being environmentally preferable, the NPS did not select the no action alternative for implementation because it does not meet the goals set out in the recently completed GMP to revitalize the park by expanding visitor experience and creating connections with downtown St. Louis and the riverfront. Nor does it meet the specific purpose, need, and objectives for taking action described in chapter 1 of the EA.

MITIGATING MEASURES

The NPS places a strong emphasis on avoiding, minimizing, and mitigating potentially adverse environmental impacts. Under the selected action, best management practices and mitigation measures will be used to prevent or minimize potential adverse effects associated with the project. These practices and measures will be incorporated into the project construction documents and plans. To help ensure the protection of cultural resources, natural resources, and the quality of the visitor experience, the following protective measures will be implemented.

General Construction Mitigation

- Construction and associated staging will be coordinated with other ongoing construction efforts led by NPS and other entities, as well as with seasonal constraints and adjacent property owners as necessary.
- Staging will be coordinated to keep visitor disruptions to a minimum.
- Construction activities, including selective excavation and material delivery, will also be coordinated and timed to minimize disruptions to visitors and access to the park.
- Existing structures and newly completed construction will be protected from ongoing construction activity.

- Standard required construction measures, such as site fencing, sediment and erosion control, and temporary security measures, will be provided throughout the duration of the work at the park.
- As the construction phases are completed, care will be taken to open areas to visitors where possible, while ensuring new construction is adequately protected and maintained for the final use and occupancy.
- Construction on the park site and the Central Riverfront will require the relocation of some utilities. Care will be taken to comply with all permitting and approvals required; to minimize horizontal movement, unnecessary disruption, and costs; and to avoid impacts to historic features. All utility relocation will follow appropriate coordination with agencies and utility providers.
- The West Gateway's new structure and landscape over the highway will require utility reconfiguration, including an existing steam pipe in the Market Street Bridge (to be coordinated with MoDOT), a water main, underground electrical lines, and possibly cable and telecom conduits. Coordination will occur with appropriate agencies and utility providers to maintain service during construction and during the installation of any new connections.
- New utilities required to serve proposed project elements and for construction will be designed and installed to mitigate impacts to the historic landscape and to comply with all applicable codes.
- Monitoring will be conducted throughout the construction process to help ensure that protective measures are being properly implemented.

General Mitigation for Cultural Resources

- In order to mitigate potential impacts to cultural resources, the NPS has entered into a programmatic agreement with the State Historic Preservation Office (SHPO), Advisory Council on Historic Preservation (ACHP), and other consulting parties to address compliance with Section 106 of the National Historic Preservation Act (see attachment D of FONSI). This programmatic agreement establishes a process to assess and resolve adverse effects to cultural resources, in accordance with 36 CFR Part 800.14(b)(1)(ii). It outlines means for identifying, evaluating, and treating historic properties, including archeological resources; outreach to tribes and the public; and establishment of a Collaborative Design Review team which will review design documents and make recommendations on how relationships between the design and historic properties might be improved and/or adverse effects avoided. It includes appendices that address a tribal monitoring plan (to assist in identifying and minimizing impacts on important Osage Nation cultural resources, graves, and isolated human remains); how to handle unanticipated discovery of human remains and other items addressed by the Native American Graves and Repatriation Act; and how to handle inadvertent discoveries of historic properties.
- In accordance with the programmatic agreement developed during the Section 106 process, prior to any ground disturbing activities, all locations that may be impacted will be tested and evaluated for archeological resources.
- Consultation will occur with the Missouri State Historic Preservation Officer (SHPO) and the Osage Nation regarding any necessary archeological surveys which may be required.

- A protocol for fill material will be developed during the detailed design process to ensure re-used fill does not contain artifacts and is culturally sterile.
- Should unanticipated archeological resources be discovered during construction, all work in the immediate vicinity of the discovery will stop immediately and the proper authorities will be notified. Work will be halted until the resources are identified and documented and an appropriate mitigation strategy is developed. Discovered resources will be evaluated for their potential National Register of Historic Places (NRHP) significance, and, if needed, mitigation measures will be developed in consultation with the Missouri SHPO and appropriate representatives of affected tribes. The NPS will conduct identification and assessment of archeological resources consistent with the measures described in the programmatic agreement, which is included in attachment D of this FONSI.
- In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act, as amended (43 CFR 10, Subpart B) and the Archeological Resources Protection Act of 1979 (43 CFR 7) will be followed. The programmatic agreement includes further stipulations that will be followed.
- Mitigation measures will be cognizant of resource significance and preservation needs, and could include such provisions as changes in project design and/or archeological monitoring of the project and data recovery conducted by an archeologist meeting the Secretary of the Interior's standards. NPS will ensure that the measures outlined in the programmatic agreement are carried out to avoid, minimize, and mitigate adverse effects.

Mitigation for Specific Project Areas

Mitigation measures specific to project areas include the following.

East Slopes

- The usual seasonal high water condition on the Mississippi River will be considered when timing concrete and grading work at the base of the East Slopes.
- Construction will be coordinated with concurrent work throughout the park and with the work on the Central Riverfront, specifically at the edges of the project areas where the East Slopes meet the allées at the head of the slopes and the NPS property boundary near the toes of the slopes.
- Work will be coordinated to minimize interference with train or riverfront business operations wherever possible.
- The path treatment and materials will be compatible with the historic landscape.
- Existing trees will be retained and protected to minimize disruptions to existing vegetation and soils.

Reflecting Ponds

- Construction will be coordinated with the Missouri Department of Transportation's work at the Memorial Drive northbound area between Chestnut Street and the Washington Avenue intersection.
- Work around the Walnut Street area will be coordinated with adjacent property owners, including MoDOT and the Archdiocese of St. Louis.

- Work will also be coordinated with the design and construction of the Processional Walks. The path treatment and materials will be compatible with the historic landscape.

Processional Walks

- During phased removal of the existing ash trees, work will proceed on renovating the pavement of the walks, including associated soil amendments and irrigation improvements, to coordinate construction and limit disruptions to the area.

Visitor Center/Museum

- Renovations will be staged to maintain visitor flow and security screening.
- Exterior ramp construction will occur with minimal interior disturbance, then connected through service spaces in off-peak season, when an Arch leg Visitor Center/Museum entrance might be able to be temporarily closed.
- Substantial consideration will be given to protecting the Visitor Center/Museum's material fabric, preserving the visual appearance of the Arch leg entry, and respecting designed walkways when considering the new pedestrian ramps at the Arch legs,
- Interior ramps and steps will be constructed as light-weight infill platforms so that damage to the building is minimized should they need to be removed. As necessary, ramps will be constructed off-site and installed during normal closing times to minimize impacts to visitors.
- To the extent possible, alterations will all take place outside the primary visitor area in adjacent service spaces.
- The existing edge of pavement will be tapered into the ramp so as to minimize visual discontinuity.

Old Courthouse

- Substantial consideration will be given to protecting the Old Courthouse's material fabric, preserving its historic integrity, and respecting the cultural landscape.
- Exterior ramps will be constructed to minimize damage to the material fabric of the building, should they need to be removed.
- Accessible ramps will use light-weight steel construction to mitigate visual impacts.
- Existing objects outside the building (pedestal, sundial, fountain, etc.) will be protected and preserved.
- Existing soil surrounding the building will be cleared, grubbed, and stockpiled to be replaced and reseeded with high use turf and augmented with additional planting soil as required.
- Construction work on the adjacent streets and sidewalks on Chestnut and Market Streets will be coordinated with the city. Work will be staged and implemented to comply with city permit and construction requirements and to minimize impacts to visitor experience.
- Interior upgrades and renovations will be subject to additional review in accordance with the terms and conditions of the programmatic agreement.

Central Riverfront

- Construction will be timed and coordinated to minimize disruptions to visitors and businesses.

- Existing structures and newly completed construction will be protected from ongoing construction activity.
- Standard required construction site fencing, temporary security measures, and temporary traffic control devices will be provided throughout the duration of work on the Central Riverfront.
- Access to the riverfront and levee for emergency vehicles will be maintained at all times.
- Stair treads and foundations of the Grand Staircase, as well as sloping bases of the overlook walls, will be protected and left in place when buried by fill to raise the elevation of Leonor K. Sullivan Boulevard.
- Modifications to stair handrails on the Grand Staircase and overlook stairs will be in-kind with the existing handrails.
- To protect the Eads Bridge, existing conditions (including damaged and compromised elements) will be documented and monitored throughout construction. This will include seismic monitoring.
- Protective barriers will be placed against all masonry faces of the Eads Bridge prior to placement and compaction of fill.
- The new elevation of the Leonor K. Sullivan Boulevard surface in the area of the Eads Bridge will allow for limited exposure of the existing red granite at the base of the pier.
- Cobbles along eastern edge of the project will be salvaged and reset in order to maintain integrity of the cobble levee.
- Elevation changes to Leonor K. Sullivan Boulevard will be subject to additional design review requirements and Section 106 compliance to ensure the potential for adverse effects under Section 106 and impacts to the park's National Historic District Landmark, Eads Bridge, and other historic buildings, structures, sites, objects and districts and cultural landscapes are minimized.

West Gateway and Visitor Center/Museum

- Extensive coordination will occur with MoDOT during work on the structure over I-70.
- Upon completion by MoDOT, NPS will have access to the Park Over the Highway structure and construction at Luther Ely Smith Square and the West Entrance of the Visitor Center/Museum could commence. The last pieces to be constructed will be the plaza and the landscape across the Park Over the Highway, as the needs for construction access and staging will be substantially reduced by this point.
- Staging for selective excavation and material delivery will be coordinated to keep visitor disruptions to a minimum.
- As the construction phases are completed, care will be taken to make areas accessible to visitors where possible, while ensuring that the new construction is adequately protected and maintained for the final use and occupancy.
- Visitor security screening will be accommodated during construction.
- Changes will be subject to additional design review and Section 106 compliance to ensure impacts to the cultural landscape and National Historic Landmark are minimized.

North Gateway

- A parking strategy will be implemented prior to the demolition of the Arch Parking Garage to facilitate access to nearby parking for visitors, park staff, and others accessing the park and adjacent downtown activities that will adequately replace the needs being serviced by the Arch Parking Garage today (e.g., easy, secure, accessible and reasonably priced).
- Testing for asbestos and lead paint will be performed prior to demolition of the Arch Parking Garage, and any hazardous materials will be removed prior to demolition.
- A demolition plan will be developed to ensure safe, controlled, and efficient demolition of the Arch Parking Garage.
- If possible, portions of the Arch Parking Garage will be salvaged for re-use and metal will be recycled.
- To protect the Eads Bridge, existing conditions (including damaged and compromised elements) will be documented and monitored throughout construction. This will include seismic monitoring.
- Protective barriers will be placed against all masonry faces of the Eads Bridge prior to placement and compaction of fill.

WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT ON THE HUMAN ENVIRONMENT

Based on the analysis in the EA, the NPS has determined that the selected alternative, alternative 3, can be implemented without significant adverse effects. As defined in 40 CFR §1508.27, significance is determined by examining the context (including duration) of an impact, and its intensity, which is based on a consideration of the following criteria.

Impacts that may be both beneficial and adverse and which on balance may be beneficial, but that may still have significant adverse impacts which require analysis in an Environmental Impact Statement (EIS): As described in the EA, several resource areas will experience beneficial and adverse impacts during the implementation of the selected alternative; however, no significant adverse impacts were identified in the EA analysis, which is summarized here, that would require analysis in an EIS.

The selected alternative includes changes in the vegetation, topography, accessibility, and circulation features that will adversely affect character-defining or other features of the historic buildings, structures, sites, objects and districts, both within and outside the park boundary. These changes will also adversely affect the designated cultural landscape of the park. Ground disturbances related to project elements in the preferred alternative could also disturb as-yet identified archeological resources. Additionally, access to some of the park's museum collection will be temporarily disrupted during construction, but the collection will be protected and managed by staff while in storage or alternative locations.

In order to mitigate potential impacts to cultural resources, the NPS has entered into a programmatic agreement with the SHPO and other Section 106 consulting parties (see attachment D of this FONSI), establishing a process to assess and resolve adverse effects to cultural resources. As described in the mitigating measures section previously, this includes identifying, evaluating, and treating historic properties, including archeological resources; communicating with tribes and the public; and reviewing design documents and making recommendations on how relationships between the design and historic properties might be

improved and/or adverse effects avoided. As part of the programmatic agreement, the NPS will establish a Collaborative Design Review team which will review design documents and make recommendations on how relationships between the design and historic properties might be improved and/or adverse effects avoided. The NPS commits to complete this review for each project or action that may stem from the revitalization of the Jefferson National Expansion Memorial in accordance with the terms and conditions of this programmatic agreement.

Some of the specific measures the NPS has already identified to minimize impacts to historic properties and cultural landscapes include using treatments and materials for new paths which are compatible with the historic landscape; use of removable, minimally intrusive, or in-kind materials to minimize impacts to the Old Courthouse, Grand Staircase, floodwalls, and overlook stairs; and documentation and monitoring of the Eads Bridge.

For archeological resources, the programmatic agreement requires testing and evaluating all locations that may be impacted by any ground disturbing activities for archeological resources, including consultation with the Missouri SHPO and the Osage Nation regarding any such archeological surveys. The NPS will develop a protocol for fill material to ensure re-used fill does not contain artifacts and is culturally sterile. In addition, should unanticipated archeological resources be discovered during construction, all work in the immediate vicinity of the discovery will stop immediately and proper authorities will be notified. Work will be halted until the resources are identified and documented and an appropriate mitigation strategy is developed. Discovered resources will be evaluated for their potential National Register of Historic Places (NRHP) significance, and, if needed, mitigation measures will be developed in consultation with the Missouri SHPO and appropriate representatives of affected tribes. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act, as amended (43 CFR 10, Subpart B) and the Archeological Resources Protection Act of 1979 (43 CFR 7) will be followed.

Taking the execution of the programmatic agreement and other mitigation into account, the NPS has determined that any adverse impacts from alterations to character-defining features or other effects to cultural resources will be moderate.

For natural resources, temporarily disturbing or removing a relatively large number of trees, landscape plantings, and turf will have short-term adverse effects on the manicured landscape vegetation at the park and along the Central Riverfront. This will not affect any extant native plant communities. Mitigation, such as phasing and coordinating construction and staging to limit ground disturbances, and retaining existing trees wherever possible, will help limit the effects. In addition, although new vegetation will require time to mature, a substantial amount of new vegetation will be planted in the park at Luther Ely Smith Square, the new West Entrance, and the North Gateway. As a result, adverse impacts to vegetation are considered to be short-term and moderate, with long-term benefits from an increase in vegetation, and improvements to the health and diversity of plantings.

Construction-related activities will cause noise above background soundscape conditions at the park. While this will temporarily disturb the park's soundscape, such noise is expected to be below levels established by regulatory guidelines, and will end once construction is complete. Park management and operations under the selected alternative (e.g., landscape maintenance and testing of the emergency generators) will not change from current conditions, and will

continue to sometimes create noise above background conditions. Therefore, short-term impacts to soundscapes from construction are expected to be moderate. Long-term, operational impacts are expected to be minor and adverse, with some improvements because of the potential sound attenuation from landscape additions to the park and removal of vehicular traffic noise sources in proximity to the north and west edges of the park.

With regards to floodplains, raising the elevation of Leonor K. Sullivan Boulevard and adding pedestrian and bicycle paths will have negligible long-term impacts to floodplains as the nature of the development in the floodplain and the existing floodplain functions and values will not be altered. To address compliance with Executive Order 11988 (Floodplain Management) and NPS Procedural Manual #77-2 (Floodplain Management), the NPS has prepared a statement of findings which describes the rationale for the use of the floodplain, discloses the risk associated with the use of the floodplain, and identifies flood mitigation (see attachment E to this FONSI).

The selected alternative will disturb soils and potentially alter stormwater flows during construction, which could create an increased potential for soil erosion and transport of surface pollutants into adjacent water bodies and storm sewers. This could have short-term (during construction) moderate adverse impacts by temporarily altering historic or desired water quality conditions in the vicinity of the park. However, standard construction best management practices for erosion and sediment control will minimize the potential for any such impacts.

During construction of project elements at the park and along the Central Riverfront, visitor use and experience will be adversely affected by limitations and changes to visitor access needed to accommodate construction. To minimize closures and disruptions, the NPS will use signage and other accommodations to allow for maximum visitor access to the park during construction, including coordinating and phasing construction activities. There could also be a potential decline in visitor satisfaction and visitation during construction, and when considered with impacts to visitor access, temporary moderate adverse impacts are expected to visitor use and experience.

Visitors who prefer on-site parking could be dissatisfied with the removal of the Arch Parking Garage, but a parking strategy will be implemented prior to demolition to facilitate access to parking that will adequately replace the needs being serviced today (e.g., easy, secure, accessible and reasonably priced).

