Long Term Dry and Wet Effects on the Engineering Behavior of Subgrade Soil with High Amount of Soluble Salts using Low Cost Stabilizers

Original Article, D74
Ibrahim S.F., Ibrahim M.S., Abd hak H.
ABSTRACT: The performance of pavements depends upon the quality of subgrades. A stable subgrade and properly draining pavement help to sustain the load of heavy vehicles. The CBR value of soil with different amendments like 2.5\% CaCl\(_2\), 5\% lime, 6\% RHA, 6\% kaolin increases by about (48\%, 66.1\%, 36.1\% and 38\%) respectively. While the CBR value of soil with 5\% saw dust decreases to (29\%). The CBR value of soil increases more when the modified proctor is conducted, the results of soaking showed reduction in both CBR value and T.S.S with the time.

Keywords: Strength, Rice husk ash, Total soluble salts, Durability, Calcium chloride

3-D Underflow of a Sluice Gate at a Channel Inlet; Experimental Results and CFD Simulations

Original Article, D75
Calomino F. and Lauria A

ABSTRACT: The underflow of a sluice gate is well known when the gate is set into a channel. After many years, discharge coefficients in a more extended range of relative openings were computed for use in the practice.

Keywords: Channel Inlet, Sluice Gate, 3-D Underflow, Discharge Coefficients, CFD Simulations
The Hydraulic Investigation of Perforated-Cylindrical-Intake Structure

Abstract:
Water surface level regulation and deviation of a constant value of discharge into the side channel, is the basis of the ... be possible to measure and control the intake discharge precisely, installing a counter and a valve at the side channel.

Key words: Cylindrical weir-gate; Over-under flow; Intake; Orifice.

Experimental Study on the Seismic Behavior of Retrofitted Concrete Infill

Abstract:
Nowadays, Infill is widely used in retrofitting structures. Low sensitivity to construction quality is one of the ... and increases the area of the hysteresis loops of the compound frames and consequently increases energy absorption.

Key words: Concrete Infill, Frictional Sliding Fuse, Retrofitting, Strengthening.

Structural Elements of Urban Squares from Tradition to Modernity in Iran: A Comparative Study of Isfahan’s Naghsh-e-Jahan Square and Tehran’s Toop-khaneh Square

Abstract:
Modernism, as one of the main achievements of man, has been the source of various changes in the spatial structure of ... vehicles, urban space of squares can be revitalized, and defects in modernist modifications of squares can be decreased.

Keywords: Structural Elements, Square, Tradition, Modernism, Naghsh-e-Jahan, Toop-khaneh.

Evaluation of Nonlinear Static Analysis for Special Moment Resisting Frames
ABSTRACT: In order to prevent extensive devastation and death toll in strong earthquakes, rehabilitation of existing structures was proposed. In this paper, the seismic rehabilitation of existing buildings to higher performance levels was studied. For this purpose, a building was designed and numerically evaluated using both the linear and nonlinear static methods. The results indicated that the nonlinear static method provided a more accurate evaluation of the building's behavior and was more appropriate for use in taller buildings.

Key words: Nonlinear Static Method, Special Moment Resisting Frame, Seismic Rehabilitation, Performance-Based Design

ABSTRACT: In this paper, a comparison was done between the coefficient of behavior of steel moment frame systems with thin steel shear walls and divergent braced walls. The results showed that the steel shear walls had better performance than the divergent braced walls.

Key words: Coefficient of behaviour, Thin plate steel shear walls, Divergent brace.

ABSTRACT: Sistan River, being located on the tail water of Helmand's very extensive basin, is prone to deposition of fine sediments. In this study, the impact of Niatak Lateral Spillway performance on the process of erosion and sedimentation of Sistan River was investigated. The results showed that the gates had a significant effect on the erosion and sedimentation process.

Key words: Sistan River, Niatak Spillway, Erosion, Sedimentation, HEC-RAS model

ABSTRACT: In this experimental study, the effect of vortex breakers on the discharge coefficient for the shaft spillway with sharp edge and wide edge was investigated. The results showed that using blade vortex breaker increased the spillway discharge coefficient, and the increase was more significant for the sharp edge.

Key words: Vortex, Shaft Spillway, Vortex Breaker Plate, Hydraulic Model

Zoning of Flood Caused by Farrokhi Dam Breaking Of Qaen South Khorasan, Iran
Due to the very high losses caused by breakage of dams, especially with regard to the dams that are constructed in the... to necessary to maintain readiness for dealing with crisis situations, the separation of risk areas is essential.

Keywords: Dam Break, Flood Zoning, Farrokhi, HEC-RAS

Consciously design of the buildings and human residences especially dwelling, with due attention to energy problem can... nature and each other have closer relationship that to this manner, man psychic comfort condition give to very extents.

Keywords: Sustainable Development, Smart Building, Design Purposefully