

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**  
**HIGH SPEED FLARE TEST TRACK RANGE ENVIRONMENTAL ASSESSMENT**  
**EGLIN AIR FORCE BASE, FLORIDA**

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Pursuant to the Council on Environmental Quality (CEQ) regulation for implementing the procedural provisions of the *National Environmental Policy Act* (NEPA), Title 40 of the Code of Federal Regulations (CFR) §§ 1500-1508, and U.S. Air Force (USAF) Environmental Impact Analysis Process (EIAP) regulations 32 CFR § 989, the Air Force has prepared a Range Environmental Assessment (REA) to identify and assess the potential environmental consequences associated with the activation of Test Area (TA) C-53 and installation and operation of a High Speed Flare Test Track (HSFTT), associated measurement instrumentation, and support infrastructure. This REA, dated May 2020, is hereby incorporated by reference into this finding.

**Purpose and Need (REA Section 1.2):**

The purpose of the Proposed Action is to provide capability to evaluate flare performance in a rapid and repeatable setting. The proposed HSFTT provides this capability by serving as a test-bench for flare lot acceptance and testing of experimental flares, including replicating flight conditions and providing the flare signature measurement instrumentation suite necessary to acquire flight-test relevant data early in the flare testing process. The proposed HSFTT and instrumentation suite would enable observers to identify dispensing issues and ignition problems and would provide observers the ability to track flares from dispensation through burnout.

The Air Force requires the testing capability necessary to conduct engineering-based evaluation of flare performance, and the Proposed Action is needed to support the 96 Test Wing primary research, development, testing, and evaluation of weapons and electronics systems mission as described in Section 1.1.1 of the REA.

**Description of Proposed Action and Alternatives (REA Chapter 2)**

**Proposed Action**

The Proposed Action includes the activation of 194 acres of the northeast portion of TA C-53; the installation of a HSFTT and associated measurement instrumentation/observation pads and support infrastructure; the ongoing operation of the HSFTT; and the continual maintenance of TA C-53 as required to safely and effectively evaluate flare performance (REA Figures 2-1 and 2-2). The entire Proposed Action construction footprint would affect up to 209 acres, 194 acres of which fall within the existing boundaries of TA C-53.

The total length of the flare test track is 4,253 feet, including 3,000 feet for the HSFTT, 500 feet beyond each track terminus for cables, and 253 feet of utility easements and other setup requirements. The design of the HSFTT is adapted from a ground-based test track that is currently in operation elsewhere. The design of the HSFTT at Eglin will have a dispense point 50 feet above ground level (AGL), and the flares are expected to completely burn out before landing.

Four types of flares are planned to be dispensed from the flare sled, including MTV pyrotechnic, spectral, pyrophoric, and kinematic. Tests include launching flares out of the turret downward at a 45-degree angle and then upward at a 45-degree angle after the sled has reached at least 50 feet AGL along the track. Flares would travel in the same path as the sled toward the end tower, and up to 99.9 percent of them will burn out before they hit the ground and land before the end tower.

The Region of Influence (ROI) for this Proposed Action is 4495.5 acres (7 square miles), which would be divided into three separate areas dependent on the specifications of the flare manufacturers, vegetation management requirements pertaining to risk of fire from flare deployment, and line-of-sight constraints from observation pads. The total direct Proposed Action construction area (209 acres) includes the Minimum Safety Buffer (30.4 acres), Instrument Observation Area (163.6 acres), and access road and utility corridors (15 acres).

