NORTH TEXAS MUNICIPAL WATER DISTRICT

Regional Service Through Unity… Meeting our Region's Needs Today and Tomorrow



BOIS d'ARC LAKE UPDATE

Fannin County Commissioners Court Briefing

June 4, 2019

Cesar Baptista, P.E.

Assistant Deputy of Engineering and Construction



FANNIN COUNTY COMMISSIONERS COURT UPDATE

AGENDA

- Construction Activities / Construction Pictures
  - Archer Western – Dam & Intake Structure/Raw Water Pump Station (at the dam site)
  - Resource Environmental Solutions (RES) – Full service provider for mitigation
  - Garney Constructors – Leonard Water Treatment Plant
  - Garney Constructors – Treated and Raw Water Pipeline
  - Austin Bridge and Road – FM 897 and County Roads & Bridges



BOIS d'ARC LAKE UPDATE

CMAR 1 – Dam and Intake Structure

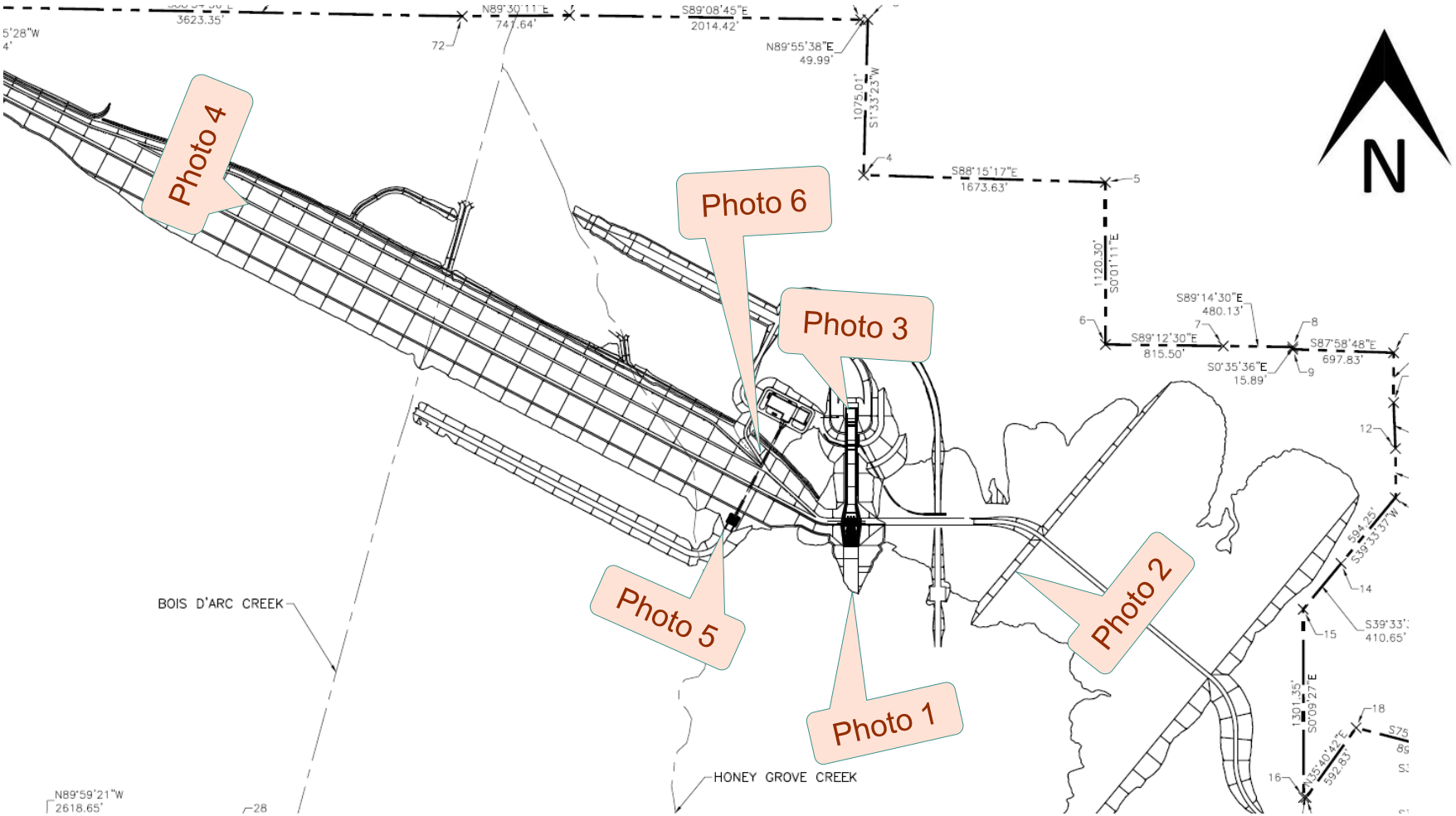
- Dam activities
  - April was a productive month – exceeded production goals
  - Record production day was 19,000 cy placed
  - Work continued on intake tower walls and conduit placement/reinforcement
  - Clearing operations complete on all available property

