

# CONSTRUCTION PLANS FOR WICHITA SEWAGE TREATMENT PLANT ONE HEADWORKS SCREENING EQUIPMENT REPLACEMENT

WICHITA, SEDGWICK COUNTY, KANSAS

CITY OF WICHITA PROJECT NO. 448-668060

OCA NO. 628310

GARY JANZEN, P.E., CITY ENGINEER

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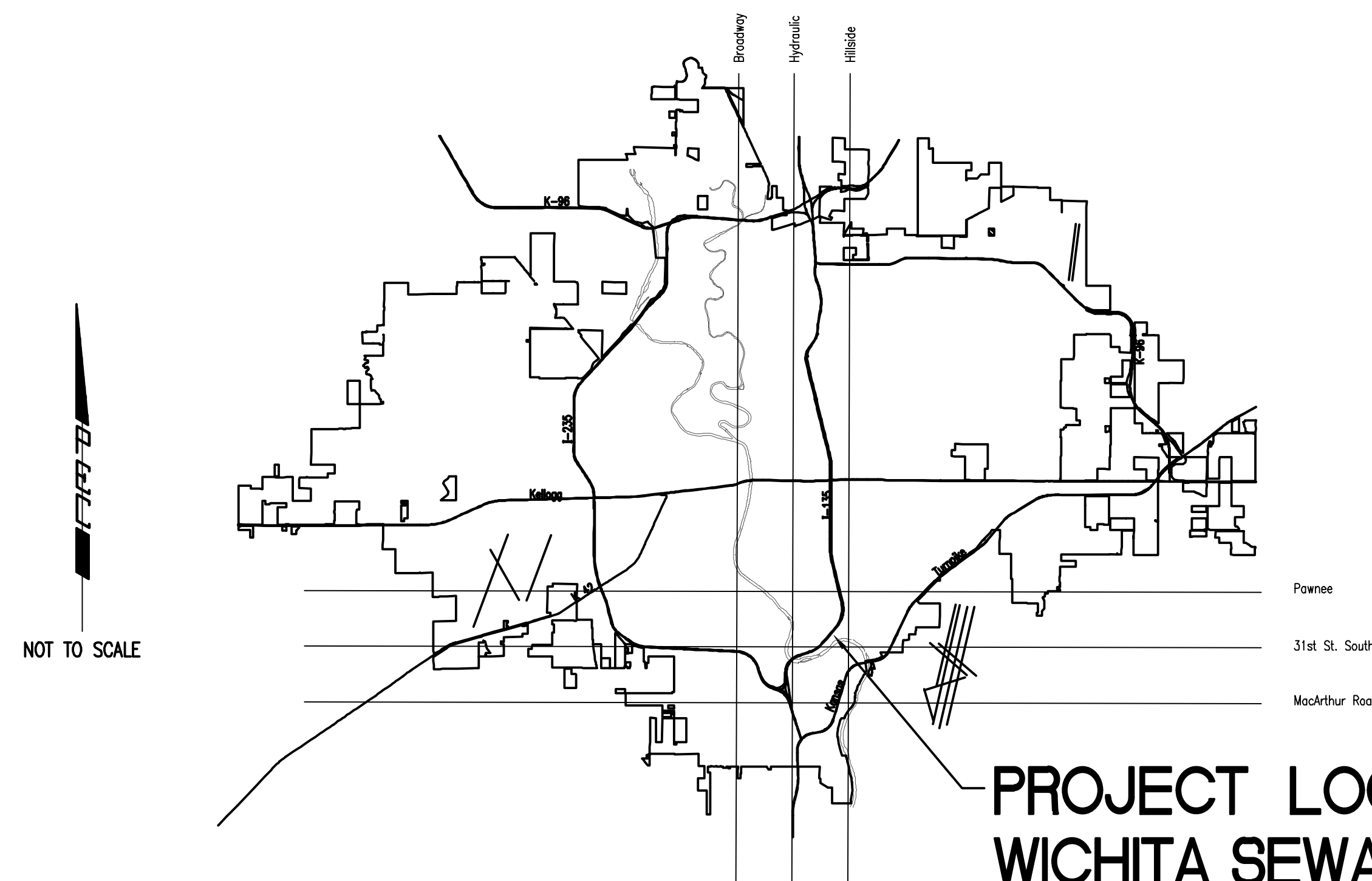
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VICINITY MAP

# OCTOBER 2019

PEC PROJECT NO. 34-180295-001-0042

PLANS PREPARED BY

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

## RECORD DRAWING

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE ENGINEER HAS NOT VERIFIED THE ACCURACY OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED HEREIN AS A RESULT.

*Sarah C. Unruh*

09/18/2020



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 Site: C:\Users\cal\Documents\180295-001\Drawings\180295-000 Key Map  
 US\Wichita-Civ\2019\180295\001\Drawings\180295-000 Key Map

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A

B

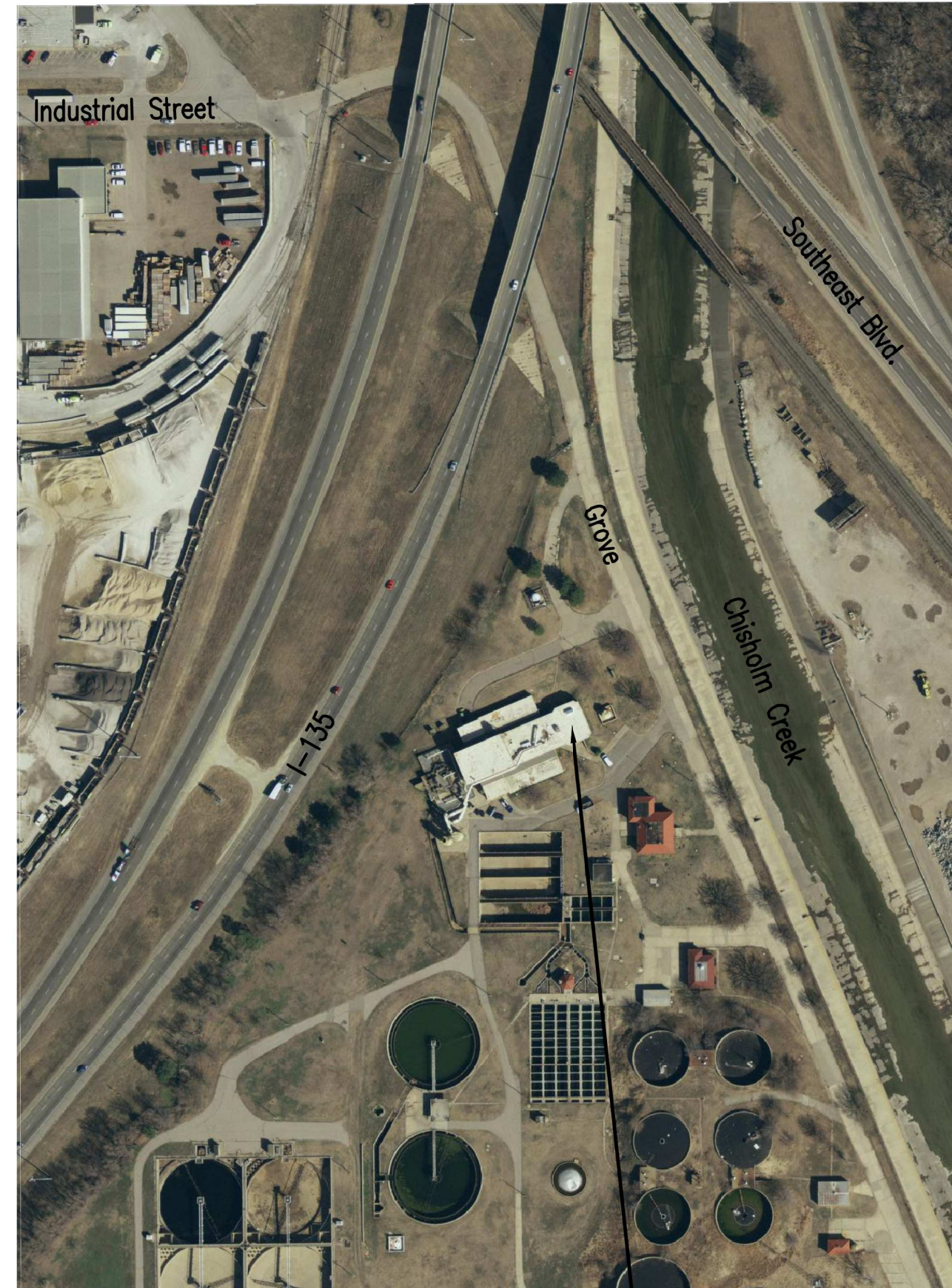
C

D

E

**GENERAL NOTES**

1. THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS TO PERMIT TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT EXISTING ROADWAYS AT ALL TIMES. THE CONTRACTOR SHALL ERECT WARNING SIGNS, FLASHING LIGHTS AND BARRICADES IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES TO ENSURE SAFETY.
2. AT LEAST 72 HOURS PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL CONTACT THE FOLLOWING PERSONNEL TO ADVISE THEM OF THE INTENDED WORK AND OF HIS SCHEDULE:  
 REBECCA LEWIS                      JAMIE BELDEN  
 316-303-8703 (office)              316-640-7255 (mobile)  
 rlewis@wichita.gov                      jbelden@wichita.gov
3. ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE CITY OF WICHITA SPECIFICATIONS AND STANDARDS UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL OBTAIN ALL LOCAL, COUNTY, STATE AND FEDERAL PERMITS AS REQUIRED.
5. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES SHALL BE REMOVED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WILL REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS MAY REQUIRE ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED DISPOSAL LOCATION.
6. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION, TYPE, SIZE AND CLASS OF EXISTING UTILITIES PRIOR TO MAKING CONNECTIONS. EXISTING UTILITY LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. CONTRACTOR SHALL MAKE ADJUSTMENTS AS REQUIRED AND APPROVED BY THE ENGINEER. SHALL BE SUBSIDIARY TO OTHER PAY ITEMS OF WORK.
7. THE CONTRACTOR SHALL CONTAIN HIS OPERATIONS AS TO NOT INTERRUPT PLANT OPERATIONS OR THE ACCESS OF PLANT DELIVERY VEHICLES.
8. THE CONTRACTOR SHALL COORDINATE ALL PLANT TIE-INS, SHUT DOWNS, PROCESS REMOVAL, AND PROCESS START UP WITH PLANT PERSONNEL. THESE WORK ACTIVITIES SHALL BE COMPLETED ONLY WITHIN THE WINDOW OF TIME ALLOCATED FOR THE PROCEDURE BY THE PLANT PERSONNEL.
9. ALL ELEVATIONS SHOWN ARE BASED ON NAVD 88 DATUM.
10. THE CONTRACTOR SHALL NOT START WORK ON THE PROJECT UNTIL THE PROJECT INSPECTOR IS ASSIGNED AND IS PRESENT ON THE SITE. ANY WORK DONE WITHOUT INSPECTION WILL BE REQUIRED TO BE UNCOVERED FOR INSPECTION AT THE CONTRACTORS EXPENSE.
11. THE CONTRACTOR SHALL CLEAN THE SITE UPON COMPLETION OF THE WORK. ANY NEW ITEMS REQUIRING PAINTING SHALL BE SUFFICIENTLY CLEANED AND PREPARED PRIOR TO PAINTING.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HANDLING AND DISPOSAL OF ALL REMOVED EQUIPMENT AND MATERIALS UNLESS SPECIFICALLY NOTED TO BE SALVAGED TO THE OWNER.



PROJECT LOCATION  
 WICHITA SEWAGE TREATMENT PLANT ONE



HEADWORKS SCREENING EQUIPMENT REPLACEMENT

CITY OF WICHITA, KANSAS

Issue:	

JOB NO.	180295-001
DATE	OCTOBER 2019
PM	MDK
DESIGNED BY	SCU
DRAWN BY	CAL
CHECKED BY	MDK

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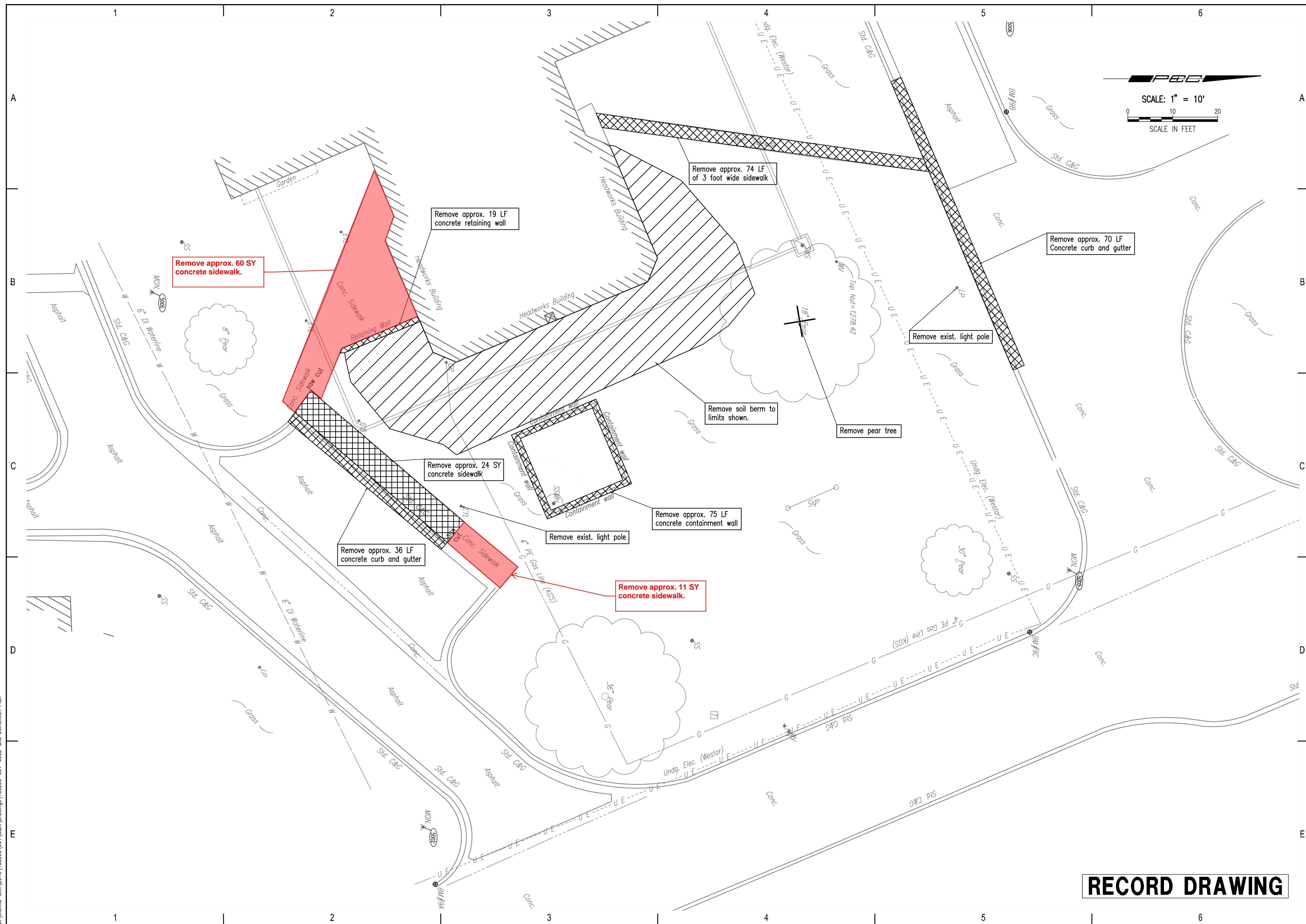
KEY MAP AND GENERAL NOTES

