GENERAL

- ALL WORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS ISSUED BY THE ENGINEER AND ACCOMPANYING THESE DRAWINGS.
- CONSTRUCTION TRAFFIC CONTROL SHALL BE PROVIDED AS NECESSARY AT ANY POINTS OF ENTRANCE OR EXIT ONTO PAVED STREETS. NO CLOSURE OF PUBLIC OR PRIVATE ROADWAYS SHALL BE ALLOWED WITHOUT PRIOR WRITTEN CONSENT OF THE CITY OF TAHLEQUAH OR THE OWNER, RESPECTIVELY. COST OF TRAFFIC CONTROL SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE BID PRICE OF OTHER ITEMS OF WORK.
- CONTRACTOR SHALL CONTACT THE ENGINEER AS SOON AS POSSIBLE SHOULD ANY CIRCUMSTANCES FOUND DURING THE COURSE OF PROJECT COMPLETION NECESSITATE A VARIANCE FROM THE PLANS. VARIANCE FROM THE PLANS WILL BE REVIEWED BY THE ENGINEER

2. STORMWATER/EROSION CONTROL

- PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL VERIFY THAT A NOTICE OF INTENT (NOI) HAS BEEN FILED WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA). IN THE EVENT THAT AN NOI IS NOT CURRENTLY ON FILE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILING SAID DOCUMENT IN CONFORMANCE WITH EPA REQUIREMENTS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE GUIDELINES SET FORTH IN THE PERMITS ARE IN PLACE PRIOR TO INITIATING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF ALL FEES ASSOCIATED WITH STORM WATER PERMITS.
- THE NOTICE OF INTENT (NOI) AND THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), AS WELL AS ANY OTHER APPLICABLE DOCUMENTS SHALL BE KEPT ON SITE BY THE CONSTRUCTION SUPERINTENDENT AT ALL TIMES. SAID ITEMS SHALL BE MADE AVAILABLE TO STATE AND MUNICIPAL AUTHORITIES UPON REQUEST.
- ANY DISCHARGES FROM THE SITE SHALL CONFORM TO THE SWPPP. THE CONTRACTOR SHALL INSTALL ADDITIONAL STORMWATER CONTROL DEVICES AS NECESSARY TO ENSURE COMPLIANCE WITH SAID DOCUMENT.
- CONSTRUCTION OF ALL EROSION CONTROL MEASURES SHALL BE PERFORMED BY THE CONTRACTOR PRIOR TO THE INITIATION OF ANY LAND DISTURBING ACTIVITIES. INSPECTION OF THESE STRUCTURES MAY BE PERFORMED BY EPA, ODEQ, AND/OR THE CITY OF TAHLEQUAH STORM WATER QUALITY DEPARTMENT. MAINTENANCE OF EROSION CONTROL MEASURES SHALL BE PERFORMED BY THE CONTRACTOR AS INDICATED IN THE SWPPP OR AT A SUFFICIENT INTERVAL TO ENSURE RETENTION OF SEDIMENTS.
- A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED BY THE CONTRACTOR AT ANY POINTS OF ENTRANCE OR EXIT ONTO ADJACENT PAVED STREETS. WASHDOWN OF VEHICLES SHALL BE PERFORMED AS NECESSARY TO REDUCE/ELIMINATE SIGNIFICANT DEPOSITS OF SOIL ON ROADWAY. REMOVAL OF SOIL FROM STREET SHALL BE PERFORMED BY THE CONTRACTOR AS
- DISTURBED PORTIONS OF THE SITE, INCLUDING STOCKPILES, WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21-DAYS, SHALL BE TEMPORARY STABILIZED NO LATER THAN 14-DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. TEMPORARY STABILIZATION SHALL BE COMPLETED PER THE SWPPP.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASE SHALL BE STABILIZED NO LATER THAN 14-DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. PERMANENT STABILIZATION SHALL BE COMPLETED PER THE SWPPP.
- IN THE EVENT THAT CONSTRUCTION SEQUENCING OR WEATHER MAKE STABILIZATION OF DISTURBED AREAS WITHIN THE REQUIRED TIME IMPRACTICAL, THE CONTRACTOR SHALL STABILIZE THE SOILS WITH STRAW OR FIBER MULCH, CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF MULCH AND ESTABLISHMENT OF PERMANENT VEGETATION ONCE WEATHER AND/OR SEQUENCING PERMITS. SEE SWPPP FOR ADDITIONAL INFORMATION.

3. EXISTING UTILITIES

- 3.1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES WHICH MAY BE IMPACTED BY THE WORK OF THE APPROVED PLANS. THE CONTRACTOR SHALL COMPLETE THE SCOPE OF WORK IN SUCH A MANNER AS TO PRECLUDE DAMAGE TO EXISTING UTILITIES AND/OR STRUCTURES. DAMAGE TO FACILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE FACILITY OWNER.
- EXISTING UTILITIES SHOWN ON THE APPROVED PLANS IN THE APPROXIMATE LOCATION WHERE EVIDENCE OF THEIR LOCATION WAS AVAILABLE EITHER BY FIELD OBSERVATION OR FROM INFORMATION PROVIDED BY THE OWNER, AND/OR UTILITY COMPANY. NEITHER THE OWNER, THE UTILITY OWNER, NOR THE ENGINEER ACCEPT RESPONSIBILITY FOR DAMAGE DONE BY THE CONTRACTOR TO EXISTING FACILITIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL UTILITIES DURING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY EXACT HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES, SPECIFICALLY AT CRITICAL TIE-IN POINTS, PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES. VERIFICATION OF SIZE AND CONSTRUCTION MATERIAL (I.E., PVC, DIP, RCP, ETC.) SHALL BE PERFORMED DURING THESE ACTIVITIES.

GEOTECHNICAL

- ALL EARTHWORK AND SUBGRADE PREPARATION SHALL BE COMPLETED PER THE JANUARY 17 2018 REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL EVALUATION PREPARED BY BUILDING & EARTH (BUILDING & EARTH PROJECT NO. OK170293) AND SECTION 31 2000 OF THE PROJECT SPECIFICATIONS. CONFLICTS BETWEEN THE TWO DOCUMENTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO THE SUBMISSION OF BID. REQUIREMENTS WHICH SPECIFICALLY IMPACT THE SCOPE OF WORK INCLUDE, BUT ARE NOT LIMITED TO:
- TOPSOIL THICKNESS IN BORINGS RANGED FROM 2 TO 30-IN. TOPSOIL THICKNESS LIKELY VARIES IN UNEXPLORED LOCATIONS. THESE SOILS ARE ANTICIPATED TO LOSE STABILITY WITH SLIGHT INCREASE IN SOIL MOISTURE CONTENT AND WILL NOT PROVIDE A WORKABLE
- RESIDUAL CLAY SOILS WERE ENCOUNTERED BELOW THE TOPSOIL IN ALL BORINGS AND EXTENDED TO DEPTHS OF 1 TO 10-FT. CLAY SOILS VARY FROM NEAR-SURFACE, LOW TO MODERATE PLASTICITY RESIDUAL CLAY SOILS, TO MODERATE TO HIGH-PLASTICITY SOILS. SEE SECTION 3.3.2 OF THE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
- A LIMESTONE UNIT WAS ENCOUNTERED BELOW RESIDUAL CLAY SOILS IN ALL BORINGS AT DEPTH OF 1 TO 9.8-FEET. THIS LIMESTONE UNIT EXTENDED TO THE AUGER REFUSAL DEPTH OF 2 TO 10.5-FEET BELOW THE EXISTING GROUND SURFACE. AUGER REFUSAL DEPTH ARE REPORTED IN SECTION 3.3.4 OF THE GEOTECHNICAL REPORT.
- 4.1.4. GROUNDWATER SEEPAGE WAS ENCOUNTERED IN PORTIONS OF THE BORINGS AT DEPTHS OF 8 TO 9-FT BELOW EXISTING GRADE. FREE WATER WAS MEASURED AT 4 TO 6-FT. 24-HOURS AFTER COMPLETION OF DRILLING OPERATIONS.
- HIGH SOIL MOISTURE CONTENTS WERE OBSERVED AT THE TOPSOIL/RESIDUAL CLAY INTERFACE AS WELL AS AT THE RESIDUAL CLAY/LIMESTONE INTERFACE. BASED ON THIS, THE GEOTECHNICAL ENGINEER HAS IDENTIFIED A HIGH PROBABILITY FOR THE DEVELOPMENT OF PERCHED WATER.
- SWALE AREA: AS NOTED IN THE GEOTECHNICAL REPORT, SOFT TO MEDIUM STIFF SOILS WITH RELATIVELY HIGH MOISTURE CONTENTS WERE IDENTIFIED THROUGHOUT THE SWALE WHICH BISECTS THE PROPERTY. HIGH MOISTURE CONTENTS WERE NOTED TO DEPTH OF APPROXIMATELY 6-FT. SOFT, WET, AND UNSTABLE SOIL CONDITIONS SHOULD BE ANTICIPATED WITHIN AND ADJACENT TO THE SWALE ALIGNMENT. SEE SECTION 4.2 OF THE GEOTECHNICAL REPORT FOR ADDITIONAL DETAIL AND INFORMATION.
- MOISTURE SENSITIVE SOILS:
- THE SITE WILL BE PRONE TO DEVELOPMENT OF NEAR-SURFACE PERCHED WATER. NEAR-SURFACE SOILS WILL DEGRADE IF ALLOWED TO BECOME SATURATED. THE CONTRACTOR IS ADVISED TO NOT ALLOW WATER TO POND BY MAINTAINING POSITIVE DRAINAGE AND PROVIDING TEMPORARY DEWATERING METHODS.
- THE CONTRACTOR SHOULD ANTICIPATE SOME DIFFICULTY DURING THE EARTHWORK PHASE OF THIS PROJECT DURING CONSTRUCTION. INCREASED MOISTURE LEVELS WILL FURTHER SOFTEN THE SUBGRADE. THE SOILS ARE UNSTABLE AND SHOULD BE EXPECTED TO RUT AND PUMP UNDER THE INFLUENCE OF CONSTRUCTION TRAFFIC.

- HARD ROCK EXCAVATION TECHNIQUES SHOULD BE ANTICIPATED WITHIN THE UNDERLYING LIMESTONE UNIT. THE DEPTH OF THIS UNIT VARIES FROM 2-FT TO 10-FT ACROSS THE SITE. SEE SECTION 4.8.1 OF THE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION.
- UTILITY TRENCH BACKFILL: ALL UTILITY TRENCHES SHALL BE BACKFILLED AND COMPACTED 6.4. PER THE REQUIREMENTS OF SECTION 4.7 OF THE GEOTECHNICAL RPOERT. LIFT THICKNESS MAY BE REQUIRED TO BE REDUCED TO 4 TO 6-IN IN ORDER TO ACHIEVE REQUIRED COMPACTION USING HAND-OPERATED EQUIPMENT.
- GROUNDWATER HAS BEEN ENCOUNTERED ON THE SITE AT DEPTHS OF 4 TO 9-FT. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING OF EXCAVATION AS NECESSARY TO COMPLETE THE INDICATED SCOPE OF WORK. COST OF DEWATERING ACTIVITIES SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE SUBMITTED BID. SEE SECTION 31 2319 OF THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- UNSATISFACTORY OR UNUSABLE SOIL MATERIAL GENERATED DURING EARTHWORK OPERATIONS SHALL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM THE SITE PRIOR TO FINAL INSPECTION AND ACCEPTANCE BY THE OWNER.
- ROCK AND OTHER UNFORESEEN OBSTRUCTIONS ENCOUNTERED DURING THE COMPLETION OF SITE WORK SHALL BE REMOVED BY THE CONTRACTOR AT NO COST TO THE OWNER
- THE CONTRACTOR SHALL SPRINKLE DISTURBED AREAS AS NECESSARY TO REDUCE/ELIMINATE THE CREATION OF DUST DURING GRADING ACTIVITIES. THE COST OF SPRINKLING SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE SUBMITTED BID.
- SHORING, BRACING, TERRACING/BENCHING, AND OTHER MEASURES ASSOCIATED WITH PROTECTION OF WORKERS IN AN AROUND EXCAVATIONS SHALL BE PERFORMED AS NECESSARY TO MFFT ALL APPLICABLE OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) REQUIREMENTS AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL NECESSARY MEASURES ARE IN PLACE. SEE SECTION 31 5000 OF THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SANITARY SEWER

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF OKLAHOMA ADMINISTRATIVE CODE TITLE 252, CHAPTER 656. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE A COPY OF THE STATE REGULATIONS FOR REFERENCE.
- PUBLIC SANITARY SEWER IMPROVEMENTS SHALL BE CONSTRUCTED PER THE CITY OF TAHLEQUAH STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS. PRIVATE IMPROVEMENTS SHALL BE CONSTRUCTED PER SECTION 22 1313 OF THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS OF THE INTERNATIONAL PLUMBING CODE (VERSION AS ADOPTED BY THE CITY OF TAHLEQUAH). CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING AND REVIEWING ALL REFERENCED DOCUMENTS AND DETERMINING APPLICABILITY TO THE INDICATED SCOPE OF WORK.
- A CONSTRUCTION PERMIT FROM THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY IS REQUIRED PRIOR TO EXTENSION OF ANY PUBLIC SANITARY SEWER LINES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THAT THIS PERMIT HAS BEEN ACQUIRED PRIOR TO CONSTRUCTION. ADDITIONAL COSTS AND/OR DELAYS RESULTING FROM CONSTRUCTION OF THE SANITARY SEWER LINES PRIOR TO ACQUISITION OF THE PERMIT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- A WORK ORDER FROM THE CITY OF TAHLEQUAH DEPARTMENT OF UTILITIES SHALL BE REQUIRED PRIOR TO EXTENSION OF ANY PUBLIC SANITARY SEWER LINES. IF PUBLIC SANITARY SEWER LINE IMPROVEMENTS ARE INCLUDED WITHIN THE SCOPE OF WORK, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE THIS WORK ORDER. ADDITIONAL COSTS AND/OR DELAYS RESULTING FROM CONSTRUCTION OF ANY WATER LINES PRIOR TO ACQUISITION OF THE WORK ORDER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- LEAKAGE AND DEFLECTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 22 1313 OF THE PROJECT SPECIFICATIONS. LEAKAGE ALONG ANY NEWLY INSTALLED SANITARY SEWER LINE SHALL NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE PER DAY. DOCUMENTATION OF TESTING. PROCEDURES AND RESULTS SHALL BE PROVIDED TO THE ENGINEER WITHIN 24 HOURS OF COMPLETION OF THE TEST(S).
- IN ACCORDANCE WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ), THE 5.6. CONTRACTOR SHALL UTILIZE BEDDING MATERIAL IN ACCORDANCE WITH OAC 252:655-9-2(G)(3)
- COVER ABOVE TOP OF PIPE SHALL BE MAINTAINED AS SPECIFIED ON THE PLANS. IN NO SITUATION SHALL THE COVER FROM TOP OF PIPE BE LESS THAN 30-INCHES.
- IN THE EVENT THAT MINIMUM SEPARATION BETWEEN THE SANITARY SEWER LINES AND ANY ADJACENT WATER LINES (24-INCHES VERTICALLY, 10-FEET HORIZONTALLY) CANNOT BE MET. THE
- SPECIAL PROVISIONS OF OAC 252:655-9-1(H) SHALL BE MET BY THE CONTRACTOR. ALL PVC SANITARY SEWER LINES SHALL HAVE A MINIMUM STIFFNESS OF 46-PSI IN ACCORDANCE
- ALL MANHOLES SHALL HAVE A MINIMUM DIAMETER OF 48-INCHES. MANHOLES LESS THAN 4.5-FEET DEEP SHALL BE FULL DIAMETER FROM TOP TO BOTTOM. MANHOLE BASES SHALL BE A MINIMUM OF
- 8-INCHES THICK AND SHALL EXTEND AT LEAST 4-INCHES BEYOND THE MANHOLE WALL. ALL CONCRETE USED IN MANHOLE CONSTRUCTION SHALL HAVE A COMPRESSIVE STRENGTH GREATER THAN OR EQUAL TO 3,500-PSI. PRECAST REINFORCED CONCRETE MANHOLES SHALL
- INLET AND OUTLET LINES SHALL BE JOINED TO THE MANHOLE VIA A WATER-TIGHT CONNECTION WHICH ALLOWS FOR DIFFERENTIAL SETTLEMENT BETWEEN THE PIPE AND MANHOLE TO TAKE
- CONTRACTOR SHALL PROVIDE FIELD NOTES AND AS-BUILT SURVEYS TO ENGINEER UPON COMPLETION OF SANITARY SEWER CONSTRUCTION. BOTH DIGITAL AND HARD COPIES SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO ACCEPTANCE OF THE IMPROVEMENTS BY THE OWNER. AS-BUILT INFORMATION SHALL INCLUDE LOCATIONS AND ELEVATIONS OF ALL FITTINGS AS INSTALLED. A COMPLETE AND ACCURATE LIST OF QUANTITIES SHALL BE INCLUDED WITH, OR SHOWN ON, THE PLAN SHEETS. QUANTITES SHALL INCLUDE BEDDING AND PIPE, ALONG WITH FITTINGS AND INCIDENTAL ITEMS. SUBMITTED SURVEYS SHALL BE SIGNED AND SEALED BY A LICENSED LAND SURVEYOR AND SHALL BE PREPARED UTILIZING THE IDENTICAL VERTICAL AND HORIZONTAL DATUM INDICATED ON THE APPROVED PLANS. COST OF AS-BUILT SURVEYS SHALL BE CONSIDERED AN INCIDENTAL ITEM AND SHALL BE INCLUDED IN THE BID PRICE OF OTHER ITEMS OF
- 5.14. ADDITIONAL REQUIREMENTS FROM THE TAHLEQUAH PUBLIC WORKS AUTHORITY SHALL BE AS
- ALL PVC SANITARY SEWER LINES SHALL HAVE A MAXIMUM SDR OF 35. 5.14.2. BEDDING MATERIAL SHALL BE 3/4-IN WASHED ROCK. BEDDING MATERIAL TO BE PROVIDED 6-IN BELOW PIPE AND 12-IN ABOVE PIPE
- ALL MANHOLES SHALL HAVE A MINIMUM DIAMETER OF 4-FT. ALL PUBLIC MANHOLES SHALL BE PROVIDED WITH STANDARD TAHLEQUAH MANHOLES LIDS
- 5.14.5. FLAT-TOP MANHOLES SHALL BE PROHIBITED.

PLACE IN ACCORDANCE WITH OAC 252-655-9-4(E).

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF OKLAHOMA ADMINISTRATIVE CODE TITLE 252, CHAPTER 626. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE A COPY OF THE STATE REGULATIONS FOR REFERENCE.
- PUBLIC WATER LINE IMPROVEMENTS SHALL BE CONSTRUCTED PER THE CITY OF TAHLEQUAH STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS. PRIVATE IMPROVEMENTS SHALL BE CONSTRUCTED PER SECTION 22 1113 OF THE PROJECT SPECIFICATIONS AND THE REQUIREMENTS OF THE INTERNATIONAL PLUMBING CODE (VERSION AS ADOPTED BY THE CITY OF TAHLEQUAH). CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING AND REVIEWING ALL REFERENCED DOCUMENTS AND DETERMINING APPLICABILITY TO THE INDICATED SCOPE OF WORK.
- A CONSTRUCTION PERMIT FROM THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY SHALL BE REQUIRED PRIOR TO EXTENSION OF ANY PUBLIC WATER LINES. IF PUBLIC WATER LINE IMPROVEMENTS ARE INCLUDED WITHIN THE SCOPE OF WORK, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM THAT THIS PERMIT HAS BEEN ACQUIRED PRIOR TO THE START OF CONSTRUCTION. ADDITIONAL COSTS AND/OR DELAYS RESULTING FROM CONSTRUCTION OF ANY WATER LINES PRIOR TO ACQUISITION OF THE PERMIT SHALL BE THE RESPONSIBILITY OF THE
- A WORK ORDER FROM THE CITY OF TAHLEQUAH DEPARTMENT OF UTILITIES SHALL BE REQUIRED PRIOR TO EXTENSION OF ANY PUBLIC WATER LINES. IF PUBLIC WATER LINE IMPROVEMENTS ARE

GRAPHICAL SYMBOLS

INCLUDED WITHIN THE SCOPE OF WORK, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR

CONSTRUCTION OF ANY WATER LINES PRIOR TO ACQUISITION OF THE WORK ORDER SHALL BE

CONTRACTOR SHALL COMPLETE PROPOSED TAPS IN ACCORDANCE WITH CITY OF TAHLEQUAH

A MINIMUM HORIZONTAL SEPARATION OF 10-FEET SHALL BE MAINTAINED BETWEEN ANY POTABLE

EVENT THAT THIS SEPARATION IS NOT POSSIBLE, THE WATER LINE SHALL BE CONSTRUCTED IN A

ALL HIGH POINTS IN PROPOSED WATER LINES ARE SHOWN ON PLANS. CONTRACTOR SHALL MAINTAIN POSITIVE PIPELINE SLOPE TOWARD DESIGNATED HIGH POINTS AND SHALL NOT CREATE

INSTALLATION OF EACH FIRE HYDRANT SHALL BE COMPLETED SO AS TO ACHIEVE THE STEAMER

NOZZLE ELEVATION SPECIFIED ON THE PLANS. COMPLETED HYDRANT INSTALLATIONS WHICH DO

NOT MEET THE SPECIFIED ELEVATION SHALL BE ADJUSTED ACCORDINGLY. COST OF RAISING OR

LOWERING RECENTLY INSTALLED HYDRANTS SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

ALL WASTE MATERIAL (INCLUDING WATER GENERATED DURING FLUSHING PROCEDURES) SHALL

ADDITIONAL SERVICES FOR LANDSCAPE IRRIGATION SHALL BE PROVIDED AS INDICATED BY THE

LANDSCAPE ARCHITECT. LOCATIONS AND SIZES OF ADDITIONAL IRRIGATION SERVICES SUBJECT

COVER ABOVE THE TOP OF PRIVATE WATER LINES SHALL BE MAINTAINED AS SPECIFIED ON THE

ACCORDANCE WITH SECTION 22 1113 OF THE PROJECT SPECIFICATIONS AND PER STANDARD C-601

DISINFECTION PROCEDURES FOR PRIVATE WATER LINES SHALL BE PERFORMED IN ACCORDANCE

WITH SECTION 22 1113 OF THE PROJECT SPECIFICATIONS AND PER STANDARD C-651 OF THE

AMERICAN WATER WORKS ASSOCIATION (AWWA). DOCUMENTATION OF TESTING, PROCEDURES

REACTION BLOCKING FOR PRIVATE WATER LINES SHALL BE PROVIDED AT ALL BENDS, TEES, AND

HYDRANTS AND SHALL BE INSTALLED PER SECTION 22 1113 OF THE PROJECT SPECIFICATIONS.