- TSR activities
  - Procurement completed and on May Board meeting for authorization
  - Five proposers for embankment work package.
  - Partial GMP of **$44,687,897.67**
  - Construction anticipated to start in mid-June

- May Board authorization sets Final GMP for CMAR 1 - $216,714,595.64



CMAR 1 PHOTOS LEGEND



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DAM EMBANKMENT CROSSSECTION WEST OF BOIS D'ARC

= Zone 1 Material (Fat Clay, Impervious Core)

= Zone 2 Material (Leaner Clay, Cohesive Random)

= Zone 3 Material (Sandy Clay, Low Plasticity Random)

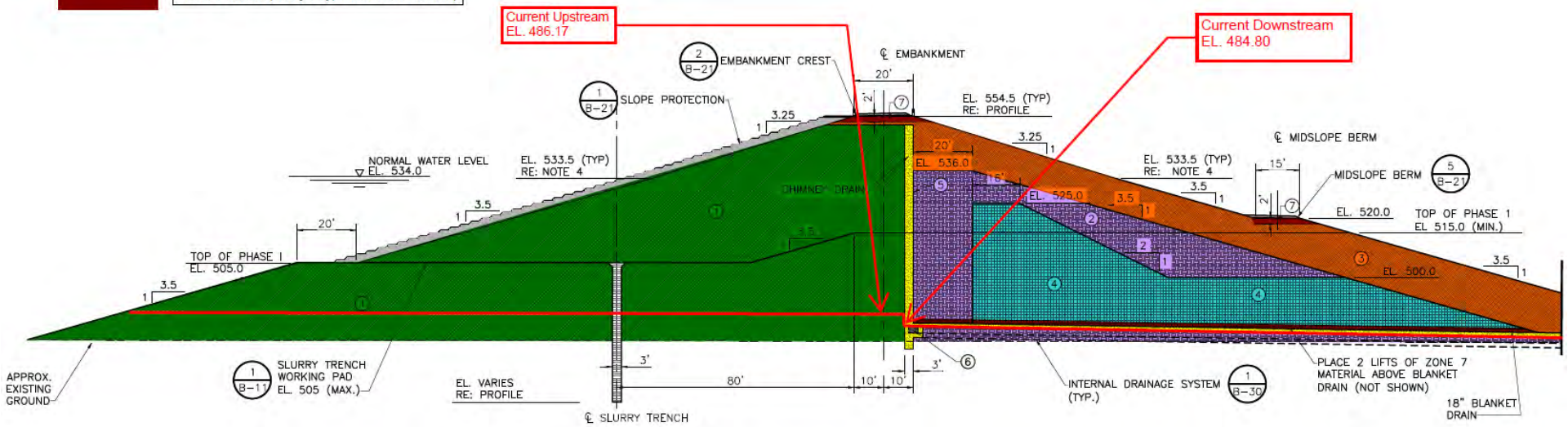
= Zone 4 Material (Mixed Clay, Random Fill)

= Zone 5 Material (Sand, Sand Filter)

= Zone 6 Material (Gravel, Gravel Drain)

= Zone 7 Material (Sandy Clay, Cohesionless Random)