G101

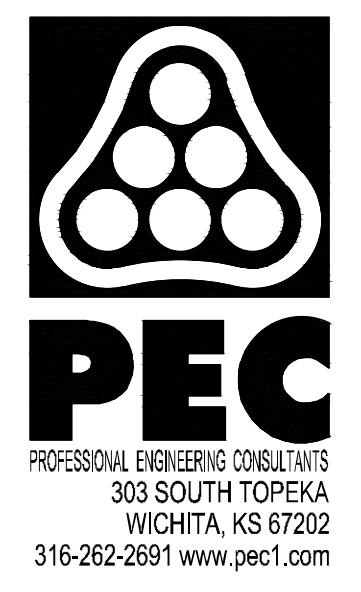
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SCALE: 1" = 10'  
 SCALE IN FEET



HEADWORKS SCREENING EQUIPMENT REPLACEMENT

CITY OF WICHITA, KANSAS

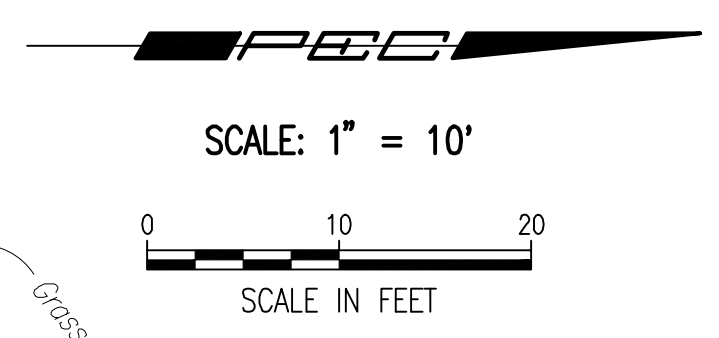
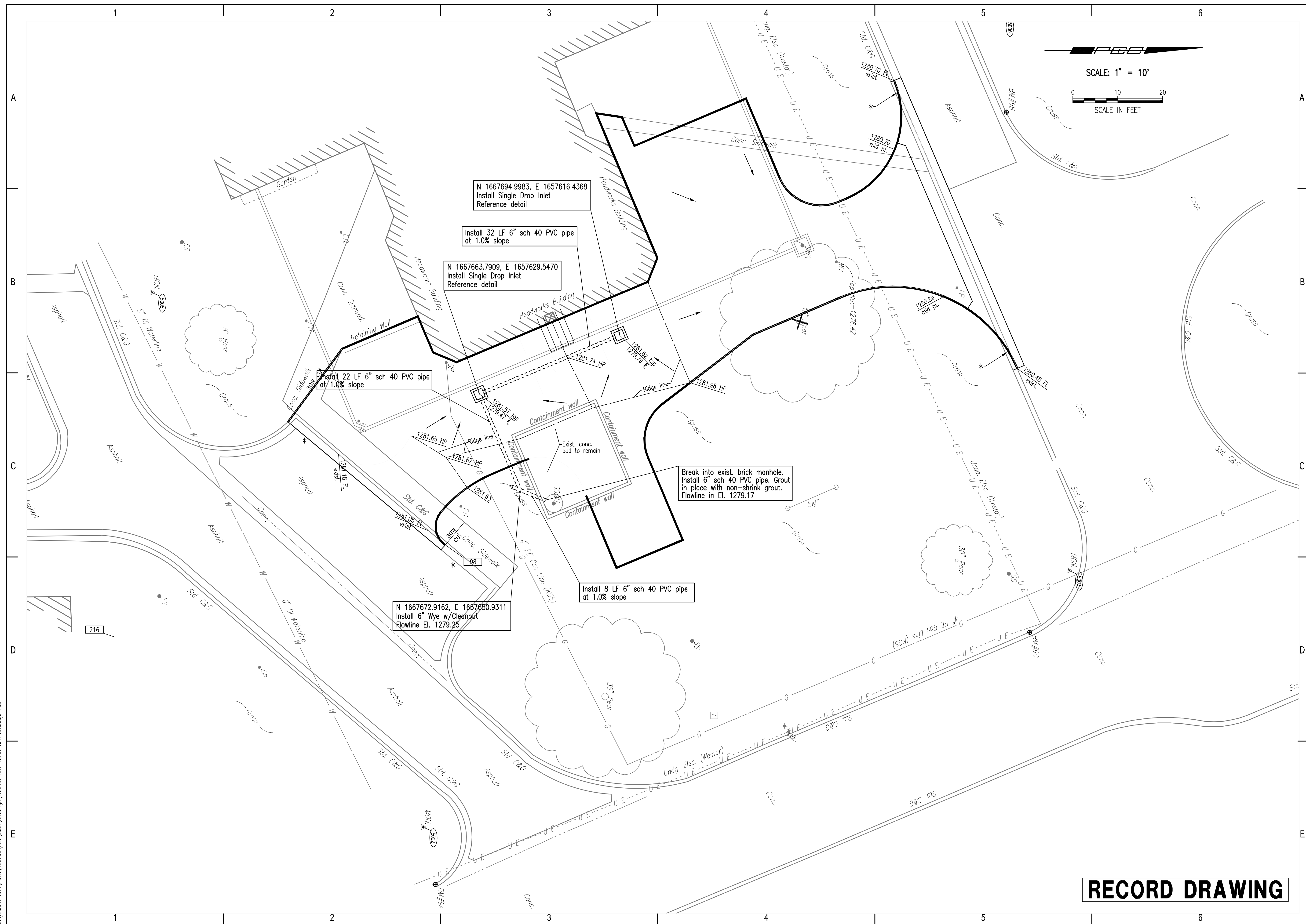
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JOB NO.	180295-001
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DRAWN BY	CAL
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**RECORD DRAWING**

SITE DEMOLITION PLAN

C002

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N 1667694.9983, E 1657616.4368  
Install Single Drop Inlet  
Reference detail

Install 32 LF 6" sch 40 PVC pipe  
at 1.0% slope

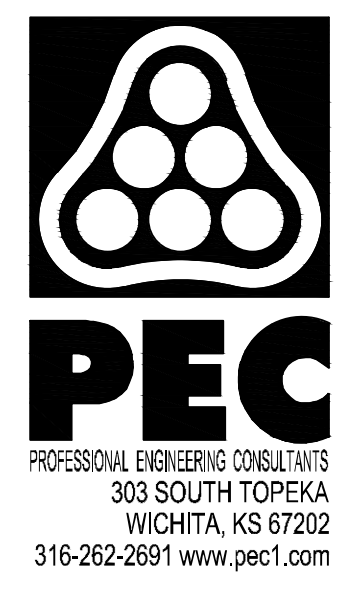
N 1667663.7909, E 1657629.5470  
Install Single Drop Inlet  
Reference detail

Install 22 LF 6" sch 40 PVC pipe  
at 1.0% slope

Break into exist. brick manhole.  
Install 6" sch 40 PVC pipe. Grout  
in place with non-shrink grout.  
Flowline in El. 1279.17

Install 8 LF 6" sch 40 PVC pipe  
at 1.0% slope

N 1667672.9162, E 1657650.9311  
Install 6" Wye w/Cleanout  
Flowline El. 1279.25



HEADWORKS SCREENING EQUIPMENT REPLACEMENT

CITY OF WICHITA, KANSAS

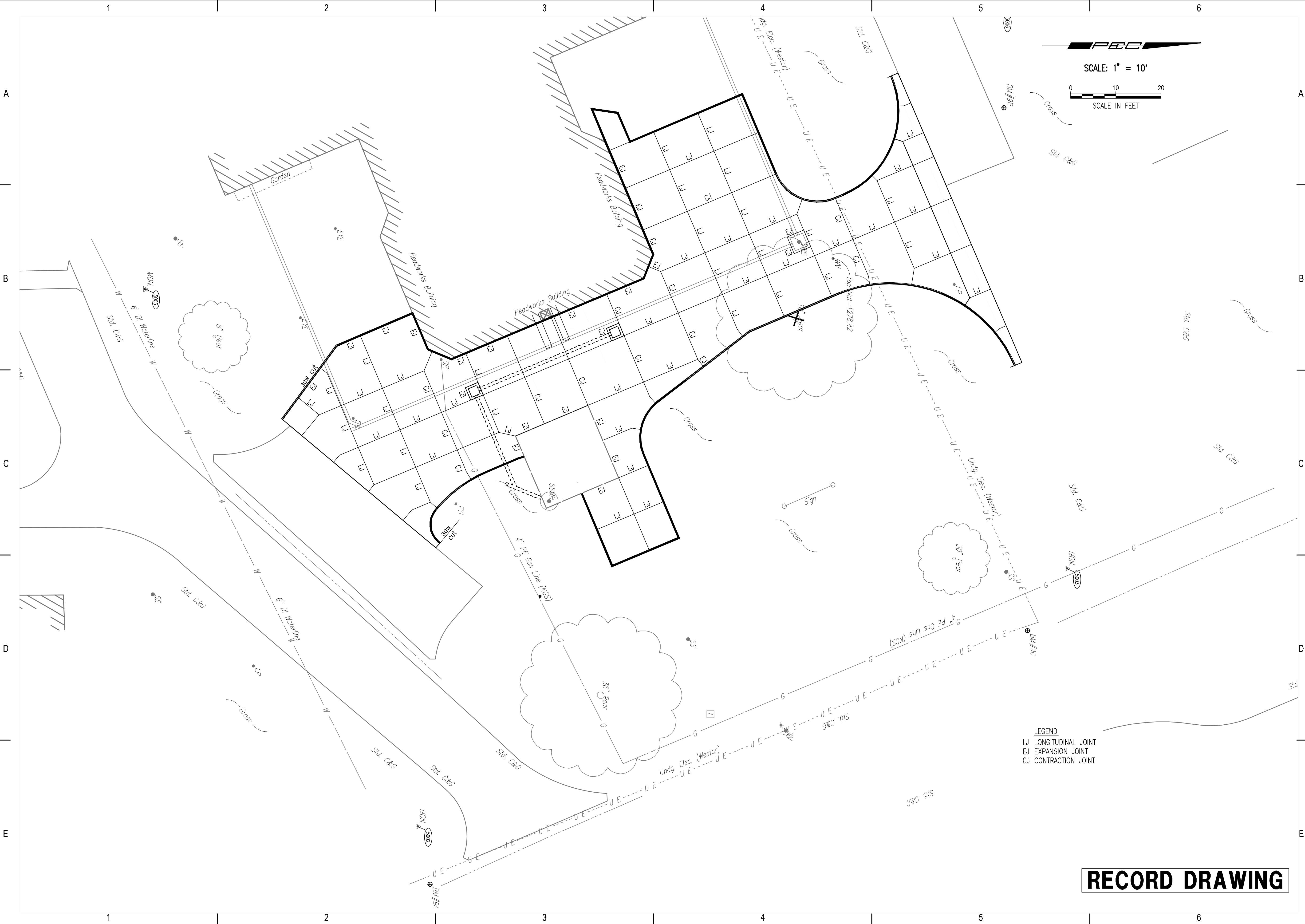
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JOB NO.	180295-001
DATE	OCTOBER 2019
PM	MDK
DESIGNED BY	SCU
DRAWN BY	CAL
CHECKED BY	MDK

**RECORD DRAWING**

C003

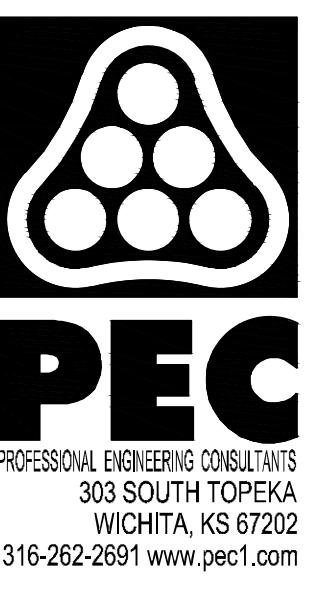


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**LEGEND**  
 LJ LONGITUDINAL JOINT  
 EJ EXPANSION JOINT  
 CJ CONTRACTION JOINT

**RECORD DRAWING**



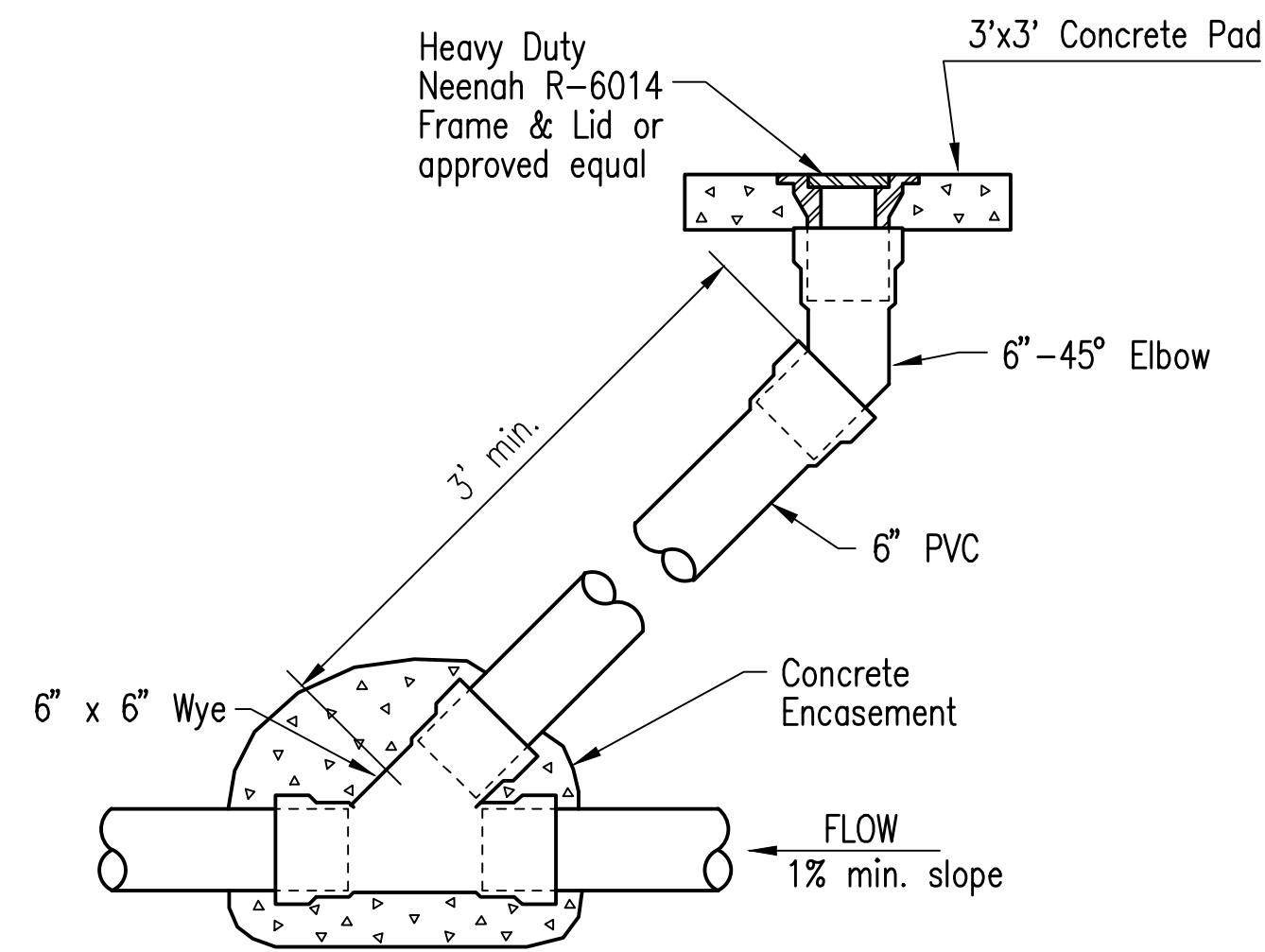
HEADWORKS SCREENING EQUIPMENT REPLACEMENT

