PMC-ND
(1.08.09.13)

U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION

RECIPIENT: NREL **STATE:** CO

PROJECT TITLE: NREL STM Exterior Improvements 2016, NREL Tracking No. 16-019

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-AC36-08GO28308	NREL-16-019	GO28308

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

DOE/EA-1968 (NREL STM) SITEWIDE ENVIRONMENTAL ASSESSMENT, U.S. DOE NATIONAL RENEWABLE ENERGY LABORATORY, SOUTH TABLE MOUNTAIN CAMPUS, GOLDEN, COLORADO

Rationale for determination:

The U.S. Department of Energy (DOE) proposes to implement a number of site improvements at the National Renewable Energy Laboratory (NREL) South Table Mountain (STM) campus located in Golden, Colorado. The proposed project would address the following ten issues across the NREL STM campus:

- Pedestrian safety improvements at the STM campus south entrance
- Hillside stabilization and drainage improvements behind the Field Test Laboratory Building (FTLB)
- Drainage improvements on the north side of the FTLB
- South Side Entrance Building (SSEB) interior modifications
- Hillside stabilization and erosion control improvements behind the Integrated Biorefinery Research Facility (IBRF)
- Solar Energy Research Facility (SERF) and Science and Technology Facility (S&TF) landscaping improvements
- Energy Systems Integration Facility (ESIF) liquid nitrogen tank barriers
- STM site safety improvements – signage, striping, turn arrow pavement markings, crosswalks, stop bars, and concrete pan
- Asphalt repair at the Solar Industrial Mesa Test Area (SIMTA) and Vehicle Testing & Integration Facility (VTIF), Thermal Test Facility (TTF), IBRF, and Bulk Storage Building
- FTLB parking lot restriping

Pedestrian safety improvements at the STM campus south entrance
Pedestrian safety improvements would include enhancing pedestrian lighting near the SSEB, installing a sidewalk from Denver West Parkway to the SSEB, installing ADA-compliant pedestrian crossings on Research Road, and modifying all roadway signage as appropriate for new configurations.

FTLB Hillside stabilization and drainage improvements
The steep hillside along the northwest corner of the FTLB, an area of approximately 8,000 square feet, has experienced major amounts of erosion that occasionally washes into the roadway. This steep slope area would be modified to increase slope stability and correct the existing erosion. This work includes installing a new gravel sidewalk, a small porous paver plaza, concrete retaining walls, concrete channels, and curb and gutter. Rock rip rap stabilization materials would be installed to correct the erosion issues. Native and adaptive plants would be planted, including trees. A clear zone at the base of the hill and behind the curb and gutter would provide a trap for debris that may come off the steep slope area in the future. A system to redirect the surface runoff that currently flows down the steep slope area would be implemented to redirect the flow to a more stable location. Grading, drainage, erosion control, and landscaping work would be performed to support the new stabilization and drainage improvements.

Drainage improvements on the north side of the FTLB
The foundation along the north side of the FTLB, an area of approximately 8,000 square feet, experiences significant water seepage during rainfall events that result in safety hazards in and to the FTLB. New concrete curb and gutter, concrete drainage channels, impervious surfacing materials, and rock rip rap stabilization materials would be installed to reduce surface water infiltration into the building wall. Additionally, a concrete drainage system would be installed to direct surface runoff away from the FTLB foundation wall, and portions of the FTLB foundation wall would be waterproofed. Grading, drainage, erosion control, and landscaping work would be performed to support the remediation improvements.

SSEB interior modifications
Improvements to the interior of the SSEB include window, door, hardware, electrical, and lighting enhancements. Security improvements involve installing security cameras on the exterior of the building. Additionally, a small section of existing concrete sidewalk at the north side of the SSEB would be removed and replaced to resolve ice build-up issues.

Hillside stabilization and erosion control improvements behind the IBRF
The steep hillside directly behind and to the east of the IBRF has experienced erosion. New retaining walls, concrete channels, storm drainage pipes and inlets, landscape material, and rock rip rap stabilization materials would be installed along the north side of the IBRF service road and continuing along the hillside to the northwest corner of the TTF to stabilize the area. Grading, drainage, erosion control, and landscaping work would be performed to support installation of the new hillside stabilization and drainage improvements. This task will be completed in two phases: phase 1 would include installing landscaping materials on the upper portion of the hillside, and phase 2 would involve completing the remaining work, including installation of retaining walls using rock rip rap stabilization materials and installation of drainage pipes and associated structures.

SERF and S&TF landscaping improvements
An overhaul to the exterior landscaping on the south side of the SERF and S&TF is proposed to stabilize the existing slopes, resolve existing drainage concerns, and improve pedestrian access and circulation. This would involve ground disturbing activities that would affect approximately 66,000 square feet of existing area that was previously landscaped. Construction activities would include the installation of new concrete sidewalks, porous paver plaza areas, a concrete stairway and metal handrails that would connect the Research Support Facility with the S&TF, concrete retaining walls, a concrete stormwater stilling basin, and bike racks/lockers. Native vegetation would be planted, including grasses, trees and shrubs. Two gathering areas would be installed, including the Meadow Circle and Contemplative Circle. The Meadow Circle would include stone seating and would be vegetated with native grasses, ornamental grasses, and shrubs, and the Contemplative circle would be vegetated with grass and trees. Repairs would be made to the existing pedestrian bridge of the middle creek and existing erosion issues leading down to the middle creek would be addressed. Additionally, existing rock skirts would be removed and replaced as they are a safety hazard. Grading, drainage, erosion control, and landscaping work would be performed to support installation of the new stabilization and drainage improvements.