ANSI/AWWA C509 AND SHALL HAVE MECHANICAL JOINT ENDS. MECHANICAL JOINTS AND JOINT

GATE VALVES INSTALLED ON PRIVATE WATER LINES SHALL MEET THE REQUIREMENTS OF

ACCESSORIES SHALL MEET THE REQUIREMENTS OF ANSI/AWWA A21.1/C111. ALL BOLTS,

CONTRACTOR SHALL PROVIDE FIELD NOTES AND AS-BUILT SURVEYS TO ENGINEER UPON

COMPLETION OF WATER LINE CONSTRUCTION. BOTH DIGITAL AND HARD COPIES SHALL BE

AND VALVING AS INSTALLED. A COMPLETE AND ACCURATE LIST OF QUANTITIES SHALL BE

VERTICAL AND HORIZONTAL DATUM INDICATED ON THE APPROVED PLANS.

6.16. ADDITIONAL REQUIREMENTS FROM TAHLEQUAH PUBLIC WORKS AUTHORITY SHALL BE AS

CONTRACTOR TO PROVIDE MIDCO RESTRAINTS ON ALL PVC PIPE.

MEGA-LUG RESTRAINTS SHALL BE PROVIDED ON DUCTILE IRON PIPE.

ANY WATER LINES OVER 12-IN MUST BE DUCTILE IRON PIPE.

ALL DUCTILE IRON PIPE SHALL BE WRAPPED IN PLASTIC.

WATER LINES SHALL HAVE A MAXIMUM SDR OF 21.

VALVES SHALL BE AVK.

MECHANICAL JOINT.

AND APPROVAL PRIOR TO ENGAGING SURVEYOR.

REVIEW PRIOR TO DISTURBING THE CONTROL POINT.

RESPONSIBILITY OF THE CONTRACTOR

CONTROL SHALL BE ESTABLISHED BY A LICENSED LAND SURVEYOR.

SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO ACCEPTANCE OF THE IMPROVEMENTS BY THE

OWNER. AS-BUILT INFORMATION SHALL INCLUDE LOCATIONS AND ELEVATIONS OF ALL FITTINGS

INCLUDED WITH, OR SHOWN ON, THE PLAN SETS. QUANTITIES SHALL INCLUDE BEDDING AND PIPE

ALONG WITH FITTINGS, VALVES AND INCIDENTAL ITEMS. SUBMITTED SURVEYS SHALL BE SIGNED

AND SEALED BY A LICENSED LAND SURVEYOR AND SHALL BE PREPARED UTILIZING THE IDENTICAL

BEDDING MATERIAL SHALL BE SAND IN DRY AREAS AND 3/4-IN WASHED ROCK IN WET

BEDDING MATERIAL SHALL BE PROVIDED 6-IN BELOW PIPE AND 12-IN ABOVE THE PIPE

CONTRACTOR TO PROVIDE 12/14 GUAGE COATED TRACER WIRE STUBBED OUTSIDE OF

BELL RESTRAINTS SHALL BE PROVIDED WITHIN 40-FT (IN ALL DIRECTIONS) FROM A

VALVE OPERATOR EXTENSIONS SHALL BE PROVIDED ON ANY VALVES BURIED DEEPER

STEEL CASINGS SHALL BE PROVIDED UNDER ROADWAYS WITH CASING SPACES AND END

COST OF STAKING TO BE INCLUDED IN SUBMITTED BID PRICE. ALL CONSTRUCTION STAKING SHALL

PROVIDE QUALIFICATION STATEMENT FROM SURVEYOR TO ENGINEER AND OWNER FOR REVIEW

CONTRACTOR AS INDICATED IN THE CONSTRUCTION DRAWINGS. IT SHALL BE RESPONSIBILITY OF

THE CONTRACTOR TO CONFIRM THE ACCURACY OF THE PROVIDED COORDINATE AND ELEVATION

DATA PRIOR TO USING ANY OF THE LISTED POINTS FOR CONSTRUCTION STAKING OR PLACEMENT

PRIMARY CONTROL POINTS SHALL BE PROTECTED AND PRESERVED THROUGHOUT THE COURSE

OF THE PROJECT. IN THE EVENT THAT THE LOCATION OF PRIMARY CONTROL INTERFERES WITH

COMPLETION OF THE SCOPE OF WORK, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR

COST ASSOCIATED WITH THE REPLACEMENT OF ANY PRIMARY CONTROL DAMAGED DURING THE COURSE OF WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. REPLACEMENT

SECONDARY CONTROL SHALL BE SET AS NECESSARY BY THE CONTRACTOR TO ACCURATELY

COMPLETE THE SCOPE OF WORK. COST ASSOCIATED WITH PLACEMENT OF ALL SECONDARY

CONTROL AS WELL AS ANY NECESSARY CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY

FIELD SURVEYS SHALL BE PROVIDED BY THE CONTRACTOR AS NECESSARY TO CALCULATE AND

SURVEYS SHALL BE COMPLETED BY A LICENSED LAND SURVEYOR AND SHALL BE SUBMITTED TO

THE ENGINEER IN BOTH DIGITAL AND HARD COPY FORMAT. COST OF SURVEY SHALL BE THE

VERIFY ANY QUANTITIES USED TO CALCULATE CHANGES IN THE CONTRACT AMOUNT. ALL

BE PROVIDED BY INDEPENDENT LICENSED LAND SURVEYING COMPANY CONTRACTOR TO

PRIMARY CONTROL FOR CONSTRUCTION OF THE PROJECT HAS BEEN PROVIDED TO THE

VALVE BOXES AND AT THE HYDRANT. WIRES SHALL BE SOLDERED TOGETHER OR OTHER

APPROVED METHOD. TRACER WIRE MUST BE UNCUT AND ACCESSIBLE OUTSIDE ALL VALVE

FIRE HYDRANTS SHALL BE AVK FIRE HYDRANTS WITH TAHLEQUAH THREAD (301).

INCLUDING THOSE IN VALVE BODY SHALL BE STAINLESS STEEL.

AND RESULTS SHALL BE PROVIDED TO THE ENGINEER WITHIN 24 HOURS OF COMPLETION OF THE

PLANS. IN NO SITUATION SHALL THE COVER FROM TOP OF PIPE BE LESS THAN 30-INCHES.

PRESSURE AND LEAKAGE TESTING FOR PRIVATE WATER LINES SHALL BE PERFORMED IN

OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA). DOCUMENTATION OF TESTING.

PROCEDURES AND RESULTS SHALL BE PROVIDED TO THE ENGINEER WITHIN 24 HOURS OF

BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE DISPOSED OF IN ACCORDANCE WITH

FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS. SALVAGEABLE MATERIALS AND

EQUIPMENT SHALL BE RETURNED TO OWNER UNLESS RE-USED FOR THIS PROJECT.

SEPARATE TRENCH AND THE SEWER LINE SHALL BE DESIGNED, CONSTRUCTED, AND TESTED AS A

AND NON-POTABLE WATER LINE EXTENSIONS AND ANY ADJACENT SANITARY SEWER LINES. IN THE

POLICIES AND PROCEDURES. TAPPING ACTIVITIES SHALL BE COORDINATED THROUGH THE

TO SECURE THIS WORK ORDER, ADDITIONAL COSTS AND/OR DELAYS RESULTING FROM

THE RESPONSIBILITY OF THE CONTRACTOR.

UTILITIES DIVISION OF THE CITY OF TAHLEQUAH.

WATER LINE PIPE IN ACCORDANCE WITH OAC 252:655-9-1(H).

ADDITIONAL HIGH POINTS IN THE PIPE ALIGNMENT.

TO REVIEW AND APPROVAL BY THE ENGINEER.

COMPLETION OF THE TEST(S).

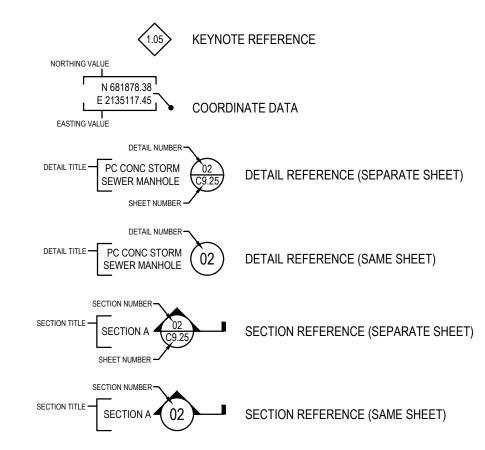
FOLLOWS:

6.16.2.

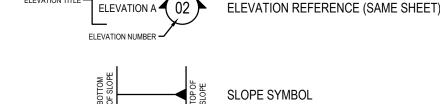
6.16.11.

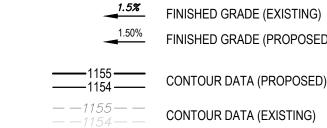
6.16.13.

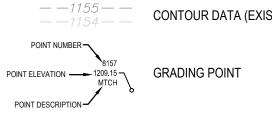
ANNOTATION REGARDING EXISTING CONDITIONS ANNOTATION REGARDING PROPOSED CONDITIONS











	SOIL MATERIAL (UNDISTURBED)		ASPHALT	
	SOIL MATERIAL (DISTURBED)		REGULAR DUTY PAVING	
	AGGREGATE MATERIAL		HEAVY DUTY PAVING	
	IRON		EXTRA HEAVY DUTY PAVING	
	BRICK		SODDING / SEEDING / VEGETATIVE COVER	
4 4 4	CONCRETE			

ALL WATER METERS SHALL BE INSTALLED IN NON-TRAFFIC AREAS.

TOPOGRAPHIC SURVEY HAS BEEN PREPARED BY KROHN SURVEYING, INC OF LONE GROVE, OKLAHOMA (PHONE 580.490.2422), AN UNOFFICIAL COPY OF THIS SURVEY HAS BEEN PROVIDED WITH THE CONSTRUCTION DRAWINGS FOR THE CONTRACTOR'S REFERENCE. SURVEY CONTROL FOR THE

CIVIL SHEET INDEX

Sheet Number	Sheet Title
C0.01b	INDEX AND GENERAL CONSTRUCTION NOTES
C0.02b	PLAT OF TOPOGRAPHIC MAPPING (1 OF 2)
C0.03b	PLAT OF TOPOGRAPHIC MAPPING (2 OF 2)
C2.02b	UTILITY PLAN INDEX
C6.02b	SANITARY SEWER INDEX
C6.05b	SANITARY SEWER PLAN AND PROFILE - LINE A
C6.10b	SANITARY SEWER PLAN AND PROFILE - LINE A (CONT)
C6.15b	SANITARY SEWER PLAN AND PROFILE - LINE A (CONT)
C6.20b	SANITARY SEWER PLAN AND PROFILE - LINE A (CONT)
C6.25b	SANITARY SEWER PLAN AND PROFILE - LINE B
C6.30b	SANITARY SEWER PLAN AND PROFILE - LINE B (CONT)
C7.02b	WATER INDEX
C7.05b	WATER LINE PLAN AND PROFILE - LINE A
C7.10b	WATER LINE PLAN AND PROFILE - LINE A (CONT)
C7.15b	WATER LINE PLAN AND PROFILE - LINE B
C7.20b	WATER LINE PLAN AND PROFILE - LINE B (CONT)
C7.25b	WATER LINE PLAN AND PROFILE - LINE C
C7.30b	WATER LINE PLAN AND PROFILE - LINE D
C7.35b	WATER LINE PLAN AND PROFILE - LINE D (CONT)
C9.10b	CIVIL CONSTRUCTION DETAILS
C9.15b	CIVIL CONSTRUCTION DETAILS
C9.20b	CIVIL CONSTRUCTION DETAILS

MATERIAL SYMBOLS

SURVEY CONTROL

PROJECT SHALL BE AS IDENTIFIED ON THIS SURVEY.

R 22 E EAST BALLENTINE ROAD LOCATION EAST WILLIS ROAD LOCATION MAP

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

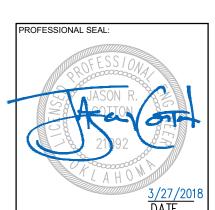
UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



Architect, Inc 45 South 4th Street Fort Smith, AR 72901

479-783-2480

www.childersarchitect.com



Oklahoma City, OK 73106 P 405.232.5700 W www.adgokc.com

CA 6447, exp. 06.30.2018



BID PACKAGE 02

(100% SET)

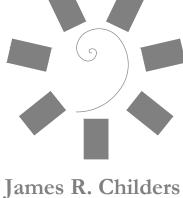
03/27/18

C0.01b

INDEX AND GENERAL CONSTRUCTION NOTES

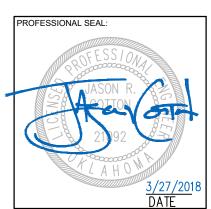
NOTES TO CONTRACTOR

- 1.1. SURVEY PREPARED BY KROHN SURVEYING, INC OF LONE GROVE, OKLAHOMA (CONTACT INFORMATION PROVIDED AT SHEET C0.03b). SURVEY APPEARS TO HAVE BEEN PREPARED UNDER CONTRACT WITH CHEROKEE NATION OF OKLAHOMA. THE SURVEY WAS PROVIDED BY JAMES R. CHILDERS, ARCHITECT, INC. TO ADG, PC ON JANUARY 31, 2018 AND IS PROVIDED AS A PART OF THIS BID PACKAGE FOR REFERENCE ONLY.
- THE UNOFFICIAL REPRODUCTION OF THIS SURVEY AS A PART OF THESE CONSTRUCTION DRAWINGS HAS BEEN INCLUDED AS A COURTESY TO THE CONTRACTOR AND TO AID IN PROPERLY COMPLETING CONSTRUCTION STAKING FOR THE PROJECT. IN THE EVENT THAT AN OFFICIAL BOUNDARY SURVEY IS REQUIRED, THE CONTRACTOR IS ADVISED TO CONTACT KROHN SURVEYING, INC. DIRECTLY.
- ADG, PC ASSUMES NO LIABILITY FOR WORK COMPLETED BY KROHN SURVEYING, INC. IN CONJUNCTION WITH THIS PROJECT.



Architect, Inc.

45 South 4th Street
Fort Smith, AR 72901
479-783-2480
www.childersarchitect.com



920 West Main
Oklahoma City,OK 73106
P 405.232.5700
W www.adgokc.com
CA 6447, exp. 06.30.2018



HEROKEE NATION ENTERTAINMENT

TAHLEQUAH CASINO

CHEROKE

ROJECT PHASE:
BID PACKAGE 02
(100% SET)

REVISIONS
DATE DESCRIPTION

DATE: JOB NUMBER: 17-06

C0.02b

PLAT OF TOPOGRAPHIC MAPPING (1 OF 2)

Drawing Scale 1" = 100'

Plat of Topographic Mapping for the Cherokee Nation of Oklahoma

Being part of E/2 Section 9, Township 16 North, Range 22 East, I.B.M. Cherokee County, State of Oklahoma

UNITED STATE OF AMERICA IN TRUST FOR CHEROKEE NATION

LEGAL DESCRIPTION BOOK 1166, Page 740: A tract of land situated in the SE1/4 and in the S1/2 S1/2 NE1/4 of Section 9, Township 16 North, Range 22 East of the Indian Meridian, Cherokee County, Oklahoma, being a portion of that parcel of land conveyed to Cherokee Nation Property Management L.L.C. in Document No. I-2012-008705 filed December 28, 2012 in Book 1055 at Page 778-779 in the official records of the Cherokee County Clerk, said tract being more particularly described as follows:

COMMENCING at the Southeast Corner of said SE1/4, marked with a mag nail; Thence N89°52'00"W along the South boundary of said Section 9, a distance of 1734.91 feet;

Thence N0°05'50"W a distance of 758.57 feet to a 3/8" rebar capped Chaffin LS 1243 to the true POINT OF BEGINNING;

Thence N0°05'50"W a distance of 2117.10 feet to a 3/8" rebar capped Chaffin LS 1243;

Thence N89°54'10"E a distance of 1083.04 feet to a 3/8" rebar

capped Chaffin LS 1243;

Thence S0°04'58"W a distance of 1215.47 feet to a 3/8" rebar

capped Chaffin LS 1243;

Thence S44°11'33"E a distance of 101.33 feet to a 3/8" rebar capped Chaffin LS 1243;

Thence S45°16'33"W a distance of 1179.88 feet to a 3/8" rebar capped Chaffin LS 1243;

Thence S89°54'10"W a distance of 310.02 feet to the POINT OF BEGINNING.

Containing 45.92 acres more or less. SURFACE ONLY, BASIS OF BEARINGS-BEARINGS BASED ON GPS READINGS TAKEN ON SECTION CONTROL AND ARE GEODETIC NORTH.

PROJECT LOCATION Section line LOCATION MAP SCALE: N.T.S.

R 22 E

SURVEYORS NOTES:

1/8" = 1'-0"

1. Survey was performed without the benefit of a current Abstract, Commitment or Title Opinion. No Easements or Rights-of-Way were provided to the

2. Only those underground utilities were located as flagged by on Okie one call order #18012207130181 along with observed meters, control box's and other visible utility's as found in the process of mapping site. Krohn Surveying make no guarantee that this comprises all the underground utilities.

3. Subject property is located in Zone X according to both Firm Maps 40021C0265D and 40021C0400D. Low lying areas may be subject to

4. Bearings are NAD(83) Oklahoma North Zone. Horizontal coordinates as shown hereon are tied to and static GPS session observed on a 1/2" Iron Rod set with Krohn CA6716 orange cap. A separate static GPS session was also observed on said point to verify horizontal accuracy position.

5. Vertical benchmark as shown hereon are tied to and static GPS session observed on a 1/2" Iron Rod set with Krohn CA6716 orange cap. a separate static GPS session was also observed on said point to verify both vertical accuracy.

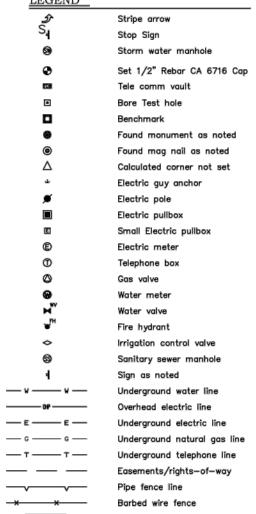
6. Trust land description as shown hereon was found in Book 1166, Page 740, Office of the County Clerk, Cherokee County. The Basis Bearings for said description stated that they were based geodetic bearings. This topographic maps Basis of Bearings is based on NAD83 Oklahoma North Zone.

- 7. Several tele-comm hand holes were found along the east and west sides of Seven Clans Ave., but had no markings between them. The conduit maybe ran but no lines have been installed from hand hole to hand hole so it would make the line un-locatable at this time.
- 8. Seven Clans Drive is all concrete surface
- 9. Willis Road is asphalt surface

10. The no name street has asphalt driving lanes with concrete curb.

11. No utility was marked in the 20' City of Tahlequah Easement Book 286, Page 241. It is unknown if any utility's are in service or have

12. The Oklahoma Gas and Electric easement shown hereon is depicted from the apparent centerline of the existing poles and overhead lines.





OLORADO KANSAS Part of E/2 of Sec. 9 T16N R22E Sheet Sheet 2 of 2 Corrd. File Drawing Scale
Sheet 2 of 2 2018006 1" = 100'
Field Book Date of Survey Measurement method
Joh Number Date of last site visit Basis of basis of

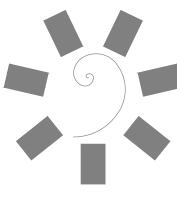
Jan. 25, 2018 Grid North NAD83 2018006

NOTES TO CONTRACTOR

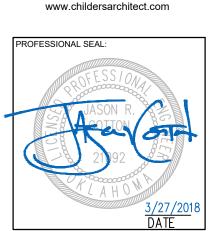
1.1. SURVEY PREPARED BY KROHN SURVEYING, INC OF LONE GROVE, OKLAHOMA (CONTACT INFORMATION ABOVE). SURVEY APPEARS TO HAVE BEEN PREPARED UNDER CONTRACT WITH CHEROKEE NATION OF OKLAHOMA. THE SURVEY WAS PROVIDED BY JAMES R. CHILDERS, ARCHITECT, INC. TO ADG, PC ON JANUARY 31, 2018 AND IS PROVIDED AS A PART OF THIS BID PACKAGE FOR REFERENCE ONLY.

THE UNOFFICIAL REPRODUCTION OF THIS SURVEY AS A PART OF THESE CONSTRUCTION DRAWINGS HAS BEEN INCLUDED AS A COURTESY TO THE CONTRACTOR AND TO AID IN PROPERLY COMPLETING CONSTRUCTION STAKING FOR THE PROJECT. IN THE EVENT THAT AN OFFICIAL BOUNDARY SURVEY IS REQUIRED, THE CONTRACTOR IS ADVISED TO CONTACT KROHN SURVEYING, INC. DIRECTLY.

ADG, PC ASSUMES NO LIABILITY FOR WORK COMPLETED BY KROHN SURVEYING, INC. IN CONJUNCTION WITH THIS PROJECT.



