SANITARY SEWER IMPROVEMENTS

LIFT STATION NO. 4

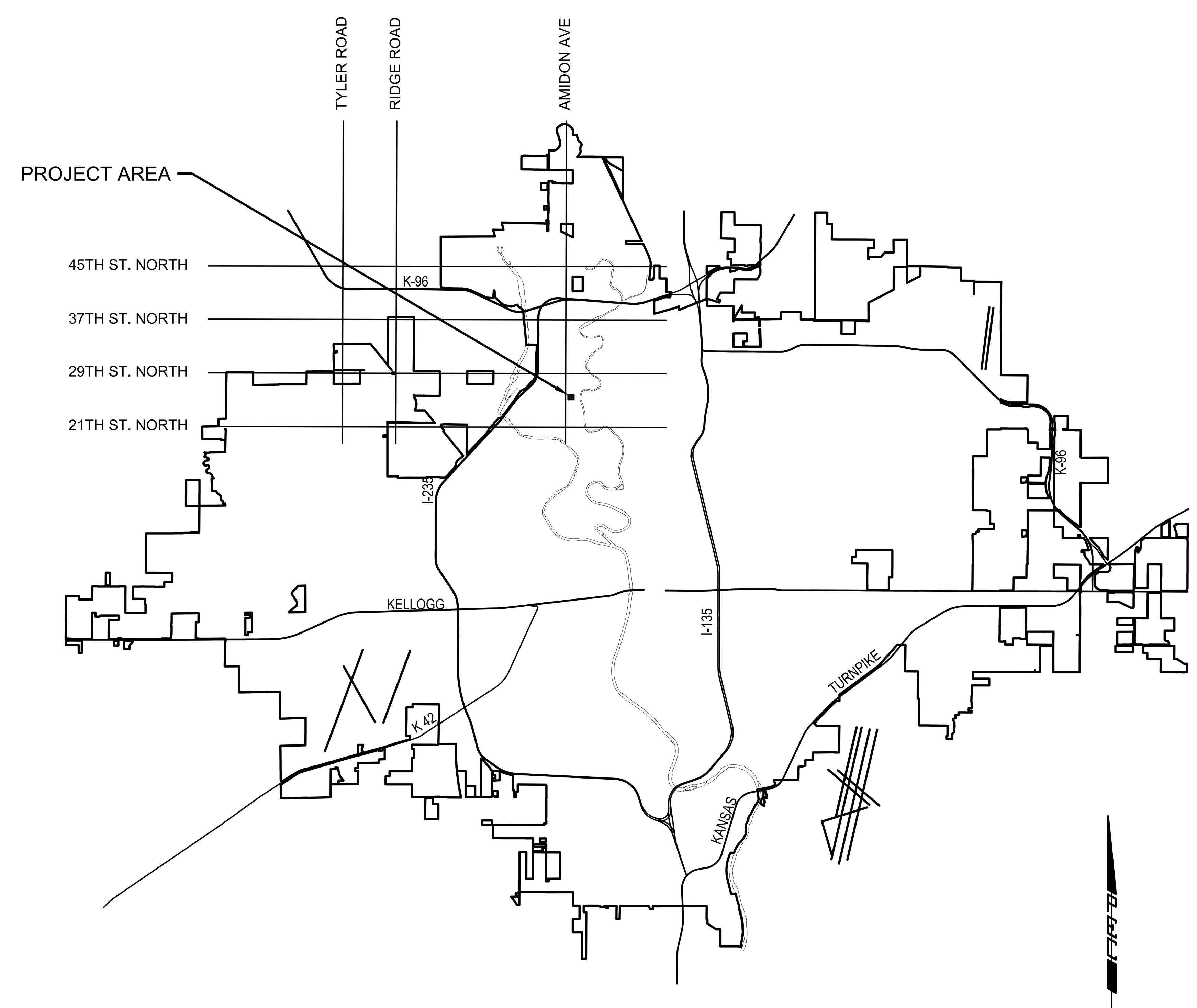
AT

25TH AND AMIDON

CITY OF WICHITA ENGINEERING PROJECT NO. 468-2025-010835
ORG CODE S2008, MUNIS NO. 53200222

CITY OF WICHITA, KANSAS

PAUL GUNZELMAN, P.E. - CITY ENGINEER



LOCATION MAP

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CITY OF WICHITA

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26008
09/03/2025
KANSAS
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COW LIFT STATION NO. 4 IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
DATE	MAY 2025
PM	RWG
DESIGNED BY	TBK
DRAWN BY	CAE
CHECKED BY	RWG

TITLE SHEET

CU001

SAVED 5/8/2025 9:42:20 AM BY CHRIS.EPP
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GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS, UNLESS OTHERWISE INCLUDED IN THE CONTRACT DOCUMENTS.