In addition, there will be changes to the designed approach to the Arch and Visitor Center/Museum as a result of creating a new west entrance. Visitors will still have the ability to experience the Arch up close, including as they exit through the legs, but this will affect those who want to experience the originally planned approach. There will continue to be a shortage of oversized vehicle parking near the park, which will affect those visitors who travel to the park in such vehicles.

While these impacts will change visitor use and experience, the effects will be minor as critical characteristics of the visitor experience (e.g., the Visitor Center/Museum complex beneath the Gateway Arch, the ride to the top of the Gateway Arch, the observation deck at the top of the Gateway Arch, visiting the Old Courthouse) will not be limited. Visitor satisfaction and visitation is expected to remain stable over the long-term, if not increase as a result of more opportunities, destinations, activities, and accessibility within the park and the Central Riverfront.

Should visitation decrease during construction, it could result in a temporary but apparent decrease in spending that will affect local businesses in the vicinity of the park, resulting in minor to moderate adverse socioeconomic impacts. However, as noted above, to minimize closures and disruptions, and corresponding socioeconomic effects, the NPS will use signage and other accommodations to allow for maximum visitor access to the park during construction. In addition, construction-related spending under the selected alternative will generate revenue for individual businesses in the region. Removal of the Arch Parking Garage will have long-term adverse impacts due to the loss of a revenue generating facility for NPS and its partner Metro. This could result in less localized spending by the NPS and Metro, which will have minor adverse effects on local businesses. Ultimately, the potential for long-term beneficial socioeconomic effects will be relative to any increase in visitation and visitor spending after the selected alternative is implemented.

Degree of effect on public health or safety: The selected alternative includes a variety of typical construction mitigation measures (e.g., closing or limiting access to construction areas) which will minimize potential effects on public health or safety during construction. As a designated icon park, the Gateway Arch's physical security is of paramount importance, so temporary security measures and Visitor Center/Museum security will also be provided for the duration of any construction activities. Over the long-term, new security measures will be implemented (e.g., new security screening at new entrance to Visitor Center/Museusm, improved security perimeter, new welcome center at North Gateway), minimizing potential safety risks. The landscaping of the Park Over the Highway is expected to provide a safer approach to the park from downtown St. Louis, while the bicycle and pedestrian promenade along Leonor K. Sullivan Boulevard, along with raising the roadbed to minimize impacts of flooding, will improve public safety along the Central Riverfront.

Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, wetlands, prime farmlands, wild and scenic rivers, or ecologically critical areas: As described previously the selected alternative includes changes in the vegetation, topography, accessibility, and circulation features that will have moderate adverse impacts to historic and cultural resources both within and outside the park boundary (i.e., impacts which alter character-defining features and/or diminish the integrity of resources). Ground disturbances related to project elements in the preferred alternative could also disturb unidentified archeological resources.

However, the NPS has entered into a programmatic agreement with the SHPO, ACHP, and other Section 106 consulting parties (see attachment D of this FONSI), establishing a process to assess and resolve adverse effects to cultural resources. As described in the mitigating measures section, this includes identifying, evaluating, and treating historic properties, including archeological resources; communicating with tribes and the public; and reviewing design documents and making recommendations on how relationships between the design and historic properties might be improved and/or adverse effects avoided. As part of the programmatic agreement, the NPS will establish a Collaborative Design Review team which will review design documents and make recommendations on how relationships between the design and historic properties might be improved and/or adverse effects avoided. The NPS commits to complete this review for each project or action that may stem from the revitalization of the Jefferson National Expansion Memorial in accordance with the terms and conditions of this programmatic agreement.

Some of the specific measures the NPS has already identified to minimize impacts to historic properties and cultural landscapes include using treatments and materials for new paths which are compatible with the historic landscape; use of removable, minimally intrusive, or in-kind materials to minimize impacts to the Old Courthouse, Grand Staircase, floodwalls, and overlook stairs; and documentation and monitoring of the Eads Bridge.

For archeological resources, the programmatic agreement requires testing and evaluating all locations that may be impacted by any ground disturbing activities for archeological resources, including consultation with the Missouri SHPO and the Osage Nation regarding any such archeological surveys. The NPS will develop a protocol for fill material to ensure re-used fill does not contain artifacts and is culturally sterile. In addition, should unanticipated archeological resources be discovered during construction, all work in the immediate vicinity of the discovery will stop immediately and proper authorities will be notified. Work will be halted until the resources are identified and documented and an appropriate mitigation strategy is developed. Discovered resources will be evaluated for their potential National Register of Historic Places (NRHP) significance, and, if needed, mitigation measures will be developed in consultation with the Missouri SHPO and appropriate representatives of affected tribes. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act, as amended (43 CFR 10, Subpart B) and the Archeological Resources Protection Act of 1979 (43 CFR 7) will be followed.

The park and the Central Riverfront have been heavily manipulated by human activity and development; as such, there are no existing prime farmlands, ecologically critical areas, or unique natural resources within the project area, and the only wetlands at the park, as identified by the National Wetlands Inventory, are the artificially created reflecting pools.

Degree to which effects on the quality of the human environment are likely to be highly controversial: Under Department of the Interior NEPA regulations (43 CFR 46.30) controversial "refers to circumstances where a substantial dispute exists as to the environmental consequences of the proposed action and does not refer to the existence of opposition to a proposed action, the effect of which is relatively undisputed." No highly controversial effects were identified during either preparation of the EA or the public comment period. No public comments were received at any point in the compliance process that indicates there are controversial environmental effects.

Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risks: With the exception of potential impacts to unknown subsurface archeological resources, the implementation of the selected alternative does not involve highly uncertain effects or unique or unknown risks. To minimize these unknown risks, the NPS has entered into a programmatic agreement with the SHPO and other Section 106 consulting parties (see attachment D of this FONSI), establishing a process for identifying, evaluating, and treating historic properties, including archeological resources.

Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration: The proposed projects are an outgrowth of the park's GMP and the design competition conducted specifically for the park and surrounding area. As a tiered decision, implementation of the selected

alternative neither establishes an NPS precedent for future actions with significant effects nor represents a decision in principle about a future consideration.

Whether the action is related to other actions with individually insignificant but cumulatively significant impacts: The NPS conducted a thorough cumulative impacts analysis in the EA by:

- identifying past, present, and reasonably foreseeable future actions which could impact the resources affected by the selected alternative (cultural resources, natural resources, visitor use and experience, socioeconomics, and operations and management);
- considering the effects of these cumulative actions in conjunction with the effects of the selected alternative; and
- arriving at an assessment of total cumulative impact.

Based on the analysis in the EA, the NPS has determined the selected alternative is not related to other actions with individually insignificant but cumulatively significant impacts.

Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources: As described previously the selected alternative includes changes in the vegetation, topography, accessibility, and circulation features that will alter character-defining features and/or diminish the integrity of resources including the National Historic Landmarks of the park and Eads Bridge, historic buildings, structures, sites, objects and districts, both within and outside the park boundary, listed or eligible for listing on the NRHP; and designated cultural landscapes. Ground disturbances related to project elements in the preferred alternative could also diminish the integrity of as-yet identified archeological resources. Additionally, access to some of the park's museum collection will be temporarily disrupted during construction, but the collection will be protected and managed by staff while in storage or alternative locations.

In order to mitigate potential impacts to cultural resources, the NPS and its consulting parties entered into a programmatic agreement, in accordance with 36 CFR 800.14(b). As described in the mitigating measures section, this includes identifying, evaluating, and treating historic properties, including archeological resources; communicating with tribes and the public; and reviewing design documents and making recommendations on how relationships between the design and historic properties might be improved and/or adverse effects avoided. As part of this agreement, the NPS will establish a Collaborative Design Review team which will review design documents and make recommendations on how relationships between the design and historic properties might be improved and/or adverse effects avoided. The NPS commits to complete this review for each project or action that may stem from the revitalization of the Jefferson National Expansion Memorial in accordance with the terms and conditions of this programmatic agreement.

Some of the specific measures the NPS has already identified to minimize impacts to historic properties and cultural landscapes include using treatments and materials for new paths which are compatible with the historic landscape; use of removable, minimally intrusive, or in-kind materials to minimize impacts to the Old Courthouse, Grand Staircase, floodwalls, and overlook stairs; and documentation and monitoring of the Eads Bridge.

For archeological resources, the programmatic agreement requires testing and evaluating all locations that may be impacted by any ground disturbing activities for archeological resources, including consultation with the Missouri SHPO and the Osage Nation regarding any such archeological surveys. The NPS will develop a protocol for fill material to ensure re-used fill does not contain artifacts and is culturally sterile. In addition, should unanticipated archeological resources be discovered during construction, all work in the immediate vicinity of the discovery will stop immediately and proper authorities will be notified. Work will be halted until the resources are identified and documented and an appropriate mitigation strategy is developed. Discovered resources will be evaluated for their potential National Register of Historic Places (NRHP) significance, and, if needed, mitigation measures will be developed in consultation with the Missouri SHPO and appropriate representatives of affected tribes. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act, as amended (43 CFR 10, Subpart B) and the Archeological Resources Protection Act of 1979 (43 CFR 7) will be followed.

Degree to which the action may adversely affect an endangered or threatened species or its critical habitat: While federally listed threatened and endangered species may be present at locations within St. Louis City and County, Missouri and St. Clair County, Illinois, the project area includes only those lands in downtown St. Louis within the existing park boundary and the adjacent Central Riverfront. No threatened and endangered species are known to be present within the project area. Due to the urban environment and associated disturbances, it is highly unlikely that suitable habitat to support listed species will be available, now or in the future. Additionally, although improvements to the east slopes of the park and the Central Riverfront will occur within the 100-year floodplain of the Mississippi River, the project will not change floodplain development, functions, or values, or the base 100-year flood elevation. This will minimize potential for any impacts to listed species which may occur in or near the river. To address, consultation under section 7 of the Endangered Species Act, the NPS sent a consultation letter to the U.S. Fish and Wildlife Service regarding the determination that the project will have no effect on listed species, their habitats, or proposed or designated critical (see Appendix B of the EA).

Whether the action threatens a violation of federal, state, or local environmental protection law: The selected alternative violates no federal, state, or local environmental protection laws. The selected alternative will be consistent with all existing local, state, and federal regulations.

PUBLIC INVOLVEMENT

Coordination, consultation, and public involvement for this planning process began with the initiation of the GMP in 2008. Further public involvement occurred both during the design competition and after the winner was announced. After being chosen to move forward with their design, the design team coordinated with the National Park Service, the City of St. Louis and others, and this coordination is ongoing. The design team has also provided information to the public about the progress of the design at public presentations in January 2011 and January 2012.

During the EA process, the NPS provided two formal public involvement opportunities, one during scoping and one associated with release of the EA. On July 22, 2011, a public scoping newsletter and questions to stimulate public comment were posted on the NPS Planning, Environment, and Public Comment (PEPC) for review and comment. The scoping newsletter

summarized the purpose, need, and objectives for this plan/EA, described the scope of the EA, and listed the proposed impact topics for the EA analysis. The NPS sent a postcard and email announcing the availability of the newsletter on PEPC to the project's preliminary mailing list of government agencies, tribes, organizations, businesses, and individuals. Hard copies of the newsletter were available at the park. The Department of the Interior issued a press release on July 22, 2011 announcing the scoping period, and the NPS also published a Notice of Intent to prepare this EA in the *Federal Register* on July 26, 2011. The NPS requested public comments be submitted by August 30, 2011 to be most helpful.

During the scoping period, 123 pieces of correspondence were entered into the PEPC system either via direct entry by the commenter, or by uploading emails and hard-copy letters that had been sent to the NPS. After reviewing and categorizing all of the comments within each correspondence received during public scoping, the NPS identified 329 comments 77 of which were considered substantive. This analysis was posted to the PEPC site for public inspection, and the public was notified of its availability via email or a postcard to the mailing list on November 23, 2011.

Public scoping comments considered substantive included requests for a specific visitor experience and/or a particular visitor amenity or opportunity at the park; ideas or suggestions for new alternatives; and the need for greater connectivity in the vicinity of the park. The topic addressed by the majority of the comments was transportation infrastructure surrounding the park and in particular, the removal of the depressed lanes of I-70. Transportation infrastructure was being considered under a separate but concurrent EA being prepared by MoDOT, and is outside NPS jurisdiction and the scope of the EA. As a result, these comments were considered non-substantive for the NPS EA, but were provided to MoDOT to inform their EA process.

On January 15, 2013, the NPS published the EA for Implementing CityArchRiver Initiative Elements, issuing a press release the same day which announced the availability of the document and the public meeting to be held at the Old Courthouse in St. Louis on January 29, 2013. Postcards and emails announcing the availability of the EA on PEPC and the public meeting were mailed to the project's mailing list of government agencies, tribes, organizations, businesses, and individuals. A hard copy of the EA was available for review at the park, or by request from the Superintendent. Public comments were accepted through March 1, 2013.

Approximately 66 people attended the public meeting, which was an open house with various stations presenting information about the EA and preferred alternative. Attendees were able to review the posters and have their comments recorded on flipcharts. Comment cards were also available for the public to fill out and leave behind, or take home and mail in at a later date.

The NPS received a total of 38 pieces of correspondence regarding the EA, which included 146 comments considered substantive. Those substantive comments were grouped by like concerns, summarized as 'concern statements', and have been responded to by the NPS, as documented in the errata to this finding of no significant impact. The comments primarily recommended design or programming elements for the NPS to consider; other comments pertained to ensuring changes were consistent with the mission of the NPS and the historic landscape at the park; support for the no action alternative; concerns about removal of the Arch Parking Garage and Washington Avenue, and the availability of replacement parking; recommendations for plantings; concerns about public safety; concerns about impacts to historic resources; questions about funding and revenue; questions about expansion of the park to the east side of the

Mississippi River; and recommendations to include the park in existing heritage corridors. In addition, numerous comments were received about the Park Over the Highway being planned and constructed by MoDOT, including recommendations to reconsider this element and remove the depressed lanes of I-70. Although outside the scope of the NPS decision-making process, the NPS worked with MoDOT to develop responses to these comments.

CONCLUSION

The NPS has selected alternative 3, as described on pages 28-36 and 42-49 of the EA, for implementation. Considering the information and analysis in the EA and supporting environmental documentation, the comments of agencies and the public, NPS guidance and policies, and the capability of mitigation measures to avoid, minimize, or eliminate impacts, the NPS has determined that the selected alternative is not a major federal action which normally requires preparation of an environmental impact statement.

The NPS has determined that there are no significant direct, indirect or cumulative effects on public health or safety, sites listed on the National Register of Historic Places, or other unique characteristics of the region. While there will be impacts to cultural resources, the NPS has entered into a programmatic agreement with the SHPO, ACHP, and other Section 106 consulting parties, establishing a process to assess and resolve adverse effects to cultural resources. The effects of the selected alternative are not highly uncertain or controversial and do not involve unique or unknown risks that cannot be mitigated. No elements of precedence were identified, and the selected action will not violate any federal, state, or local law. Implementation of the selected alternative will not automatically trigger other actions which may require environmental impact statements.

Based on the foregoing, an EIS is not required for this action, and one will not be prepared.

Recommended: Tom Bradley 4/25/13

Tom Bradley
Superintendent,
Jefferson National Expansion Memorial

Date

Approved: Michael A. Reynolds 5/3/13

Michael Reynolds
Regional Director
Midwest Region

Date

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ATTACHMENT A: RESPONSE TO PUBLIC COMMENTS ON ENVIRONMENTAL ASSESSMENT FOR IMPLEMENTING CITYARCHRIVER INITIATIVE ELEMENTS AT JEFFERSON NATIONAL EXPANSION MEMORIAL

As required by National Park Service (NPS) Director's Order 12, the following errata respond to all substantive comments submitted on the Environmental Assessment (EA) for Implementing CityArchRiver Initiative Elements. Substantive comments from various individuals have been grouped as concern statements. Concerns are statements that summarize the issues identified in similar comments.

Following the response to comments, the errata also make a factual correction to the Consultation and Coordination chapter of the Environmental Assessment for Implementing CityArchRiver Initiative Elements, which had no bearing on the analysis in the EA.

Concern Statement: One commenter felt the responsibility for promoting extended visitation to the area is inconsistent with the NPS mission at the park, which needs to be better articulated, and should be interpreted more broadly than the history of the city of St. Louis.

Response: The projects proposed for implementation at Jefferson National Expansion Memorial are part of the broader CityArchRiver initiative that stemmed from the 2009 international design competition 'Framing a Modern Masterpiece: The City + The Arch + the River 2015.' This design competition was called for by the NPS as part of the implementation of the park's general management plan (GMP). The goals of this competition, which were developed with input from the NPS and incorporated, as appropriate, into the objectives for this EA (see chapter 1), included creating attractors to promote extended visitation to the Arch, the City of St. Louis, and the Mississippi River. Although the analysis in this EA focuses on projects proposed for NPS lands, the CityArchRiver initiative includes numerous other elements which would support this goal, but which are being pursued by park partners (e.g., the Park Over the Highway, improvements to the Central Riverfront, redevelopment of Kiener Plaza) or not ready for a decision at this time (e.g., expansion of the park to East St. Louis). Recognizing this goal could only be realized by working with its partners, the NPS developed specific language addressing this as part of the objectives described on page 3 of the EA.

