CITY OF TULSA

WATER AND SEWER
Engineering Design

DATE:
April 10, 2026

TO:
Plan Holders
Contractors

FROM:
Jenna Richardson
918-596-9637
jennarichardson@cityoftulsa.org

EMAIL TRANSMITTAL

ADDENDUM NO. 1

PROJECT NO. TMUA-W 25-08 YAHOLA TERMINAL STORAGE RESERVOIR IMPROVEMENTS

Number of pages: 12

All addenda to the contract documents should be denoted on the last page of the Proposal in the space provided.

Thank you,
Contract Administration

CITY OF TULSA

WATER AND SEWER
Engineering Design

DATE:
April 10, 2026

ADDENDUM NO. 1
TO
PROJECT NO. TMUA-W 25-08 YAHOLA TERMINAL STORAGE RESERVOIR IMPROVEMENTS

This Addendum No. 1 consisting of eighteen (18) clarifications and four (4) items, submitted by Keithline Engineering Group, PLLC, is hereby made a part of the Contract Documents to the same extent as though it were originally included therein and shall supersede anything contained in the Plans and Specifications with which it might conflict. **All addenda to the contract documents should be denoted on the last page of the Proposal in the space provided.**

This Addendum No. 1 consists of the following:

1. The attached documents list the detailed items that have been modified in Addendum No. 1. These documents shall be inclusive and apply to this project.

All other provisions of the Plans and Specifications shall remain in full force and effect.

CITY OF TULSA

Eric Lee
Director

HAS/~~TGP~~/CW/JR/kt

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WWW.CITYOFTULSA.ORG

KEITHLINE ENGINEERING GROUP, PLLC

REG. PROFESSIONAL ENGINEERS, OKLAHOMA
Member of NSPE, ASCE, AWWA, ACI, OFMA, ASDSO, ACEC

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TULSA, OKLAHOMA 74133
Main: 918 369.7911 / C: 918.520.0069
Email: dan@KEngineering-US.com

Yahola Terminal Storage Reservoir Improvements
TMUA-W 25-08

ADDENDUM NO. 1, dated April 8, 2026

This Addendum No.1, consisting of modifications hereby made part of the Contract Documents to the same extent as though they were originally included therein, and shall supersede anything contained in the Plans and Specifications with which they might conflict.

CONTRUCTION PLAN REVISIONS:

1) Sheet 4. Project Scope #1. Change the text "SLUICE GATE" to "SLIDE GATE".
2) Sheet 2-55. Below the OKIE811 logo, add the text "SCALES ON THIS SHEET ARE FOR FULL SIZE SHEETS UNLESS NOTED OTHERWISE".

TECHNICAL SPECIFICATION REVISIONS:

1) SECTION 31 23 19 – Dewatering. Under 1.4.A. Delete the text "Delegated design for dewatering system, prepared by or under the supervision of a qualified professional engineer signed and sealed plan."

SUBMITTED CONTRACTOR QUESTIONS WITH ANSWERS:

Q1: Is the Handrail on top of the berm gate structures need to be aluminum?

- Response: Technical Specification 05 52 00 calls out galvanized steel for handrail components.

Q2: On sheet 12 & 20, I am counting 76 FRP manhole steps. The bid form shows 59.

- Response: Sheet 20 does not show them all because it is an elevation view. Sheets 11 & 19 shows the manhole steps correctly which has 28 on the East Gate Structure and 31 on the West Gate Structure.

Q3: Regarding bid item #10, I believe you have the quantity of the sloped channel walls included in this bid item as well when it shows it should be in bid item #12.

- Response: Bid Item #10 (Class AA Concrete) which includes channel, tower, and ACB Terminations. This is shown correctly on the pay item quantities (sheet 3) and summary tables (sheet 6). This is same for Bid Item #12 (Epoxy coated reinforcing steel).

Q4: Do the wing walls that are sloped at the structure need to be in bid item #10 or bid item #11? Is there a quantity or scale bust on bid item #11? With the channel slab sloped walls and the sloped wing walls, I am coming up with a little less than half of what you show.

Response: The channel, tower, tower wingwalls are to be Class AA Concrete. Class A Concrete is to be used to reconstruct concrete slope walls on the berms. The quantity shown Pay Item #11 (Class A concrete) is for installation of concrete slope walls on the berm within the PROJECET EXTENTS as identified on the plans. Tower bottom slab, tower walls, tower top slab, tower interior slab, tower wingwalls, tower apron, channel curtain wall, channel bottom slab, channel walls, and channel berm wall are to be Class AA Concrete. Slope Walls on the berm are to be Class A Concrete as shown on Sheet 33 typical.

Q5: What Bid Item does pay note A19 refer to?

- Response: Pay note A19 refers to the shaft extension stem which is referenced in Pay Item 46. See Detail 1 on Sheet 41.

Q6: Once the city dewaters all three cells, where will the contractor be able to discharge any ground water to once we are building the structures?

- Response: The contractor discharges the ponding water directly into any reservoir cell.

Q7: Will there be any kind of permits the contractor will need to provide for this project?

- Response: No permits required. This has been verified with ODEQ, OWRB, and COT.

Q8: Regarding the demo of the existing 20" CIP lines at the splitter box in add alt 1. Are your thoughts on this to cut out the wall around the two existing lines and then form and pour back around the new 24" line going in are the existing 20" pipe penetrations wall sleeves? Or are they casted into the wall with wall collars?

- Response: Yes. Remove the existing concrete box top, cut two existing pipes out of the existing wall, install new 24" DIP with wall collar, and install new concrete box top w/ lifting hooks. The internal composition of the existing splitter box and existing construction methods is unknown. See the notes on Sheet 41.

Q9: Regarding the slope walls bid item, does the placement of the concrete slope protection need to be in the slope walls bid item?

- Response: Pay Item 11 (Class A Slope Walls) is concrete slope protection as shown on Sheet 33.

Q10: Can a geotechnical report be provided for this project?

- Response: Yes, the geotechnical investigation dated 3/10/2026 can be found on the city website for the Contractors to download with all bid documents. It is contractors' responsibility to collect soil for proctors and test for compaction as indicated in Tulsa Public Works Specifications in Section 335 – Acceptance Sampling/Testing Requirements.

Q11: Can you clarify what bid item the placement of the new boat ramp needs to be in?

- Response: The new boat ramp is spread across 12 pay items which are summarized on the summary table on sheet 6. Each column corresponds to a pay item.

Q12: Are the scales on the Plans correct?

- Response: Yes. Plans were designed for full-size (22"x34") sheets. All the dimensional scales are shown for details, plans, cross sections, and typical have been verified and are correct. Contractor needs to match scales with ruler.

Q13: Explain accelerated schedule placing tower footings?

- Response: Excavation, subgrade preparation and/or subgrade replacement, install geogrid and separator fabric, aggregate base installation, set reinforcement, place concrete tower footing and backfill edges shall be completed as quickly as possible. Weather and ground water shall not be allowed to saturate the foundation soils. Coordination with all participates is important.

Q14: Can the photographs of the typical east and west submerged beam be provided?

- Response: Yes, see the submerged berms photographs on next sheet of the Addendum.

Q15: Can the City provide the Contractors CAD files?

- Response: The city does not give CAD files to Contractors.

Q16: What is the best laydown area to stage the construction activities?

- Response: Contractor's has 2 possible locations option are to use either 1) south center parking area adjacent to Mohawk Blvd or 2) east parking area adjacent to boat ramp and Mohawk Blvd as shown on Sheet 07. Normally the public uses the parking lot but the reservoir will be closed to the public during this project.

Q17: Can a detail be provided of the existing pipe configuration of the splitter box?

- Response: The city does not have record info on the submerged splitter box inside; therefore, assume full DIP pipe connections to be replaced in-kind with new cast concrete top.

Q18: Sheet 34 shows 1300 SF of articulating conc. block and sheet 36 shows 2300 sf which one is correct?

- Response: Pay Item 14 - use proposal quantity of 2,300 SF. Add to Pay Note 11 – "Use strongest polypropylene cable and add Class A rock under block system in lieu of select backfill".

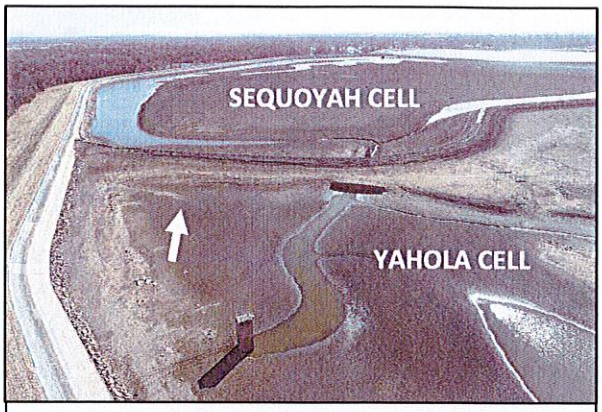


Photo 1 – showing the existing perimeter road and existing slope walls adjacent to the West Gate Berm Structure. White arrow shows approx. project location.

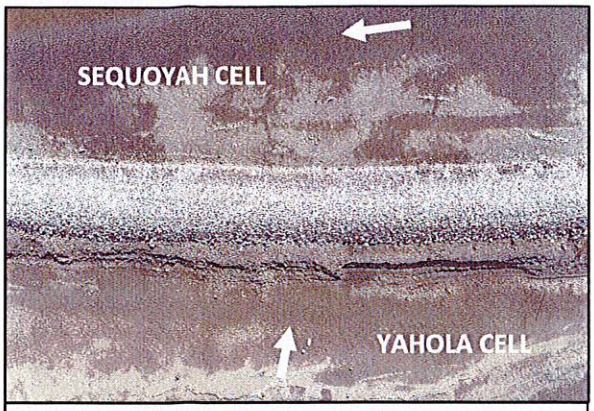


Photo 2 – showing the typical existing berm at the West Gate Berm Structure. White arrow shows approx. project location.