James R. Childers Architect, Inc. 45 South 4th Street Fort Smith, AR 72901 479-783-2480



Oklahoma City, OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018



NTERTAINM ATION EN

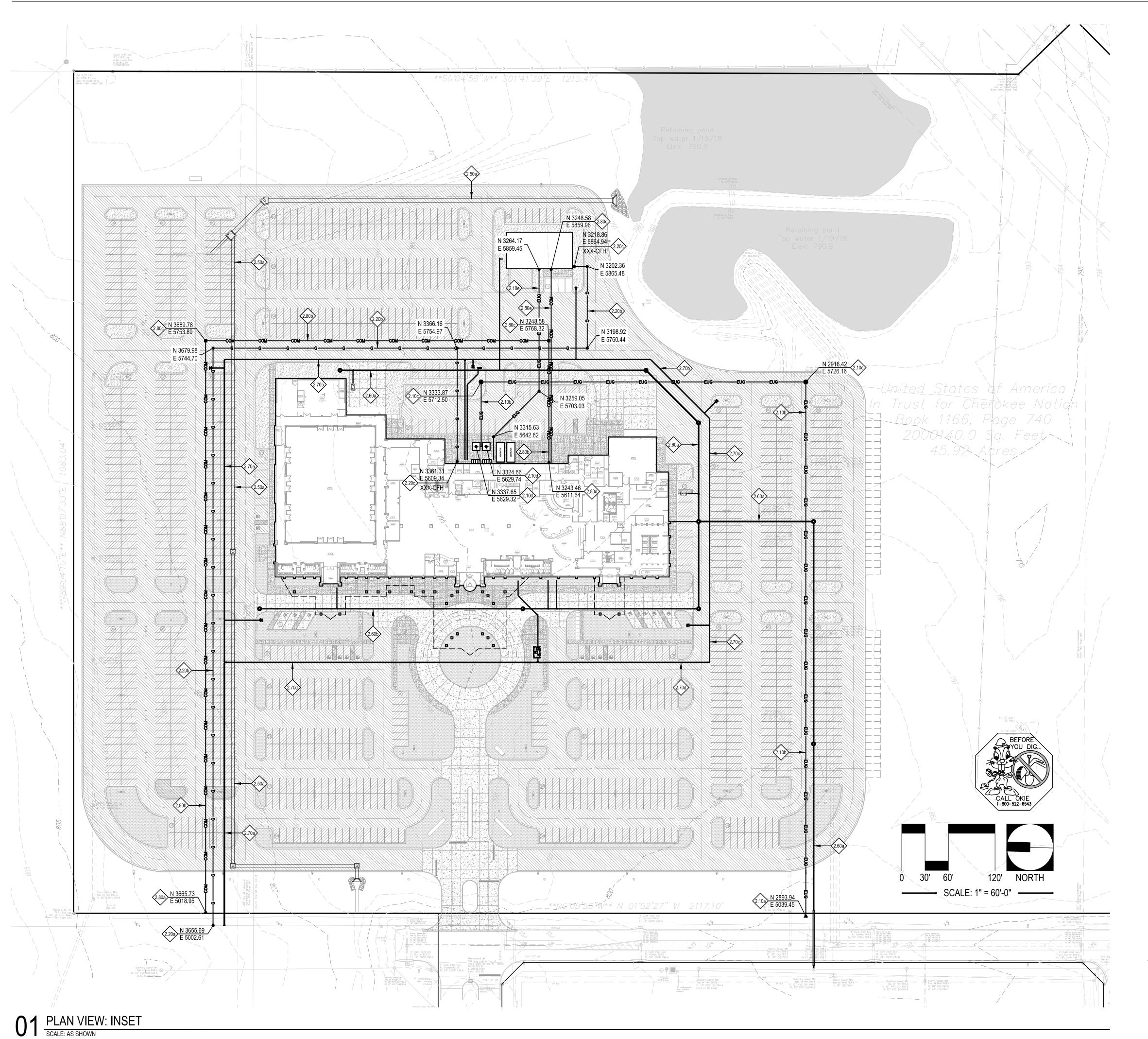
ROKEE TAHL

BID PACKAGE 02 (100% SET)

03/27/18 17-06

C0.03b

PLAT OF TOPOGRAPHIC MAPPING (2 OF 2)



LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.



HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION, EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED AREAS.



PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.



UTIL	ITY PLAN KEYNOTES	
ID	DESCRIPTION	
2.10a	PROPOSED POINT OF ENTRY ONTO PROPERTY FOR PRIMARY ELECTRIC EXTENSION EXTENSION TO BE COMPLETED BY ELECTRICAL SERVICE PROVIDER. CONTRACTOR SHALL COORDINATE WORK IN AREA AS REQUIRED.	
2.10b	PROPOSED LOCATION OF PRIMARY ELECTRICAL EXTENSION. WORK TO BE COMPLETED BY ELECTRICAL SERVICE PROVIDER. CONTRACTOR SHALL COORDINATE WORK IN AREA ACCORDINGLY.	
2.10c	PROPOSED PRIMARY ELECTRICAL VAULT. WORK TO BE COMPLETED BY ELECTRICA SERVICE PROVIDER. CONTRACTOR SHALL COORDINATE WORK IN AREA ACCORDINGLY.	
2.10d	PROPOSED TRANSFORMER PAD PER ELECTRICAL SERVICE PROVIDER REQUIREMENTS. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.	
2.10e	PROPOSED LOCATION OF SECONDARY ELECTRICAL EXTENSION. WORK TO BE COMPLETED BY ELECTRICAL CONTRACTOR. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.	
2.20a	PROPOSED POINT OF ENTRY ONTO PROPERTY FOR GAS SERVICE. EXTENSION TO E COMPLETED BY GAS SERVICE PROVIDER. CONTRACTOR SHALL COORDINATE WORLIN AREA AS REQUIRED.	
2.20b	PROPOSED LOCATION OF GAS SERVICE EXTENSION. WORK TO BE COMPLETED BY GAS SERVICE PROVIDER. CONTRACTOR SHALL COORDINATE WORK IN AREA ACCORDINGLY.	
2.20c	PROPOSED GAS METER LOCATION. METER INSTALLATION SHALL BE PER IFGC AND SHALL BE COMPLETED BY GAS SERVICE PROVIDER. CONTRACTOR SHALL COORDINATE WORK IN AREA. SEE MEP DOCUMENTS FOR CONTINUATION.	
2.500	STORM SEWER LINE A (BID PACKAGE 01) - NOT IN CONTRACT. SEE BID PACKAGE 01	

SANITARY SEWER LINE B. SEE SANITARY SEWER INDEX, SHEET C6.02b, FOR ADDITIONAL DETAIL AND INFORMATION. WATER LINE A. SEE WATER INDEX, SHEET C7.02b, FOR ADDITIONAL DETAIL AND

SANITARY SEWER LINE A. SEE SANITARY SEWER INDEX, SHEET C6.02b, FOR

DOCUMENTS FOR ADDITIONAL DETAIL AND INFORMATION.

ADDITIONAL DETAIL AND INFORMATION.

WATER LINE B. SEE WATER INDEX, SHEET C7.02b, FOR ADDITIONAL DETAIL AND WATER LINE C. SEE WATER INDEX, SHEET C7.02b, FOR ADDITIONAL DETAIL AND

WATER LINE D. SEE WATER INDEX, SHEET C7.02b, FOR ADDITIONAL DETAIL AND

PROPOSED POINT OF ENTRY ONTO PROPERTY FOR TELECOMM. SERVICE. EXTENSION TO BE COMPLETED BY TELECOMM. SERVICE PROVIDER(S). CONTRACTOR SHALL COORDINATE WORK IN AREA AS REQUIRED. PROPOSED TELECOMM. SERVICE EXTENSION. INSTALL THREE (3) 4-IN SCH40 PVC CONDUITS @ 30-IN BELOW FINAL PAVING SUBGRADE. CONTRACTOR TO PROVIDE

1/8-IN PULL-STRING IN EACH CONDUIT FOR LATER SERVICE EXTENSION BY SERVICE PROPOSED TELECOMM. PULL BOX PER SERVICE PROVIDER REQUIREMENTS. CONTRACTOR TO PROCURE AND INSTALL PULL-BOX. TOP OF PULL-BOX SHALL BE

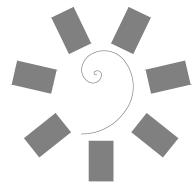
FLUSH WITH FINAL FINISHED GRADE IN AREA. END TELECOMM. SERVICE EXTENSION. SEE MEP/IT DOCUMENTS FOR CONTINUATION

PROPOSED TELECOMM. SERVICE EXTENSION. INSTALL TWO (2) 4-IN SCH40 PVC CONDUITS @ 30-IN BELOW FINAL PAVING SUBGRADE. CONTRACTOR TO PROVIDE 1/8-IN PULL-STRING IN EACH CONDUIT FOR LATER SERVICE EXTENSION BY SERVICE PROVIDER(S).

NOTE TO CONTRACTOR: COORDINATE DATA HAS BEEN TRUNCATED FOR CLARITY. STATE PLANE COORDINATES MAY BE OBTAINED BY ADDING 330,000 TO ALL PROVIDED NORTHINGS. AND 2,860,000 TO ALL PROVIDED EASTINGS.

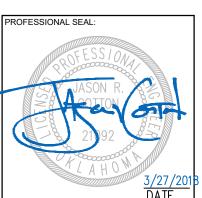
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc.

45 South 4th Street Fort Smith, AR 72901 479-783-2480 www.childersarchitect.com



Oklahoma City,OK 73106

P 405.232.5700

W www.adgokc.com

CA 6447, exp. 06.30.2018



ROKEE NATION ENTERTAINN TAHLEQUAH CASINO

BID PACKAGE 02 (100% SET)

03/27/18 17-06

C2.02b

UTILITY PLAN INDEX

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.



HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



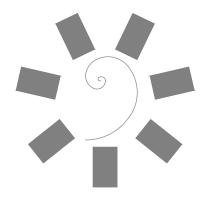
REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED AREAS.



PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.



James R. Childers Architect, Inc. 45 South 4th Street Fort Smith, AR 72901

479-783-2480 www.childersarchitect.com





P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018



EROKEE NATION ENTERTAINM TAHLEQUAH CASINO

BID PACKAGE 02 (100% SET)

03/27/18 17-06

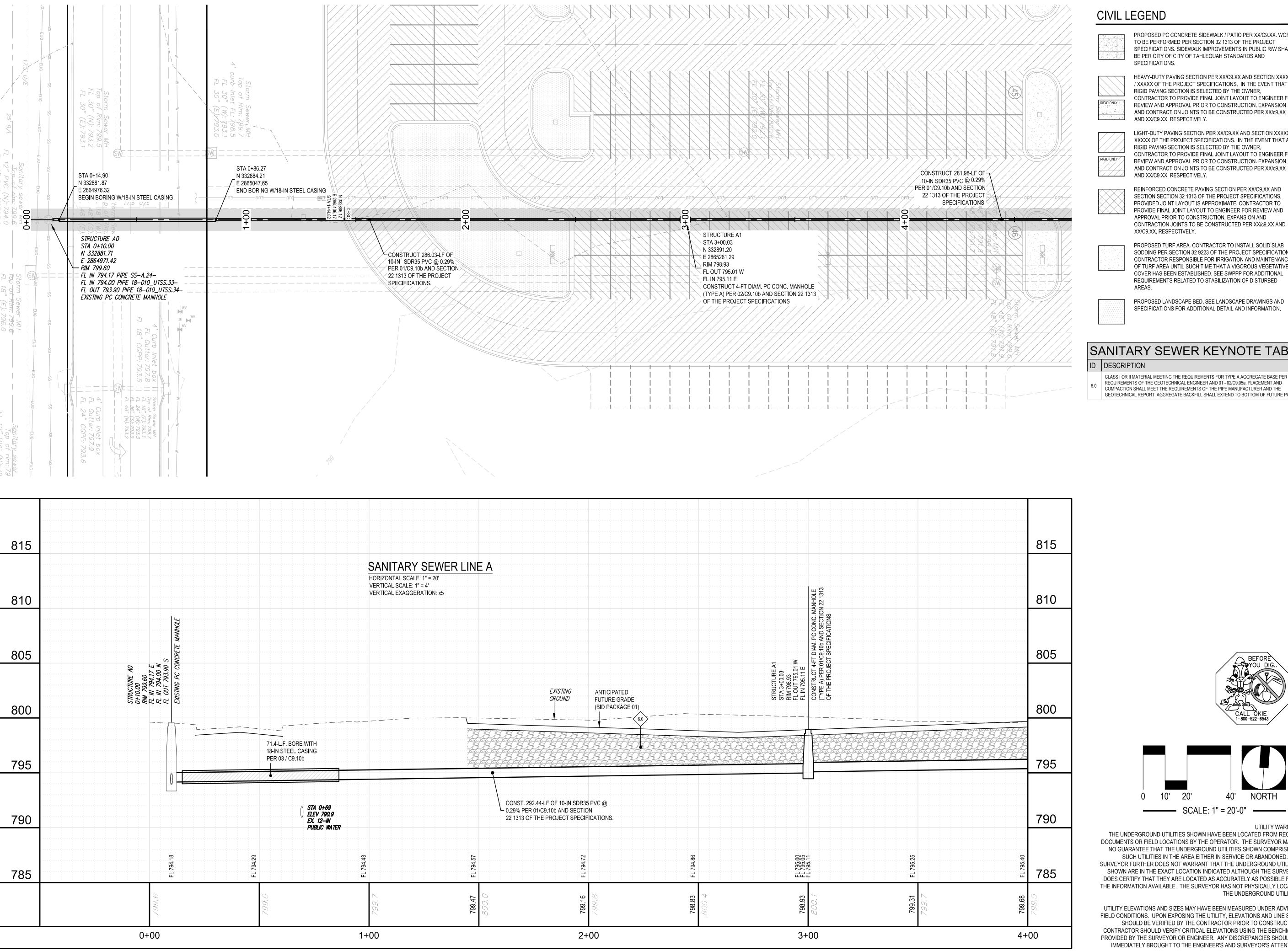
C6.02b

SANITARY SEWER INDEX

120' NORTH ----- SCALE: 1" = 60'-0" -----

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



3/8" =1'-0

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

> HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

> LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

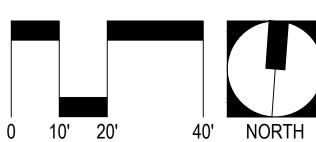
SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED

PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

SANITARY SEWER KEYNOTE TABLE

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.

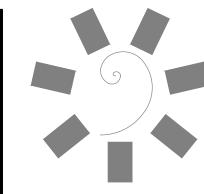




SCALE: 1" = 20'-0"

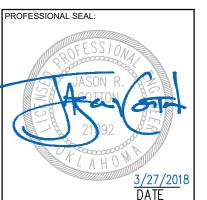
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc. 45 South 4th Street

Fort Smith, AR 72901 479-783-2480 www.childers architect.com



Oklahoma City,OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018



CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

BID PACKAGE 02

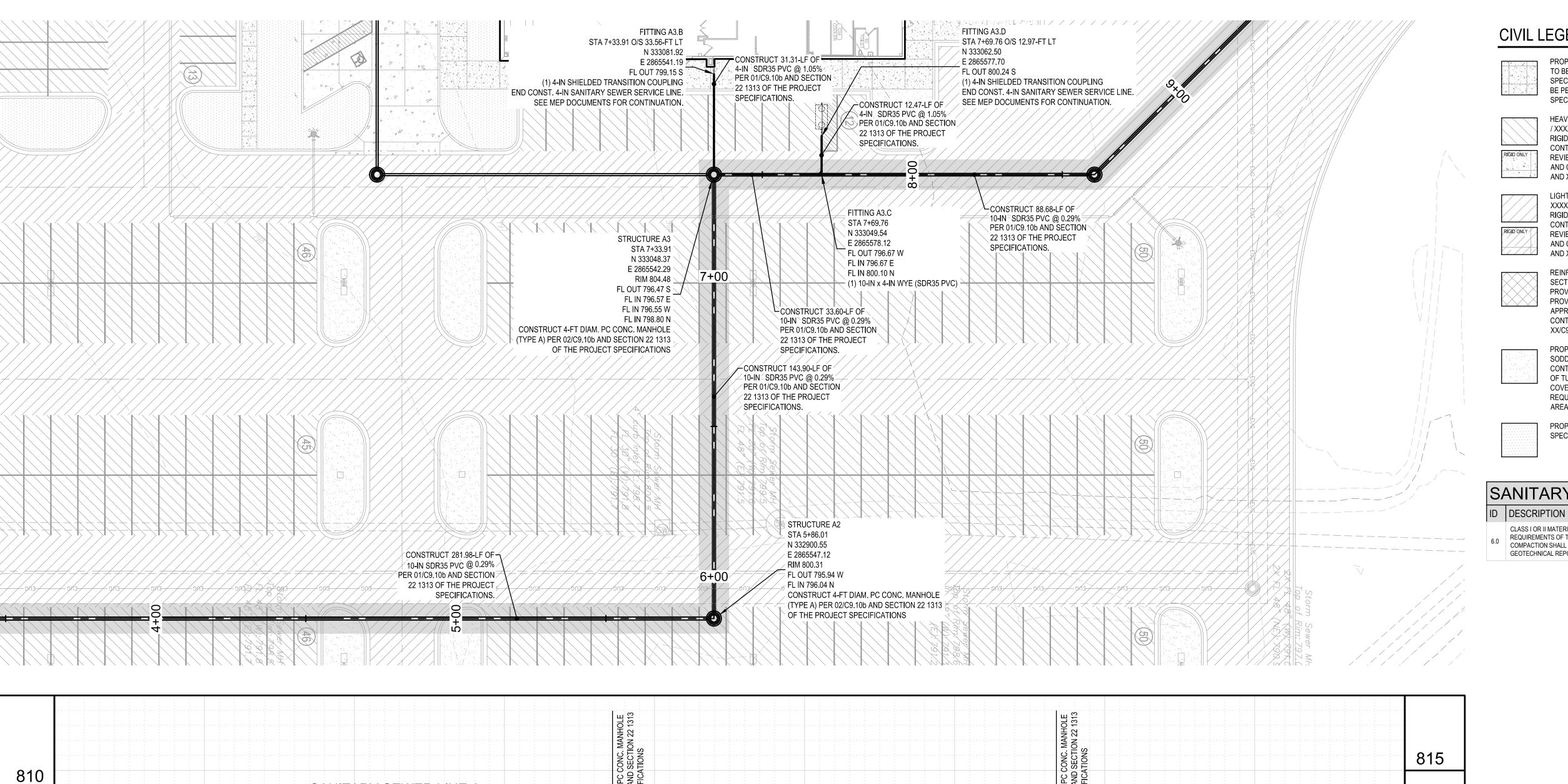
R	EVISIONS
DATE	DESCRIPTION

(100% SET)

03/27/18 17-06

C6.05b

SANITARY SEWER PLAN AND PROFILE LINE A



STA 6+16 ELEV 791.4 EXISTING 30-IN

STORM SEWER

FL 795.93 FL 796.05

6+00

SANITARY SEWER LINE A

HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1" = 4' VERTICAL EXAGGERATION: x5

5+00

ANTICIPATED FUTURE GRADE (BID PACKAGE 01)

CONST. 283.57-LF OF 10-IN SDR35 PVC @

22 1313 OF THE PROJECT SPECIFICATIONS.

- 0.29% PER 01/C9.10b AND SECTION

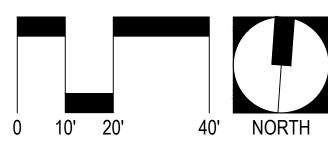
EXISTING GROUND

805

795

4+00

3/8" =1'-0



SCALE: 1" = 20'-0"

DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.

CIVIL LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX, WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

> LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED

PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

SANITARY SEWER KEYNOTE TABLE

810

800

795

790

785

FITTING A3.C STA 7+69.76 FL OUT 796.67 FL IN 796.67 E FL IN 800.10 N

CONST. 35.85-LF OF 10-IN SDR35 PVC @

22 1313 OF THE PROJECT SPECIFICATIONS.

8+00

0.29% PER 01/C9.10b AND SECTION

STA 7+19.91 ELEV 799.25 ↓ PROP. 8-IN, WATERLINE

FL 796.46 FL 796.58

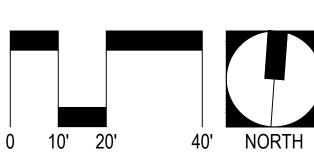
CONST. 147.90-LF OF 10-IN SDR35 PVC @

22 1313 OF THE PROJECT SPECIFICATIONS.

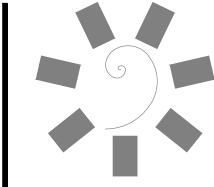
7+00

└ 0.29% PER 01/C9.10b AND SECTION

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.



THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR



James R. Childers Architect, Inc. 45 South 4th Street

Fort Smith, AR 72901 479-783-2480 www.childers architect.com

PROFESSIONAL SEAL:

Oklahoma City, OK 73106 P 405.232.5700 W www.adgokc.com

CA 6447, exp. 06.30.2018

CHEROKEE NATION Entertainment

CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

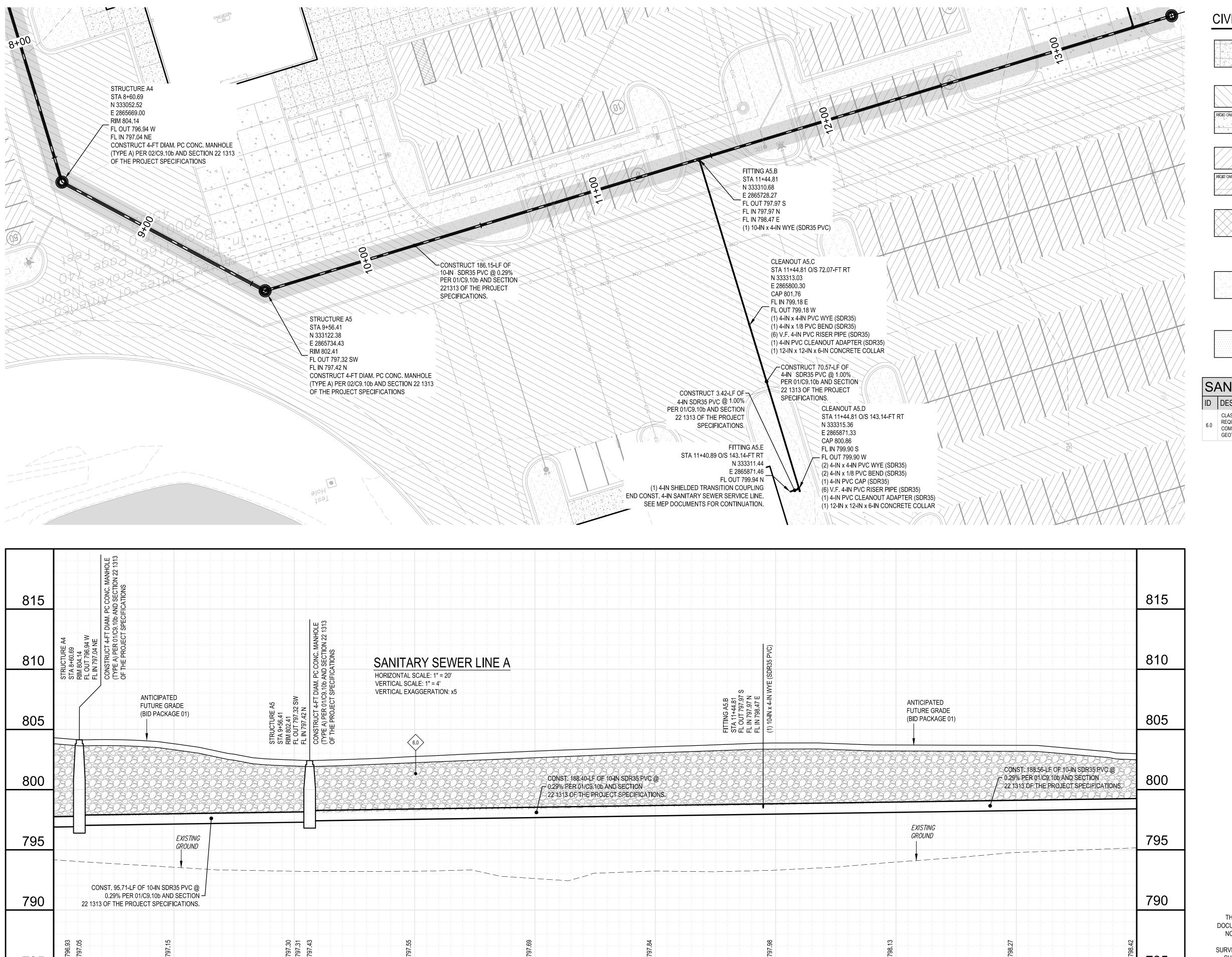
BID PACKAGE 02 (100% SET)

	R	REVISIONS
#	DATE	DESCRIPTION

03/27/18 17-06

C6.10b

SANITARY SEWER PLAN AND PROFILE LINE A (CONT)



11+00

12+00

3/8" =1'-0

785

그 그

9+00

10+00

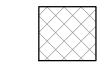
CIVIL LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX, WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9,XX AND XX/C9.XX, RESPECTIVELY.