The goals of the competition and objectives described in the EA also recognize the general mission of the NPS and the specific mission at this park unit, which is described clearly in the 'Purpose and Significance of the Park' section of chapter 1. Incorporating requirements to honor the character-defining features of the National Historic Landmark and relevant National Historic Districts, and more generally prohibiting violations of the NPS Organic Act and Management Policies 2006, has allowed the NPS to shape the projects proposed on park lands to ensure consistency with our mission. Part of that mission includes, but is in no way confined to, commemorating '...St. Louis' role as a confluence and gateway of the American westward expansion during the 19th century.'

Concern Statement: One commenter felt the NPS has not articulated the goals it hopes to accomplish, how they relate to the NPS mission at the park, and what is truly required to meet those goals.

Response: The objectives in the EA (beginning on page 3) are clearly described as those goals the NPS feels must be achieved to a large degree for an action to be considered a success. These goals relate to the mission of the NPS at Jefferson National Expansion Memorial, as described in response to the previous concern statement, by including requirements to honor the character-defining features of the National Historic Landmark and relevant National Historic Districts, and more generally prohibiting violations of the NPS Organic Act and Management Policies 2006. With regard to what is truly required to meet these goals, the NPS feels the actions presented in alternative 3 meet the objectives best (see pages 60-61 of the EA). When considering this and other factors (e.g., the NPS mission at the park, the goals of the park's GMP, and the results of the impacts analysis in the EA; see page 68), the NPS identified it as their preferred alternative.

Concern Statement: One commenter expressed support for the no action alternative, and felt the money should be spent on maintaining existing structures and landscaping.

Response: The projects proposed for implementation at Jefferson National Expansion Memorial are part of the broader CityArchRiver initiative that stemmed from the 2009 international design competition 'Framing a Modern Masterpiece: The City + The Arch + the River 2015.' This design competition was called for by the NPS as part of the implementation of the park's GMP. The no action alternative does not meet the purpose, need, and objectives for taking action, which relate to implementing the decision the NPS made in the GMP to revitalize the park and conduct a design competition. As a tiered NEPA document, the EA does not revisit this decision. However, the proposed projects will only be implemented as funding (which is expected to come from partners, donations, and other non-federal and federal sources) becomes available, as described on page 49 of the EA.

Concern Statement: Commenters suggested the NPS should make changes consistent with the Saarinen/Kiley vision, especially at the West Gateway.

Response: The NPS recognizes the need to honor the Arch grounds designed by Saarinen/ Kiley, which were ultimately designated a National Historical Landmark, as evidenced by the objectives described in chapter 1 of the EA. While the NPS has acknowledged some impacts to the landscape (see the 'Cultural Resources' section of chapter 4) as a result of meeting the broader objectives related to implementing CityArchRiver initiative elements at the park, the design team has also sought to continue the themes of curved walkways and a manicured landscape, and find opportunities to better realize or enhance the original design intent (e.g., connecting the park to downtown St. Louis by landscaping a Park Over the Highway; replacing ash trees and repairing of the Processional Walks, and additional plantings on the East Slopes). In addition, continuing to engage consulting parties under Section 106 of the National Historic Preservation Act throughout the design process (see the programmatic agreement in attachment D of the finding of no significant impact (FONSI)) will minimize impacts to the park to the extent possible.

Concern Statement: Commenters recommended a variety of new alternative elements for the NPS to consider, including: developing educational wetlands; additional signage and overhead walkways to connect the park to Laclede's Landing and the Metro system; providing pedestrian drop-offs; changes to the north and south overlooks; and walkways around ponds and which connect the entire park.

Response: Some of the suggestions received from the public, such as developing wetlands, or changes to the overlooks, would be inconsistent with the park's purpose and significance (see chapter 1 of the EA). Some suggestions provided by members of the public are for specific design details, such as additional signage and drop-off locations, and may be considered during design development. Other suggestions, such as the overhead walkways connecting to Eads Bridge, may have been part of the original design or other design competition entries, but were dismissed as not viable for a variety of reasons during the value analysis process, including costs, potential impacts, etc.

Concern Statement: The NPS received numerous comments about providing additional attractors at the park, including a beer garden; restaurants; an ice/roller skating rink; and a playground, Ferris wheel, or other rides to entertain kids. Some commenters were opposed to providing such amenities, and were concerned about the effect to entities already providing such opportunities in the area.

Response: While the NPS is still considering food service in the expanded underground museum, the other suggestions for additional attractors at the park are not viable. Some of the attractions suggested, such as Ferris wheels, beer gardens, etc. are inconsistent with the park's purpose and significance. Some of the suggested attractors could be more appropriate at sites adjacent to, but outside of, the park, such as Kiener Plaza. These ideas will be shared with the design team as the process moves forward.

Concern Statement: Commenters provided numerous ideas for interpretive and educational opportunities at the park, including park history and mission; the construction/architecture of the Old Courthouse; river ecology; mound cultures; local industrialism; local history prior to park development; baseball history; and musical history. Also commenters asked for additional information about programming, and were concerned design was proceeding without having defined program use

Response: The projects proposed for implementation at Jefferson National Expansion Memorial are design features that would change the cultural landscape and structures at the park. Specific programming elements do not need to be addressed in the Environmental Assessment as they would not change the alternatives, have impacts to the human environment (as defined by 40 Code of Federal Regulations (CFR) 1508.14), or change the analysis in the EA. All planning for programming is ultimately addressed in the park's Long Range Interpretive Plan that guides the design of interpretive media, such as exhibits and waysides, as well as park interpretive programs. This plan is currently in draft form and will be finalized as the design progresses on the various elements of the CityArchRiver initiative. In addition, all proposed interpretive programs must adhere to the park's purpose and significance (see chapter 1 of the EA). So, while some of the ideas suggested by commenters could be considered, others (such as history of baseball, musical history) would not.

Concern Statement: Commenters suggested the new visitor center/museum entrance be designed to minimize queuing and provide shade.

Response: As the design process moves forward into more detailed phases for the new visitor center/museum entrance, a variety of details for accommodating visitors at the new entrance will be developed. These could include strategically placed plants or other features which provide shade, as well as indoor and outdoor space for line queuing.

Concern Statement: Several commenters expressed concern over removing the Arch Parking Garage, including cost to demolish and replace the garage; potential negative effects on Laclede's Landing businesses; loss of revenue to the park; availability of replacement parking; the burden placed on visitors to find their own parking in downtown; and the loss of easy access to the park. Some commenters suggested alternative uses for the garage, such as creating a green roof/welcome center available to visitors on the top deck; or providing removable event space on the top deck.

Response: By removing the existing parking garage and replacing it with parkland area, a completely new visitor experience is created with greatly improved accessible pedestrian links to Washington Avenue, Laclede's Landing, and the Central Riverfront. The NPS believes these links will have a positive impact to the businesses in Laclede's Landing, providing easier access and potentially greater numbers of visitors from the park and riverfront who patronize businesses in the Landing. However, the NPS will not close and demolish the Arch parking garage until the community provides park visitors easy, secure, accessible and reasonably priced parking. The city of St. Louis is leading the effort to ensure that visitors to the Gateway Arch and to downtown in general, will have appropriate choices for parking that will adequately replace the needs being serviced by the Arch Parking Garage today. Partners will be required to provide funding for ranger activities and all maintenance and operations costs for the proposed site improvements to replace revenue lost from the demolition of the garage. Design alternatives that included partial demolition and renovation of garage with a landscaped deck were developed and studied, but either did not meet the accessibility goals of the project or were financially unfeasible due to the high costs associated with the significant modifications that would be required to the parking structure.

Concern Statement: Commenters recommended changing alternative 3 by keeping Washington Avenue open and making improvements for vehicular, bicycle, and pedestrian traffic. Some were concerned removal of Washington Avenue would have negative economic impacts to businesses in Laclede's Landing and along the riverfront.

Response: As part of the mitigation being considered by MoDOT for the reconfiguration of the I-70 ramps (and closure of Washington Ave.) improvements will be made for access into Laclede's Landing. The NPS also anticipates that the improved pedestrian and bicycle connections to Laclede's Landing and the Central Riverfront from the park will have a positive impact to the businesses in Laclede's Landing, by providing easier access and potentially greater numbers of visitors from the park and riverfront who patronize businesses in the Landing.

Concern Statement: One commenter suggested the new plantings use fewer trees and be more reflective of the prairie that used to exist in this area.

Response: The park is a National Historic Landmark, designated in part due to its designed landscape, which included trees as part of the original design intent. Therefore, planting trees has beneficial effects to the landscape in line with the original design intent, and attempting to recreate the conditions prior to the development of the city of St. Louis would have adverse impacts to the National Historic Landmark.

Concern Statement: Some commenters expressed concern over the replacement of the allee trees within the park, including suggestions for alternative plantings and phased implementation.

Response: The decision to use a single species of trees with uniform height, spread and caliper as replacements for the allee planting was made in a separate NEPA compliance process for implementing management strategies to address the threat of the Emerald Ash Borer. This decision is consistent with the original design intent to use a singular species, and which is now a contributing feature to the designated National Historic Landmark. As a result, planting the allees in any other manner would have too great an impact on the National Historic Landmark. As described on page 32 of this EA, the tree replacement will occur in a phased approach.

Concern Statement: One commenter suggested the NPS alter the topography at the base of the Arch to restore the visual connection from downtown St. Louis to the river.

Response: The topography of the park is part of the original designed landscape and significant changes, such as those suggested, would have too great an impact on the National Historic Landmark.

Changes to the current topography in this area could also adversely affect the railroad operations. In addition, the Arch grounds are part of the levee system protecting downtown St. Louis from Mississippi River flooding, which could be compromised by lowering the park grounds at the base of the Arch. Therefore, this suggestion was eliminated from further consideration.

Concern Statement: One commenter suggested considering visitor safety when redesigning Luther Ely Smith Square and considering a shared use of paths at the redeveloped North Gateway and East Slopes.

Response: The suggestions made are implementation level details which would not change the alternatives, have impacts on the human environment as defined by the Council on Environmental Quality (CEQ) (40 CFR 1508.14), or change the analysis in the EA. However, the NPS will consider the suggestions for redesigning Luther Ely Smith Square as the design process moves forward. However, the NPS believes that any new shared use paths created in the park will be of sufficient width to comfortably accommodate multiple users.

Concern Statement: One commenter felt the changes proposed to make the Old Courthouse entrance accessible were not sufficient for meeting objectives related to connectivity and accessibility, and recommended the NPS create a subterranean entry complimentary to the proposed entry to the underground visitor center/museum.

Response: The suggestion made by the commenter would have substantial impacts to the historic Old Courthouse. The NPS feels the proposals described for the Old Courthouse and the landscaping of the Park Over the Highway (to be constructed by the Missouri Department of Transportation) as part of alternative 3 will accomplish objectives related to accessibility and connectivity just as well with much less cost and impact. Therefore, the proposal to build a subterranean entry to the Old Courthouse has been dismissed from further consideration.

Concern Statement: One commenter was concerned about the impacts to the historic fabric/message of the Old Courthouse by making it more accessible and improving interpretation and educational opportunities.

Response: The NPS has acknowledged some impacts to the Old Courthouse (see the 'Historic Buildings, Structures, Sites, Objects, and Districts' section of chapter 4) as a result of meeting the broader objectives related to implementing CityArchRiver iniative elements at the park. However, the design team has sought to minimize impacts to this historic resource and through the value analysis process dismissed other options with greater impacts to the building (see page 67 of the EA). In addition, the EA lays out several mitigation measures specific to the Old Courthouse (see page 52 of the EA) all of which are intended to minimize impacts to the historic integrity and cultural landscape. In addition, by engaging consulting parties under Section 106 of the National Historic Preservation Act throughout the design process (see the programmatic agreement in attachment D of the FONSI), impacts to this resource will continue to be minimized to the extent possible.

Concern Statement: One commenter asked for more details regarding the change in the berm height proposed to accommodate the new museum entrance, and the impacts it would have on the National Historic Landmark as well as use of the space for large events.

Response: The NPS understands the commenter's concerns regarding the new berm height. However, the berm will actually remain in the preferred alternative, even with the new entrance to the underground museum. Details regarding its height will be guided by the Section 106 process and programmatic agreement, so as not to alter the character defining feature of the views from the Old Courthouse to the Arch. During the design process, efforts will be made to minimize impacts to visitor use and experience of the berm at the park.

Concern Statement: One commenter questioned whether or not implementation of the projects on park grounds would really have impacts to archeological resources.

Response: The EA describes the archeological resources of the park in the Affected Environment chapter (specifically on page 86 of the EA). Any impacts to the archeological resources found in the park will be mitigated during construction by testing and evaluating all locations which may be impacted by ground disturbing activities for their potential to contribute archeological information.

Concern Statement: A number of comments supported the re-design of the Central Riverfront, with several suggestions for additional design/program elements including more appropriate barriers between vehicular and pedestrian lanes; landscaping; a marina/boat docks; performance/event space; educational programs; water-based recreation; amenities including food and beverage vendors, and bicycle rentals; the need for a business plan and "anchor businesses" that serve residents and out of town visitors; and access to the levee. However, some commenters also questioned the need for food services along the riverfront.

Response: Many suggestions for the Central Riverfront are final design/implementation level details which will be shared with Great Rivers Greenway, who is proposing the changes to the riverfront. These details would not change the alternatives, have impacts on the human environment as defined by CEQ (40 CFR 1508.14), or change the analysis in the EA. Other suggestions, such as marinas/boat docks, are outside the scope of this EA.

Concern Statement: Commenters suggested the proposed increase in the height of Leonor K. Sullivan Boulevard would not be sufficient to minimize impacts from flooding; expressed concern about impacts to the adjacent cobblestone levee; and expressed concern that revamped traffic patterns would make the Central Riverfront difficult to get to.

Response: Although the exact increase of Leonor K. Sullivan Boulevard will be subject to final design, as described on page 67 of the EA, the proposal to raise the road has been vetted through value analysis processes to help identify an increase that balances flood mitigation and impacts to park and historic resources.

Regarding the levee, the Central Riverfront has design has been and will continue to be coordinated with the State Historic Preservation Office and refined to minimize impacts.

While changes in traffic patterns may influence vehicular access to the Central Riverfront, such access will still be available via Poplar Street on the south end of the park, and through Laclede's Landing to the north. Additionally, it is anticipated that implementing the CityArchRiver initiative elements will increase visitation by both local residents and out-of-town visitors. When coupled with the changes proposed at the North Gateway and East Slopes of the park, as well as the improvements to the Central Riverfront itself, including better connection to regional bicycle trails, more access and visitation to the Central Riverfront is anticipated.

Concern Statement: Commenters inquired about funding for and revenue generated by the implementation of the projects, including questions about oversight and fiscal responsibility, funding sources, and allocation to particular elements such as the Old Courthouse.

Response: This EA addresses only those elements of the CityArchRiver initiative occurring on park property and the riverfront. Project funding would likely not come all at once and may be provided by partners, donations or other non-Federal sources. Non-Federal funding sources utilized for improvements to park facilities and lands would include an adequate amount of funding for operations and maintenance. A local sales tax initiative will provide Great Rivers Greenway District with funding for riverfront and selected park capital improvements as well as for operations and maintenance. In all instances, acceptance, accountability and use of non-Federal funds would comply with Federal law, regulation and policy pertaining to donations and fundraising.

Concern Statement: One commenter suggested the park be incorporated into existing heritage corridors in the area (e.g., Great River Road and the Mississippi River Trail).

Response: While outside the scope of this EA, the park's purpose, significance and location make it an important and recognized site on a number of heritage and recreation trails, including: Lewis and Clark National Historic Trail Site #2, Great River Road Interpretive Center, Mississippi River Trail, Riverfront Trail, Confluence Greenway, and proposed Mounds Heritage Trail.

Concern Statement: Many commenters suggested the NPS should consider the potential for expansion of the park to the east side of the river in the environmental assessment, including suggestions for access, development, and visual connections. Some were concerned that the current projects could not be planned properly without considering the east side, and that nothing should be done within the current park grounds that would preclude development of a park on the east side.

Response: The NPS recognizes the benefit that would result from planning the expansion to East St. Louis at the same time as planning the implementation of CityArchRiver initiative elements at the existing park grounds; however, as noted on page 5 of the EA, the proposed expansion of the park and changes to the East St. Louis site are not ready for a decision at this time. Regardless, the winning design competition entry considered potential expansion of the park to East St. Louis in conjunction with proposed improvements within the current park boundary. As the NPS preferred alternative considered in this EA is based on the winning design competition entry, the proposed projects will all be compatible with the potential expansion of the park to East St. Louis, and will not preclude any development in that area.

