CONTRACT DOCUMENTS - DRAWINGS
FOR
PROJECT NO. TMUA WPC 26-5
COAL CREEK FEB, PORT SOUTH DIURNAL BASIN, NSWWTP LAGOON & NSWWTP DECANT LAGOON IMPROVEMENTS
FY'26 WATER POLLUTION CONTROL CAPITAL EQUIPMENT REPLACEMENTS

ATTENDANCE AT PRE-BID CONFERENCE IS MANDATORY

PREPARED BY:

HOLLOWAY, UPDIKE AND BELLEN, INC.
2001 N WILLOW AVE
BROKEN ARROW, OK 74012
918-251-0717 OFFICE
C.A. No. 219
EXPIRES 6/30/27

Stephen Tolar P.E., S.E. No. OK 20679 — Date: 10-27-26

LICENSED PROFESSIONAL ENGINEER — LOYD STEPHEN TOLAR — 20679 — OKLAHOMA

Cindy Cantero, Water Pollution Control Manager — Date: 10-27-26

CITY OF TULSA

ERIC LEE, DIRECTOR
WATER AND SEWER DEPARTMENT

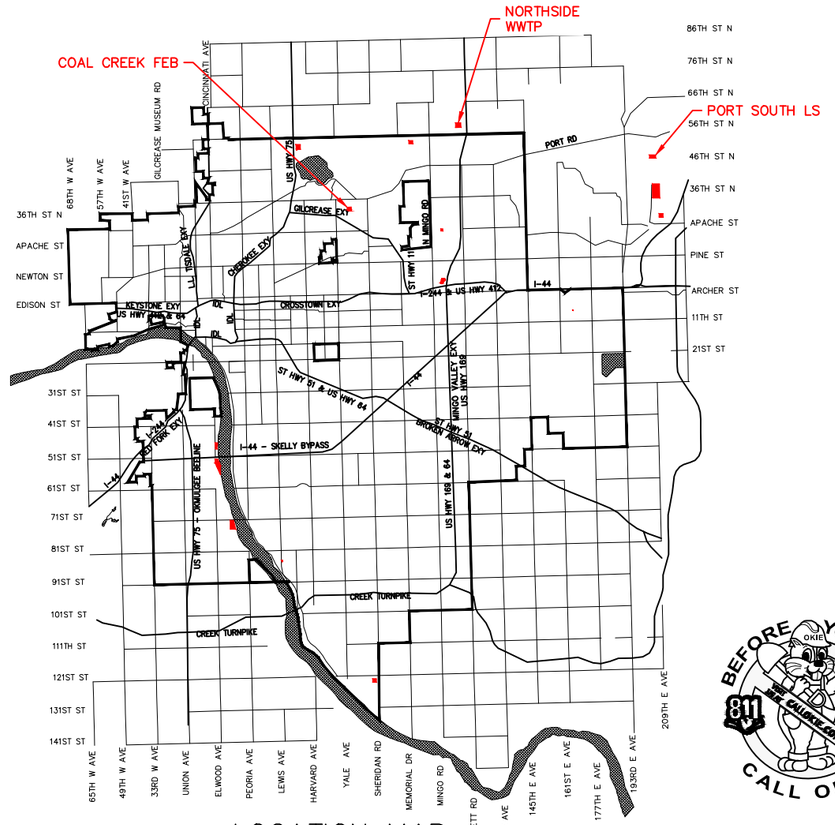
Eric Lee, Director Water & Sewer Dept. — Date: 10.29.2026

Account Numbers: 2731S00007.SewerLines.Sewer.7500.75003305.541101
2731S00004.SewerTreat.Sewer.7500.75003305.541101
7503368-544003

Note: The Drawings attached hereto as part of these Specifications are for information purposes only. The Authority makes no representation or guarantee with respect to the accuracy of any information contained in the Drawings. It is the Contractors responsibility to verify information on the drawings to ensure the equipment installed or controlled by work performed under this Contract performs as specified herein.

Water and Sewer Department
175 E. 2nd Street, Suite 1300
Tulsa, Oklahoma 74103
(918) 596-9870

INDEX OF SHEETS				
PLAN SHEET NO.	DRAWING NO.	DESCRIPTION	EQUIPMENT NO.	LOCATION
1		COVER		
2		INDEX OF SHEETS & LOCATION MAP		
3		GENERAL NOTES		
4		LOCATION PLANS		
5	203.100.A	OVERVIEW – COAL CREEK FLOW EQUALIZATION BASIN		COAL CREEK LS
6	203.100.B	PAY ITEMS & NOTES		COAL CREEK LS
7	203.100.C	TASK DESCRIPTIONS		COAL CREEK LS
8	203.100.D	COAL CREEK SECTIONS & DETAILS	N132–FEB1–BAS01	COAL CREEK LS
9	203.100.E	COAL CREEK SECTIONS & DETAILS	N132–FEB1–BAS01	COAL CREEK LS
10	203.100.F	AERIAL – COAL CREEK	N132–FEB1–BAS01	COAL CREEK LS
11	203.100.G	REPAIR PLAN – COAL CREEK	N132–FEB1–BAS01	COAL CREEK LS
12	203.100.H	STORMWATER MANAGEMENT PLAN – COAL CREEK FEB	N132–FEB1–BAS01	COAL CREEK LS
13	203.100.I	COAL CREEK PHOTOS	N132–FEB1–BAS01	COAL CREEK LS
14	203.200.A	PORT SOUTH LS DIURNAL BASIN LINER REPLACEMENT PLAN	L137–FEB1–BAS01 L137–FEB1–LLC02	PORT SOUTH LS
15	203.200.B	PORT SOUTH LS DIURNAL BASIN LINER REPLACEMENT DETAILS	L137–FEB1–BAS01 L137–FEB1–LLC02	PORT SOUTH LS
16	203.200.C	PORT SOUTH LS DIURNAL BASIN LINER REPLACEMENT DETAILS	L137–FEB1–BAS01 L137–FEB1–LLC02	PORT SOUTH LS
17	203.200.D	PORT SOUTH LIFT STATION PHOTOS	L137–FEB1–BAS01 L137–FEB1–LLC02	PORT SOUTH LS
18	203.200.E	PORT SOUTH LIFT STATION PHOTOS	L137–FEB1–BAS01 L137–FEB1–LLC02	PORT SOUTH LS
19	203.300.A	NSWWTP SITE PLAN		NSWWTP
20	203.300.B	NSWWTP LAGOON #5 REHABILITATION (BASE BID) & DECANT LAGOON DRAIN IMPROVEMENTS (ADD ALT #1)	N090–LAG5–LAG01	NSWWTP
21	203.300.C	NSWWTP LAGOON #5 PHOTOS	N090–LAG5–LAG01	NSWWTP
22	203.300.D	NSWWTP LAGOON #5 DRAWING SECTIONS	N090–LAG5–LAG01	NSWWTP
23	203.300.E	NSWWTP LAGOON #5 DRAWING SECTIONS	N090–LAG5–LAG01	NSWWTP
24	203.400.A	NSWWTP DECANT LAGOON PNP 8" GRAVITY LINE "D" (ADD ALT #1)	N090–LAG1–VLT01 N090–LAG1–RWR01	NSWWTP
25	203.400.B	NSWWTP DECANT LAGOON STRUCTURE PLANS & SECTIONS (ADD ALT #1)	N090–LAG1–VLT01 N090–LAG1–RWR01	NSWWTP
26	203.400.C	NSWWTP DECANT LAGOON STRUCTURE WALKWAY DETAILS (ADD ALT #1)	N090–LAG1–VLT01 N090–LAG1–RWR01	NSWWTP
27		MISCELLANEOUS DETAILS		
28		MISCELLANEOUS DETAILS		



LOCATION MAP

TULSA CONTACT INFORMATION

SOUTHSIDE WASTEWATER TREATMENT PLANT
JOSH FISHER, SUPERINTENDENT 918–591–4450

NORTHSIDE WASTEWATER TREATMENT PLANT
COLIN WILMERING, SUPERINTENDENT 918–591–4570

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 —— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10.22.2026
OKLAHOMA

INDEX OF SHEETS & LOCATION MAP

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26–5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)258-0707, FAX (918)258-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 2 OF 28 SHEETS

GENERAL NOTES

1. THE CONTRACTOR SHALL CALL WWTP PERSONNEL AND CALL OKIE AT 1-800-522-6543 PRIOR TO ANY EXCAVATION TO DETERMINE LOCATION OF EXISTING UTILITIES.
2. THE CONTRACTOR SHALL, AT CONTRACTOR'S EXPENSE, UNCOVER AND DETERMINE THE DEPTH OF PIPE LINES AND OTHER UTILITIES WHICH, IN CONTRACTOR'S OPINION, COULD INTERFERE WITH THE CONSTRUCTION.
3. THE CITY OF TULSA ENGINEERING SERVICES DEPARTMENT STANDARD SPECIFICATIONS AND STANDARD DETAILS, CURRENT VERSION, ARE HEREBY ADOPTED AS PART OF THESE SPECIFICATIONS WHERE REFERENCE IS MADE. SAID SPECIFICATIONS WILL BE HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS".
4. CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AT ALL TIMES. TRASH, SPENT PALLETS, CONTAINER REMNANTS, BINDINGS, ETC. SHALL BE PICKED UP WHEN NO LONGER IN USE AND DEPOSITED IN TRASH CONTAINERS.
5. ALL STAINLESS STEEL SHALL BE MINIMUM TYPE 316 SUITABLE FOR SANITARY APPLICATIONS, UNLESS SPECIFICALLY NOTED OTHERWISE. ALL ANCHOR BOLTS, SUPPORTS, BRACKETS, FASTENERS AND UNISTRUT SHALL BE 316 SS UNLESS NOTED SPECIFICALLY OTHERWISE.
6. ALL DIMENSIONS SHOWN WITH ± SHALL BE CONFIRMED BY THE CONTRACTOR ACCORDING TO ACTUAL FIELD CONDITIONS OR EQUIPMENT REQUIREMENTS.
7. DISSIMILAR METALS SHALL BE SEPARATED BY GASKET TO PREVENT GALVANIC CORROSION.
8. ANY EXISTING ITEMS, EQUIPMENT, STRUCTURES OR SURFACES DISTURBED OR DAMAGED BY CONTRACTOR SHALL BE REPAIRED OR REPLACED TO ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER.
9. CONTRACTOR SHALL VERIFY EXISTING UTILITIES IN THE VICINITY OF PROPOSED CONSTRUCTION PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES FROM DRAWINGS.
10. CONTRACTOR SHALL CONFIRM ALL DIMENSIONS WITH EQUIPMENT SUPPLIERS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER OF DISCREPANCIES.
11. CONSTRUCTION STAKING SHALL BE PROVIDED BY THE CONTRACTOR, UNLESS SPECIFICALLY NOTED OTHERWISE.
12. THE IMPROVEMENTS SET FORTH IN THE PLANS SHALL NOT PROHIBIT ON-SITE TRAFFIC AND/OR RELATED TASKS REQUIRED IN THE TREATMENT AND DISCHARGE OF WASTEWATER.
13. TOPSOIL (MINIMUM 6") IN THE DISTURBED AREAS SHALL BE REMOVED, STOCKPILED AND REPLACED AFTER CONSTRUCTION OPERATIONS. ALL WASTE SOILS AND DEBRIS BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE HAULED OFFSITE AND DISPOSED OF PROPERLY.
14. ALL WORKMANSHIP SHALL BE NEAT, PLUMB, SQUARE AND CONSTRUCTED IN A PROFESSIONAL MANNER.
15. ALL ELECTRICAL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH ALL N.E.C. AND CITY OF TULSA ELECTRICAL CODES. ELECTRICAL, MECHANICAL, AND PLUMBING INSPECTIONS ARE REQUIRED AT BOTH ROUGH AND FINAL STAGES OF THE PROJECT.
16. BYPASS PUMPING OR BYPASS PIPING, IF UTILIZED BY CONTRACTOR, SHALL BE SCHEDULED FOR DRY WEATHER PERIODS AND COMPLETELY OPERATED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING UNAUTHORIZED DISCHARGES. BYPASS PUMPING SHALL BE MANNED CONTINUOUSLY (24/7) BY THE CONTRACTOR WHEN OPERATING. AVERAGE DRY WEATHER FLOWS ARE AVAILABLE FROM CITY BY REQUEST.
17. CONTRACTOR IS RESPONSIBLE FOR ANY DEWATERING REQUIRED TO CONSTRUCT FOUNDATIONS IN DRY CONDITIONS AND TO PROTECT EXCAVATION SIDE SLOPES.
18. ALL BURIED CONSTRUCTION, INCLUDING BUT NOT LIMITED TO PIPE AND CONDUIT, SHALL BE PHOTOGRAPHED PRIOR TO COVER. EQUIPMENT DATA TAGS SHALL ALSO BE PHOTOGRAPHED WITH EQUIPMENT. SUBMIT IN A DIGITAL JPEG FORMAT ON JUMP DRIVE AS PART OF CONTRACTORS CONSTRUCTION PHOTOGRAPHIC RECORD. CONTRACTOR SHALL SUBMIT GPS COORDINATES AND ELEVATIONS OF THE ℄ OF ALL PIPING AT BENDS, FITTING, VALVES AND OTHER BURIED ITEMS.
19. WHERE RED TEXT AND LINEWORK IS USED IT CONVEYS NEW OR PROPOSED WORK. RECORD DRAWING USED AS BASE DRAWINGS MAY SHOW BOLD LINEWORK AND TEXT. THIS SHOULD BE VIEWED AS EXISTING.

GENERAL PIPING NOTES

P1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.

P2. SIZE OF FITTINGS SHOWN ON THE PLANS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED.

P3. ALL BURIED D.I.P., C.I.P. AND PVC PIPE SHALL UTILIZE RESTRAINED D.I. MECHANICAL JOINT FITTINGS AT ALL CONNECTIONS UNLESS DEPICTED ON THE PLANS SPECIFICALLY OTHERWISE.

P4. ALL UNRESTRAINED, BURIED FITTINGS SUCH AS BENDS, TEES, WYES, ETC. SHALL BE BLOCKED FOR THRUST BLOCKS AS SHOWN ON STANDARD DETAILS. THIS REQUIREMENT INCLUDES BOTH GRAVITY AND PRESSURE PIPING.

P5. A MINIMUM OF 10 FEET OF HORIZONTAL SEPARATION (FOR PARALLEL LINES) AND 2 FEET OF VERTICAL SEPARATION (FOR LINES CROSSING) SHALL BE MAINTAINED BETWEEN WATER AND SANITARY SEWER LINES IN ACCORDANCE WITH OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY.

P6. CONTRACTOR SHALL REMOVE AND RECONSTRUCT INVERTS WHERE NEW CONNECTIONS ARE MADE TO EXISTING MANHOLES. WORK SHALL BE PAID FOR IN OTHER ITEMS OF WORK.

P7. ALL FLANGE COUPLING ADAPTERS SHOWN ON THE CONSTRUCTION DRAWINGS SHALL BE RESTRAINED TYPE, MEGAFLANGE SERIES 2100, OR EQUAL.

P8. CONTRACTOR IS REQUIRED TO VACUUM TEST ALL MANHOLES ACCORDING TO CITY OF TULSA, ENGINEERING SERVICES STANDARDS AND SPECIFICATIONS.

P9. EXPOSED PIPING SHALL BE PAINTED PER COLOR CODE REQUIREMENTS AND INCLUDE SIGNAGE/LABELS.

SPECIAL WPC PROJECT NOTES & REQUIREMENTS:

1) ALL UNISTRUT SUPPORTS, ANCHOR BOLTS, BOLTS, SCREWS, FASTENERS AND OTHER RELATED COMPONENTS WITHIN THE PLANT FACILITY SHALL BE 316 STAINLESS STEEL UNLESS SPECIFICALLY NOTED OTHERWISE. IF A DISCREPANCY IS NOTED, THE MATERIAL SELECTION SHALL DEFAULT TO 316 STAINLESS STEEL IN ALL EXTERIOR, SUBMERGED, H2S AND CLASSIFIED SPACES.
2) ALL NEW DISCONNECTS, ELECTRICAL/CONTROL DISPLAY DEVICES AND SMALL PANELS SHALL BE MOUNTED ON THE CUSTOM ALUMINUM PANEL SUPPORT AS SHOWN IN THE MISCELLANEOUS DETAILS, UNLESS SPECIFICALLY NOTED OTHERWISE PER PLAN SHEET NOTES.
3) ALL NEW PIPING AND MODIFIED PIPING SHALL BE PAINTED, STANDARD COLOR CODED, WITH DIRECTION ARROWS AND SIGNAGE AS PART OF THE NEW WORK.
4) ALL AREAS OF DEMOLITION SHALL INCLUDE REPAIRS TO THE WALLS, CEILING, ROOF, FLOORING, AND CONCRETE. OTHER AREAS OF WORK TO INCLUDE TOUCH UP PAINTING TO MATCH AND CONCRETE REPAIRS AS SHOWN IN THE MISCELLANEOUS DETAILS. SEE SPECIFICATIONS AND SPECIFIC PLAN SHEETS FOR ADDITIONAL DETAILS.
5) ALL ELECTRICAL AND CONTROLS DEMOLITION FOR BIDDING PURPOSES, UNLESS SPECIFICALLY NOTED OTHERWISE, SHALL BE REMOVED COMPLETELY BACK TO CLOSEST POINT OF TERMINATION. CONTRACTOR SHALL SUBMIT WRITTEN SKETCHES, DETAILS AND A WORK PLAN TO FURTHER DEFINE EXTENT OF EACH AREA OF DEMOLITION AND NEW WORK FOR PLANT OPERATIONS COORDINATION.
6) SEE SPECIFICATIONS AND CITY OF TULSA STANDARDS AND DETAILS FOR ADDITIONAL REQUIREMENTS. ALL WWTP FACILITY'S ROADS, PARKING AND PAVED AREAS ARE CONSIDERED CITY OF TULSA ROADS AND CITY OF TULSA STANDARDS APPLY.
7) THE CONTRACTOR SHALL SELECT MATERIALS AND INSTALL MATERIALS TO MINIMIZE CORROSION AND DISSIMILAR METALS IN ALL AREAS OF WORK. COAT ALL ALUMINUM IN CONTACT WITH CONCRETE, ISOLATION WASHERS ON BOLTS/FASTENERS AND OTHER MATERIAL SEPARATION METHODS SHALL BE USED.
8) ALL COPPER PIPING SHALL BE COATED OR PAINTED PRIOR TO INSTALLATION TO ENSURE COPPER IS COVERED COMPLETELY. ALL HVAC LINES, OTHER COPPER TUBING OR COPPER SERVICE LINES SHALL BE OPTIONED FOR CORROSION RESISTANT COATINGS BY THE MANUFACTURER IF AVAILABLE. IF A FACTORY COATING OPTION IS NOT AVAILABLE, APPLY A SPRAY COATING ONSITE WITH HERESITE COATING OR EQUAL. PROTECTIVE COATINGS SHALL BE APPLIED PRIOR TO ASSEMBLY/INSTALLATION. REQUIREMENTS APPLY TO ALL HVAC MECHANICAL EQUIPMENT AND PLUMBING SYSTEMS WITHIN ALL PLANT FACILITY GROUNDS, EXTERIOR EQUIPMENT, SERVICES AND INSIDE OF BUILDINGS, MANHOLES, VAULTS, SHEDS OR OTHER AREAS, EXCEPT PERSONNEL OCCUPIED SPACES LIKE OPERATIONS BUILDING, OFFICE SPACE OR ADMINISTRATION BUILDINGS. BURIED COPPER WATERLINES ARE ALSO EXEMPT.
9) ALL PVC PIPING SIZES BETWEEN 1/2" – 4" SHALL BE SCH. 80 CPVC UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLAN SHEET OR APPLICABLE SPECIFICATION SECTION. 316 SST PIPE SUPPORT SHALL BE ON 4'-0" AND AT ALL CHANGES IN DIRECTION.

COAL CREEK NOTES

1. DRAWING SHEETS 5 – 12 WERE ORIGINALLY PREPARED BY KEITHLINE ENGINEERING GROUP FOR TMUA PROJECT ES 2017-04, FLOW EQUALIZATION BASIN JOINT AND CRACK REPAIR. THE ORIGINAL PROJECT WAS BID BUT THE COAL CREEK FEB WORK WAS NOT AWARDED. THE WORK IDENTIFIED HEREIN IS INCORPORATED INTO TMUA PROJECT WPC 26-5.
2. THESE SHEETS FORM PART OF THE TMUA WPC 26-5 CONTRACT DOCUMENTS AND SHALL BE READ IN CONJUNCTION WITH THE COMPLETE PROJECT DRAWINGS, SPECIFICATIONS, AND ADDENDA.
3. REFER TO THE TMUA WPC 26-5 BID FORM FOR BID ITEMS, ALTERNATES, QUANTITIES, AND MEASUREMENT AND PAYMENT REQUIREMENTS. ORIGINAL ES 2017-04 BID ITEM AND ALTERNATE DESIGNATIONS ARE ARE MODIFIED AS SHOWN ON DRAWING SHEETS 5 – 12.
4. WORK IDENTIFIED BY RED LINE STRIKE-THROUGHS OR RED X'S IS OMITTED FROM THIS CONTRACT.
5. MODIFICATIONS OR ADDITIONS TO THE ORIGINAL DRAWINGS ARE SHOWN IN RED.

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10.27.2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 — 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

GENERAL NOTES

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEIN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)258-0717, FAX (918)251-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

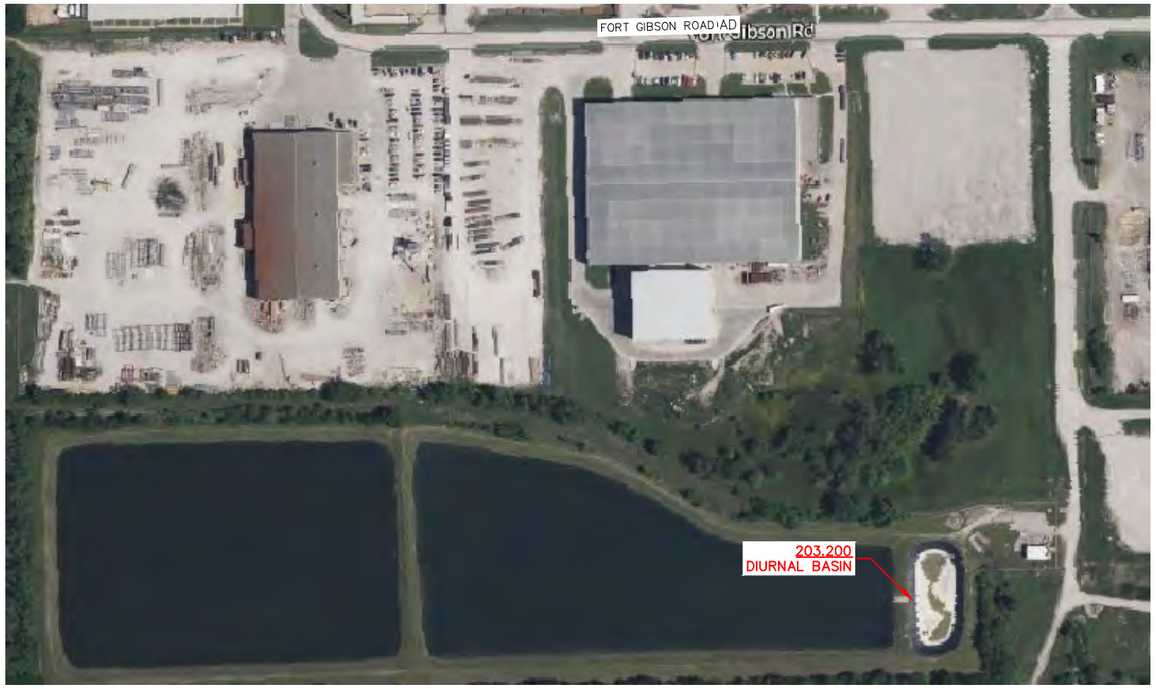
FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 3 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\INDEX.dwg, 10/29/2026 1:34:46 PM



1/4 NORTHSIDE WWTP
5628 N. 105TH EAST AVE.