- The Minimum Safety Buffer would be established and maintained vegetation-free with dirt/sand or gravel substrate to reduce risk of fire from flare deployment immediately beneath and surrounding the track. Ninety-nine percent of all flares are expected to burn out over or land within this zone.
- The Instrument Observation Area would be cleared and vegetation maintained below 3 feet relative to the ground-level sight view between the instrumentation pads and the towers to effectively observe the flare tests and minimize visual obstructions. In some areas vegetation may be allowed to grow higher than 3 feet, particularly in low-lying wetland or stream areas and their adjacent upland slopes (REA Figure 2-4). It is highly improbable (less than 1% chance) that either conventional or kinematic flares will land outside of the Minimum Safety Buffer and within the Instrument Observation Area. Vegetation in the Instrument Observation Area would generally be maintained through mowing and herbicide/prescribed fire treatments as needed.
- The Maximum Safety Buffer is a highly conservative buffer zone, offset 7,000 feet from the sled track. The Maximum Safety Buffer is designed to accommodate the largest available kinematic flare in the event that it does not operate as anticipated; however, the largest planned flare to be tested at TA C-53 is 25 percent smaller than the design group flares, and the majority of flares would be 50 percent smaller. This zone will be closed during kinematic flare tests. There is no vegetation removal or active management proposed to occur within the Maximum Safety Buffer area, but it is analyzed within this REA due to the less than 0.1 percent chance that a kinematic flare could land within this area.
- A Vertical Safety Buffer will be activated during testing operations that would preclude aircraft encroachment through the area during testing events. A 500-ft AGL Vertical Safety Buffer would be activated that corresponds with the Minimum Safety Buffer in support of the MJU-53 non-thrusted flare or similar. A 7,000-foot AGL Vertical Buffer would be activated corresponding with the Maximum Safety Buffer in support of worst-case-scenarios testing the MJU-71 and MJU-39A/B kinematic flares or similar.

Approximately 3,002 linear feet of new, unpaved road would be constructed to provide access to the HSFTT to the east and 3,740 linear feet of new, unpaved road would be constructed providing access to the west. New roads would be established in accordance with *Eglin AFB Road Management Plan and Workshop* and *USACE Special Report 92-26, Unsurfaced Road Maintenance Management* (Eglin AFB 1998). Barbed-wire/concertina fencing would be installed around the perimeter of the Instrument Observation Area (approximately 12,800 linear feet).

The Proposed Action involves the testing and evaluation of 810 flares per year (REA Table 2-2). Use of the HSFTT would include up to 10 testing events per year, with events from 7 to 10 days in duration, for a total projected use of 10 to 15 weeks per year. The Maximum Safety Buffer would be activated to support up to two 3-day events testing the kinematic flares (or a total of 6

days) per year. Events would occur during day or night, but many would likely be concentrated in nighttime hours to increase flare visibility and tracking capability.

### **No-Action Alternative**

The No Action Alternative provides the baseline for analysis of potential impacts. The No Action Alternative for this Proposed Action would consist of not establishing the HSFTT at Eglin AFB, whereas TA C-53 would remain inactive until a future designated use for the location is evaluated and assigned.

**Alternative 1, Proposed Action.** Alternative 1 includes the Proposed Action described above.

**Alternative 2, Increased Mission Tempo.** Alternative 2 includes the installation of the HSFTT as described; however, testing and evaluation operations would effectively triple, for a total of 2,430 flares per year (an additional 1,620 flares per year over the Proposed Action). The mission schedule and required manpower would not change over the Proposed Action and would be limited to dispensing more flares over a test period.

## **Environmental Consequences**

### **Summary of Findings**

The Air Force has concluded that there would be no effect to the following resources: airspace; land use; visual resources and aesthetics; noise; transportation and traffic; socioeconomics and environmental justice, including protection of children; and public services and utilities (natural gas, potable water, sewerage, solid waste, or communications services).

The Air Force has concluded that there would be no significant adverse effects, including cumulative impacts, to the following resources as a result of implementation of the Proposed Action: biological resources (including vegetation, wildlife, aquatic/wetland habitats, and special status species); geology and soils; coastal zone management; water resources (including floodplains, surface water, and groundwater); cultural resources; safety; hazardous materials and waste, toxic substances, and contaminated sites; and air quality.

### **Biological Resources (REA Section 3.4.1)**

No significant adverse impacts to biological resources are anticipated as a result of implementation of the Proposed Action. Potential impacts to biological resources were evaluated based on the assumption that the entire 209 acres of the Minimum Safety Buffer, Instrument Observation Area, and access road and utility corridors would be disturbed by the Proposed Action construction footprint. The 0.1 percent chance that a kinematic flare would land in the extended Maximum Safety Buffer area was not extensively evaluated as the risks for potential effects were considered discountable under NEPA.