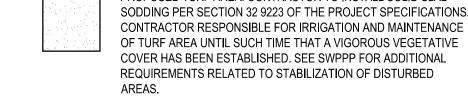
LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB

SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS.



REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED



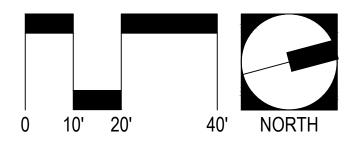
PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

SANITARY SEWER KEYNOTE TABLE

ID DESCRIPTION

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.



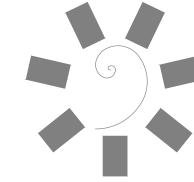


SCALE: 1" = 20'-0"

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.

13+00



James R. Childers Architect, Inc. 45 South 4th Street

Fort Smith, AR 72901 479-783-2480 www.childers architect.com

PROFESSIONAL SEAL:

CONSULTANT LOGO:

Oklahoma City,OK 73106 P 405.232.5700 W www.adgokc.com

CA 6447, exp. 06.30.2018

CHEROKEE NATION Entertainment

CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

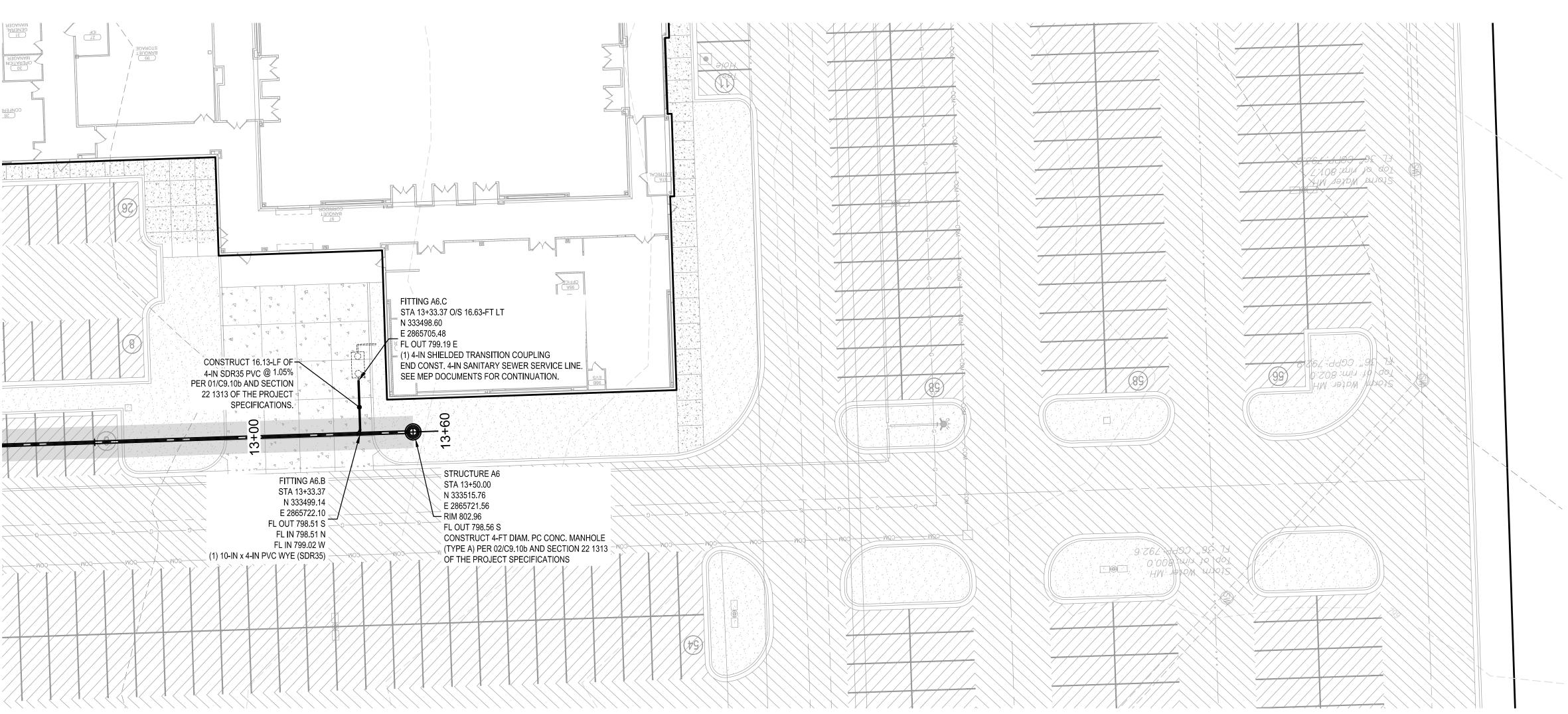
BID PACKAGE 02 (100% SET)

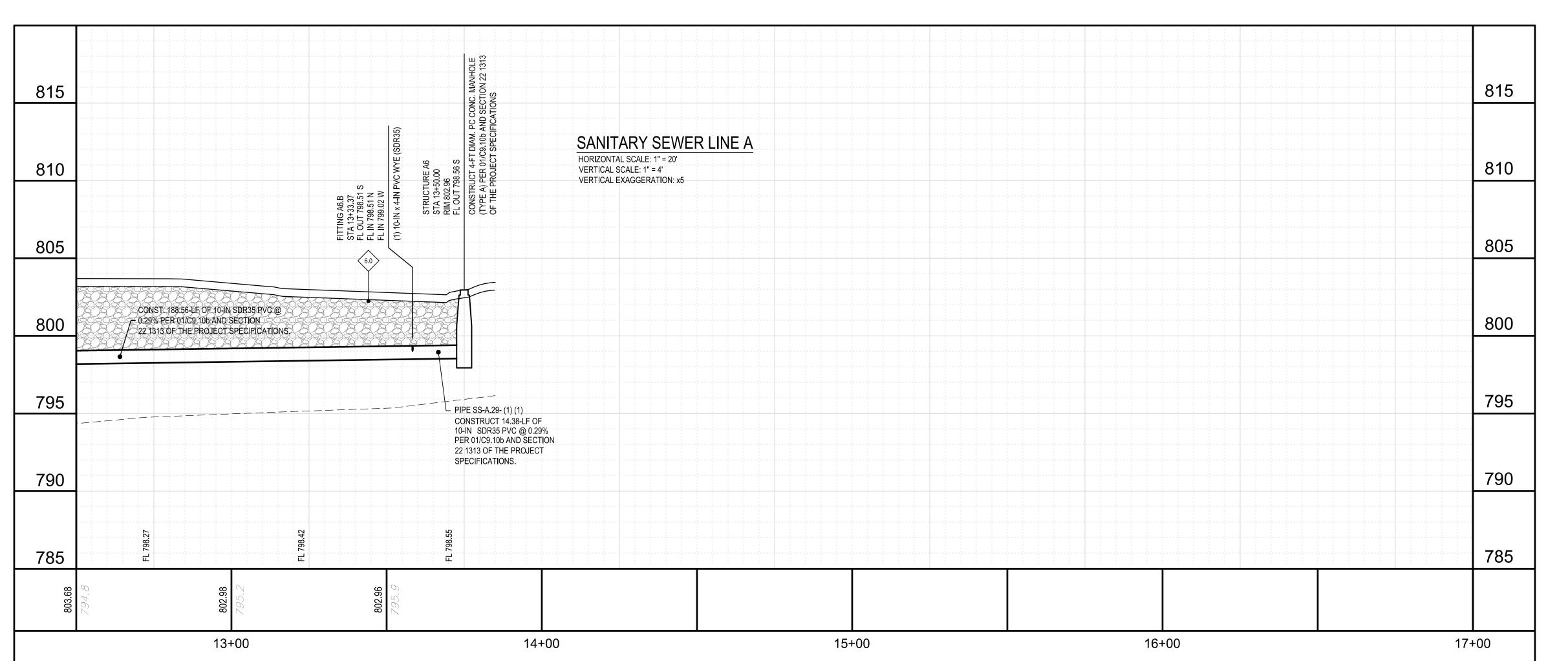
	R	REVISIONS
#	DATE	DESCRIPTION

03/27/18 17-06

C6.15b

SANITARY SEWER PLAN AND PROFILE LINE A (CONT)





3/8" =1'-0'

CIVIL LEGEND

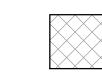
PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

RIGID ONLY

HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX. RESPECTIVELY.



LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED AREAS.



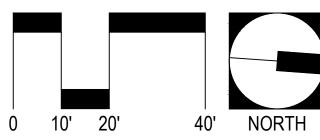
PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

SANITARY SEWER KEYNOTE TABLE

ID DESCRIPTION

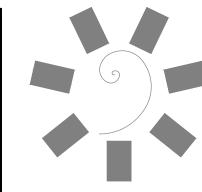
6.0 CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.





THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc.

45 South 4th Street

Fort Smith, AR 72901 479-783-2480 www.childersarchitect.com



CONSULTANT LOGO:

920 West Main
Oklahoma City, OK 73106
P 405.232.5700
W www.adgokc.com
CA 6447, exp. 06.30.2018

CHEROKEE NATION Entertainment

STAINMENT SINO

CHEROKEE NATION ENTERTAINM

TAHLEQUAH, OKLAHOMA

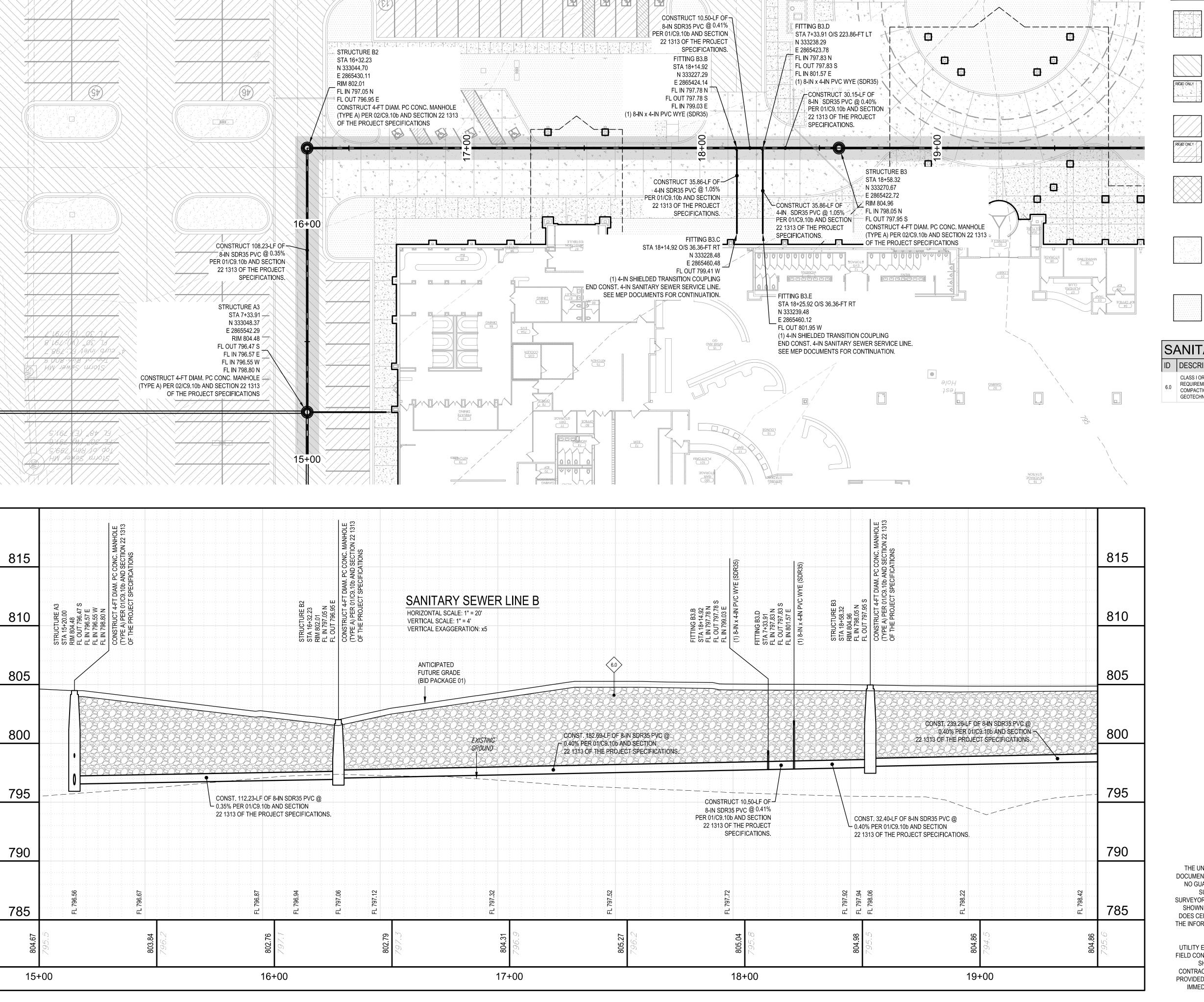
DJECT PHASE:
BID PACKAGE 02
(100% SET)

	REVISIONS				
#	DATE	DESCRIPTION			

DATE: JOB NUMBER: 17-06

C6.20b

SANITARY SEWER PLAN AND PROFILE -LINE A (CONT)



3/8" =1'-0

1/8" = 1'-0"

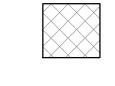
CIVIL LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9,XX AND XX/C9.XX. RESPECTIVELY.



LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED

PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB



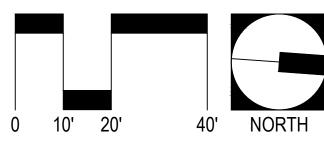
PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

SANITARY SEWER KEYNOTE TABLE

ID DESCRIPTION

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.

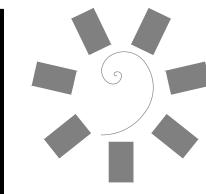




SCALE: 1" = 20'-0"

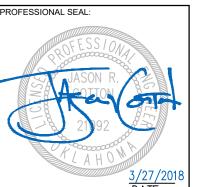
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc. 45 South 4th Street

Fort Smith, AR 72901 479-783-2480 www.childers architect.com



CONSULTANT LOGO

Oklahoma City, OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018

CHEROKEE NATION
Entertainment

CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

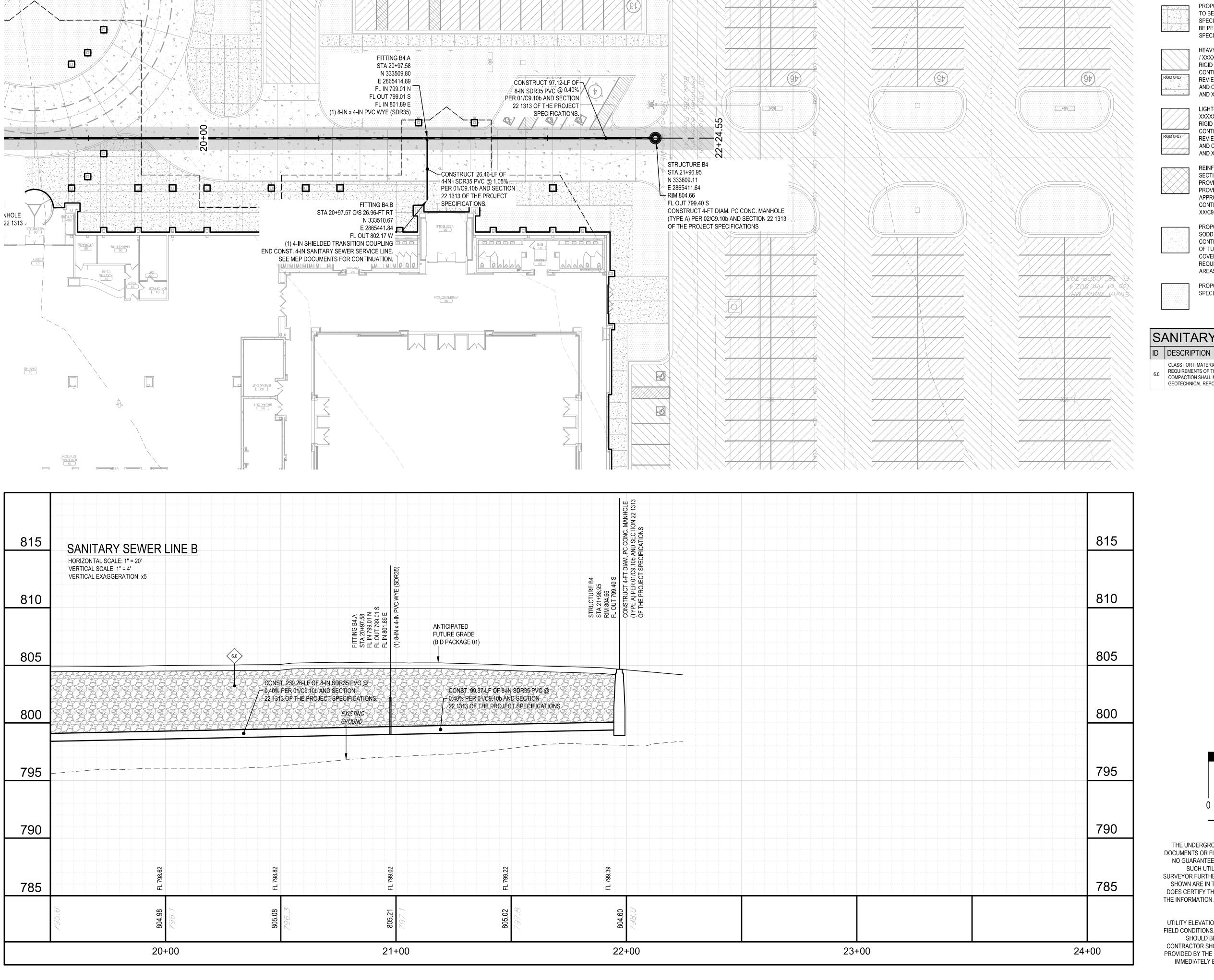
BID PACKAGE 02 (100% SET)

R	REVISIONS
DATE	DESCRIPTION

03/27/18 17-06

C6.25b

SANITARY SEWER PLAN AND PROFILE LINE B



3/8" =1'-0'

CIVIL LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX. RESPECTIVELY.

LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

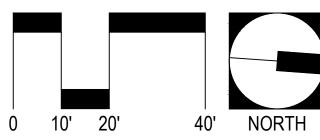
PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED

PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

SANITARY SEWER KEYNOTE TABLE

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.

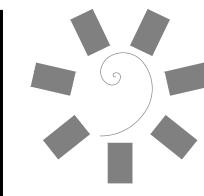




SCALE: 1" = 20'-0"

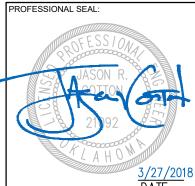
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc. 45 South 4th Street

Fort Smith, AR 72901 479-783-2480 www.childers architect.com



CONSULTANT LOGO:

Oklahoma City,OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018



CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

BID PACKAGE 02

	R	REVISIONS
#	DATE	DESCRIPTION

(100% SET)

03/27/18 17-06

SANITARY SEWER

PLAN AND PROFILE

LINE B (CONT)

C6.30b

LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.



HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9,XX, RESPECTIVELY,



LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



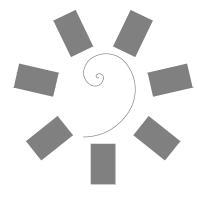
REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED AREAS.



PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.