West of Bois d'Arc Creek Current Embankment Fill Elevations



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DAM SERVICE SPILLWAY CHUTE/STILLING BASIN & RWPS (PHOTO 1)

RWPS

Stilling basin

Chute

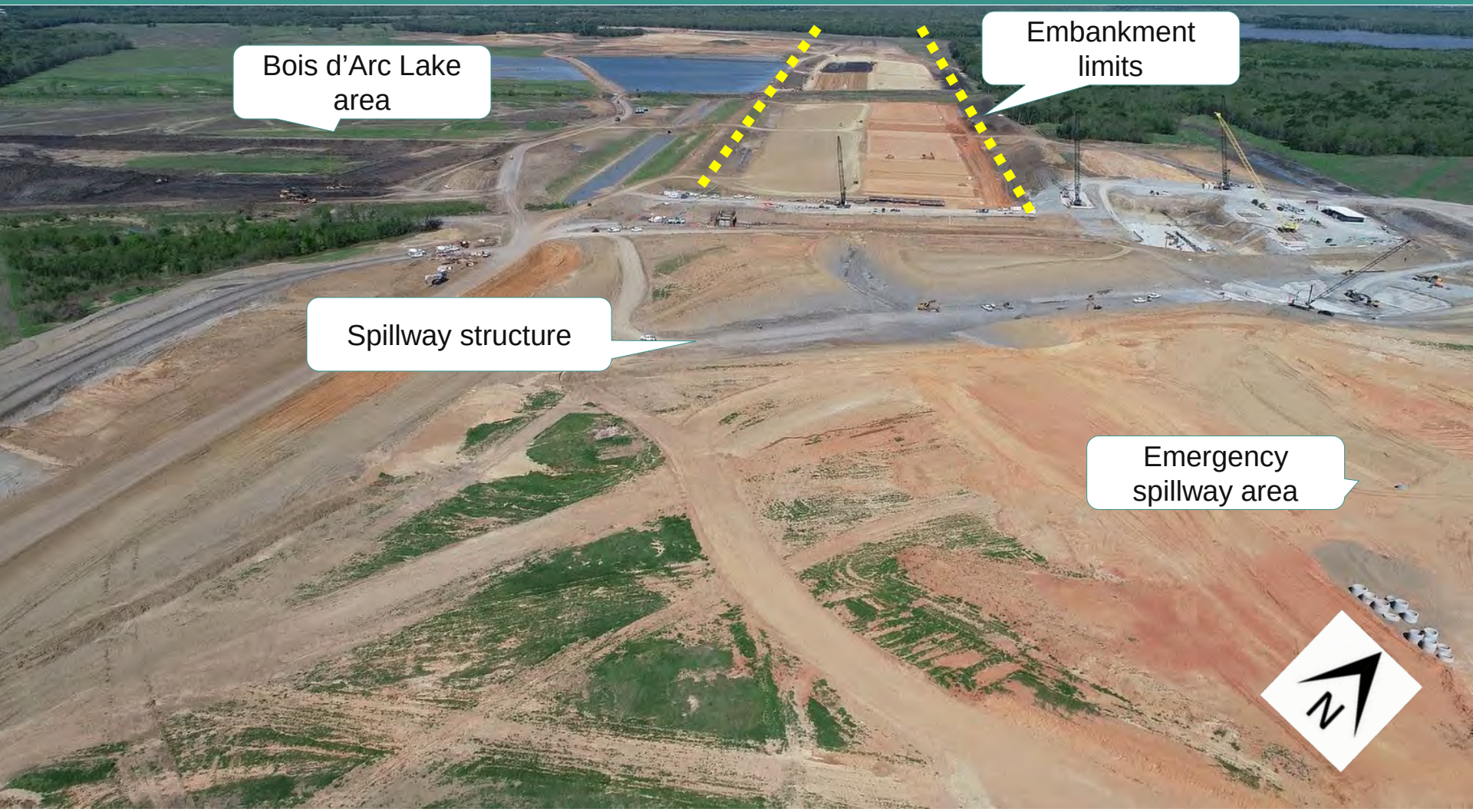
N

Spillway

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DAM EMBANKMENT LOOKING WEST (PHOTO 2)