*Vegetation.* The Proposed Action would convert up to 209 acres from sandhill and pine production to an open grass/shrubland artificially maintained vegetative community. As relatively good habitat in the upland portions of the Proposed Action area would be converted and maintained as lower quality, cleared areas, this habitat alteration would represent a moderate impact to vegetation over the existing condition and the No Action Alternative. Negligible impacts to stream and riparian wetland habitat along the streambanks and slopes are anticipated as trees extending into

the line-of-sight would be hand cut and because any stormwater flow from upland areas would be arrested by BMPs at the upland/slope interface and as appropriate where slope trees are removed.

The Proposed Action would contribute incremental vegetation and habitat impacts to the Eglin AFB landscape that would combine with past, present, and future vegetation management actions on the reservation. However, as maintenance of designated TAs was considered in the comprehensive analysis and implementation of the Eglin AFB INRMP, and because manipulation of various units is accounted for on a landscape scale within the *Eglin Forest Management Component Plan* (Eglin AFB 2018), it is not anticipated that impacts to vegetation and habitat from the Proposed Action will combine in a way that will cumulatively degrade vegetation resources on the reservation.

*Wildlife.* It is anticipated that minor impacts to wildlife would occur with the implementation of Alternative 1. The use of TA C-53 by wildlife is anticipated to be similar to other maintained and operational ranges on the reservation, and wildlife would experience similar impacts as anticipated under the No Action Alternative if timber harvest were to occur in this area, as most species would avoid construction activities by relocating to available adjacent habitat. However, as opposed to the No Action Alternative, species are not likely to recolonize the 30 acres of the Minimum Safety Buffer area as it will be maintained as open soil or gravel, and many species would be likely to continue to avoid the HSFTT during operations due to human presence and noise disturbances. It is also less likely that many existing species will recolonize the Instrument Observation Area as vegetation will be cut to ground level and habitat structure will be regularly maintained at less than 3 feet. Installation of a perimeter fence will also preclude many large mammals such as the white-tailed deer and Florida black bear from utilizing the Instrument Observation Area. Smaller species that can pass through or under the perimeter fence such as the least shrew, pocket gopher, cotton rat, cotton mouse, fox, northern bobwhite, snakes, and lizards may utilize the area. The shift in vegetative community structure may also promote utilization by some raptors that hunt prey in open habitats devoid of canopy. The use of TA C-53 by wildlife is anticipated to be similar to other maintained and operational ranges on the reservation.

*Special Status Species.* A Biological Assessment (BA) of the Proposed Action evaluating potential effects on the Okaloosa darter, Eastern indigo snake, and gopher tortoise and ESA Section 7 consultation regarding potential impacts to these Federally Endangered, Threatened, and Candidate species is available in the REA Appendix C. The BA details specific conservation measures that would be required to be implemented under the Proposed Action to avoid and minimize potential impacts to each species (REA Chapter 4). The USFWS concluded that the Proposed Action is not likely to adversely affect resources protected by the ESA (21 April 2020).

- Florida Black Bear. Given their relatively large home range and significant amount of habitat that will remain outside of the Proposed Action construction area, the loss of habitat due to implementation of the Proposed Action is considered insignificant, and adverse impacts to the Florida Black bear as a result of the Proposed Action are not anticipated
- Gopher Tortoise. Per analysis in the BA, negligible adverse impacts to the gopher tortoise populations are anticipated. The Eglin Natural Resources Office will conduct a 100 percent gopher tortoise burrow survey within 30 days prior to the initiation of construction activities. Should burrows be identified during the survey, *FWC Gopher Tortoise Permitting Guidelines* (FWC 2017) would be followed for gopher tortoise burrow excavation and relocation to suitable habitat on Eglin AFB.