James R. Childers Architect, Inc. 45 South 4th Street Fort Smith, AR 72901

479-783-2480

www.childersarchitect.com PROFESSIONAL SEAL:

Oklahoma City,OK 73106

P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018

CHEROKEE NATION
Entertainment

NTERTAINM EROKEE NATION E
TAHLEQUAH

BID PACKAGE 02 (100% SET)

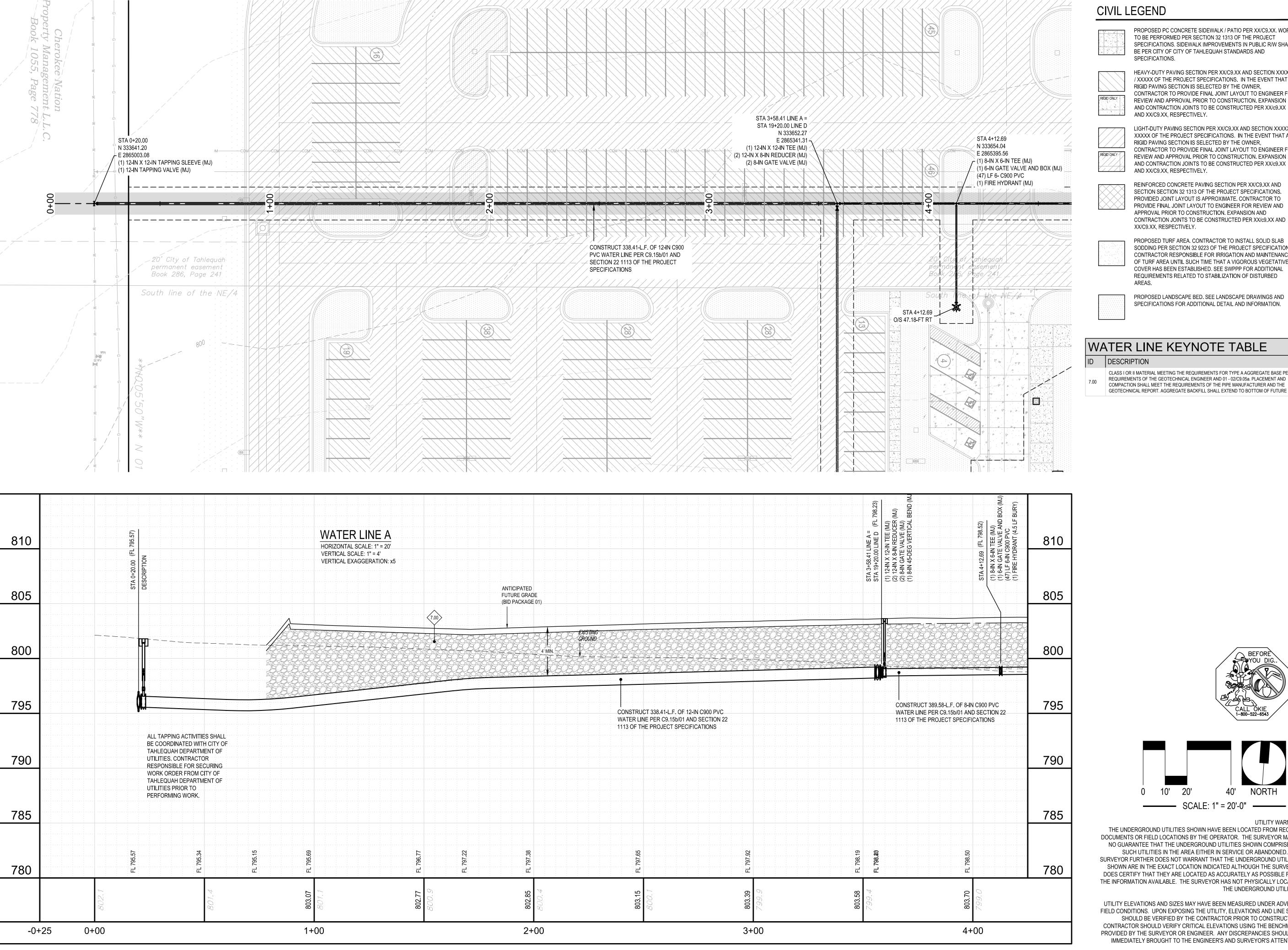
03/27/18 17-06

C7.02b WATER INDEX

120' NORTH ---- SCALE: 1" = 60'-0" -----

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



1/4" =1'-0"

1/8" =1'-0"

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

> HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9,XX AND XX/C9.XX, RESPECTIVELY.

LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

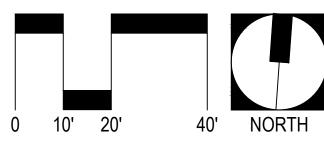
SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED

PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

WATER LINE KEYNOTE TABLE

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.

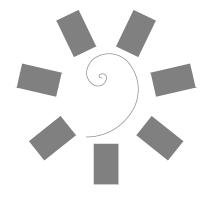




SCALE: 1" = 20'-0"

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc. 45 South 4th Street

Fort Smith, AR 72901 479-783-2480 www.childers architect.com

PROFESSIONAL SEAL:

Oklahoma City,OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018

CHEROKEE NATION Entertainment

CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

BID PACKAGE 02 (100% SET)

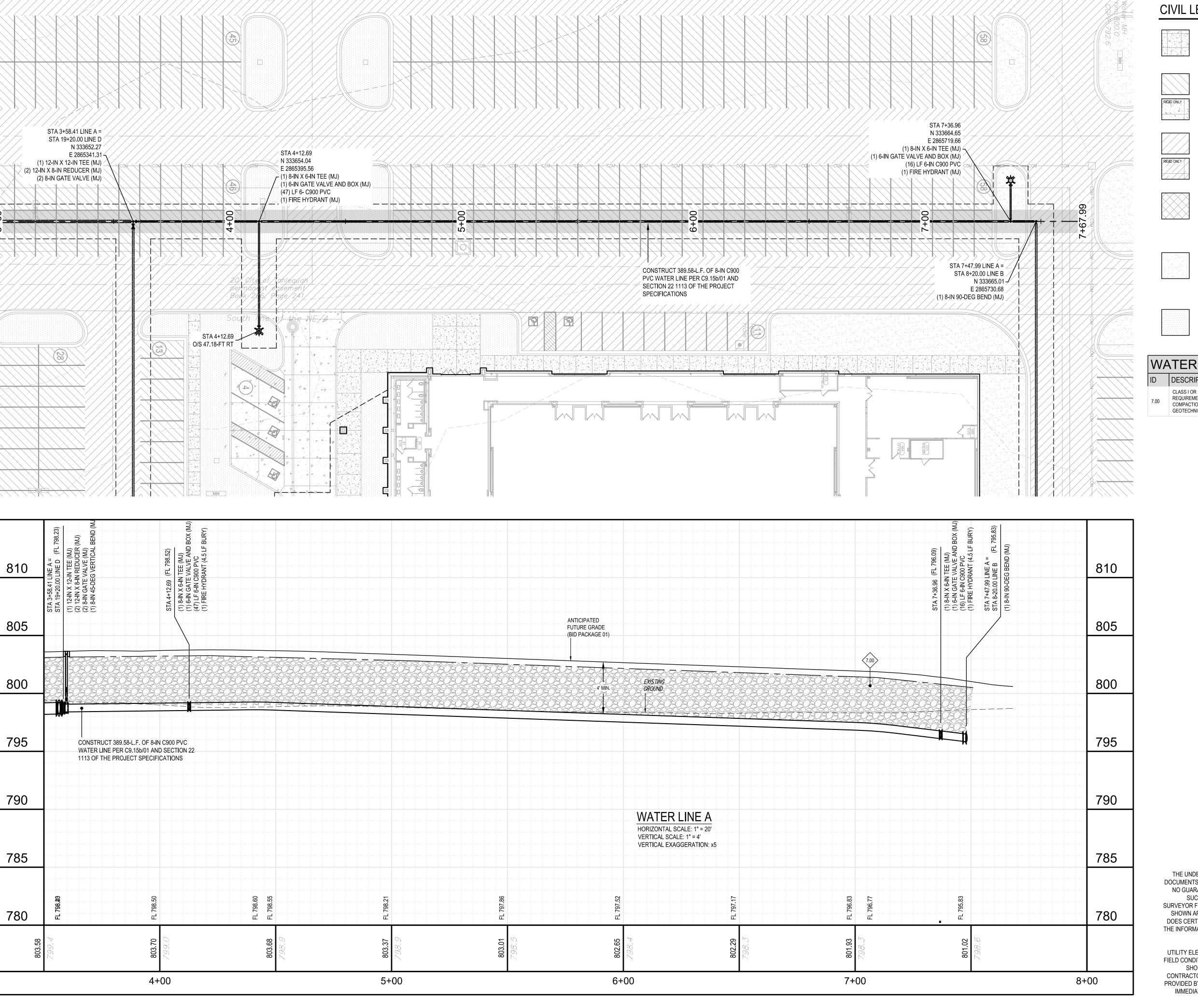
	R	REVISIONS
#	DATE	DESCRIPTION

03/27/18 17-06

C7.05b

WATER LINE PLAN AND PROFILE -

LINE A



1/4" =1:0"

1/8" =1'-0"

CIVIL LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX. RESPECTIVELY.

LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED

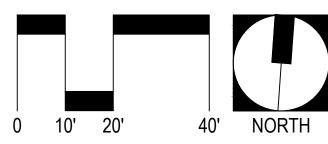
PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

WATER LINE KEYNOTE TABLE

DESCRIPTION

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.

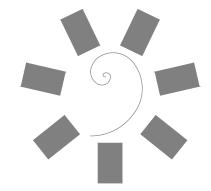




SCALE: 1" = 20'-0"

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc.

45 South 4th Street Fort Smith, AR 72901 479-783-2480 www.childersarchitect.com

PROFESSIONAL SEAL:

CONSULTANT LOGO:

Oklahoma City, OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018

CHEROKEE NATION Entertainment

CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

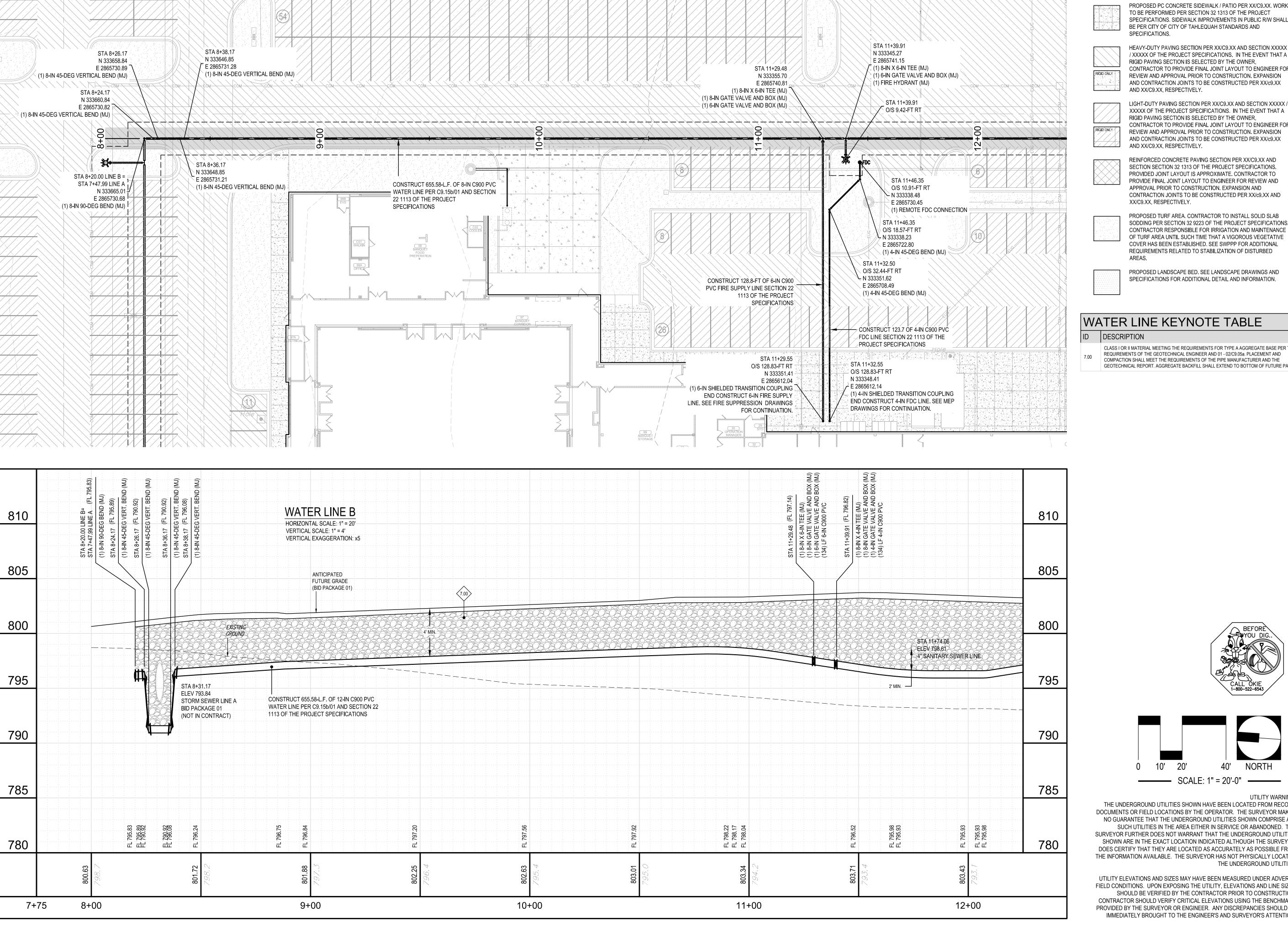
BID PACKAGE 02 (100% SET)

	R	REVISIONS
#	DATE	DESCRIPTION

03/27/18 17-06

C7.10b

WATER LINE PLAN AND PROFILE -LINE A (CONT)



1/4" =1:0"

1/8" =1'-0"

CIVIL LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX, WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9,XX AND XX/C9.XX, RESPECTIVELY.

LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED

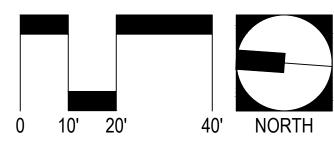
PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

WATER LINE KEYNOTE TABLE

DESCRIPTION

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.

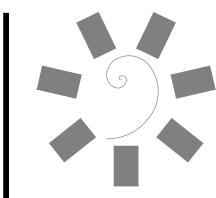




SCALE: 1" = 20'-0"

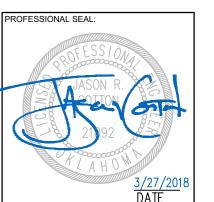
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc. 45 South 4th Street

Fort Smith, AR 72901 479-783-2480 www.childers architect.com



Oklahoma City, OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018

CHEROKEE NATION
Entertainment

CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

BID PACKAGE 02 (100% SET)

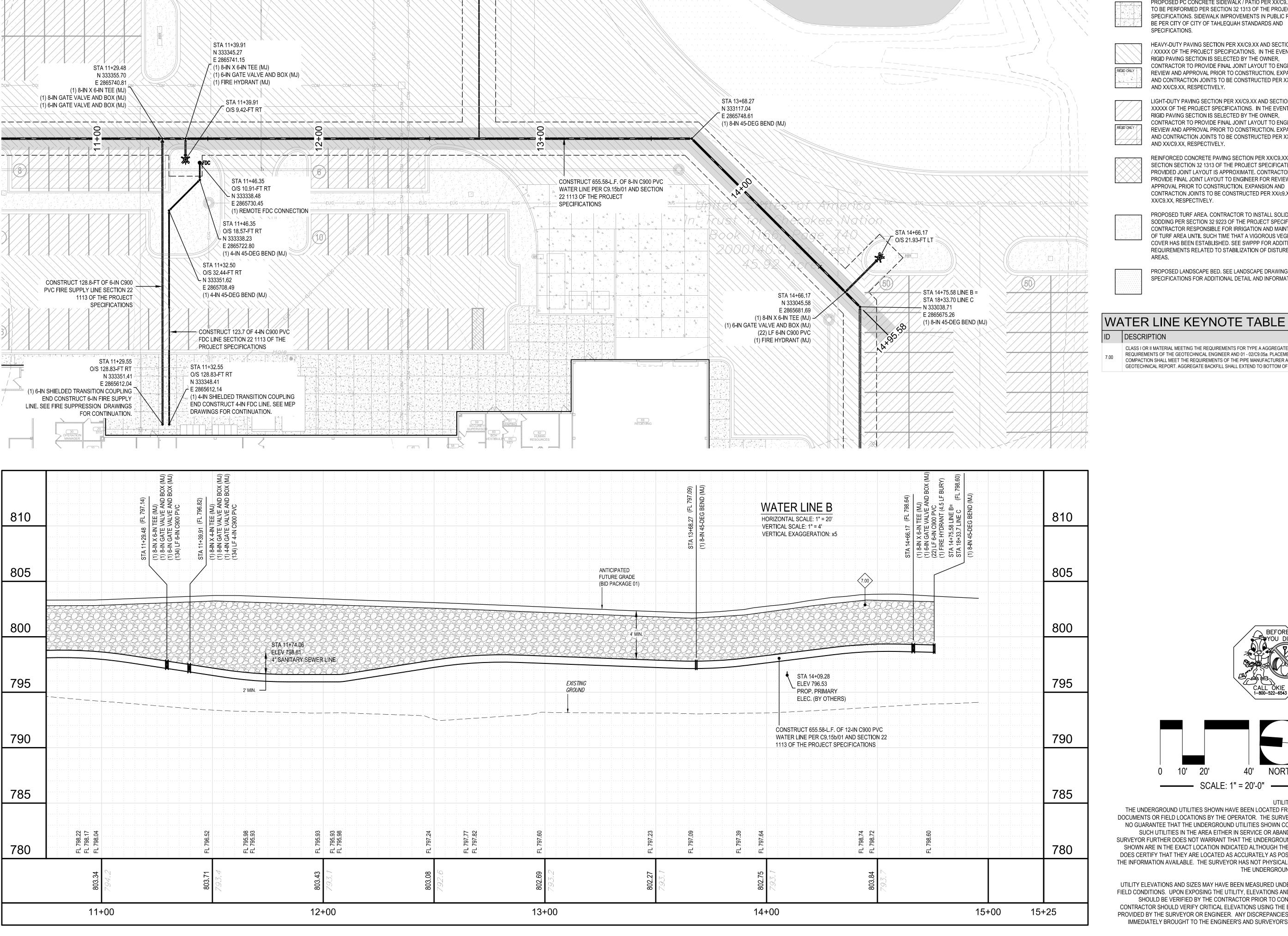
	REVISIONS			
#	DATE	DESCRIPTION		

03/27/18 17-06

C7.15b

WATER LINE PLAN AND PROFILE -

LINE B



1/4"=1-0"

1/8" =1'-0"

CIVIL LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX, WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.



LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB

PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND

SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

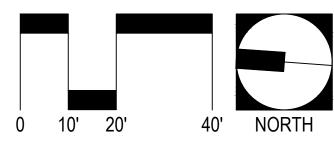
SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED



DESCRIPTION

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.

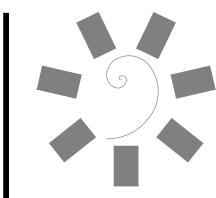




SCALE: 1" = 20'-0"

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc.

45 South 4th Street Fort Smith, AR 72901 479-783-2480 www.childers architect.com



Oklahoma City, OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018



CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

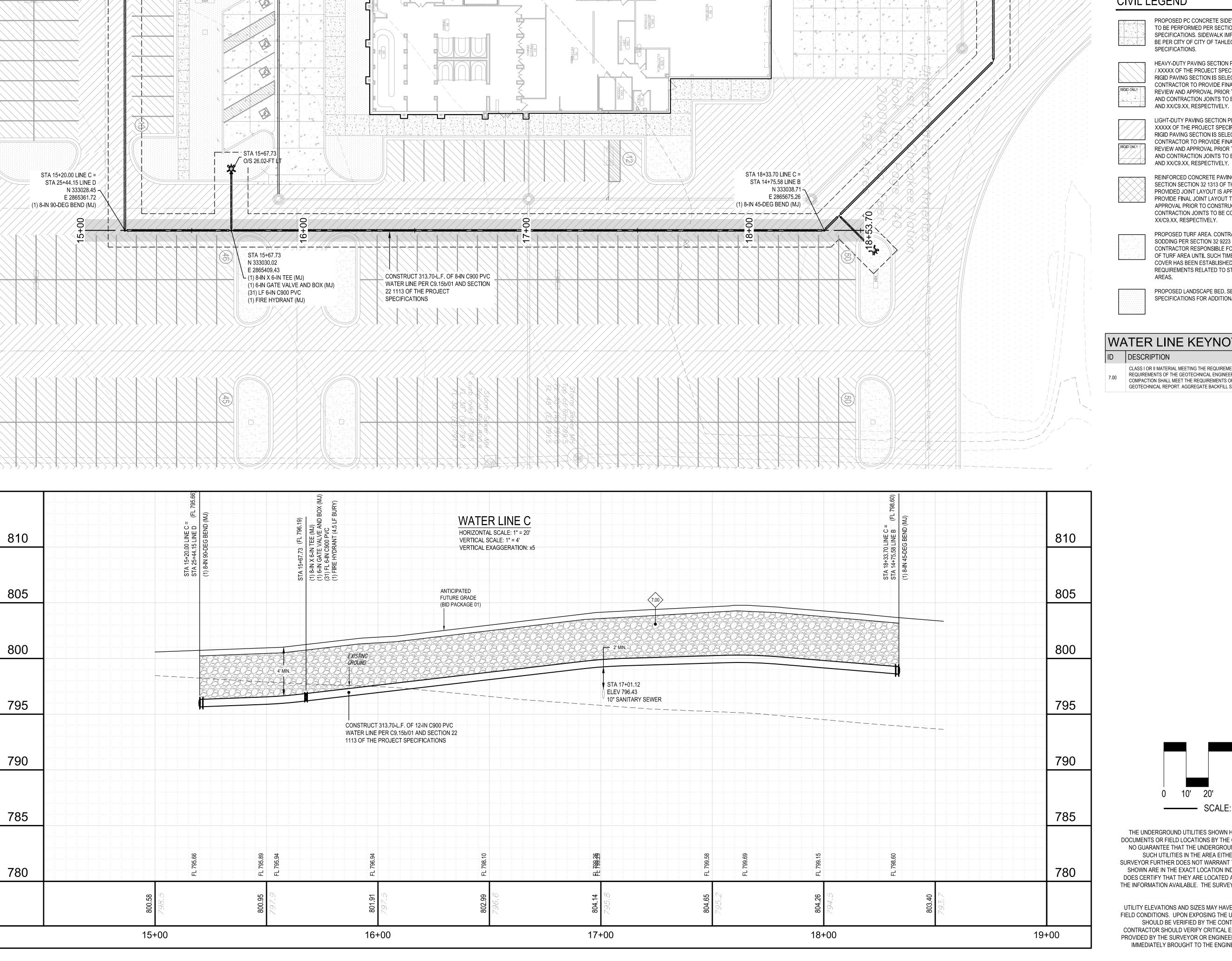
BID PACKAGE 02 (100% SET)

	REVISIONS								
#	DATE DESCRIPTION								

03/27/18 17-06

C7.20b

WATER LINE PLAN AND PROFILE -LINE B (CONT)



1/4" =1:0"

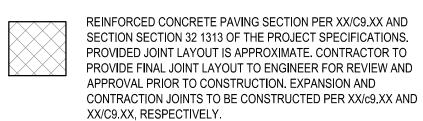
1/8" =1'-0"

CIVIL LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX. RESPECTIVELY.

LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX



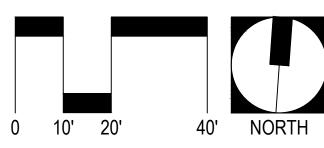
PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED

PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

WATER LINE KEYNOTE TABLE

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.

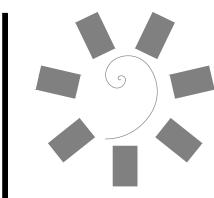




SCALE: 1" = 20'-0"

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc.

45 South 4th Street Fort Smith, AR 72901 479-783-2480 www.childersarchitect.com



CONSULTANT LOGO:

Oklahoma City,OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018

CHEROKEE NATION Entertainment

CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

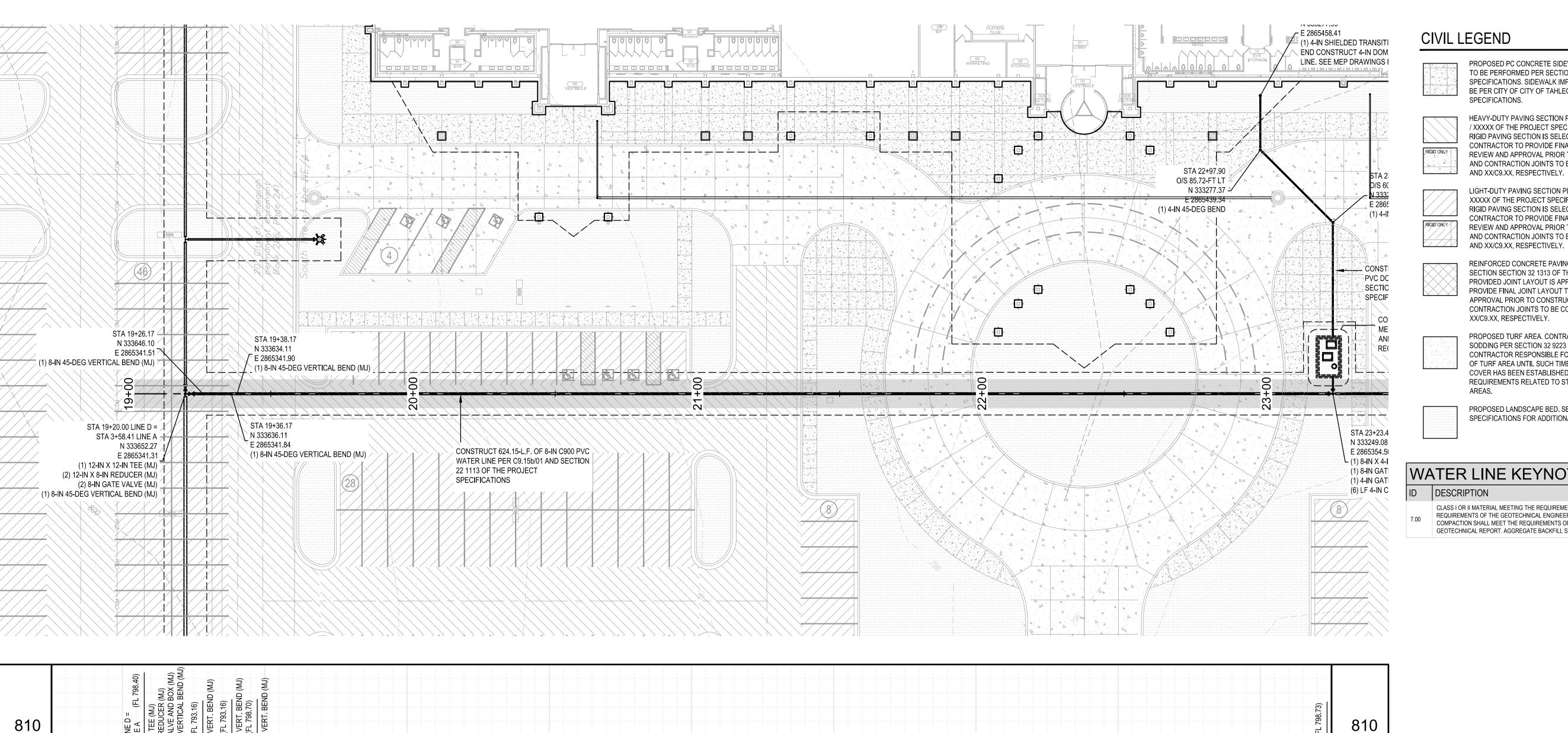
BID PACKAGE 02 (100% SET)

R	REVISIONS
DATE	DESCRIPTION

03/27/18 17-06

C7.25b

WATER LINE PLAN AND PROFILE -LINE C



WATER LINE D

HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1" = 4' VERTICAL EXAGGERATION: x5

21+00

798.90 798.90

급급

22+00

ANTICIPATED FUTURE GRADE (BID PACKAGE 01)

교

EXISTING GROUND

CONSTRUCT 624.15-L.F. OF 12-IN C900 PVC

20+00

1113 OF THE PROJECT SPECIFICATIONS

WATER LINE PER C9.15b/01 AND SECTION 22

STA 19+31.17 ELEV 796.08

41

798.40 798.48

793.16

STORM SEWER LINE A

(NOT IN CONTRACT)

BID PACKAGE 01

805

795

790

785

18+75

19+00

3/8" =1'-0'

1/4" = 1'-0"

1/8" =1'-0"

CIVIL LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX. WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

> HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9,XX

> LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED

PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

WATER LINE KEYNOTE TABLE

805

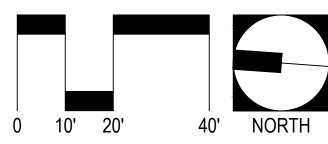
790

785

23+00

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.

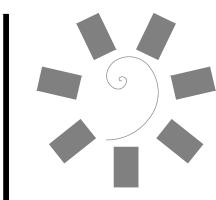




SCALE: 1" = 20'-0"

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc. 45 South 4th Street

Fort Smith, AR 72901 479-783-2480 www.childers architect.com

PROFESSIONAL SEAL:

Oklahoma City,OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018

CHEROKEE NATION Entertainment

CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

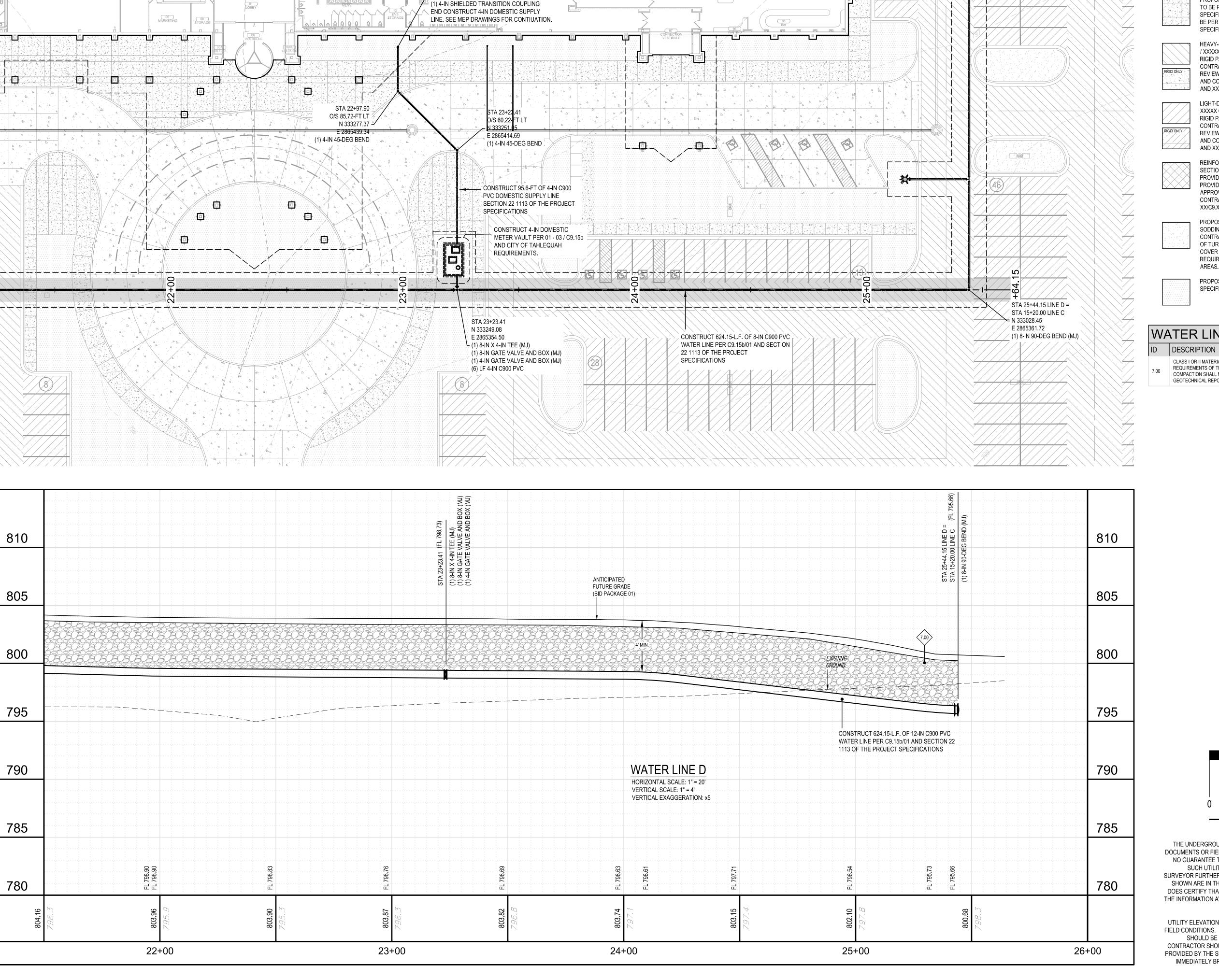
BID PACKAGE 02 (100% SET)

	REVISIONS						
# DATE DESCRIPTION							

03/27/18 17-06

C7.30b WATER LINE PLAN AND PROFILE -

LINE D



STA 22+97.90 O/S 104.80-FT LT

N 333277.99 E 2865458.41

3/8" =1'-0'

1/4" =1:0"

1/8" =1'-0"

CIVIL LEGEND

PROPOSED PC CONCRETE SIDEWALK / PATIO PER XX/C9.XX, WORK TO BE PERFORMED PER SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. SIDEWALK IMPROVEMENTS IN PUBLIC R/W SHALL BE PER CITY OF CITY OF TAHLEQUAH STANDARDS AND SPECIFICATIONS.

HEAVY-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9,XX AND XX/C9.XX, RESPECTIVELY.

LIGHT-DUTY PAVING SECTION PER XX/C9.XX AND SECTION XXXXX / XXXXX OF THE PROJECT SPECIFICATIONS. IN THE EVENT THAT A RIGID PAVING SECTION IS SELECTED BY THE OWNER, CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

REINFORCED CONCRETE PAVING SECTION PER XX/C9.XX AND SECTION SECTION 32 1313 OF THE PROJECT SPECIFICATIONS. PROVIDED JOINT LAYOUT IS APPROXIMATE. CONTRACTOR TO PROVIDE FINAL JOINT LAYOUT TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. EXPANSION AND CONTRACTION JOINTS TO BE CONSTRUCTED PER XX/c9.XX AND XX/C9.XX, RESPECTIVELY.

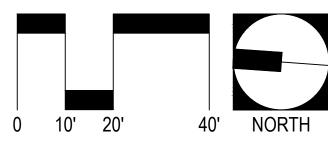
PROPOSED TURF AREA. CONTRACTOR TO INSTALL SOLID SLAB SODDING PER SECTION 32 9223 OF THE PROJECT SPECIFICATIONS. CONTRACTOR RESPONSIBLE FOR IRRIGATION AND MAINTENANCE OF TURF AREA UNTIL SUCH TIME THAT A VIGOROUS VEGETATIVE COVER HAS BEEN ESTABLISHED. SEE SWPPP FOR ADDITIONAL REQUIREMENTS RELATED TO STABILIZATION OF DISTURBED

PROPOSED LANDSCAPE BED. SEE LANDSCAPE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DETAIL AND INFORMATION.

WATER LINE KEYNOTE TABLE

CLASS I OR II MATERIAL MEETING THE REQUIREMENTS FOR TYPE A AGGREGATE BASE PER THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER AND 01 - 02/C9.05a. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF THE PIPE MANUFACTURER AND THE GEOTECHNICAL REPORT. AGGREGATE BACKFILL SHALL EXTEND TO BOTTOM OF FUTURE PAVING.

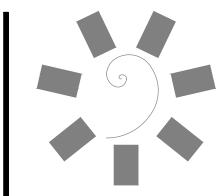




SCALE: 1" = 20'-0"

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM RECORD DOCUMENTS OR FIELD LOCATIONS BY THE OPERATOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ELEVATIONS AND SIZES MAY HAVE BEEN MEASURED UNDER ADVERSE FIELD CONDITIONS. UPON EXPOSING THE UTILITY, ELEVATIONS AND LINE SIZES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION CONTRACTOR SHOULD VERIFY CRITICAL ELEVATIONS USING THE BENCHMARK PROVIDED BY THE SURVEYOR OR ENGINEER. ANY DISCREPANCIES SHOULD BE IMMEDIATELY BROUGHT TO THE ENGINEER'S AND SURVEYOR'S ATTENTION.



James R. Childers Architect, Inc. 45 South 4th Street

Fort Smith, AR 72901 479-783-2480 www.childers architect.com





W www.adgokc.com CA 6447, exp. 06.30.2018

CHEROKEE NATION Entertainment

CHEROKEE NATION ENTERTAINM TAHLEQUAH CASINO

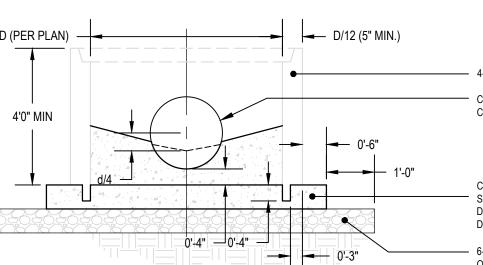
BID PACKAGE 02 (100% SET)

	REVISIONS						
# DATE DESCRIPTION							

03/27/18 17-06

C7.35b

WATER LINE PLAN AND PROFILE -LINE D (CONT)

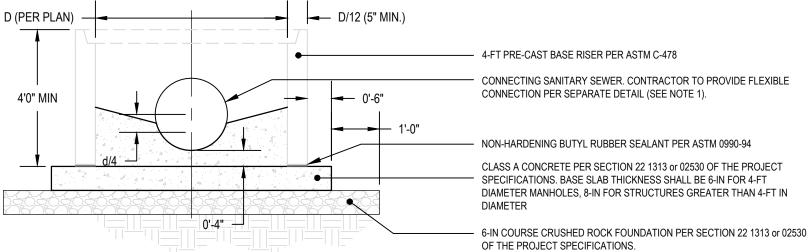


4-FT PRE-CAST BASE RISER PER ASTM C-478 CONNECTING SANITARY SEWER. CONTRACTOR TO PROVIDE FLEXIBLE CONNECTION PER SEPARATE DETAIL (SEE NOTE 1).

CLASS A CONCRETE PER SECTION 22 1313 or 02530 OF THE PROJECT SPECIFICATIONS. BASE SLAB THICKNESS SHALL BE 6-IN FOR 4-FT DIAMETER MANHOLES, 8-IN FOR STRUCTURES GREATER THAN 4-FT IN

6-IN COURSE CRUSHED ROCK FOUNDATION PER SECTION 22 1313 or 02530 OF THE PROJECT SPECIFICATIONS.

PRE-CAST MANHOLE: BASE RISER SECTION WITH PRE-FORMED SOCKET (OPTION II)



PRE-CAST MANHOLE: BASE RISER SECTION WITH MASTIC SEALER (OPTION I)

CAST-IN-PLACE MANHOLE DIMENSIONS SHALL MEET OR EXCEED THE REQUIRED DIMENSIONS FOR PRECAST MANHOLES PRECAST REINFORCED CONCRETE MANHOLES AS

ON THE PLANS OR DIRECTED BY THE ENGINEER.

- SPECIFIED BY ASTM C-478 (SEE BELOW). SHOP DRAWINGS OF ALL PRE-CAST MANHOLE STRUCTURES SHALL BE SUBMITTED TO ENGINEER 7.2. PROTECTIVE COATING: PROTECTIVE COATING SHALL FOR REVIEW AND APPROVAL PRIOR TO STRUCTURE NOT BE REQUIRED UNLESS OTHERWISE INDICATED PROCUREMENT.
- THE VERTICAL DROP OF CONCRETE POURS SHALL ACCORDANCE WITH ASTM C-478. ALL MANHOLE NOT EXCEED TEN (10') FEET. THE CONTRACTOR MAY SECTIONS SHALL BE INSTALLED COMPLETE WITH UTILIZE A KEYED CONSTRUCTION JOINT WITH (4) NO. O-RING GASKETS AT EACH JOINT. 4 DOWEL BARS (EQUALLY SPACED), OR A TREMMIE.
- PRE-CAST MANHOLE DIMENSIONS SHALL MEET OR MONOLITHIC POURS OF THE MANHOLE BOTTOM AND EXCEED THE REQUIREMENTS OF ASTM C-478. THE WALLS SHALL BE PERMITTED PROVIDED THAT ALL MINIMUM WALL THICKNESS SHALL NOT BE LESS CONCRETE (BOTTOM AND WALLS) IS VIBRATED THAN ONE-TWELTH (1/12) OF THE INTERNAL ACCORDING TO THE PROJECT SPECIFICATIONS. DIAMETER OF THE LARGEST CONE OR RISER

SECTION OR 5-IN, WHICHEVER IS GREATER.

- 8.3. FIRST JOINT IN MANHOLE WALL SHALL NOT BE LESS THAN 4-FT FROM FLOOR OF STRUCTURE. 8.4 CONCENTRIC AND ECCENTRIC CONE HEIGHTS SHALL BE 3'0" MINIMUM UNLESS OTHERWISE INDICATED ON
- PLANS. CONE SECTIONS SHALL NOT BE PERMITTED FOR MANHOLE INSTALLATIONS LESS THAN 4-FT IN PRE-CAST MANHOLES SHALL BE CONSTRUCTED IN

BASE CONSTRUCTION (ALTERNATE II)

MANHOLES GREATER THAN 4-FT IN DIAMETER SHALL BE FINISHED WITH A PRE-CAST SOLID SLAB TOP AS REQUIRED TO PERMIT INSTALLATION OF A STANDARD 4-FT DIAMETER CONE SECTION. SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR

REVIEW AND APPROVAL PRIOR TO PROCUREMENT.

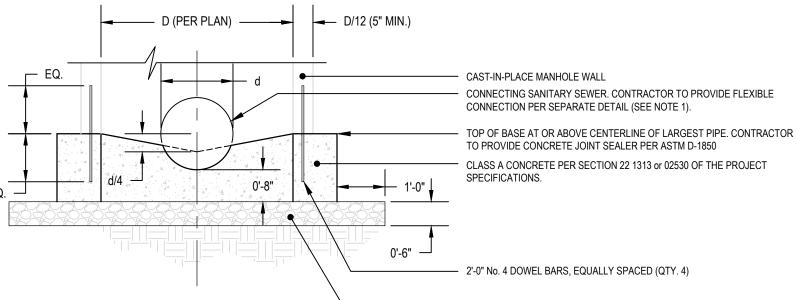
CAST-IN-PLACE MANHOLE WALL CONNECTING SANITARY SEWER. CONTRACTOR TO PROVIDE FLEXIBLE CONNECTION PER SEPARATE DETAIL (SEE NOTE 1). TOP OF BASE AT OR ABOVE CENTERLINE OF LARGEST PIPE. CONTRACTOR TO PROVIDE CONCRETE JOINT SEALER PER ASTM D-1850 CLASS A CONCRETE PER SECTION 22 1313 or 02530 OF THE PROJECT SPECIFICATIONS.

CRUSHED ROCK FOUNDATION PER SECTION 22 1313 or 02530 OF THE PROJECT SPECIFICATIONS.

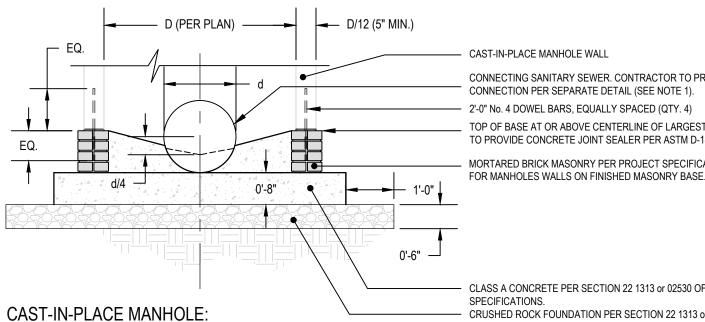
CAST-IN-PLACE MANHOLE: STANDARD BASE CONSTRUCTION

—— D (PER PLAN) ——— D/12 (5" MIN.)

0'-8"



CAST-IN-PLACE MANHOLE: CRUSHED ROCK FOUNDATION PER SECTION 22 1313 or 02530 OF THE PROJECT SPECIFICATIONS. BASE CONSTRUCTION (ALTERNATE I)



CONNECTING SANITARY SEWER. CONTRACTOR TO PROVIDE FLEXIBLE CONNECTION PER SEPARATE DETAIL (SEE NOTE 1). 2'-0" No. 4 DOWEL BARS, EQUALLY SPACED (QTY. 4) TOP OF BASE AT OR ABOVE CENTERLINE OF LARGEST PIPE. CONTRACTOR

TO PROVIDE CONCRETE JOINT SEALER PER ASTM D-1850 MORTARED BRICK MASONRY PER PROJECT SPECIFICATIONS. PLACE FORMS

- CLASS A CONCRETE PER SECTION 22 1313 or 02530 OF THE PROJECT CRUSHED ROCK FOUNDATION PER SECTION 22 1313 or 02530 OF THE

PROJECT SPECIFICATIONS.