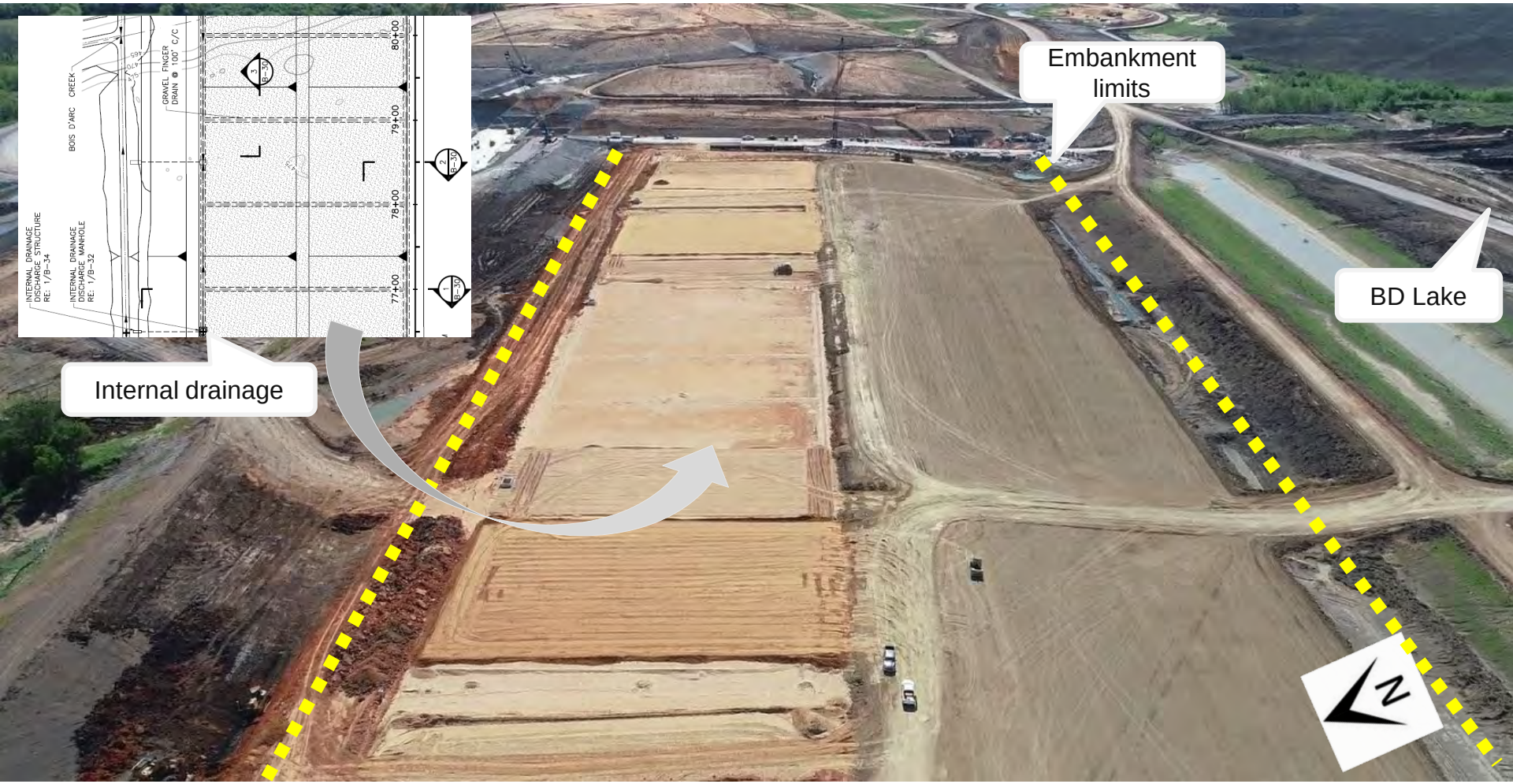
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DAM SERVICE SPILLWAY PROGRESS (PHOTO 3)





DAM EMBANKMENT LOOKING EAST AND DRAINS (PHOTO 4)