2/4 PORT SOUTH LS FACILITY
1000 W. FORT GIBSON RD.



3/4 COAL CREEK LS FACILITY
3131 N. ERIE AVE.

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10-26-2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

LOCATION PLANS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

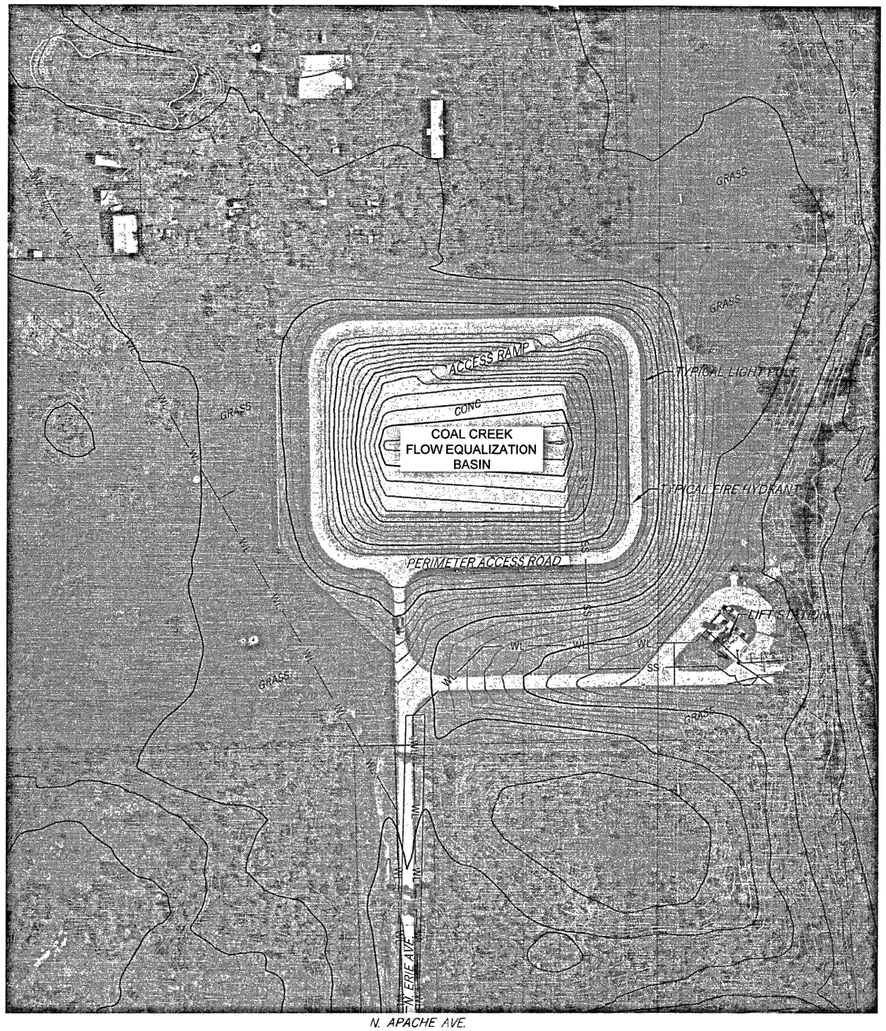
PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
2009 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)258-0707, FAX (918)258-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 4 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\Location Plan.dwg, 10/29/2026 1:34:49 PM



1 COAL CREEK FLOW EQUALIZATION BASIN

SCALE: 1 : 100

COAL CREEK FLOW EQUALIZATION BASIN SCOPE & CONSTRAINTS

FLOOR AND SLOPEWALLS OF FEB ~~(PRIORITY 1)~~

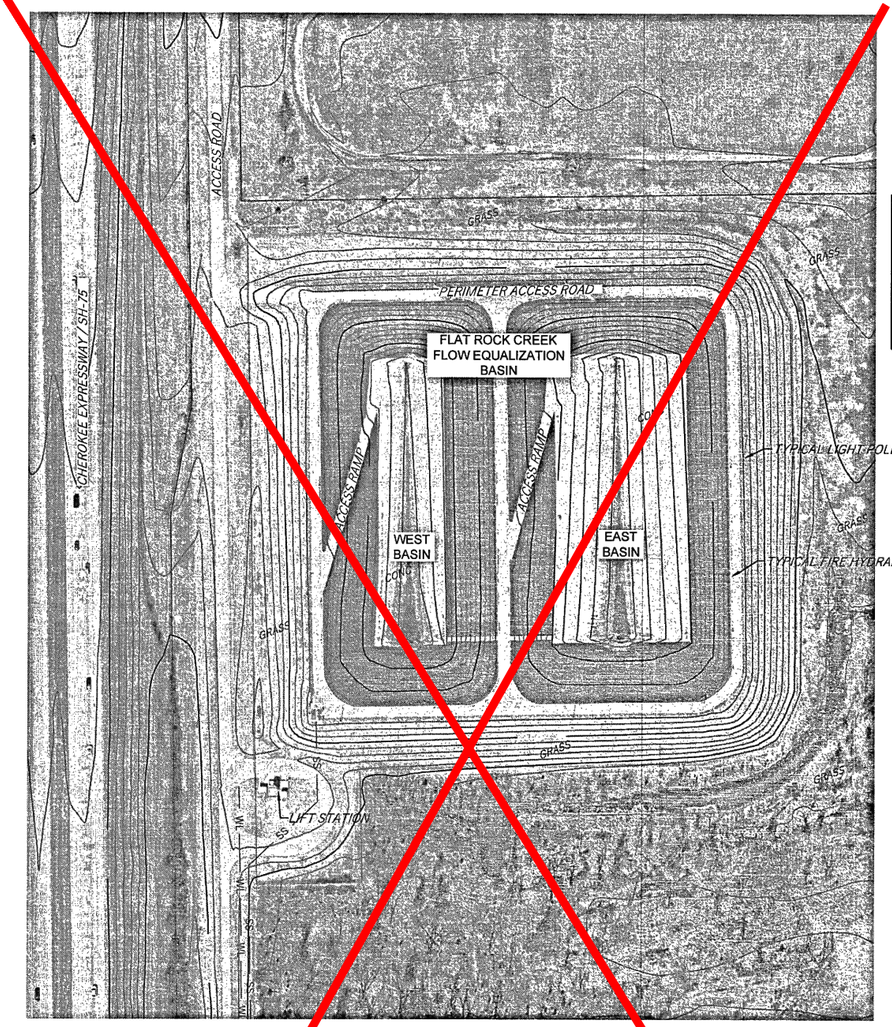
1. REMOVE AND REPLACE THE BASIN DRAIN STRUCTURE SURFACE CONCRETE PANEL PER PLANS DUE TO EXTENSIVE CONCRETE HEAVING AND CRACKING. REPLACEMENT BASIN OUTLET STRUCTURE WILL BE COMPRISED OF MULTIPLE CONCRETE PANELS WITH UNDERLYING GEOFABRIC, INSTEAD OF ONE SINGLE MONOLITHIC BASIN PANEL. REUSE EXISTING BASIN OUTLET GRATES AND FRAMES AND SS ANCHOR U-BOLTS AND NUTS. REPLACE MISSING SS ANCHOR U-BOLTS AND NUTS AS NEEDED TO INSURE FOUR ANCHORS ARE INSTALLED PER PANEL
2. CONTRACTOR TO CLEAN DRAIN AND REMOVE DEBRIS.
3. REPLACE THE TRICKLE CHANNEL DUE TO LEAKING CAUSED BY INCORRECTLY PLACED WATER STOP
4. CONSTRUCT FULL DEPTH / PARTIAL PANEL REPAIRS WHERE NOTED WHERE BASIN CONCRETE HAS CRACKED.
5. ROUTE AND RESEAL BASIN FLOOR CRACKS AND JOINTS, THEN RESEAL ALL CONCRETE SURFACES.

SLOPEWALLS OF EAST AND WEST BASINS

6. CONCRETE ACCESS DRIVE REQUIRES REPAIRS AS NOTED. EXISTING HYPALON SLOPEWALL LINERS REQUIRE NO REPAIRS BUT MAY REQUIRE DETACHMENT AND FOLDING BACK THEN REATTACHMENT TO FACILITATE CONCRETE REPAIRS.

ALONG PERIMETER ROAD OF FEB

7. PRESSURE WASH AND RECOAT EXISTING HYDRANTS.
8. REPLACE TWO BROKEN / MISSING HYDRANTS AND TWO BROKEN LIGHT POLES
9. ~~BY ADDITIVE ALTERNATE~~, CRACK SEAL AND FOG SEAL ASPHALT PERIMETER ROAD.
10. HAND WEED AND APPLY HERBICIDE WHERE VEGETATION IS GROWING BETWEEN CONCRETE AND HYPALON LINER.



2 FLAT ROCK CREEK FLOW EQUALIZATION BASIN

SCALE: 1 : 100

FLAT ROCK FLOW EQUALIZATION BASIN SCOPE & CONSTRAINTS

FLOOR OF EAST AND WEST BASINS AND SLOPE WALLS OF FEB (PRIORITY 1)

1. REMOVE AND REPLACE THE BASIN DRAIN STRUCTURES PLUS ENTRY 20 FT OF TRICKLE CHANNEL DUE TO EXTENSIVE CONCRETE HEAVING AND CRACKING. REPLACEMENT BASIN OUTLET STRUCTURES WILL BE COMPRISED OF MULTIPLE CONCRETE PANELS WITH UNDERLYING GEOFABRIC, INSTEAD OF ONE SINGLE MONOLITHIC BASIN POUR. REUSE EXISTING BASIN OUTLET GRATES AND FRAMES AND SS ANCHOR U-BOLTS AND NUTS. PROVIDE ANY MISSING SS ANCHOR U-BOLTS AND NUTS AS NEEDED TO INSURE FOUR ANCHORS ARE INSTALLED PER PANEL
2. CONTRACTOR TO CLEAN DRAINS AND REMOVE DEBRIS. THE EAST DRAIN IS 90% CLOGGED, AND THE EAST IS 50% CLOGGED.
3. CONSTRUCT FULL DEPTH / PARTIAL PANEL REPAIRS WHERE BASIN CONCRETE HAS CRACKED PER PLANS.
4. ROUTE, CLEAN AND RESEAL ALL BASIN FLOOR CRACKS AND JOINTS, THEN RESEAL ALL CONCRETE SURFACES.

SLOPE WALLS OF EAST AND WEST BASINS

5. ACCESS DRIVEWAY REQUIRES REPAIRS AS NOTED. EXISTING HYPALON SLOPE WALL LINERS REQUIRES NO REPAIRS, BUT HYPALON LINER MAY NEED TO BE DETACHED, FOLDED BACK, THEN REATTACHED TO FACILITATE NOTED CONCRETE REPAIRS.

ALONG PERIMETER ROAD

7. PRESSURE WASH, REPAIR AND RE-COAT EXISTING HYDRANTS PER PLANS.
8. REPLACE ONE BROKEN LIGHT POLE.
9. BY ADDITIVE ALTERNATE, CLEAN, CRACK SEAL AND FOG SEAL OF ASPHALT PERIMETER ROAD.
10. HAND WEED AND APPLY HERBICIDE WHERE VEGETATION IS GROWING BETWEEN CONCRETE AND HYPALON LINER.



0 100 200

1" = 100'
FULL SIZE (22x34)

REPAIR TASKS*

TASK 1 - CONCRETE FULL-DEPTH REPLACEMENT (BOTTOM SLAB AND ACCESS RAMP)
TASK 2 - ROUTING AND SEAL CONCRETE CRACKS (BOTTOM SLAB AND ACCESS RAMP)
TASK 3 - ROUTING AND SEALING JOINTS (BOTTOM OF SLAB AND ACCESS RAMP)
TASK 4 - REPLACE CHAMBER CONCRETE APRON PANEL
TASK 5 - REMOVE AND REPLACE EXISTING COAL CREEK TRICKLE CHANNEL
TASK 6 - REMOVE AND REPLACE EXISTING 4" FLOOR RELIEF VALVES

* ~~SEE SHEET S1 FOR FULL TASK DESCRIPTIONS~~

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. ES 2017-04
FLOW EQUALIZATION BASIN JOINT & CRACK REPAIR
FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.100.A
OVERVIEW – COAL CREEK FLOW EQUALIZATION BASIN

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
HOLLOWAY, UPDIKE + BELLEN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-070, FAX (918)251-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 5 OF 28 SHEETS

Z:\Projects\2025\251MUAWPC26-1\Design\Production Plans\251MUAWPC26-5\203.100.dwg, 10/29/2026 1:34:52 PM

FLOW EQUALIZATION BASIN JOINT AND CRACK REPAIR, CONTRACT 1 AMENDMENT 1
TMUA PROJECT NO. ES 2017-04

ITEM NO.	SPEC NO.	ITEM DESCRIPTION	UNIT	QTY	NOTES	TASK 1" Concrete Full-Depth Replacements	TASK 2" Routing and Sealing Concrete Cracks	TASK 3" Routing and Sealing Joints	TASK 4" Remove and Replace Drain Chamber Concrete Apron Panel	TASK 5" Remove and Replace Existing Coal Creek Trickle Channel (230LF) and Flat Rock (40LF)	TASK 6" Remove and Replace Defective 4" Floor Relief Valve
BASE BID - IMPROVEMENTS AT FLAT ROCK CREEK FEB						* See Sheet 4 for TASK 1-6 Descriptions					
1	COT302	UNCLASSIFIED EXCAVATION	CY	70	1	1			16	14	10
2	COT303	MOBILIZATION, DEMOBILIZATION, WORK PLAN, SAFETY PLAN, PROJECT SIGN, SURVEY,SWMP PERMIT	EA	1	25						
3	COT330	TEMPORARY FIBER LOG AND SITE CLEANUP	EA	1	26						
4	ODOT303	AGGREGATE BASE TYPE B (CLASS 57 CLEAN ROCK)	CY	23	2				18	8	7
5		FULL-DEPTH SAW CUT	LF	604	3	16			182	100	160
6	ODOT723	#4 EPOXY COATED REBAR, GRADE 60, EPOXIED IN PLACE	LBS	111	4	4					111
7	ODOT723	#5 EPOXY COATED REBAR, GRADE 60, EPOXIED IN PLACE	LBS	2,818	4				2,248	835	
8	ODOT723	#5 EPOXIED COATED TIE REBAR, 16" LONG, GRADE 60, DRILLED & EPOXIED IN PLACE	EA	384	5				262		
9	ODOT701	ODOT AA CONCRETE	CY	47	6	1			16	9	6
10		WATER STOP (SIKA)	LF	604	7					100	
11		WATER STOP (DUMBPBELL)	LF	34	20						
12		ROUTING AND CLEANING FOR BASIN JOINT & CRACK REHABILITATION	LF	12,145	8	16		10,884	180		320
13		TREMCO 100 SEALANT OR APPROVED EQUAL, > 1" WIDE JOINTS	LF	3,850	10			3,768	90		
14		TREMCO 100 SEALANT OR APPROVED EQUAL, ≤ 1" WIDE JOINTS	LF	8,295	10	16		7,116	90		320
15	ODOT325	GEOTEXTILE FABRIC, MIRAFI 140NL, OR EQUAL	SY	729	11	6			32	17	420
16		REMOVE & REINSTALL EXISTING HYPALON LINER DURING DRAIN CHAMBER APRON REPLACEMENT	EA	2	12				2		
17		REMOVE AND REPLACE EXISTING 4" FLOOR RELIEF VALVE	EA	40	9						40
18		CLEAN AND FLUSH DEBRIS FROM EXISTING 30"/42" FILL/DRAIN LINES	EA	1	28						
19		PRESSURE WASH AND APPLY CONCRETE SILOX SEALANT	SY	12,552	13						
20		REPLACE MISSING LIGHT POLE & LIGHT, MATCH EXISTING	EA	1	24						
21		PRESSURE WASH AND RECOAT HYDRANTS (SAME COLOR)	EA	35	15						
22		REMOVE VEGETATION BY HAND AND APPLY HERBICIDE BETWEEN CONCRETE - HYPALON LINER	LF	3,170	16						
23		REPAIR BROKEN CONCRETE STAIRWELL STEPS	SF	25	17						
24		EXISTING BASIN WASH OUTLET THRUST BLOCK REPAIR (EAST FEB ONLY)	EA	1	30						
26		OWNER ALLOWANCE	ALLOW	1	19						
27	SP1	REMOVE & REINSTALL INLET GRATES W/ NEW STAINLESS STEEL BRACKET ASSEMBLIES PER DETAILS	EA	1	29				2		
ADD ALTERNATE 1 - REJUVINATE FLAT ROCK CREEK FEB ASPHALT PERIMETER AND ACCESS ROAD											
28		CLEAN ASPHALT ROAD SURFACE	SY	8,553	21						
29		BITUMINOUS CRACK SEAL	LF	2,650	22						
30	ODOT407	FOG SEAL	GAL	856	23						

ITEM NO.	SPEC NO.	ITEM DESCRIPTION	UNIT	QTY	NOTES	TASK 1" Concrete Full-Depth Replacements	TASK 2" Routing and Sealing Concrete Cracks	TASK 3" Routing and Sealing Joints	TASK 4" Remove and Replace Drain Chamber Concrete Apron Panel	TASK 5" Remove and Replace Existing Coal Creek Trickle Channel (230LF) and Flat Rock (40LF)	TASK 6" Remove and Replace Defective 4" Floor Relief Valve
~~ADD ALTERNATE 2 -~~ IMPROVEMENTS AT COAL CREEK FEB											
31	COT302	UNCLASSIFIED EXCAVATION	CY	117	1				8	78	6
32	COT303	MOBILIZATION, DEMOBILIZATION, WORK PLAN, SAFETY PLAN, PROJECT SIGN, SURVEY,SWMP PERMIT	EA	1	25						
33	COT330	TEMPORARY FIBER LOG AND SITE CLEANUP	EA	1	26						
34	ODOT303	AGGREGATE BASE TYPE B (CLASS 57 CLEAN ROCK)	CY	38	2				9	44	5
35		FULL-DEPTH SAW CUT	LF	741	3				91	470	96
36	ODOT723	#4 EPOXY COATED REBAR, GRADE 60, EPOXIED IN PLACE	LBS	67	4						67
37	ODOT723	#5 EPOXY COATED REBAR, GRADE 60, EPOXIED IN PLACE	LBS	5236	5				1,124	4,798	
38	ODOT723	#5 EPOXIED COATED TIE REBAR, 16" LONG, GRADE 60, EXISTING DRILLED & EPOXIED IN PLACE	EA	409	5				131		
39	ODOT701	ODOT AA CONCRETE	CY	79	6				8	50	4
40		WATER STOP (SIKA)	LF	741	7					470	
41		WATER STOP (DUMBPBELL)	LF	12	20						
42		ROUTING AND CLEANING FOR BASIN JOINT AND CRACK REHABILITATION	LF	5438	8		300	3,200	90		192
43		TREMCO 100 SEALANT OR APPROVED EQUAL, > 1" WIDE JOINTS	LF	1100	10			1,560	45		
44		TREMCO 100 SEALANT OR APPROVED EQUAL, ≤ 1" WIDE JOINTS	LF	4338	10		300	3,078	45		192
45	ODOT325	GEOTEXTILE FABRIC, MIRAFI 140NL, OR EQUAL	SY	467	11				16	94	252
46		REMOVE & REINSTALL EXISTING HYPALON LINER DURING DRAIN CHAMBER APRON REPLACEMENT	EA	1	12				1		
47		REMOVE AND REPLACE EXISTING DEFECTIVE 4" FLOOR RELIEF VALVE	EA	24	9						24
48		CLEAN AND FLUSH DEBRIS FROM EXISTING 30" FILL/DRAIN LINE	EA	1	28						
49		PRESSURE WASH AND APPLY CONCRETE SILOX SEALANT	SY	5332	13						
50		INSTALL NEW 4-IN YARD HYDRANTS ATOP EXISTING BREAKAWAY RINGS	EA	2	14						
51		PRESSURE WASH AND RECOAT HYDRANTS (SAME COLOR)	EA	19	15						
52		REPLACE MISSING LIGHT POLE & LIGHT, MATCH EXISTING	EA	2	24						
53		REMOVE VEGETATION BY HAND AND APPLY HERBICIDE BETWEEN CONCRETE - HYPALON LINER	LF	1450	16						
54		REPAIR BROKEN CONCRETE STAIRWELL STEPS	SF	25	17						
~~55~~		~~OWNER ALLOWANCE~~	~~ALLOW~~	~~1~~	~~19~~						
56	SP2	REMOVE & REINSTALL INLET GRATES W/ NEW STAINLESS STEEL BRACKET ASSEMBLIES PER DETAILS	EA	1	29				1		
ADD ALTERNATE 3 - REJUVINATE COAL CREEK FEB ASPHALT PERIMETER AND ACCESS ROAD											
57		CLEAN ASPAHLT ROAD SURFACE	SY	4551	21						
58		BITUMINOUS CRACK SEAL	LF	1720	22						
59	ODOT407	FOG SEAL	GAL	456	23						

