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CENTRAL AVENUE AND 151ST STREET
 WATERLINE IMPROVEMENTS

PHASE 1 - ALONG CENTRAL AVE,
 (WEST OF N 135TH W ST.)

PAUL GUNZELMAN, P.E. - INTERIM CITY ENGINEER
 CITY OF WICHITA PROJECT NO. 448-2020-033962

Issue:	
JOB NO.	35-210255-002-0042
DATE	MARCH 2023
PM	TBK
DESIGNED BY	REW
DRAWN BY	KTD
CHECKED BY	TBK

STANDARD WATER
 ASSEMBLY DETAIL

 CU501

MATERIALS LIST

- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET (D"x 6")
- 1- 6" MJ GATE VALVE
- 1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED *
- 6" DI CL SJ PIPE (LENGTH VARIABLE)
- 1- FIRE HYDRANT
- 1- 6" ANCHOR COUPLING*
- 2- 90° BENDS*
- 6" DI CL PIPE WITH ADEQUATE JOINT RESTRAINT *
- CONCRETE BLOCKING (AS REQUIRED)
- RIVER WASHED PEA GRAVEL (AS REQUIRED)

*** IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DI CL PIPE AS NECESSARY FOR VERTICAL ADJUSTMENT. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING AT HYDRANT AND MEGALUGS, OR SIMILAR RESTRAINT BETWEEN 90° BENDS TO SECURE ALL FITTINGS DURING TESTING AND OPERATION. THE CONTRACTOR SHALL PROVIDE A VALVE STEM EXTENSION PER DETAIL THIS SHEET.**

**** CAUTION: WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES. PLACE 1 CUBIC FOOT OF RIVER WASHED PEA GRAVEL AROUND EACH WEEP HOLE.**

CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.

FIRE HYDRANT ASSEMBLY
PER CITY OF WICHITA SPECIFICATIONS

TRACER WIRE
Conductive type pipe locator/tracer wire shall be install to locate all waterline pipe regardless of pipe material. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. A waterproof connector shall be used at splice locations. A complete list of approved tracer wire and waterproof connectors can be found on the City of Wichita's website at www.wichita.gov.

WIRE
The tracer wire shall be Blue No. 12 AWG CCS with 45 mil HDPE insulation. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. Wire connectors shall be installed per manufacturer recommendations. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

TEST STATIONS
The test station for fire hydrant application shall be a 1" "conduit" style station as manufactured by AGRA Industries with a removable solid cover having a single lead extending from the face or approved equal. The "conduit" style test station shall be attached to a 1" rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "WATER" stamped or molded into the lid. The test station for valve applications shall be a 2" flush style test station with wire connector on lid. Model # 12PH/7B1LP Handley Industries or CD14*TP SnakePit as manufactured by Copperhead Industries or approved equal. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be install to allow 12" of wire within the test station. The location of all test stations shall be recorded, and shown in the as-built drawings. Flush style test stations shall not be installed in pavement or sidewalk unless approved by the Engineer. Contractor shall extend tracer wire & move flush mount test station to nearest location out of pavement or sidewalk.

ANODES
The anodes shall be 3 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to 12 AWG CCS which shall be extended to the test station.

TRACER WIRE DETAIL
COST IS SUBSIDIARY TO PIPE INSTALLATION

FIRE HYDRANTS REQUIRED				
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
WL 1,Sta. 17+00.00	1351.9	1345.92	7.0	
WL 1,Sta. 32+80.00	1364.4	1359.77	5.5	

VALVE ASSEMBLY

MATERIALS LIST

- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
- 1- 6" VALVE BOX
- CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

CITY TAP

PROTECTIVE FILL DETAIL

ANCHORED VALVE ASSEMBLY

ANCHORED VALVE ASSEMBLY, SPECIAL

THRUST AT VALVES

VALVE	THRUST AT 150 #/sq
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

2" BLOWOFF ASSEMBLY

VALVE STEM EXTENSION DETAIL

STANDARD WATER ASSEMBLY DETAIL

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 CITY ENGINEER
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