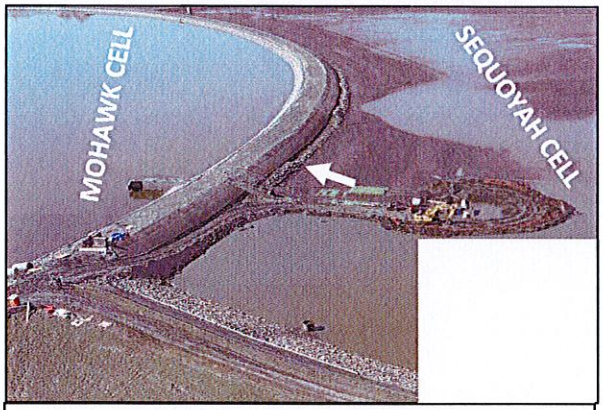


Photo 3 – showing recent project after a significant rain event near the East Gate Berm Structure location. White arrow shows approx. project location. Mohawk Cell has gone up to approx.. 596.00 and Sequoyah Cell near empty but has ponding.

Photo 4 – showing the typical existing berm at the East Gate Berm Structure. White arrow shows approx. project location. Mohawk Cell has drawdown to 595.00 and Sequoyah Cell near empty.

Photo 5 – showing the existing condition of the Sequoyah Boat Ramp project area.

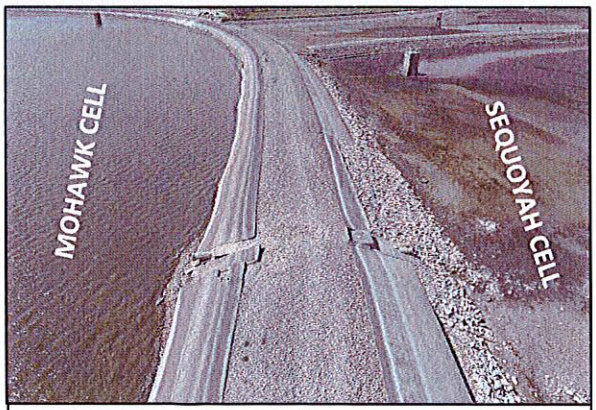


Photo 6 – Showing the existing condition of the Additive Alternate #1 project area.

Bidders should acknowledge receipt of the Addendum by signing and submitting this document with the proposal submittal and by writing on the cover sheet of the proposal as follows:

"RECEIPT OF ADDENDUM NO. 1 IS HEREBY ACKNOWLEDGED"

Name and Title (Print)

SECTION 31 23 19
DEWATERING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes construction dewatering of stormwater and groundwater ponding on subgrade within excavation pits.

1.3 PRE INSTALLATION MEETINGS

A. Discuss the following at the pre-work conference.

1. Verify availability of Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

2. Review condition of site to be dewatered including coordination with temporary erosion-control measures and temporary controls and protections.

3. Review of geotechnical report.

4. Review proposed site clearing and excavations.

5. Review existing utilities and subsurface conditions.

6. Review observation and monitoring of dewatering system.

1.4 ACTION SUBMITTALS

A. Shop Drawings: ~~Delegated design for dewatering system, prepared by or under the supervision of a qualified professional engineer signed and sealed plan.~~ 1

1. Include plans, elevations, sections, and details.

2. Show arrangement, locations, and details of dewatering sump; locations of risers, headers, filters, pumps, power units, and discharge lines; and means of discharge, control of sediment, and disposal of water.

3. Include written plan for dewatering operations including sequence of dewatering sump placement coordinated with excavation shoring and bracings and control procedures to be adopted if dewatering problems arise.

1.5 INFORMATIONAL SUBM ITTALS

A. Qualification Data: For Installer and professional engineer.

B. Field quality-control reports.

C. Existing Conditions: Using photographs or video recordings, show existing conditions of adjacent construction and site improvements that might be misconstrued as damage caused by dewatering operations. Submit before Work begins.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer that has specialized in design of dewatering systems and dewatering work.

1.7 FIELD CONDITIONS

A. Project-Site Information: A geotechnical report has been prepared for this Project and is available for information only. The opinions expressed in this report are those of a geotechnical engineer and represent interpretations of subsoil conditions, tests, and results of analyses conducted by a geotechnical engineer. Owner is not responsible for interpretations or conclusions drawn from this data.

1. Make additional test borings and conduct other exploration operations necessary for dewatering according to the performance requirements.

2. The geotechnical report is supplied independently bid documents.

B. Survey Work: Engage a qualified land surveyor or professional engineer to survey adjacent existing buildings, structures, and site improvements; establish exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.

PART 2 PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of ground water and permit excavation and construction to proceed on dry, stable subgrades.

1. Design dewatering system to maintain construction excavate dry and not pool water.

2. Continuously monitor and maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, prevention of flooding in excavation, and prevention of damage to subgrades and permanent structures.

3. Prevent surface water from entering excavations by grading, dikes, or other means.

4. Accomplish dewatering without damaging existing buildings, structures, and site improvements adjacent to excavation.

5. Remove dewatering system when no longer required for construction.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning dewatering. Comply with water- and debris-disposal regulations of authorities having jurisdiction.

PART 3 EXECUTION

3.1 PREPARATION

A. Protect structures, utilities, perimeter access, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations.

1. Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding site or surrounding area.

2. Protect subgrades, foundation soils and gravel mats from softening and damage by rain or water accumulation. Flooded areas is not acceptable.

B. Install dewatering system to ensure minimum interference with access roads, embankments, walks, and other adjacent occupied and used facilities.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

C. Provide temporary grading to facilitate dewatering and control of surface water.

D. Protect and maintain temporary erosion and sedimentation controls.

3.2 INSTALLATION

A. Install dewatering system utilizing sump points, or similar methods complete with pump equipment, standby power and pumps, filter material gradation, valves, appurtenances, and surface- water controls.

1. Space sump points at practical intervals required to provide sufficient dewatering for excavation in project areas.

2. Use filters or other means to prevent pumping of fine sands or silts from the subsurface.

B. Place dewatering system into operation to lower water to specified levels before excavating below ground-water level.

C. Provide sumps, sedimentation tanks, and other flow-control devices as required by authorities having jurisdiction.

D. Provide standby equipment on-site, installed and available for immediate operation, to maintain dewatering on continuous basis if any part of system becomes inadequate or fails.

3.3 OPERATION

A. Operate system continuously until drains, sewers, and structures have been constructed and fill materials have been placed or until dewatering is no longer required.

B. Operate system to lower and control ground water to permit excavation, construction of structures, and placement of fill materials on dry subgrades. Drain water-bearing strata above and below bottom of foundations, drains, sewers, and other excavations.

1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.

2. Reduce hydrostatic head in water-bearing strata below subgrade elevations of foundations, drains, sewers, and other excavations.

C. Remove dewatering system from Project site on completion of dewatering. Plug or fill sump with native material.

3.4 FIELD QUALITY CONTROL

A. Promptly notify Engineer if changes in elevations occur or if cracks, sags, or other damage is evident in adjacent construction.

B. Provide continual observation to ensure that subsurface soils are not being removed by the dewatering operation.

C. Prepare reports of observations.

3.5 PROTECTION

A. Protect and maintain dewatering system during dewatering operations.

B. Promptly repair damages to adjacent facilities caused by dewatering.

END OF SECTION

FINAL DRAWINGS BID SET
DATE: FEBRUARY 26, 2026

CONSTRUCTION PLANS FOR

YAHOLA TERMINAL STORAGE RESERVOIR IMPROVEMENTS

PROJECT NO. TMUA-W-25-08

WATER & SEWER DEPARTMENT
CITY OF TULSA, OKLAHOMA

BID ADVERTISE DATE _____

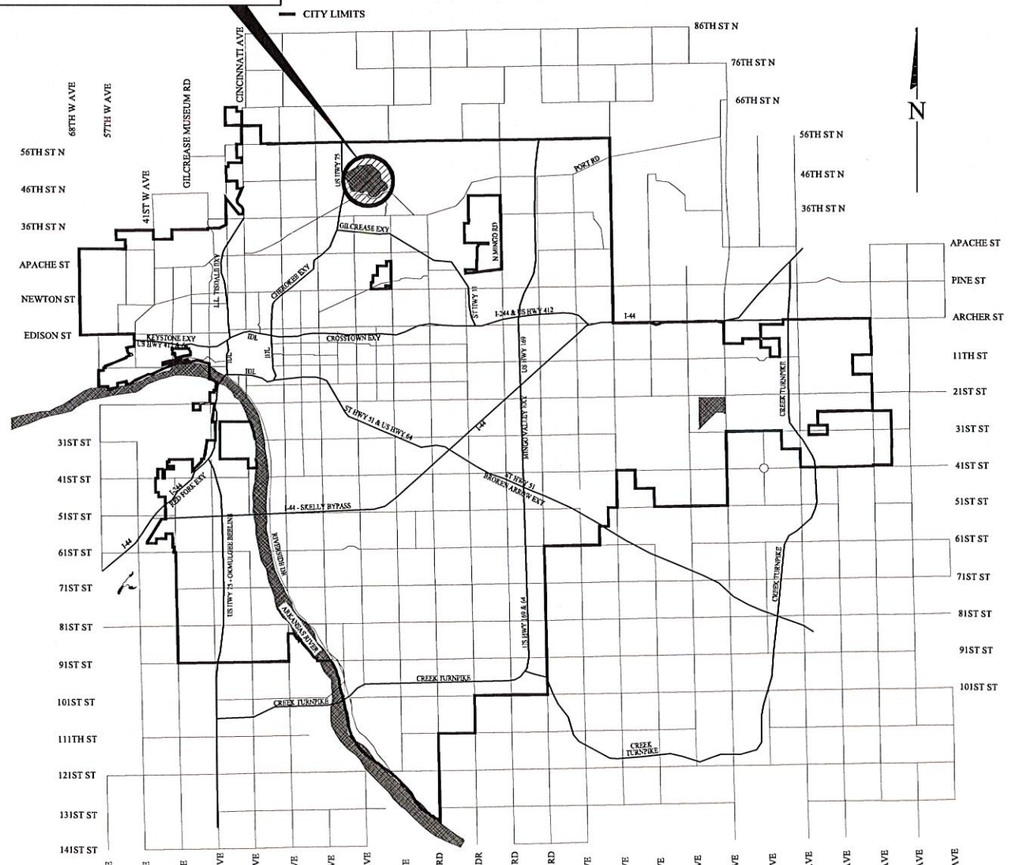
SEE SHEET 2 FOR INDEX OF DRAWINGS

LEGEND

- GROUND LINE
- EXISTING ROADS
- GRADE LINES
- EXISTING BUILDINGS/STRUCTURES
- BENCHMARKS
- SOIL BORING

PROJECT LOCATION
YAHOLA TERMINAL STORAGE RESERVOIR
4122 MOHAWK BLVD, TULSA, OK 74115

PROJECT LOCATION



SCALES IN THIS PLAN SET ARE FOR FULL SIZE SHEETS UNLESS NOTED OTHERWISE.