CITY OF WICHITA, KANSAS

Issue:	
JOB NO.	180295-001
DATE	OCTOBER 2019
PM	MDK
DESIGNED BY	SCU
DRAWN BY	CAL
CHECKED BY	MDK

PAVEMENT JOINTING PLAN

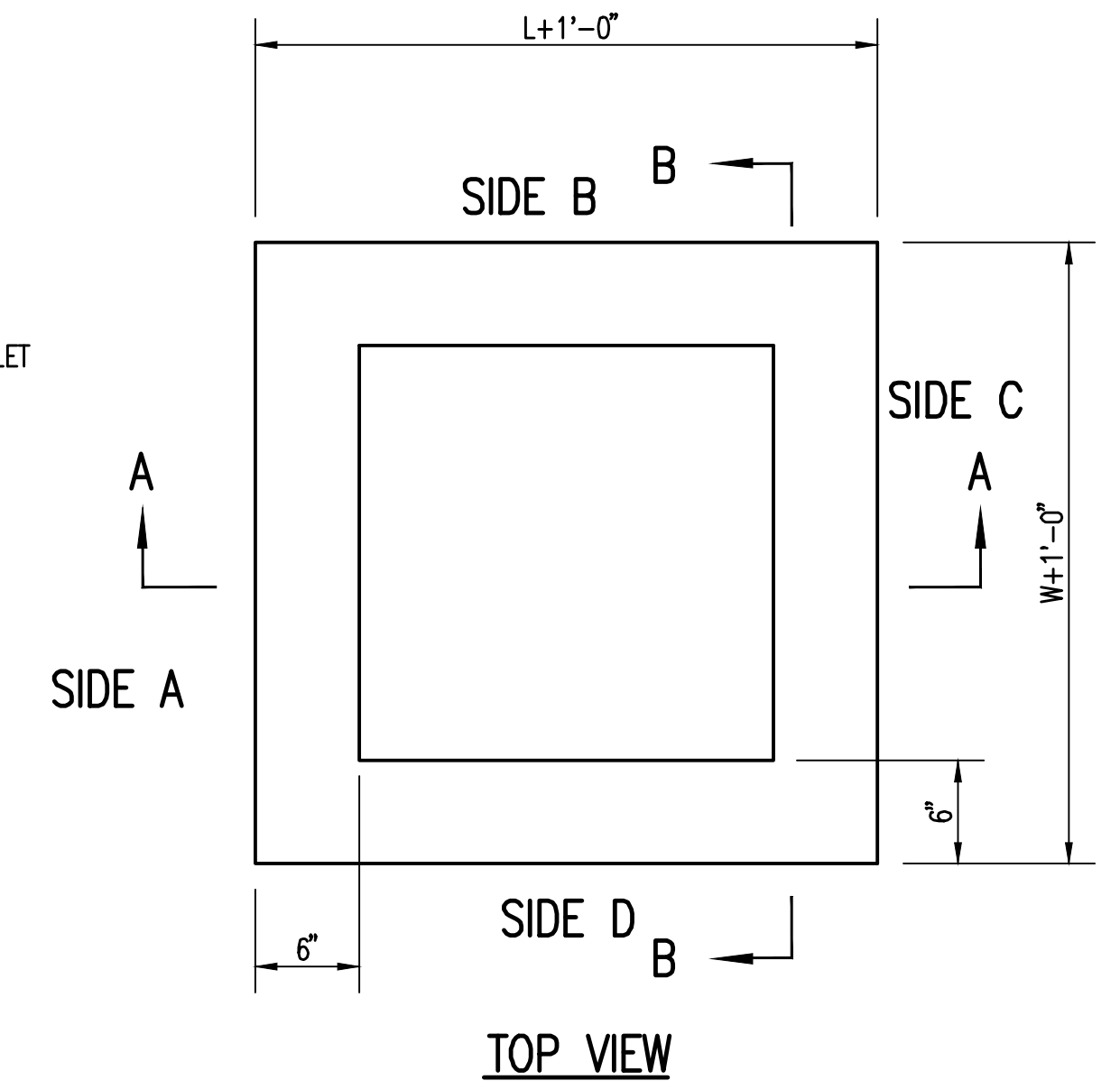
**C005**



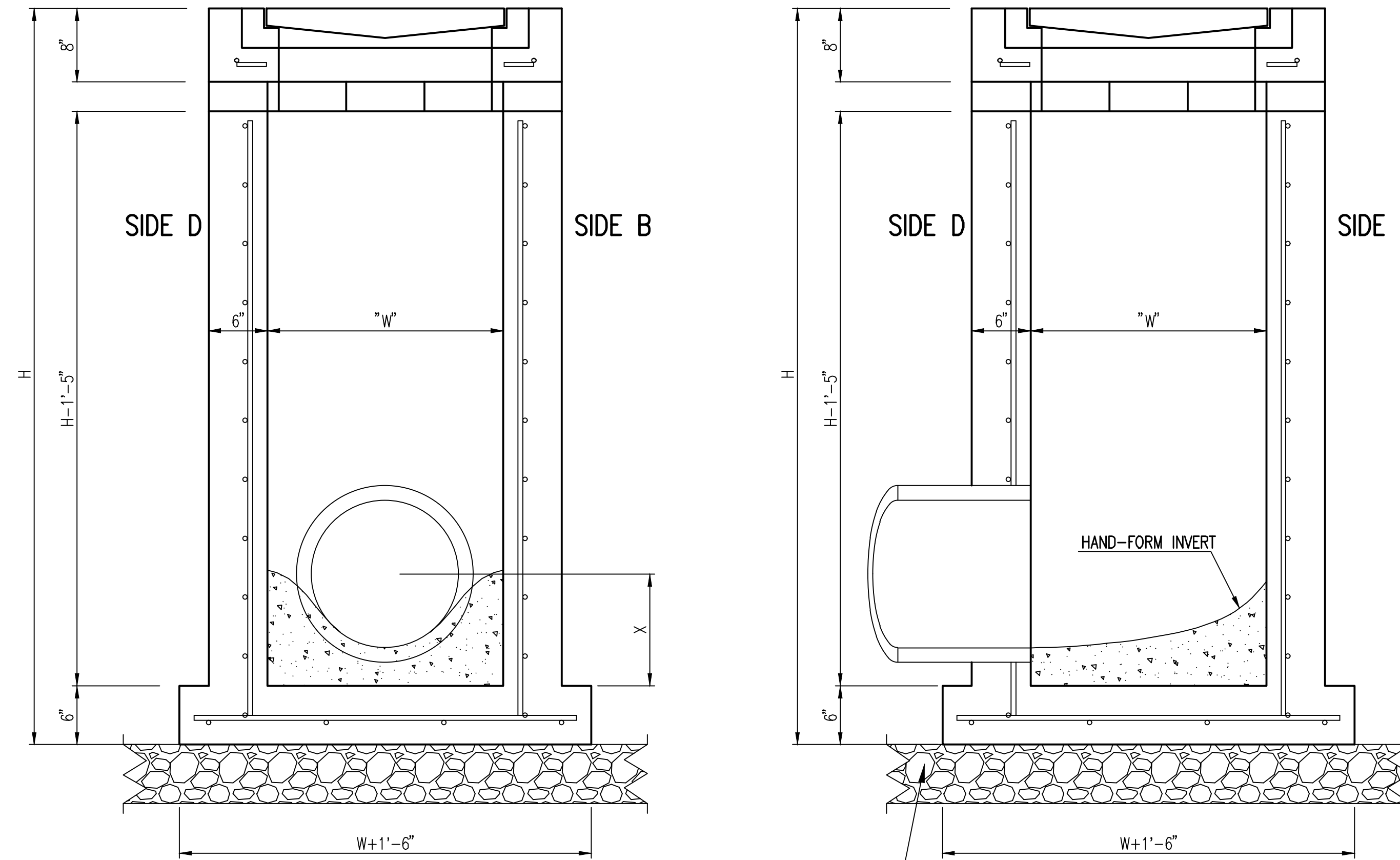
**6" CLEANOUT ASSEMBLY DETAIL**

**GENERAL NOTES**

1. GRATE FRAME TO BE INSTALLED ON THIN MORTAR CUSHION TO INSURE FULL SUPPORT ALONG BRICK. CONCRETE USED FOR INLET CONSTRUCTION SHALL CONFORM TO CITY OF WICHITA SPECIFICATIONS FOR CONCRETE PAVEMENT MIX.
2. INLET INVERT SHALL BE SHAPED WITH 8 SACK SAND MIX CONCRETE TO CREATE FLOW CHANNELS AND TO INCREASE HYDRAULIC EFFICIENCY SUCH THAT THE INLET WILL BE SELF CLEANING BETWEEN ALL INLET AND/OR OUTLET PIPES.
3. THE ENDS OF ALL PIPES INSTALLED IN INLETS SHALL BE CUT OFF FLUSH WITH THE INSIDE FACE OF THE INLET WALL.
4. INLET FRAME AND GRATE TO BE DEETER #2433, EJIW #5391-Z1 OR APPROVED EQUAL FOR 2'x2' SINGLE DROP INLET.
5. CONTRACTOR SHALL REMOVE LIFTING HOOKS AFTER INSTALLATION. RECESSES IN INLET WALL SHALL BE GROUTED FLUSH TO THE INLET WALL WITH HYDRAULIC CEMENT AFTER THE INLET IS IN PLACE. LIFTING HOLES THRU THE INLET WALL WILL NOT BE ACCEPTED.



**FLUSH STYLE TOP**



**SECTION "B-B"  
END OUTLET**

**SECTION "B-B"  
SIDE OUTLET**

6" CRUSHED ROCK BASE BEDDING TO LIMITS OF EXCAVATION PER CITY OF WICHITA SPECIFICATIONS

W=2' and L=2' for SINGLE DROP INLET

The structure(s) on this detail sheet are designed for HS-20 loading at these specific dimensions only. If larger dimensions are required, the ENGINEER shall provide a project specific structure design for approval by the City Engineer's office.

**RECORD DRAWING**

REVISED: MARCH 2015



**DROP INLET AND CLEANOUT DETAIL**

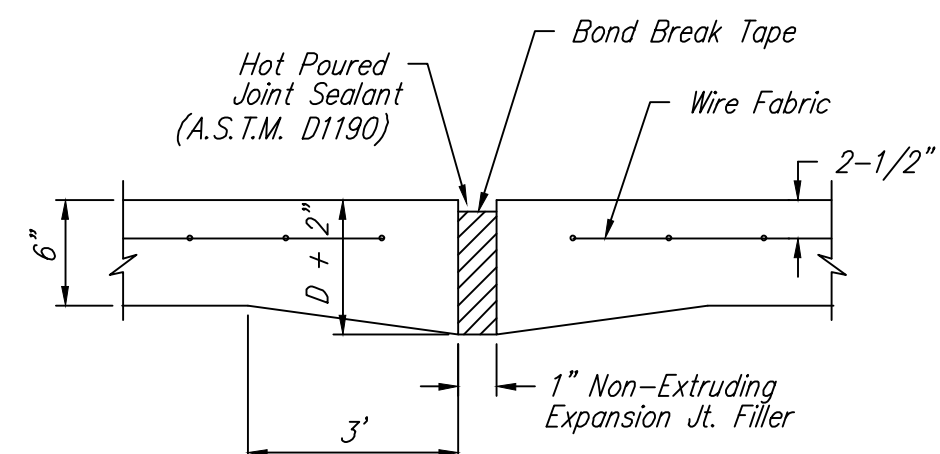
CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER	OCA NUMBER	DATE
-	-	-

CITY ENGINEER'S OFFICE  
CITY HALL - SEVENTH FLOOR  
455 NORTH MAIN STREET  
WICHITA, KANSAS 67202-1620  
(316) 268-4501

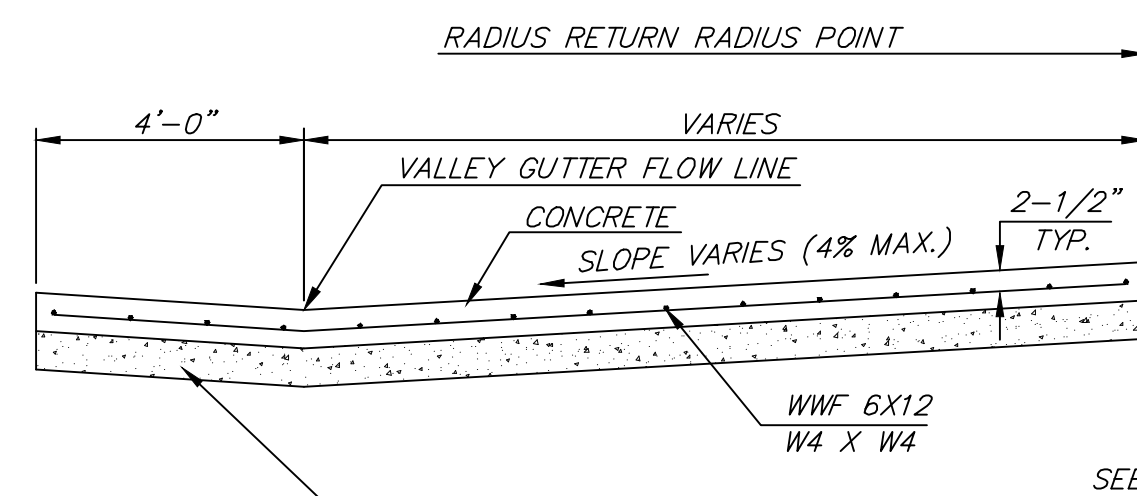
SHEET

**C006**

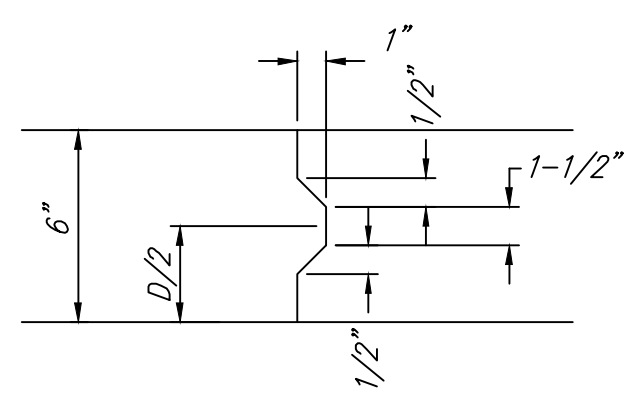


**EXPANSION JOINT**

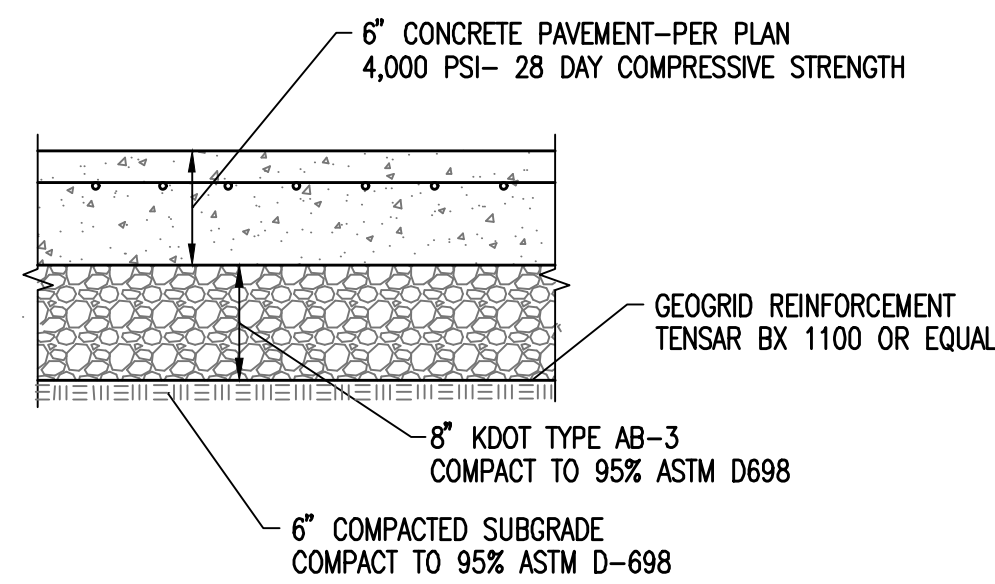
NOTE: Extra Thickness to be Subsidiary to Price of Square Yards Pavement