Concern Statement: Commenters suggested shuttles should be provided to create connections with other parts of the city, including the east side of the river, and that the NPS should consider connections with Union Station.

Response: While the NPS is supportive of this idea, it is outside of the scope of this EA. Responsibility for implementing any shuttle system is outside of NPS jurisdiction, would be the responsibility of other organizations such as Metro, and is not ready for a decision. While the shuttle system was not part of the winning design entry, which evolved into the alternatives assessed in the EA, this concept is being worked on and the NPS will share comments on this EA with partners involved in these other initiatives.

Concern Statement: Several commenters suggested I-70 be removed from downtown St. Louis and replaced with a boulevard. Some were concerned changes proposed by MoDOT as part of the Park Over the Highway would preclude removal of I-70 in the future; would not provide the connectivity needed; and would not work with plans to widen sidewalks and add curb cuts to encourage people to walk from Citygarden to the river.

Response: The Park Over the Highway concept was contemplated by the NPS in the general management plan completed for the park in 2009; was an element of the winning design competition entry; and was identified by the Missouri Department of Transportation (MoDOT) and Federal Highway Administration (FHWA) as their preferred and selected alternatives in

their Environmental Assessment (approved in July 2012) and resulting FONSI for the Park Over the Highway (issued in December 2012).

The NPS and MoDOT/FHWA feel the Park Over the Highway will provide increased and improved connectivity between the park and downtown when compared to the current condition, as described in both agency's EAs. This decision was not revisited as part of the EA.

However, as the NPS noted in response to similar public comments received on the GMP (see page 5-15 of the GMP), the NPS would strongly support the removal of the Interstate highway between Poplar Street Bridge and Eads Bridge at some point in the future. And, as FHWA notes in their FONSI, should regional leaders eventually consider replacing I-70, the construction of the Park Over the Highway will not preclude that from happening.

With regard to the comment that the Park Over the Highway does not work with plans to widen sidewalks and add curb cuts to encourage people to walk from Citygarden to the river, the NPS disagrees and addressed how this will work on pages 36 and 37 of the NPS EA.

Concern Statement: Commenters expressed concern that the Park Over the Highway will disrupt traffic; will create safety issues on 4th Street that will need to be mitigated; is expensive; and is not in line with the original design of the park. Others suggested more information is needed about the effects on Memorial Drive north and south of the Park Over the Highway, and coordination/communication with local agencies and the public about changes in traffic patterns is important.

Response: As stated in their July 2012 EA, MoDOT/FHWA, with the exception of temporary impacts during construction, overall travel patterns in the area should remain very similar after the Park Over the Highway is built. They also addressed concerns raised about disruptions to traffic in their FONSI (issued December 2012) for the project, noting such effects were considered, among many others, during the design and assessment process; no major construction project can be completely mitigated; and they firmly believe the selected alternative is the best for the region and downtown area.

Modeling completed by MoDOT for traffic patterns on 4th Street after building the Park Over the Highway indicate capacity limits of the roadway will safely allow for the anticipated increase in traffic numbers. However, MoDOT will take this opportunity to implement pedestrian safety improvements along 4th Street, many of which mirror those suggested by commenters, to meet goals of the CityArchRiver initiative. For example, the signaled intersections in the area of MoDOT's project will be updated with new curb ramps, painted crosswalks, and the latest timed pedestrian countdown signals to comply with the Americans with Disabilities Act. In addition, MoDOT proposes to create 'bump outs' where possible at these intersections to shorten the amount of time a pedestrian needs to be in the roadway, and to reallocate that time to main vehicular movements. These measures are final design/implementation level details which will not change the alternatives nor have bearing on the impacts analysis in the NPS EA.

While the NPS will not be building the Park Over the Highway, there will be costs to install and maintain the landscaping, with funding expected to come from project partners, donations, and other non-federal and federal sources. Any construction and operations/maintenance costs will be minimized to the extent possible through the design process.

The NPS acknowledges the construction (to be done by MoDOT) and landscaping (to be done by the NPS) of the Park Over the Highway will alter topography, planting, and the visual relationship along the primary axis between the Old Courthouse and the Arch. However, completion of this project will also implement an unrealized Saarinen/Kiley design goal of better connecting these sections of the park (see the analysis of impacts to cultural resources in chapter 4 of the NPS EA). Additionally, this project is important in realizing the objectives for implementing CityArchRiver initiative elements at the park (see chapter 1 of the NPS EA), and has been vetted through not only the alternatives development process for this EA, but the park's general management planning process (it is part of the selected alternative identified in the GMP record of decision), the winng design competition entry, and the EA/Finding of No Significant Impact prepared for the project by MoDOT/FHWA.

With regard to the need for more information, communication, and coordination about traffic changes associated with the Park Over the Highway, the MoDOT/FHWA EA documented these and other changes expected in the project area (see figure 13 of their EA). All affected agencies (e.g., NPS, MoDOT, City of St. Louis, etc.) continue to be engaged in the design process, and will provide information to the public about the changes as it is available.

Concern Statement: One commenter felt the NPS did not adequately distribute the Environmental Assessment to St. Charles County considering other county governments (e.g., Madison County) were included in the list of recipients in chapter 5.

Response: There NPS provided numerous notifications and many opportunities for involvement in the EA process, sending direct mailings to individuals in St. Charles County and issuing press releases to the media, including outlets in St. Charles County. These notifications announced the availability of the EA for public review and comment, and provided information about the public open house.

The listing of the Madison County Board and Madison County Transit as direct recipients of the EA (found on page 172 of the EA) is an error, as those agencies were not on the mailing list for this project. Therefore, the errata included in attachment B to the finding of no significant impact documents the correction made to the EA to address this factual error.

ATTACHMENT B: ERRATA TO THE ENVIRONMENTAL ASSESSMENT FOR IMPLEMENTING CITYARCHRIVER INITIATIVE ELEMENTS AT JEFFERSON NATIONAL EXPANSION MEMORIAL

CHAPTER 5: CONSULTATION AND COORDINATION

On page 172 of the EA, the following lists should replace the respective sections for those agencies which received notification of the availability of the EA:

COUNTY AND LOCAL GOVERNMENTS

- City of Clayton
- City of St. Louis Board of Aldermen
- City of St. Louis Department of Human Services
- City of St. Louis Office of the Mayor
- City of Webster Groves
- East West Gateway Council of Governments
- Great Rivers Greenway District
- Madison County Board
- Metro East Parks and Recreation District
- Metropolitan St. Louis Sewer District
- St. Charles County – Office of the County Executive
- St. Clair County Board
- St. Louis County Office of the Executive

OTHER ORGANIZATIONS

- CityArchRiver 2015 Foundation
- Downtown St. Louis Partnership
- St. Louis Convention and Visitors Commission

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ATTACHMENT C: NON-IMPAIRMENT DETERMINATION FOR IMPLEMENTING CITYARCHRIVER INITIATIVE ELEMENTS AT JEFFERSON NATIONAL EXPANSION MEMORIAL

Pursuant to the National Park Service (NPS) *Guidance for Non-Impairment Determinations and the NPS NEPA Process* (October 2011), a non-impairment determination for the selected alternative is included here as an attachment to the finding of no significant impact.

Chapter 1 of the Environmental Assessment for Implementing CityArchRiver Initiative Elements at Jefferson National Expansion Memorial (EA) describes the related federal acts and policies regarding the prohibition against impairing park resources and values in units of the national park system. The prohibition against impairment originates in the NPS Organic Act, which directs that the NPS shall:

> promote and regulate the use of the ... national parks ... which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. (16 U.S.C. 1–4)

According to NPS *Management Policies 2006*, while Congress has given the NPS the management discretion to allow impacts within parks, that discretion is limited by the statutory requirement (generally enforceable by the federal courts) that the Park Service must leave park resources and values unimpaired (section 1.4.5).

An action constitutes an impairment when its impact "would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values" (section 1.4.5). To determine impairment, the NPS must evaluate "the particular resources and values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts" (section 1.4.5).

As stated in the NPS *Management Policies 2006*, an impact on any park resource or value may, constitute an impairment, but an impact would be more likely to constitute impairment to the extent that it affects a resource or value whose conservation is:

- necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or
- key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or
- identified in the park's general management plan or other relevant NPS planning documents as being of significance.

The resource impact topics carried forward and analyzed for the NPS selected alternative, which is the same as the preferred alternative (alternative 3) in the EA, and for which a non-impairment determination was completed, include: historic buildings, structures, sites, objects, and districts; cultural landscapes; archeological resources; museum collections; vegetation; soundscape; water quality; and floodplains.

HISTORIC BUILDINGS, STRUCTURES, SITES, OBJECTS, AND DISTRICTS

Historic buildings, structures, sites, objects, and districts (historic properties) listed on, or determined eligible for listing on, the National Register of Historic Places or the City Landmarks Registry occur within the park boundaries, along the Central Riverfront, and in the immediate vicinity of the project area. These include the park itself, which is a designated historic district and National Historic Landmark, and includes contributing features such as the grounds, north and south overlooks, the Grand Staircase, the railroad tunnels,the Gateway Arch (also listed separately on its own), and the Old Courthouse (also listed separately on its own) and associated sundial and fountain (both eligible for listing). These historic buildings, structures, sites, objects and districts are necessary to fulfill the purposes for which the park was established and are fundamental to the cultural integrity of the park.

Adjacent to the park, potentially affected properties include the Eads Bridge (a National Historic Landmark), Old Cathedral (eligible for listing), the Laclede's Landing Historic District (listed), the St. Louis Levee (eligible for listing), and the International Fur Exchange Building (listed). Along the Central Riverfront, potentially affected properties include the North Riverfront Industrial Historic District (listed) and the Ashley Street Power House (listed), and the MacArthur Bridge. Other properties within the study area include the J. Kennard and Sons Carpet Company Building, the Missouri Athletic Club Association Building, the Security Building, Laclede Building, the Peabody Coal Company National Headquarters (Memorial Drive), the Mississippi Valley Trust Company Building, the American Zinc, Lead and Smelting Company Building, Pet Plaza, St. Mary of Victories Church, the Crunden-Martin Manufacturing Company District, and the Wainwright Building.

The visual character, setting, and/or fabric of these resources, both within and outside the park boundaries, will be adversely affected by aspects of the selected alternative including: temporary alterations of vegetation, topography, circulation, and appearance (from the use of scaffolding, fencing) during the construction period; the addition of the new West Entrance façade and its associated vegetation, circulation, and topographic changes; the installation of interior and exterior ramps into the Visitor Center/Museum; accessibility modifications at the Old Courthouse: paths around the North and South ponds and along the East Slopes; and noticeable changes to the park landscape and Eads Bridge footings along the Central Riverfront. The use of the West Entry as the park's main entryway will result in increased bus and car traffic at the proposed drop-off area at Luther Ely Smith Square, which could affect historic buildings and structures surrounding the square due to increased air pollution from exhaust known to cause soiling and damage on historic façade materials such as stonework.

In order to mitigate potential impacts to cultural resources, the NPS has entered into a programmatic agreement with the State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), and other consulting parties to address compliance with Section 106 of the National Historic Preservation Act (see attachment D of the finding of no significant impact (FONSI)). This programmatic agreement establishes a process to assess and resolve adverse effects to cultural resources, in accordance with 36 CFR Part 800.14(b)(1)(ii), including means for identifying, evaluating, and treating historic properties. In accordance with this programmatic agreement, the NPS will establish a Collaborative Design Review team which will review design documents and make recommendations on how relationships between the design and historic properties might be improved and/or adverse effects avoided and how to handle inadvertent discoveries of historic properties.

Some of the specific measures the NPS has already identified to minimize impacts to historic properties include using treatments and materials for new paths which are compatible with the National Historic Landmark landscape; use of removable, minimally intrusive, or in-kind materials to minimize impacts to the Old Courthouse, Grand Staircase, floodwalls, and overlook stairs; and documentation and monitoring of the Eads Bridge.

In addition, the design team has sought to continue the themes of this National Historic Landmark, such as curved walkways and a manicured landscape, while also finding opportunities to better realize or enhance the original design intent. For example landscaping the Park Over the Highway connection, replacing ash trees and repairing of the Processional Walks, and additional plantings on the East Slopes will result in changes which better realize some of the original design intent, such as denser plantings, replacement of allee trees with more appropriate species, and better connection of Old Courthouse/ Luther Ely Smith Square to the arch grounds). Removal of the parking garage will also enhance the setting of character-defining features of the National Historic Landmark as well as adjacent resources such as Eads Bridge, the Laclede's Landing Historic District, and the North Overlook. Raising Leonor K. Sullivan Boulevard will also improve protection from flooding that currently causes risks to the concrete structure of the overlooks and the Grand Staircase.

Overall, the selected alternative will have short- and long-term adverse impacts, including cumulative impacts, which affect the visual character, setting, and/or fabric of historic buildings, sites, structures, objects, or districts. To minimize these potential effects, the NPS will implement the mitigation measures described previously and coordinate with Section 106 consulting parties as part of the executed programmatic agreement to assess and resolve adverse effects to cultural resources, in accordance with 36 CFR Part 800.14(b)(1)(ii). In addition, the design team has sought to continue the themes of this National Historic Landmark, such as curved walkways and a manicured landscape, while also finding opportunities to better realize or enhance the original design intent (e.g., denser plantings, replacement of allee trees with more appropriate species, better connection of Old Courthouse/Luther Ely Smith Square to the arch grounds, removal of the parking garage). This and other mitigation measures will ensure the integrity of these properties is maintained for public use and enjoyment. The accessibility and other improvements proposed will also open up opportunities for more visitors to experience these resources in the future. As a result, while there will be adverse impacts to historic buildings, sites, structures, objects, and districts, these impacts will not cause impairment of these resources.

CULTURAL LANDSCAPES

The NPS defines a cultural landscape as "a geographic area, including both cultural and natural resources ... therein, associated with a historic event, activity, or person, or that exhibit other cultural or aesthetic values" (NPS 1998). The landscape at Jefferson National Expansion Memorial was recognized in early documentation as a vital part of the designed resource, but a detailed documentation of its significance for landscape design was lacking for many years. In 1996 and 2010 the NPS prepared cultural landscape reports (CLRs) for the park. The period of significance identified in the 2010 cultural landscape report for the park landscape is 1947-2003, beginning the year the United States Territorial Expansion Commission sponsored a national design competition, marking the inception of the Memorial idea (NPS 2010), and ending with the completion of the central section of the Grand Staircase. The landscape also possesses all seven aspects of integrity (location, design, setting, materials, workmanship, feeling, and

association). The reports documented the key contributing features of the landscape (i.e., biotic or abiotic feature[s] associated with a landscape characteristic that contributes to the significance of the cultural landscape) to be the topography, spatial organization, views and vistas, buildings and structures, vegetation, circulation, constructed water features (the ponds), and small-scaled features. Character-defining features (i.e., the prominent or distinctive aspect(s), quality(ies), or characteristic(s) of a historic property that contributes significantly to its physical character) of the landscape, as identified in the cultural landscape reports, include the Gateway Arch; the overall landform and spatial organization; designed views; the system of walks; the single species allées; the two ponds; the overlooks including the stairs; the railroad open cuts and tunnels; the Grand Staircase; the baldcypress circles; the screen plantings and depressed service areas; the entrance ramps into the Gateway Arch; and the concrete benches. This cultural landscape is necessary to fulfill the purposes for which the park was established and is fundamental to the cultural integrity of the park.

Park-wide, the selected alternative will have short-term adverse impacts which temporarily affect the cultural landscape by disrupting vegetation, topography, and views during construction. Impacts from the following aspects of the selected alternative will have long-term adverse impacts by disrupting vegetation, topography, and views of the landscape: the new West Entrance and changes associated with paving, planting, topography, and views along the primary axis between the Old Courthouse and the Arch; changes to the sculpted topography from the addition of paths around the ponds and at the East Slopes, as well as the addition of interior and exterior ramps at the Visitor Center/Museum, grading around the ponds, and changes to the North and South Overlooks and the Grand Staircase along the Central Riverfront.

In order to mitigate potential impacts to cultural landscapes, the NPS has entered into a programmatic agreement with the State Historic Preservation Office (SHPO), the Advisory Council on Historic Preservation (ACHP), and other consulting parties to address compliance with Section 106 of the National Historic Preservation Act (see attachment D of the FONSI). This programmatic agreement establishes a process to assess and resolve adverse effects to cultural resources, in accordance with 36 CFR Part 800.14(b)(1)(ii), including means for identifying, evaluating, and treating features which contribute to the landscape. In accordance with this programmatic agreement, the NPS will establish a Collaborative Design Review team which will review design documents and make recommendations on how relationships between the design and the cultural landscape might be improved and/or adverse effects avoided. Some of the specific measures the NPS has already identified and which will minimize impacts to cultural landscape include using treatments and materials for new paths which are compatible with the National Historic Landmark landscape; and the use of removable, minimally intrusive, or in-kind materials at the Grand Staircase, floodwalls, and overlook stairs.