CITY OF TULSA STANDARD DETAILS

102 ..... PROJECT SIGN
126 ..... STANDARD SILT FENCE AND CONSTRUCTION ENTRANCE
325 ..... 16" & 24" BALL VALVE VAULT STANDARD

OKLAHOMA DOT STANDARD DETAILS

BMPR-0 ..... BEST MANAGEMENT PRACTICE REFERENCE MATRIX (R-1)
TESCA-0 .... TYPICAL TEMPORARY EROSION CONTROL APPLICATION (R-4)
RSF-0 ..... REINFORCED SILT FENCE INSTALLATION AND APPLICATIONS (R-6)
TFL-0 ..... TEMPORARY FIBER LOG (R-8)
SSS-2 ..... SOLID SLAB SODDING (R-14)
RWF3-3-2 ... RIGHT OF WAY STYLE CLF (CHAIN LINK FENCE) (R-73)

CITY OF TULSA

APPROVED BY

WATER AND SEWER DIRECTOR — DATE 4-10-26

DANIEL A. KEITHLINE, P.E., S.E.
KEITHLINE ENGINEERING GROUP, PLLC — DATE 02/26/2026

Licensed Professional Engineer — Daniel A. Keithline — 17348 — Oklahoma

JAMES R. UMDENSTOCK, P.E.
KEITHLINE ENGINEERING GROUP, PLLC — DATE 02/26/2026

Licensed Professional Engineer — James R. Umdenstock — 11407 — Oklahoma

PLANS PREPARED BY
KEITHLINE ENGINEERING GROUP, PLLC
8556 EAST 101ST STREET
SUITE C
TULSA, OK 74133
OFFICE: (918) 369-7911
CA NO: 5736, EXP: JUNE 30, 2027

ENGINEER'S STATEMENT:
1) CURRENT CITY OF TULSA STANDARD SPECIFICATIONS AND STANDARD DETAILS GOVERN.
2) ALL OTHER CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE OKLAHOMA DEPARTMENT OF TRANSPORTATION 2019 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
3) THIS PROJECT COMPLIES WITH ALL OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS.
4) THIS PROJECT COMPLIES WITH ALL OKLAHOMA WATER RESOURCE BOARD (OWRB) REQUIREMENTS.
5) ENTIRE PROJECT IS WITHIN THE CORPORATE LIMITS OF CITY OF TULSA (COT).

UTILITY COORDINATION INFORMATION

TULSA WATER & SEWER DEPARTMENT		
WATER DESIGN		918-596-9580
WASTE WATER DESIGN		918-596-9564
TRANSPORTATION DESIGN		918-596-9636
TRAFFIC ENGINEERING DESIGN		918-596-9741
STORMWATER DESIGN		918-596-9498
INSIDE OF RIGHT OF WAY		
CITY OF TULSA	TONY GLYNN	918-596-9245
AEP/PSO	EMERGENCY	888-216-3523
OKLAHOMA NATURAL GAS CO.	EMERGENCY	800-664-5463
AT&T	EMERGENCY	800-288-2020
COX COMMUNICATION	CUSTOMER SERVICE	918-806-6000
VERIZON	CUSTOMER SERVICE	888-294-6804
WINDSTREAM	CUSTOMER SERVICE	800-347-1991
MTTA	CUSTOMER SERVICE	918-830-0024

REFERENCED CONTROL DATA

STATION NAME:	2016-27
HORIZ. CONTROL:	OKLAHOMA NORTH ZONE 3501, NAD83(2011)
	NORTHING = 446700.650
	EASTING = 2576125.084
VERT. CONTROL:	NAVD 1988 (GEOID12A)
	ELEVATION = 644.119
DESCRIPTION:	3" ALUMINUM CAP , FLUSH, SET IN CONC. POST

PROJECT NO. TMUA-W-25-08 YAHOLA TERMINAL STORAGE RESERVOIR IMPROVEMENTS

WATER PAY ITEM NOTES (COT VERSION 5/15/2025)

W1. NOT USED

W2. BURIED BOLTS, HARNESS LUGS, AND COUPLINGS SHALL BE GIVEN TWO COATS OF KOPPER'S BITUMASTIC 300-M (DRY MIL THICKNESS OF 16 MILS) OR EQUAL. COST TO BE INCLUDED IN UNIT PRICE BID FOR PIPE AND FITTINGS.

W3-4. NOT USED

W5. ALL HYDRANTS, VALVES AND OTHER FITTINGS FROM ABANDONED WATER MAINS SHALL BE SALVAGED AND DELIVERED TO THE SOUTH YARD AT 2317 S JACKSON AVE. PAYMENT TO BE MADE UNDER RIGHT OF WAY CLEARING AND RESTORING. NO ADDITIONAL PAYMENT SHALL BE MADE.

W6-7. NOT USED

W8. ALL COSTS FOR COMPONENTS NECESSARY TO RESTRAIN JOINTS FOR PIPE AND FITTINGS DESIGNATED RESTRAINED JOINT ("RJ") SHALL BE INCLUDED IN UNIT PRICE BID FOR PIPE OR FITTINGS.

A. DUCTILE IRON PIPE RESTRAINED JOINT SYSTEMS: US PIPE TRFLEX, GRIFFIN SNAPLOK, MCWANE THRUSTLOCK, AMERICAN FLEXRING, EBAA MEGALUG, STAR STARGRIP, SMITH-BLAIR CAMLOCK, CLOW TUFGRIP OR EQUAL SHALL BE USED ON THIS PROJECT. SHOULD RJ PIPE BE SPECIFIED THROUGH UNCASED BORES, ONLY USPIPE TRFLEX, GRIFFIN SNAPLOK, MCWANE THRUSTLOCK, OR AMERICAN FLEXRING IS TO BE USED. LOCKING GASKETS NOT PERMITTED.

B. POLYVINYL CHLORIDE (PVC) RESTRAINED JOINT SYSTEMS: EBAA MEGALUG, STAR STARGRIP OR EQUAL SHALL BE USED ON THIS PROJECT. LOCKING GASKETS NOT PERMITTED; SHOULD RJ PIPE BE SPECIFIED ON BORE, CASING IS REQUIRED.

C. HIGH DENSITY POLYETHYLENE (HDPE) RESTRAINED JOINT SYSTEMS: EBAA MEGALUG, STAR STARGRIP OR EQUAL SHALL BE USED ON THIS PROJECT.

NO ADDITIONAL PAYMENT SHALL BE MADE.

W9-17. NOT USED

W18. THE "OWNER ALLOWANCE" CAN BE USED FOR VARIOUS WORK AND MISCELLANEOUS ITEMS NOT IDENTIFIED IN THE CONTRACT DOCUMENTS WITH THE FOLLOWING PROVISIONS:

A. THE ALLOWANCE SHALL BE USED FOR THE COST OF MATERIALS, LABOR, INSTALLATION, OVERHEAD, AND PROFIT FOR ADDITIONAL WORK AND MISCELLANEOUS ITEMS THAT ARE NOT IDENTIFIED IN THE CONSTRUCTION DOCUMENTS AND PLANS, AND NOT INCLUDED IN THE BID ITEMS OF THE CONTRACT. EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO:

1. WATER SERVICE LINES OF UNKNOWN OR UNEXPECTED SIZE.

B. THE ALLOWANCE SHALL BE USED ONLY AT THE DISCRETION OF THE CITY. ANY ALLOWANCE BALANCE REMAINING AT THE COMPLETION OF THE PROJECT WILL BE CREDITED BACK TO THE CITY ON THE FINAL APPLICATION FOR PAYMENT SUBMITTED BY THE CONTRACTOR.

C. THE CONTRACTOR SHALL PROVIDE, TO THE CITY, A WRITTEN REQUEST FOR THE USE OF ANY ALLOWANCE, WITH A SCHEDULE OF VALUES, AND ALL ASSOCIATED BACKUP INFORMATION, INCLUDING ANY TIME EXTENSIONS REQUIRED TO PERFORM THE WORK.

D. THE CONTRACTOR SHALL PROCEED WITH THE WORK INCLUDED IN THE ALLOWANCE ONLY AFTER RECEIVING A WRITTEN ORDER FROM THE ENGINEER AND CITY AUTHORIZING SUCH WORK. PROCEEDING WITH WORK IN THE ALLOWANCE WITHOUT A WRITTEN ORDER FROM THE CITY WILL BE AT THE CONTRACTOR'S EXPENSE.

W19-23. NOT USED

W24. SPOT ELEVATIONS ON THE MAIN WATER LINE RELATIVE TO FINISHED GRADE SHALL BE PROVIDED AT EACH 100-FT INTERVAL, COMPLETE WITH STATION AND OFFSET. IN ADDITION, ALL VALVES, FITTINGS, FIRE HYDRANTS (TOP OF NUT) AND OTHER MAJOR APPURTENANT ITEMS SHALL BE SHOWN WITH THE PROPER DESCRIPTION, STATION, OFFSET (NORTHING, EASTING) AND ELEVATION PER PLAN SURVEY CONTROL DATUM.

W25. SPOT ELEVATIONS ON WATER METER CANS, VAULTS, SHALL BE SHOWN WITH THE PROPER DESCRIPTION (METER TYPE, METER SIZE, METER NUMBER, SERVICE MATERIAL, SERVICE SIZE), STATION, OFFSET (NORTHING, EASTING) AND ELEVATION PER PLAN SURVEY CONTROL DATUM. UPON DISCOVERY OF A LEAD OR GALVANIZED SERVICE LINE, NOTIFICATION SHALL BE MADE TO WATER DISTRIBUTION AND WORK SHALL CEASE UNTIL RELEASED AT WHICH TIME ANY AND ALL SERVICE LINES LOCATED THAT ARE LEAD OR GALVANIZED ARE TO BE REPLACED WITH APPROVED MATERIALS.