- Eastern Indigo Snake. In order to avoid direct impacts to or harassment of the Eastern indigo snake, Eglin will implement conservation measures described in the Eastern Indigo Snake Programmatic Biological Opinion (USFWS 2009) during construction. These measures include the inspection of gopher tortoise burrows, or other refugia where a snake could reside, and the relocation of all individuals prior to the initiation of construction activities (see Chapter 4). Per the analysis in the BA, it is anticipated that the Proposed Action is “not likely to adversely affect” the Eastern indigo snake. Thus, the requirements of Section 7 of the ESA are fulfilled for the Eastern indigo snake, and no further actions are required.
- Florida Pine Snake. There is potential that Florida pine snakes could be directly impacted by construction or operational vegetative maintenance activities. To minimize potential impacts to this species, the Eglin Natural Resources Office will inspect gopher tortoise burrows and other refugia during the pre-construction protected species survey. If found during the survey or any required gopher tortoise burrow excavations, individuals would be relocated to suitable habitat on Eglin in accordance with commensal relocation procedures contained within the *FWC Gopher Tortoise Permitting Guidelines* (FWC 2017). Due to the implementation of BMPs and their fossorial nature, negligible risk to individuals and no risk to Florida pine snake populations are anticipated.
- Okaloosa Darter. Potential direct physical impacts to the Okaloosa darter and darter habitat modifications due to erosion within the Proposed Action construction area would be prevented to the greatest extent practicable by avoiding construction or operational activities in the streams or on stream slopes as well as protecting slope interfaces from potential overland runoff from adjacent upland areas. It is anticipated that the Proposed Action is “not likely to adversely affect” the Okaloosa darter.

### **Geology and Soils (REA Section 3.4.2)**

No significant adverse impacts to geology and soils resources are anticipated as a result of implementation of the Proposed Action. Soils would be disturbed as a result of clearing up to 209 acres of vegetation to establish the Minimum Safety Buffer area, Instrument Observation Area, and access road and utility corridors. The Minimum Safety Buffer area would be completely cleared and maintained as open sand or gravel beneath the HSFTT, while the upland portions of the Instrument Observation Area would be harvested, cleared, and periodically maintained as low-growing groundcover and shrub vegetation generally not to exceed 3 feet in height. Trees in the stream bank and slope area exceeding line-of-sight height requirements would be hand cut and removed, which presently include pine species with approximately 20 percent cover in this area. A NPDES Stormwater Construction Permit (Chapter 62-621.300[4] FAC) filed with the FDEP would be required for ground disturbing activities, a Stormwater Pollution Prevention Plan would be prepared for the site in association with the NPDES permit, and implementation of relevant BMPs and procedures would minimize impacts to soils resulting from construction activities.

Due to the prevailing well-drained soil and low slope characteristics of the site, application of relevant BMPs, and hand cutting trees on slopes associated with streams, the potential impacts to soils would be negligible. Furthermore, it is not anticipated that these negligible impacts to soils would interact with other development projects or unrestored, erosional areas and cumulatively

degrade streams, especially streams designated as Okaloosa darter habitat, in the Rocky Creek watershed and beyond.

### **Coastal Zone Management (REA Section 3.4.3)**

No significant adverse impacts to coastal zone resources are anticipated as a result of implementation of the Proposed Action. A review of the 24 Florida statutes of the Florida Coastal Management Program is summarized in REA Appendix D. The Proposed Action area is fully located in upland areas, inland from Choctawhatchee Bay and Rocky Bayou. There will be no land disturbing activities on the coast or in areas directly adjacent to coastal resources. All vegetation removal and maintenance associated with the Proposed Action would occur in the flat, upland areas, and, although hydrologically connected to Rocky Bayou, impacts would be contained within the Proposed Action footprint to the greatest extent possible to minimize migration potential into the greater coastal watershed. Stream slopes would not be cleared, and impacts to the Rocky Creek tributaries within the Instrument Observation Area would be avoided to the greatest extent possible through the application of relevant buffers and BMPs. The Proposed Action would be constructed in accordance with ongoing conservation of Florida's coastal resources and is determined to be consistent with the enforceable policies of the Florida Coastal Zone Management Program. The State of Florida's final concurrence with this determination will be concluded through the FDEP ERP process. As no to negligible impacts to Coastal Zone resources are anticipated, the Proposed Action would not contribute incremental impacts that could become cumulatively significant to coastal resources in the region.

### **Water Resources (REA Section 3.4.4)**

No significant adverse impacts to water resources are anticipated as a result of implementation of the Proposed Action. Although timber harvest and regular vegetation maintenance will occur over 209 acres, due to the well-drained soils present, lack of topographical slopes on regularly managed areas, avoidance of activity in stream and wetland areas to the greatest extent possible, administration of BMPs adjacent to and within sloped areas, and minimal construction of impervious surface proposed in association with the instrument observation pads and tower footers, it is anticipated that the Proposed Action will have no to negligible impacts on surface water resources in the ROI, including wetlands, and no impacts to floodplains and groundwater.