PAY NOTES

1. **UNCLASSIFIED EXCAVATION** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT EXCAVATE EXISTING BASE MATERIAL AND CONCRETE PER PLANS.
2. **CL 57 ROCK** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO INSTALL #57 ROCK PER PLANS.
3. **FULL-DEPTH SAW CUT** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT PERFORM FULL-DEPTH SAW CUT PER PLANS.
4. **EPOXY COATED REBAR, GRADE 60, EPOXIED IN PLACE** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO INSTALL EPOXY COATED REBAR PER PLANS. COST INCLUDES STRAIGHT REBAR AND BENT BARS.
5. **#5 EPOXY COATED TIE BAR, GRADE 60, EPOXIED IN PLACE** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO INSTALL EPOXY COATED TIE BARS PER PLANS. COST INCLUDES DRILLING ANCHOR HOLES AND SIKA 7300 EPOXY, OR EQUAL.
6. **ODOT AA CONCRETE** -INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO REMOVE EXISTING CONCRETE AND INSTALL ODOT AA CONCRETE PER PLANS.
7. **WATER STOP (SIKA)WA** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO INSTALL SIKA GREEN STREAK #609 WATER STOP PER PLANS. INCLUDES EPOXYING WATER STOP TO CONCRETE USING SIKA EPOXY 7300 OR EQUAL.
8. **ROUTING AND CLEANING FOR BASIN JOINT AND CRACK REHABILITATION** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO ROUTE AND CLEAN JOINTS AND CRACKS PER PLANS. SEE SHT 8 JOINT / CRACK REHABILITATION TREATMENT TABLE.
9. **4" SS RESILIENT SEAT FLOOR RELIEF VALVE** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO REMOVE AND REPLACE EXISTING 4" FLOOR RELIEF VALVE WITH TROY VALVE (WWW.PENNTROY.COM) 4" STAINLESS STEEL RESILIENT SEAT FLOOR RELIEF VALVE MODEL A2550, OR APPROVED EQUAL. COST INCLUDES PVC EXTENSION. REMOVAL AND REPLACEMENT OF SURROUNDING CONCRETE USING FULL-DEPTH CONCRETE REPLACEMENT SPECIFICATION.
10. **TREMCO DYMONIC 100 SEALANT, OR EQUAL** -INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO INSTALL TREMCO DYMONIC 100 SEALANT PLUS BACKER ROD PER PLANS. DYMONIC 100 SEALANT IS AVAILABLE IN CARTRIDGES OR SAUSAGES. SEE SHT 8 JOINT / CRACK REHABILITATION TREATMENT TABLE. CONTACT: JEDWARDS@SUNSHINESUPPLY.COM 619-581-0458.
11. **GEOTEXTILE FABRIC, MIRIFI 140NL, OR EQUAL** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO INSTALL MIRAFI 140NL GEOTEXTILE FABRIC PER PLANS. COST DOES NOT INCLUDE DESIGNATED OVERLAP.
12. **REMOVE & REINSTALL EXISTING HYPALON LINER DURING DRAIN CHAMBER CONCRETE APRON REPLACEMENT** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO REMOVE AND REINSTALL EXISTING HYPALON POLY LINER TO INSTALL NEW DRAIN CHAMBER CONCRETE APRON AT COAL AND FLAT ROCK CREEK AS REQUIRED. THE EXISTING STAINLESS STEEL BOLTED BATTEN BARS AT LINER EDGES SHALL BE REMOVED AS NECESSARY TO ALLOW LINER TO CLEAR CONSTRUCTION AND REANCHORED AT COMPLETION USING NEW IN-KIND CONCRETE BAR ANCHORS.
13. **PRESSURE WASH AND APPLY CONCRETE SILOX SEALANT (FEB SLAB, ACCESS RAMP AND STAIRS)** THIS ITEM CONSISTS OF ALL COSTS OF LABOR, MATERIALS, PLANT, AND EQUIPMENT TO 3000PSI POWER WASH THE FEB BOTTOM SLAB, ACCESS RAMP AND STAIRS AND THEREAFTER APPLY A SILOXANE-BASED CONCRETE SEALER PER MANUFACTURERS RECOMMENDATIONS.
14. **INSTALL NEW 4-INCH YARD HYDRANTS ATOP EXISTING BREAKAWAY RINGS** THIS BID ITEM CONSISTS OF ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO INSTALL NEW HYDRANTS WHERE MISSING ATOP EXISTING BREAKAWAY RINGS AND RESTORE TO OPERATING CONDITION. COATINGS TO BE APPLIED TO NEW HYDRANTS UNDER OTHER PAY ITEM.
15. **PRESSURE WASH AND RECOAT HYDRANTS** THIS BID ITEM CONSISTS OF ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO PRESSURE WASH EXISTING HYDRANTS AND RECOAT WITH A PRIMER AND ENAMEL COAT. COLOR TO MATCH EXISTING. THE CONTRACTOR SHALL COAT ALL HYDRANTS USING 4-6 MIL DFT OF TNEMIC SERIES 140-POTA-POX-PLUS, OR APPROVED EQUAL PURSUANT TO THE MANUFACTURER'S SPECIFICATIONS FOR COMPLETE COVERAGE. AFTER THE PRIMER COAT HAS COMPLETELY DRIED, THE CONTRACTOR SHALL APPLY TWO 2-3 MIL COATS OF DFT TNEMIC SERIES 69 HI-BUILD INDIGO BLUE, OR APPROVED EQUAL PURSUANT TO THE MANUFACTURER'S SPECIFICATION FOR COMPLETE COVERAGE. PAINTING PAINT AND PRIMER SHALL BE APPLIED EVENLY TO PREVENT DRIPS. IF PAINT OR PRIMER IS APPLIED USING A SPRAY METHOD, THE CONTRACTOR SHALL NOT SPRAY HYDRANTS ON DAYS WHEN WIND EXCEEDS TWENTY (20) M.P.H., UNLESS A PROTECTIVE ENCLOSURE IS USED. HYDRANTS SHALL NOT BE LEFT UNPRIMED FOR ANY PERIOD OF TIME AFTER PRESSURE WASHING.
16. **REMOVE VEGETATION BY HAND AND APPLY HERBICIDE BETWEEN CONCRETE AND HYPALON LINER** THIS BID ITEM CONSISTS OF ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO REMOVE VEGETATION BY HAND AND THEREAFTER APPLY DEFOLIANT (ROUNDUP OR APPROVED EQUAL) BETWEEN CONCRETE AND HYPALON LINER. CONTRACTOR SHALL INSURE HYPALON LINER IS NOT DAMAGED.
17. **REPAIR BROKEN CONCRETE STAIRWELL STEPS** CONTRACTOR SHALL NOTE THAT SEVERAL EXISTING CONCRETE STAIR STEPS, BOTH HORIZONTALLY AND VERTICALLY, ARE UNEVEN, BROKEN AND STAIR NOSES ARE DEFORMED. INCLUDES ALL MATERIALS, LABOR, EQUIPMENT AND PLANT TO STRAIGHTEN AND REPAIR THE NOSE DEFECTS, UNEVEN CONCRETE STEPS, AND PRE- AND POST-CLEANING. UNEVEN HORIZONTAL AND VERTICAL CONCRETE STEP SURFACES SHALL BE CLEANED / GROUND SMOOTH / LEVELED/ FILLED WITH HILTI 2-PART EPOXY. payment shall be made by sf and shall be full compensation for performing the work specified and the furnishing of all materials, labor, equipment and incidentals necessary to complete the work specified.
18. **CONSTRUCTION RECORD DRAWINGS** THIS WORK CONSISTS OF ALL LABOR, EQUIPMENT, AND EQUIPMENT TO COMPLETE AND FURNISH ACCURATE, RED-LINED CONSTRUCTION AS-BUILT DRAWINGS FOR THE BASE BID ITEMS, PLUS ANY SELECTED ADDITIVE ALTERNATES, TO THE ENGINEER AT THE END OF THE PROJECT.
19. **OWNER ALLOWANCE** THIS BID ITEM CAN BE USED FOR VARIOUS WORK AND MISCELLANEOUS ITEMS NOT IDENTIFIED IN THE CONTRACT DOCUMENTS:
    a. THE ALLOWANCE SHALL BE USED FOR COST OF MATERIALS, LABOR, INSTALLATION AND 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.
    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 CONTRACTOR'S EXPENSE.
20. **WATER STOP - DUMB BELL** INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO INSTALL GREENSTREAK PVC 6'x3/8" DUMBBELL WATERSTOP PER PLANS. INCLUDES EPOXYING WATER STOP TO CONCRETE USING SIKA EPOXY 7300 OR EQUAL.
21. **CLEAN ROAD SURFACE** THIS BID ITEM CONSISTS OF ALL COSTS FOR LABOR, MATERIALS, PLANT, AND EQUIPMENT TO PRESSURE WASH AND CLEAN ROAD SURFACE.
22. **BITUMINOUS CRACK SEAL** THIS BID ITEM CONSISTS OF ALL COSTS FOR LABOR, MATERIALS, PLANT, AND EQUIPMENT FOR APPLYING BITUMINOUS BINDER MATERIAL IN CLEAN AND BLOWN ASPHALT CRACKS IN ROADWAYS. APPLY HEATED BITUMINOUS BINDER MATERIAL WITH WAND INTO CRACKS. DURING APPLICATION KEEP THE BITUMINOUS BINDER AT A TEMPERATURE OF AT LEAST 290F.
23. **FOG SEAL** THIS BID ITEM CONSISTS OF ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO APPLY FOG SEAL (.100 GAL PER SY DILUTED EMULSION @ 5:1 WATER TO ORIGINAL EMULSION) ACCORDING TO PLANS AND SPECIFICATIONS AND OKLAHOMA DOT SECTION 407.
24. **REPLACE MISSING LIGHT POLE AND LIGHT** THIS BID ITEM CONSISTS OF ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO REPLACE THE MISSING LIGHT POLES WITH LIGHTS AND METAL BASES AND RESTORE TO OPERATING CONDITION. USE EXISTING CONCRETE BASES AND BOLTS. NEW LIGHT POLES SHALL MATCH EXISTING POLES AND BASES AS PRACTICAL. EXISTING LIGHT IS BELL & MCCOY ERL2-30-C3-40-E-GRAY (LED COBRA HEAD/30000LM)
25. **MOBILIZATION, DEMOBILIZATION, WORK PLAN, SAFETY PLAN, PROJECT SIGN, SURVEY, SWPPP PERMIT** THIS BID ITEM CONSISTS OF ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO ACCOMPLISH THE FOLLOWING PROJECT ACTIVITIES:
    a. MOBILIZATION
    b. DEMOBILIZATION
    c. PROVIDE WORK PLAN
    d. PROVIDE SAFETY PLAN
    e. PROVIDE PROJECT SIGN FOR COAL OR FLAT ROCK CREEK PER COT STD 102)
    f. PROVIDE ANY REQUIRED SURVEY WORK
    g. ACQUIRE SWPPP PERMIT
26. **TEMPORARY SILT FENCE AND SITE PROTECTION** THIS BID ITEM INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO PROVIDE ALL SILT FENCE AND SITE PROTECTION REQUIRED FOR PROJECT DURATION.
27. **CIM 1000 TROWEL GRADE SEALANT SYSTEM, OR EQUAL** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO INSTALL CIM 1000 SEALANT SYSTEM IN LIEU OF DYMONIC 100 PER PLANS. SEE SHT 8 JOINT / CRACK REHABILITATION TREATMENT TABLE. CIM 1000 TROWEL GRADE SEALANT IS AVAILABLE IN 29 OZ CARTRIDGES WITH APPLICATOR GUN OR 5 GAL BUCKETS. COST OF CIM 1000 INCLUDES TEMPORARY MASKING TAPE PLACED ON EITHER SIDE OF THE APPLIED CIM 1000 TROWEL GRADE SEALANT TO PROVIDE A SHARP NOT SLOPPY FINAL EDGE. CONTACT: JEDWARDS@SUNSHINESUPPLY.COM 619-581-0458.
28. **CLEAN AND FLUSH DEBRIS FROM 42"/30" FILL/DRAIN LINE** - THIS BID ITEM INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO FLUSH AND/OR REMOVE EXISTING DEBRIS FROM THE EXISTING FILL/DRAIN LINES AT COAL CREEK (TO DIVERSION STRUCTURE) AND BOTH FLAT ROCK CREEK FEBS (TO SPLITTER BOX), USING PRESSURED WATER FROM HYDRANTS AND VACTOR TRUCKS.
29. **REMOVE AND REINSTALL EXISTING BOLTED DOWN 35-3/4" X 84-1/4" STEEL FRAME AND GRATES** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO CAREFULLY REMOVE AND REINSTALL EXISTING CI GRATES & FRAMES AND SUPPLY / INSTALL ANY MISSING ¼" SS PLATES AND 1/2" SS THREADED RODS W/ BOLTS & LOCKWASHERS TO SECURE THE GRATES TO THE FRAME AT CENTERS AS SPECIFIED.
30. **SUPPORT EXISTING BASIN WASH OUTLET THRUST BLOCK** - INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT FOR THE CONTRACTOR TO FURNISH AND PACK NON-SHRINK GROUT (SIKAGROUT 528SF OR EQUAL) UNDER EXISTING DESIGNATED FLAT ROCK EAST BASIN WASH OUTLET TO SUPPORT THRUST BLOCK CURRENTLY OFF THE BASIN FLOOR.

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10-26-2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. ES 2017-04
FLOW EQUALIZATION BASIN CRACK FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.100.B
PAY ITEMS & NOTES

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)259-0777, FAX (918)258-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026
ATLAS PAGE NO: --- SHEET 6 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.100.dwg, 10/29/2026 1:34:55 PM

TASK 1 - CONCRETE FULL-DEPTH REPLACEMENT (BOTTOM SLAB AND ACCESS RAMP)

THIS ITEM INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT FOR THE CONTRACTOR TO FURNISH AND PLACE, WHERE DESIGNATED, ALL REINFORCING STEEL AND CONCRETE FOR THE CONCRETE PANEL REPLACEMENTS (FULL DEPTH/FULL PANEL), AS SHOWN IN THE DRAWINGS, AND AT LOCATIONS AS DETERMINED BY THE ENGINEER. THIS ITEM INCLUDES ALL THE FOLLOWING, WHICH ARE SEPARATE BID ITEMS:

- FULL DEPTH SAW CUTTING AROUND IDENTIFIED DEFECTIVE CONCRETE FLOOR
- EXCAVATION OF DEFECTIVE CONCRETE FLOOR
- EXCAVATION OF EXISTING 8" BASE MATERIAL
- REPLACEMENT OF 8" OF EXISTING BASE MATERIAL WITH 8" OF #57 ROCK WRAPPED IN GEOTECHNICAL FABRIC WITH 6" OVERLAP (NOTE: OVERLAP NOT INCLUDED IN COST OF GEOFABRIC),
- PLACEMENT OF #4 GRADE 60 EPOXY REBAR MATS AS SHOWN ON PLANS.
- PLACEMENT OF #4 GRADE 60 EPOXY REBAR DOWELS AS SHOWN ON PLANS.
- APPLYING CONCRETE BONDING ADHESIVE TO CONCRETE SIDES (COST INCLUDED IN ODOT AA CONCRETE),
- PLACEMENT OF ODOT AA CONCRETE AS SHOWN ON PLANS.
- BROOM FINISH CONCRETE TOP (COST INCLUDED IN ODOT AA CONCRETE)
- ROUTING AND SEALING PERIMETER REPAIR JOINTS PER PLANS.

ALL CONCRETE SHALL CONFORM TO ODOT AA CONCRETE. INCLUDES COSTS OF APPLYING QUIKCRETE CONCRETE BONDING ADHESIVE, OR EQUAL, AND METAL REBAR SUPPORT CHAIRS.

ALL MATERIALS REMOVED SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY.

AFTER REMOVAL OF THE DAMAGED CONCRETE, EXISTING 8" BASE MATERIAL SHALL BE EXCAVATED AND REPLACED WITH #57 ROCK WRAPPED IN SEPARATOR FABRIC COMPACTED TO THE ORIGINAL GRADE LEVEL. THE CONTRACTOR, AT HIS OPTION, MAY SUBSTITUTE FLOWABLE FILL CONCRETE FOR FILL MATERIAL.

THE #57 ROCK SHALL BE ENCASED IN NON-WOVEN GEOTEXTILE FABRIC.

THE REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE DRAWINGS.

INSTALL #4 EPOXY REBAR DOWELS ALONG ALL PANEL JOINTS AS SPECIFIED IN THE PLANS. DRILL AND INSERT THE DOWELS AT MID DEPTH OF THE EXISTING CONCRETE SLOPE PANEL OR AS SHOWN IN THE PLANS FOR THE FULL-DEPTH REPLACEMENT REPAIR AND SECURE WITH HILTI HIT RE 500 OR APPROVED EQUAL. THE COST OF THE DRILLING, DOWELS AND EPOXY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR DOWELS.

REPAIRS MAY INVOLVE JOINTS BETWEEN CONCRETE SLOPE PANELS WHICH ARE CONTRACTION/EXPANSION JOINTS. THE EDGES OF THE EXISTING CONCRETE AT CONTRACTION/EXPANSION JOINTS SHALL HAVE AN EFFECTIVE MEANS OF PREVENTING BONDING TO THE NEW CONCRETE. THIS SHALL BE ACCOMPLISHED BY COATING THE EDGE OF THE EXISTING CONCRETE BELOW THE AREA OF THE JOINT SEALANT WITH CURING COMPOUND OR A GOOD COMMERCIAL QUALITY GRAY PAINT HAVING A LINSEED OIL VEHICLE. THE COST OF THE MATERIAL AND APPLICATION SHALL BE INCLUDED IN THE UNIT PRICE BID OF CONCRETE.

ALL JOINT TOPS ≥ 1/8" SHALL BE ROUTED A MINIMUM OF ¼" (SEE SHT 5) TO PROVIDE A JOINT SURFACE, AS INDICATED ON DRAWING. THE ROUTED JOINT SHALL BE SEALED WITH TREMCO DYMONIC 100 SEALANT, OR EQUAL.

PLACING OF THE CONCRETE SHALL BEGIN AT THE LOWEST AREA FIRST AND PROCEED TO FINISH THE PLACING AT THE HIGHEST AREA. AS THE PLACING PROGRESSES, THE TOP OF THE CONCRETE WILL BE LEVEL TO THE ADJACENT LEVEL. THE CONCRETE WILL BE GIVEN A BROOM FINISH AFTER TROWELING. CURING COMPOUNDS SHALL BE USED TO MINIMIZE THE SHRINKAGE OF THE CONCRETE DURING CURING.

ALL MATERIAL AND LABOR COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EACH BID ITEM.

TASK 2 - ROUTING AND SEAL CONCRETE CRACKS (BOTTOM SLAB AND ACCESS RAMP)

THIS ITEM INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT FOR THE CONTRACTOR TO PERFORM ROUTING AND SEALING OF ALL IDENTIFIED CRACKS ≥ 1/8", INCLUDING INSTALLATION OF BACKER ROD INTO THE EXISTING ROUTED JOINTS AT LOCATIONS AS PER PLANS, SHT 5. THE ESTIMATED QUANTITY SHOWN IN THE PROPOSAL MAY OR MAY NOT BE USED, OR MAY BE EXCEEDED, DEPENDING UPON CONDITIONS REVEALED DURING CONSTRUCTION.

THE BID ITEMS TO BE USED ARE:

- ROUTING AND CLEANING FOR JOINT & CRACK REHABILITATION
- TREMCO DYMONIC 100 SEALANT, OR EQUAL

COST OF BACKER ROD INCLUDED IN COST OF ROUTING AND CLEANING FOR JOINT & CRACK REHABILITATION.

THIS BID ITEM DOES NOT APPLY TO JOINTS BETWEEN CONCRETE PANEL JOINTS. NOTE THAT ALL CRACKS ≤ 1/8" WILL BE SEALED UNDER PRESSURE WASH AND APPLY CONCRETE SILOX SEALANT.

THE DESIGNATED CRACK AREAS SHALL BE ROUTED TO PROVIDE A CLEAN JOINT SURFACE, AS INDICATED ON THE DRAWINGS. THE JOINT MUST BE CLEANED OF ALL DEBRIS USING PRESSURIZED AIR, ETC., APPLYING BACKER ROD, BEFORE BEGINNING THE FILL OPERATION. THE ROUTED JOINT SHALL BE PRIMED AND SEALED WITH TREMCO DYMONIC 100, OR APPROVED EQUAL, IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE SHELF LIFE OF THE MATERIAL SHALL BE STRICTLY OBSERVED.

A CLOSED CELL BACKER ROD OR OAKUM SHALL BE USED TO LIMIT THE THICKNESS OF THE FILL MATERIAL. THE SIZE OF THE BACKER ROD AND THICKNESS OF THE SEALANT SHALL BE AS SPECIFIED ON THE WIDTH OF THE CONCRETE CRACK AS CITED ON SHT 5.

TASK 3 - ROUTING AND SEALING JOINTS (BOTTOM OF SLAB AND ACCESS RAMP)

THIS ITEM INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT FOR THE CONTRACTOR TO PERFORM ROUTING AND SEALING OF ALL IDENTIFIED JOINTS ≥ 1/8", INCLUDING INSTALLATION OF BACKER ROD INTO THE EXISTING ROUTED JOINTS AT LOCATIONS AS PER PLANS, SHT 5. THE ESTIMATED QUANTITY SHOWN IN THE PROPOSAL MAY OR MAY NOT BE USED, OR MAY BE EXCEEDED, DEPENDING UPON CONDITIONS REVEALED DURING CONSTRUCTION.

THE BID ITEMS TO BE USED ARE:

- ROUTING AND CLEANING FOR JOINT & CRACK REHABILITATION
- TREMCO DYMONIC 100 SEALANT, OR EQUAL

COST OF BACKER ROD INCLUDED IN COST OF ROUTING AND CLEANING FOR JOINT & CRACK REHABILITATION.

THIS BID ITEM DOES NOT APPLY TO CRACKS IN CONCRETE.

THE DESIGNATED DEFECTIVE JOINT AREAS SHALL BE ROUTED TO PROVIDE A CLEAN JOINT SURFACE, AS INDICATED ON THE DRAWINGS. THE JOINT MUST BE CLEANED OF ALL DEBRIS USING PRESSURIZED AIR, ETC., APPLYING BACKER ROD, BEFORE BEGINNING THE FILL OPERATION. THE ROUTED JOINT SHALL BE PRIMED AND SEALED WITH TREMCO DYMONIC 100 SEALANT, OR APPROVED EQUAL, IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE SHELF LIFE OF THE MATERIAL SHALL BE STRICTLY OBSERVED.

A CLOSED CELL BACKER ROD OR OAKUM SHALL BE USED TO LIMIT THE THICKNESS OF THE FILL MATERIAL. THE SIZE OF THE BACKER ROD AND THICKNESS OF THE SEALANT SHALL BE AS SPECIFIED ON THE WIDTH OF THE CONCRETE CRACK AS CITED ON SHT 5.

TASK 4 - REPLACE DRAIN CHAMBER CONCRETE APRON PANEL

THIS ITEM INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT FOR THE CONTRACTOR TO REMOVE AND REPLACE THE EXISTING DRAIN CHAMBER CONCRETE APRON PANEL AT COAL CREEK AND BOTH APRONS AT FLAT ROCK CREEK FEBS. THIS ITEM INCLUDES ALL THE FOLLOWING, WHICH ARE SEPARATE BID ITEMS:

- FULL-DEPTH SAW CUTTING
- EXCAVATION OF CONCRETE
- EXCAVATION OF EXISTING 8" OF BASE MATERIAL
- REPLACEMENT OF 8" OF EXISTING BASE MATERIAL WITH 8" OF #57 ROCK WRAPPED IN GEOTECHNICAL FABRIC WITH 6" OVERLAP (NOTE: OVERLAP NOT INCLUDED IN GEOFABRIC COST),
- PLACEMENT OF EPOXIED #5 REBAR DOUBLE MATS AS SHOWN ON PLANS,
- PLACEMENT OF SMOOTH #5 DOWELS AS SHOWN ON PLANS,
- PLACEMENT OF ODOT AA CONCRETE AS SHOWN ON PLANS WITH BROOM FINISH
- ROUTING AND SEALING JOINTS AS SHOWN ON PLANS
- REMOVING AND REINSTALLING EXISTING 35-3/4" X 84-1/4" FRAMES AND GRATES, INCLUDING PROVIDING ANY MISSING ½" SS U-BOLT AND NUTS TO FORM TO THE FRAME FOR BOLTING DOWN THE GRATES AT INTAKE CENTER
- REMOVE AND REPLACE EXISTING HYPALON LINER DURING DRAIN CHAMBER APRON REPLACEMENT

TRICKLE CHANNEL VALLEY AT ENTRANCE TO FRAME/GRATE SHALL FLOW UNDER FRAME. SEE EXISTING ENTRANCE AT COAL CREEK FEBS.