W26-31. NOT USED

W32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL AND MAINTENANCE OF THE STORM WATER DRAINAGE FROM THE CONSTRUCTION SITE. STORM WATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRUCTION WILL NOT BE ALLOWED. ALL COST ASSOCIATED WITH STORM WATER MANAGEMENT, AS WELL AS REMOVAL OF ALL SILT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, STORM SEWER PIPES AND APPURTENANCES WITHIN THE PROJECT LIMITS AT END OF PROJECT, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

W33. EROSION PROTECTION SHALL BE PLACED AS FOLLOWS:

A) AROUND INLETS TO PREVENT INFLOW OF ERODED MATERIAL INTO STORM SEWER SYSTEM.

B) IN LOCATIONS THROUGHOUT PROJECT SITE, AS DETERMINED BY THE ENGINEER, TO PREVENT WASH OF ERODED MATERIAL ONTO ADJACENT PROPERTY.

C) FOR ENTIRE DURATION OF PROJECT, WITH MAINTENANCE AND REPLACEMENTS, AS DIRECTED BY THE ENGINEER.

D) WITH PERIODIC REMOVAL OF SEDIMENT IN ACCORDANCE WITH STORMWATER MANAGEMENT PLAN.

ALL COST FOR ITEMS A-D ABOVE SHALL BE INCLUDED IN UNIT PRICE BID FOR THIS ITEM.

W34. PRICE BID SHALL INCLUDE MAINTENANCE, SEDIMENT REMOVAL, DISPOSAL, AND REMOVAL OF FILTERS AT PROJECT COMPLETION.

W35-36. NOT USED

EARTHWORK / EROSION CONTROL / SITE PREPARATION PAY ITEM NOTES (COT)

E1-11. NOT USED

SURFACING / STRUCTURES PAY ITEM NOTES (COT)

S1-11. NOT USED

S12. THE USE OF FLY-ASH IN CONCRETE IS PROHIBITED.

S13-21. NOT USED

TRAFFIC PAY ITEM NOTES

T1-6. NOT USED

T7. PRICE BID FOR THIS ITEM INCLUDES INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF PROJECT SIGN.

REMOVAL / ADJUSTMENTS PAY ITEM NOTES (COT)

R1. WASTE MATERIAL TO BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE IN A MANNER APPROVED BY THE ENGINEER.

R2. ALL SAW CUTTING AND REMOVAL SHALL BE INCLUDED IN THE COST OF THE ITEM TO BE ADJUSTED, REMOVED, REPAIRED, OR REPLACED.

R3-4. NOT USED

R5. ITEMS TO BE REMOVED MAY OR MAY NOT BE PRESENT IN ANY SPECIFIED CONDITION.

R6. SHALL INCLUDE ALL COSTS ASSOCIATED WITH PLUGGING/ PATCHING HOLES IN EXISTING STRUCTURES TO REMAIN.

GENERAL PAY ITEM NOTES (COT)

G1. NOT USED

G2. MAXIMUM OVERALL DOLLAR AMOUNT AND SCHEDULE OF PAYMENTS SHALL BE IN ACCORDANCE SECTION 641 OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, CURRENT EDITION.
EXCLUDES MOBILIZATION FOR WATERLINE WORK.

G3. CONSTRUCTION STAKING SHALL INCLUDE SURVEYING AND THE FURNISHING, PLACING, AND MAINTAINING OF THE CONSTRUCTION LAYOUT STAKES NECESSARY FOR THE PROPER COMPLETION AND INSPECTION OF THE ENTIRE PROJECT.

G4. THE COST TO REPLACE REMOVED OR DAMAGED SECTION CORNERS AND ALL OTHER PERMANENT RIGHT OF WAY MARKERS SHALL BE INCLUDED IN THE PRICE BID FOR THIS ITEM. NO ADDITIONAL PAYMENT WILL BE MADE.

G5-10. NOT USED

ADDITIONAL PAY ITEM NOTES

A1. ESTIMATED PAY ITEM VOLUME QUANTITIES FOR UNCLASSIFIED EXCAVATION AND SELECT BACKFILL WAS DETERMINED AS FOLLOWS:

A. SEE SUMMARY TABLE FOR EXCAVATION AND BACKFILL QUANTITIES.

B. THE CONTRACTOR HAS THE OPTION TO USE ENGINEERED SHORING SYSTEM. IF SHORING SYSTEM IS USED, THE CONTRACTOR WILL BE PAID THE ESTIMATED PLAN QUANTITY LISTED ABOVE. ALL COST SHALL BE INCLUDED IN THE BID ITEM UNIT COST. NO OTHER PAYMENTS WILL BE MADE.

A2. DUE TO THE CONSTRUCTION TAKING PLACE IN THE EXISTING RESERVOIRS, DEWATERING OF STORMWATER AND GROUNDWATER WILL BE REQUIRED. CONTRACTOR SHALL DEWATER EXCAVATION PITS 24 HOURS A DAY TO PREVENT STORMWATER AND GROUNDWATER FROM PONDING ON SUBGRADE AND AGGREGRATE BASE.

THE CITY WILL DRAWDOWN MOHAWK CELL TO APPROXIMATE ELEVATION 595.00. THE CITY WILL DRAWDOWN SEQUOYAH CELL AND YAHOLA CELL TO NEAR EMPTY. THE CONTRACTOR WILL PERFORM ALL ADDITIONAL DEWATERING WORK AT EACH PROJECT AREA, AFTER WEATHER OR RAIN EVENTS, OR IF RAW WATER PIPES ARE LEAKING INTO ANY PROJECT AREAS.

PHOTOGRAPHIC DOCUMENTATION OF EXISTING CONDITION IS REQUIRED PRIOR TO DEWATERING. DAMAGES RESULTING FROM DEWATERING OPERATIONS SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

THE PRICE BID INCLUDES ALL COSTS ASSOCIATED WITH DEWATERING FOR ALL ASPECTS OF THE PROJECT AND TEMPORARY CONTROL OF WATER NECESSARY TO KEEP ALL PROJECT AREAS DRY. DEWATERING PLAN/PROCEDURE SHALL BE SUBMITTED, REVIEWED, AND APPROVED BY ENGINEER OR RECORD.

A3. INCLUDES THE COST TO RELOCATE THE EXISTING RIPRAP TO NEAREST UNDISTURBED BERM TOE TO DISTRIBUTE EVENLY.

A4. INCLUDES STOCKPILING THE EXISTING BERM CREST AGGREGATE AT THE WEST GATE STRUCTURE PROJECT AREA ONLY. INSTALLATION OF THE STOCKPILED AGGREGATE TO BE PAID UNDER SELECT BACKFILL.

A5. GEOTEXTILE REINFORCEMENT SHALL BE NON-WOVEN FABRIC FOR SUBGRADE SEPERATION IN ACCORDANCE WITH AASHTO M 288 WITH A CLASS 1 DEGREE OF SURVIVABILITY, APPARENT OPENING SIZE MAXIMUM TO BE #80 U.S. SIEVE, AND MINIMUM WEIGHT OF 8 OUNCES PER SQUARE YARD. THE CONTRACTOR WILL BE PAID ESTIMATED PLAN QUANTITY WITH NO OVERLAPS. ESTIMATED PLAN QUANTITY INCLUDES BOTTOM SURFACE AREA, VERTICAL SIDES, AND FABRIC LAID OVER ON TOP, IF SHOWN IN PLANS. ALL COST SHALL BE INCLUDED IN THE BID ITEM UNIT COST. NO PAYMENTS WILL BE MADE FOR 2' MINIMUM LAPS, ONLY TOTAL SURFACE AREA. LAYOUT SHOWING JOINTS SHALL BE SUBMITTED FOR APPROVAL.

A6. INCLUDES COMPACTION OF NATIVE SOILS TO 95% MODIFIED PROCTOR DENSITY.

A7. INCLUDES PLACING THE STOCKPILED RIPRAP ON THE WEST RECONSTRUCTED BERM WITH EXPOSED SOIL SURFACE EVENLY.

A8. INCLUDES BUT NOT BE LIMITED TO, FORM WORKS, LABOR, EQUIPMENT, TRANSPORTING, DELIVERING, PLACING, AND FINISHING OF THE CONCRETE AS INDICATED ON THE CONSTRUCTION PLANS. ALL COST SHALL BE INCLUDED IN THE UNIT BID PRICE PER CUBIC YARD OF CONCRETE.

A9. THE CONTRACTOR SHALL FURNISH AND INSTALL REINFORCING STEEL (DEFORMED 60 KSI EPOXY COATED STEEL BARS) FOR TWO (2) NEW SLUICE GATE STRUCTURES, SLOPE WALLS AND BOAT RAMPS PER PLAN QUANTITIES. ALL COST ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE UNIT COST BID FOR THIS WORK SYSTEM. MANUFACTURED CHAIRS ARE REQUIRED. CONCRETE BLOCKS ARE NOT PERMITTED.

A10. INCLUDES COSTS OF LABOR, MATERIALS, PLANT, AND EQUIPMENT TO PLACE 378 TON OF 12-INCH RIPRAP FOR SHORELINE PROTECTION BY HAND OR MACHINE TO ACHIEVE THE LINES AND THICKNESS SHOWN ON THE PLANS. RIPRAP WAS CALCULATED AT 150LBS/CF. PAYMENT SHALL BE CALCULATED FROM DELIVERY TICKETS WEIGHT/VOLUME TOTALS AFTER INSTALLATION IS COMPLETE PER PLANS.

INCLUDES COSTS OF LABOR, MATERIALS, PLANT, AND EQUIPMENT TO PLACE 129 TON OF 2-INCH TO 8-INCH SHOT ROCK TO BE USED FOR SUBGRADE STABILIZATION AS DIRECTED BY THE ENGINEER AT THE TOWER AND CHANNEL SUBGRADE AT THE EAST AND WEST BERM GATE STRUCTURE. SHOT ROCK WAS CALCULATED AT 75 LBS/CF. SHOT ROCK AT THE EAST BERM GATE STRUCTURE IS ESTIMATED TO BE 1173 SF X 1-FT DEEP X 75 LBS/CF = 67 TON. SHOT ROCK AT THE WEST BERM GATE STRUCTURE IS ESTIMATED TO BE 1647 SF X 1-FT DEEP X 75 LBS/CF = 62 TON. PAYMENT SHALL BE CALCULATED FROM DELIVERY TICKETS WEIGHT/VOLUME TOTALS AFTER INSTALLATION IS COMPLETE AS DIRECTED BY ENGINEER.

