



DeCordova Bend Dam Trifecta Project

***Presented by
Mike McClendon
Upper Basin Regional Manager***

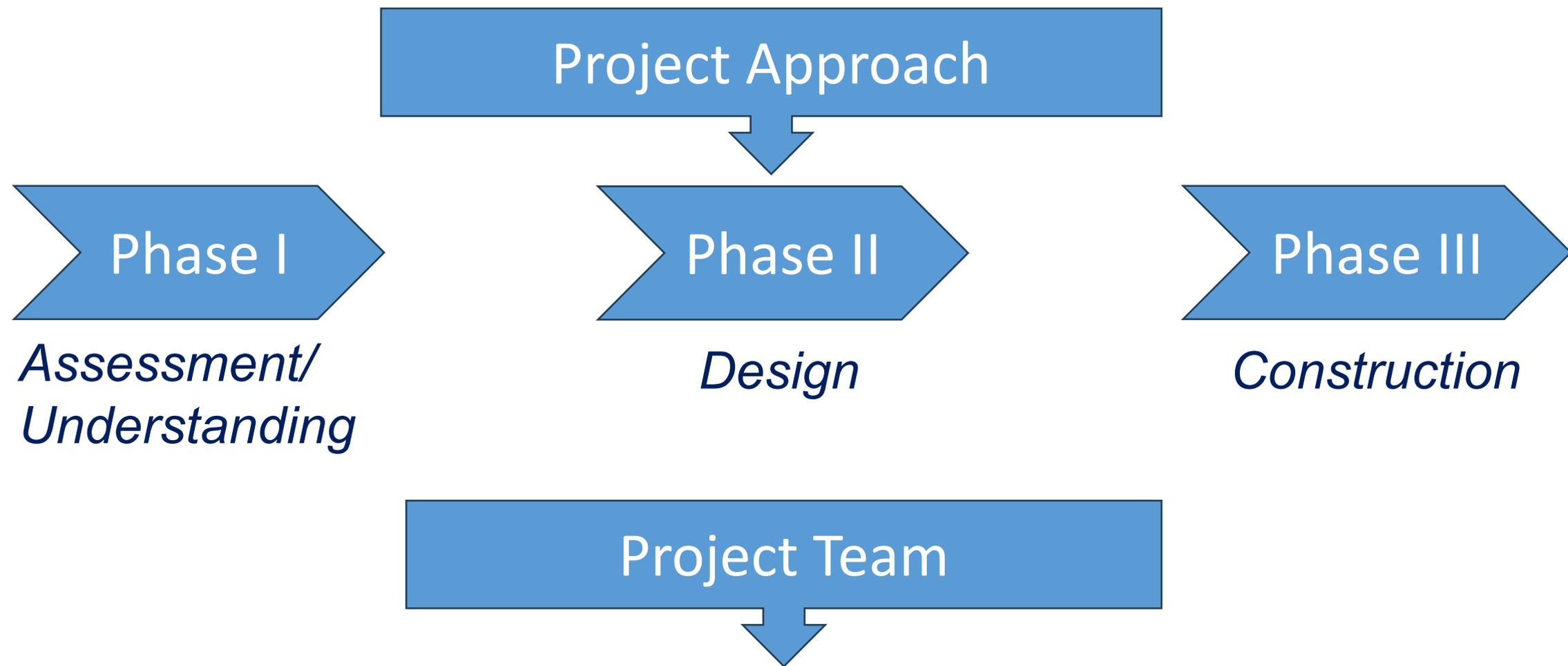


Project(s)

1. Stop Log Hoist System
2. Buttress 1/44 and Embankment Retaining Wall Repairs
3. Comprehensive Tainter Gate and Tainter Gate Hoist Evaluation

Purpose

The Trifecta Project incorporates multiple efforts to facilitate operational and structural improvements to DeCordova Bend Dam which achieve and/or extend the service life of the structure.



Walter P. Moore
Gannet Fleming Inc.
US Underwater (Diving)
VCS Engineering (Corrosion)
Fugro (Geotechnical)

STV (Lidar & Survey)
D. Hertel & Associates (Cost & Constructability)
Bridge Diagnostics, Inc. (Tainter Gate Testing NDE)
Universal Construction Testing (Materials Testing)



Non-destructive Examination (NDE) Buttresses, Piers, Bridge Deck, Retaining Walls



- Visual Observations (Access via Walking, Ropes, Diving)
- Ground Penetrating Radar (GPR)
- Concrete Ultrasonics (Impact Echo & MIRA Tomography)
- Hammer Sounding
- High-Resolution Imagery

Materials Testing



- Concrete Cores (Petrography / Chlorides / Carbonation) 4"
- Concrete Cores (Strength) 6"
- Rebar Sampling (Degradation, Measuring, Cross-Sectional, Yield Strength)



Inspection / Ops Testing / (NDE)
Tainter Gates / Stop Logs



- Visual Observation/Inspection (Access via Walking, Ropes, Stop Log, Diving)
- Strain Gauge Test
- Trunnion Pin & Anchor Test
- Corrosion Test

LiDAR Survey



- Assess structure geometry/dimension vs. record documents for structural analysis and future construction drawings



ENGINEERING TASKS / SCHEDULE / COST

Phase I (Tasks 1/2/2A/2B)	Duration	Cost
<i>Task 1: Data Collection/Review & Workshops</i>		
Record Document Review	Month 1	\$449,873
BRA Staff Interview Workshop	Month 1-2	
Existing Electrical & Communication Infrastructure Review	Month 1-2	
Risk Register Development & Workshop	Month 2-3	
Data Collection Summary Report	Month 2-4	
<i>Task 2: Condition Assessment</i>		
Condition Assessment Preparation/Planning/Coordination	Month 3-4	\$312,356
Reinforced Concrete NDE, Steel NDE, & Materials Testing	Month 5-10	\$446,112
Reinforced Concrete Assessment & Supplemental NDE	Month 5-11	\$147,925
Tainter Gate Performance Testing & Bridge Load Rating Testing	Month 5-7	\$467,898
Tainter Gate, Tainter Gate Hoists Equip., & Stop Log Assessments & Supplemental NDE	Month 7-10	\$286,893
Supporting Services Condition Assessment & Reporting (Lidar, Diving, Ropes, Geo-Tech, Corrosion, Constructability, Materials)	Month 5-6	\$345,011
Condition Assessment Reporting	Month 11-14	\$419,643



ENGINEERING TASKS / SCHEDULE / COST



Phase I (Tasks 1/2/2A/2B)	Duration	Cost
<i>Task 2A: Existing Structural Capacity Analysis</i>		
Existing Structural Capacity Analysis (Bridge Deck, Tainter Gates, TG Hoist Platform, Buttress, Piers)	Month 8-12	\$484,167
Existing Structural Capacity Analysis Approach/Findings Workshops	Months 9 & 14	
Baseline Structural Assessment Summary Report	Month 12-16	
<i>Task 2B: Phase II Planning Workshop & Reporting</i>		
Phase II Planning Workshop (Findings, Risks, Options, Recommendations, Design Criteria, Sequencing)	Month 14	\$102,746
Workshop Reporting & Presentation	Month 14-16	
Phase I Total		\$3,462,624



“BE IT RESOLVED that the Board of Directors of the Brazos River Authority hereby authorizes the General Manager/CEO to execute a Professional Services Agreement with Walter P. Moore to perform engineering services for the DeCordova Bend Dam Trifecta Project in an amount not to exceed \$3,808,886.”



Brazos River Authority



Brazos

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RIVER AUTHORITY