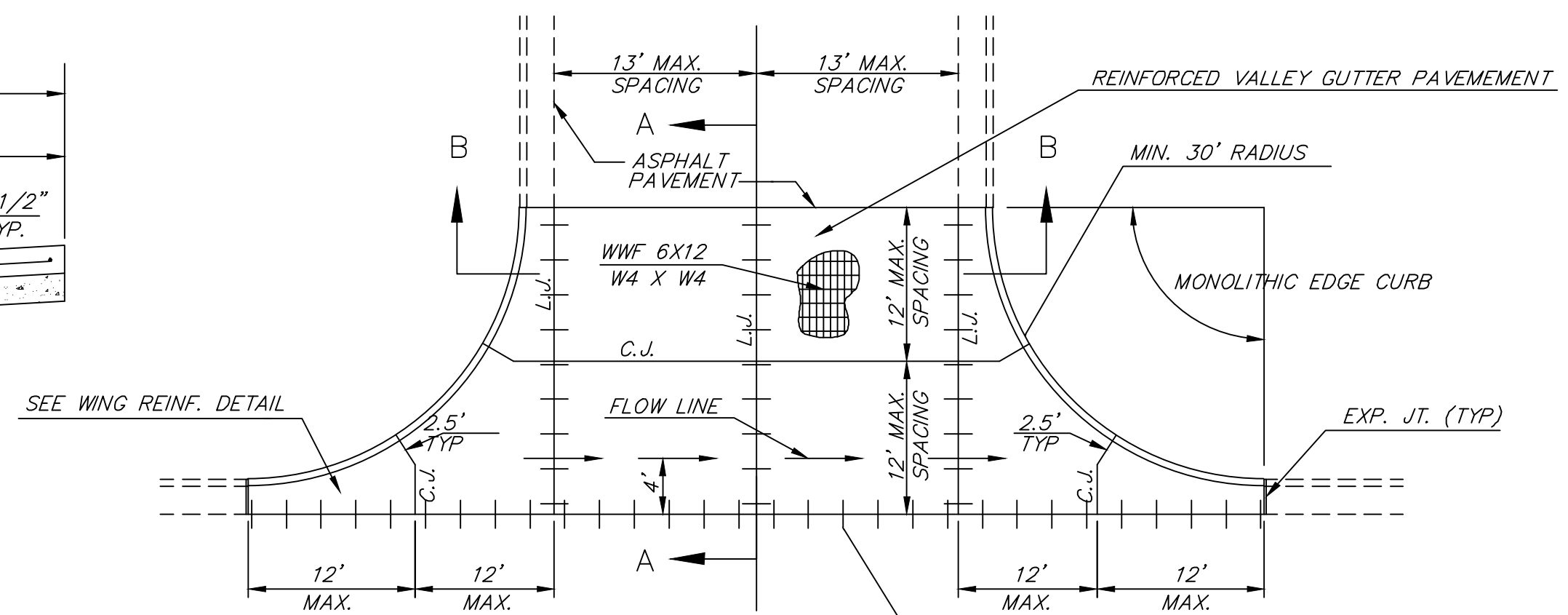
**SECTION A-A**



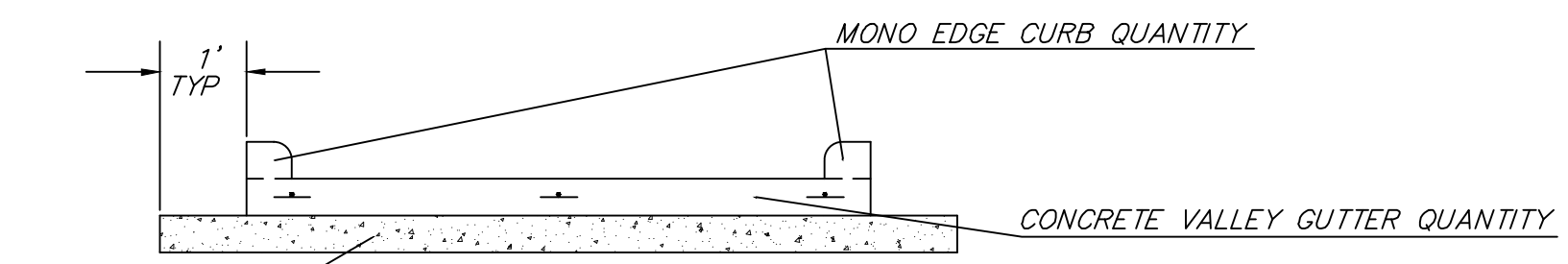
**KEYWAY DETAIL**



**6\"/>**

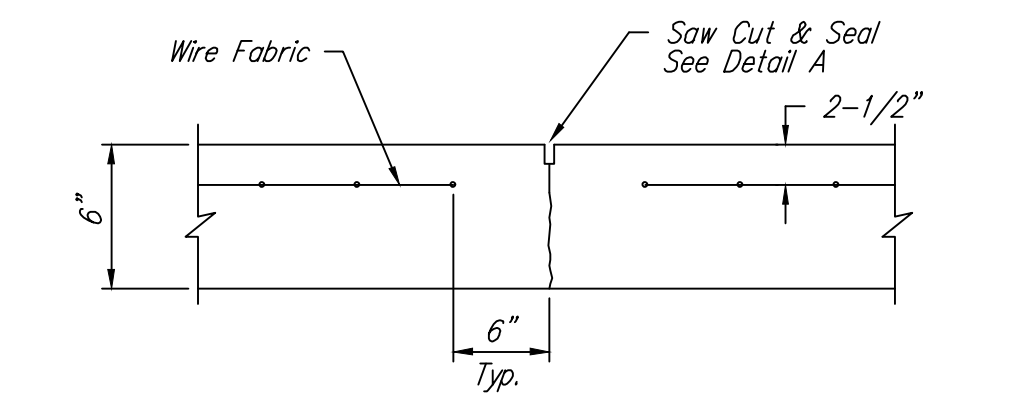


**PLAN**

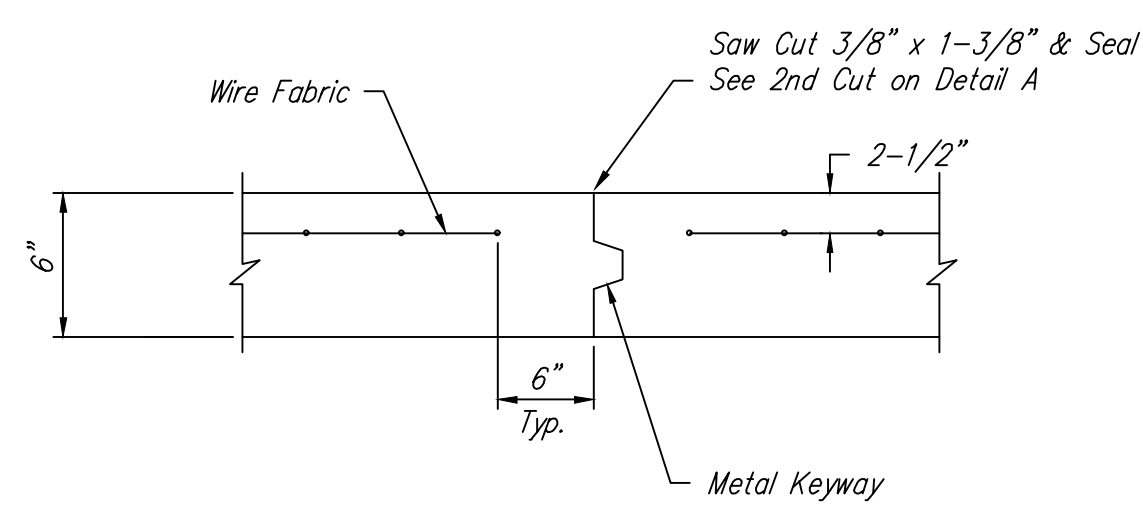


**SECTION B-B**

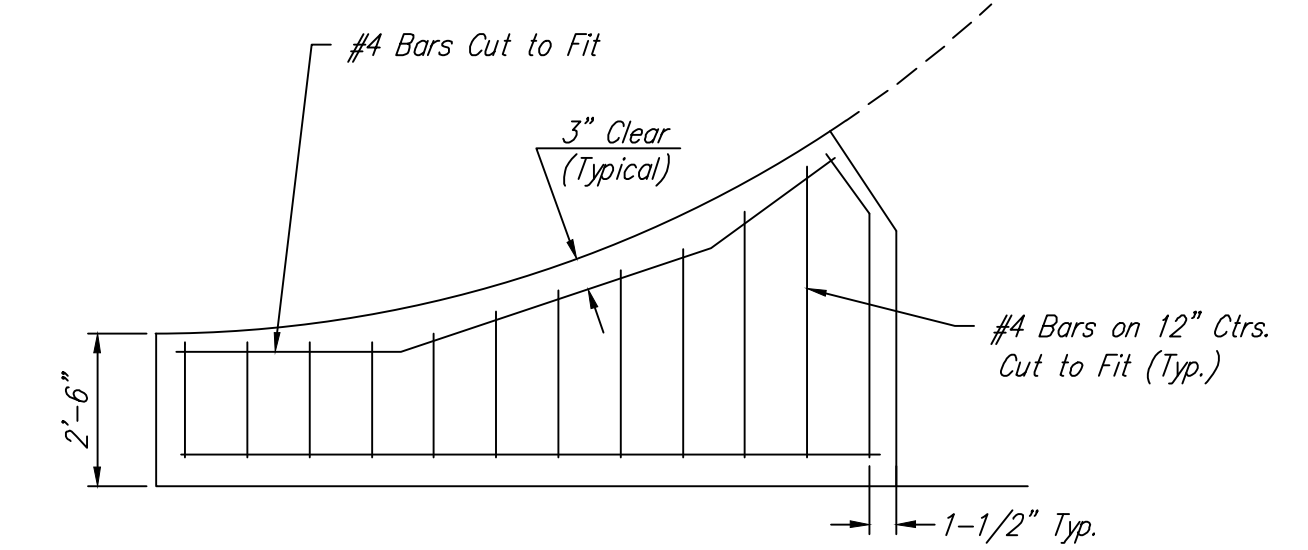
**REINFORCED VALLEY GUTTER DETAIL**



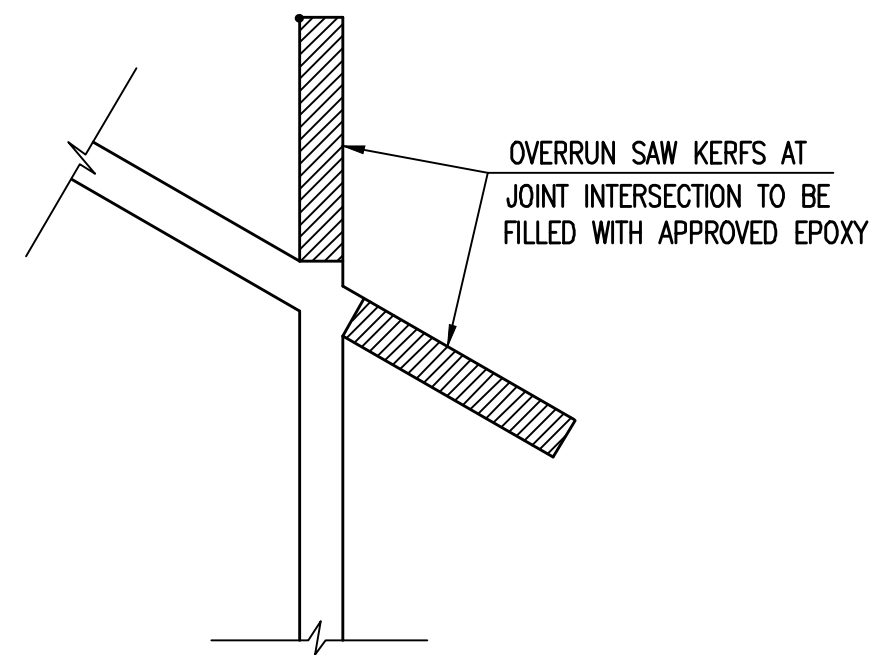
**CONTRACTION JOINT DETAIL (C.J.)**



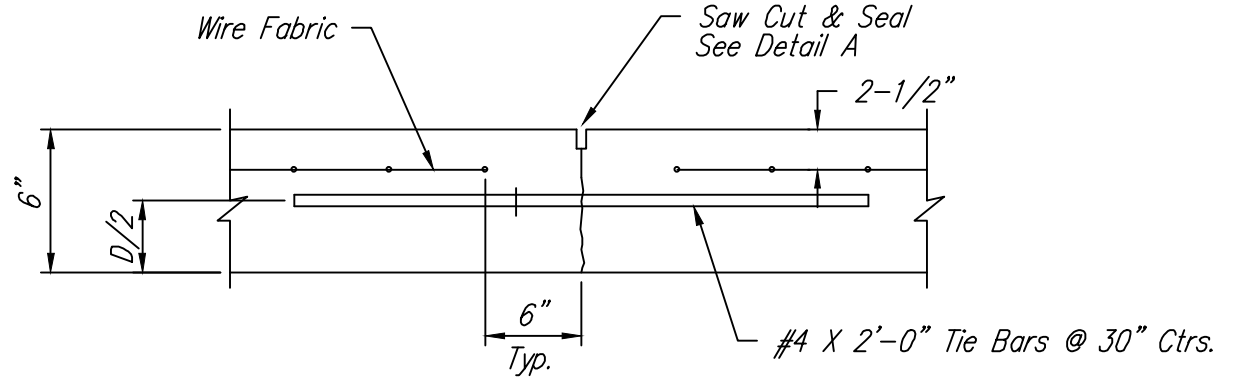
**OPTIONAL CONTRACTION JOINT**



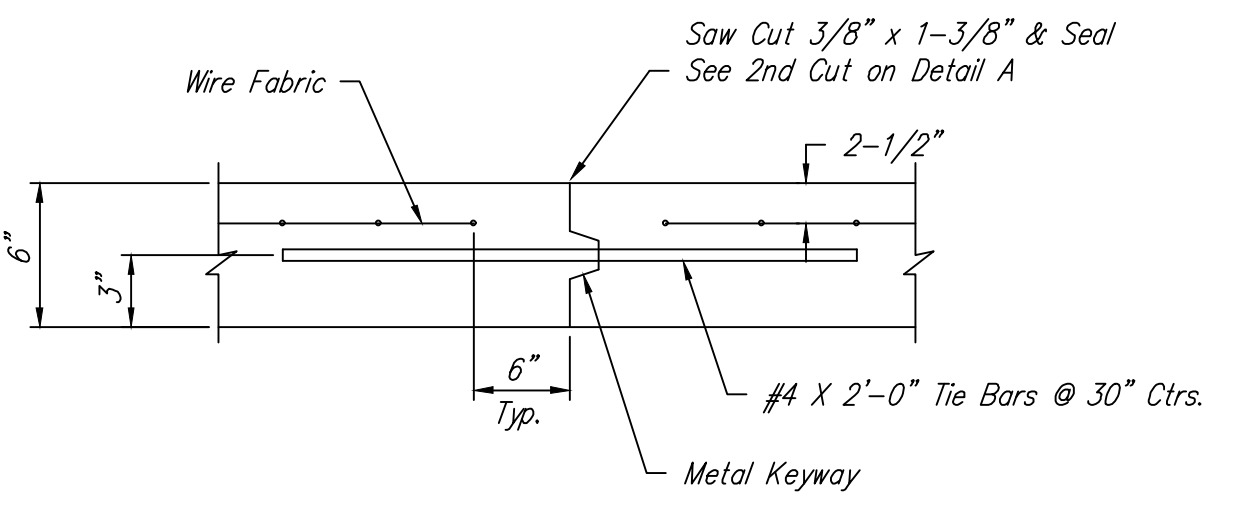
**WING REINFORCING DETAIL**



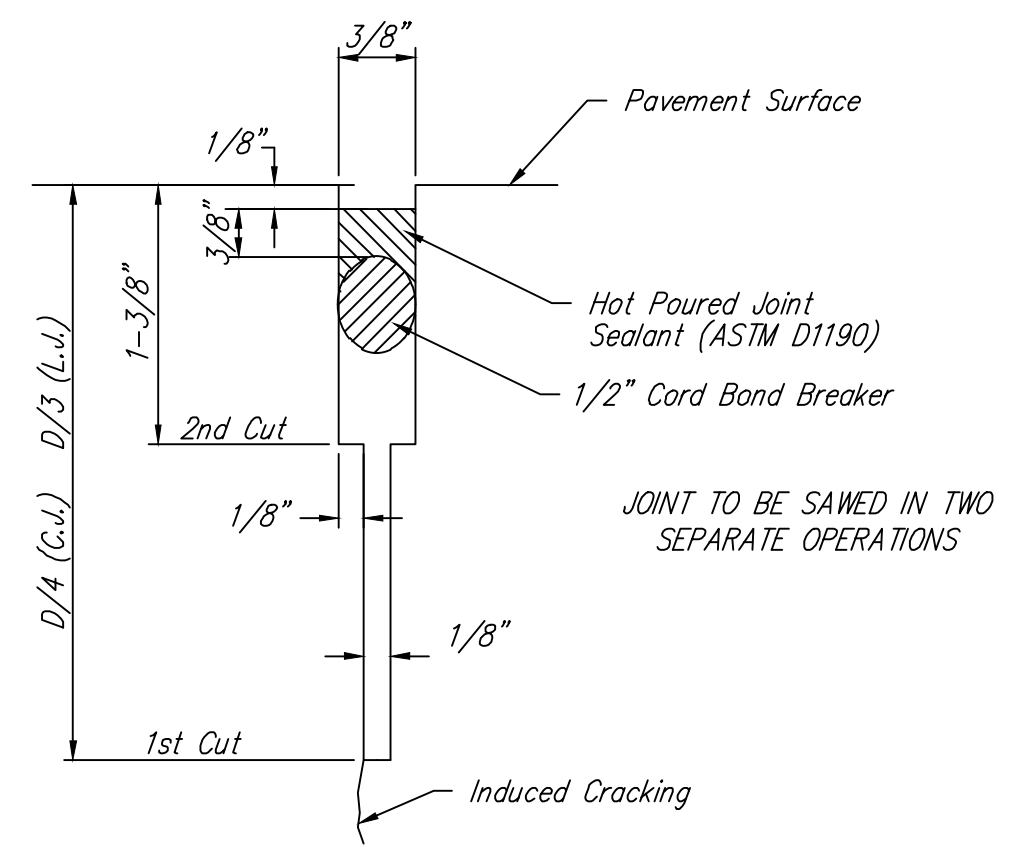
**KERF DETAIL**



**LONGITUDINAL JOINT DETAIL (L.J.)**



**OPTIONAL LONGITUDINAL JOINT DETAIL (L.J.)**



**SAW JOINT DETAIL (DETAIL A)**

**WELDED WIRE FABRIC**

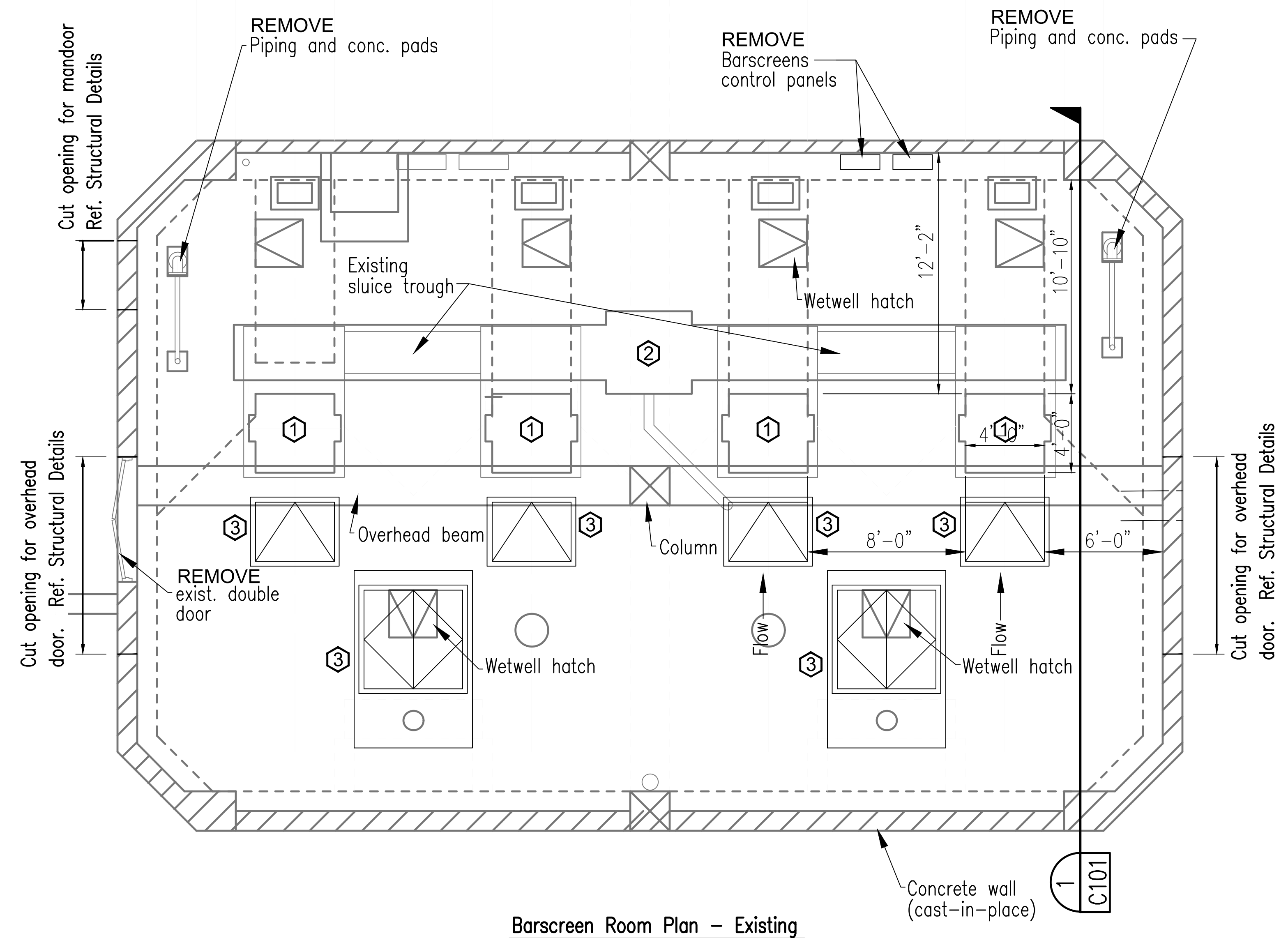
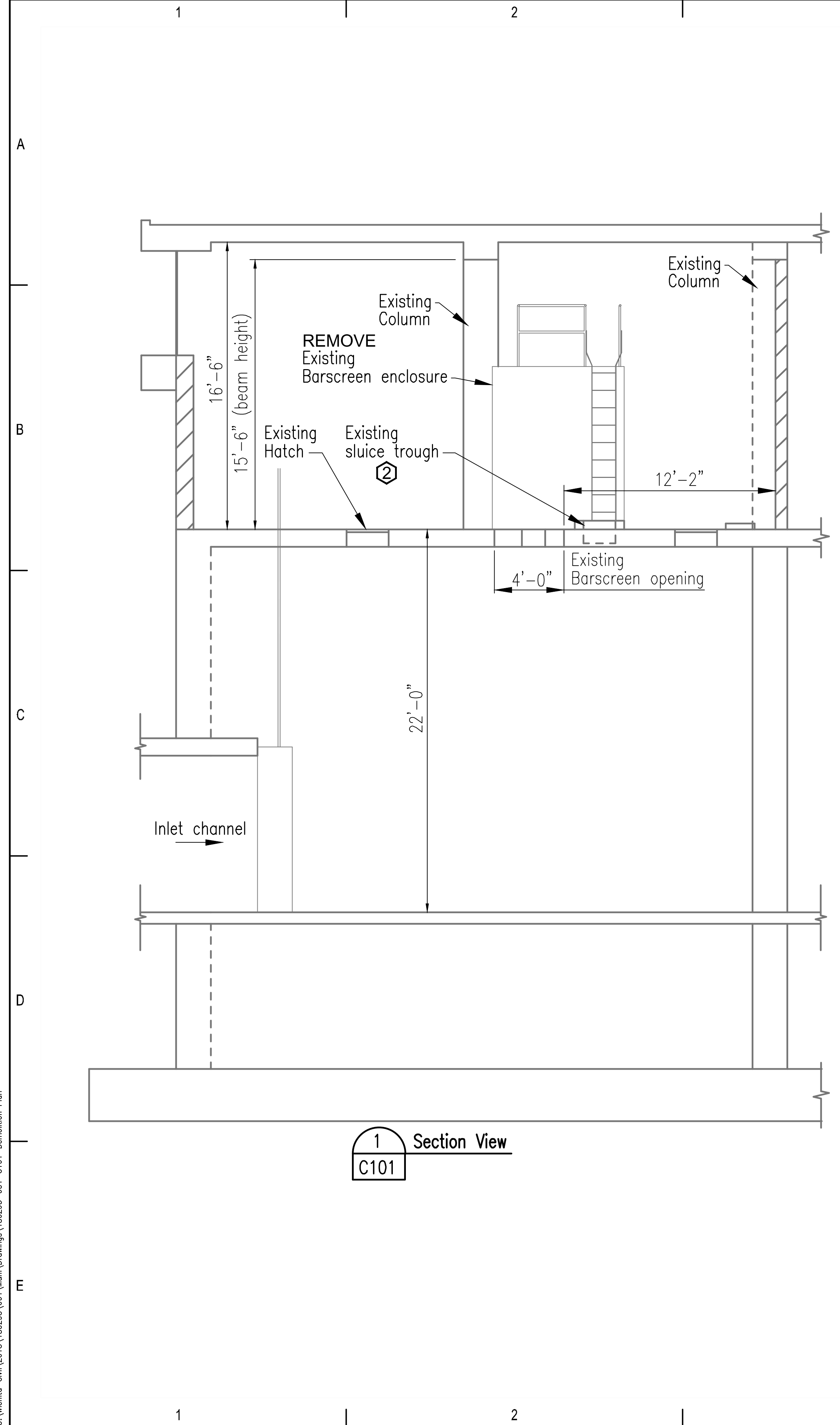