ALL CONCRETE SHALL CONFORM TO ODOT AA CONCRETE. CONCRETE REMOVAL IS CONTAINED IN EXCAVATION.

ALL MATERIALS REMOVED SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY.

AFTER REMOVAL OF THE DAMAGED CONCRETE, EXISTING BASE MATERIAL SHALL BE EXCAVATED AND REPLACED WITH #57 ROCK WRAPPED IN GEOTEXTILE FABRIC COMPACTED TO THE ORIGINAL GRADE LEVEL. THE #57 ROCK SHALL BE FURNISHED BY THE CONTRACTOR. THE CONTRACTOR, AT HIS OPTION, MAY SUBSTITUTE FLOWABLE FILL CONCRETE FOR FILL MATERIAL.

THE #57 ROCK SHALL BE ENCASED IN GEOTEXTILE FABRIC.

REINFORCING STEEL SPECIFIED ON THE DRAWINGS SHALL BE EPOXY COATED STEEL REBARS, GRADE 60. THE REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE DRAWINGS. #5 STEEL REBARS, WHEN SPECIFIED SHALL BE PLACED AS SHOWN IN PLANS. COATED METAL CHAIRS SHALL BE USED TO SUPPORT REBARS.

INSTALL SMOOTH #5 DOWEL BARS ALONG ALL PANEL JOINTS AS SPECIFIED IN THE PLANS. DRILL AND INSERT THE DOWELS AT MID DEPTH OF THE EXISTING CONCRETE SLOPE PANEL OR AS SHOWN IN THE PLANS FOR THE SPLASH WALL REPAIR AND SECURE WITH SIKA 7300 EPOXY OR APPROVED EQUAL. THE COST OF THE DRILLING, DOWELS AND EPOXY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR DOWELS.

REPAIRS MAY INVOLVE JOINTS BETWEEN CONCRETE SLOPE PANELS WHICH ARE CONTRACTION/EXPANSION JOINTS. THE EDGES OF THE EXISTING CONCRETE AT CONTRACTION/EXPANSION JOINTS SHALL HAVE AN EFFECTIVE MEANS OF PREVENTING BONDING TO THE NEW CONCRETE. THIS SHALL BE ACCOMPLISHED BY COATING THE EDGE OF THE EXISTING CONCRETE BELOW THE AREA OF THE JOINT SEALANT WITH CURING COMPOUND OR A GOOD COMMERCIAL QUALITY GRAY PAINT HAVING A LINSEED OIL VEHICLE. THE COST OF THE MATERIAL AND APPLICATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

THE JOINT TOP SHALL BE FORMED OR ROUTED TO PROVIDE A JOINT SURFACE, AS INDICATED ON DRAWING. THE JOINT SHALL BE SEALED WITH TREMCO DYMONIC 100 OR APPROVED EQUAL.

PLACING OF THE CONCRETE SHALL BEGIN AT THE LOWEST AREA FIRST AND PROCEED TO FINISH THE PLACING AT THE HIGHEST AREA. AS THE PLACING PROGRESSES UP A PANEL SLAB, THE TOP OF THE CONCRETE WILL BE LEVEL TO THE ADJACENT LEVEL. THE CONCRETE WILL BE GIVEN A BROOM FINISH AFTER TROWELING. CURING COMPOUNDS SHALL BE USED TO MINIMIZE THE SHRINKAGE OF THE CONCRETE DURING CURING.

ALL MATERIAL AND LABOR COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EACH BID ITEM.

TASK 5 - REMOVE AND REPLACE EXISTING COAL CREEK TRICKLE CHANNEL (224LF) ~~AND FLAT ROCK CREEK EAST (20LF)~~

THIS BID ITEM CONSISTS OF ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT TO REMOVE AND REPLACE THE EXISTING COAL CREEK TRICKLE CHANNEL ACCORDING TO PLANS AND SPECIFICATIONS.

THIS ITEM INCLUDES ALL THE FOLLOWING, WHICH ARE SEPARATE BID ITEMS:

- FULL-DEPTH SAW CUTTING
- EXCAVATION OF CONCRETE
- EXCAVATION OF 6" EXISTING BASE MATERIAL
- REPLACEMENT OF 6" OF BASE MATERIAL WITH 8" OF #57 ROCK WRAPPED IN GEOTEXTILE FABRIC WITH 12" OVERLAP (NOTE: OVERLAP NOT INCLUDED IN GEOFABRIC COST),
- PLACEMENT OF EPOXIED #5 REBAR MAT AS SHOWN ON PLANS,
- PLACEMENT OF #5 EPOXY REBAR DOWELS AS SHOWN ON PLANS,
- PLACEMENT OF ½" BITUMINOUS BOARD AS SHOWN ON PLANS,
- PLACEMENT OF WATER STOP AS SHOWN ON PLANS,
- PLACEMENT OF ODOT AA CONCRETE AS SHOWN ON PLANS BROOM FINISH CONCRETE TOP
- ROUTING AND SEALING JOINTS PER PLANS

TRICKLE CHANNEL VALLEY AT ENTRANCE TO FRAME/GRATE SHALL FLOW UNDER FRAME. SEE EXISTING ENTRANCE AT COAL CREEK FEBS.

INCLUDES 2" DEEP SAWED TRANSVERSE CONTRACTION JOINTS MATCHING EXISTING ADJACENT CONCRETE PANELS I.E. APPROX EVERY 25 LF), ROUTED AND SEALED.

ALL CONCRETE SHALL CONFORM TO ODOT AA CONCRETE. CONCRETE REMOVAL IS INCLUDED IN COST OF CONCRETE.

ALL MATERIALS REMOVED SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY.

AFTER REMOVAL OF THE DAMAGED CONCRETE, EXISTING BASE MATERIAL SHALL BE EXCAVATED AND REPLACED WITH #57 ROCK WRAPPED IN FILTER FABRIC COMPACTED TO THE ORIGINAL GRADE LEVEL. THE #57 ROCK SHALL BE FURNISHED BY THE CONTRACTOR. THE CONTRACTOR, AT HIS OPTION, MAY SUBSTITUTE FLOWABLE FILL CONCRETE FOR FILL MATERIAL.

THE #57 ROCK SHALL BE ENCASED IN GEOTEXTILE FABRIC.

REINFORCING STEEL SPECIFIED ON THE DRAWINGS SHALL BE EPOXY COATED STEEL REBARS, GRADE 60. THE REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE DRAWINGS. STEEL REBARS, WHEN SPECIFIED SHALL BE PLACED AS SHOWN IN PLANS. COATED METAL CHAIRS SHALL BE USED TO SUPPORT REBARS.

INSTALL SMOOTH DOWEL BARS ALONG ALL PANEL JOINTS AS SPECIFIED IN THE PLANS. DRILL AND INSERT THE DOWELS AT MID DEPTH OF THE EXISTING CONCRETE SLOPE PANEL OR AS SHOWN IN THE PLANS FOR THE SPLASH WALL REPAIR AND SECURE WITH HILTI HIT RE 500 OR APPROVED EQUAL. THE COST OF THE DRILLING, DOWELS AND EPOXY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR DOWELS.

REPAIRS MAY INVOLVE JOINTS BETWEEN CONCRETE SLOPE PANELS WHICH ARE CONTRACTION/EXPANSION JOINTS. THE EDGES OF THE EXISTING CONCRETE AT CONTRACTION/EXPANSION JOINTS SHALL HAVE AN EFFECTIVE MEANS OF PREVENTING BONDING TO THE NEW CONCRETE. THIS SHALL BE ACCOMPLISHED BY COATING THE EDGE OF THE EXISTING CONCRETE BELOW THE AREA OF THE JOINT SEALANT WITH CURING COMPOUND OR A GOOD COMMERCIAL QUALITY GRAY PAINT HAVING A LINSEED OIL VEHICLE. THE COST OF THE MATERIAL AND APPLICATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

THE JOINT TOP SHALL BE FORMED OR ROUTED TO PROVIDE A JOINT SURFACE, AS INDICATED ON DRAWING. THE JOINT SHALL BE SEALED WITH TREMCO DYMONIC 100 SEALANT OR APPROVED EQUAL.

PLACING OF THE CONCRETE SHALL BEGIN AT THE LOWEST AREA FIRST AND PROCEED TO FINISH THE PLACING AT THE HIGHEST AREA. AS THE PLACING PROGRESSES UP A PANEL SLAB, THE TOP OF THE CONCRETE WILL BE LEVEL TO THE ADJACENT LEVEL. THE CONCRETE WILL BE GIVEN A BROOM FINISH AFTER TROWELING. CURING COMPOUNDS SHALL BE USED TO MINIMIZE THE SHRINKAGE OF THE CONCRETE DURING CURING.

ALL MATERIAL, LABOR, AND EQUIPMENT COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EACH BID ITEM.

TASK 6 - REMOVE AND REPLACE EXISTING 4" FLOOR RELIEF VALVES

THIS ITEM INCLUDES ALL LABOR, MATERIALS, PLANT, AND EQUIPMENT FOR THE CONTRACTOR TO FURNISH AND PLACE, WHERE DESIGNATED, ALL 4" FLOOR HYDROSTATIC RELIEF VALVES, INCLUDING SURROUNDING REINFORCING STEEL AND CONCRETE FOR THE CONCRETE PANEL REPLACEMENTS (FULL DEPTH/FULL PANEL), AS SHOWN IN THE DRAWINGS, AND AT LOCATIONS AS DETERMINED BY THE ENGINEER. THIS ITEM INCLUDES ALL THE FOLLOWING, WHICH ARE SEPARATE BID ITEMS:

- FULL-DEPTH SAW CUTTING
- EXCAVATION OF CONCRETE
- EXCAVATION OF EXISTING 12" BASE MATERIAL
- REPLACEMENT OF 12" OF EXISTING BASE MATERIAL WITH 12" OF #57 ROCK WRAPPED IN GEOTECHNICAL FABRIC WITH 12" OVERLAP (NOTE: 12" OVERLAP NOT INCLUDED IN GEOFABRIC COST),
- PLACEMENT OF EPOXIED #4 GRADE 60 EPOXY REBAR DOWELS AS SHOWN ON PLANS,
- PLACEMENT OF NEW 4" FLOOR RELIEF VALVE AND PVC C900 EXTENSION,
- APPLYING CONCRETE BONDING ADHESIVE TO CONCRETE SIDES,
- PLACEMENT OF ODOT AA CONCRETE AS SHOWN ON PLANS
- BROOM FINISH CONCRETE TOP
- ROUTING AND SEALING PERIMETER REPAIR JOINTS PER PLANS

ALL CONCRETE SHALL CONFORM TO ODOT AA CONCRETE. INCLUDES COSTS OF APPLYING QUIKCRETE CONCRETE BONDING ADHESIVE, OR EQUAL, AND METAL REBAR SUPPORT CHAIRS.

ALL MATERIALS REMOVED SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY.

AFTER REMOVAL OF THE DAMAGED CONCRETE, EXISTING BASE MATERIAL SHALL BE EXCAVATED AND REPLACED WITH #57 ROCK WRAPPED IN GEOTECHNICAL FABRIC COMPACTED TO THE ORIGINAL GRADE LEVEL. THE CONTRACTOR, AT HIS OPTION, MAY SUBSTITUTE FLOWABLE FILL CONCRETE FOR FILL MATERIAL.

THE #57 ROCK SHALL BE ENCASED IN GEOTEXTILE FABRIC.

THE REINFORCING STEEL SHALL BE PLACED IN CONFORMANCE WITH THE DRAWINGS.

INSTALL SMOOTH DOWEL BARS ALONG ALL PANEL JOINTS AS SPECIFIED IN THE PLANS. DRILL AND INSERT THE DOWELS AT MID DEPTH OF THE EXISTING CONCRETE SLOPE PANEL OR AS SHOWN IN THE PLANS FOR THE FULL-DEPTH REPLACEMENT REPAIR AND SECURE WITH SIKA EPOXY 7300 OR APPROVED EQUAL. THE COST OF THE DRILLING, DOWELS AND EPOXY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR DOWELS.

REPAIRS MAY INVOLVE JOINTS BETWEEN CONCRETE SLOPE PANELS WHICH ARE CONTRACTION/EXPANSION JOINTS. THE EDGES OF THE EXISTING CONCRETE AT CONTRACTION/EXPANSION JOINTS SHALL HAVE AN EFFECTIVE MEANS OF PREVENTING BONDING TO THE NEW CONCRETE. THIS SHALL BE ACCOMPLISHED BY COATING THE EDGE OF THE EXISTING CONCRETE BELOW THE AREA OF THE JOINT SEALANT WITH CURING COMPOUND OR A GOOD COMMERCIAL QUALITY GRAY PAINT HAVING A LINSEED OIL VEHICLE. THE COST OF THE MATERIAL AND APPLICATION SHALL BE INCLUDED IN THE UNIT PRICE BID OF CONCRETE.

ALL JOINT TOPS ≥ 1/8" SHALL BE ROUTED A MINIMUM OF ¼" (SEE SHT 5) TO PROVIDE A JOINT SURFACE, AS INDICATED ON DRAWING. THE ROUTED JOINT SHALL BE SEALED WITH TREMCO DYMONIC 100 OR EQUAL.

PLACING OF THE CONCRETE SHALL BEGIN AT THE LOWEST AREA FIRST AND PROCEED TO FINISH THE PLACING AT THE HIGHEST AREA. AS THE PLACING PROGRESSES, THE TOP OF THE CONCRETE WILL BE LEVEL TO THE ADJACENT LEVEL. THE CONCRETE WILL BE GIVEN A BROOM FINISH AFTER TROWELING. CURING COMPOUNDS SHALL BE USED TO MINIMIZE THE SHRINKAGE OF THE CONCRETE DURING CURING.

ALL MATERIAL AND LABOR COSTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EACH BID ITEM.

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. ES 2017-04
FLOW EQUALIZATION BASIN CRACK FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.100.C
TASK DESCRIPTIONS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
200 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-0717, FAX (918)251-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

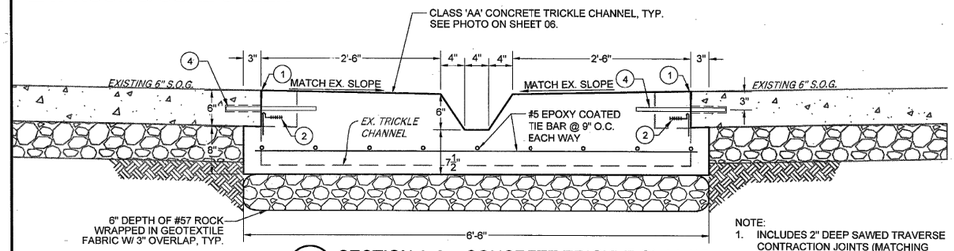
FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 7 OF 28 SHEETS

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10-26-2026
OKLAHOMA

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.100.dwg, 10/29/2026 1:34:57 PM

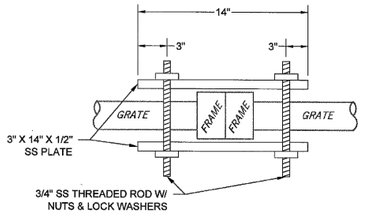
~~FLAT ROCK &~~ COAL CREEK



1 SECTION A-A CONCRETE TRICKLE CHANNEL
SCALE: 1" = 1'

TASK 5

NOTE:
1. INCLUDES 2" DEEP SAWED TRAVERSE CONTRACTION JOINTS (MATCHING ADJACENT CONCRETE PANEL JOINTS) ROUTED & SEALED.



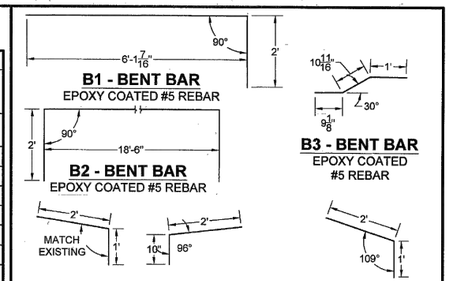
~~FLAT ROCK &~~ COAL CREEK
SS TIE DOWN BRACKET ASSEMBLY
2 SCALE: NTS

TASK 4

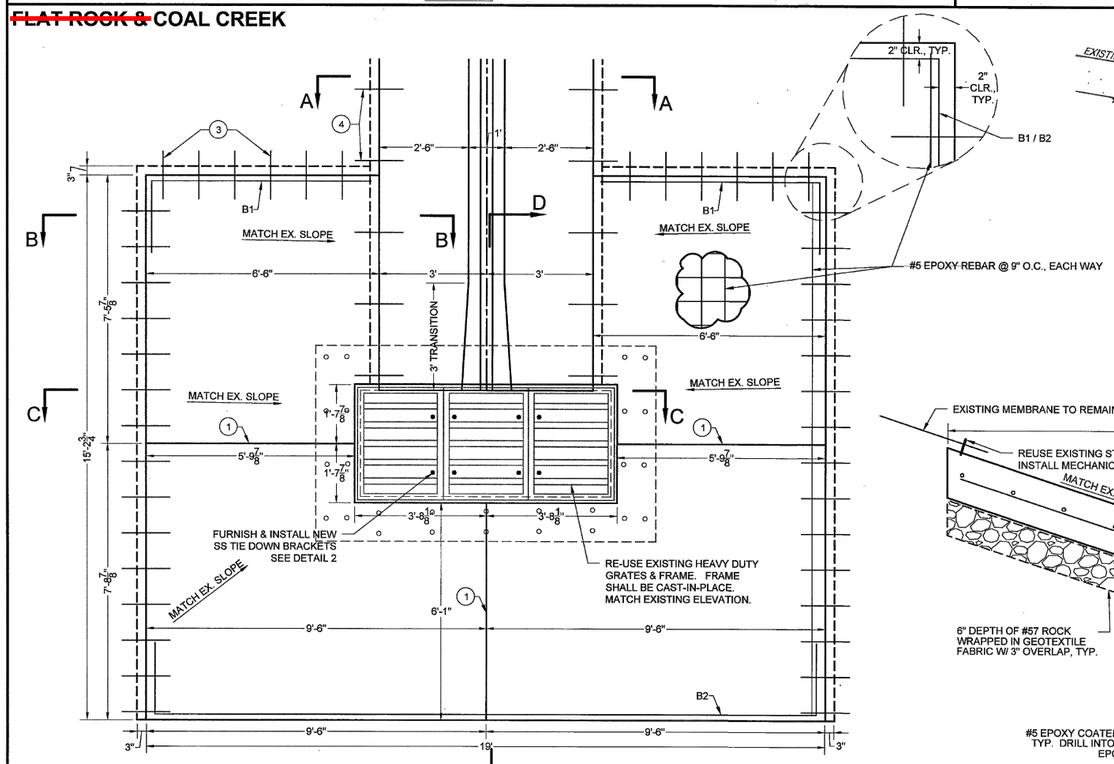
~~FLAT ROCK &~~ COAL CREEK

JOINT / CRACK REHABILITATION TREATMENT TABLE - FLAT ROCK AND COAL CREEK

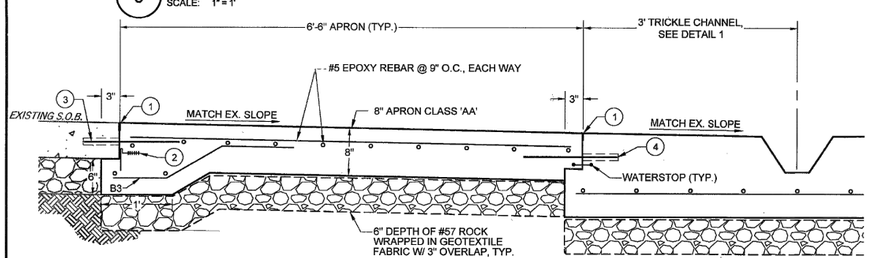
CRACK WIDTH	ROUTED WIDTH	DEPTH OF CUT	SEALANT RECESS DEPTH	SEALANT THICKNESS	BACKERROD DIAMETER	SEALANT MAT'L (OR EQUAL)
≤ 1/8"	–	–	–	–	–	Silox Sealant Only (See Pay Note ---)
1/8"	1/4"	1 1/8"	1/8" (MIN)	1/4"	3/8"	DYMONIC 100
1/4"	1/4"	1 1/8"	1/8" (MIN)	1/4"	3/8"	DYMONIC 100
3/8"	3/8"	1 1/4"	1/8" (MIN)	3/8"	1/2"	DYMONIC 100
1/2"	1/2"	1 3/4"	1/8" (MIN)	1/2"	5/8"	DYMONIC 100
3/4"	3/4"	1 3/4"	1/8" (MIN)	3/4"	7/8"	DYMONIC 100
7/8"	7/8"	1 3/4"	1/8" (MIN)	7/8"	1"	DYMONIC 100
1"	1"	2"	1/8" (MIN)	1"	1 –1/8"	DYMONIC 100
>1"	>1"	>2"	1/8" (MIN)	>1"	1 –1/4"	DYMONIC 100



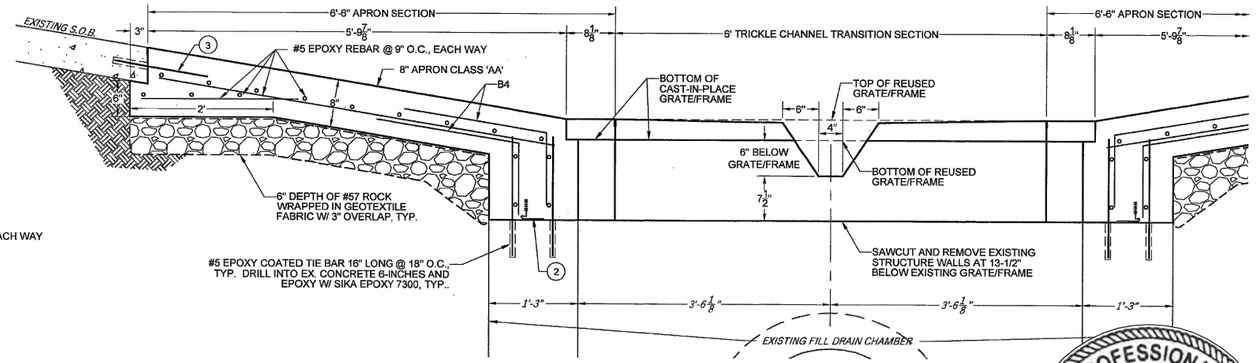
~~FLAT ROCK &~~ COAL CREEK



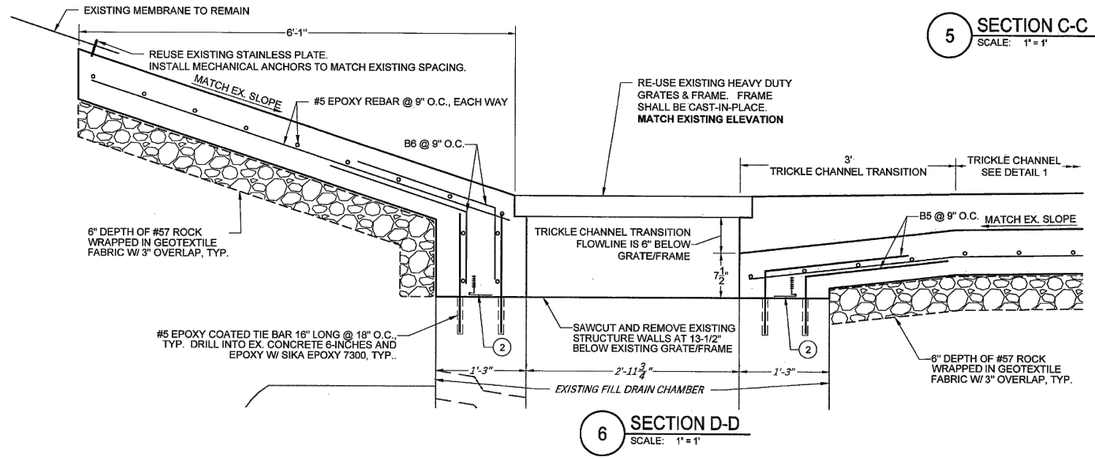
3 PLAN VIEW
FILL/CHAMBER APRON CONNECTION TO TRICKLE CHANNEL
SCALE: 1" = 1'



4 SECTION B-B
FILL/CHAMBER APRON CONNECTION TO TRICKLE CHANNEL
SCALE: 1" = 1'



5 SECTION C-C
SCALE: 1" = 1'



6 SECTION D-D
SCALE: 1" = 1'

CONSTRUCTION NOTES:

1. ALL REBAR CLEARANCE SHALL BE 2" FROM TOPS/SIDES AND 3" FROM BOTTOM.
2. FILL/CHAMBER APRON PANEL IS A MONOLITHIC PLACEMENT WITH SAWED JOINTS CUT AFTER PROPER SETTING TIME.
3. TRICKLE CHANNEL IS A MONOLITHIC PLACEMENT WITH SAWED JOINTS CUT AFTER PROPER SETTING TIME.