ALL LIFTING HOLES SHALL BE REPAIRED WITH A

MIXTURE OF CEMENT AND SAND GROUT FIRMLY

PACKED. MANHOLE STEPS AND LADDERS: STEPS AND LADDERS SHALL NOT BE CONSTRUCTED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. IF CALLED FOR, THEY SHALL CONFORM WITH SECTION 13 OF ASTM C-478.

Steel Conduit Schedule

Carrier Pipe	Diameter of	Minimum Casing Wall Thickness		
Diameter (in)	Casing (in)	Under Highway	Under Railroad	
4	12	0.250	0.188	
6	12	0.250	0.188	
8	16	0.250	0.188	
10	18	0.250	0.188	
12	20	0.375	0.281	
16	24	0.375	0.312	
18	26	0.375	0.375	
20	30	0.500	0.406	
24	33	0.500	0.463	
30	40	0.500	0.500	
36	54	0.500	0.500	

STEEL PIPE". MINIMUM YIELD SHALL BE GREATER THAN OR EQUAL TO 35,000-PSI. MODEL AZ NON-METALLIC CASING SPACERS BY PIPELINE SEAL & **INSULATOR OR APPROVED EQUAL** SPACERS SHALL BE PLACED ON 5-FT CENTERS. SPACER TO BE PROVIDED WITHIN 2-FT OF ANY COUPLINGS/JOINTS, AS WELL AS WITHIN 1-FT OF EACH END OF CARRIER PIPE. DIAMETER PER

WELDED STEEL CONDUIT PER

ASTM STANDARD A-139 FOR GRADE

B "ELECTRIC FUSION OF WELDED

1. CONTRACTOR RESPONSIBLE FOR CONFIRMING PROPOSED CASING SIZE IS APPROPRIATE FOR PROPOSED CARRIER PIPE

DIAMETER PRIOR TO CASING PROCUREMENT.

- 2. CONTRACTOR TO PROVIDE MODEL "C" PULL-ON END SEALS BY PIPELINE SEAL & INSULATOR (OR APPROVED EQUAL) AT EACH END OF PROPOSED CASING.
- 3. BORED INSTALLATIONS: CONTRACTOR RESPONSIBLE FOR FIELD LOCATING AND DETERMINING EXACT DEPTH OF ANY INTERSECTING UTILITIES PRIOR TO INITIATING WORK.

GENERAL NOTES:

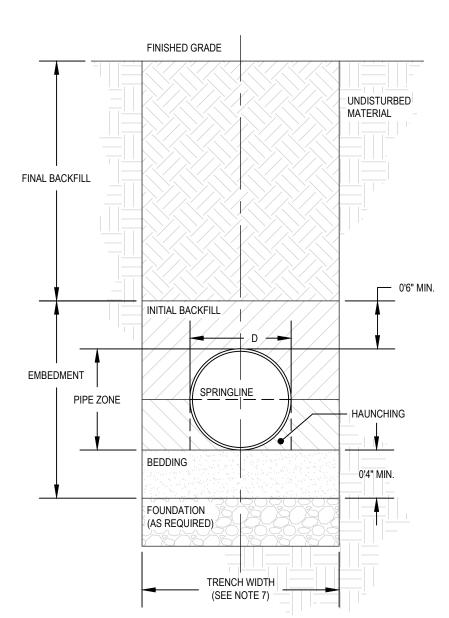
- 1. CONTRACTOR TO PROVIDE NEOPRENE-EPDM BLENDED COMPOUND BOOT SHALL MEETING THE REQUIREMENTS OF ASTM C-923 AT THE MANHOLE/PIPE INTERFACE UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR REQUIRED BY THE PIPE MANUFACTURER, CONTRACTOR RESPONSIBLE FOR ESTABLISHING WATER-TIGHT CONNECTION AT INTERFACE.
- 2. THE MANHOLE RING AND COVER SHALL BE ADJUSTED TO GRADE WITH CONCRETE RINGS OR SUCCESSIVE COURSES OF BRICK MASONRY. WHEN MASONRY UNITS ARE USED, TOTAL HEIGHT OF MASONRY WORK SHALL BE BETWEEN 12-IN AND 18-IN.
- 3. ALL CONCRETE FOR MANHOLE BASES, INVERTS AND WALL SHALL HAVE A MINIMUM COMPRESSION STRENGTH

OF 3,000-PSI PER THE PROJECT SPECIFICATIONS.

- 4. FORMS SHALL BE PROVIDED FOR THE SHAPING AND FINISHING OF THE MANHOLE BOTTOMS. A MINIMUM OF TWENTY-FOUR (24) HOURS SHALL ELAPSE PRIOR TO POURING THE MANHOLE WALLS.
- HONEYCOMBING OF CONCRETE LESS THAN TWO (2") INCHES DEEP IN MANHOLE WALLS MAY BE REPAIRED USING TYPE S MORTAR PER ASTM C-270.
- 6. ALL CONSTRUCTION JOINTS SHALL BE CLEANED OF ANY EXCESS FOREIGN MATTER PRIOR TO APPLICATION OF CONCRETE JOINT SEALER. CONCRETE JOINT SEALER SHALL COMPLY WITH ASTM D-1850.

7. CAST-IN-PLACE NON-REINFORCED CONCRETE MANHOLES

03 SLEEVED SANITARY SEWER INSTALLATION SCALE: AS SHOWN



- . PRIVATE PVC SANITARY SEWER LINE SHALL BE AS SPECIFIED BY THE DRAWINGS AND SECTION 22 1313 or 02530 OF THE PROJECT SPECIFICATIONS. THE FOLLOWING STANDARDS (LATEST EDITION) SHALL APPLY AS APPROPRIATE:
- SDR PIPE: ASTM D3034 STANDARD SPECIFICATION FOR TYPE PSM POLY(VINYL CHLORIDE) (PVC) SEWER PIPE AND FITTINGS.
- 1.2. SCHEDULE PIPE: ASTM D2665 STANDARD SPECIFICATION FOR POLY(VINYL CHLORIDE) (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS.
- 2. PROVIDED DETAIL SHALL BE USED FOR EXTENSION OF PRIVATE SANITARY SEWER LINES ONLY. PUBLIC SANITARY SEWER LINE EXTENSIONS SHALL BE BEDDED AND BACKFILLED PER THE REQUIREMENTS OF THE MUNICIPALITY WHICH WILL BE ACCEPTING THE IMPROVEMENTS
- AT THE COMPLETION OF THE WORK. 3. ALL INSTALLATIONS SHALL MEET THE REQUIREMENTS OF INTERNATIONAL PLUMBING CODE (CURRENT EDITION) AND OAC 252:656 WATER POLLUTION CONTROL FACILITY CONSTRUCTION STANDARDS (CURRENT EDITION).
- 4. DEPTH FROM FINISHED GRADE TO TOP OF PIPE SHALL BE AS SPECIFIED ON THE CONSTRUCTION DRAWINGS. IN NO INSTANCE SHALL THE DEPTH OF COVER BE LESS THAN
- 5. COMPACTION REQUIREMENTS NOTED ARE AS REQUIRED TO SUPPORT THE PIPE INSTALLATION. COMPACTION ABOVE AND BEYOND THAT SPECIFIED MAY BE REQUIRED TO ENSURE THAT (1) SETTLEMENT DOES NOT OCCUR AFTER INSTALLATION, AND (2) PAVING AND PROPOSED STRUCTURES ABOVE INSTALLATION ARE PROPERLY SUPPORTED BY BACKFILL. AS A RESULT, COMPACTION REQUIREMENTS SPECIFIED BY THE GEOTECHNICAL ENGINEER SHALL BE CONSIDERED TO SUPERCEDE THOSE NOTED.
- 6. FOR INSTALLATIONS BENEATH PROPOSED VEHICULAR PAVING, CONTRACTOR SHALL PROVIDE CLASS I OR CLASS II MATERIAL TO BOTTOM OF PROPOSED PAVING ELEVATION.
- 7. WHERE TRENCH WALLS ARE STABLE OR SUPPORTED, PROVIDE A WIDTH SUFFICIENT, BUT NO GREATER THAN NECESSARY, TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER EMBEDMENT MATERIALS. THE SPACE BETWEEN THE PIPE AND TRENCH WALL MUST BE WIDER THAN THE COMPACTION EQUIPMENT USED IN THE PIPE ZONE. MINIMUM WIDTH SHALL BE NOT LESS THAN THE GREATER OF EITHER THE PIPE OUTSIDE DIAMETER PLUS 16 IN. (400 MM) OR THE PIPE OUTSIDE DIAMETER TIMES 1.25, PLUS 12 IN. (300 MM).
- B. CONTRACTOR RESPONSIBLE FOR REVEGATATION OF ALL DISTURBED AREAS THAT ARE OUTSIDE THE LIMITS OF AREAS SPECIFICALLY IDENTIFIED TO RECEIVE VEGETATIVE COVER AT THE COMPLETION OF THE PROJECT. REVEGATATION TO BE COMPLETED VIA SOLID SLAB SOD PER CORRESPONDING SECTIONS OF THE PROJECT SPECIFICATIONS.

PC CONCRETE SANITARY SEWER MANHOLE

Recommendations for Installation and Use of Soils and Aggregates for Foundation and Pipe-Zone Embedment per ASTM

Soil Class A	Class I B	Class II	Class III	Class IV	
General Recommendations and Restrictions	Acceptable and common where no migration is probable or when combined with a geotextile filter media. Suitable for use as a drainage blanket and under drain where adjacent material is suitably graded or when used with a geotextile filter fabric	Where hydraulic gradient exists check gradation to minimize migration. Clean groups are suitable for use as a drainage blanket and underdrain. Uniform fine sands (SP) with more than 50 % passing a #100 sieve (0.006 in., 0.15 mm) behave like silts and should be treated as Class IV soils.	Do not use where water conditions in trench prevent proper placement and compaction. Not recommended for use with pipes with stiffness of 9 psi or less	Difficult to achieve high-soil stiffness. Do not use where water conditions in trench prevent proper placement and compaction. Not recommended for use with pipes with stiffness of 9 psi or less	
Foundation	Suitable as foundation and for replacing over-excavated and unstable trench bottom as restricted above.	Suitable as foundation and for replacing over-excavated and unstable trench bottom as restricted above. Install and compact in 12 in. (300 mm) maximum layers	Suitable for replacing over-excavated trench bottom as restricted above. Install and compact in 6 in. (150 mm) maximum layers		
Pipe Embedment	Suitable as restricted above. Work material ur	nder pipe to provide uniform haunch support.	Suitable as restricted above. Difficult to place and compact in the haunch zone.	Suitable as restricted above. Difficult to place and compact in the haunch zone.	
Embedment Compaction: recommended Percent Compaction, SPD D	See Note C	85% (SW and SP soils). For GW and GP soils, see Note E	90%	95%	
Relative Compactive Effort Required to Achieve Minimum Percent Compaction	low	moderate	high	very high	
Compaction Methods	vibration or impact	vibration or impact	impact	impact	
Required Moisture Control	none	none	Maintain near optimum to minimize compactive effort		

A Class V materials are unsuitable as embedment. They may be used as final backfill as permitted by the engineer. 3 Class I materials have higher stiffness than Class II materials, but data on specific soil stiffness of placed, uncompacted Class I materials can be taken equivalent to Class II materials compacted to 95% of maximum standard Proctor density (SPD95), and the soil stiffness of compacted Class I materials can be taken equivalent to Class II materials compacted to 100% of maximum standard Proctor density (SPD100). Even if placed uncompacted (that is, dumped), Class I materials should always be worked into the haunch zone to assure complete placement.

C Suitable compaction typically achieved by dumped placement (that is, uncompacted but worked into haunch zone to ensure complete placement). D SPD is standard Proctor density as determined by Test Method D698.

EPlace and compact GW and GP soils with at least two passes of compaction equipment.

materials. These materials should only be used when evaluated and approved by the Engineer. F Uniform fine sands (SP) with more than 50% passing a No. 100 sieve (0.006 in., 0.15 mm) are very sensitive to moisture and should not be used as backfill unless specifically allowed in the contract documents. If use of these materials is allowed, compaction and handling procedures should follow the

Soil Classes (ASTM D2321) Percentage Passing Sieve Sizes AASHTO Soil Groups C Class Description A,B No. 4 No. 200 3/8-in (9.525-mm) (4.75-mm) (0.075-mm) I crushed rock, angular D 100% <u>< 25%</u> <u>< 15%</u> <u>< 12%</u> clean, coarse grained soils: SW, SP, GW, GP or any soil beginning < 12% E, F A1, A3 with one of these symbols coarse grained soils with fines: GM, GC, SM, SC, or any soil A-2-4, A-2-5, A-2-6 > 12% beginning with one of these symbols sandy or gravelly fine-grained soils: CL, ML, or any soil < 70% A-4, A-6

beginning with one of these fine-grained soils: CL, ML, or any IV soil beginning with one of these A-2-7, A-4, A-6 A5, A7

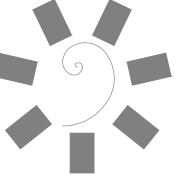
IV MH, CH, OL, OH, PT A See Classification D2487, Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System)

B Limits may be imposed on the soil group to meet project or local requirements if the specified soil remains within the group. For example, some project applications require a Class I material with minimal fines to address specific structural or hydraulic conditions and the specification may read "Use Class I soil with a maximum of 5% passing the #200 sieve."

C AASHTO M145, Classification of Soils and Soil Aggregate Mixtures.

D All particle faces shall be fractured.

E Materials such as broken coral, shells, and recycled concrete, with less than or equal to 12% passing a No. 200 sieve, are considered to be Class II



James R. Childers Architect, Inc. 45 South 4th Street Fort Smith, AR 72901

479-783-2480 www.childers architect.comPROFESSIONAL SEAL:

Oklahoma City, OK 73106 P 405.232.5700

W www.adgokc.com

CA 6447, exp. 06.30.2018

CHEROKEE NATION

ERTAIN ASIN

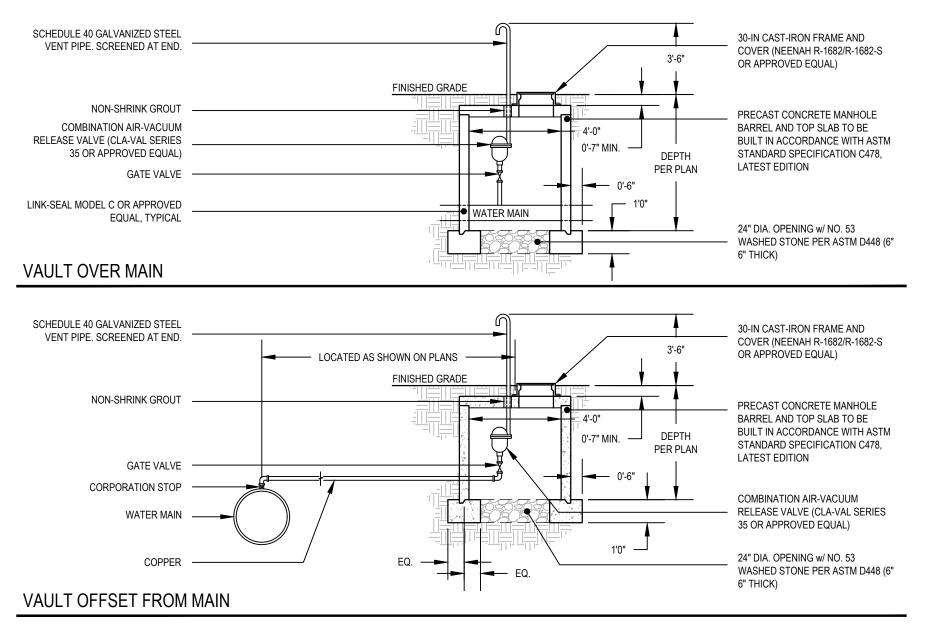
ATION QUA

BID PACKAGE 02

(100% SET)

17-06

CONSTRUCTION **DETAILS**



GENERAL NOTES: 1. ALL VALVE BOXES SHALL BE BOTTOM VALVE BOX DETAIL (4-IN TO 12-IN)

CAST-IRON AND SHALL MEET OR EXCEED THE REQUIREMENTS OF AWWA STANDARD M44.

VALVE BOXES INSTALLED WITHIN ROADWAYS SHALL BE RATED FOR H20 LOADING OR GREATER. WATER LINE CONTRACTOR

TO PLACE 24-IN x 24-IN CONCRETE PAD AROUND EACH WATER VALVE AFTER FINAL GRADING HAS BEEN HAVE SETTLED.

COMPLETED AND TRENCHES VALVE BOXES REQUIRING OVER 2 ADDITIONAL BOTTOM SECTIONS SHALL BE EXTENDED USING PVC PIPE WITH A BOTTOM AND TOP SECTION PLACED ON TOP OF THE PVC PIPE.

3'0" MIN. TO 6'0" MAX. NATIONAL STANDARD PENTAGON OPERATION NUT 4-1/2" STANDARD REMOVABLE 2-1/2" NATIONAL STANDARD HOSE NOZZLES - BREAKABLE CONNECTION 1'6" (MIN) TO STANDARD VALVE BOX PER PLANS 2'0" (MAX) FINISHED GRADE 2'x2'x6" CONCRETE COLLAR. TO BE INSTALLED FOLLOWING HYDRANT BURY LINE. HYDRANT COMPLETION OF FINAL GRADING BURY DEPTH TO BE AS SPECIFIED AND SETTLEMENT OF ADJACENT TRENCHES HYDRANT DRAIN. TO BE LEFT CLEAN BY CONTRACTOR AFTER TEE WITH DI-ROTATABLE VALVE POURING CONCRETE BLOCKING. AND HYDRANT MJ GLAND ON PLAIN END BRANCH 6" MJ GATE VALVE CONNECTING PIECE WITH INTEGRALLY CAST MJ GLAND AND DI-ROTATABLE MJ GLAND. SECTION GENERAL NOTES: ASSEMBLY INCLUDES:

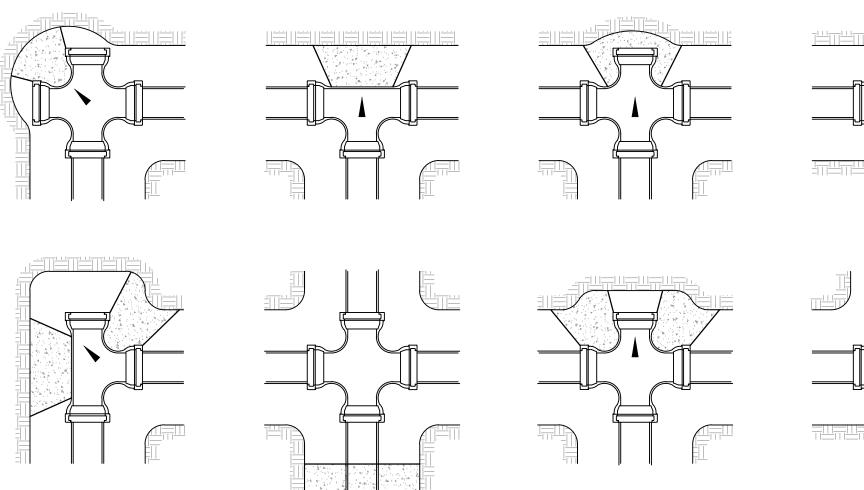
PARTIAL PLAN

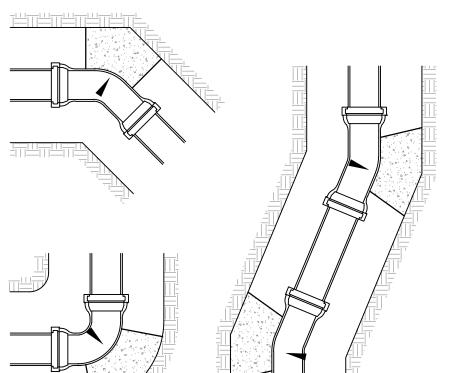
1.1. (1) 3-WAY FIRE HYDRANT (1) 6" CONNECTING PIECE (1) 6" MJ GATE VALVE & BOX 1.4. (1) 6" VALVE & HYDRANT TEE 1.5. (1) VALVE BOX

05 AIR RELIEF VALVE AND VAULT

VALVE BOX SCALE: AS SHOWN

1 HYDRANT DETAIL - W-09a



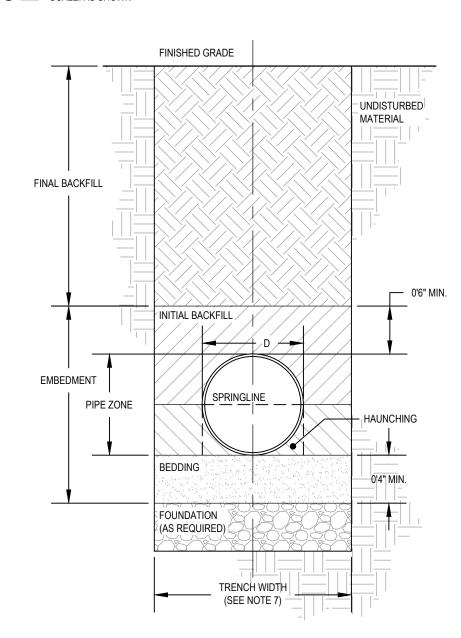


VALVE BOX DETAIL (2-IN TO 3-IN)

GENERAL NOTES:

- 1. IN SOFT, UNSTABLE SOILS SUCH AS MUCK OR PEAT, THRUSTS MAY BE RESISTED BY RUNNING CORROSION-RESISTANT TIE RODS TO SOLID FOUNDATIONS OR BY REMOVING SOFT MATERIALS AND REPLACING IT WITH A BALLAST OF SUFFICIENT SIZE AND WEIGHT TO RESIST THE THRUSTS DEVELOPED.
- PRE-CAST THRUST BLOCKS SHALL NOT BE PLACED DIRECTLY AGAINST PVCPIPE TO AVOID POINT LOADING AN PROVIDE ADEQUATE FORCE DISTRIBUTION.
- WHERE A FITTING IS USED TO MAKE A VERTICAL BEND, THE FITTING SHALL BE ANCHORED TO A THRUST BLOCK BRACED AGAINST UNDISTURBED SOIL. THRUST BLOCK SHALL HAVE ENOUGH RE TO WITHSTAND UPWARD THRUSTS AT THE FITTING.
- RESTRAINED JOINTS MAY BE UTILIZED IN LIEU OF CONCRETE THRUST BLOCKING. WHERE UTILIZED, SUCH INSTALLATIONS SHALL MEET THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

Soil Type	Assumed Bearing Pressure (lb/sq.ft.) (1)	Pipe Size	90-deg Bend (2)	Total Area of Thrust Backing Required (sq.ft.) (3)	45-deg Bend (2)	Total Area of Thrust Backing Required (sq.ft.) (3)	Tee/Plug (2)	Total Area of Thrust Backing Required (sq.ft.) (3)
		4	5,120	10.24	2,780	5.56	3,620	7.24
		6	10,580	21.16	5,720	11.44	7,480	14.96
soft clay	1,000	8	18,200	36.40	9,840	19.68	12,860	25.72
		10	27,360	54.72	14,820	29.64	19,720	39.44
		12	38,700	77.40	20,940	41.88	27,380	54.76
		4	5,120	5.12	2,780	2.78	3,620	3.62
		6	10,580	10.58	5,720	5.72	7,480	7.48
sand	2,000	8	18,200	18.20	9,840	9.84	12,860	12.86
		10	27,360	27.36	14,820	14.82	19,720	19.72
		12	38,700	38.70	20,940	20.94	27,380	27.38
		4	5,120	3.41	2,780	1.85	3,620	2.41
		6	10,580	7.05	5,720	3.81	7,480	4.99
sand and gravel	3,000	8	18,200	12.13	9,840	6.56	12,860	8.57
		10	27,360	18.24	14,820	9.88	19,720	13.15
		12	38,700	25.80	20,940	13.96	27,380	18.25
	4,000	4	5,120	2.56	2,780	1.39	3,620	1.81
		6	10,580	5.29	5,720	2.86	7,480	3.74
sand and gravel cemented with clay		8	18,200	9.10	9,840	4.92	12,860	6.43
		10	27,360	13.68	14,820	7.41	19,720	9.86
		12	38,700	19.35	20,940	10.47	27,380	13.69
		4	5,120	1.02	2,780	0.56	3,620	0.72
		6	10,580	2.12	5,720	1.14	7,480	1.50
hard shale	10,000	8	18,200	3.64	9,840	1.97	12,860	2.57
		10	27,360	5.47	14,820	2.96	19,720	3.94
		12	38,700	7.74	20,940	4.19	27,380	5.48
(1) Soil bearing data compiled from various sources. Contractor shall review Site Specific Geotechnical Report to determine appropriate value.								
(2) Based on 200-psi water pressure. Contractor shall make adjustments in thrust block size as required should water pressures exceed this assumption.								