REINFORCING FABRIC SHALL BE FURNISHED IN FLAT SHEETS. THE CONTRACTOR MAY PROVIDE A DIFFERENT PATTERN OF FABRIC AS LONG AS A MINIMUM OF 0.054 SQ. IN./ FT. OF REINFORCING IS PROVIDED IN EACH DIRECTION. WELDED WIRE FABRIC SHALL BE CUT IN THE FIELD AS REQUIRED TO CONFORM TO THE SHAPE OF THE PANEL TO BE REINFORCED.

**RECORD DRAWING**

REVISION MAY 2017		SECTION B-B, ROCK EXTENDED ONE FOOT BEYOND PAVEMENT	
<b>PAVEMENT DETAILS</b> CITY ENGINEER <b>GARY JANZEN, P.E.</b>			
PROJECT NUMBER	OCA NUMBER	DATE	
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501			SHEET <b>C007</b>

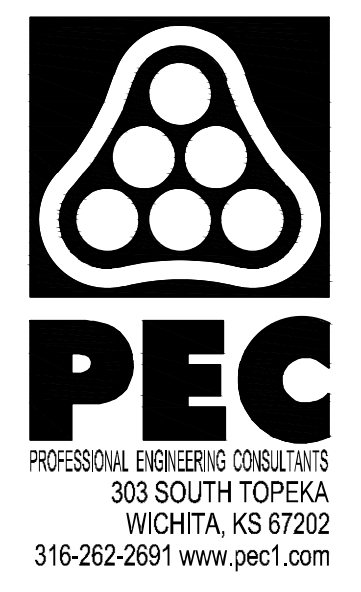
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 U:\Wichita-Civ\2019\180295\001\Main\Drawings\180295-001-C101-Demolition Plan



- ① Remove existing barscreen enclosure, control panels (Reference Electrical) and support. Contractor responsible for disposal of all removed equipment, accessories, and materials.
- ② Remove sluce trough curb flush with floor - Reference Structural drawings for details and requirements.
- ③ Remove concrete floor - Reference Structural drawings for details and requirements.