In addition, the design team has sought to continue the themes of the landscape, such as curved walkways and a manicured landscape, while also finding opportunities to better realize or enhance the original design intent. For example, the landscaping of the Park Over the Highway is in keeping with the Saarinen/Kiley design intent for a pedestrian connection. Replacement of the ash trees and repair of the Processional Walks, and replanting of the East Slopes, will be more in line with original landscape design. Removal of the non-historic parking garage will enhance the cultural landscape and the reduction of flooding along the Central Riverfront will improve protection of the landscape from flooding.

Overall, the selected alternative will have short- and long-term adverse impacts, including cumulative impacts, which affect the vegetation, topography, and views of the cultural landscape. To minimize these potential effects, the NPS will implement the mitigation measures described previously and coordinate with Section 106 consulting parties as part of the executed programmatic agreement to assess and resolve adverse effects to cultural resources, in accordance with 36 CFR Part 800.14(b)(1)(ii). In addition, the design team has sought to continue the themes of this National Historic Landmark, such as curved walkways and a manicured landscape, while also finding opportunities to better realize or enhance the original design intent (e.g., denser plantings, replacement of allee trees with more appropriate species, better connection of Old Courthouse/Luther Ely Smith Square to the arch grounds, removal of the parking garage). This and other mitigation measures will ensure the integrity of the cultural landscape is maintained for public use and enjoyment. The accessibility and other improvements proposed will also open up opportunities for more visitors to experience this landscape in the future. As a result while there will be adverse impacts to the cultural landscape at the park, these impacts will not cause impairment of this resource.

ARCHEOLOGICAL RESOURCES

Much of the park has not been subjected to archeological investigations. Those investigations which have occurred typically yielded historical construction debris and partially disturbed architectural and infrastructure features dating to the second half of the 19th century. The post-1850 architectural and infrastructural features that have been identified indicate the potential presence of additional historic resources that may meet National Register eligibility criteria. While all archeological reports acknowledge that the deep fill in the eastern portion of the park severely limits the potential for archeological deposits to be disturbed in future construction, the presence of intact deposits and features cannot be discounted. Due to the slope of the original ground surface, the section of the park west of 2nd Street has the highest potential to yield archeological deposits that are not covered by deep fill and that may be affected by future development. Unexamined areas in the central western area of the park in particular may yield additional information, including areas around the Old Courthouse and Luther Ely Smith Square that are in relatively undisturbed contexts and could contain intact, relatively shallow deposits pre-dating the industrial development of the area. The area between 1st and 2nd Streets, however, may also have a medium to high archeological potential depending on the depths of future ground disturbing activities. Portions of the southern area are expected to have medium archeological potential as a result of the rubble fill.

Outside of the park, archeological resources include buried refuse and construction debris dating to the mid-19th to mid-20th centuries (including privies, cisterns, remains of row houses, brick streets and sidewalks, mortar building debris). In addition, a group of prehistoric mounds known as the St. Louis mound group have been documented to the north of Laclede's Landing. Early 19th-century accounts describe the mounds site as consisting of 26 pyramids with a two hectare plaza, with the largest "Big Mound" at the northern end of the site. The St. Louis mound group was demolished as St. Louis development spread north in the 19th century. The majority of mounds were leveled by the 1870s, and little is known about the site as a result.

As archeological resources are located in subsurface contexts, they are primarily anticipated to be affected by ground disturbing activities such as excavation or grading. Several project elements will require ground disturbance activities that will be somewhat limited in size and depth and will occur primarily in previously disturbed areas of the park. Other elements (such as

regarding of the berm, expansion of the visitor center/museum, including new entrance, demolition of the parking garage), will require extensive excavation and could disturb as-yet intact subsurface archeological. These activities, as well as other activities which contribute cumulative impacts, do have the potential to disrupt and displace archeological resources.

Therefore, as part of the programmatic agreement developed during the Section 106 process, mitigation measures and guidance on archeological resources identification prior to any ground disturbances were developed, as well as treatment measures if resources are identified. For example, all locations that may be impacted by any ground disturbing activities for archeological resources will be tested and evaluated, including consultation with the Missouri SHPO and the Osage Nation regarding any such archeological surveys. In addition, should unanticipated archeological resources be discovered during construction, all work in the immediate vicinity of the discovery will stop immediately and proper authorities will be notified. Work will be halted until the resources are identified and documented and an appropriate mitigation strategy is developed. Discovered resources will be evaluated for their potential National Register of Historic Places (NRHP) significance, and, if needed, mitigation measures will be developed in consultation with the Missouri SHPO and appropriate representatives of affected tribes. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act, as amended (43 CFR 10, Subpart B) and the Archeological Resources Protection Act of 1979 (43 CFR 7) will be followed. The NPS will also develop a protocol to ensure re-used fill does not contain artifacts and is culturally sterile.

Overall, there is the potential for long-term adverse impacts to archeological resources from disturbance or disruption of unknown resources during construction, However, the parameters of the programmatic agreement to be followed in the event that previously unreported and unanticipated resources were to be found during construction will provide guidance to ensure the resources are properly handled. These measures will ensure the integrity of unknown archeological resources is maintained for future use and enjoyment, and as a result, the potential adverse impacts would not impair these resources.

MUSEUM COLLECTIONS

The park's collection consists of 1,347,086 cataloged items: 10,257 objects and 45 archival collections. There are 8,941 history objects, 860 archeological objects, 342 ethnology objects, 54 geology objects, and 60 natural history objects. The purpose of the collection is to preserve historic artifacts and to support understanding of the park's themes through exhibits, research, and interpretive programs. Collections are used for permanent and temporary exhibits in the Museum of Westward Expansion and Old Courthouse, and for staff and public research. Archeological holdings from excavations done in association with site work are administered by the NPS Midwest Archeological Center in Lincoln, Nebraska. Ethnological materials in the collection consist of American Indian clothing, weapons, tools, and domestic items such as basketry and pottery. A collection of architectural materials is on long-term loan to Southern Illinois University, Edwardsville for cataloging and study. These collections are considered fundamental to the purposes and cultural integrity of the park, although only those held at the park have the potential to be affected by the selected alternative.

During construction under the selected alternative, the temporary disruption to visitor, researcher, and staff access to the collections will cause minimal adverse impacts. The

collections will continue to be protected and managed by staff while in storage or in alternate locations and visitor and researcher access will be only be limited temporarily, with access to the collections provided as feasible. Over the long-term, the improvements in climate control, the updated and increased space for collections in the Visitor Center/Museum and renovated space in the Old Courthouse, the improved access to the collections, and improved space for collections management, interpretation, and preservation will help to ensure the usefulness of the collections for research and interpretation.

Short-term impacts to museum collections housed at the park during construction will be limited to access restrictions, which will not degrade the usefulness of the collection for future research and interpretation. Improvements in museum collection storage at the park will have long-term benefits for the integrity of these resources. The accessibility and other improvements proposed will also provide opportunities for more visitors to access and experience the park's museum collections. As a result, there will be no impairment of museum collections.

VEGETATION

The park grounds are a formally planned, designed, and planted landscape. It is highly maintained with no extant naturally occurring native plant communities. The park's plants include a mixture of ornamental native and non-native deciduous and evergreen trees, as well as a few shrubs, expanses of maintained turf lawn, and ground cover. Mature Rosehill ash trees (Fraxinus americana "Rosehill"), the park's major planting, are planted in tree pits and along the park's paved walks. Vegetation along the Central Riverfront is limited due to the urban and paved nature of the area, and consists of street trees along portions of Leonor K. Sullivan Boulevard and several small grass-covered areas.

Temporarily disturbing or removing a relatively large number of trees, landscape plantings, and turf will have short-term, moderate adverse effects on vegetation at the park. However, this will not affect any extant native plant communities, and mitigation, such as phasing and coordinating construction and staging and retaining existing trees wherever possible, will help minimize the effects. In addition, although new vegetation will require time to mature, overall long-term beneficial impacts will occur due to a substantial increase in vegetation in the park at Luther Ely Smith Square, the new West Entrance, and the North Gateway. Beneficial impacts will also stem from an increase in the health of vegetation and diversified planting types. This includes replacement of the allee Rosehill ash trees with a species unsusceptible to impacts from the emerald ash borer.

Despite some short-term loss of vegetation during construction, mitigation will minimize the disturbance, and the manicured landscape will remain accessible for public use and enjoyment. Long-term benefits will be realized by planting additional vegetation and increasing the health and diversity of planting types. The accessibility and other improvements proposed will also open up opportunities for more visitors to access and experience the park's vegetation. As a result, there will be no impairment of this resource.

SOUNDSCAPE

In general, the soundscape at the park is typical of a busy urban area, dominated by fairly loud urban background noise from traffic on surrounding roadways. While the background traffic noise is perceptible everywhere, it diminishes towards the center of the park near the Gateway Arch and reflecting ponds due to natural attenuation and intervening topography and plantings.

Park maintenance activities (e.g., lawn mowing), emergency generators, trains moving across Eads Bridge and in the below-grade cuts in the eastern portion of the park, commercial aircraft, helicopters, music from the riverfront and park special events, horns from ships on the Mississippi River also contribute to the existing soundscape.

Motorized and non-motorized equipment used during construction will be intermittently perceptible above background levels within the park. Construction of project elements will be coordinated and phased which will help to limit multiple concurrent sources of construction-generated noise. Operational activities at the park, including routine maintenance activities and emergency generator testing, and other sources of noise noted above will continue, having intermittent effects on the soundscape at the park. No additional noise-generating activities or infrastructure will be added with implementation of the selected alternative. The potential sound attenuation from landscape additions to the park (West and North Gateways) and removal of vehicular traffic noise sources in the North Gateway will create long-term beneficial impacts by reducing noise intruding on the park's soundscape, including beneficial cumulative effects once the Park Over the Highway is completed.

Construction activities will affect the park's soundscape by causing temporary and intermittent noise above background levels. Ultimately, such noise is required to be below local regulatory thresholds, and once construction is completed, the soundscape will reflect current conditions at the park. The current soundscape could also be improved by additional plantings which will attenuate noise and removal of vehicular noise sources in proximity to the north and west edges of the park. As a result, opportunities for visitors to experience quieter areas towards the center of the Arch Grounds will remain, if not expand as a result of accessibility improvements, and the selected alternative will not impair the park's soundscape.

WATER QUALITY

The park grounds and Central Riverfront are located in the Cahokia-Joachim watershed. The surface waters in the watershed flow to the Mississippi River along the eastern boundary of the park and along the Central Riverfront. The only surface water resources in the park itself are the constructed reflecting ponds. The water quality of the Mississippi River is affected by human activities throughout the watershed, which includes non-point source pollution, such as stormwater runoff; and point source pollution, such as wastewater treatment or industrial discharges. Currently, water quality in the Mississippi River is degraded due to high levels of fecal coliform, manganese, PCBs, and chlordane. The water quality only partially supports the river use for public water supply, primary contact recreation, and fish consumption.

Construction-related impacts under the selected alternative will temporarily disturb soils and alter stormwater flows, which could create an increased potential for soil erosion and transport of surface pollutants into adjacent water bodies and storm sewers. While this has the potential to temporarily alter historic or desired water quality conditions, standard construction best management practices for erosion and sediment control will minimize the potential for such impacts. In the long-term, new methods used to reduce and treat stormwater runoff before it enters adjacent water bodies, increased vegetation, and a reduction in the use of pesticides will minimize the continued stormwater runoff that contains pollutants entering the Mississippi River during storm events.

Overall, temporary adverse impacts to water quality from the potential for increased erosion and transport of surface pollutants during construction will be mitigated by standard construction best management practices. In the long-term, benefits will occur by reducing runoff and pollutant loading of the reflecting ponds and Mississippi River adjacent to the park. As a result the selected alternative will ultimately protect water quality and will help maintain the integrity of water resources at and in the vicinity of the park for public use and enjoyment. Therefore, the selected alternative will not impair water quality.

FLOODPLAINS

Portions of the park lie within the regulatory Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) 100-year (1%) Mississippi River floodplain. The floodway portion of the river is confined by a floodwall/levee system on both the east side of the River (Illinois bank) and the west side of the river (Missouri bank). The floodwall/levee system essentially "squeezes" the floodplain into a relatively narrow floodway. This portion of the Mississippi River floodplain adjacent has been highly industrialized with several river ports / transfer loading facilities located within what is referred to as the St. Louis Harbor. The channel is routinely dredged by commercial sand and gravel suppliers.

Although development in the 100-year floodplain will occur, floodplain values will be protected to the maximum degree possible and the extent of development, placement of structures, and types of structures will be selected to minimize impacts. The East Slopes will remain vegetated, with some loss to accommodate the addition of paved paths to the riverfront. This will not change the nature of the development in the floodplain, nor the floodplain functions and values, along the Central Riverfront will remain unchanged. Because fill will be placed into the floodplain and floodway, a "no-rise" analysis and a "no-rise" certificate will be required to assure the City of St. Louis and the NFIP that all floodplain regulations are in compliance and that the development will not increase base flood heights.

Because the selected alternative will be designed to minimize the number of flood events that close Leonor K. Sullivan Boulevard, will not affect the100-year flood base elevations, and will not change floodplain functions and values, there will be no impairment of floodplains.

SUMMARY

The NPS has determined that the implementation of the selected alternative will not constitute an impairment of the resources or values of the park, including those whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or identified as significant in the park's general management plan or other relevant NPS planning documents. This conclusion is based on the consideration of the park's purpose and significance; a thorough analysis of the environmental impacts to resources described in the EA subject to non-impairment determinations; relevant consultations, including the execution of a programmatic agreement to assess and resolve adverse effects to cultural resources in accordance with 36 CFR Part 800.14(b)(1)(ii); the comments provided by the public and others; and the professional judgment of the decision maker guided by the direction of the NPS Management Policies 2006.

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PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES DEPARTMENT OF THE INTERIOR (NATIONAL PARK SERVICE),
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND
THE MISSOURI STATE HISTORIC PRESERVATION OFFICER
REGARDING
IMPLEMENTATION OF THE WINNING DESIGN OF THE FRAMING A MODERN MASTERPIECE INTERNATIONAL DESIGN COMPETITON

WHEREAS, the United States Department of the Interior, National Park Service, Jefferson National Expansion Memorial (NPS) and the CityArchRiver 2015 Foundation (Foundation) propose to implement the winning design of the *Framing a Modern Masterpiece* International Design Competition (the Design Competition) by carrying out the physical and programmatic elements called for by that design in Appendix A (the Undertaking) and in doing so must meet the requirements of Sections 106 and 110(f) of the National Historic Preservation Act (16 U.S.C. 470f, 470h-2(f)); and

WHEREAS, the Design Competition was undertaken after being identified as the preferred alternative of the October 2009 General Management Plan/Environmental Impact Statement (GMP/EIS) for Jefferson National Expansion Memorial (the Park); and

WHEREAS, the Foundation sponsored the Design Competition focusing on the Park, a National Historic Landmark (NHL), to result in the selection of a design "to integrate the park, the east and west sides of the Mississippi River, the surrounding attractions and the downtown into a single and vibrant dynamic destination;" and

WHEREAS, the Federal Highway Administration (FHWA) has satisfied the requirements of Section 106 for transportation improvements associated with the Foundation's Design Competition (see Appendix A) including the proposed construction of a 300-foot wide landscaped 'lid' over the sunken lanes of I-70 between Market and Chestnut streets and associated road and ramp changes as demonstrated by a concurrence by the Missouri SHPO dated September 30, 2011 with FHWA's finding of a no adverse effect; and

WHEREAS, the NPS has identified the Area of Potential Effect (APE) and assembled a list of historic properties within the APE that have the potential to be affected by the Undertaking as indicated in Appendix B; and

WHEREAS, NPS has determined that effects on historic properties cannot be fully evaluated prior to approval of the undertaking, and has developed this Programmatic Agreement (PA) establishing a process to assess and resolve adverse effects in accordance with 36 CFR Part 800.14(b)(1)(ii); and

WHEREAS, the Secretary of the Interior has been invited to participate in recognition of the potential effects to two National Historic Landmarks (Jefferson National Expansion Memorial and Eads Bridge); and

WHEREAS, any portion of the winning design that extended beyond the referenced APE will not be implemented under this PA, except as noted herein or as amended pursuant to the terms herein; and

WHEREAS, the NPS acknowledges that removal of parking will create a demand for parking accommodation beyond the confines of the Park, and the connection to this Undertaking, if any, will be clarified and NPS agrees to undertake separate review of that action under 36 CFR Part 800, as appropriate; before the removal of the parking garage will commence; and

WHEREAS, the NPS, consulted with the Advisory Council on Historic Preservation (ACHP) and the ACHP will be a signatory to this PA; and

WHEREAS, the development and execution of this PA fulfills stipulation IV.H of the Memorandum of Agreement among the NPS, ACHP, Illinois and Missouri SHPOs and the Foundation executed July 13, 2010 to guide the design completion; and

1

WHEREAS, the NPS consulted with the Missouri and Illinois State Historic Preservation Officers (SHPO) and the Illinois SHPO declined to participate in negotiations to develop the PA or be a signatory to the PA; and

WHEREAS, the NPS consulted with the Absentee-Shawnee Tribe of Indians of Oklahoma, Delaware Nation of Oklahoma, Eastern Shawnee Tribe of Oklahoma, Iowa Tribe of Kansas and Nebraska, Iowa Tribe of Oklahoma, Kaw Nation, Kickapoo Tribe in Kansas, Miami Tribe of Oklahoma, Muscogee Creek Nation, Osage Nation, Ponca Tribe of Nebraska, Peoria Tribe of Oklahoma, Quapaw Tribe of Oklahoma, Sac and Fox Tribe of the Missouri in Kansas and Nebraska, Sac and Fox Tribe of the Mississippi in Iowa, Sac and Fox Nation of Oklahoma concerning the Undertaking and historic properties of cultural significance to them; and

WHEREAS, the Peoria Tribe of Oklahoma, Miami Tribe of Oklahoma, and Quapaw Tribe of Oklahoma (here after referred to as "other Interested Tribes") desire to continue participating in consultations and have been invited to sign the agreement as a Concurring Party (acknowledging that the Tribes have read and understand the PA and are in agreement with the terms of the PA); and

WHEREAS, the Osage Nation desires to continue participating in consultations and has been invited to execute this agreement; and

WHEREAS, the NPS has and continues to provide the public with information about the Undertaking and shall continue to seek and consider the views of the public regarding the Undertaking; and

WHEREAS, Missouri Preservation has participated in consultations and has been invited to sign this agreement as a Concurring Party; and

WHEREAS, the National Trust for Historic Preservation has participated in consultations and has been invited to sign this agreement as a Concurring Party;

NOW, THEREFORE, the NPS, the ACHP, and the Missouri SHPO agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on historic properties.

