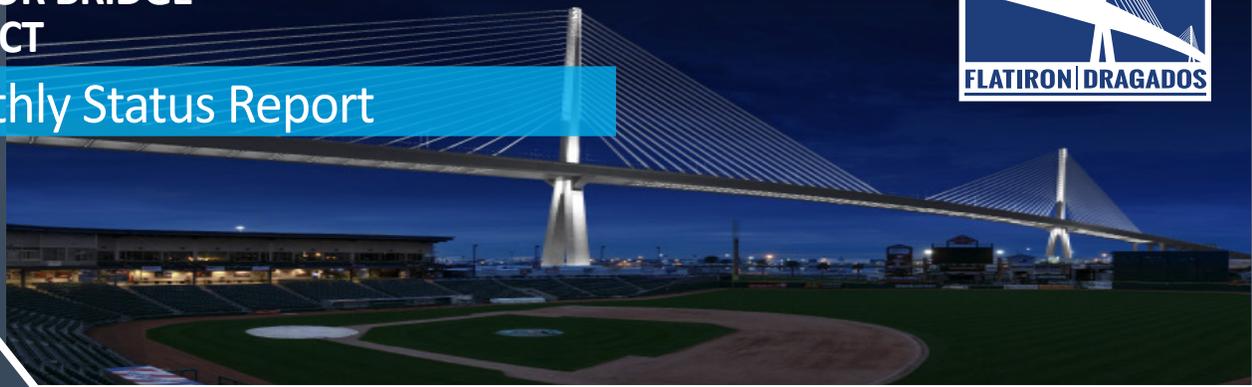


US 181 HARBOR BRIDGE PROJECT

Monthly Status Report



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April 2022

Earthworks on the Harbor Bridge Project (HBP)

Earthworks are germane to the significant roadworks and structure progress on the HBP this spring. Our reduce, reuse, and repurpose motto requires strategic planning, chemical analysis, and engineering expertise to execute a reduced carbon footprint Project-wide. Environmental conservation is prevalent in using recycled materials in ground preparation, roadways, embankments, and retaining walls. Sustainability is commonplace around the south interchange and along US 181 at North Beach, where crews utilize excavated soils, shell base, demolished concrete, and milled asphalt to build new roads and structures.

Several examples include: 1) 100% of the existing concrete removed from demolished structures is sent offsite for processing. The recycled aggregate or rock is mixed with cement powder and water to create a cement treated base (CTB). The CTB is tested multiple times before and during placement to ensure stability at a minimum of 100 psi. Along with poured concrete and rebar, recycled concrete is also placed as another layer between embankment dirt and soil nail walls for stabilization. 2) Shell base excavated from old mainlanes is stockpiled and spread for temporary construction or heavy equipment haul roads inside the work zone. 3) Asphalt pavement scraped from the old road surface is milled into a fine granular and is placed between embankment dirt and mechanically stabilized walls (MSE), creating a retention zone to prevent permeation. Recycled asphalt is also used in maintaining the Pre Cast Yard construction access and roadways. New mainlane pavement is treated with soil and flex base stabilization, and the hot mix asphalt design utilizes milled asphalt from excavated roads within the Project. 4) Over 100,000 cubic yards of dirt from the former IH 37 and SH 286 connector ramp embankments are being used for new IH 37 bridge abutments and embankments. 5) Topsoil from old ramp embankments is run through a sieve to strip debris, and the rich dirt is used for seeding and saved for future landscaping plans.

Each type of repurposed material must be sampled and run through a process called proctoring to ensure optimum moisture content and plasticity index (PI) to meet compaction standards. As a result, some materials, such as shell base with a lower PI or dense clay soil with a higher PI, are not used in embankment or new mainlane construction due to how it expands with moisture.

Aside from earthworks being in the forefront every day, the HBP is honored by the subcontractors who planted trees on Earth Day to memorialize our historic Project.



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