**RECORD DRAWING**



HEADWORKS SCREENING EQUIPMENT REPLACEMENT

CITY OF WICHITA, KANSAS

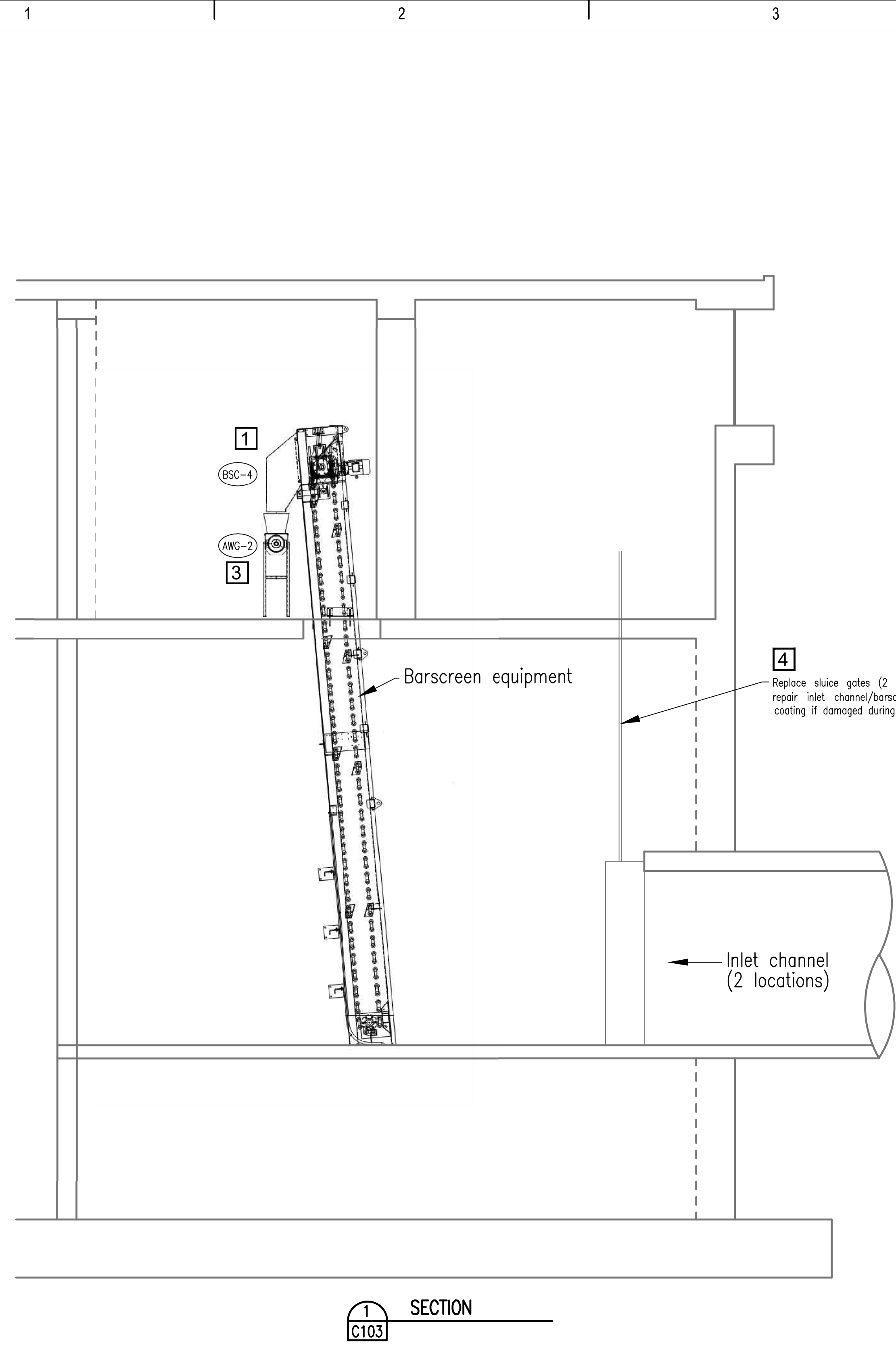
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JOB NO.	180295-001	
DATE	OCTOBER 2019	
PM	MDK	
DESIGNED BY	SCU	
DRAWN BY	CAL	
CHECKED BY	MDK	

HEADWORKS DEMOLITION PLAN

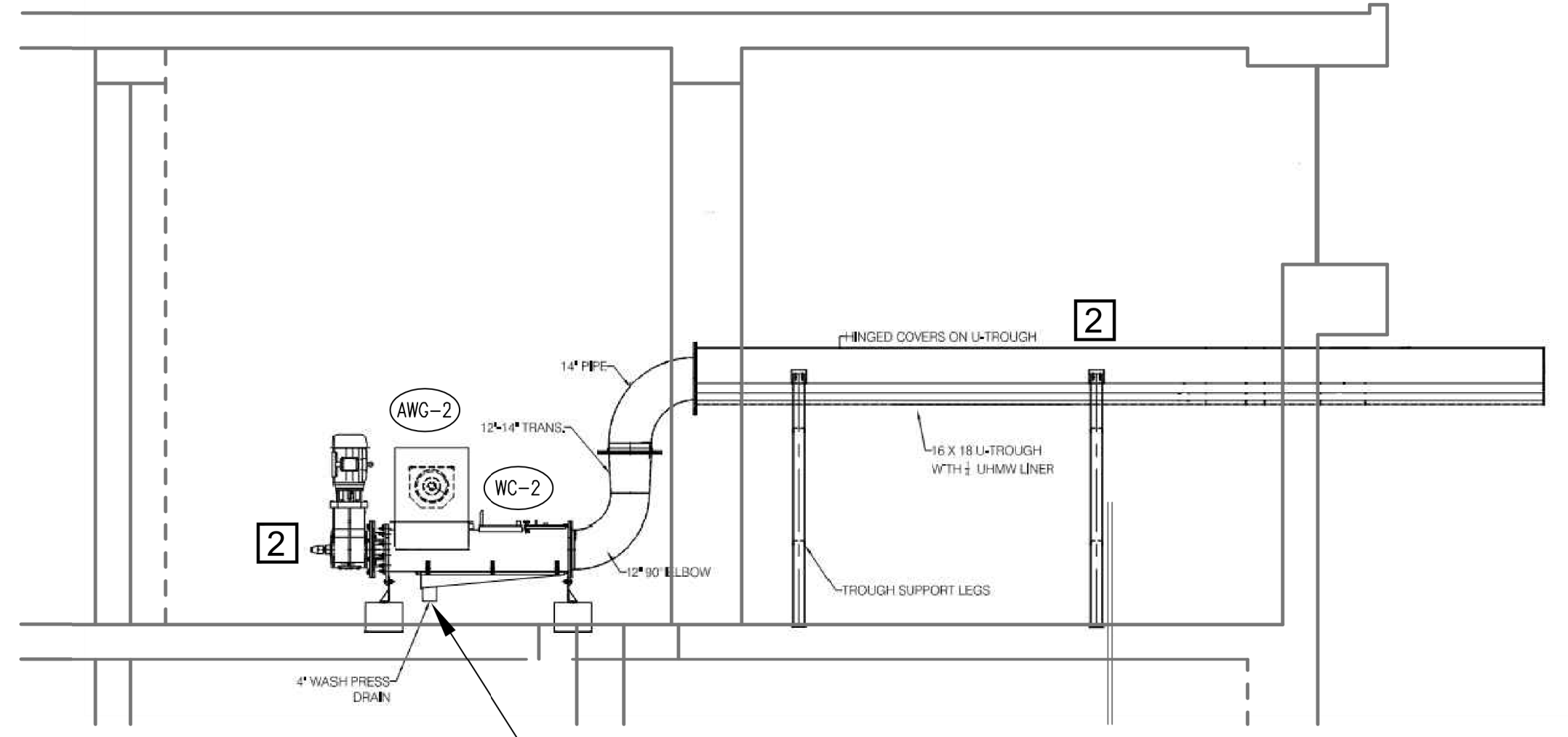
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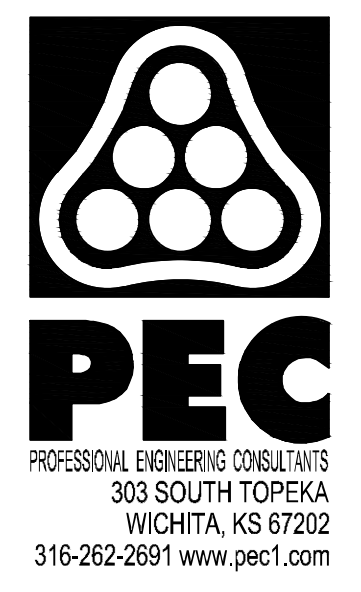
1 SECTION  
C103



2 SECTION  
C103

- 1 Install Barscreens (4 required)
- 2 Install Washer Compactor and Discharge Chute and required supports (2 required)
- 3 Install Auger Equipment and required supports (2 required)
- 4 Install Sluice Gates (4 required)

**RECORD DRAWING**



HEADWORKS SCREENING EQUIPMENT REPLACEMENT

CITY OF WICHITA, KANSAS

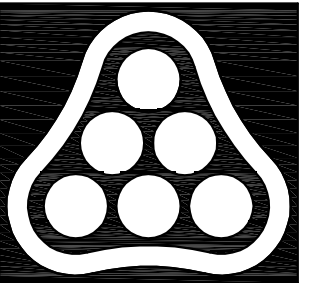
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JOB NO.	180295-001
DATE	OCTOBER 2019
PM	MDK
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HEADWORKS EQUIPMENT SECTIONS

C103



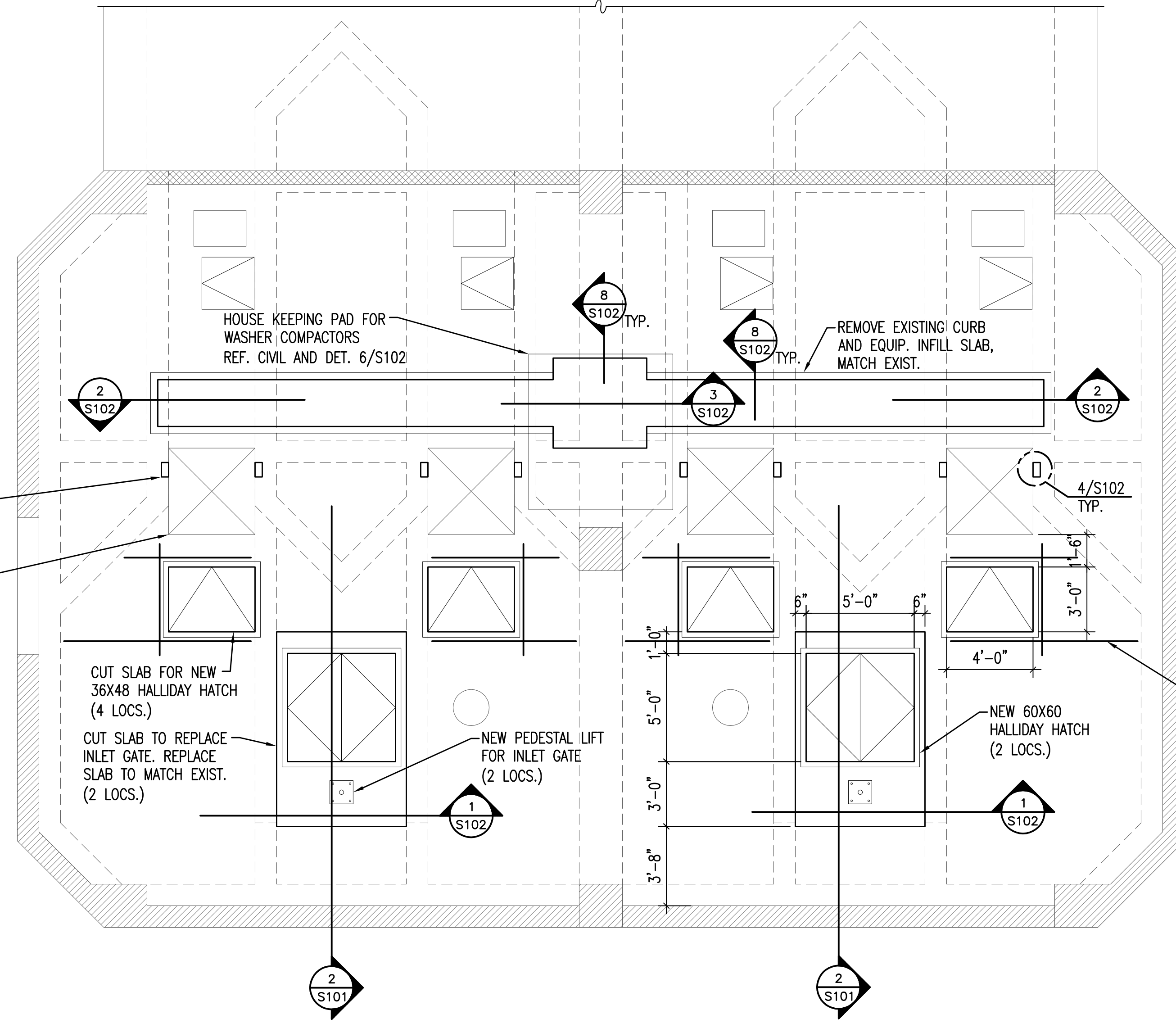




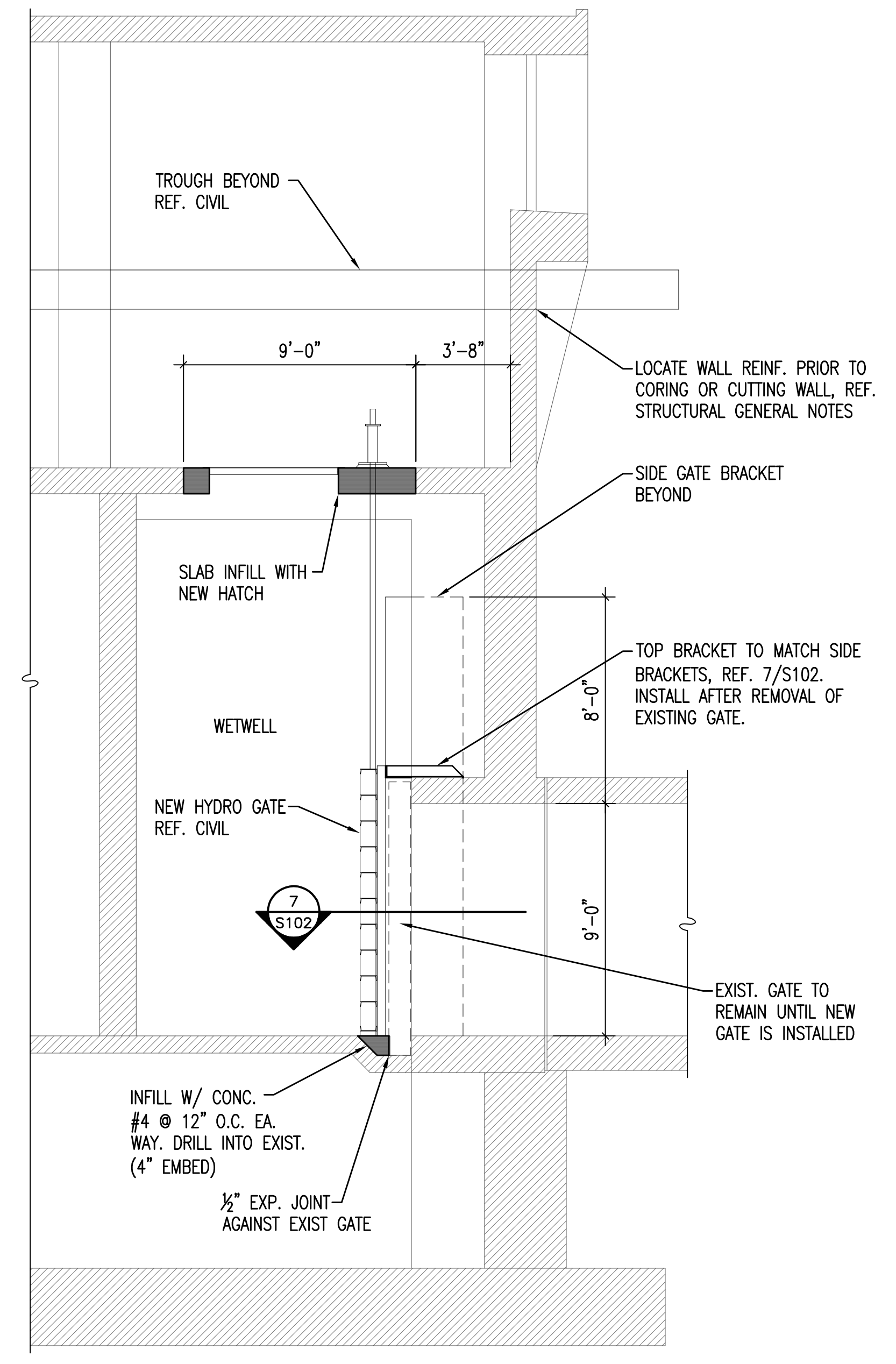
**PEC**  
 PROFESSIONAL ENGINEERING CONSULTANTS  
 303 SOUTH TOPEKA  
 WICHITA, KS 67202  
 316-262-2691 www.pec1.com