### **Cultural Resources (REA Section 3.4.5)**

No significant adverse impacts to cultural resources are anticipated as a result of implementation of the Proposed Action. No known buried cultural resources are within the vicinity of the Project Area (Eglin AFB 2017c). If previously unknown archaeological resources are discovered during construction activities, work would be stopped immediately, the Base Historic Preservation Officer and the Cultural Resources Branch of the 96th Civil Engineer Group/Environmental Assets would be notified, and the Eglin AFB procedures for caretaking and communicating inadvertent discovery would be implemented per the Eglin AFB ICRMP (Eglin AFB 2017).

Portions of TA C-53 (but outside of the Proposed Action construction footprint) have been identified as a historic district, which was determined as eligible for listing on the National Register of Historic Places (NRHP) (Mathews et al. 1994; Bourgeois, et al. 1999; Hampton and Kennedy 2007; Meyer et al. 2000). All existing structural elements on TA C-53 that contribute to the

designation of the historic district do not occur within and thus will be avoided during construction, operation, and maintenance activities, and it is not anticipated that reactivation of TA C-53 would be out of character with the original use for which the historic district is designated.

Due to the minimal subsurface disturbance, avoidance of existing historic district contributing elements, and compatible proposed use of the range, it is anticipated that Alternative 1 would have negligible risk to encounter unknown cultural resources and no impact to the integrity of setting of the historic district during construction, operation, and maintenance activities. The Florida SHPO concurred with the determination that the Range C-53 Historic District appears to meet the criteria for listing in the National Register and that the proposed undertaking would have no adverse effect on historic properties or the Historic District (15 April 2020; REA Appendix E). As no impacts to cultural resources are anticipated, and because Eglin AFB manages all known cultural resources and characterizes and avoids impacts to unknown cultural resources through implementation of standard procedures identified in the Eglin AFB ICRMP (Eglin AFB 2017c), cumulative impacts to cultural resources are likewise not anticipated.

Native American tribes with ancestral ties to installation lands include the Miccosukee Tribe of Florida, Muscogee (Creek) Nation, Poarch Band of Creek Indians, Seminole Tribe of Florida, Seminole Nation of Oklahoma, and Thlopthlocco Tribal Town. Eglin AFB operates under separate Memorandums of Understanding between the Muscogee (Creek) Nation and Thlopthlocco Tribal Town and is in the process of establishing a Programmatic Agreement (PA) with Muscogee (Creek) Nation, Poarch Band of Creek Indians, Seminole Nation of Oklahoma, and Thlopthlocco Tribal Town. The proposed PA will relieve the consultation requirements for proposed actions that do not affect pre-contact archaeological sites. Additionally, the Miccosukee and the Seminole Tribe of Florida have stated their preference to not be consulted about projects with no resources present. However, Eglin provided the tribal liaisons who have not concurred with the terms of exemption stated in the forthcoming PA information concerning activities that have no adverse effect to pre-contact properties due to the nature of these activities not being on the list of exempted actions. According to the Eglin AFB Installation Tribal Relations Officer, Ms. Maria Rodriguez, Eglin's standard operating procedures for inadvertent discovery has been deemed sufficient by all tribal nations with ancestral ties to Eglin AFB.

### **Safety (REA Section 3.4.6)**

No significant adverse impacts to safety are anticipated as a result of implementation of the Proposed Action. Due to Buffer Area closures during testing events, the Proposed Action is not anticipated to have any effect on public safety.

This area is in a known unexploded ordnance (UXO) area and may require an Explosive Safety Submission approved by the DoD Explosive Safety Board prior to any ground intrusion by construction, operation, and maintenance personnel. Intrusion includes removal of trees and ground disturbance by heavy equipment, which will require clearance by qualified UXO personnel. Once the area is evaluated and cleared by appropriate personnel it will be determined as low safety risk to proceed with construction, operation, and maintenance activities. If UXO are discovered during clearing, construction, operation, and maintenance, the responsible Safety authority will immediately reassess the risk level and appropriate UXO construction support required.

### **Hazardous Materials and Waste, Toxic Substances, and Contaminated Sites (REA Section 3.4.7)**

No significant adverse impacts to the management of hazardous materials and waste, toxic substances, and contaminated sites are anticipated as a result of implementation of the Proposed Action.