KEY NOTES:

① 1/4" WIDE X 1-1/8" DEEP SAWED JOINT W/ SEALANT, TYP AT ALL NEW JOINTS. SEE JOINT TABLE ON THIS SHEET.

② SIKA GREEN STREAK #609 WATER STOP EPOXIED TO EXISTING CONCRETE WITH SIKA EPOXY 7300, TYP.

③ #5 EPOXY COATED TIE BAR 16" LONG @ 12" O.C., TYP. DRILL INTO EX. CONCRETE 6-INCHES AND EPOXY W/ SIKA EPOXY 7300, TYP.

④ #5 EPOXY COATED TIE BAR 16" LONG @ 24" O.C., TYP. DRILL INTO EX. CONCRETE 6-INCHES AND EPOXY W/ SIKA EPOXY 7300, TYP.

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10-26-2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. ES 2017-04
FLOW EQUALIZATION BASIN CRACK FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.100.D
COAL CREEK SECTIONS & DETAILS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
3000 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-0707, FAX (918)251-0764

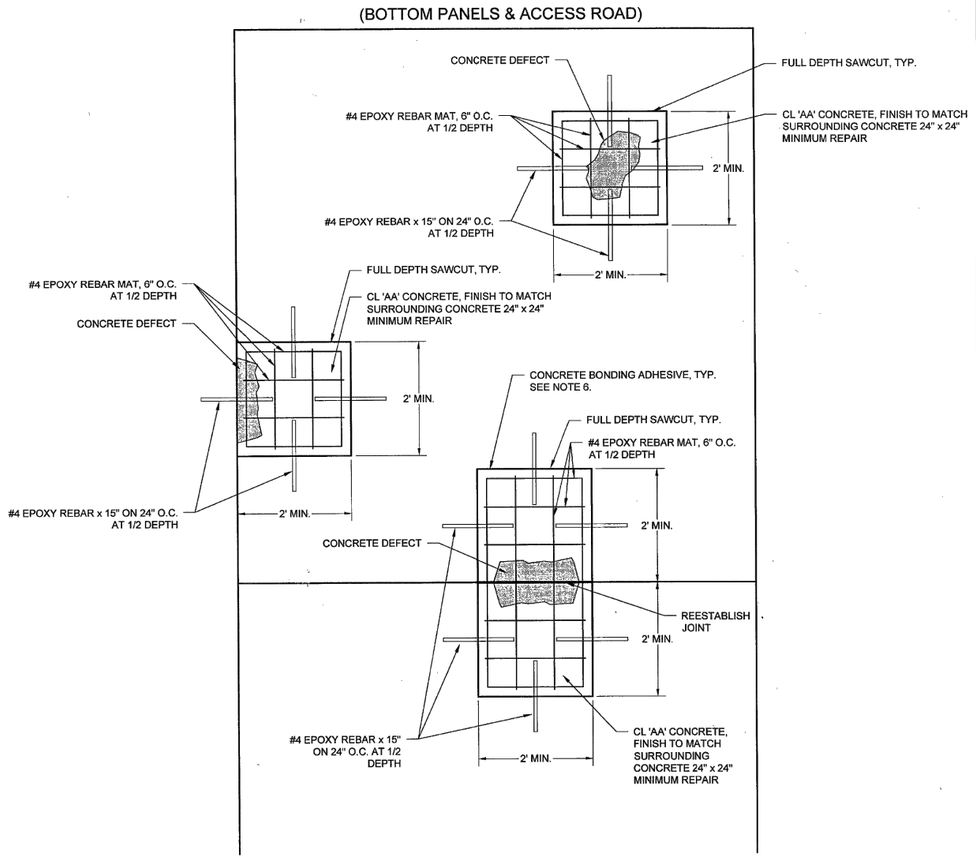
PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 8 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.100.dwg, 10/29/2026 1:34:58 PM

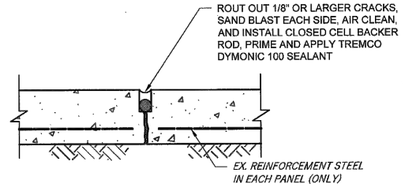
~~FLAT ROCK &~~ COAL CREEK



1 FULL-DEPTH CONCRETE PARTIAL-PANEL REPAIR
SCALE: NTS

TASK 1

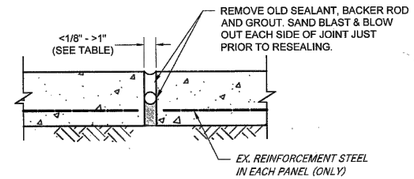
~~FLAT ROCK &~~ COAL CREEK



2 ROUTING & RESEALING IRREGULAR CRACKS IN PANELS
SCALE: 2:1

TASK 2

~~FLAT ROCK &~~ COAL CREEK



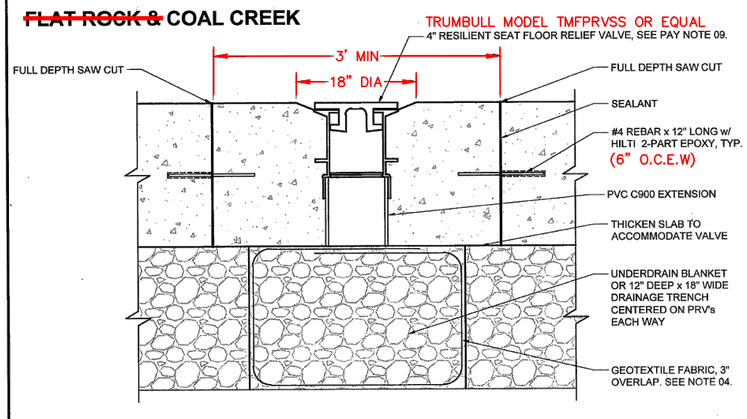
3 ROUTING & RESEALING JOINTS BETWEEN PANELS
SCALE: 2:1

TASK 3

NOTES:

1. REMOVE EXISTING CONCRETE PANEL AND 8-IN OF SUBGRADE MATERIAL. SCARIFY THE EXPOSED SUBGRADE, ALLOW TO DRY, GRADE SUBGRADE TO SLAB TEMPLATE, COMPACT TO 95% MINIMUM STANDARD DENSITY. INSTALL 8-IN OF CLASS A AGGREGATE #57 ROCK ENCASED IN GEOFABRIC. MECHANICALLY COMPACT TO ACHIEVE MATERIAL INTERLOCK. ENCASE / WRAP CLASS A AGGREGATE #57 ROCK WITH SEPARATOR FABRIC. ALL FABRIC LAPS SHALL BE 18". COST DOES NOT INCLUDE LAP.
2. APPLY BONDING COMPOUND "WELD CRETE" OR APPROVED EQUAL ON ALL PARTIAL PANEL REPAIRS.

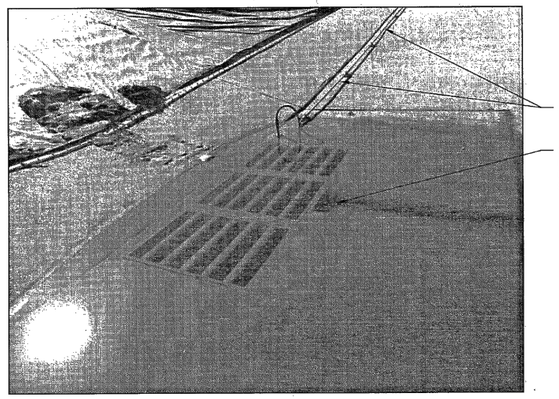
~~FLAT ROCK &~~ COAL CREEK



4 4" SS RESILIENT SEAT FLOOR RELIEF VALVE
SCALE: NTS

TASK 6

NOTE:
1. VALVES EXTENDED WITH C900 PVC TO ANY REQUIRED LENGTH
2. BEGINS TO OPEN AT ≈ 9" OF UNSEATING HEAD DIFFERENTIAL
3. COVER LIFTS 1" IN POSITION
4. OVER LAP INCLUDED IN THE COST OF GEOTEXTILE FABRIC



5 TRICKLE CHANNEL IN APRON
SCALE: NTS

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10·16·2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 — 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. ES 2017-04
FLOW EQUALIZATION BASIN CRACK FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.100.E
COAL CREEK SECTIONS & DETAILS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-1707, FAX (918)251-1764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 9 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.100.dwg, 10/29/2026 1:35:00 PM



1/10 COAL CREEK FEB
SCALE: 1" = 30'

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10-26-2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. ES 2017-04
FLOW EQUALIZATION BASIN CRACK FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.100.F
AERIAL – COAL CREEK

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

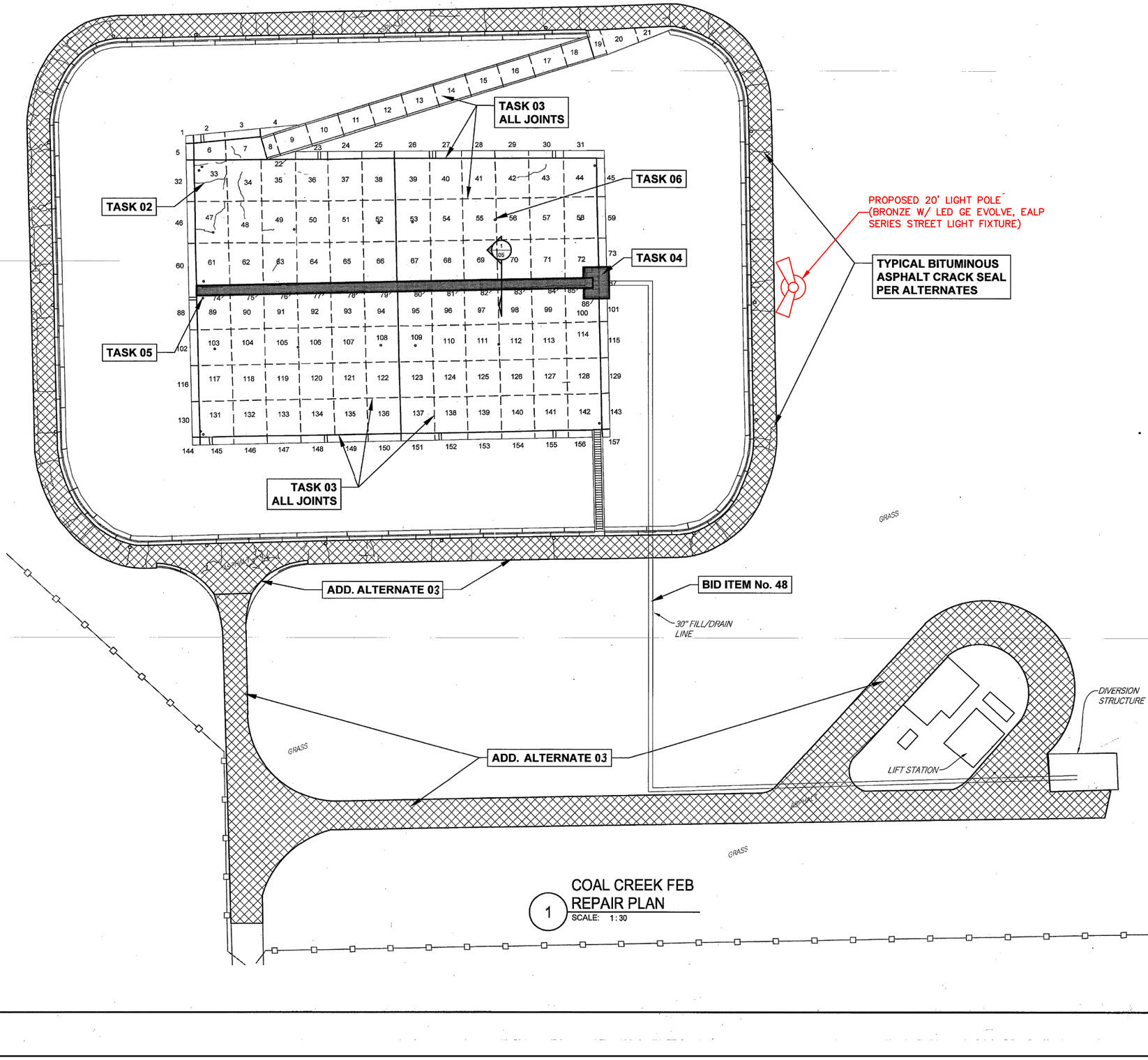
PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-4772, FAX (918)251-2704

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 10 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.100.dwg, 10/29/2026 1:35:01 PM



1 COAL CREEK FEB REPAIR PLAN
SCALE: 1:30

0 30 60
1" = 30'
FULL SIZE (22x34)

REPAIR TASKS*

TASK 1 - CONCRETE FULL-DEPTH REPLACEMENT (BOTTOM SLAB AND ACCESS RAMP)
TASK 2 - ROUTING AND SEAL CONCRETE CRACKS (BOTTOM SLAB AND ACCESS RAMP)
TASK 3 - ROUTING AND SEALING JOINTS (BOTTOM OF SLAB AND ACCESS RAMP)
TASK 4 - REPLACE CHAMBER CONCRETE APRON PANEL
TASK 5 - REMOVE AND REPLACE EXISTING COAL CREEK TRICKLE CHANNEL
TASK 6 - REMOVE AND REPLACE EXISTING 4" FLOOR RELIEF VALVES

*SEE SHEET 7 (203.100.C) FOR FULL TASK DESCRIPTIONS

LEGEND

- MISCELLANEOUS ITEMS
- 2" COLD MILLING & OVERLAY
- CONCRETE REPAIR (FULL-DEPTH REPLACEMENT)
- NEW CONSTRUCTION JOINT
- CONCRETE REPAIR (ROUTED & SEALED)
- EX. EXPANSION JOINT
- EX. CONTRACTION JOINTS
- EX. CRACKS
- EX. VALLEY

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 — 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. ES 2017-04
FLOW EQUALIZATION BASIN CRACK FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.100.G
REPAIR PLAN – COAL CREEK

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)259-7777, FAX (918)258-2764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026
ATLAS PAGE NO: --- SHEET 11 OF 28 SHEETS

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10-26-2026
OKLAHOMA

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.100.dwg, 10/29/2026 1:35:02 PM

STORM WATER MANAGEMENT PLAN

REVISIONS	
DESCRIPTION	DATE

SITE DESCRIPTION

PROJECT LIMITS: CITY OF TULSA COAL CREEK FLOW EQUALIZATION BASIN

PROJECT DESCRIPTION: FLOW EQUALIZATION BASIN CONCRETE JOINT AND CRACK REPAIR

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES:

1. INSTALL AND MAINTAIN TEMPERARY FIBER LOGS IN AREA INLETS AND DITCH.
2. INSTALL AND MAIN SILT FENCE AROUND PROJECT LIMITS.

SOIL TYPE: SAND / CLAY

TOTAL AREA OF THE CONSTRUCTION SITE: 1.04 AC.

ESTIMATED AREA TO BE DISTURBED: 0.25 AC.

OFFSITE AREA TO BE DISTURBED: 0 AC.
(FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 0.25 AC.

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 0.25 AC.

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: N/A

LATITUDE & LONGITUDE OF CENTER OF PROJECT: LAT 36°12'06", LONG 95°54'55"

PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: ARKANSAS RIVER

SENSITIVE WATERS OR WATERSHEDS:	YES [ ]	NO [X]
303(d) IMPAIRED WATERS:	YES [ ]	NO [X]
IF YES, LIST IMPAIRMENT:		
LOCATED IN A TMDL:	YES [ ]	NO [X]
LAKE THUNDERBIRD TMDL:	[ ]	NO [X]
MS4 ENTITY	YES [ ]	NO [X]
IF YES, LOCATION:		

NOTE:
THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- ____ TEMPORARY SEEDING
- __X__ PERMANENT SODDING, SPRIGGING OR SEEDING
- ____ VEGETATIVE MULCHING
- ____ SOIL RETENTION BLANKET
- __X__ PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:

- ____ STABILIZED CONSTRUCTION EXIT
- __X__ TEMPORARY SILT FENCE
- ____ TEMPORARY SILT DIKES
- __X__ TEMPORARY FIBER LOG
- ____ DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- ____ DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ____ ROCK FILTER DAMS
- ____ TEMPORARY SLOPE DRAIN
- ____ PAVED DITCH W/ DITCH LINER PROTECTION
- ____ TEMPORARY DIVERSION CHANNELS
- ____ TEMPORARY SEDIMENT BASINS
- ____ TEMPORARY SEDIMENT TRAPS
- ____ TEMPORARY SEDIMENT FILTERS
- ____ TEMPORARY SEDIMENT REMOVAL
- ____ RIP RAP
- ____ INLET SEDIMENT FILTER
- ____ TEMPORARY BRUSH SEDIMENT BARRIERS
- ____ SANDBAG BERMS
- ____ TEMPORARY STREAM CROSSINGS

OFFSITE VEHICLE TRACKING:

- __X__ HAUL ROADS DAMPENED FOR DUST CONTROL
- __X__ LOADED HAUL TRUCKS TO BE COVERED WITH TARPAULIN
- __X__ EXCESS DIRT ON ROAD REMOVED DAILY

NOTES:

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2009 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

103.05	BONDING REQUIREMENTS
104.10	FINAL CLEANING UP
104.12	CONTRACTOR'S RESPONSIBILITY FOR WORK
104.13	ENVIRONMENTAL PROTECTION
106.08	STORAGE AND HANDLING OF MATERIAL
107.01	LAWS, RULES AND REGULATIONS TO BE OBSERVED
107.20	STORM WATER MANAGEMENT
220	MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
221	TEMPORARY SEDIMENT CONTROL

IN ADDITION:

"ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA." ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10.26.2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. ES 2017-04
FLOW EQUALIZATION BASIN CRACK FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.100.H
STORMWATER MANAGEMENT PLAN
COAL CREEK FEB

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
3000 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-0717, FAX (918)251-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 12 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.100.dwg, 10/29/2026 1:35:04 PM



1/13 PHOTO–EXIST. LOOKING WEST
NTS



2/13 PHOTO–EXIST. LOOKING NORTHEAST
NTS



3/13 PHOTO–EXIST. LOOKING EAST
NTS



4/13 PHOTO–EXIST. LOOKING EAST @ FEB DRAIN
NTS

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10·26·2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWING 203.100.I
COAL CREEK PHOTOS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26–5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-0777, FAX (918)251-2704

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026
ATLAS PAGE NO: --- SHEET 13 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.100.dwg, 10/29/2026 1:35:06 PM

PROPOSED ULTRA-SONIC CUSTOM SUPPORT ARM SEE DETAIL 5/16

EXIST. POLE (POWER & LIGHT)

PROPOSED PANEL REPAIRS SEE DETAIL 1/18

WEATHER OVERFLOW

WET WEATHER RISE, MIXERS OFF

110.00'

WEIR EL 574.20

EXISTING TOP EL 576.20

575

EL 574.20

EL 572.95

570

EL 570.20

565

10' MIN.

3

1

560

BOTTOM EL 566.20

50.00'

EXISTING BOTTOM EL 559.00±

EL 572.95 MAXIMUM LIQUID LEVEL DURING NORMAL DIURNAL OPERATIONS

NORMAL DIURNAL OPERATIONS

EL 570.20 MINIMUM LIQUID LEVEL DURING NORMAL DIURNAL OPERATIONS

SECTION A

SCALE 1"=20' HORIZ
1"=5' VERT

DRAINAGE PIPE *				
NO.	DIA IN	LENGTH FT	INLET FL. ELEV	OUTLET FL. ELEV
1	18	30	572.30	572.10
2	24 x 38	40	570.10	569.80

* USE REINFORCED CONCRETE PIPE, CL III WITH PREFABRICATED CULVERT END SECTIONS ON EACH END. (SEE OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD NO. PCES-2)

REMOVE EXISTING AND INSTALL NEW SYNTHETIC LINER APPROX. 2,430 SY
SLOPES-1,645 SY
BOTTOM-785 SY

PROPOSED 10 CY FLOWABLE FILL UNDER CONCRETE SLABS AS DIRECTED AND 20 CY COMPACTED CLAY AROUND OUTFALL SLAB

Diurnal Basin Overflow Structure See Drawing SD-1 and SD-2 for Details

N 276.00'

N 276.00'

3:1 Typical

3:1 Typical

3:1 Typical

Aerator No.1

Aerator No.2

35

30 Radius

PROPOSED 30 CY COMPACTED CLAY AROUND PIPE END SECTION

PROPOSED 5 CY FLOWABLE FILL UNDER CONCRETE SLABS

EXISTING PIPING

PROPOSED DITCH CHECK W/ TOP EL. 574.00 SEE DETAIL 4/27

DEMOLISH & PREPARE UPPER LINER FOOTING (ANCHOR) AS REQUIRED. SEE DETAIL 2/16

PROPOSED DITCH CHECK W/ TOP EL. 574.00 SEE DETAIL 4/27

8" Diurnal Force Main

4" DIP PRV SEE DETAIL

PROPOSED 15'x30'x4" SLAB W/ #4 REBAR 8" O.C.E.W. & 4" PRV IN EACH AREA REMOVE & REINSTALL AERATOR #1 & #2 AS REQUIRED

4" DIP PRV SEE DETAIL

PROPOSED LINER SYSTEM SEE NOTE #1

PROPOSED LINER SEE DETAIL 2/16

PROPOSED 30'x20'x4" SLAB W/ #4 REBAR 8" O.C.E.W. & 4" PRV IN EACH AREA REMOVE & REINSTALL AERATOR #1 & #2 AS REQUIRED

NOTES:

QUANTITIES ARE APPROXIMATE. CONTRACTOR SHALL QUANTIFY AND CONFIRM PRIOR TO ORDERING.