A11. SHALL BE ARMORFLEX 55S CLOSED BLOCK, OR APPROVED EQUAL, AND INSTALLED PER MANUFACTURE RECOMMENDATIONS. INCLUDES THE COST OF FILTER FABRIC. USE STRONGEST POLYPROPYLENE CABLE TO CONNECT THE BLOCKS AND ADD CLASS A ROCK UNDER BLOCK SYSTEM IN LIEU OF SELECT BACKFILL.

A12. INCLUDES COST TO COMPACT AGGREGATE STONE TO ACHIEVE AGGREGATE ROCK COMPACTION INTERLOCK. THIS REFERS TO MECHANICAL STABILITY AND RESISTANCE TO MOVEMENT THAT DEVELOPS OPTIMUM SEATING AND CONSOLIDATION OF INDIVIDUAL IRREGULAR AGGREGATE PARTICLES TO RESIST DISPLACEMENT UNDER LOADING. THE INTERLOCK IS CRITICAL INSTALLATION METHOD WHEN ROCK FINE PARTICLES ARE NOT PRESENT TO FILL VOIDS AS APPROVED BY FIELD ENGINEERING & ENGINEER.

A13. PRICE BID IS PAID FOR EACH PROJECT SITE. INCLUDES INSTALLING TEMPORARY ACCESS FOR EQUIPMENT THE CONTRACTOR NEEDS TO COMPLETE WORK SHOWN IN THE PLANS. INCLUDES UTILIZING THE EXISTING PERIMETER BERM GRAVEL ROAD. INCLUDES COST TO REMOVE TEMPORARY ACCESS MATERIALS AND REPAIR THE RESERVOIR AND EXISTING PERIMETER GRAVEL BERM ROAD TO EXISTING CONDITION PRIOR TO TARGET DATES & DEMOBILIZATION. CONTRACTOR TEMPORARY ACCESS PLAN SHALL BE APPROVED BY FIELD ENGINEERING PRIOR TO WORK.

A14. A TRAFFIC & PEDESTRAIN CONTROL PLAN SHALL BE DEVELOPED AND SUBMITTED FOR APPROVAL. THE PLAN SHALL COVER MATERIAL/EQUIPMENT DELIVERIES IN PARKING LOTS AND CONSTRUCTION TRAFFIC ALONG THE RESERVOIR EXISTING GRAVEL PERIMETER ROAD BERMS.

A15. TRAFFIC CONTROL SHALL BE ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THIS ITEM SHALL BE PAID PER CALENDAR DAYS FOR ALL NECESSARY TRAFFIC CONTROL.

A16. INCLUDES THE COST TO REMOVE THE EXISTING CONCRETE BOX LID, EXISTING PIPE INSIDE THE BOX, AND EXISTING VALVES INSIDE BOX.

A17. PAY ESTIMATED PLAN QUANTITY ONLY. PAYMENT IS IN ACCORDANCE WITH CITY OF TULSA SPECIFICAITON 302.7

A18. INCLUDES THE COST OF THE CASTING THE NEW ROOF LID OFFSITE WITH VALVE BOX & EYE HOOKS.

A19. INCLUDES THE COST OF THE SHAFT EXTENSION STEM FOR A COMPLETE AND WORKING VALVE AS SHOWN ON PLANS.

A20. INCLUDES COMPACTION OF AGGREGATE TO 95% MODIFIED PROCTOR DENSITY.

BASE BID PAY QUANTITIES (GATE STRUCTURES & BOAT RAMP, COMPLETE)

BID ITEM NO.	COT SPEC. NO.	ODOT SPEC. NO.	TECHNICAL SPEC. NO.	DESCRIPTION	PAY NOTES	UNIT	QTY
1	---	202(A)2200	---	UNCLASSIFIED EXCAVATION (ESTIMATED)	A1,A3,A4,A17,A22,A25,R1	CY	3,434.
2	SPECIAL	220	---	SWPPP DOCUMENTATION AND MANAGEMENT	W32,W33,W34	LS	1.
3	---	303(A)1200	---	AGGREGATE BASE TYPE A (BASE)	A20	CY	213.
4	---	310(B)5300	---	SUBGRADE, METHOD B	A27	SY	4,117.
5	---	326(A)1200	---	GEOTEXTILE REINFORCEMENT	A5	SY	2,461.
6	---	326(B)1300	---	GEOGRID REINFORCEMENT	A30	SY	380.
7	---	501(A)1200	---	STRUCTURAL EXCAVATION UNCLASSIFIED (ESTIMATED)	A17	CY	2,116.
8	---	501(E)1600	31 23 00	SELECT BACKFILL (ESTIMATED)	A6,A7,A17	CY	4,443.
9	---	501(G)1810	---	CONTROLLED LOW-STRENGTH MATERIAL (CLSM) BACKFILL	-	CY	78.
10	---	509(A)0200	---	CLASS AA CONCRETE	A8,S12	CY	563.
11	---	509(B)0300	---	CLASS A CONCRETE (SLOPE WALLS)	A8,S12	CY	131.
12	---	511(B)2300	---	EPOXY COATED REINFORCING STEEL	A9	LB	121,127.
13	---	601(A)1100	---	TYPE I PLAIN RIPRAP	A10	TON	378.
14	---	602(B)2300	35 31 19	ARTICULATING CONCRETE BLOCK SYSTEM, COMPLETE IN PLACE	A11	SF	2,300.
15	---	619(B)6360	---	REMOVAL OF CONCRETE PAVEMENT	R1,R2,R5	SY	73.
16	---	619(B)6408	---	REMOVAL OF CONCRETE SLOPE PROTECTION	R1,R2,R5	SY	516.
17	---	640(A)1210	---	FIELD OFFICE	-	EA	1.
18	---	641	---	MOBILIZATION	A29,G2	EA	1.
19	304	642	---	CONSTRUCTION STAKING LEVEL II	G3,G4	EA	1.
20	---	---	---	TEMPORARY SITE ACCESS	A13,A21,A26	EA	2.
21	---	---	---	2" TO 8" SHOT ROCK FOR SUBGRADE STABILIZATION	A10	TON	129.
22	---	---	05 51 33	16" WIDE STEEL REINFORCED PLASTIC MANHOLE STEPS	-	EA	59.
23	---	---	05 53 00	TOWER SS304 GRATING W/ CAST-IN-PLACE SS304 FRAME, COMPLETE	-	EA	2.
24	---	---	05 53 00	CHANNEL SS304 GRATING W/ CAST-IN-PLACE SS304 FRAME, COMPLETE	-	EA	2.
25	---	---	31 23 19	DEWATERING, COMPLETE	A2	CD	112.
26	---	---	41 22 13	DAVIT CRANE W/ BASE, OPERATING SYSTEM, COMPLETE IN PLACE	-	EA	2.
27	---	---	05 52 00	HANDRAILS, POSTS, WALL BRACKETS, AND CHAINS, COMPLETE SYSTEM IN PLACE	-	EA	2.
28	---	---	40 05 59.23	STAINLESS STEEL SLIDE GATES, COMPLETE OPERATION SYSTEM IN PLACE	-	EA	2.
29	102	---	---	PROJECT SIGN (CITY OF TULSA)	T7	EA	1.
30	213	---	---	SIZE #1 CRUSHED STONE AGGREGATE (BERM CREST), COMPLETE IN PLACE	A12	CY	103.
31	334	---	---	CONSTRUCTION AS-BUILT	W24,W25,A28	EA	1.
32	335	---	---	CONTRACTOR QUALITY CONTROL	-	LSUM	1.
33	SPECIAL	---	---	CONSTRUCTION TRAFFIC CONTROL	A14,A15,A23	CD	285.
34	SPECIAL	---	---	OWNER ALLOWANCE	W18	ALLOW	100,000.

ADDITIVE ALTERNATE 1 PAY QUANTITIES (SPLITTER BOX)

BID ITEM NO.	COT SPEC. NO.	ODOT SPEC. NO.	TECHNICAL SPEC. NO.	DESCRIPTION	PAY NOTES	UNIT	QTY
35	---	326(A)1200	---	GEOTEXTILE REINFORCEMENT	A5	SY	130.
36	---	509(A)0200	---	CLASS AA (SPLITTER BOX ROOF SLAB)	A8,A18,S12	CY	2.
37	---	509(B)0300	---	CLASS A CONCRETE (SLOPE WALLS)	A8,S12	CY	21.
38	---	511(B)2300	---	EPOXY COATED REINFORCING STEEL	A9	LB	1,598.
39	---	619(B)6392	---	REMOVAL OF EXISTING STRUCTURES	R1,R2,R5,A16	EA	1.
40	---	619(B)6408	---	REMOVAL OF CONCRETE SLOPE PROTECTION	R1,R2,R5	SY	81.
41	---	619(B)6440	---	REMOVAL OF EXISTING PIPE	R1,R2,R5,R6	LF	26.
42	---	---	---	TEMPORARY SITE ACCESS	A13,A24	EA	1.
43	312	---	---	24 INCH X 16 INCH DUCTILE IRON REDUCER (RJ)	W2,W8	EA	2.
44	312	---	---	24 INCH DUCTILE IRON TO 24" CAST IRON PIPE ADAPTOR (RJ)	W2,W8	EA	1.
45	317	---	---	24 INCH DUCTILE IRON PIPE (RJ)	W2,W8	LF	15.
46	317	---	---	16" GATE VALVE (RJ) (RESILIIENT WEDGE), COMPLETE IN PLACE	W2,A19	EA	1.
47	318	---	---	VALVE BOX	-	EA	1.

A21. INCLUDES THE PLACEMENT OF STEEL PLATES ON THE EAST BERM TO PROTECT THE EXISTING BURIED 6'X6' CONCRETE BOX OUTLET WHILE HEAVY EQUIPMENT TRAVELS ALONG THE GRAVEL CREST TO THE PROJECT AREA.

A22. INCLUDES COST TO CONSTRUCT A RECOMMENDED TEMPORARY EARTHEN COFFERDAM USING STOCKPILED SUITABLE STRUCTURAL NATIVE SOIL. THE COFFERDAM IS USED TO PREVENT WATER FROM ENTERING THE PROJECT AREA. THE COFFERDAM ACTS AS A STOCKPILE SUITABLE STRUCTURAL MATERIAL TO BE USED DURING BACKFILL OPERATIONS. NO ADDITIONAL PAYMENTS WILL BE MADE FOR DOUBLE HANDLING MATERIAL.