*Construction.* Due to the low volumes of Hazardous Materials (HM) and Hazardous Waste (HW) that would be associated with the Proposed Action, minimal risk of HM spill or seepage, and the adherence to all applicable management plans by Eglin AFB reservation staff and maintenance contractors, it is not anticipated that these resources would be impacted by the implementation of Alternative 1. As needed during construction and maintenance operations, all HM would be used and stored on site by the maintenance contractor in accordance with the *Eglin AFB HWMP* (Eglin AFB 2019), *SPCC* (Eglin AFB 2011), and other Federal, State of Florida, and DoD/USAF HM management protocols.

*Operation.* The Proposed Action would release and burn up to 810 flares per year, most of which are anticipated to be fully consumed/combusted in the air. When flares are deployed, the spent aluminum casings are generally retained in the launching device, although some debris and trace elements may fall to the ground or become airborne. Although flares could potentially result in the release of trace amounts of toxic substances as they combust or decompose, the Proposed Action would have negligible potential to cause accumulation or migration of flare constituents as range debris would be managed under *EAFBI 13-212, Range Planning and Operations* (Eglin AFB 2015). Like all Eglin land ranges, the potential for toxic material releases are reduced by periodically removing test debris from the test area. The Eglin Operations Maintenance Services contractor maintains processes and personnel who execute removal of range/munitions residue within the Eglin land range test areas. The procedure ensures that all material processed is free of hazards to human health and safety and that all wastes are managed as required by applicable Federal, state, and local laws and DoD and Air Force procedures.

### **Air Quality (REA Section 3.4.8)**

No significant adverse impacts to air quality are anticipated as a result of implementation of the Proposed Action. The smoke and emissions produced by flares, and volume of the components thereof, are too small to create a concern with respect to National Ambient Air Quality Standards compliance. Some flares are ejected by pyrotechnic devices or contain mixtures or initiation devices that contain chromium and/or lead compounds. Both chromium and lead are listed as Hazardous Air Pollutants under the Clean Air Act. The results of health screening assessments for flare use determined that up to 67,000 flares can be released in a peak hour, and, for a typical target area of 10,000 acres, 220,000 flares could be released annually, without significantly increasing short- or long-term health risks from hexavalent chromium or lead (Air Force 1997). Given the comparatively small number of flares anticipated to be released annually under the Proposed Action (810), emissions from the proposed release of flares was not quantified.

Emissions from construction equipment used to clear the Instrument Observation Area and associated with the short-term and intermittent operational use of transport and maintenance equipment would be minimal and temporary in nature; thus, it is anticipated that the Proposed Action would have a negligible impact on air quality. Additionally, it is not anticipated that the small emissions associated with the Proposed Action would intermingle with existing emissions at Eglin AFB or past, present, or future actions in the region in a way that would cumulatively contribute to the degradation of local air quality or cause Eglin AFB to violate its air permit.

#### **Management Actions (REA Chapter 4)**

All personnel involved in construction activities and testing operations at TA C-53 are expected to implement conservation measures to reduce or eliminate the potential for adverse impacts on protected species and their habitats. General conservation measures and those specific to the Okaloosa darter, Eastern indigo snake, and gopher tortoise as determined through consultation with the USFWS in the BA are outlined in REA Section 4.1.

#### **Public Notice**

A notice was published in the *Northwest Florida Daily News* on [insert date], inviting the public to review and comment on the draft REA and draft Finding of No Significant Impact. The public comment period closed on [insert date], and [insert number] public comments were received. State agency correspondence indicated [insert summary]. Copies of agency correspondence and a copy of the public notice can be found in REA Appendix A, Public and Agency Participation.

#### **FINDING OF NO SIGNIFICANT IMPACT**

Based on my review of the facts and analyses contained in the attached REA, conducted under the provisions of NEPA, CEQ regulations, and 32 C.F.R. Part 989, I conclude that implementation of the projects identified in the REA would not have a significant environmental impact, either by themselves or cumulatively with other projects at Eglin AFB. Accordingly, an Environmental Impact Statement is not required. The signing of this Finding of No Significant Impact completes the environmental impact analysis process.

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MARK A. SCHLUETER, NH-04  
Deputy Director, 96<sup>th</sup> Civil Engineer Group

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DATE