DIURNAL BASIN

NEW FENCE

Install 12' Gate in Existing Security Fence

6' Chain Link Security Fence

Manhole

8" Thick Gravel Access Road

Asphalt Parking

Double Gate

6" Thick Conc. Slab for Emer. Eye Wash and Shower. Reinf. W/ #4@12"

8" Thick Gravel Drive

Emergency Pump Connection See Drawing SC-1

Ventsorb Conc. Pad

12" Diurnal Return

Control Valve CV-1 Pit

Wet Well

Control Building FF El 575.00

5'-6" Conc. Apron 6" Thick

DIP Risers By PSO

Venturi Vault No.2 See Drawing SC-1

Venturi Vault No.1 See Drawing SC-1

A/C Conc. Pad

24" Force Main to Waste Water Treatment Plant

50.00' 62.00' 21.25' 28.00' 65.00'

24.33' 37.33' 21.58' 28.00' 83.25'

30-Inch Gravity Sewer

ROAD (TYP.)

SOUTH PORT PUMP STATION

NOTES:

1. REMOVE AND REPLACE LINER SYSTEM IN THE DIURNAL BASIN. DEMOLISH EXISTING LINER(S), RE-GRADE SLOPES, RE-GRADE BOTTOM, FINE GRADE AND PREPARE FOR NEW LINER SYSTEM.
2. BASIN SHALL BE LINED WITH XR-5 GEOMEMBRANE MANUFACTURED BY SEAMAN CORPORATION, PRODUCT 8138 XR-5 (40MIL), OR PRE-APPROVED EQUAL.
3. CONTRACTOR SHALL INSTALL XR-5 GEOMEMBRANE FOLLOWING MANUFACTURER'S SPECIFICATIONS, DETAILS, AND SHOP DRAWINGS.
4. LINER MANUFACTURER SHALL PREPARE AND SUBMIT SHOP DRAWINGS WITH PROPOSED PANEL LAYOUT TO COVER THE LINER AREA SHOWN IN THE PLANS, SHOP DRAWINGS SHALL INDICATE THE DIRECTION OF FACTORY SEAMS, PANEL SIZES, TERMINATION DETAILS PIPE PENETRATION DETAILS, VENT LOCATION AND DETAILS. ANCHORING SYSTEM SHALL BE DESIGNED AND PROVIDED BY MANUFACTURER AND COMPLETE INFORMATION INCLUDED IN THE SHOP DRAWINGS.
5. INSTALLATION OF THE LINER SHALL NOT COMMENCE UNTIL ALL SHOP DRAWINGS AND DETAILS HAVE BEEN APPROVED BY THE ENGINEER, AND SUBGRADE HAS BEEN PREPARED AND COMPACTED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- GAS LINE
- WATER LINE
- NEW 6' CHAIN LINK FENCE
- ASPHALT PAVEMENT
- GRAVEL SURFACING
- CONCRETE PAVEMENT

BEFORE YOU DIG 1-800-522-6543 CALL OKIE

LICENSED PROFESSIONAL ENGINEER LOYD STEPHEN TOLAR 20679 10-22-2026 OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE ORIGINAL TMUA 92-3 RECORD DRAWINGS FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.200.A
PORT SOUTH LS DIURNAL BASIN LINER REPLACEMENT PLAN

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc. ENGINEERS 200 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012 (918)251-0717, FAX (918)251-0764

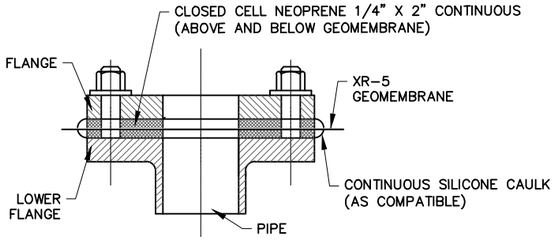
PLAN SCALE: VARIES	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

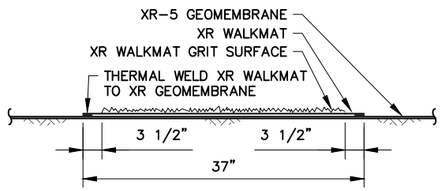
ATLAS PAGE NO: --- SHEET 14 OF 28 SHEETS

File Name: D:\ILBG\LE2\SS1.dwg 10/26/24 10:26

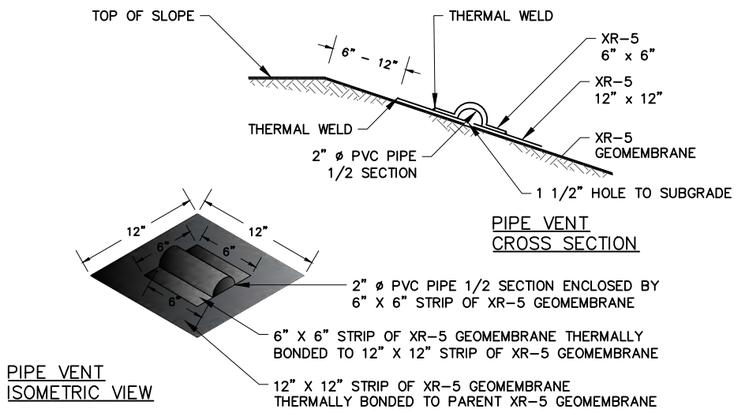
Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.200.C.dwg, 10/29/2026 1:35:10 PM



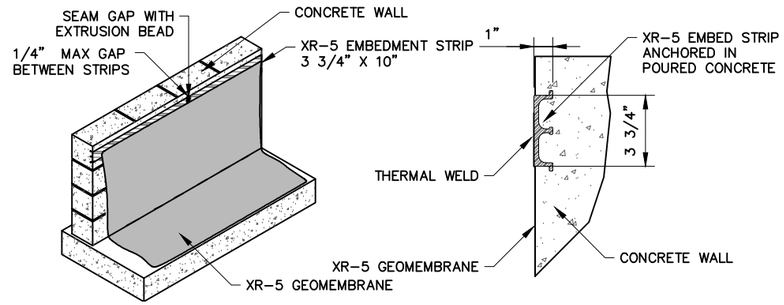
1/15 SECTION @ FLANGE
NTS



2/15 SECTION @ WALKMAT
NTS

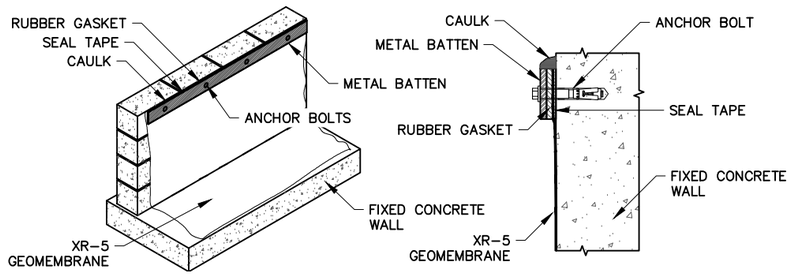


3/15 DETAIL @ PIPE VENT
NTS



4/15 DETAIL @ EMBEDMENT STRIP
NTS

NOTES:
1. CAULK SHOULD BE CONTINUOUS AND COMPATIBLE WITH LINER TYPE. SIKA 1A IS COMMONLY USED.
2. METAL BATTEN TO BE ¼" X 2" AND EITHER ALUMINUM OR S.S. OR APPROVED EQUAL
3. STAINLESS STEEL ANCHOR BOLTS TYPICALLY ⅜" X 3" AT DISCRETION OF ENGINEER. STAINLESS STEEL WASHERS AND BOLTS. BOLTS LOCATED 6" O.C. WHEN INSTALLED BELOW WATER LINE. 12" O.C. WHEN INSTALLED ABOVE WATER LINE. BOLTS SHOULD BE LOCATED A MINIMUM OF 4" FROM CONCRETE PERIMETER.
4. RUBBER GASKET TYPICALLY ¼" X 2" NEOPRENE OR EPDM RUBBER CONTINUOUS
5. SEAL TAPE TO BE ⅛" X 2" BUTYL GUM AND APPLIED OVER BOLT PATTERN.



5/15 DETAIL @ MECHANICAL BATTEN
NTS

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10.26.2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWING 203.200.B
PORT SOUTH LIFT STATION DIURNAL
BASIN LINER REPLACEMENT DETAILS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

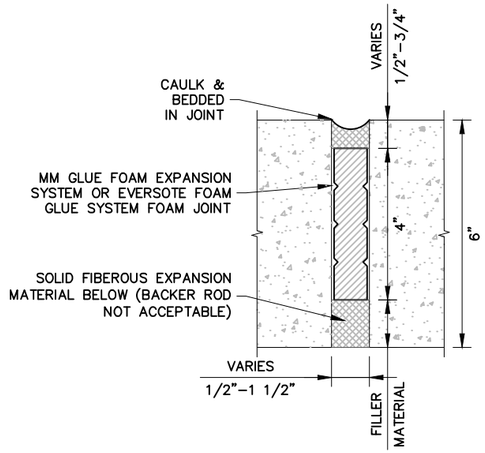
CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-0717, FAX (918)251-0764

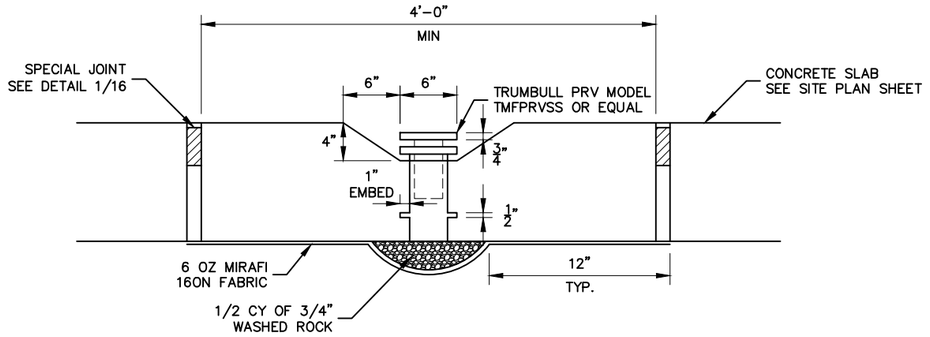
PLAN SCALE: VARIES	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026
ATLAS PAGE NO: --- SHEET 15 OF 28 SHEETS

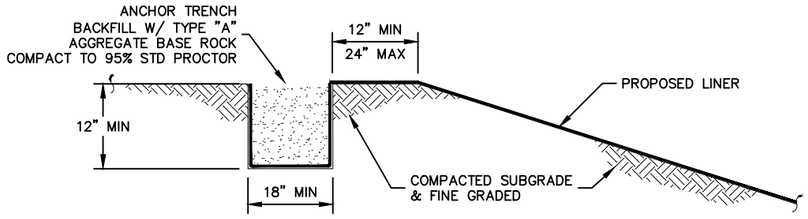
Z:\Projects\2025\251TMUAWPC26-1\Design\Production Plans\251TMUAWPC26-5\203.200.B.dwg, 10/29/2026 1:35:14 PM



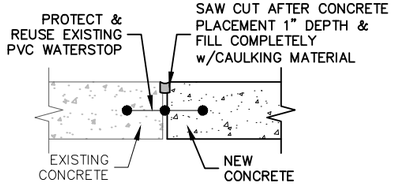
1/16 DETAIL @ SPECIAL JOINT
SCALE: NTS



4/16 SPECIAL CONCRETE SLAB PRV DETAIL
SCALE: 1 1/2" = 1'-0"

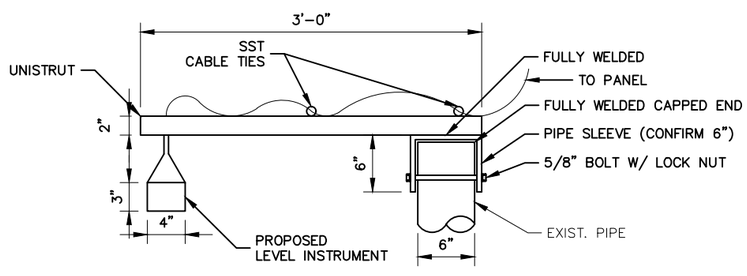


2/16 UPPER LINER ANCHOR DETAIL
SCALE: NTS



NOTE: REFERENCE DETAIL ⅜ SHOWING RETAINING PVC WATERSTOP AT THE JOINT: AT CONTRACTOR OPTION IN LIEU OF DETAIL ⅜ , THE CONTRACTOR MAY CONSTRUCT THE JOINTS IN ACCORDANCE WITH DETAIL ⅛ .

3/16 DETAIL @ PVC WATERSTOP SPECIAL CAULK JOINT
SCALE: NTS



NOTE:

ALL MATERIALS SHALL BE 316 SST.

5/16 CUSTOM LEVEL INSTRUMENT SUPPORT DETAIL
SCALE: 1 1/2" = 1'-0"

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWING 203.200.C
PORT SOUTH LIFT STATION DIURNAL
BASIN LINER REPLACEMENT DETAILS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
200 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)258-0707, FAX (918)258-0764

PLAN SCALE: VARIES	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 16 OF 28 SHEETS

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10.26.2026
OKLAHOMA

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.200.C.dwg, 10/29/2026 1:35:18 PM



1/17 PHOTO–EXIST. LOOKING SOUTHWEST
NTS



2/17 PHOTO–EXIST. LOOKING NORTHWEST
NTS



3/17 PHOTO–EXIST. LOOKING SOUTH
NTS



4/17 PHOTO–EXIST. LOOKING SOUTHWEST
NTS

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10·26·2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 —— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWING 203.200.D
PORT SOUTH LIFT STATION PHOTOS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26–5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

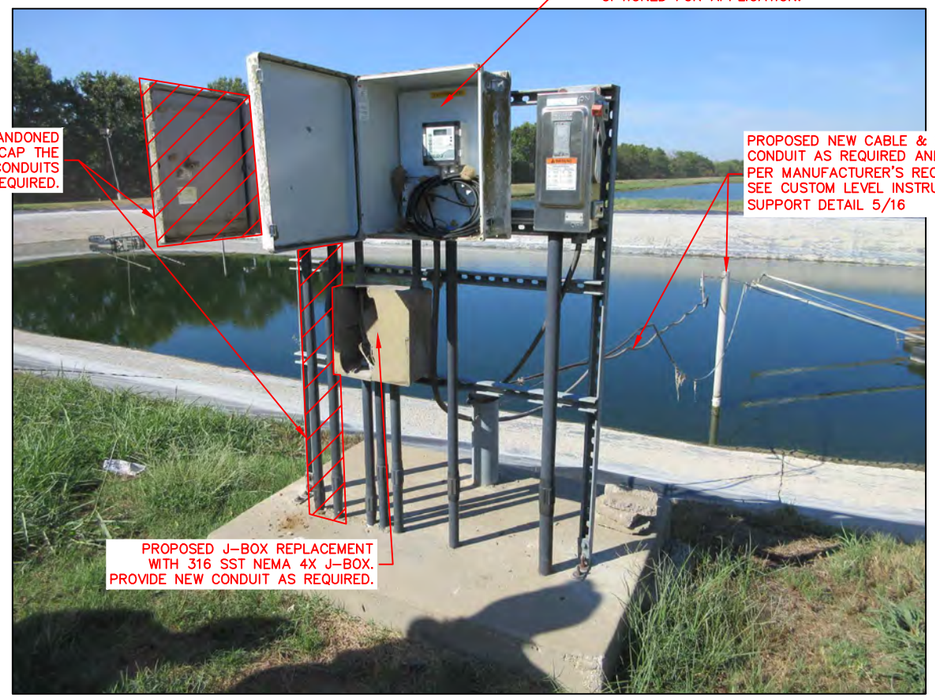
PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc. ENGINEERS
2009 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)258-0707, FAX (918)258-0704

PLAN SCALE: VARIES	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

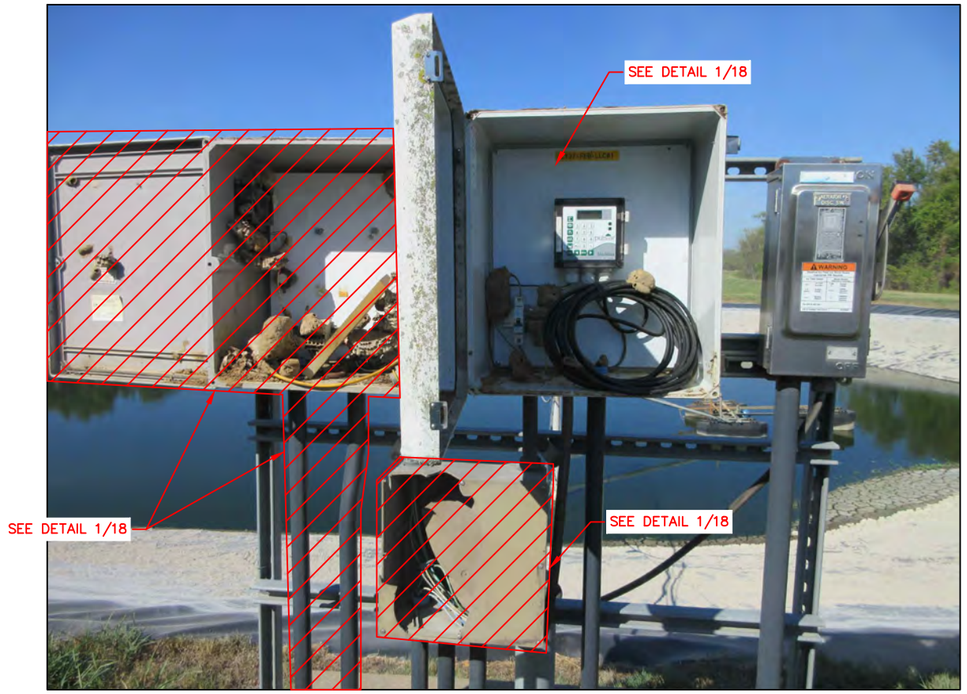
FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 17 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.200.C.dwg, 10/29/2026 1:35:20 PM



1/18 PHOTO-EXIST. LOOKING SOUTHWEST
NTS



2/18 PHOTO-EXIST. LOOKING NORTHWEST
NTS

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10-26-2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 — 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWING 203.200.E
PORT SOUTH LIFT STATION PHOTOS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

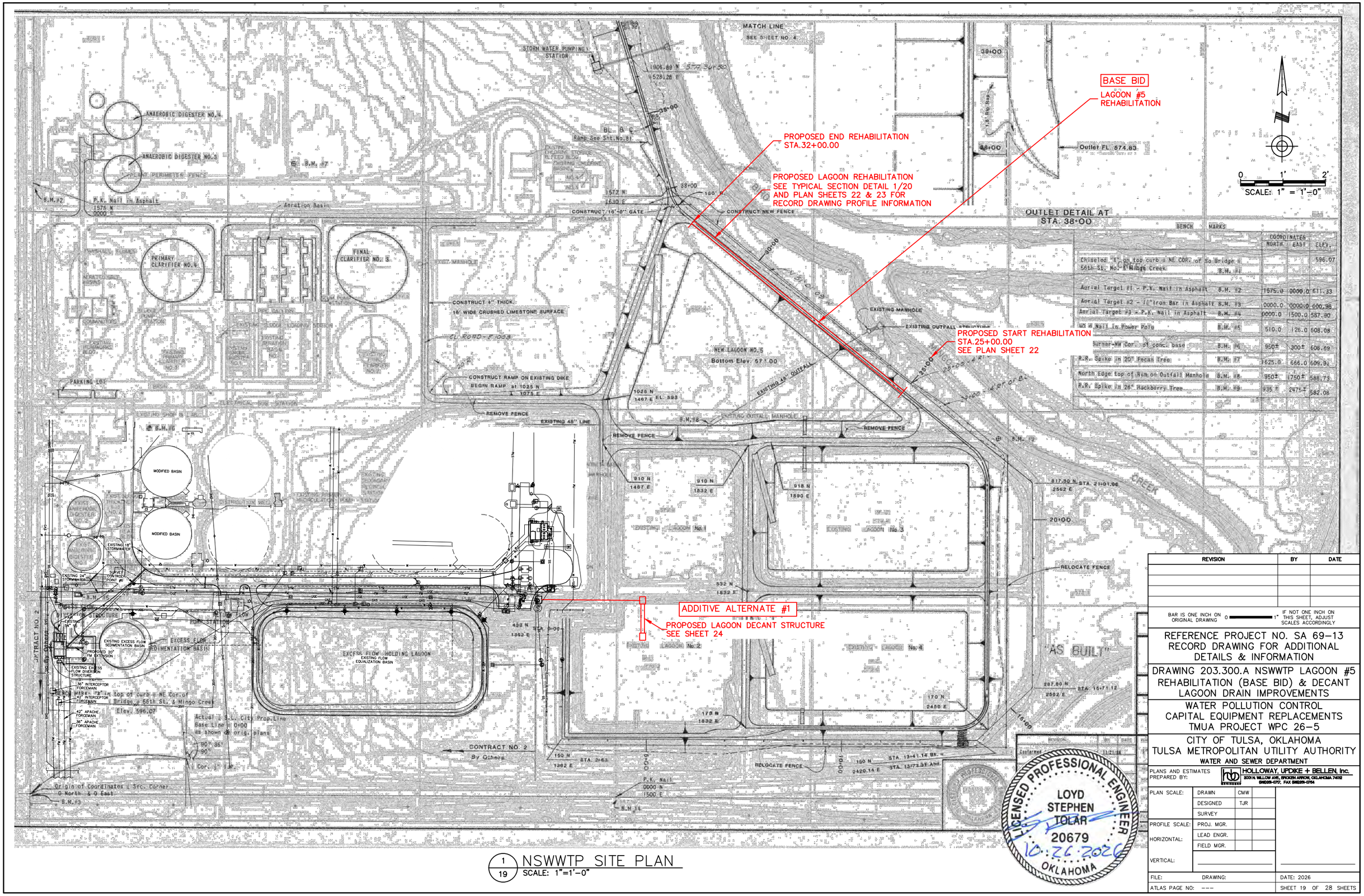
CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEIN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)258-4707, FAX (918)258-0764