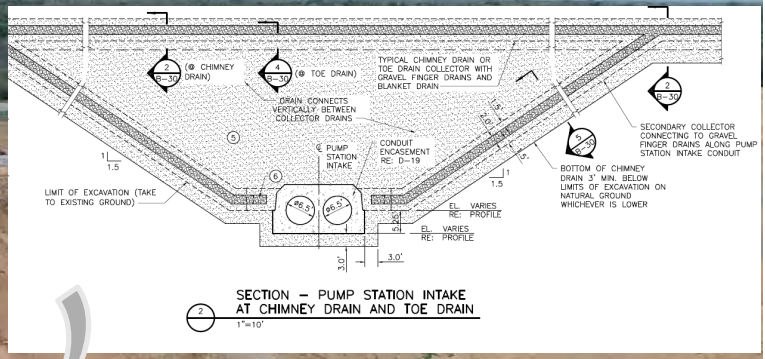
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CMAR 1 INTAKE TOWER LOOKING TO RWPS (PHOTO 5)

Raw Water PS

78-in raw water pipelines to PS

Intake tower



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INTAKE TOWER AND 78-INCH PIPES LOOKING SOUTH (PHOTO 6)



Looking upstream towards intake structure



BOIS d'ARC LAKE UPDATE

CMAR 3 – Leonard Water Treatment Plant, RWPS & HSPS

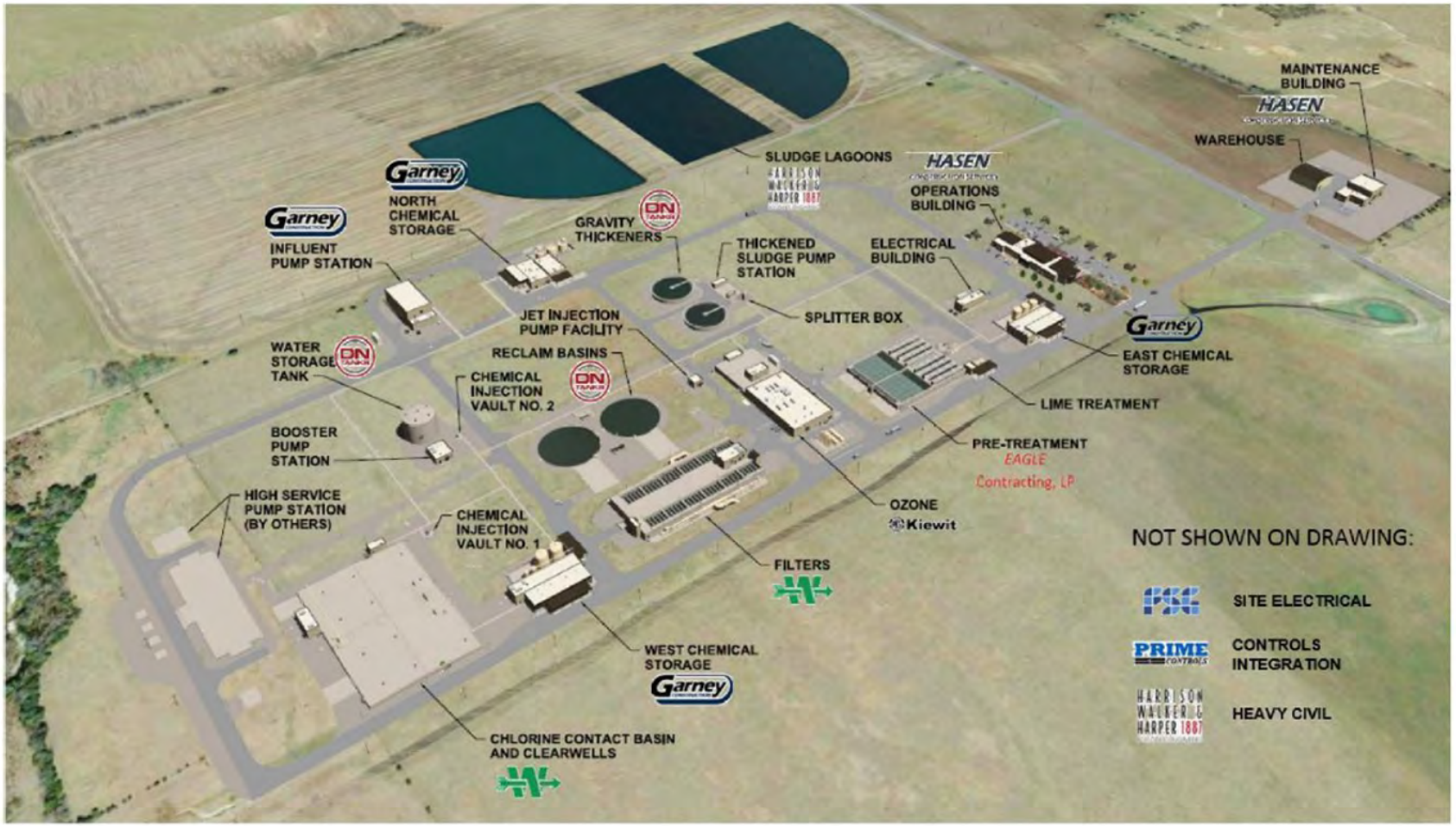
- Leonard Water Treatment Plant
  - Mobilization for all contractors is nearing completion
  - Mass earthwork is nearing completion and all but two facilities have been released to building sub-contractors
  - Rock anchors at clearwell are underway
- Raw Water Pump Station
  - Excavation is complete and foundation work is on-going
  - Rock anchor installation is complete
  - Work on alcove for sump pumps underway
  - Access road to the pump station site completed
- High Service Pump Station
  - Contracting and procurement stage