A23. INCLUDES COST FOR TWO(2) CONSTRUCTION AREA RESERVOIR CLOSED TO PUBLIC SIGNS MOUNTED TO TYPE 3 BARRIER WITH FLASHING LIGHTS. INCLUDED TWO(2) ONE-WAY TRAFFIC SIGNS AT EACH SITE. INCLUDES FLAGMAN IF REQUIRED TO DIRECT CONSTRUCTION TRAFFIC.

A24. PRICE BID SHALL INCLUDE INSTALLATION AND REMOVAL OF THE CONTRACTORS ACCESS ROAD(S) TO THE ADDITIVE ALTERNATE 1 SITE AREA. ACCESS ROAD(S) TO BE APPROVED BY FIELD ENGINEERING PRIOR TO WORK. RESERVOIR SHALL BE BROUGHT BACK TO EXISTING CONDITION PRIOR TO DEMOBILIZATION.

A25. UNCLASSIFIED EXCAVATION INCLUDES SILT, NON-STRUCTURAL SEDIMENT AND STRUCTURAL SOILS. ALL SILT & NON-STRUCTURAL SEDIMENT SHALL BE REMOVED FROM THE SITE AND BECOME THE PROPERTY OF THE CONTRACTOR.

A26. INCLUDES COST TO MAINTAIN THE EXISTING GRAVEL PERIMETER BERM ROAD TO EXISTING CONDITION. EXISTING CONDITION SHALL BE PHOTOGRAPHED AND DOCUMENTED PRIOR TO MOBILIZATION. NO ADDITIONAL PAYMENT WILL BE MADE.

A27. PRIOR TO BACKFILL OF NATIVE SOIL OR AGG. BASE, PERFORM SUBGRADE METHOD 'B' COMPACTED TO 95% MODIFIED PROCTOR DENSITY. IF 95% COMPACTION IS UNOBTAINABLE, CONTRACTOR SHALL USE OTHER APPROVED MEANS. IF UNDERCUT IS REQUIRED, IT SHALL BE PAID BY UNCLASSIFIED EXCAVATION AND AGGREGATE BASE TYPE A.

A28. TO BE PERFORMED BY LICENSED SURVEYOR. INCLUCES PROVIDING COORDINATES AND ELEVATION OF THE EXISTING WEIR & OUTLET VALVE OF THE YAHOLA OVERFLOW TOWER.

A29. IF ADDITIVE ALTERNATE #1 IS NOT ACCEPTED THEN THIS PAY ITEM INCLUDES THE COST TO INSTALL & REMOVE A TEMPORARY PLUG FOR THE EXISTING 24" PIPE ON THE SPLITTER BOX IN MOHAWK CELL.

A30. GEOGRID SHALL MEET OR EXCEED PERFORMANCE OF TENSAR INTERAX NX850 A MULTI AXIAL GEOGRID. COEXTRUDED COMPOSITE POLYMER SHEET WHICH IS THEN PUNCHED AND ORIENTED FORMING THREE GEOMETRICS 100% RESISTANCE TO CHEMICAL DEGRADATION. MANUFACTURED IN ACCORDANCE WITH ISO 14025:2011-10. MATERIAL LIST AND LAYOUT SHALL BE SUBMITTED SHOWING LAPS OF 3'-0" FOR APPROVAL BY ENGINEER.

PROFESSIONAL ENGINEER — Daniel A. Keithline 17348 — 02/26/2026 — OKLAHOMA

OKIE811

PAY QUANTITIES & PAY NOTES

TMUA-W 25-08

YAHOLA TERMINAL STORAGE RESERVOIR IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER & SEWER DEPARTMENT

Plans and Estimates Prepared by:
KEITHLINE ENGINEERING GROUP
8556 E. 101ST ST., STE.C Tulsa, Oklahoma 74133 (918) 369-7911

REVISION	BY	DATE
⚠ ADDENDUM 1	DAK	4/8/2026

PLAN SCALE: N/A
PROFILE SCALE
HORIZONTAL: N/A
VERTICAL: N/A

DRAWN	ZLM	01-29-2026	APPROVED:
DESIGNED	DAK	01-29-2026	
SURVEY	NJR	03-29-2020	
PROJECT MGR			
LEAD ENGINEER			
FIELD MGR			

DESIGN MANAGER

FILE: DRAWING: DATE: JANUARY 29, 2026

ATLAS PAGE NO: 433, 434, 354, 355, 284 SHEET 03 OF 55 SHEETS

PROJECT NO. TMUA-W-25-08 YAHOLA TERMINAL STORAGE RESERVOIR IMPROVEMENTS

S:\1_Projects\1 - TMUA-Water\24.33_Yahola Resvr.2023 Improv_W-25-08\03.0_Plans_XS & Stnds\1.2_Plan Sheets\24.33_A2_Pay Items & Notes.dwg, 4/9/2026 8:58:57 AM

PROJECT SCOPE OF WORK

1. THE BASE BID INCLUDES THE CONSTRUCTION OF TWO (2) SLIDE GATE (1) STRUCTURES (SGS) THAT WILL CONNECT THE THREE (3) SUBMERGED RESERVOIR CELLS DURING NORMAL POOL OPERATIONS. CONSTRUCTION OF THE SGS ON THE EAST SUBMERGED BERM SHALL OCCUR FIRST, ALONG WITH THE SEQUOYAH BOAT RAMP AND ADDITIVE ALTERNATE 1. CONSTRUCTION OF THE SGS ON THE WEST SUBMERGED BERM SHALL OCCUR SECOND.
2. THE WORK INCLUDES REMOVAL OF CONCRETE SLOPE PROTECTION, REMOVAL OF AGGREGATE, UNCLASSIFIED EXCAVATION, DEWATERING, SUBGRADE PREPARATION, PLACEMENT OF SUBBASE AGGREGATE, REINFORCED CONCRETE FOOTINGS, TOWER, CONVEYANCE CHANNEL AND APRONS. ALSO INCLUDES TWO (2) SLUICE GATES, GRATING, HANDRAILS, DURABLE MANHOLE STEPS, SELECT BACKFILL AND EROSION CONTROL AS SHOWN ON PLANS.
3. THE ADDITIVE ALTERNATE 1 INCLUDES THE RECONSTRUCTION OF A 24-INCH CONVEYANCE PIPE AND VALVE TO CONNECT THE SEQUOYAH CELL TO THE MOHAWK CELL.
4. THE BASE BID AND ADDITIVE ALTERNATE WORK AREAS ARE SHOWN ON PROJECT OVERVIEW SHEET. CONSTRUCTION SEQUENCE WITH STARTUP PROCEDURE IS LISTED ON THIS SHEET AS WELL.
5. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL IMPLEMENT A TRAFFIC CONTROL PLAN AROUND THE ENTIRE EXISTING RESERVOIR GRAVEL PERIMETER ROAD THAT WAS DEVELOPED IN ACCORDANCE WITH THE LATEST ADDITION OF THE MUTCD. PLAN SHALL SHOW MATERIAL AND EQUIPMENT STAGING AREAS, SAFETY AND LOGISTICAL SIGNS FOR ALL TYPES OF TRAFFIC.

CONSTRUCTION CONSTRAINTS

1. DO NOT PERFORM WORK BETWEEN THE HOURS OF 6:00 PM AND 7:00 AM NOR ON SATURDAY, SUNDAY, OR LEGAL HOLIDAYS WITHOUT THE WRITTEN APPROVAL OR PERMISSION OF THE CITY.
2. BEFORE WORK IN ANY AREA MAY COMMENCE, THE CONTRACTOR MUST COORDINATE HIS ACTION IN WRITING THROUGH THE OWNER AT LEAST 10 DAYS PRIOR TO STARTING THE PLANNED WORK.
3. THE CONTRACTOR IS RESPONSIBLE AND SHALL MANAGE STORMWATER AND GROUNDWATER FLOW BY DEWATERING AT EACH PROJECT AREA DURING THE PROJECT DURATION. PROJECT AREAS ARE IDENTIFIED IN CONSTRUCTION PLANS.
4. ANTCIPATED TARGET DATES IS AS FOLLOWS: (THESE DATES ARE SUBJECT TO CHANGE, F.E. APPROVAL REQUIRED.)
   AUG. 6, 2026 - CITY RECEIVES EXCUTED CONTRACT.
   AUG. 17, 2026 - PRE-CONSTRUCTION MEETING AND CITY ISSUES TAX CERTIFICATE.
   AUG. 18, 2026 - CONTRACTOR STARTS THE SLIDE GATE SHOP DRAWING/PURCHASE PROCESS.
   - CONTRACTOR ALLOWED TO BEGIN MOBILIZATION AS LONG AS IT DOES NOT IMPACT THE CITY'S DAILY OPERATIONS.
   SEP. 21, 2026 - PENDING WEATHER & DEMAND RATES, CITY WILL BEGIN RESERVOIR DRAWDOWN.
   OCT. 7, 2026 - SECOND PRE-CONSTRUCTION MEETING AND CITY ISSUES NTP.
   OCT. 12, 2026 - COMPLETION OF RESERVOIR DRAWDOWN.
   - CONTRACTOR CAN BEGIN CONSTRUCTION OF PROPOSED WORK.
   MAR. 30, 2027 - ALL RESERVOIR CELLS TO BEGIN FILLING.
   - PROPOSERD WORK AND PUNCH LIST TO BE COMPLETE IN TULSA REGULATORY FLOODPLAIN.
   MAY 28, 2027 - COMPLETE CLEANUP, PUNCH LIST, DEMOBILIZATION OUTSIDE OF TULSA REGULATORY FLOODPLAIN COMPLETE.
   - THE CONTRACTOR SHALL NOT IMPACT THE CITY'S DAILY OPERATIONS
5. THE EAST BERM GATE STRUCTURE IS THE PRIORITY AND SHOULD BEGIN 2-3 WEEKS MINIMUM PRIOR TO STARTING THE WEST BERM GATE.
6. THE CITY RESERVES THE RIGHT TO ISSUE THE CONTRACTOR A STOP WORK ORDER IF AN EMERGENCY ARSISES AND FILL THE RESERVOIRS PENDING WEATHER AND ANTICIPATED WATER DEMAND. EVERY EFFORT WILL BE MADE TO PROVIDE A MINIMUM OF A WEEKS NOTICE, BUT THE OWNER RESERVES THE RIGHT IN AN EXTREME EMERGENCY TO FORCE CONTRACTOR TO VACATE WITHIN 24 HOURS. IF CONTRACTOR IS FORCED TO VACATE THE RESERVIOR PER THIS NOTE, AN ADDITIONAL MOBILIZATION SHALL BE GRANTED AS WELL AS ADDITIONAL CALENDAR DAYS.
7. CONTRACTOR TO PERMIT CITY STAFF ACCESS TO THE RESERVOIR FACILITIES TO PERFORM NORMAL OPERATION OR MAINTENANCE DUTIES AT ALL TIMES. THIS INCLUDES UNOBSTRUCTED ACCESS TO PARKING LOT GATES, EXISTING GRAVEL PERIMETER ROAD, AND EXISTING BOAT RAMPS.