STIPULATIONS

Consistent with assurances contained in the GMP/EIS for the Park, the National Park Service will *not allow the implementation of a project that would cause impairment to the Memorial, and all of the enhancements would be required to be located in such a manner as to preserve the integrity of the National Historic Landmark and National Register Historic District.* In furtherance of this assurance, the National Park Service will ensure that the following measures are carried out.

I. APPLICABILITY AND SCOPE

This PA applies to the design and construction of the Undertaking defined in Appendix A. The NPS is the lead federal agency for fulfilling the Section 106 requirements in accordance with this PA.

II. PROFESSIONAL QUALIFICATIONS AND STANDARDS

A. The NPS will ensure that all work performed on the Site that has the potential to have an effect, directly or indirectly, on contributing structures and/or landscape features is performed or supervised by qualified individuals and/or teams that meet the *Secretary of the Interior's Historic Preservation Professional Qualification Standards*, 62 Fed. Reg. 33,707 (June 20, 1997), for history, architectural history, architecture, historic architecture and conservation, landscape architecture and/or archeology, as appropriate. Nothing in this stipulation may be interpreted to preclude NPS or any agent or contractor thereof from using the properly supervised services of persons who do not meet the professional qualification standards.

B. Any testing, inventory or documentation of potential or known historic properties pursuant to implementation of the PA shall conform to the provisions of the Secretary of the Interior's *Standards and*

Guidelines for Archeology and Historic Preservation (48 FR. 44716-44740) and applicable standards and guidelines for historic preservation established by the Missouri SHPO.

III. IDENTIFICATION AND EVALUATION OF HISTORIC PROPERTIES

A. **Historic Structures, Buildings, Objects and Landscapes.** Through its management of the Park, the NPS has compiled extensive documentation on the presence and significance of historic properties as documented on the park's CAR2015 Design Center web site at http://www.nps.gov/jeff/parkmgmt/cardocuments.htm. This documentation includes analysis of the existing contributing features and contributing landscape features of the Memorial and identification of known historic properties and their qualifying characteristics within the APE (Appendix B). NPS will ensure that this documentation is fully taken into account. Additionally, NPS will ensure that this documentation is available to all consulting parties and the public except for sensitive archeological documentation, which may be kept private in accordance with stipulation III.F below. In carrying out the components of the Undertaking identified in Appendix A, the NPS will not need to undertake any additional studies to identify at grade historic properties, unless otherwise set forth in this PA.

B. **Archeological Resources - Identification.** Implementation of the Undertaking may result in damage to previously unknown archeological resources. Accordingly, the NPS will consult with the Missouri SHPO and Osage Nation and carry out needed archeological surveys to determine if any such archeological sites are present and whether such sites are eligible for inclusion in the National Register. Although NPS files indicate that large amounts of sediments were imported from another location during monument landscape construction, the source and degree of integrity at specific locations within the park is currently unknown. Before any ground disturbing activities take place, all locations that may be impacted by these activities will be tested and evaluated for potential to contribute archeological information during the course of each project component. The NPS will conduct identification and assessment of archeological resources consistent with the following measures.

1. *Survey Scope.* The NPS, in consultation with the Missouri SHPO and the Osage Nation, will identify all surface areas that may be altered in any way by construction activities, to include any areas subject to temporary disturbance due to construction activities, lay-down areas, access roads, etc. An archeological identification effort will be carried out for these areas with the exception of any areas for which sufficient archeological information is already known or there is clear evidence that an area has been disturbed by previous activity to the extent that the presence of significant archeological deposits is highly unlikely.
2. *Survey Timing.* The NPS will schedule survey activities to reflect the sequential nature of construction activities and to ensure that survey activities and consultation on the identification, effects, and resolution of any adverse effects are completed well in advance of any construction related soil disturbance activities.
3. *Survey Methodology.* The NPS will consult with the Missouri SHPO and the Osage Nation and develop an efficient and effective survey methodology, ensuring that it is sufficient to generate information necessary to apply the National Register Criteria to any identified sites. The NPS shall ensure that the determinations of eligibility are consistent with the National Register Bulletin: *How to Apply the National Register Criteria for Evaluation* and follow the format consistent with the *State of Missouri, Department of the Natural Resources, Preliminary National Register of Historic Places Eligibility Assessment* (http://www.dnr.mo.gov/forms/780-1878-f.pdf) or another format mutually agreed upon by the NPS and Missouri SHPO.
4. *Outcome.* Based on its analysis of survey results and further consultation with appropriate signatories to this PA, NPS will apply the National Register Criteria and determine what, if any, identified archeological sites are eligible for inclusion in the National Register.

C. **Archeological Resources – Treatment.** For identified archeological properties determined to be eligible for the National Register, the NPS, in consultation with the Missouri SHPO and the Osage Nation, will develop treatment measures. Priority will be given to avoidance alternatives, to include burying sites under fill or incorporating them into the Undertaking, provided that the long-term protection of the archeological site can be assured by such measures. If avoidance options are not practical, NPS will undertake a data recovery plan for the recovery of archeological data from the site. Archeological

treatment plans and/or data recovery plans will be developed during the Design Development phase of design once options to avoid sites have been explored. Data recovery will be guided by a scope of work that includes:

1. Research questions to be addressed through the data recovery or through other research means.
2. Methods to be used, with an explanation of their relevance to the research questions.
3. Methods to be used in the analysis, data management, and dissemination of data, including a schedule.
4. Proposed disposition of recovered materials and records. And,
5. Proposed methods for involving the public and disseminating results of the work to the public.

The NPS will ensure that the data recovery plan is carried out and the signatories to the PA notified of the results.

D. **Consultation Protocols.** In carrying out the measures set forth in stipulation V. B, the NPS will ensure that consultation with the Missouri SHPO and the Osage Nation is conducted in a manner in which:

1. Meaningful input and opportunity for resolving disagreements is encouraged;
2. Any reviewing party for any scopes of work, National Register evaluations, treatment plans, and data recovery plans is provided 30 calendar days from the time of receipt to conduct review and submit comments unless otherwise negotiated; and,
3. Comments received are taken fully into account and the commenting party is notified of how the NPS responded to its comments.

E. **Review Materials.** At a minimum, the Missouri SHPO and the Osage Nation will be provided with the following items for their information and/or review:

1. Scopes of work and/or survey methodologies;
2. Draft and final archeological reports and memorandums at each stage of archeological investigation;
3. Archeological treatment and/or data recovery plans; and,
4. Responses to comments.

F. **Site Disclosure.** All archeological resources identified in carrying out the terms of this PA are subject to the provisions of section 304 of the National Historic Preservation Act, relating to the disclosure of archeological site information and NPS will ensure that all actions and documentation prescribed by this PA are consistent with said sections.

IV. OUTREACH TO AND INVOLVEMENT OF TRIBES

A. The NPS is committed to working with the Osage Nation and other interested Tribes to assist in identifying and minimizing project impacts on important cultural resources, graves, and isolated human remains and recognizes that tribal monitoring is a vital contributing element in this effort.

B. Other interested Tribes, as identified in the whereas clause of this PA, will receive all notifications and review materials stipulated in this PA for informational purposes.

C. Tribal monitoring will follow protocols and procedures established through consultation as set forth in Appendix C.

D. **Unanticipated Discovery of Human Remains or Graves.**

1. In the case of an unanticipated discovery of human remains or graves on Federal land, the NPS shall follow the procedures outlined by the Native American Graves Protection and Repatriation Act, as amended (43 C.F.R. 10, Subpart B), and pursuant to the Archeological Resources Protection Act of 1979 (43 C.F.R. 7) and as clarified in Appendix D.
2. If remains are found not to be Native American and not associated with a crime scene, every effort will be made to avoid impacting burial areas and graves. NPS will attempt to consult with individuals and groups linked by demonstrable ties of kinship or culture to potentially identifiable human remains. Reinterment at the same park may be permitted or another agreement reached

as to their treatment. If no consulting groups are identified, NPS will consult with the Missouri SHPO to determine an appropriate course of action.

V. DESIGN DEVELOPMENT

The Undertaking will be designed consistent with design objectives expressed in the outcome of the winning design. Implementation of the design and development of design documents and specifications for the various component parts of the Undertaking will present overlapping and demanding schedules to meet construction schedules. To accommodate these factors while ensuring that there is adequate opportunity for input from consulting parties, NPS will implement the following measures.

A. **Design Standards.** The NPS and Foundation will ensure that all design contractors working on the Undertaking are provided design standards, to include at a minimum, the following:

1. The Secretary of the Interior's *Standards for the Rehabilitation of Cultural Landscapes.*
2. The Secretary of the Interior's *Standards for the Treatment of Historic Properties.*
3. Formatting and content consistent with the NPS Denver Service Center Design Workflows guidelines for schematic, design, and construction documents http://www.nps.gov/dscw/designbldbuild.htm.
4. A copy of this executed PA. And,
5. Other design standards recommended by signatories to this PA as deemed appropriate by the NPS and Foundation.

The NPS and the Foundation will ensure that the design contractors adhere to these standards in the development of all design documents including change orders necessitated after award of any construction contracts implementing the Undertaking or part thereof.

B. **Establishment of Collaborative Design Review Team.** To ensure that signatories and consulting parties to this PA have opportunity to assist the NPS in meeting its design goal that the Undertaking preserve the integrity of this historic setting, the NPS, with assistance from the Foundation, will establish and provide administrative support to a Collaborative Design Review Team.

1. *Membership.* Membership on the team will consist of a representative of the NPS, the Foundation, the Missouri SHPO, and Missouri Preservation. Additional members would be added to this team at the discretion of its members and based on the nature of the particular component of the Undertaking being reviewed. Consulting parties wishing to participate in design review of specific components of the Undertaking will let their interest be known by notification to the NPS. The NPS shall notify the National Trust for Historic Preservation as early as possible in advance of all Collaborative Design Review Team meetings to help ensure that it has an opportunity to request participation by joining the meeting.
2. *Team Mission.* The primary purpose of the team will be to review draft schematic and design documents and evaluate how project design and specifications may affect qualifying characteristics of properties included in or eligible for inclusion in the National Register and to make recommendations on how relationships between the design and historic properties might be improved and/or adverse effects avoided.
3. *Team Support.* The NPS, with assistance from the Foundation, will facilitate the function of this Team by providing for regularly scheduled meetings during the design process, ensuring that Team members are provided all appropriate construction documents in a timely fashion, and documenting the outcome of team meetings. At its initial meetings, the Collaborative Design Review Team will establish its general operating procedures and the NPS will ensure that these procedures are distributed consistent with stipulation V.B.4. below.
4. *Consulting Party and Public Notification of Team Activities.* Through use of appropriate websites or other notification techniques, the NPS will ensure that consulting parties and the public are provided information about the purposes of the Collaborative Design Review Team and its general schedule of activities, along with the schedule of design review process for the Undertaking as it may relate to the activities of the Collaborative Design Review Team. Upon

request, the NPS, on behalf of the Collaborative Design Review Team, will respond to consulting party and/or the public inquiries about how comments were taken into account in the decision making process.

5. *Team Outcome and Dispute Resolution.* The members of the Team will strive diligently to work toward mutually agreeable outcomes on design issues addressed by the Team. If, during the course of Team review of a design proposal an impasse is reached, any member of the Team can take steps to have the dispute resolved through the provisions set forth in stipulation X of this PA.
6. *Team Duration.* The Team will remain in place until the close of the design process, to include development of pertinent design construction documents and specifications, for the components of the Undertaking or sooner if mutually agreed to by all of the Team members.

VI. PUBLIC OUTREACH

Until such time as the Undertaking is completed, the NPS, with assistance from the Foundation, will take necessary steps to ensure that the public is provided timely information on the status of the Undertaking and steps taken to meet the terms of the PA. At a minimum, these efforts will include use of relevant websites to update the public and solicit ongoing input and suggestions as it may relate to the relationship of the Undertaking to historic properties. Information to be exchanged with the public will include project design and construction schedules, the activities of the Collaborative Design Review Team, as discussed in stipulation V.B.4, the results of further historic property identification efforts, as discussed in stipulation III.A, new interpretive features, and component design plans. Throughout this outreach effort, the NPS will encourage input from the consulting parties to this PA and other groups, organizations, and individuals that did not participate in consultation leading to this PA.

VII. DOCUMENTATION

A. The NPS shall prepare Historic American Landscape Survey (HALS) recordation of the NHL prior to alterations in the Design Competition's rehabilitation of or introduction of new features into the historic landscape. HALS documentation will be completed prior to the commencement of any construction activities.

B. Following implementation of the Undertaking the NPS shall update the NHL documentation to reflect modifications that resulted from the Undertaking, and to include more information about the significance of the historic landscape to the overall NHL designation.

VIII. INADVERTANT DISCOVERIES AND UNANTICIPATED EFFECTS

In the event that previously unreported and unanticipated historic properties or unanticipated effects to already known historic properties are found during activities conducted by or on behalf of the NPS, the NPS will ensure that the procedures set forth in Appendix E are fully carried out.

IX. INTERPRETIVE TREATMENTS

A. The NPS will seek to interpret for future visitors to the Jefferson National Expansion Memorial the changes that have occurred at the Park as a consequence of the Design Competition and implementation of the Undertaking. The NPS will consider a wide range of options for how best to achieve this interpretive program, including a permanent exhibit within the Museum, explaining the Design Competition and resulting changes to the appearance and character of the JNEM, using models, documents, etc. from the Competition and/or other electronic media, waysides or exhibits.

B. In the development of this interpretive program the NPS will consult with the signatories to this PA and examine possible techniques and interpretive techniques that will provide visitors with information on historic properties known to have existed prior to construction of the Arch and Grounds and archeological features preserved in place in carrying out the Undertaking unless pursuant to stipulation III.F. above the nature and location of a remaining archeological site(s) should be kept confidential.

X. DISPUTE RESOLUTION

A. Should the signatories executing this PA at any time object in writing to the manner in which the terms of this PA are implemented, to any action carried out or proposed with respect to implementation of this

PA, or to any document prepared in accordance with and subject to the terms of this PA, the objecting party shall notify the other signatories, and the signatories shall consult within seven calendar days to resolve the objection.

B. If the objection is resolved through consultation, the NPS may proceed with the disputed action in accordance with the terms of such resolution.

C. If, after initiating consultation, the NPS determines that the objection cannot be resolved through consultation, or if the duration of the consultation has exceeded 15 days from the commencement of consultation to resolve the dispute, the NPS shall forward all documentation relevant to the objection to the ACHP, including the NPS's proposed resolution of the objection, with the expectation that the ACHP shall within 30 days after receipt of such documentation:

1. Advise the NPS that the ACHP concurs in the NPS's proposed resolution of the objection, whereupon the NPS shall notify the signatories executing this PA, and NPS shall resolve the objection accordingly; or
2. Provide the NPS with recommendations, which the NPS shall take into account in reaching a final decision to resolve the objection. The NPS shall notify the signatories executing this PA of its final decision.