PLAN SCALE: VARIES	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026
ATLAS PAGE NO: --- SHEET 18 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.200.C.dwg, 10/29/2026 1:35:22 PM



BENCH MARKS		COORDINATES NORTH	EAST	ELEV.
Chiseled "X" on top curb @ NE COR. of So Bridge @ 56th St. No. E Mingo Creek	B.M. #1			596.07
Aerial Target #1 - P.K. Nail in Asphalt	B.M. #2	1575.0	0000.0	611.33
Aerial Target #2 - 1/2" Iron Bar in Asphalt	B.M. #3	0000.0	0000.0	600.98
Aerial Target #3 - P.K. Nail in Asphalt	B.M. #4	0000.0	1500.0	587.80
NW'd Nail in Power Pole	B.M. #5	510.0	126.0	608.08
Burner-NW Cor. of conc. base	B.M. #6	950±	300±	606.69
R.R. Spike in 20" Pecan Tree	B.M. #7	1625.0	666.0	609.91
North Edge top of Nim on Outfall Manhole	B.M. #8	950±	1750±	588.73
R.R. Spike in 26" Hackberry Tree	B.M. #9	935 ±	2475±	582.08

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 —— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. SA 69-13
RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.300.A NSWWTP LAGOON #5 REHABILITATION (BASE BID) & DECANT LAGOON DRAIN IMPROVEMENTS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc. ENGINEERS
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)258-0707, FAX (918)258-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

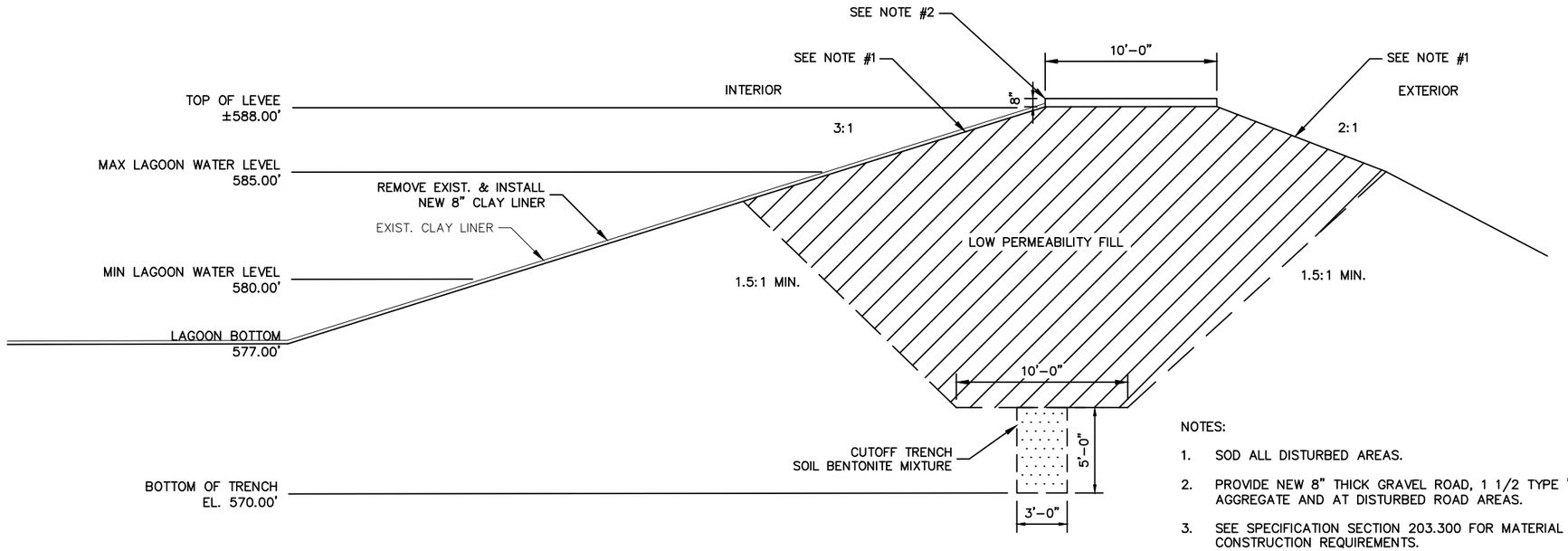
LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10-26-2026
OKLAHOMA

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 19 OF 28 SHEETS

1/19 NSWWTP SITE PLAN
SCALE: 1"=1'-0"

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.300.dwg, 10/29/2026 1:35:25 PM



NOTES:

1. SOD ALL DISTURBED AREAS.
2. PROVIDE NEW 8" THICK GRAVEL ROAD, 1 1/2 TYPE "A" AGGREGATE AND AT DISTURBED ROAD AREAS.
3. SEE SPECIFICATION SECTION 203.300 FOR MATERIAL AND CONSTRUCTION REQUIREMENTS.

1/20 NSWWTP LAGOON #5 REHABILITATION TYPICAL SECTION
NTS

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10·26·2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWING 203.300.B
NSWWTP LAGOON #5 REHABILITATION
OPTION #4

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc. ENGINEERS 2009 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012 (918)258-0707, FAX (918)258-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 20 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.300.dwg, 10/29/2026 1:35:29 PM



1/21 PHOTO–EXIST. LAGOON
NTS

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWING 203.300.C
NSWWTP LAGOON #5 PHOTOS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26–5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)258-0707, FAX (918)258-0764

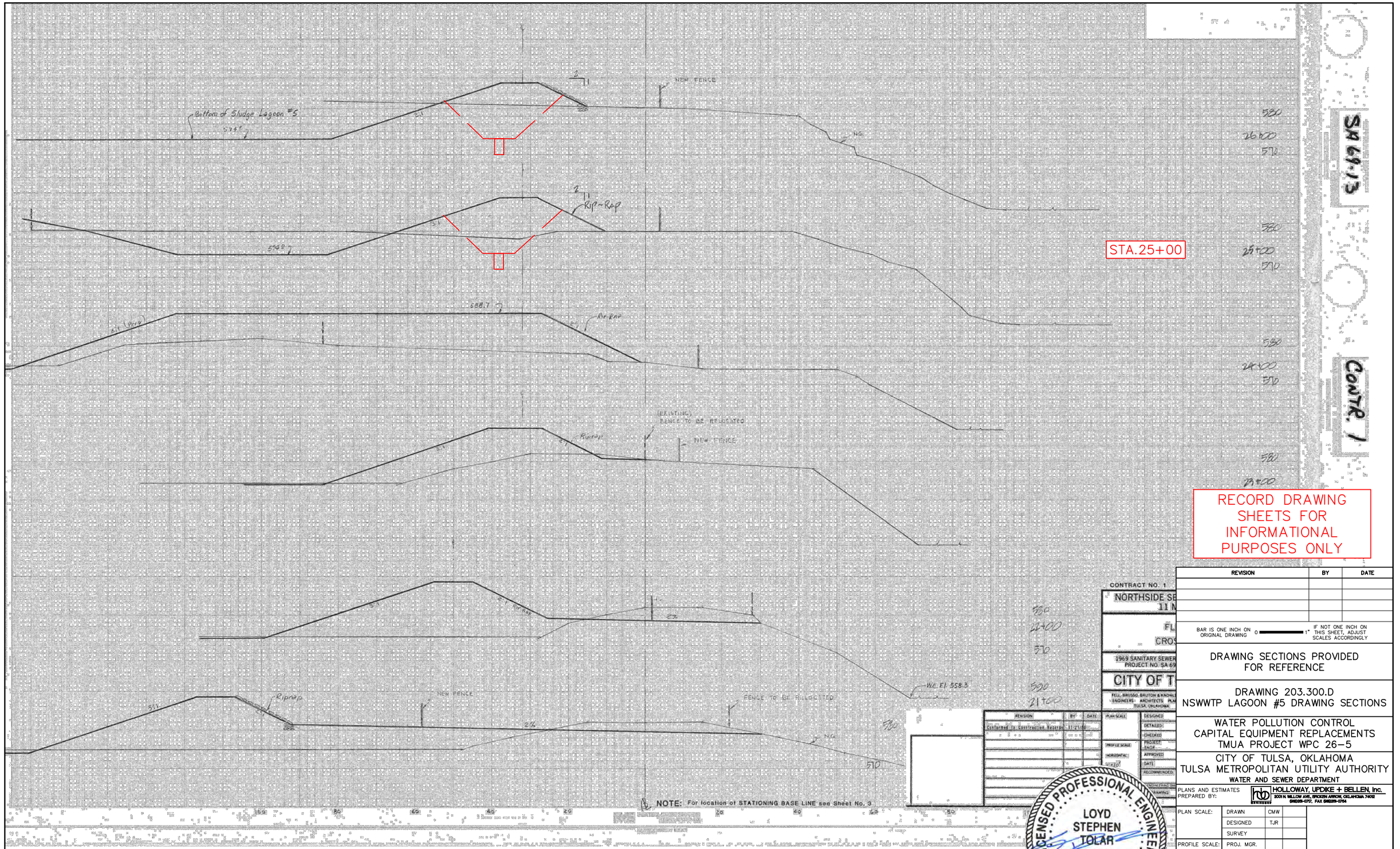
LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10·26·2026
OKLAHOMA

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 21 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.300.dwg, 10/29/2026 1:35:30 PM



RECORD DRAWING SHEETS FOR INFORMATIONAL PURPOSES ONLY

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 —— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWING SECTIONS PROVIDED FOR REFERENCE

DRAWING 203.300.D
NSWWTP LAGOON #5 DRAWING SECTIONS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
3001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)205-0717, FAX (918)205-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10.26.2026
OKLAHOMA

FILE: DRAWING:	DATE: 2026
ATLAS PAGE NO: ---	SHEET 22 OF 28 SHEETS

1/22 NSWWTP LAGOON #5 DRAWING SECTIONS
SCALE: 1" = 10'

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.300.dwg, 10/29/2026 1:35:30 PM

Transition Top of Dike Elev. from 588.7 to 584.0 Sta. 32+00 to Sta 33+00 to meet dike on west side of Sl. Lagoon #5

2:1 RIP RAP

In Slope

N.G.

FENCE

Rip Rap

Rip Rap

Rip Rap

Rip Rap

Rip Rap

Bottom of Sludge Lagoon #5 Elev 574.0

PLACE ON ALL TOPS OF DIKES WHERE CONSTRUCTED (4' CRUSHED LIMESTONE)

STA.30+00

NOTE: For location of STATIONING BASE LINE see Sheet No. 3

RECORD DRAWING SHEETS FOR INFORMATIONAL PURPOSES ONLY

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DRAWING SECTIONS PROVIDED FOR REFERENCE

DRAWING 203.300.E
NSWWTP LAGOON #5 DRAWING SECTIONS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
200 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)205-0717, FAX (918)205-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

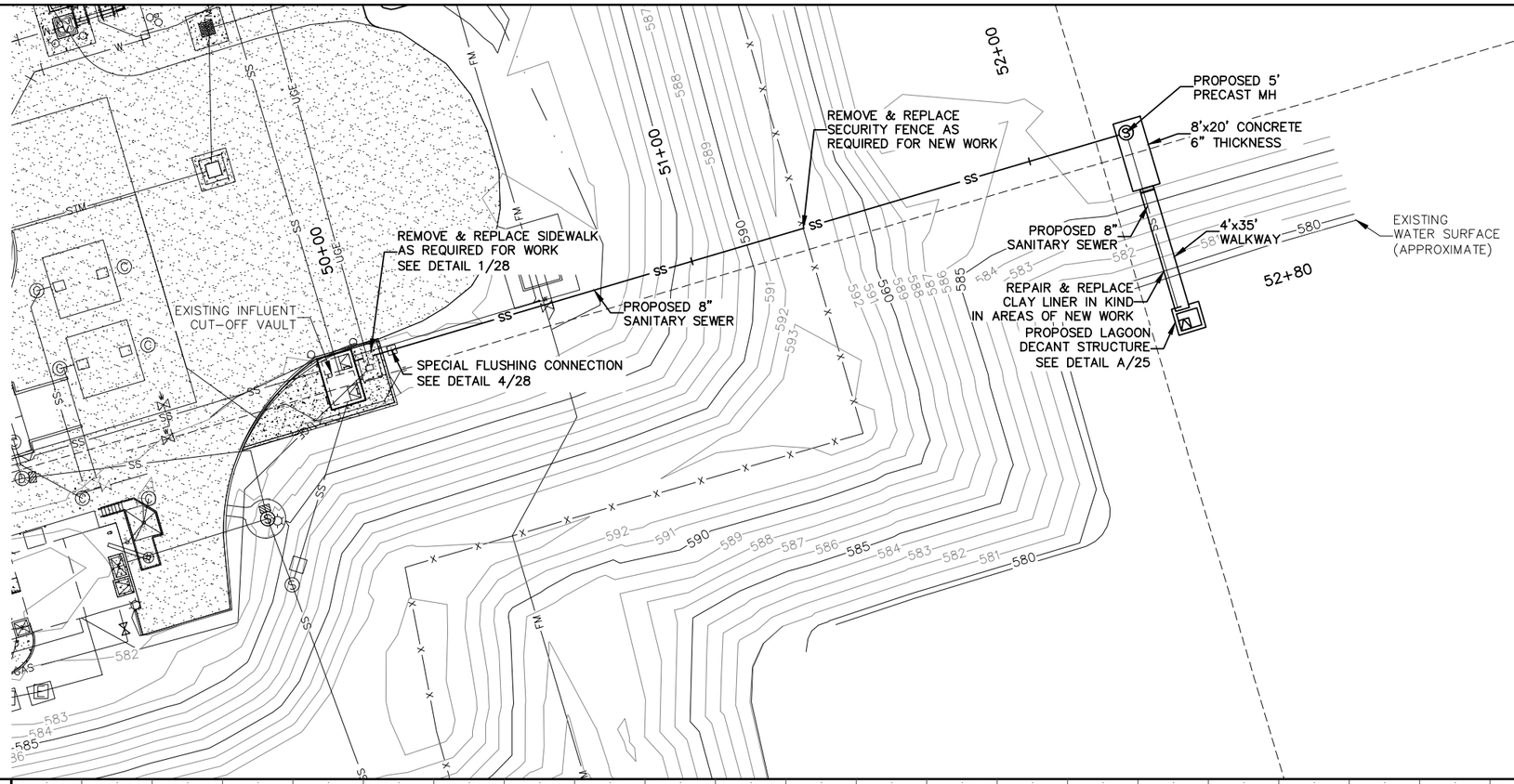
LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10-26-2026
OKLAHOMA

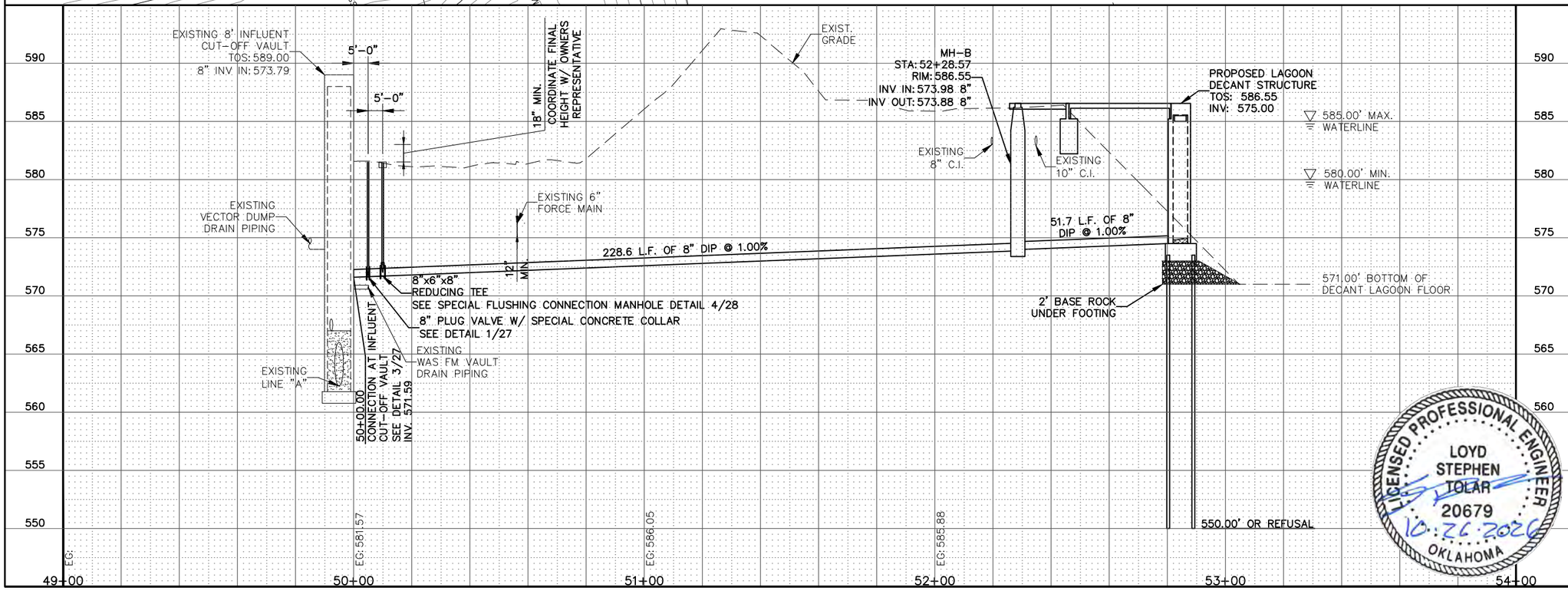
FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 23 OF 28 SHEETS

1/23 NSWWTP LAGOON #5 DRAWING SECTIONS
SCALE: 1" = 10'

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.300.dwg, 10/29/2026 1:35:34 PM





BEFORE YOU DIG... CALL OKIE 1-800-522-6543

0 10' 20'
SCALE: 1" = 10'

ADDITIVE ALTERNATE #1

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 ——— 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. 18TMUAAIRPLS
RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.400.A
DECANT LAGOON
PNP 8" GRAVITY LINE "D"

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)259-0777, FAX (918)259-0764

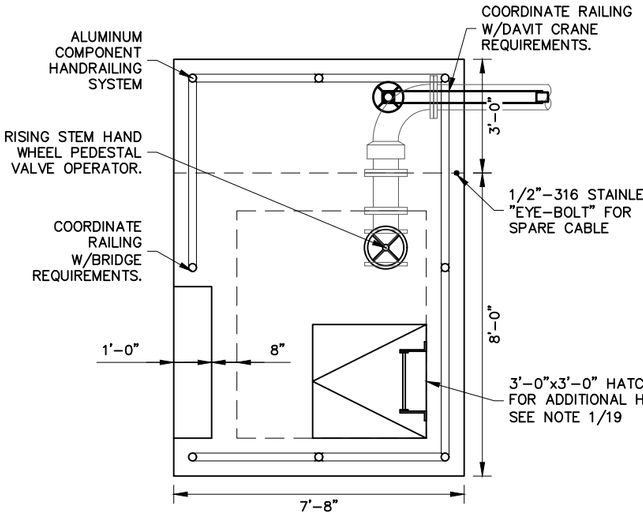
PLAN SCALE: 1"=20'	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL: 1"=x'	LEAD ENGR.		
	FIELD MGR.		
VERTICAL: 1"=x'			

FILE: DRAWING: DATE: 2026

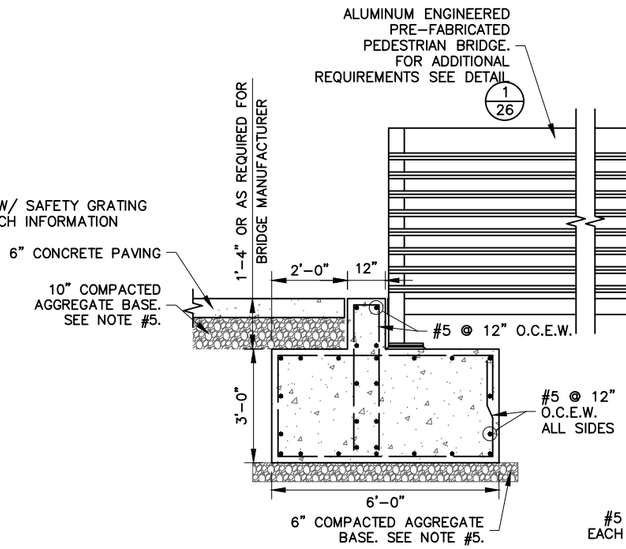
ATLAS PAGE NO: --- SHEET 24 OF 28 SHEETS

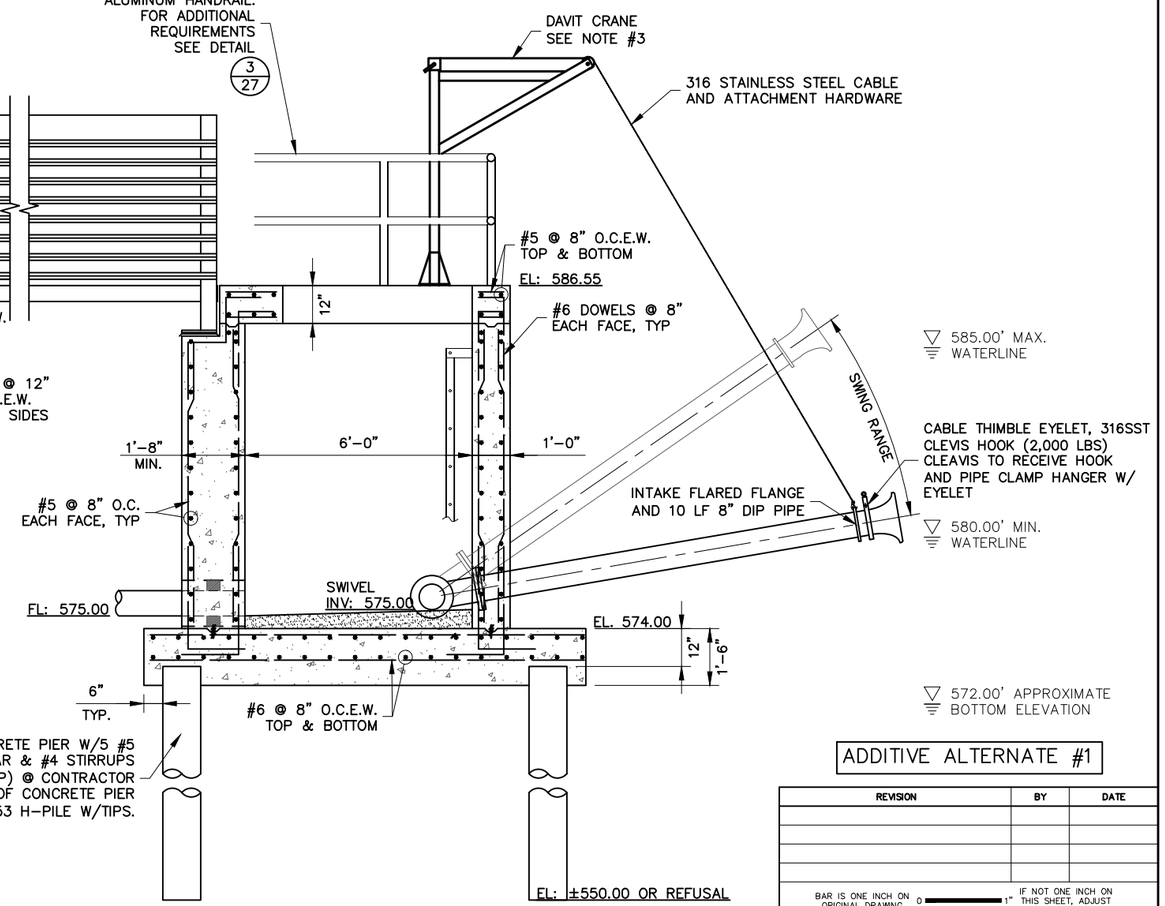
LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10.26.2026
OKLAHOMA

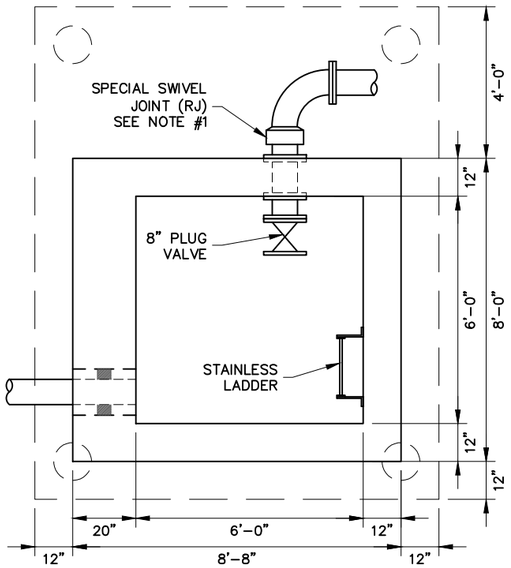
Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.400.dwg, 10/29/2026 1:35:43 PM



1/25 DECANT STRUCTURE PLAN
SCALE: 1/2" = 1'-0"







2/25 DECANT STRUCTURE PLAN @ EL. 580.00
SCALE: 1/2" = 1'-0"

NOTES:

1. PROVIDE FLANGED STAINLESS STEEL FABRICATED OPW ENGINEERED SYSTEMS SWIVEL JOINT, 3930F-0802 OR EQUAL FOR APPLICATION SHOWN. CONTRACTOR SHALL COORDINATE PIPING LAYING LENGTH WITH INTAKE PIPING AND FINAL CRANE PLACEMENT.
2. ALL PIPING SHALL BE FLANGE BY FLANGE WITH 316 STAINLESS STEEL BOLT SETS.
3. INSTALL A 1/2-TON DAVIT CRANE W/ PEDESTAL BASE AND MANUAL HOIST. DAVIT CRANE SHALL BE THERN MODEL ENSIGN 1000 316 SS OR EQUAL. COORDINATE PEDESTAL LOCATION DURING CONSTRUCTION PRIOR TO INSTALLATION.
4. PROVIDE SPARE IN PLACE CABLE FOR RETRIEVAL. CONNECT SPARE CABLE TO 316 STAINLESS STEEL CABLE AND FASTENED W/ CLEAVIS AND HOOK TO CONCRETE DECK, INCLUDING 5-FOOT EXTRA SLACK.