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LEONARD WATER TREATMENT PLANT PROGRESS PHOTOS

Leonard Water Treatment Plant





LEONARD WATER TREATMENT PLANT PROGRESS PHOTOS



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Operations building slab reinforcement



Clearwell Rock anchors and wetwell reinforcement



BOIS d'ARC LAKE UPDATE

CMAR 5 – Raw Water Pipeline and Treated Water Pipeline

- Raw Water
  - Tunneling and Right of Way preparation began April 1
- Treated Water
  - Procurement stage and ROW acquisition



TUNNEL INSTALLATION FOR 90-INCH RAW WATER PIPE



RWPL tunnel excavation



BOIS d'ARC LAKE UPDATE

CMAR 4 – FM 897 and County Roads

- FM 897
  - Tie-in to US 82 construction is underway
  - Continued work on bridge superstructure
  - Detour roads being constructed to prep for main FM 897 construction
  - Earthwork on north and south ends of bridge continued
- County Roads and Bridges
  - Right-of-way acquisition complete for all but one site
  - Site and utility work continues at four sites
  - Structure and roadway construction continues at three sites

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FANNIN COUNTY ROAD AND BRIDGE IMPROVEMENTS

Proposed Fannin County road plan

Temporary road closures under construction:

CR 2680 (Site 1)

CR 2610 (Site 2)