WATER CONSTRUCTION NOTES (COT VERSION 5/15/2025)

1. THE CITY OF TULSA FIELD ENGINEERING DEPARTMENT SHALL INSPECT ALL TRENCHING, BEDDING, PIPE INSTALLATION, BACKFILL AND COMPACTION.
2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS AND STANDARD DETAILS OF THE CITY OF TULSA WATER & SEWER DEPARTMENT.
3. NOT USED.
4. MINIMUM COVER OVER WATER LINES SHALL BE AS NOTED ON THE PLANS.
5. CONTRACTOR SHALL REPLACE EXISTING GRASS WITH SEED/SOD OF THE SAME TYPE AND VARIETY OR AS NOTED ON PLANS.
6. NOT USED.
7. NOT USED.
8. WATER OPERATIONS SHALL OPERATE ALL VALVES ON TRANSMISSION MAINS (16" AND LARGER). CONTRACTOR SHALL OPERATE ALL VALVES ON DISTRIBUTION MAINS (SMALLER THAN 16") WITH THE COORDINATION OF FIELD ENGINEERING AND WATER OPERATIONS AND IN THE PRESENCE OF A FIELD ENGINEERING INSPECTOR.
   A. ATTEMPTS WILL BE MADE WITH ASSISTANCE FROM THE CONTRACTOR TO NOTIFY ALL AFFECTED CUSTOMERS 48 HOURS IN ADVANCE, PARTICULARLY IF COMMERCIAL OR INDUSTRIAL CUSTOMERS ARE INVOLVED. PRIOR TO SHUTDOWN, FIELD ENGINEERING WILL NOTIFY WATER OPERATIONS AT 918-596-9488, GIVING AN ESTIMATED DOWNTIME. WATER OPERATIONS WILL NOTIFY THE FIRE DEPARTMENT OF ALL FIRE HYDRANTS OUT OF SERVICE AND WHEN THEY ARE BACK IN SERVICE, BY STREET ADDRESS OR INTERSECTION.
   B. WHERE COMMERCIAL, INDUSTRIAL, OR CRITICAL CUSTOMERS ARE AFFECTED, AND FOR ALL LINES 16-INCH AND LARGER IN SIZE, FIELD ENGINEERING WILL REQUEST WATER OPERATIONS TO SHUT DOWN THE MAIN. THERE WILL BE A MINIMUM OF 48-HOUR NOTICE TO WATER OPERATIONS.
9. NOT USED.
10. CONTRACTOR SHALL GIVE THE NOTIFICATION CENTER OF THE OKLAHOMA ONE-CALL SYSTEM, INC, NOTICE OF ANY EXCAVATION NO LATER THAN 48 HOURS OR SOONER THAN 10 DAYS PRIOR TO COMMENCEMENT OF WORK (EXCLUDING SATURDAYS, SUNDAYS, LEGAL HOLIDAYS). PHONE: 1-800-522-6543.
11. LOCAL AND THROUGH TRAFFIC SHALL BE MAINTAINED THROUGH PROJECT AT ALL TIMES. OPEN CUT STREET CROSSINGS REQUIRE AN APPROVED TRAFFIC CONTROL PLAN WITH TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH CURRENT MUTCD REQUIREMENTS.
12. ANY DAMAGE CAUSED BY THE CONTRACTOR TO ADJACENT TRAFFIC SIGNAL INFRASTRUCTURE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE TRAFFIC ENGINEER.
13. NOT USED.
14. CONSTRUCTION FOR ALL ENGINEERING SERVICE FACILITIES SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF TITLE 252, DEPARTMENT OF ENVIRONMENTAL QUALITY, CHAPTER 626, PUBLIC WATER SUPPLY CONSTRUCTION STANDARDS, OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ).
15. ALL EXCAVATED MATERIAL NOT REQUIRED IN OTHER AREAS OF THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER ACCEPTABLE TO THE ENGINEER WITHOUT COST TO THE CITY. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN AN EARTH CHANGE PERMIT IF ANY EXCESS MATERIAL IS TO BE DISPOSED OF WITHIN THE CITY LIMITS OF TULSA.
16. ANY CHANGES FROM THE APPROVED PLANS SHALL BE SUBMITTED TO THE CITY OF TULSA FOR WRITTEN APPROVAL PRIOR TO INSTALLATION.

GENERAL STRUCTURAL NOTES

CONCRETE

1. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE LATEST BUILDING AND CODE REQUIREMENTS FOR REINFORCED CONCRETE OF THE AMERICAN CONCRETE INSTITUTE (A.C.I. 318 & 350R).
2. ALL REINFORCING BARS SHALL CONFORM TO A.S.T.M. A-615 GRADE 60, EPOXY COATED. ARRANGEMENT AND DETAILS OF REINFORCING STEEL, INCLUDING BAR SUPPORTS & SPACERS, SHALL BE IN ACCORDANCE WITH THE LATEST A.C.I. DETAILING MANUAL, UNLESS OTHERWISE NOTED.
3. ALL SLAB AND BEAM REINFORCEMENT SHALL HAVE A MINIMUM EXTENSION INTO THE SUPPORT IN ACCORDANCE WITH LATEST A.C.I. CODE. IF SUCH EXTENSION IS NOT POSSIBLE, BARS SHALL TERMINATE IN STANDARD HOOKS.
4. HORIZONTAL WALL AND SLAB REINFORCEMENT SHALL LAP A MINIMUM OF 1.7LD AT SPLICES, WALL DOWELS AND WALL BAR EXTENSIONS AND ALL SPLICES SHALL LAP A MINIMUM OF 1.7LD UNLESS OTHERWISE NOTED. BAR TENSION SPLICES ARE SHOWN ON CHART ON PLANS PER ACI 318-19 OR ACI 318-14
5. UNLESS OTHERWISE NOTED ON THE DRAWINGS, REINFORCEMENT SUPPORTS SHALL CONFORM TO CRSI, PROVIDE PROPER COVER AND BE THE FOLLOWING:
   WHERE WET CONCRETE IS PLACED ON GROUND: PRECAST CONCRETE BLOCKS (NOT PERMITTED)
   WHERE CONCRETE IS EXPOSED TO VIEW, WEATHER, WATER OR EARTH: PLASTIC PROTECTED CRSI TYPE 3
6. UNLESS OTHERWISE NOTED ON THE DRAWINGS, CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL NOT BE LESS THAN THE FOLLOWING:
   STRUCTURAL MEMBERS, FOUNDATIONS, WALLS AND SUSPENDED SLABS . . . . . 4,000 PSI
   SLABS ON GRADE AND PADS . . . . . 4,000 PSI
   CLSM . . . . . 400 PSI
7. UNLESS OTHERWISE NOTED ON THE DRAWINGS, REINFORCED CLEARANCE FROM SURFACE IS AS FOLLOWS:
   SLABS
   FOOTINGS AND BASE SLABS AT FORMED SURFACES AND . . . . . 3 INCH
   TOP OR BOTTOM UNFORMED SURFACES AND BOTTOMS . . . . . 3 INCH
   WALLS
   EXPOSED TO EARTH,
   WATER, OR WEATHER . . . . . 3 INCH
   BEAMS & COLUMNS
   STIRRUPS AND TIES . . . . . 1-1/2 INCH
   PRINCIPLE REINFORCEMENT . . . . . 2 INCH
8. ALL VERTICAL CONCRETE FORMED SURFACES SHALL BE FINISHED WITH CLASS 2 RUBBED FINISH PER ODOT SPECIFICATIONS.
   ALL SLABS, APRONS, AND CONCRETE SLOPE PROTECTION SURFACES SHALL BE FINISHED WITH MEDIUM HEAVY BROOM PRIOR TO SET OR AS DIRECTED BY FIELD ENGINEERING.
9. HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS SHOWN OR NOTED ON THE PLANS ARE RECOMMENDED. ANY DEVIATION FROM THOSE SHOWN SHALL HAVE APPROVAL OF FIELD ENGINEERING.

   PRIOR TO PLACING CONCRETE AGAINST COLD JOINTS, THE CONCRETE SURFACE SHALL BE CLEANED AND WETTED PER ODOT REQUIREMENTS. APPROVED CONCRETE ADDESIVE IS ACCEPTABLE.
10. ANY STOP IN FRAMED CONCRETE WORK MUST BE MADE IN THE CENTER OF THE SPAN AND INCORPORATE THE CONSTRUCTION JOINT SHOWN IN THE PLANS. REINFORCEMENT SHALL EXTEND THROUGH THESE JOINTS IF REQUIRED FOR CONTINUITY.
11. USE CONCRETE KEYWAY FOR ALL CONSTRUCTION JOINTS IN WALLS AND SLABS BELOW GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
12. CONCRETE WALLS AND PARTITIONS SHALL BE POURED IN MAXIMUM LENGTHS OF 40 FEET BETWEEN VERTICAL CONSTRUCTION JOINTS OR AS SHOWN ON PLANS.
13. UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL CONCRETE SLABS OVER 8-INCHES THICKNESS, REINFORCED WITH BARS, AND POURED AGAINST SOIL SHALL BE POURED IN A STRIP PATTERN OF 40 FEET OR LESS IN EACH DIRECTION.
14. ALL EXPOSED EDGES OR BEAMS, COLUMNS, SLABS AND WALLS SHALL BE CHAMFERED 3/4-INCH UNLESS MASONRY OR OTHER MEMBERS ARE ERECTED FLUSH WITH THEM.
15. REFER TO ANY ADDITIONAL FOR ALL SLEEVES, PIPES, CONDUITS AND MISCELLANEOUS ANCHORING DEVICES TO SHALL BE INCORPORATED IN THE CONSTRUCTION WHILE CONCRETE IS BEING PLACED.