ESIF liquid nitrogen tank barriers
The installation of two 10 foot long precast type 7 concrete barriers is proposed to provide suitable protection for a liquid nitrogen tank. The de-construction and re-construction of the existing fence may be needed to accommodate the installation of the barriers. No ground disturbing activities are anticipated to be involved with this task.

STM site safety improvements – signage, striping, turn arrow pavement markings, crosswalks, stop bars, and concrete pan
Improvements to the STM site are proposed to enhance traffic safety on campus roadways. Activities would include: removal of existing traffic signage, installation of new LED lit signage, installation of thermoplastic straight/turn arrow pavement markings, epoxy paint striping, and removal and replacement of an approximately 30 foot long linear section of existing concrete pan. No ground disturbing activities are anticipated with this task other than the replacement of the existing concrete pan.

Asphalt repair at the SIMTA and VTIF, TTF, IBRF and Bulk Storage Building
Asphalt repair activities are proposed at the SIMTA, VTIF, TTF, and IBRF and Bulk Storage Building. At the SIMTA, activities would include seal coating and crack sealing approximately 13,000 square feet (sq. ft.) of existing asphalt surfacing, and any area too extensively damaged to be crack sealed would be repaired using infrared pavement patching methods. At the VTIF, infrared patching methods would be used to re-shape an approximately 300 sq. ft. area of existing asphalt paving to promote drainage and prevent ice build-up at the building and service entrances. At the TTF, approximately 1,700 sq. ft. of existing asphalt surfacing would be removed, replaced, and seal-coated. The existing subgrade would be re-compacted as needed to accommodate the placement of new materials and installation of new asphalt surfacing. Additionally, an 80 sq. ft. gravel pad would be installed to accommodate a refuse container. At the IBRF and Bulk Storage Building access roadway, work would include removing and disposing of approximately 900 sq. ft. of existing damaged asphalt surfacing. The existing subgrade would be re-compacted as needed to accommodate the placement of new materials and installation of asphalt surfacing. No ground disturbing activities are

anticipated to be involved with these tasks other than re-compaction of existing asphalt subgrade and grading work for the installation of a gravel pad.

FTLB parking lot restriping
Restriping of the FTLB parking lot is proposed to improve parking operations servicing the building. This task would include cleaning of the existing asphalt, removal of existing striping, and installation of new pavement markings and striping. No ground disturbing activities are anticipated to be involved with this task.

The proposed project would have short-term land disturbing impacts of approximately 2.67 acres during the construction phase. All work would occur on NREL property. The project would result in positive long-term impacts related to erosion control, slope stability, and stormwater conveyance by stabilizing eroding steep slopes and improving existing drainage systems. Additional benefits include campus-wide safety improvements and enhanced pedestrian access.

All ground disturbing activities would be conducted in accordance with NREL Lab Level Procedure 6-1.28: Stormwater Pollution Prevention for Construction Activities: South Table Mountain Site. In addition, permit coverage under the USEPA Stormwater Construction General Permit would be required and a Stormwater Pollution Prevention Plan would be implemented to minimize stormwater and erosion impacts during construction. All disturbed areas that are not replaced with impervious features, such as the Research Road sidewalk, retaining walls, or drainage channels, would be revegetated and restored in accordance with NREL policy and procedures.

Mobile air emissions from construction equipment, such as excavators, back hoes, concrete trucks, support trucks, etc., would be negligible and short-term.

No long-term emissions would result from this project.

Construction-related noise would consist of a short-term, intermittent increase in ambient noise levels and would follow applicable noise ordinances.

Additional lighting to improve pedestrian safety by the south STM gate would use LED "full cutoff fixtures" light poles, similar to existing campus lighting where the light is only emitted downwards and would shield potential horizontal light pollution. The lights would be on sensors to minimize the time that they are active. This should minimize potential light pollution to nearby neighbors.

Hazardous materials used during the construction phase of this project would be managed in accordance with applicable regulations and NREL policy and procedures. Construction waste would be segregated and recycled to the extent practicable. Construction contractors would abide by applicable environmental, health, and safety regulations and NREL policies and procedures.

Per agency consultations conducted during the Site-Wide Environmental Assessment for the NREL South Table Mountain campus (DOE/EA-1968), no cultural resources, threatened or endangered species, wetlands, floodplains, or prime farmlands would be impacted by this proposed project. If ground disturbing activity occurs between March and August, a migratory bird nesting survey would be conducted prior to onsite project activity. If nests or eggs are found, the particular area would be cordoned off with a proper buffer until nestlings fledge. In the event that evidence of cultural resources or human remains are discovered during ground-disturbing activities, workers are to stop all work in the vicinity until a qualified archaeologist evaluates the significance of the find.

Based on the review of the proposal, DOE has determined the proposal fits within the class of action and the integral elements of 10 CFR 1021 subpart B outlined in the DOE categorical exclusion selected above. DOE has also determined that: (1) there are no extraordinary circumstances (as defined by 10 CFR 1021.410(2)) related to the proposal that may affect the significance of the environmental effects of the proposal; (2) the proposal has not been segmented to meet the definition of a categorical exclusion; and (3) the proposal is not connected to other actions with potentially significant impacts, related to other proposals with cumulatively significant actions, or an improper interim action. This proposal is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Insert the following language in the award:

You are required to:
If ground disturbing activity occurs between March and August, a migratory bird nesting survey would be conducted prior to onsite project activity. If nests or eggs are found, the particular area would be cordoned off with a proper buffer until nestlings fledge. In the event that evidence of cultural resources or human remains are discovered during ground-disturbing activities, workers are to stop all work in the vicinity until a qualified archaeologist evaluates the significance of the find.

Note to Specialist :
DOE/EA-1968
NREL
NEPA review conducted by Nicole Serio on 08/01/2016

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Electronically Signed By: Kristin Kerwin Date: 8/2/2016
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____
Field Office Manager