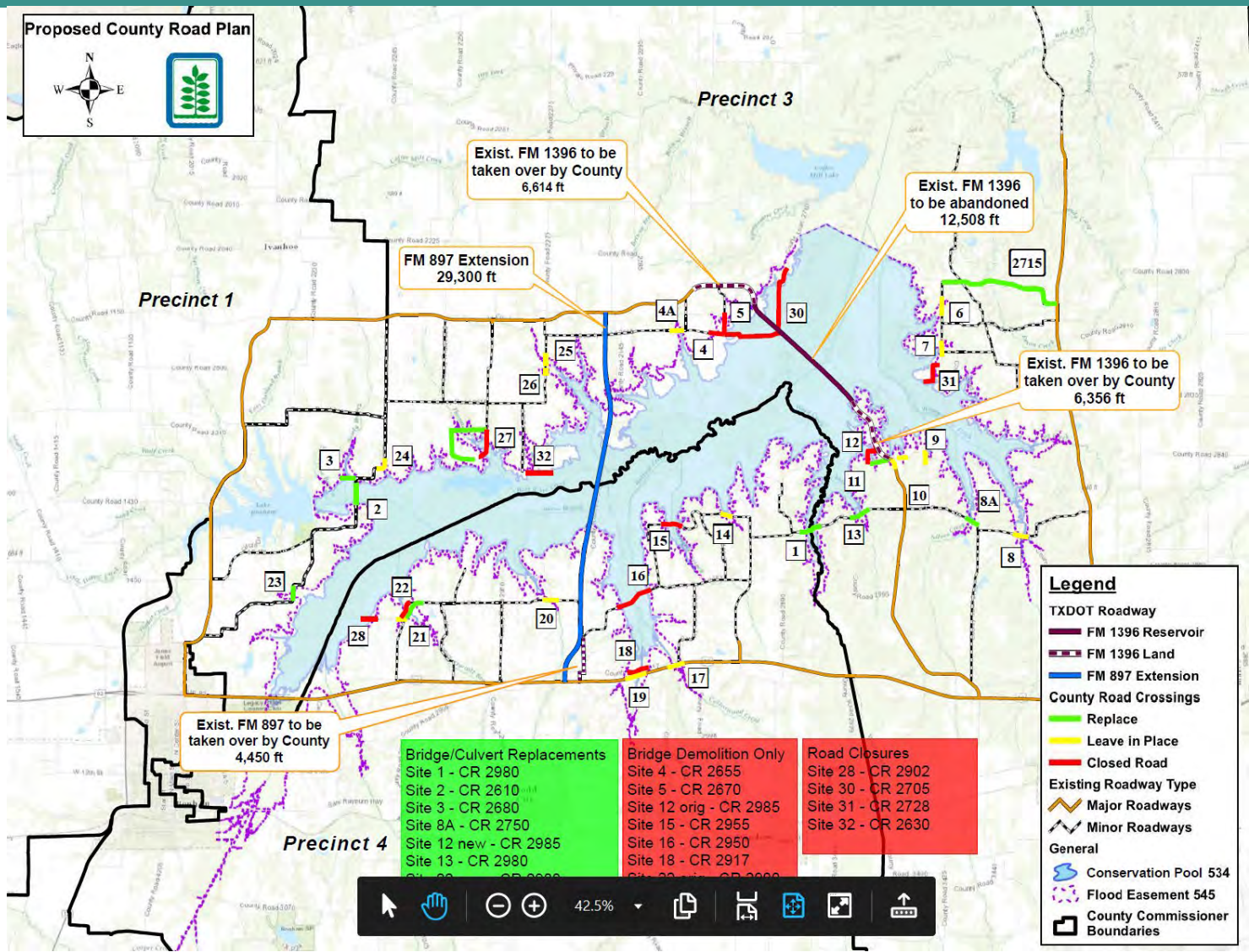
CR 2610 (Site 23)

CR 2700 (dam)

Rerouted roads under construction:

CR 2680 (Site 3)

CR 2985 (Site 12)



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FM 897 PROGRESS PHOTOS

Looking north to Lannius from CR 2915





BOIS d'ARC LAKE CONSTRUCTION PHOTOS

CMAR 4 – Austin Bridge & Road (FM 897)



FM 897 column forms installed prior to pour



ABR - FM 897 PROGRESS PHOTOS



FM 897 earthwork on north end of bridge

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FANNIN COUNTY ROAD AND BRIDGE IMPROVEMENTS

CR 2985 Site 12 Culvert bridge complete

Subgrade preparation for flex base



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FANNIN COUNTY ROAD AND BRIDGE IMPROVEMENTS

CR 2610 Site 23
Unnamed tributary of Bois d'Arc Creek embankment and abutments





FANNIN COUNTY ROAD AND BRIDGE IMPROVEMENTS



CR 2680 (Site 3) – Sand Branch temporary crossing installed. Ready for drilled shafts



FANNIN COUNTY ROAD AND BRIDGE IMPROVEMENTS

CR 2610 (Site 2) – Timber Creek

Embankment looking north





FANNIN COUNTY ROAD AND BRIDGE IMPROVEMENTS

CR 2610 (Site 23) – ready for beams.

Beams were set 5/17/2019



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