FOUNDATIONS

1. ALL EXCAVATION SHALL BE CARRIED OUT IN THE DRY, AND PROVISIONS SHALL BE MADE TO PREVENT THE BOTTOM OF ALL EXCAVATIONS FROM FREEZING OR FLOODING AT ALL TIMES. NATIVE SUBGRADE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY AS REQUIRED.
2. ALL FOUNDATIONS SHALL BE CONSTRUCTED IN EXCAVATIONS FREE OF STANDING WATER, DEWATERING MAY BE REQUIRED TO CONTROL GROUND WATER ELEVATION.
3. DUE TO THE HIGH WATER TABLE, DEWATERING WILL BE REQUIRED, ESPECIALLY DURING SIGNIFICANT RAIN EVENTS.
4. EXISTING BEARING SOILS OR STRUCTURAL FILL UNDER THE FOUNDATION SHALL BE SCARIFIED, DRIED BETWEEN +/- 2% OPTIMUM MOISTURE AND RECOMPACTED TO A MINIMUM OF 95% MODIFIED PROCTOR DENSITY PER ASTM D1557 AND HAVE A MINIMUM SOIL BEARING CAPABILITY OF 2,000 PSF. MODIFIED PROCTOR ACHIEVES SIGNIFICANT STIFFNESS AND LOWER COMPRESSIBILITY TO IMPROVE MAT FOUNDATION PERFORMANCE UNDER SUSTAINED LOADS.

DESIGN LOADS

1. TOWER TOP SLAB LOADING: (PER A.C.I. 318-19 USING FINITE ELEMENT METHOD)
   DEAD LOAD & SELF WEIGHT = 100 PSF
   LIVE LOAD = 100 PSF
2. TOWER & CHANNEL GRATE LOADING: (PER ANSI/NAAMM MBG 531 & MBG 534-24)
   DEAD LOAD & SELF WEIGHT = SEE TECHNICAL SPECIFICATION 05 53 00
   LIVE LOAD = SEE TECHNICAL SPECIFICATION 05 53 00

SLIDE GATE CONSTRUCTION NOTES

1. THE SLIDE GATE, STEM GUIDE, AND PEDESTAL MOUNT ANCHOR SPACING TO BE INSTALLED PER APPROVED SHOP DRAWINGS SUBMITTED BY THE CONTRACTOR TO FIELD ENGINEERING.
2. DURING THE ERECTION OF FORM WORK FOR TOWER WALLS & CEILING, ANCHOR LOCATIONS SHALL BE MARKED ON THE FORMS TO ENSURE REINFORCEMENT WILL NOT OBSTRUCT DRILLED HOLES DURING ANCHOR INSTALLATION.
3. SEE TECHNICAL SPECIFICATION 40 05 59.23 FOR ADDITIONAL INFORMATION.

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2019 OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE CURRENT CITY OF TULSA ENGINEERING SERVICES DEPARTMENT'S STANDARD SPECIFICATIONS AND STANDARD DETAILS. ALSO INCLUDES ALL REFERENCED STANDARDS, SPECIFICATIONS, CODES AND DIRECTIVES.
2. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS GOVERNING SAFETY, HEALTH AND SANITATION. THE CONTRACTOR SHALL PROVIDE ALL SAFEGUARDS, SAFETY DEVICES AND PROTECTIVE EQUIPMENT, AND TAKE ANY OTHER NEEDED ACTION ON AS HIS OWN RESPONSIBILITY OR AS THE ENGINEER MAY DETERMINE REASONABLY NECESSARY TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT.
3. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK IN EACH AREA. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM HIS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UTILITIES.
4. THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS TO PREVENT EXCESS MOISTURE FROM INCLEMENT WEATHER OR OTHER SOURCES FROM ENTERING ANY STREET EXCAVATION. IF EXCESS MOISTURE DOES ENTER THE EXCAVATION THROUGH THE NEGLIGENCE OF THE CONTRACTOR AND THE ADJOINING PAVEMENT IS ADVERSELY AFFECTED BY THE EXCESS MOISTURE, THE CONTRACTOR SHALL REPLACE THE ADJOINING PAVEMENT AND SUBBASE AT HIS SOLE EXPENSE.
5. THE CONTRACTOR SHALL PRESERVE THE INTEGRITY OF THE RESERVOIR STRUCTURES AND ALL OTHER UTILITY STRUCTURES WITHIN THE PROJECT EXTENTS.
6. THE CONTRACTOR SHALL WORK IN COOPERATION WITH THE CITY OF TULSA TO ESTABLISH, INSTALL, MAINTAIN, AND OPERATE COMPLETE, ADEQUATE, AND SAFE TRAFFIC CONTROLS DURING THE ENTIRE CONSTRUCTION PERIOD. ALL FLAGMEN, BARRICADES, AND TRAFFIC CONTROL DEVICES SHALL BE APPROVED BY THE FIELD ENGINEERING REPRESENTATIVE.
7. CONSTRUCTION SIGNAGE WILL BE INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT ADDITION, AND APPLICABLE ODOT STANDARD DRAWINGS. THE CONTRACTOR SHALL PROVIDE A PROPOSED TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER PRIOR TO BEGINNING WORK.
8. ALL BROKEN CONCRETE, WASTE MATERIAL, AND OTHER DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE DISPOSAL OF THIS MATERIAL.
9. WHERE MATERIALS ARE TRANSPORTED IN THE PROSECUTION OF WORK, VEHICLES SHALL NOT BE LOADED BEYOND THE CAPACITY RECOMMENDED BY THE VEHICLE MANUFACTURER OR AS PRESCRIBED BY ANY FEDERAL, STATE OR LOCAL LAW OR REGULATION.
10. PHYSICAL TESTING FOR QUALITY ASSURANCE SHALL BE FURNISHED BY THE CITY.
11. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY QUALITY CONTROL TESTING TO ENSURE THAT PROJECT REQUIREMENTS ARE MET. ALL INSPECTIONS SHALL OCCUR WITHIN 48 HOUR NOTICE FROM CONTRACTOR.
12. REFLECTORIZED SHEETING ON SIGNS AND BARRICADES SHALL BE OF A CUBIC PRISMATIC TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE IX RETRO-REFLECTIVE SHEETING. REFLECTORIZED SHEETING ON DRUMS AND TUBE CHANNELIZERS SHALL BE OF A HIGH-INTENSITY TYPE AND SHALL MEET THE SPECIFICATIONS ESTABLISHED FOR ASTM D 4956-01 TYPE III RETRO-REFLECTIVE SHEETING.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL AND MAINTENANCE OF THE STORMWATER DRAINAGE. STORMWATER PONDING ON THE CONSTRUCTION SITE THAT IS THE RESULT OF CONSTRUCTION WILL NOT BE ALLOWED.
14. STRAW OR HAY BALES AS STORMWATER BEST MANAGEMENT PRACTICES ARE NO LONGER ALLOWED ON CONSTRUCTION PROJECTS. OTHER METHODS SHALL BE USED AS SHOWN BY THE STANDARDS OR APPROVED.
15. THE CONTRACTOR MUST CALL 1-800-458-4251 IMMEDIATELY IF A NATURAL GAS PIPELINE IS CUT, DAMAGED, OR OTHERWISE DISTURBED.
16. CONTRACTOR SHALL NOT STORE EQUIPMENT OR MATERIALS IN THE FLOODPLAIN WITHOUT PERMISSION FROM THE CITY OF TULSA. IF PERMISSION IS GRANTED, IT SHALL BE STORED AT THE RISK OF THE CONTRACTOR AND SHALL BE REMOVED PRIOR TO ANY RAIN EVENT.
17. SOIL BORING LOGS FOR THIS PROJECT ARE AVAILABLE AND ABLE TO BE REQUESTED FOR REVIEW FROM THE ENGINEER OF RECORD. NEITHER CITY OR THE ENGINEER MAKES OR ACCEPTS, EXPRESS, OR IMPLIES ANY WARRANTIES ABOUT THE INFORMATION SHOWN ON THE BORING LOGS.

LD = TENSILE DEVELOPMENT LENGTH FOR REINFORCING BARS WITH: GRADE 60 REINFORCING AND 4000 PSI CONCRETE		
BAR SIZE	TENSION DEVELOPMENT LENGTH (INCHES)	
	OTHER BARS	TOP BARS
3	12 x 1.7	12 x 1.7
4	12 x 1.7	17 x 1.7
5	15 x 1.7	21 x 1.7
6	18 x 1.7	25 x 1.7
7	23 x 1.7	32 x 1.7
8	30 x 1.7	42 x 1.7
9	38 x 1.7	53 x 1.7
10	48 x 1.7	67 x 1.7
11	59 x 1.7	83 x 1.7

PROFESSIONAL ENGINEER — LICENSED — Daniel A. Keithline 17348 02/26/2026 — OKLAHOMA

OKIE811

CONSTRUCTION & STRUCTURAL NOTES

TMUA-W 25-08

YAHOLA TERMINAL STORAGE RESERVOIR IMPROVEMENTS

CITY OF TULSA, OKLAHOMA
WATER & SEWER DEPARTMENT

Plans and Estimates Prepared by:
KEITHLINE ENGINEERING GROUP
8556 E. 101ST ST., STE.C Tulsa, Oklahoma 74133 (918) 369-7911

REVISION	BY	DATE
⚠ ADDENDUM 1	DAK	4/8/2026

PLAN SCALE N/A	DRAWN	ZLM	01-29-2026	APPROVED:
	DESIGNED	DAK	01-29-2026	
PROFILE SCALE	SURVEY	NJR	03-20-2020	
HORIZONTAL: N/A	PROJECT MGR			
VERTICAL: N/A	LEAD ENGINEER			
	FIELD MGR			DESIGN MANAGER

FILE: | DRAWING: | DATE: JANUARY 29, 2026

ATLAS PAGE NO: 433, 434, 354, 355, 284 | SHEET 04 OF 55 SHEETS

PROJECT NO. TMUA-W-25-08 YAHOLA TERMINAL STORAGE RESERVOIR IMPROVEMENTS

S:\1_Projects\1 - TMUA-Water\24.33_Yahola Resvr.\2023 Improv_W-25-08\03.0_Plans_XS & Stnds\1.2_Plan Sheets\24.33_A2_Pay Items & Notes.dwg, 4/9/2026 8:59:14 AM