D. The procedures outlined in stipulations X.A to X.C, above, shall apply only to the subject of the objection. The NPS's responsibility to carry out all actions under this PA that are not the subjects of the objection, and which do not foreclose the consideration of alternatives to resolve the objection, shall remain unchanged.

XI. ADMINISTRATIVE PROVISIONS

A. Amendments. Any signatory executing this PA may propose that this PA be amended, whereupon the NPS and other executing signatories shall consult to consider such amendment. This PA may be amended only upon the written agreement of the executing signatories. The amendment shall be effective on the date a copy signed by all of the signatories is filed with the ACHP by the NPS.

B. Termination. If any signatory executing this PA proposes termination of the PA, the party proposing termination shall, in writing, notify the other signatories executing this PA, explain the reasons for proposing termination, and consult to seek alternatives to termination. Should such consultation fail, the signatory proposing termination may terminate this PA by promptly notifying in writing the other executing signatories. Termination shall render this PA without further force or effect. Should this PA be terminated, the NPS shall consult regarding the Undertaking with the executing signatories in accordance with 36 CFR Part 800.

C. Duration of the PA. Unless terminated pursuant to stipulation XI.B, the duration of this PA is five years from the date of its execution. NPS may initiate consultation with the signatories executing this PA approximately one (1) year prior to the expiration date of this PA to reconsider its terms. Reconsideration may include the continuation or revision of this PA by amendment or termination.

D. Effective date of the PA. This PA shall take effect on the date that it has been signed by the last executing signatory.

E. Anti-deficiency Act. Any requirement for the payment or obligation of funds by the Government established by the terms of this PA shall be subject to availability of appropriated funds. No provision in this PA shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 USC Section 1341. If the availability of funds and compliance with the Anti-Deficiency Act impair the NPS' ability to perform under this PA, then the NPS shall consult in accordance with stipulation XI.B of this PA.

Execution of this PA and implementation of its terms evidence that the NPS has taken into account the effects of this Undertaking on historic properties and has afforded the ACHP an opportunity to comment on the Undertaking and its effect on historic properties.

PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES DEPARTMENT OF THE INTERIOR (NATIONAL PARK SERVICE),
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND
THE MISSOURI STATE HISTORIC PRESERVATION OFFICER
REGARDING
IMPLEMENTATION OF THE WINNING DESIGN OF THE FRAMING A MODERN MASTERPIECE INTERNATIONAL DESIGN COMPETITON

SIGNATORY

NATIONAL PARK SERVICE

Tom Bradley Date: 9/18/12

Thomas A. Bradley
Superintendent, Jefferson National Expansion Memorial

PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES DEPARTMENT OF THE INTERIOR (NATIONAL PARK SERVICE),
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND
THE MISSOURI STATE HISTORIC PRESERVATION OFFICER
REGARDING
IMPLEMENTATION OF THE WINNING DESIGN OF THE FRAMING A MODERN MASTERPIECE INTERNATIONAL DESIGN COMPETITON

SIGNATORY

MISSOURI STATE HISTORIC PRESERVATION OFFICER

Sara Parker Pauley Date: 10/26/12

Sara Parker Pauley
Director, Department of Natural Resources and State Historic Preservation Officer

SIGNATORIES

NATIONAL PARK SERVICE

_____ Date: _____
Thomas A. Bradley
Superintendent, Jefferson National Expansion Memorial

MISSOURI STATE HISTORIC PRESERVATION OFFICER

_____ Date: _____
Sara Parker Pauley
Director, Department of Natural Resources and State Historic Preservation Officer

ADVISORY COUNCIL ON HISTORIC PRESERVATION

John M. Fowler Date: 11/15/12
John M. Fowler
Executive Director

Invited Signatories:

OSAGE NATION

_____ Date: _____
John D. Red Eagle
Principal Chief

CITYARCHRIVER 2015 FOUNDATION

_____ Date: _____
Maggie Hales
Executive Director

PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES DEPARTMENT OF THE INTERIOR (NATIONAL PARK SERVICE),
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND
THE MISSOURI STATE HISTORIC PRESERVATION OFFICER
REGARDING
IMPLEMENTATION OF THE WINNING DESIGN OF THE FRAMING A MODERN MASTERPIECE INTERNATIONAL DESIGN COMPETITON

Invited Signatory:

OSAGE NATION

John D. Red Eagle
Principal Chief

Date: 10/19/12

PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES DEPARTMENT OF THE INTERIOR (NATIONAL PARK SERVICE),
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND
THE MISSOURI STATE HISTORIC PRESERVATION OFFICER
REGARDING
IMPLEMENTATION OF THE WINNING DESIGN OF THE FRAMING A MODERN MASTERPIECE INTERNATIONAL DESIGN COMPETITON

Invited Signatory:

CITYARCHRIVER 2015 FOUNDATION

Maggie Hales
Executive Director

Date: 9/18/2012

PROGRAMMATIC AGREEMENT
AMONG
THE UNITED STATES DEPARTMENT OF THE INTERIOR (NATIONAL PARK SERVICE),
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND
THE MISSOURI STATE HISTORIC PRESERVATION OFFICER
REGARDING
IMPLEMENTATION OF THE WINNING DESIGN OF THE FRAMING A MODERN MASTERPIECE INTERNATIONAL DESIGN COMPETITON

Concurring Party:

NATIONAL TRUST FOR HISTORIC PRESERVATION

Barbara Pahl
Vice-President of Western Field Offices

Date: 9-09-13

APPENDIX A

THE UNDERTAKING

The overall concept of the Undertaking is informed by the goals established in the Framing a Modern Masterpiece: The City + The Arch + The River competition, as well as extensive stakeholder and public input. The overall design approach of the Undertaking was guided by the 2009 Final Jefferson National Expansion Memorial General Management Plan/Environmental Impact Statement (GMP) and the analysis and treatment recommendations included in the Jefferson National Expansion Memorial Cultural Landscape Report (CLR). The Undertaking includes the following project areas:

- The West Gateway project includes a new park landscape at Luther Ely Smith Square, a new park landscape spanning the depressed lanes of I-70, and new landscaping associated with the Museum of Westward Expansion.
- The Museum of Westward Expansion project renovates existing facilities and exhibits at the visitor center and museum, as well as provides a new universally accessible entrance and lobby facility.
- The North Gateway project includes the removal and replacement of the existing parking garage with an open landscape, and construction of a shared pedestrian/bicycle path between the Arch grounds, city, and riverfront.
- The East Slopes project comprises the east side slopes that surround the railroad open cut walls and tunnels. An accessible connection would be created between the Arch Grounds and the Mississippi riverfront via new pedestrian pathways, and a more sustainable planting strategy will be implemented.
- The Reflecting Ponds project comprises the areas surrounding and including the Reflecting Ponds located between I-70 and the Processional Walks. New, accessible pedestrian pathways through these areas will be created and new planting, grading, and drainage strategies to improve the water quality of the Reflecting Ponds implemented.
- The Processional Walks project area includes the existing system of pedestrian walkways and allées of trees. Existing ash trees, currently threatened by the invasive emerald ash borer, will be replaced with a more suitable but compatible species. The soil, irrigation and drainage network that support the allées will be improved. The walks will be resurfaced or replaced as required with exposed aggregate concrete.
- The Old Courthouse project will renovate selected gallery spaces and develop new exhibits. ADA access improvements will be provided to the first and second floors through ramp and elevator improvements.

Further explanation of the Undertaking's project elements can be found in the environmental assessment prepared for the project which, when completed, will be available on the NPS Planning, Environment and Public Comment web site at http://parkplanning.nps.gov/projectHome.cfm?projectID=37612 and archived on the park CAR2015 Design Center web site at http://www.nps.gov/jeff/parkmgmt/cardocuments.htm.

Design Competition Elements Not Covered by this PA

Several design elements of the Foundation's Design Competition will be carried out independently of the NPS and with little or no control by the NPS or are largely undefined and thus Section 106 compliance for these elements will not covered by this PA. Should cumulative impacts associated with these project elements be identified by the Collaborative Design Review Team, the cumulative impacts will be considered during Section 106 review of other project components as designs proceed. These elements are listed below.

Transportation Improvements
MoDoT has initiated a separate undertaking for transportation needs associated with the Foundation's Design Competition. The MoDoT undertaking is not covered by this PA. It includes the following elements:

- Closure of Memorial Drive northbound between Walnut Street and Washington Avenue and southbound between Chestnut Street and Market Street;

- Construction of a park over the highway spanning the geographically depressed section of I-70 between Market Street and Chestnut Street;
- Changes to ramps on I-70 at Washington Avenue;
- Connection of two sections of Third Street by "punching" through the existing concrete island barrier at the MLK Bridge;
- Connection to downtown from eastbound I-70 at Tucker Boulevard;
- Removal of bridges at Walnut, Market, Chestnut, and Pine Street;
- Construction and reconfiguration of a new Walnut Street bridge ;
- Construction of a new land bridge from Market to Chestnut Street.

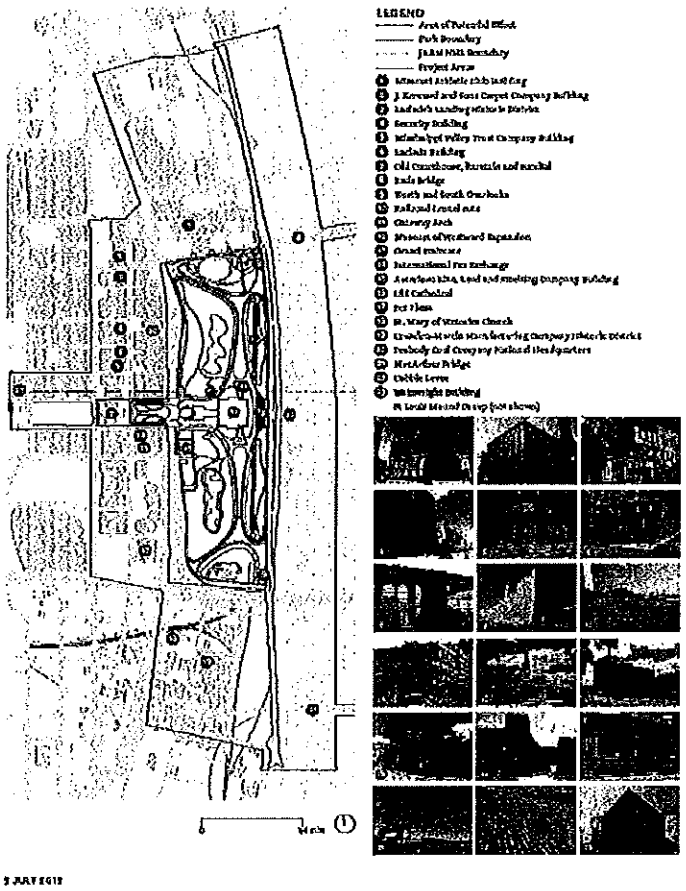
Central Riverfront Improvements
Great Rivers Greenway and the City of St. Louis will undertake improvements along Leonor K. Sullivan Boulevard from Chouteau Avenue to Biddle Street to promote economic development along the riverfront. The project may receive funding from the Federal Transit Authority, Federal Highway Department, and National Park Service. It may need federal permits from the Army Corps or additional federal agencies and will affect land owned by the National Park Service. NEPA compliance for this project will be folded into NEPA compliance for the Design Elements on NPS land. Section 106 will be done separately with the Lead Federal Agency to be determined. Elements of the undertaking may include:

- Raising the elevation of Leonor K. Sullivan Boulevard an average of 2.9 feet across the project site, varying between one foot and 4.5 feet, to reduce the frequency and impact of flood events;
- Establishing a new multi-modal greenway/roadway, providing a critical link in the regional system of bike trails;
- Conversion of the existing two-lane roadway into a narrower two-lane roadway section with a two-way bike path separated from the vehicle travel lanes;
- Establishment of designated areas for bus drop-off/pick-up lanes.

Kiener Plaza Improvements
Redevelopment of Kiener Plaza will be undertaken by the City of St. Louis using city and private funds. No federal permitting, funding or involvement is expected.

Illinois Design Elements
The Design Competition called for the development of a park on the Illinois side of the Mississippi River and construction of a gondola to promote connections between the new park and the Memorial. This project would likely involve the National Park Service and other federal permitting and funding agencies. This undertaking is currently relatively undefined. It will be covered under separate compliance if and when it becomes feasible.

APPENDIX B
AREA OF POTENTIAL EFFECTS



APPENDIX C

TRIBAL MONITORING PLAN

A. The NPS is committed to working with the Osage Nation (the Tribe) to assist in identifying and minimizing the Undertaking's impacts on important cultural resources, graves, and isolated human remains.

B. In general, tribal monitors are hired by the Tribe to monitor areas during the historic property identification and evaluation process and ground disturbing activities related to construction. The NPS will reimburse the Tribe at an agreed upon daily rate. The monitors are required to have adequate training and must follow strict protocols while in the field. The tribal monitors shall be selected by the Tribe. There will be clear lines of communication among the tribal monitors, the Tribe, and the NPS representatives and their consultants and contractors. Reports will be shared with the NPS, other tribes, and other consulting parties that will be identified through the consultation process.

C. The Osage Nation and interested tribes will be apprised of the scopes of work and scheduling of identification efforts. Pending the results of these initial identification efforts, NPS will consult with the Tribe to determine where tribal monitoring may be necessary and appropriate. Tribal monitoring will be considered in areas where initial identification efforts have indicated that historic properties of importance to the Osage Nation may be affected by the Undertaking.

D. The objective of the tribal monitoring program is to develop a reasonable monitoring process while minimizing the potential for adverse effects from identification and project activities to historic properties and sites of religious and cultural significance. This plan provides guidelines to assist in the decision-making process when consulting with the Tribe and to implement an effective communication system.

E. Tribal Monitors Position Description

1. During ground-disturbing activities the tribal monitor will provide assistance with the identification of traditional cultural resources of significance to the Tribe.
2. Tribal monitors may not direct construction personnel or equipment.
3. It is the responsibility of the tribal monitor to actively observe and report any cultural artifact or human remains found either on the surface or subsurface within the project boundaries to the NPS representative.
4. The tribal monitor is required to adhere to the PA and report to the NPS if an archaeological or cultural resource is discovered.
5. Monitors must abide by all safety rules and wear protective equipment at all times while on site.
6. NPS representatives will seek the advice and input of tribal monitors when unanticipated discoveries are encountered.
7. Only if the tribal monitor feels that extremely sensitive materials, such as human remains, are in immediate danger of being damaged or destroyed, they may notify the operator and request that they cease operations in that area until their respective Tribe and the NPS representative can be notified.

F. Credentials and qualifications of the tribal monitors shall be within the purview of the individual Tribe. The individuals selected will be officially recognized by the Tribe as having the capabilities to perform the duties as described in the job description. The NPS will coordinate the activities of the monitors according to the survey, evaluation, or construction schedule. It is anticipated that the Tribe will administer the activities of the monitors from a tribal perspective. The Osage Nation can also contract out monitoring work to other Native

American Tribes who have qualified staff provided that each tribe officially delegates such authority in writing, stating that they endorse the candidate.

G. The NPS and the Tribe will agree, through the consultation process, upon the extent of and locations of tribal monitoring. Tribal monitoring will be conducted on areas identified by the Tribe as having significance to that Tribe and areas identified by the Tribe during the Section 106 process.

H. Tribal monitors will work together with the NPS representative to assist in cultural resource identification and perform monitoring activities in areas targeted for survey, evaluation, or construction. If a cultural resource is discovered, NPS representatives will follow the terms of the PA, as well as all local, state, and federal laws governing the protection and discovery of archaeological and cultural resources. Tribal monitors will communicate with the NPS representative and will not direct construction personnel or equipment. The authority to stop work will rest on the NPS representative except as is outlined in E.7.

I. It will be the responsibility of the NPS representative to contact, in person, or via email, text, or telephone, the tribal monitor(s) and notify them of emergencies or potential emergencies affecting the entire project areas, such as inclement or violent weather.

J. The tribal monitor will not remove cultural material unless directly instructed to do so by the NPS representative. Should they be instructed to move the cultural material, they will place the material in an appropriate container and properly label the container to preserve the provenience of the material and deliver it directly to the NPS representative. Transfer of the cultural material to the NPS representative's custody will be documented within a report provided by the monitor or their represented Tribe.

K. Disputes arising out of this agreement will be resolved in the most efficient manner appropriate to the dispute. If an agreement cannot be reached in this manner, the parties shall engage a mutually agreed-upon mediator. The mediator's decision shall be binding upon the parties. The parties shall share the cost of mediation.