Soil Classes (ASTM D2774) (A)						
		Percentage Passing Sieve Sizes				
Class	Description	1.5-in	3/8-in	No. 4	No. 200	
		(40-mm)	(9.525-mm)	(4.75-mm)	(0.075-mm)	
I	crushed rock (B,C)	100% (D)	less than or equal to 25%	less than or equal to 15%	less than or equal to 12%	
II	clean, coarse grained soils E,F: SW, SP, GW, GP or any soil beginning with one of these symbols				less than or equal to 12% (E)	
III	coarse grained soils with fines: GM, GC, SM, SC, or any soil beginning with one of these symbols					
	sandy or gravelly fine-grained soils: CL, ML, or any soil beginning with one of these symbols				< 70%	
IV	fine-grained soils: CL, ML, or any soil beginning with one of these symbols				> 70%	
IV	fine-grained soils, organic soils, high compressibility silts and clays, organic soil: MH, CH, OL, OH, PT					

(A) Soil classification descriptions and symbols are in accordance with ASTM Practice D2487 and D2488. (B) For Class I, all particle faces shall be fractured. (C) Additional restrictions on Class I Material particle size: The particle size of material in contact with the pipe shall not exceed the following: 1/2 in. for pipe to 4 in., 3/4 in. for pipes 6 to 8 in.; 1 in. for pipes 10 to 16 in.; and 11/2 in. for larger

(D) Sieves and sieve cloths shall be in accordance with ASTM Specification E11. (E) Materials such as broken coral, shells, and recycled concrete, with less than 12% passing a No. 200 sieve, should be treated as Class II soils. (F) Uniform fine sands (SP) with more than 50% passing a No. 100 sieve (0.006 in., 0.15 mm) are very sensitive to

noisture and should not be used as backfill unless specifically allowed in the contract documents. If use of these materials is allowed, compaction and handling procedures should follow the guidelines for Class III materials.

pipes. Each soil layer shall be sufficiently compacted to uniformly develop lateral passive soil forces during the backfill

6. TRENCH WIDTH—THE WIDTH OF THE TRENCH AT ANY POINT BELOW THE TOP OF THE PIPE SHALL BE SUFFICIENT TO PROVIDE ADEQUATE ROOM FOR THE FOLLOWING

LOCAL, STATE, AND FEDERAL REQUIREMENTS FOR SAFETY.

1. PRIVATE PVC WATER LINE SHALL BE AS SPECIFIED BY THE DRAWINGS AND SECTION 22

1.1. ASTM D1785: STANDARD SPECIFICATION FOR POLY(VINYL CHLORIDE) (PVC) PLASTIC

1.2. ASTM D2241: STANDARD SPECIFICATION FOR POLY(VINYL CHLORIDE) (PVC)

SHALL APPLY AS APPROPRIATE:

AT THE COMPLETION OF THE WORK.

PIPE, SCHEDULES 40, 80, AND 120.

PRESSURE-RATED PIPE (SDR SERIES).

1113 OF THE PROJECT SPECIFICATIONS. THE FOLLOWING STANDARDS (LATEST EDITION)

AWWA C900: POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND FABRICATED FITTINGS,

14 IN. THROUGH 48 IN. (350 MM THROUGH 1,200 MM), FOR WATER TRANSMISSION AND

4 IN. THROUGH 12 IN., FOR WATER DISTRIBUTION, (100 MM THROUGH 300 MM).

1.4. AWWA C905: POLYVINYL CHLORIDE (PVC) PRESSURE PIPE AND FABRICATED FITTINGS,

2. PROVIDED DETAIL SHALL BE USED FOR EXTENSION OF PRIVATE PVC WATER LINES ONLY.

3. ALL INSTALLATIONS SHALL MEET THE REQUIREMENTS OF INTERNATIONAL PLUMBING

4. FOR INSTALLATIONS BENEATH PROPOSED VEHICULAR PAVING, CONTRACTOR SHALL

PUBLIC PVC WATER LINE EXTENSIONS SHALL BE BEDDED AND BACKFILLED PER THE

CODE (CURRENT EDITION), AWWA C605 (CURRENT EDITION) AND OAC 252:656 WATER

PROVIDE CLASS I OR CLASS II MATERIAL TO BOTTOM OF PROPOSED PAVING ELEVATION.

POLLUTION CONTROL FACILITY CONSTRUCTION STANDARDS (CURRENT EDITION).

5. TRENCH STABILITY—DURING TRENCH EXCAVATION, ENSURE THAT THE TRENCH SIDES

SHALL BE STABLE UNDER ALL WORKING CONDITIONS. THE TRENCH WALLS SHALL BE

SLOPED OR APPROPRIATE SUPPORTS PROVIDED TO COMPLY WITH ALL APPLICABLE

REQUIREMENTS OF THE MUNICIPALITY WHICH WILL BE ACCEPTING THE IMPROVEMENTS

6.1. JOINING THE PIPE IN THE TRENCH IF THIS IS REQUIRED

- SNAKING OF SMALLDIAMETER, HEAT FUSED OR SOLVENT CEMENTED PIPE FROM SIDE-TO-SIDE ALONG THE BOTTOM OF THE TRENCH, WHEN THE EFFECTS OF CONTRACTION ARE NOT OTHERWISE ACCOMMODATED
- 6.3. FILLING AND COMPACTING THE SIDE FILLS
- 6.4. CHECKING THE ELASTOMERIC SEAL JOINTS.
- 7. MINIMUM TRENCH WIDTHS SHALL BE PERMITTED TO BE UTILIZED WITH MOST SOLVENT-CEMENTED AND HEAT-FUSED PRESSURE PIPE MATERIALS BY JOINING THE PIPE OUTSIDE THE TRENCH AND LOWERING THE PIPE INTO THE TRENCH AFTER ADEQUATE JOINT STRENGTH HAS BEEN ATTAINED. THIS PRACTICE SHALL BE PERMITTED TO BE USED FOR GASKET JOINT PIPE, WITH MANUFACTURERS APPROVAL, PROVIDING CARE IS TAKEN TO NOT DISASSEMBLE THE JOINTS DURING LOWERING.

(3) Factor of Safety = 2.0

- TRENCH BOTTOM—THE TRENCH BOTTOM SHALL BE PREPARED FOR THE DIRECT REPLACEMENT OF THE PIPE AND SHALL BE CONTINUOUS, RELATIVELY SMOOTH, FREE OF ROCKS, AND PROVIDE UNIFORM SUPPORT. FOR BELL-ENDED OR COUPLED PIPE, SUITABLE "BELL-HOLES" SHALL BE PROVIDED AT EACH JOINT TO PERMIT THE JOINT TO BE ASSEMBLED AND THE PIPE TO BE SUPPORTED PROPERLY.
- 8.1. WHERE LEDGE ROCK, HARDPAN, OR BOULDERS ARE ENCOUNTERED, IT SHALL BE REQUIRED TO PAD THE TRENCH BOTTOM WITH A BEDDING OF AT LEAST 4-IN. (100-MM) THICKNESS OF COMPACTED CLASS I OR II MATERIAL. IN SITUATIONS WHERE RAPID MOVEMENT OF WATER TAKES PLACE THROUGH THIS BEDDING, THE CLASS I OR II MATERIAL USED SHALL HAVE GRADATION THAT PREVENTS LOSS BY MIGRATION OF ANY PIPE EMBEDMENT MATERIAL.
- TRENCH DEPTH AND PIPE COVER—EXCAVATION FOR PIPE TRENCHES SHALL BE TO THE LINES, GRADES, AND DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS. SUFFICIENT COVER SHALL BE MAINTAINED TO ADEQUATELY REDUCE THE TRAFFIC OR OTHER CONCENTRATED AND IMPACT LOADS.
- 10. RELIABILITY AND SAFETY OF SERVICE SHALL ASSUME MAJOR IMPORTANCE IN DETERMINING MINIMUM COVER FOR ANY INTENDED SERVICE. LOCAL, STATE, OR FEDERAL CODES SHALL ALSO GOVERN. PIPE INTENDED FOR WINTER WATER SERVICE SHALL HAVE A MINIMUM COVER EQUAL TO OR GREATER THAN THE MAXIMUM EXPECTED FROST PENETRATION DEPTH.

- 11. A MINIMUM COVER OF 24 IN. (610 MM) FOR PIPE SHALL BE REQUIRED WHEN SUBJECTED TO HEAVY OVERHEAD TRAFFIC. IN AREAS OF LIGHT OVERHEAD TRAFFIC A MINIMUM COVER OF 12 TO 18 IN. (305 TO 457 MM) IS REQUIRED.
- 12. THE PIPE SHALL BE UNIFORMLY AND CONTINUOUSLY SUPPORTED OVER ITS ENTIRE LENGTH ON FIRM STABLE MATERIAL. BLOCKING SHALL NOT BE USED TO CHANGE PIPE GRADE OR TO INTERMITTENTLY SUPPORT PIPE ACROSS EXCAVATED SECTIONS.
- 13. PIPE SHALL BE PERMITTED TO BE INSTALLED IN A WIDE RANGE OF NATIVE SOILS. THE PIPE EMBEDMENT SHALL BE STABLE AND PLACED IN SUCH A MANNER AS TO EVENLY SUPPORT AND PHYSICALLY SHIELD THE PIPE FROM DAMAGE. ATTENTION SHALL BE GIVEN TO LOCAL PIPE LAYING EXPERIENCE WHICH SHALL INDICATE SOLUTIONS TO PARTICULAR PIPE BEDDING PROBLEMS.
- 14. THE PIPE EMBEDMENT MATERIALS SHALL BE STABLE, SUFFICIENTLY WORKABLE TO BE READILY PLACED UNDER THE SIDES OF THE PIPE TO PROVIDE SATISFACTORY HAUNCHING, AND READILY COMPACTABLE TO ACHIEVE SOIL DENSITIES SPECIFIED BY CONTRACT DOCUMENTS. THE EMBEDMENT SHALL BE EITHER CLASS I, II OR III SOILS, AS DESCRIBED IN BY ASTM D2774.
- 15. INITIAL BACKFILL MATERIALS SHALL BE PLACED IN COMPACTED LAYERS.
- 16. ALL NATIVE AND OTHER MATERIALS IN THE PIPE EMBEDMENT ZONE SHALL BE FREE FROM REFUSE, ORGANIC MATERIAL, COBBLES, BOULDERS, LARGE ROCKS OR STONES, OR
- 17. THE PARTICLE SIZE OF MATERIAL IN CONTACT WITH THE PIPE SHALL NOT EXCEED THE FOLLOWING: 1/2 IN. FOR PIPE TO 4 IN., 3/4 IN. FOR PIPES 6 TO 8 IN.; 1 IN. FOR PIPES 10 TO 16 IN.; AND 11/2 IN. FOR LARGER PIPES. EACH SOIL LAYER SHALL BE SUFFICIENTLY COMPACTED TO UNIFORMLY DEVELOP LATERAL PASSIVE SOIL FORCES DURING THE BACKFILL OPERATION.
- 18. TO MINIMIZE DEFORMATION OF THINNER-WALLED PRESSURE PIPELINES, SUCH AS USED IN IRRIGATION, THE PIPELINE SHALL BE FIRST FILLED WITH WATER, ALL AIR REMOVED, AND KEPT FULL DURING THE BACKFILL OPERATION.
- 19. WHEN INSTALLING PIPE IN LOCATIONS WHERE RAPID MOVEMENT OF GROUND WATER SHALL RESULT IN MIGRATION OF SOIL FINES INTO, OUT OF, OR BETWEEN LAYERS OF THE

- EMBEDMENT MATERIAL, THE BEDDING AND BACK FILL SHALL BE OF SUCH GRADATION IN PARTICLE SIZE AS TO PRECLUDE THIS POSSIBILITY. SOIL MIGRATION SHALL ALSO BE CONTROLLED BY USING AN APPROPRIATE SOIL FILTER OR A GEOTEXTILE FILTER FABRIC BETWEEN COARSE EMBEDMENT AND FINE SOILS.
- 20. UNCOMPACTED FINAL BACKFILL CAN BE EITHER CLASS I, CLASS II, CLASS III, CLASS IV, OR CLASS V SOIL. IF BACKFILL IS TO BE COMPACTED, DO NOT USE CLASS V SOILS.
- 21. THE FINAL BACKFILL SHALL BE PLACED AND SPREAD IN APPROXIMATELY UNIFORM LAYERS IN SUCH A MANNER AS TO FILL THE TRENCH COMPLETELY SO THAT THERE WILL BE NO UNFILLED SPACES UNDER OR ABOUT ROCKS OR LUMPS OF EARTH IN THE BACKFILL. LARGE ROCKS, STONES, FROZEN CLODS, AND OTHER DEBRIS GREATER THAN 3 IN. (76 MM) IN DIAMETER SHALL BE REMOVED.
- 22. WHEN COMPACTION IS REQUIRED, ROLLING EQUIPMENT OR HEAVY TAMPERS SHALL ONLY BE USED TO COMPACT THE FINAL BACKFILL, PROVIDED THE PIPE IS COVERED BY AT LEAST 18 IN. OF BACKFILL. TRENCHES UNDER PAVEMENTS, SIDEWALKS, OR ROADS SHALL BE BACKFILLED AND COMPACTED TO THE REQUIRED DENSITY SPECIFIED BY CONTRACT DOCUMENTS OR BY THE APPROPRIATE GOVERNMENT JURISDICTION.
- 23. WHERE TRENCH WALLS ARE STABLE OR SUPPORTED, PROVIDE A WIDTH SUFFICIENT, BUT NO GREATER THAN NECESSARY, TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER EMBEDMENT MATERIALS. THE SPACE BETWEEN THE PIPE AND TRENCH WALL MUST BE WIDER THAN THE COMPACTION EQUIPMENT USED IN THE PIPE ZONE. MINIMUM WIDTH SHALL BE NOT LESS THAN THE GREATER OF EITHER THE PIPE OUTSIDE DIAMETER PLUS 16 IN. (400 MM) OR THE PIPE OUTSIDE DIAMETER TIMES 1.25, PLUS 12 IN. (300 MM).
- 24. CONTRACTOR RESPONSIBLE FOR REVEGATATION OF ALL DISTURBED AREAS THAT ARE OUTSIDE THE LIMITS OF AREAS SPECIFICALLY IDENTIFIED TO RECEIVE VEGETATIVE COVER AT THE COMPLETION OF THE PROJECT. REVEGATATION TO BE COMPLETED VIA SOLID SLAB SOD PER CORRESPONDING SECTIONS OF THE PROJECT SPECIFICATIONS.

BID PACKAGE 02

(100% SET)

James R. Childers

Architect, Inc.

45 South 4th Street

Fort Smith, AR 72901

479-783-2480

www.childers architect.com

PROFESSIONAL SEAL:

CONSULTANT LOGO

Oklahoma City, OK 73106

CA 6447, exp. 06.30.2018

CHEROKEE NATION

STAIN

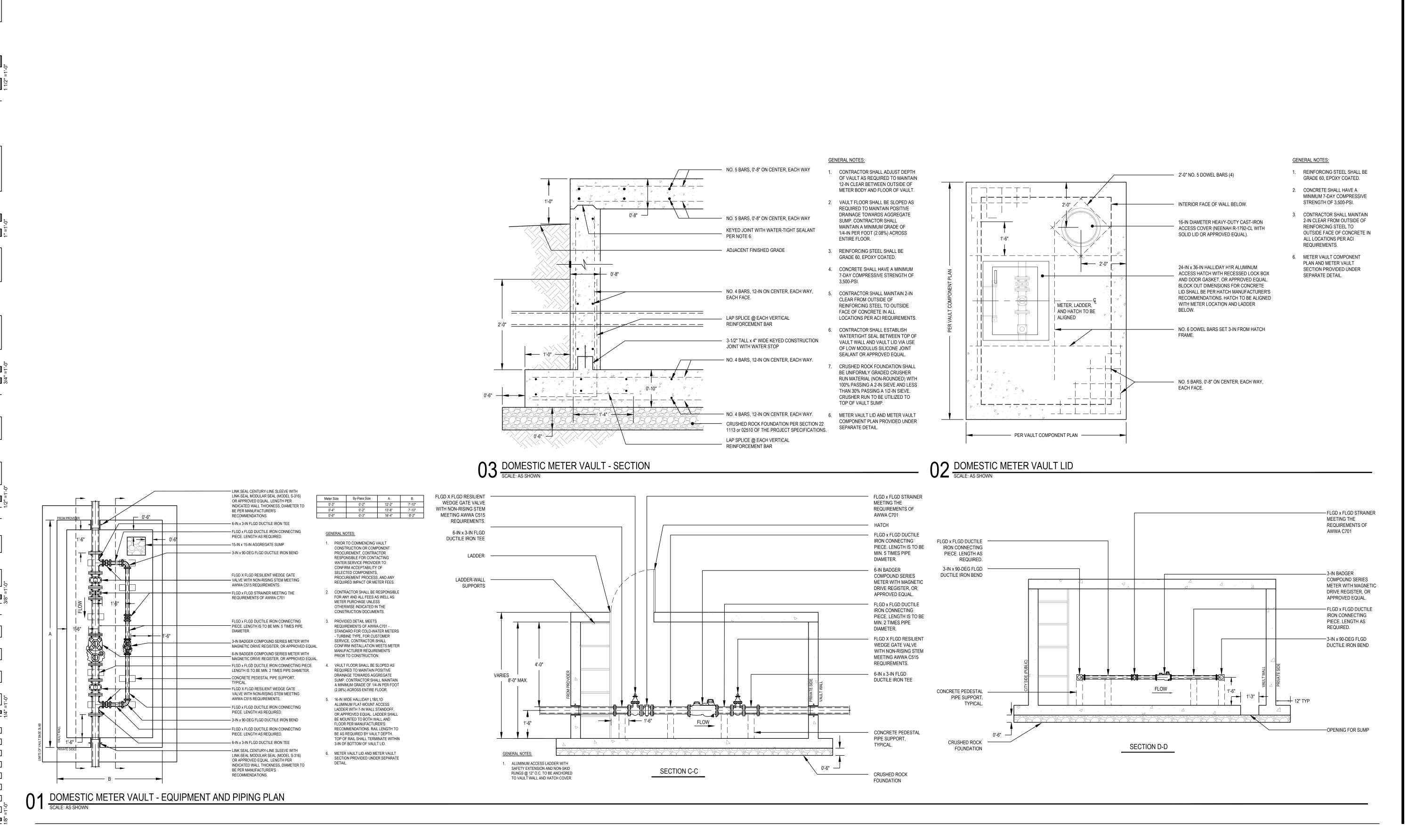
₽ Q

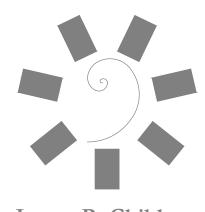
P 405.232.5700 W www.adgokc.com

CONSTRUCTION

DETAILS

PIPE BEDDING AND BACKFILL - PRIVATE PVC (ASTM D2774)





James R. Childers Architect, Inc. 45 South 4th Street Fort Smith, AR 72901 479-783-2480 www.childersarchitect.com



Oklahoma City,OK 73106 P 405.232.5700 W www.adgokc.com CA 6447, exp. 06.30.2018



NTERTAINM ATION EN

BID PACKAGE 02 (100% SET)

03/27/18 17-06

C9.20b

CONSTRUCTION DETAILS