CITY OF WICHITA, KANSAS



**1 FLOOR PLAN AT GRADE**  
 S101 1/4"=1'-0"



**2 WALL SECTION**  
 S101 1/4"=1'-0"

**RECORD DRAWING**

HEADWORKS SCREENING EQUIPMENT REPLACEMENT

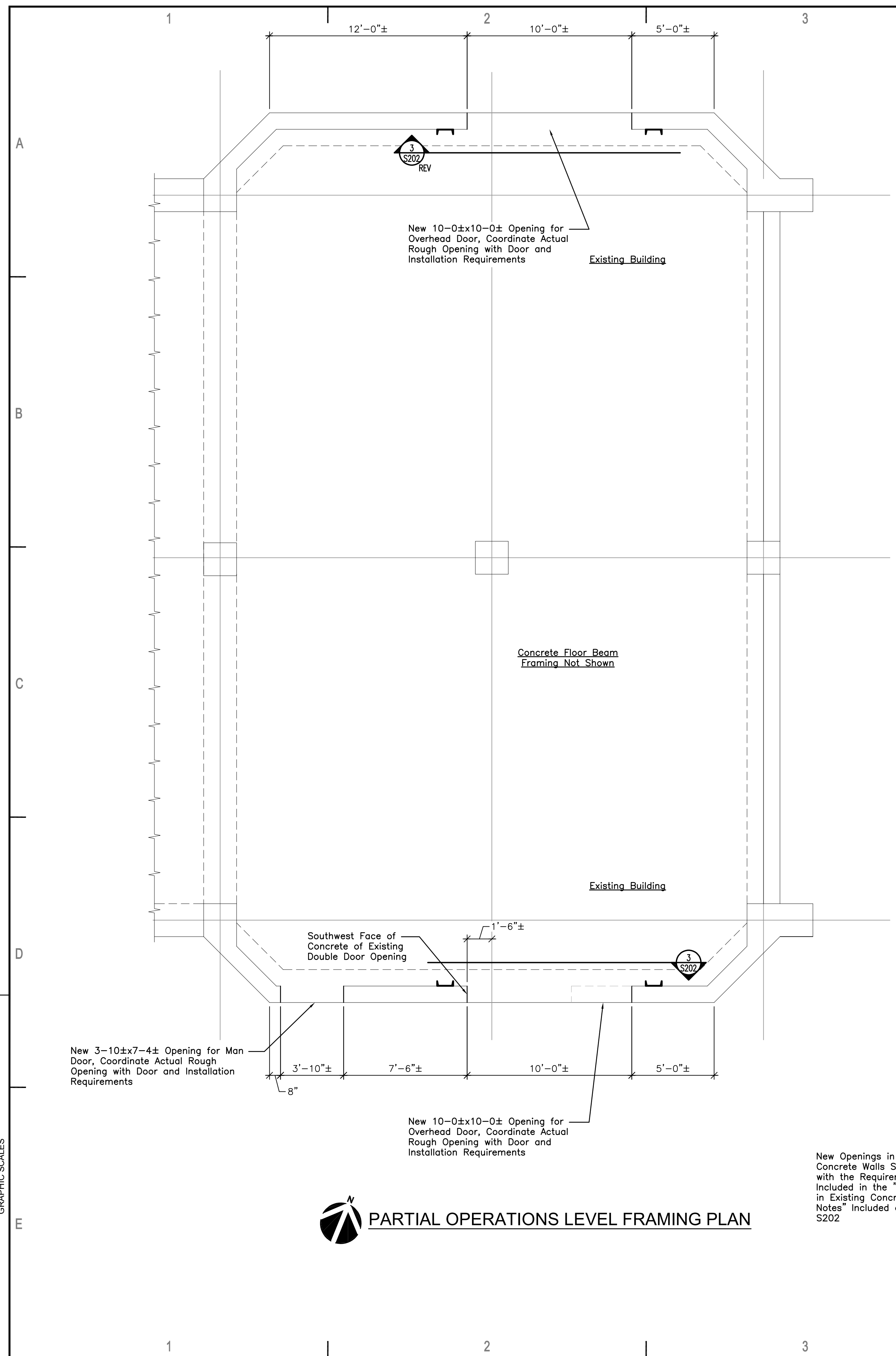
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DATE	OCTOBER 2019
PM	NDF
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DRAWN BY	DKC
CHECKED BY	MWK

FRAMING PLAN & WALL SECTION

S101

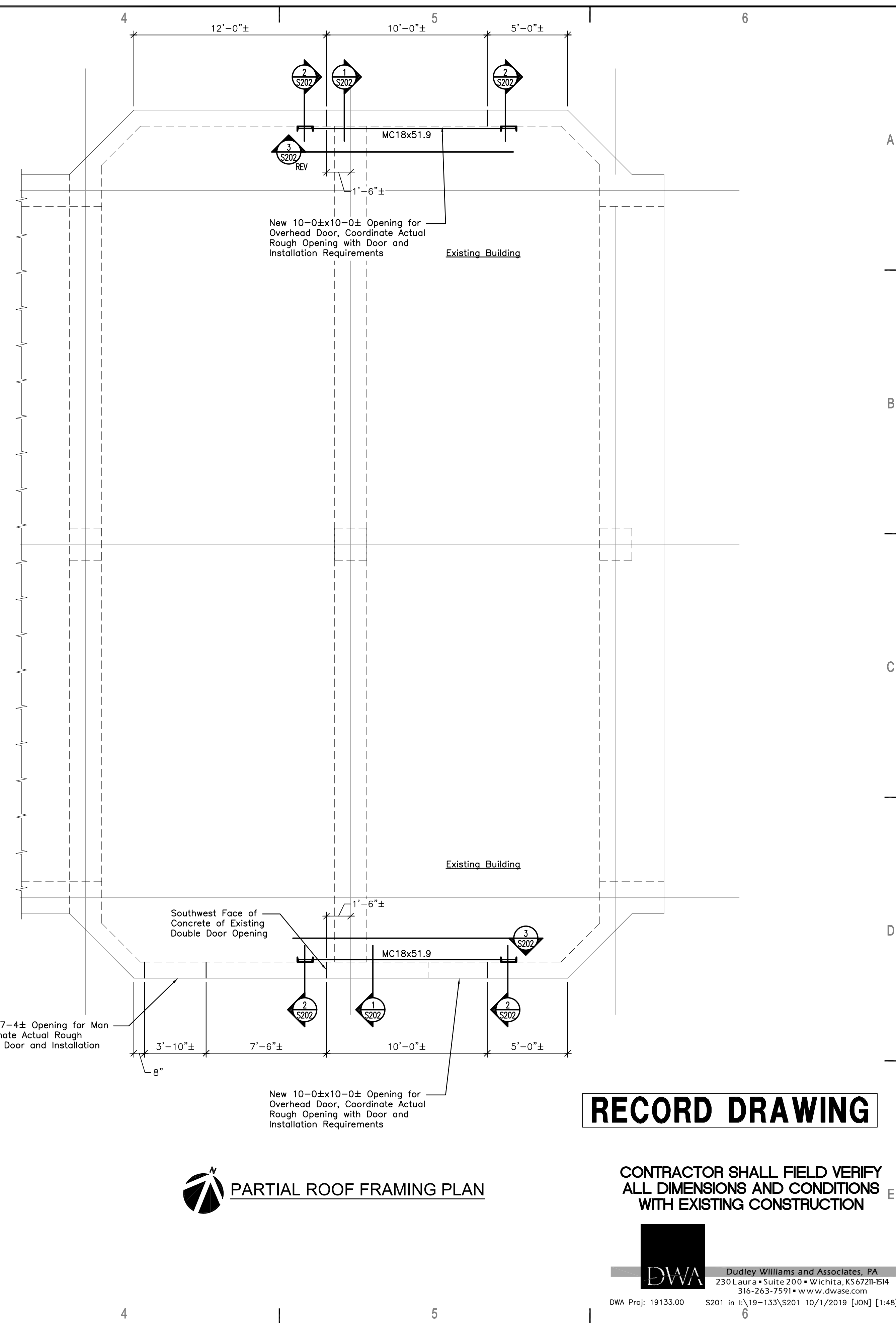
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**PARTIAL OPERATIONS LEVEL FRAMING PLAN**

New Openings in the Existing Concrete Walls Shall Comply with the Requirements Included in the "New Openings in Existing Concrete Wall Notes" Included on Sheet S202



**PARTIAL ROOF FRAMING PLAN**

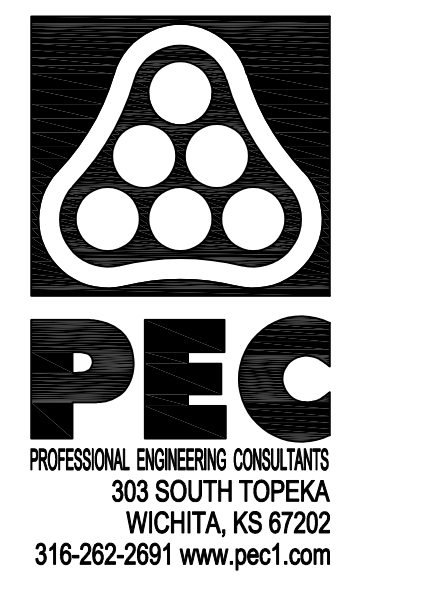
**RECORD DRAWING**

CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CONDITIONS WITH EXISTING CONSTRUCTION



Dudley Williams and Associates, PA  
230 Laura • Suite 200 • Wichita, KS 67221-1514  
316-263-7591 • www.dwase.com

DWA Proj: 19133.00 S201 in E:\19-133\S201 10/1/2019 [JON] [1-48]



HEADWORKS SCREENING EQUIPMENT REPLACEMENT

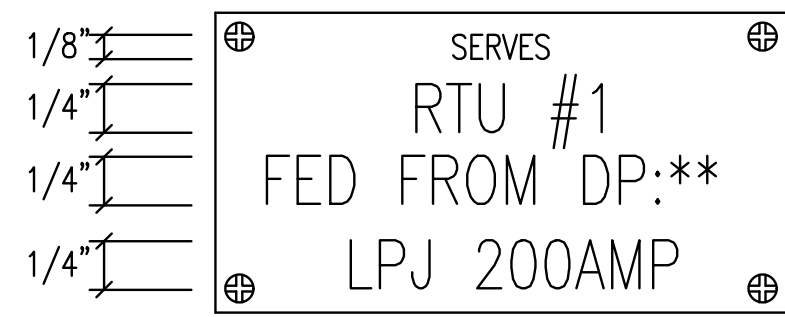
CITY OF WICHITA, KANSAS

Issue:	
JOB NO.	180295-001
DATE	OCTOBER 2019
PM	
DESIGNED BY	JL
DRAWN BY	JL
CHECKED BY	---
<b>PARTIAL FRAMING PLANS</b>	
<b>S201</b>	

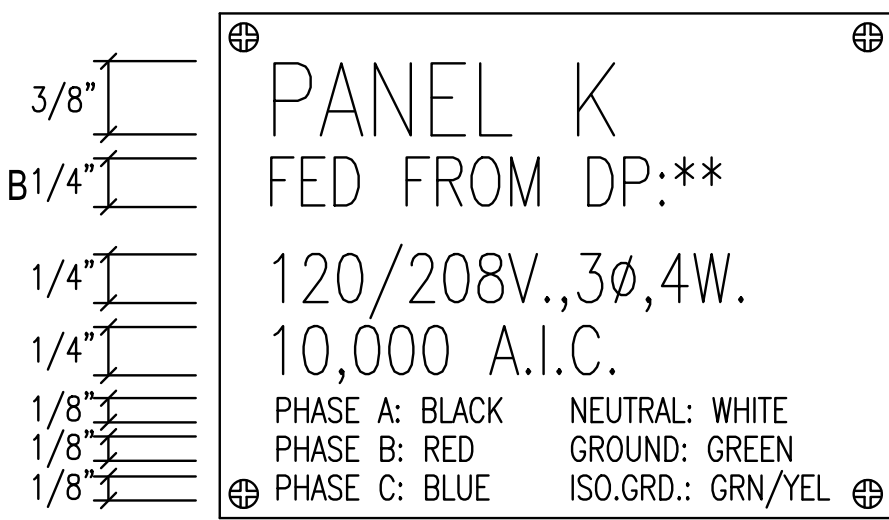




**SWITCHBOARD/DISTRIBUTION PANEL/MOTOR CONTROL CENTER BREAKER/SWITCH**



**DISCONNECT SWITCH**



**BRANCH CIRCUIT/DISTRIBUTION PANEL**

**1 TYPICAL NAME PLATES**

NO SCALE  
NOTE: SEE SPECIFICATION SECTION 260500 FOR NAME PLATE COLOR REQUIREMENTS.

**EXIST. PANEL: LB** 208Y/120 VOLTS, 3 PHASE, 4 WIRE  
225 AMP MLO, SURFACE MTD. 10000 AIC LABELED

CIRC NO.	LOAD V. A.	LOAD TYPE	DESCRIPTION	AMP SIZE	WIRE SIZE	AMP SIZE	WIRE SIZE	LOAD DESCRIPTION	LOAD TYPE	LOAD V. A.	CIRC NO.
1			UNIT HEATER	15	A	15		UNIT HEATER			2
3			UNIT HEATER	15	B	15		EXHAUST FAN #7			4
5			UNIT HEATER	15	C	20		SIDE WALK LIGHTS			6
7			REC - OPERATION LEVEL	20	A	20		REC - NORTH BLOWER			8
9			REC - OPERATION LEVEL	20	B	20		BENCH GRINDER			10
11			ELECT WATER COOLER	1	C	20		ELECT WATER COOLER WEST			12
13			WATER HEATER	1	A	20		UPS - REC ON DESK			14
15			DATA RACK	1	B	20		SECURITY PANEL			16
17			SUPPLY FAN #7	1	C	20		SMOKE DETECTOR			18
19			UNIT HEATER	15	A	20		LIGHTS RAKE ROOM			20
21			RTU	2	B	20		HOT WATER HEATER			22
23					C	20		HOT WATER HEATER			24
25			GFI REC - RAKE ROOM	1	A	20		SOUTHER OVERHEAD DOOR			26
27			MCC SMOKE DETECTOR	1	B						28
29			LTS - RAKE ROOM	1	C						30
31	340	1Ø	EXTERIOR LIGHTS	1	A	20		SPACE			32
33	500	3Ø	HEAT TRACE	1	B	20		METHANE SENSOR			34
35	500	3Ø	HEAT TRACE	1	C	20		UPS			36
37	200	3Ø	LIGHTING CONTACTOR	1	A			SPACE			38
39			SPACE		B			SPACE			40
41			SPACE		C			SPACE			42

- ALL EXISTING LOADS AND CIRCUIT BREAKERS ARE TO REMAIN U.O.N.
- PROVIDE 20A. 1P. 120V. CIRCUIT BREAKER THAT MATCHES EXISTING PANEL MANUFACTURER, TYPE, AND A.I.C. RATING. UPDATE PANEL DIRECTORY.
- ROUTE CIRCUIT VIA EXISTING EXTERIOR LIGHTING CONTACTOR.
- PROVIDE 20A. 1P. 120V. GFPE CIRCUIT BREAKER THAT MATCHES EXISTING PANEL MANUFACTURER, TYPE, AND A.I.C. RATING. UPDATE PANEL DIRECTORY.
- PROVIDE 30A. 1P. 120V. GFPE CIRCUIT BREAKER THAT MATCHES EXISTING PANEL MANUFACTURER, TYPE, AND A.I.C. RATING. UPDATE PANEL DIRECTORY.