APPENDIX D
UNANTICIPATED DISCOVERY OF HUMAN REMAINS AND NAGPRA ITEMS

Procedures for Inadvertent Discoveries of Human Remains, Funerary Objects, Sacred Objects, and Objects of Cultural Patrimony as Defined by 43 CFR Part 10.1(b)(iii)92) During Cultural Resources Investigation Efforts, Construction, and Maintenance:

A. Any contractor or applicant or their agents, representatives, or employees who knows or has reason to know that he or she has discovered inadvertently human remains, funerary objects, sacred objects, or objects of cultural patrimony must provide immediate telephone notification of the inadvertent discovery, with written confirmation, to the superintendent.

B. Upon encountering human remains, funerary objects, sacred objects, or items of cultural patrimony during ground disturbing activities, the NPS will ensure that the cultural resource investigator or construction contractor immediately stops work within the ninety (90) meter radius buffer zone around the point of discovery. The NPS will assume responsibility for implementing additional measures, as appropriate, to protect the discovery from looting and vandalism until the requirements of the Native American Graves Protection and Repatriation Act (NAGPRA) have been completed, but must not remove or otherwise disturb any human remains or other items in the immediate vicinity of the discovery.

C. The NPS will immediately notify law enforcement by telephone of the discovery of unmarked human remains.

D. The NPS will notify the Osage Nation by telephone and email within forty-eight (48) hours of the discovery of human remains, funerary objects, sacred objects, or items of cultural patrimony. This step is not intended to satisfy the requirements of 43 CFR 10.4(d)(iii).

E. The NPS will take immediate steps, if necessary, to further secure and protect inadvertently discovered human remains, funerary objects, sacred objects, or items of cultural patrimony, including, as appropriate, stabilization or covering.

F. Other than for crime scene investigation, no excavation, examination, or analysis of human remains will be conducted without first securing permission from the Osage Nation.

G. If upon investigation, the local enforcement officer determines that the remains are not involved in a legal investigation, the protocol implementing NAGPRA applies.

H. The NPS, in consultation with the Osage Nation, will have seven (7) working days to determine if the skeletal remains are human, the degree to which they were disturbed, and, if possible, assess their potential age, cultural affiliation, and identity, if possible, without any further disturbance. Upon making their determination or at the end of the seven (7) days, whichever comes first, the NPS will notify the Osage Nation and other Interested Tribes of its findings. This notification must include pertinent information as to kinds of human remains, funerary objects, sacred objects, or items of cultural patrimony discovered inadvertently, their condition, and the circumstances of their inadvertent discovery. If it is determined that the skeletal remains are not Native American, then the provisions in stipulation IV.D.2. will apply.

I. The Osage Nation will have seventy-two (72) hours to respond verbally followed by written response via U.S. mail or electronic mail. The response should specify the Osage Nation's intention to conduct or decline further consultation.

J. The NPS will consult with the Osage Nation or identified lineal descendant regarding additional measures to avoid and protect or mitigate the adverse effect of the project on the human remains and grave site. These measures may include:

   1) formal archeological evaluation of the site;

   2) visits to the site by the Osage Nation and/or interested Tribes;

   3) exploration of potential alternatives to avoid the human remains or grave;

4) Implementation of a mitigation plan by the NPS in consultation and concurrence with the Osage Nation, including procedures for disinterment and re-interment; and

5) Implementation of the mitigation plan.

K. The NPS or its agents, in consultation with the Osage Nation, Interested Tribes, and other interested parties such as living descendants, may consult with a qualified physical anthropologist, forensic scientist, or other experts as may be needed to examine and assess the inadvertent discovery. Unless the remains were inadvertently removed, the evaluation will be conducted at the site of discovery. The consulting expert will be allowed to draw and measure the exposed remains and associated funerary objects. No photographs or digital images will be permitted. Drawings and other records will be curated at a state-approved curation facility in Missouri. Drawings cannot be published in any form or shown as part of scholarly presentations without the written permission of the Osage Nation or nearest living descendant.

L. A report of findings describing the background history leading to and immediately following the reporting and resolution of an inadvertent discovery will be prepared within thirty (30) calendar days of the resolution of each inadvertent discovery. This report must meet the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (49 FR 44716) guidelines.

APPENDIX E
INADVERTENT DISCOVERY OF HISTORIC PROPERTIES

A. Objectives: The following procedures shall be used in the event that previously unreported and unanticipated historic properties are found during activities conducted by or on behalf of the NPS.

B. Pending the results of initial identification and evaluation efforts, NPS will consult with the Missouri SHPO, Osage Nation to determine whether archeological monitoring during construction will be necessary and appropriate. Monitoring will be considered in areas where initial identification and evaluation efforts have indicated that significant historic properties may exist. If deemed necessary, archeological monitors meeting the standards outlined in stipulation II.A. of this PA will be on call to help with the identification and evaluation of historic properties that may be inadvertently discovered during the course of excavation.

C. The construction contractor must immediately stop all work activity within a ninety (90) meter radius buffer zone, notify the NPS of the discovery, and implement interim measures to protect the discovery from looting and vandalism. Construction may continue outside the buffer zone. Within forty-eight (48) hours of receipt of this notification of the discovery, the NPS shall:

1) inspect the work site to determine the extent of the discovery and ensure that work activities have halted within the ninety (90) meter radius buffer zone;
2) clearly mark the area of the discovery;
3) implement additional measures, as appropriate, to protect the discovery from looting and vandalism;
4) notify the Missouri SHPO, Osage Nation of the discovery; and
5) recommend revisions to the construction buffer zone depending upon the nature of the resource discovered.

D. The NPS, in consultation and concurrence with the Missouri SHPO, and Osage Nation shall have seven (7) business days following notification to determine the National Register of Historic Places eligibility of the discovery. The NPS may assume the newly discovered property to be eligible for the National Register for the purposes of Section 106 pursuant to 36 CFR §800.13(c).

E. If the find is National Register eligible, the NPS shall consult with the Missouri SHPO and Osage Nation regarding appropriate measures for site treatment pursuant to 36 CFR §800.6(a). The Missouri SHPO, Osage Nation shall have seven (7) business days to provide their objections or concurrence on the proposed actions. Concurrence on the part of the Missouri SHPO and Osage Nation is required for all adverse effect resolution measures. These measures may include:

1) formal archeological evaluation of the site;
2) visits to the site by the Missouri SHPO, Osage Nation;
3) exploration of potential alternatives to avoid the site;
4) preparation of a mitigation plan by the NPS in consultation and concurrence with the Osage Nation for approval by the Missouri SHPO; and
5) implementation of a mitigation plan.

F. If the find is determined to be isolated, discrete, or completely disturbed by construction activities, the NPS shall consult with the Missouri SHPO and Osage Nation prior to resuming construction within the ninety (90) meter radius buffer zone.

G. The buffer zone radius may be lessened if conditions warrant. Missouri SHPO and Osage Nation, shall have seven (7) business days to comment on the lessening of a buffer zone, but shall be encouraged to respond more quickly in the case of isolated, discrete or completely disturbed resources. In the case of historic resources, the Osage Nation will be notified, but the construction radius may be lessened with just the approval of the Missouri SHPO. In the case of resources with associations to Native American culture, the Osage Nation must also be consulted.

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FLOODPLAIN STATEMENT OF FINDINGS

For the Implementation of the CityArchRiver 2015 Initiative Elements at the East Slopes and Central Riverfront

St. Louis, Missouri

March 2013

Recommended: Tom Bradley 3/5/13
Tom Bradley Date
Superintendent –
Jefferson National Expansion Memorial

Concurred: F. Edwin Hamy 4/1/13
Ed Harvey Date
Division Chief - Water Resources

Approved: Michael J Reynolds 5/3/13
Michael Reynolds Date
Regional Director – Midwest Region

March 5, 2013

STATEMENT OF FINDINGS

INTRODUCTION

Executive Order 11988 ("Floodplain Management") requires the National Park Service (NPS) and other agencies to evaluate the likely impacts of actions in floodplains. It is NPS policy to preserve floodplain values and minimize potentially hazardous conditions associated with flooding. If a proposed action is in an applicable regulatory floodplain, then flood conditions and associated hazards must be identified, and a formal Statement of Findings (SOF) must be prepared. The NPS Procedural Manual #77-2, Floodplain Management provides direction for the preparation of a floodplain SOF. This SOF has been prepared to comply with EO 11988 and with Procedural Manual #77-2.

PROJECT DESCRIPTION

The National Park Service (NPS) has prepared an Environmental Assessment (EA) to evaluate a range of alternatives to implement elements of the CityArchRiver 2015 Initiative (Figure 1) at Jefferson National Expansion Memorial (the park) in St. Louis, Missouri. Some of the actions contemplated in the EA would occur between the East Slopes of the park and the Mississippi River within the regulated floodplain. This includes the revitalization of the Central Riverfront by Great Rivers Greenway, which the NPS has provided funding for, and is located adjacent to the park. As part of this action, Leonor K. Sullivan (LKS) Boulevard, from Chouteau Avenue to Biddle Street, will be raised to reduce the frequency and impact of flood events. The proposed improvements would also convert the existing 2-lane roadway section with periodic left turn lanes into a narrower 2-lane roadway section with designated areas for bus drop-off/pick-up lanes and establish a new 2-way bike path separated from the vehicle travel lanes. A new pedestrian Promenade would be created between the bike path and the historic cobble of the levees adjacent to the river. Traffic calming measures include raised pedestrian crossings at the base of the Grand Staircase and at the new crosswalk locations at the base of the East Slope paths.

Raising the elevation of LKS would require modifications to the floodwall and levee system along the Mississippi River. Modifications to floodwall closure structures at Chouteau Avenue, Poplar Street, and Carr Street would be required. This work would include raising the sills of the closure structures and modifications to the closure structure panel systems at each location. Additionally, raising LKS would require the placement of fill against existing structures within the public right-of-way as well as construction of new retaining walls along the levee.

In addition, the East Slopes would be regraded, and subsequently replanted, to develop two-four universally accessible serpentine paths between the riverfront and Arch grounds and raise the sidewalk at the base of the slopes to meet the new roadway elevations. Grading of the slopes would be performed to balance cut and fill in an effort to limit the import and export of fill when feasible. The general form of the existing slopes would be retained while accommodating the myriad of new path systems.

March 5, 2013

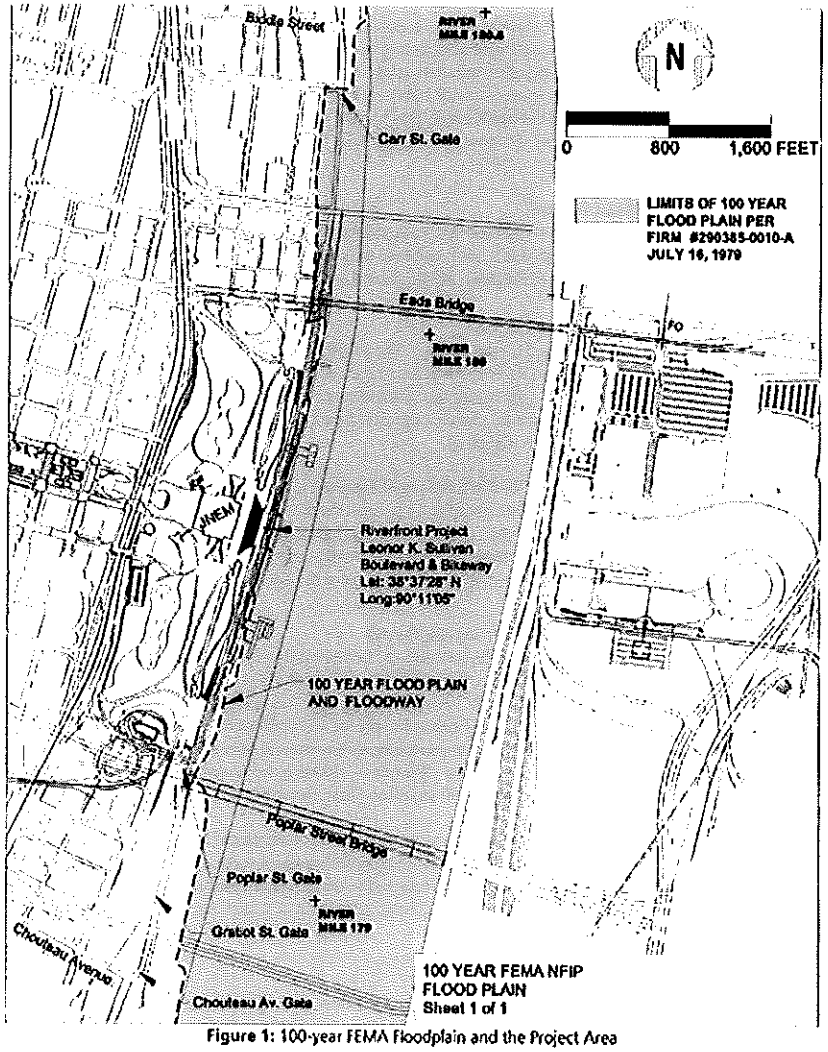

Figure 1: 100-year FEMA Floodplain and the Project Area

SITE DESCRIPTION

Portions of the East Slopes in the park and entire Central Riverfront project area lies within the regulatory 100-year (1%) Mississippi River floodplain as mapped by the Federal Emergency Management Association (FEMA) National Flood Insurance Program (NFIP). The floodway portion of the River is confined by a floodwall/levee system on both the east side of the River (Illinois bank) and the west side of the River (Missouri bank). The floodwall/levee system essentially "squeezes" the floodplain into a relatively narrow floodway.

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Floodplains are defined by the NPS Procedural Manual 77-2: Floodplain Management (NPS 2003) as "the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, and including, at a minimum, that area subject to temporary inundation by a regulatory flood." Typically floodplains function to contain flood waters. Floodplains can also provide habitat for various flora and fauna especially the islands that are temporarily formed by shifting river sediments. This portion of the Mississippi River floodplain has been highly industrialized with several river ports / transfer loading facilities located within what is referred to as the St Louis Harbor.

Justification for Use of the Floodplain

Portions of the project area are located within designated high hazard floodplains. Although the NPS is required to reduce or eliminate development in floodplains, this is not possible in the project area because the proposed improvements to the East Slopes, Central Riverfront, and LKS Boulevard are located within a 100-year floodplain.

Description of Site-Specific Flood Risk

The Central Riverfront lies at a low elevation and is relatively flat. The project area, stretching from Choteau Avenue to Biddle Street from the bank of the Mississippi River to the railroad on the East Slopes within the park is currently designated as Zone AE, which is within the 100-year floodplain (per the current FEMA mapping). West of this area, the park is shown to be protected from the 1% annual chance or greater flood hazard due to the levee system that has been provisionally accredited (per current FEMA mapping).

A one-hundred-year flood is calculated to be the level of flood water expected to be equaled or exceeded every 100 years on average. The 100-year flood can also be thought of as a 1 percent flood, since it is a flood that has a 1 percent chance of being equaled or exceeded in any single year. Along the Central Riverfront, flood occurrences that just overtop LKS Boulevard are far more frequent than the larger 100-year flood events that close the floodgates. These higher-frequency floods typically last up to two weeks and cause the closure of LKS.

Description and Explanation of Flood Mitigation Plans

The proposed project itself constitutes a strategy for the reduction of flood risk. By raising LKS Boulevard along the Central Riverfront, the project aims to mitigate the effects of annual flooding and the associated impacts to public safety, visitor use and experience, and historic resources. Because the City of St. Louis is a member of the National Flood Insurance Program, Great Rivers Greenway would need to apply for and obtain a Floodplain Development Permit. As a result, a Riverine Hydraulic Analysis of the proposed improvements will be required to assure the City that "no-rise" to the 100-year base flood elevation will occur. Therefore, although the project would be designed to minimize the number of flood events it would not affect 100-year flood base elevations.

During site preparation and construction, efforts to preserve existing vegetation within the floodplain would be undertaken as standard procedures. Any vegetation removed to accommodate the proposed improvements would be replaced within the flood zone. Floodplain values would be protected to the maximum extent possible. Although the project must occur within the floodplain, the extent of development, placement of structures, and types of structures would be selected to minimize impacts.

Summary

The proposed project constitutes enhancements for public safety, visitor use and experience, and historic resources, and must be carried out within the 100-year floodplain. Specifically, the proposed improvements to the East Slopes, Central Riverfront, and Leonor K. Sullivan Boulevard are within the 100-year floodplain. There are no other siting alternatives that could be considered for this project. Mitigation and compliance with regulations and policies to prevent impacts to water quality, floodplain values and loss of property or human life would be strictly adhered to during and after construction. Potential flood hazards would be minimized and there would be no long-term adverse impacts to the 100-year designated floodplain. To the contrary, the decreased flood events along the Central Riverfront would have beneficial effects on public safety, visitor use and experience, and historic resources at Jefferson National Expansion Memorial and along the Central Riverfront.

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