A/25 SECTION @ DECANT STRUCTURE
SCALE: 1/2" = 1'-0"

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10-22-2026
OKLAHOMA

ADDITIVE ALTERNATE #1

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING (0 — 1") IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. 18TMUAAIRPLS
RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.400.B
DECANT LAGOON DECANT STRUCTURE PLANS & SECTIONS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

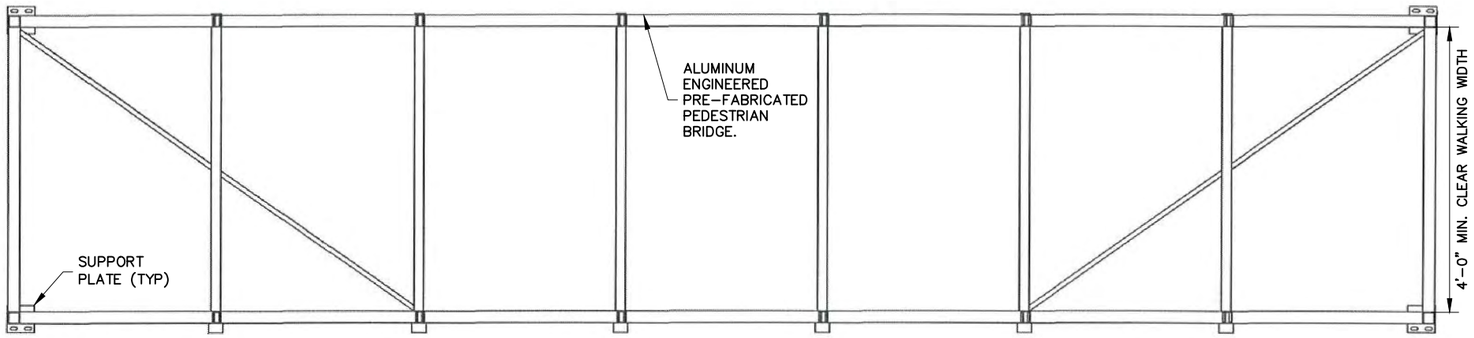
CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEIN, Inc. 2001 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012 (918)251-7717, FAX (918)251-7764

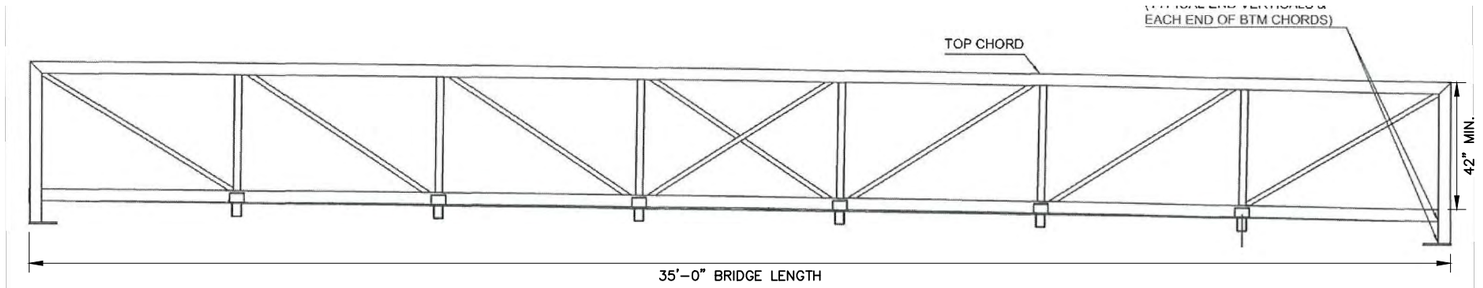
PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026
ATLAS PAGE NO: --- SHEET 25 OF 28 SHEETS

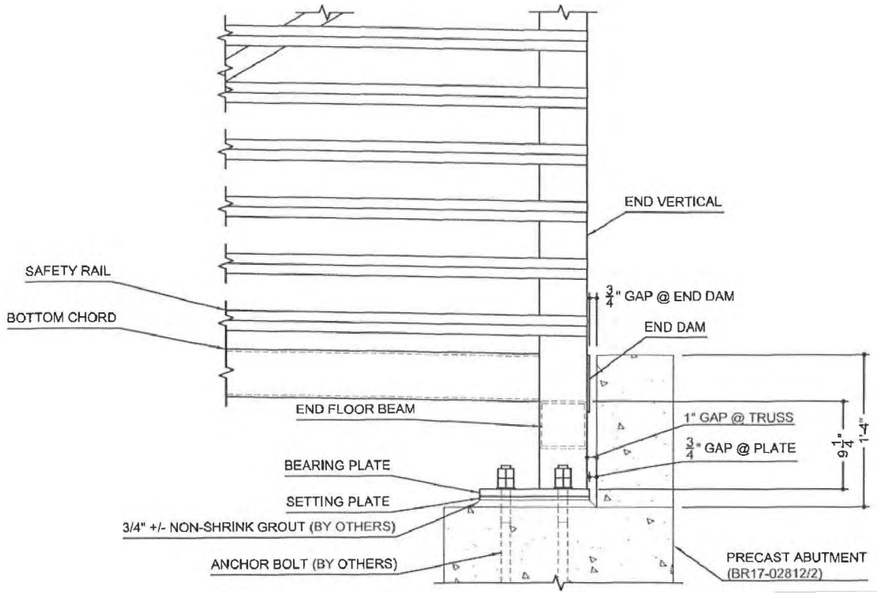
Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.400.dwg, 10/29/2026 1:35:47 PM



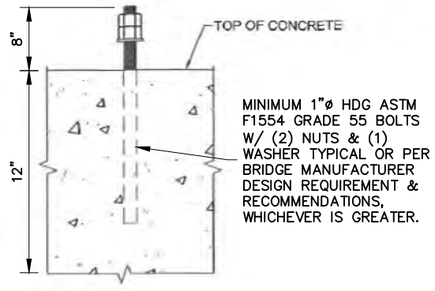
1/26 PEDESTRIAN BRIDGE FRAME PLAN
SCALE: NTS



A/26 PEDESTRIAN BRIDGE ELEVATION
SCALE: NTS



B/26 OUTSIDE ELEVATION
SCALE: 1" = 1'-0"



C/26 ANCHOR BOLT DETAIL
SCALE: 1 1/2" = 1'-0"

NOTES:

1. PROVIDE ALUMINUM ENGINEERED PREFABRICATED PEDESTRIAN BRIDGE. BIG R BRIDGE COLORADO, GATOR BRIDGE GEORGIA OR EQUAL. ENGINEER SEALED SUBMITTAL DRAWINGS AND ENGINEERED DESIGN SHALL BE LICENSED IN OKLAHOMA.
2. CONTRACTOR TO COORDINATE FINAL BRIDGE SUPPORT AND ANCHOR BOLT REQUIREMENTS AT THE DECANT STRUCTURE AND LAGOON SLOPE WITH MINIMUM SIZE REQUIREMENTS AS SHOW. ADDITIONAL REQUIREMENTS MAY BE REQUIRED BY THE CONTRACTOR'S SELECTED BRIDGE MANUFACTURE AT CONTRACTOR'S COST.
3. SOD ALL DISTURBED AREAS.
4. COORDINATE WORK WITH NORTHSIDE OPERATIONS FOR DECANT LAGOON WATER ELEVATIONS AND NEW WORK. THE DECANT LAGOON CAN BE REMOVED FROM SERVICE FOR A SCHEDULED PERIOD OF TIME AND "MOST OF THE WATER REMOVED DOWN TO 576'-0" OR POSSIBLY LOWER BY THE CITY WITH A 3 MONTH LEAD TIME, AS SCHEDULED WITH NORTHSIDE OPERATIONS.

ADDITIVE ALTERNATE #1

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 — 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. 18TMUAAIRPLS
RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION

DRAWING 203.400.C
DECANT LAGOON STRUCTURE
WALKWAY DETAILS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
200 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-0717, FAX (918)251-0764

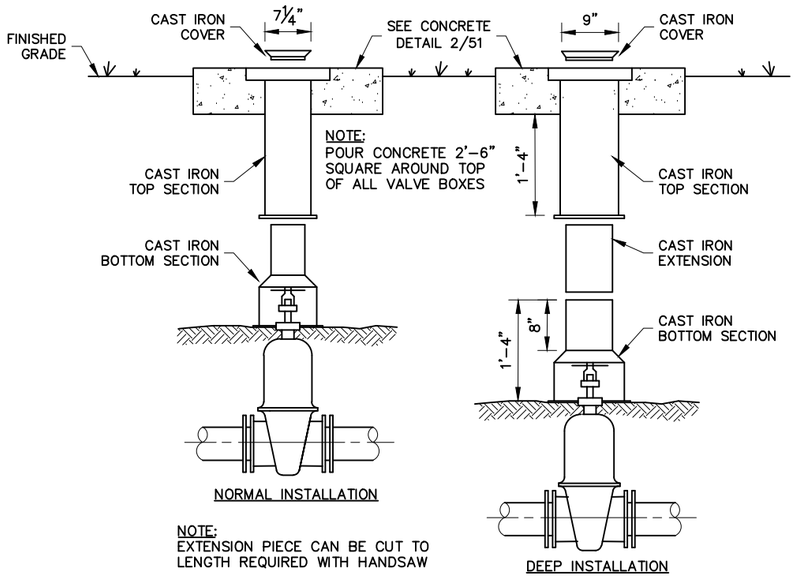
PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10.26.2026
OKLAHOMA

FILE: DRAWING: DATE: 2026

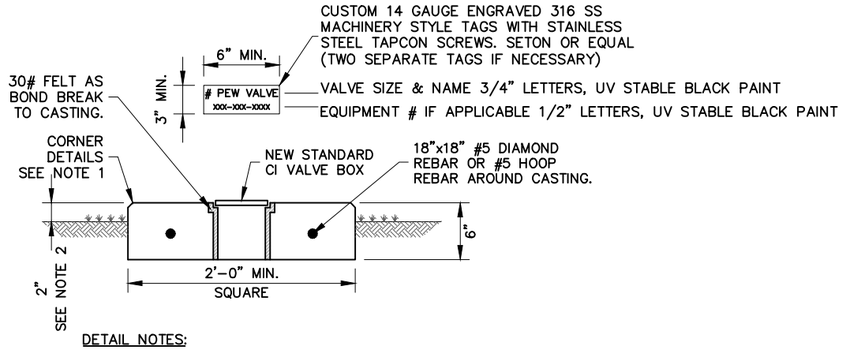
ATLAS PAGE NO: --- SHEET 26 OF 28 SHEETS

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.400.dwg, 10/29/2026 1:35:49 PM



1/27 CONCRETE COLLAR & VALVE BOX INSTALLATION

SCALE: 1" = 1'-0"

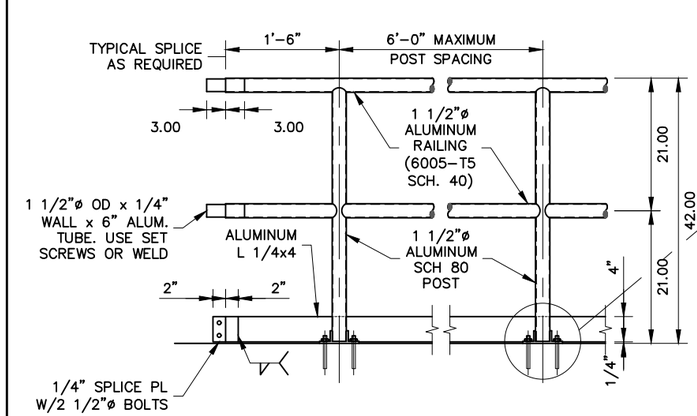


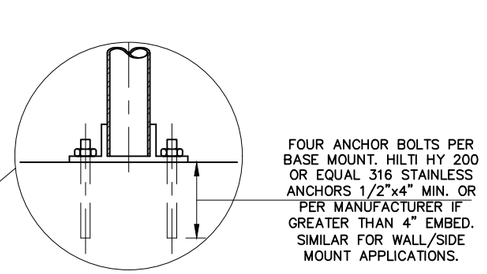
DETAIL NOTES:

1. CHAMFER EXPOSED CORNERS IF INSTALLED IN GRASS AREA. TOOLED TOP PERIMETER EDGE IF IN PAVING. CONCRETE COLLARS SHALL BE CAST IN PLACE. PRE-CAST COLLARS WILL NOT BE ACCEPTABLE.
2. ALL BURIED VALVES WITH BURIED OPERATOR. CONCRETE COLLARS IN GRASS SHALL BE 2" HIGHER IN ELEVATION THAN SURROUNDING GROUND. CONCRETE COLLARS IN PAVING OR HARD SURFACE SHALL BE FLUSH WITH SURFACE.
3. REFER TO CITY OF TULSA STANDARD SPECIFICATIONS FOR VALVE BOX REQUIREMENTS.

2/27 VALVE BOX CONCRETE COLLAR

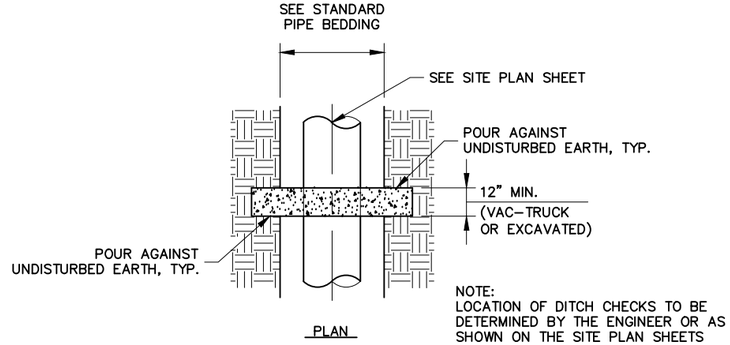
SCALE: 1 1/2" = 1'-0"



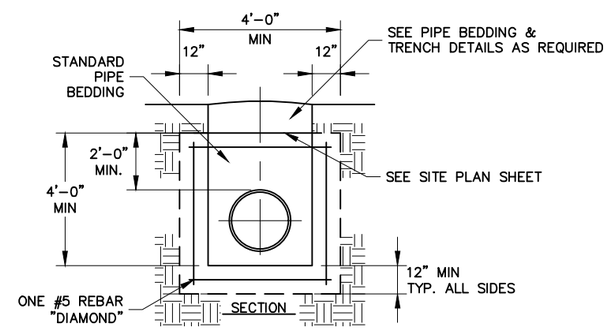


3/27 HANDRAIL DETAIL

SCALE: 1" = 1'-0"



NOTE:
LOCATION OF DITCH CHECKS TO BE DETERMINED BY THE ENGINEER OR AS SHOWN ON THE SITE PLAN SHEETS



4/27 SPECIAL DITCH CHECK DETAIL

SCALE: 3/8" = 1'-0"

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10.26.2026
OKLAHOMA

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 — 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. 18TMUAAIRPLS
RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION

MISCELLANEOUS DETAILS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

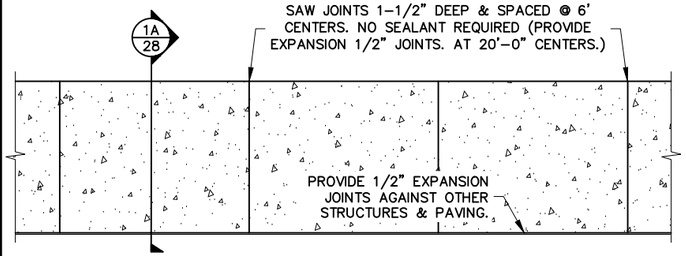
PLANS AND ESTIMATES PREPARED BY: HOLLOWAY, UPDIKE + BELLEN, Inc.
3500 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-0717, FAX (918)251-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

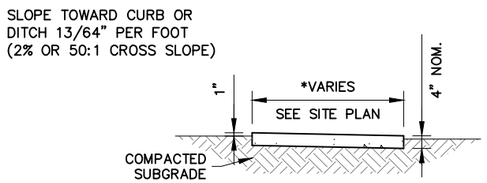
FILE: DRAWING: DATE: 2026

ATLAS PAGE NO: --- SHEET 27 OF 28 SHEETS

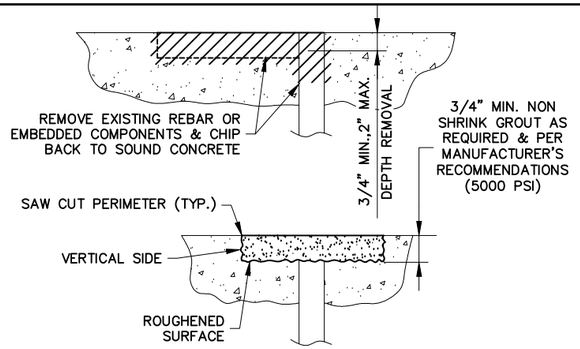
Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.400.dwg, 10/29/2026 1:35:54 PM



1/28 PLAN @ SIDEWALK/MOW STRIP
SCALE: 1/2" = 1'-0"



1A/28 SECTION @ SIDEWALK/MOW STRIP
SCALE: 1/2" = 1'-0"



2/28 REBAR & EMBEDDED ITEM CONCRETE REPAIR DETAIL
NTS

3/28 WALL PENETRATION SEAL
NTS

4/28 SPECIAL FLUSHING CONNECTION MANHOLE
SCALE: 1" = 1'-0"

DETAIL NOTES:

1. CHAMFER EXPOSED CORNERS IF INSTALLED IN GRASS AREA. TOOLED TOP PERIMETER EDGE IF IN PAVING. CONCRETE COLLARS SHALL BE CAST IN PLACE. PRE-CAST COLLARS WILL NOT BE ACCEPTABLE.
2. ALL BURIED VALVES WITH BURIED OPERATOR. CONCRETE COLLARS IN GRASS SHALL BE 2" HIGHER IN ELEVATION THAN SURROUNDING GROUND. CONCRETE COLLARS IN PAVING OR HARD SURFACE SHALL BE FLUSH WITH SURFACE.
3. REFER TO CITY OF TULSA STANDARD SPECIFICATIONS FOR VALVE BOX REQUIREMENTS.
4. ALL 2" PIPING SHALL BE THREADED 316 SST PIPING & VALVE.

REVISION	BY	DATE

BAR IS ONE INCH ON ORIGINAL DRAWING 0 — 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

REFERENCE PROJECT NO. 18TMUAAIRPLS
RECORD DRAWING FOR ADDITIONAL DETAILS & INFORMATION

MISCELLANEOUS DETAILS

WATER POLLUTION CONTROL
CAPITAL EQUIPMENT REPLACEMENTS
TMUA PROJECT WPC 26-5

CITY OF TULSA, OKLAHOMA
TULSA METROPOLITAN UTILITY AUTHORITY
WATER AND SEWER DEPARTMENT

PLANS AND ESTIMATES PREPARED BY:
HOLLOWAY, UPDIKE + BELLEN, Inc.
3500 N. WILLOW AVE., BROKEN ARROW, OKLAHOMA 74012
(918)251-0717, FAX (918)251-0764

PLAN SCALE:	DRAWN	CMW	
	DESIGNED	TJR	
	SURVEY		
PROFILE SCALE:	PROJ. MGR.		
HORIZONTAL:	LEAD ENGR.		
	FIELD MGR.		
VERTICAL:			

FILE: DRAWING: DATE: 2026
ATLAS PAGE NO: --- SHEET 28 OF 28 SHEETS

LICENSED PROFESSIONAL ENGINEER
LOYD STEPHEN TOLAR
20679
10.26.2026
OKLAHOMA

Z:\Projects\2025\25TMUAWPC26-1\Design\Production Plans\25TMUAWPC26-5\203.400.dwg, 10/29/2026 1:35:59 PM