**1 LIGHTING FIXTURE SCHEDULE (P.E.C.)**

FIXT. LTR.	MANUFACTURER CATALOG NUMBER	MANUFACTURER CATALOG NUMBER	MANUFACTURER CATALOG NUMBER	MANUFACTURER CATALOG NUMBER	DESCRIPTION	LAMP TYPE	LENS/LOUVER/FINISH	W	L	D
R1	COOPER LIGHTING XTORSARL				WALL PACK	7400LM 5000K 65CRI	ACRYLIC	8.75	11	13.5
						1 UNV	85-WATT			

1 MANUFACTURERS LISTED IN THIS SCHEDULE OR APPROVED BY WRITTEN ADDENDUM WILL BE THE ONLY APPROVED MANUFACTURERS TO BID THE LIGHTING FIXTURES FOR THIS PROJECT. CONTRACTORS AND SUPPLIERS USING PRICING FROM MANUFACTURERS NOT LISTED ON SCHEDULE OR BY ADDENDUM DO SO AT THEIR OWN RISK.

**1 2 3 EQUIPMENT CONNECTION SCHEDULE**

MECHANICAL EQUIPMENT CONNECTIONS															
UNIT DESIG.	UNIT VOLTAGE	LOAD			PANEL DEVICE				DEVICE AT UNIT			FEEDER DESCRIPTION OR SEE THE FEEDER SCHEDULE	REMARKS OR SEE THE INDICATED NOTES BELOW		
		H.P.	FLA	KVA	CIRCUIT NUMBER	BKR/SW FUSE	STARTER	NEMA STARTER	BKR/SW FUSE	NEMA STARTER	OTHER				
WH	WATER HEATER														
1	480/3	720MM	86.6	71.97	MCC3:12		200	150	3		200	---	3	1 3 #1/0 AWG THWN; #6 AWG GRD; 2" C.	

- ALL CONNECTIONS AND ELECTRICAL EQUIPMENT LISTED IN SCHEDULE SHALL BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. FIELD VERIFY CONNECTION REQUIREMENTS AND EQUIPMENT PROVIDED BY OTHERS PRIOR TO ROUGH-IN.
- REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR THE REQUIREMENTS ASSOCIATED WITH WIRING AND CONNECTIONS OF INTERLOCKING, THERMOSTAT LOCATIONS, EXHAUST FAN CONTROL SWITCHES, AND OTHER CONTROLS OF MECHANICAL EQUIPMENT.
- SIZE FUSES FOR MOTOR FUSTATS BASED ON 125% OF MANUFACTURER'S NAMEPLATE FULL LOAD AMPERAGE UNLESS OTHERWISE NOTED ON THE DRAWINGS.

**CONTROL CABLES CONDUIT SCHEDULE**

# OF CABLES	ESTIMATED CONDUIT SIZE
1	1/2"
2	3/4"
3	1"
5	1 1/4"
7	1 1/2"
13	2"
18	2 1/2"
29	3"
38	3 1/2"

NOTE: ABOVE CONDUIT SIZES DEPEND ON ACTUAL CABLES INSTALLED. VERIFY CABLE SIZES & ADJUST CONDUIT AS REQUIRED. RUN ALL CONTROL CABLES IN SEPARATE CONDUIT FROM POWER CIRCUITS. ALSO RUN SHIELDED & LAN LAN CABLES IN SEPARATE CONDUIT FROM OTHER CONTROLS. CONTRACTOR CAN SIZE CONDUIT FOR ACTUAL CABLE SIZE, PER N.E.C. FILL TABLE WITH 25% SPARE CAPACITY. SUBMIT CALCULATIONS.

**GENERAL NOTES**

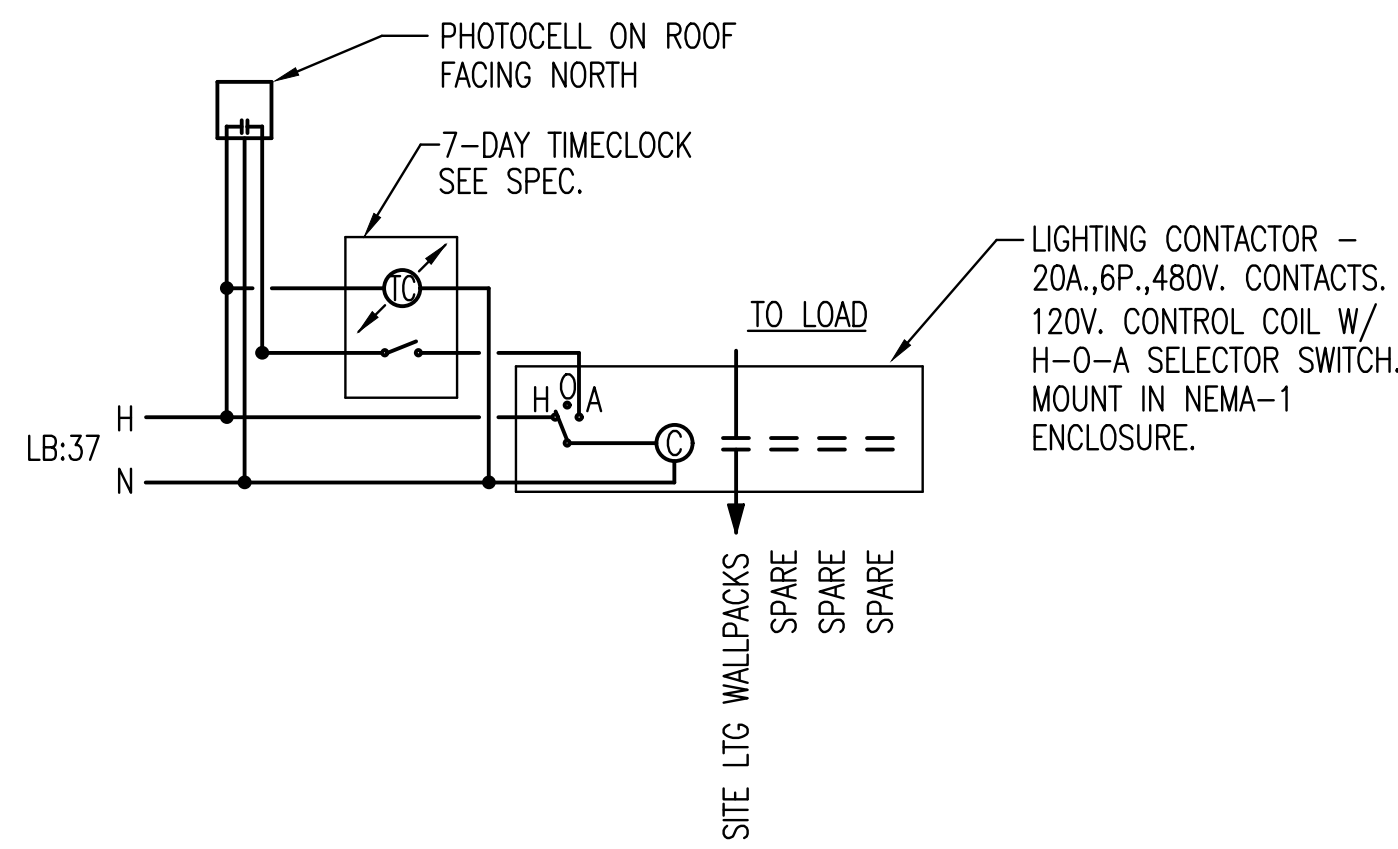
- ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) & THE AMERICANS WITH DISABILITIES ACT (ADA).
- REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.
- E.C. SHALL REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR THE REQUIREMENTS ASSOCIATED WITH WIRING AND CONNECTION OF INTERLOCKING AND CONTROLS OF MECHANICAL UNITS AND THERMOSTAT LOCATIONS.
- CONDUIT RUN W/CONDUCTORS AS INDICATED & GROUND WIRE SIZED PER N.E.C. 250.122. CONDUIT SIZE AS REQUIRED.
- WHEN INCREASED CONDUCTOR SIZES ARE SHOWN ON THE PLANS, THE LARGER CONDUCTOR SIZE SHALL BE USED THROUGHOUT THE LENGTH OF THE CIRCUIT, INCLUDING NEUTRAL AND GROUND.
- BRANCH CIRCUITS ARE INDICATED AS ONE CIRCUIT HOME RUNS WITH INDIVIDUAL NEUTRALS. A MAXIMUM OF THREE CIRCUITS (MAXIMUM OF THREE PHASE CONDUCTORS) MAY BE GROUPED IN A SINGLE CONDUIT. WHERE MULTIPLE CIRCUITS ARE LOCATED IN THE SAME RACEWAY, JUNCTION BOX OR ENCLOSURE, NEUTRALS SHALL BE MARKED OR LABELED TO INDICATE WHICH CIRCUIT THEY ARE ASSOCIATED WITH. SEE SPECIFICATION SECTION "LOW VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES" FOR ADDITIONAL INFORMATION.

**SYMBOL LIST**

SYMBOL	DESCRIPTION	MOUNTING
[ ]	FUSE	
[ ]	DISCONNECT (SEE EQUIP CONN SCHED) (VOLTAGE / SWITCH SIZE / FUSE SIZE / # OF POLES NOTED IF EQUIPMENT NOT SCHEDULED)	
[ ]	STARTER (SEE EQUIP CONN SCHED) (VOLTAGE / STARTER SIZE / # OF POLES NOTED IF EQUIPMENT NOT SCHEDULED)	
[ ]	FEEDER DESIGNATION	
[ ]	FUSIBLE SWITCH (CIRCUIT NUMBER / SWITCH SIZE / FUSE SIZE / # OF POLES) (# OF POLES IF OTHER THAN 3)	PANEL
[ ]	3Ø TRANSFORMER (DELTA PRIMARY / WYE SECONDARY)	
[ ]	EQUIPMENT (SINGLE MOTOR / MULTI-MOTOR OR OTHER TYPE AS NOTED)	
[ ]	STARTER WITH FUSIBLE SWITCH (CIRCUIT NUMBER / SWITCH SIZE / FUSE SIZE / # OF POLES) (# OF POLES IF OTHER THAN 3)	PANEL

**PEN WEIGHT LEGEND**

SYMBOL	DESCRIPTION
[ ]	NEW DUPLEX GROUNDED RECEPTACLE
[ ]	NEW LIGHT FIXTURE
[ ]	EXISTING DUPLEX GROUNDED RECEPTACLE TO REMAIN
[ ]	EXISTING LIGHT FIXTURE TO REMAIN
[ ]	DUPLEX GROUNDED RECEPTACLE TO BE REMOVED
[ ]	LIGHT FIXTURE TO BE REMOVED



**2 LIGHTING CONTROL WIRING DIAGRAMS**

NO SCALE

**SYMBOL LIST**

SYMBOL	DESCRIPTION	MOUNTING
[ ]	LIGHT FIXTURE & FIXTURE LETTER	WALL
[ ]	UNLESS OTHERWISE NOTED	
[ ]	DUPLEX GROUNDED RECEPTACLE	18" AFF
[ ]	FLOAT SWITCH	
[ ]	JUNCTION BOX	
[ ]	FUSTAT BUSS #SSY	
[ ]	BRANCH CIRCUIT PANEL & PANEL DESIG.	72" TO TOP
[ ]	ELECTRICAL DISTRIBUTION EQUIPMENT	
[ ]	FEEDER DESIGNATION	
[ ]	EMERGENCY CIRCUIT	CEIL./WALL
[ ]	MASTER/SLAVE FIXTURE WHIP	CEILING
[ ]	CONDUIT HOME RUN, 1 CIRCUIT. 2#10 & 1#10 GRD. GEN. NOTE 7 & 8	CEIL./WALL
[ ]	CONDUIT RUN 2#12 & 1#12 GRD.- 3/4"	CEIL./WALL
[ ]	CONDUIT RUN 2#12 & 1#12 GRD.- 3/4"	EARTH/FLOOR
[ ]	CONDUIT HOME RUN, 1 CIRCUIT. 2#12 & 1#12 GRD. 3/4"	CEIL./WALL
[ ]	CONDUIT HOME RUN, 2 CIRCUITS. 4#12 & 1#12 GRD. 3/4"	CEIL./WALL
[ ]	CONDUIT HOME RUN, 3 CIRCUITS. 6#12 & 1#12 GRD. 3/4"	CEIL./WALL
[ ]	CONDUIT RUN PARTIAL CIRCUIT. 2#12 & 1#12 GRD. 3/4"	CEIL./WALL
[ ]	CONDUIT HOME RUN, 2 CIRCUITS PHASE CONDUCTORS (#12 UON) NEUTRAL CONDUCTOR (#12 UON) SWITCH LEGS (#12 UON) GROUND CONDUCTOR (#12 UON)	CEIL./WALL
[ ]	DISCRETE CONTROL CABLE (# OF PAIRS)	
[ ]	CONDUIT SEAL-OFF	
[ ]	DATA UTP CABLE (# OF CABLES)	
[ ]	OVERHEAD DOOR CONTROLLER	
[ ]	EMERGENCY STOP PUSHBUTTON	
[ ]	MOTOR	
[ ]	PHOTOCELL	

**ELECTRICAL SHEET INDEX**

SHEET NO.	DESCRIPTION
E001	ELECTRICAL LEAD SHEET
E002	ELECTRICAL ONE-LINE DIAGRAM - MCC3
E003	ELECTRICAL ONE-LINE DIAGRAM - MCC4
E004	ELECTRICAL SCHEDULES
E201	ELECTRICAL DEMOLITION PLAN
E301	ELECTRICAL SITE PLAN
E401	ELECTRICAL POWER PLAN

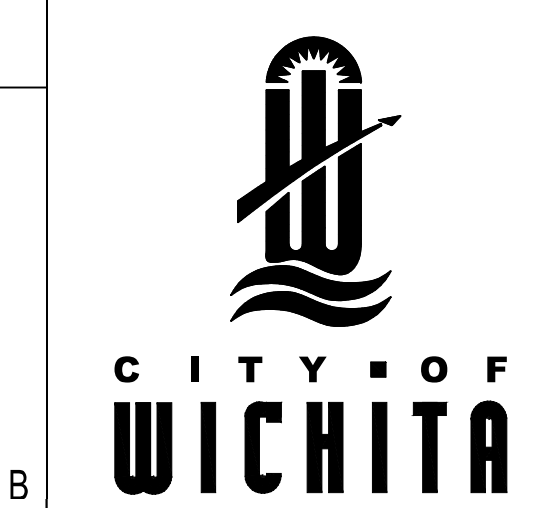
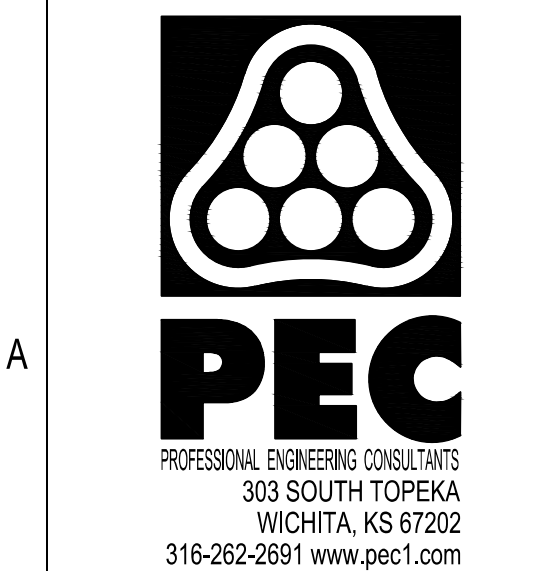
Issue:	1	90% SUBMITTAL	09/11/19

**RECORD DRAWING**

JOB NO.	180295-001
DATE	OCTOBER 2019
PM	
DESIGNED BY	RWW
DRAWN BY	ABP
CHECKED BY	SMS

ELECTRICAL LEAD SHEET

E001



HEADWORKS SCREENING EQUIPMENT REPLACEMENT

CITY OF WICHITA, KANSAS