2. EACH BIDDER SHALL VISIT THE SITE OF THE PROJECT BEFORE SUBMITTING THE PROPOSAL FOR THIS WORK SO THAT THEY WILL BE FULLY INFORMED OF THE EXISTING FIELD CONDITIONS AND THE OBSTACLES WHICH MIGHT BE ENCOUNTERED. UPON AWARD OF THE CONTRACT THE CONTRACTOR WILL NOT BE GRANTED ANY ADDITIONAL COMPENSATION WITH REGARDS TO TIME AND MONEY FOR CONDITIONS THAT MAY HAVE BEEN EVALUATED DURING ANY INSPECTION OF THE SITE.

3. THE CONTRACTOR SHALL CONTACT THE FOLLOWING AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION TO ADVISE THEM OF THE INTENDED WORK AND OF THEIR PROPOSED SCHEDULE:

   CITY OF WICHITA
   SEWAGE TREATMENT
   GENERAL SUPERVISOR
   MR. MIKE CARROLL
   OFFICE: (316) 303-8719
   CELL: (316) 641-6622

4. AT LEAST 72 HOURS PRIOR TO BEGINNING ANY EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316)-687-2470 OR 811 TO REQUEST THE LOCAL UTILITY COMPANIES TO LOCATE ANY EXISTING LINES WITHIN THE PROJECT AREA.

5. THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

EMERGENCY DISPATCH:	911
COX COMMUNICATIONS:	888-249-3530
EVERGY:	800-383-1183
AT&T:	800-286-8313
KANSAS GAS SERVICE:	888-482-4950

6. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF SEVEN (7) DAYS ADVANCE NOTICE PRIOR TO THE START OF CONSTRUCTION.

7. 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.

8. THE CONTRACTOR SHALL HAVE ALL BURIED LINES LOCATED AND FLAGGED IN THE FIELD PRIOR TO COMMENCING ANY EXCAVATION WORK. THE CONTRACTOR SHALL CONTACT THE ENGINEER AND REVIEW ANY BURIED LINES LOCATED IF CONFLICTS EXIST. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING TRENCHING OPERATIONS TO AVOID DAMAGING THESE LINES. ANY LINES DAMAGED SHALL BE REPLACED OR REPAIRED IMMEDIATELY AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

9. THE CONTRACTOR SHALL EXPOSE AND VERIFY THE VERTICAL AND HORIZONTAL LOCATION OF EXISTING UTILITIES THAT ARE IN POTENTIAL CONFLICT WITH THE PROPOSED IMPROVEMENTS. THE UTILITY LOCATES SHALL BE PERFORMED PRIOR TO THE START OF CONSTRUCTION AND ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

11. EASEMENTS AND RIGHTS-OF-WAY PROVIDED BY THE OWNER FOR THE PROJECT ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACQUISITION OF ANY ADDITIONAL TEMPORARY EASEMENTS OR RIGHTS-OF-WAY DESIRED TO USE IN COMPLETING THE WORK.

12. THE CONTRACTOR SHALL CONTAIN THEIR OPERATIONS TO PERMIT LOCAL AND EMERGENCY TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT ALL TIMES. THE CONTRACTOR SHALL UTILIZE WARNING SIGNS, FLASHING LIGHTS, BARRICADES, AND FLAGMEN IN COMPLIANCE WITH THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

13. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED, TREE TRIMMINGS, AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL ALSO BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. 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, FLOODWAYS, 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.

14. THE CONTRACTOR SHALL AVOID REMOVAL OR TRIMMING OF ANY TREES OR SHRUBS WHERE POSSIBLE. WHERE THE CONTRACTOR BELIEVES THE REMOVAL OR TRIMMING IS UNAVOIDABLE, THIS WORK SHALL BE COORDINATED WITH THE ENGINEER. TREE TRIMMING/REMOVAL SHALL BE COMPLETED IN ACCORDANCE WITH U.S FISH AND WILDLIFE SERVICE, AND KANSAS DEPARTMENT OF WILDLIFE, PARKS, AND TOURISM RESTRICTIONS. FULL TREE REMOVAL SHALL BE NOTED ON THE PLANS AND SHALL BE BID AS "TREE REMOVED, LARGE", "TREE REMOVED, SMALL", OR "TREE ROW REMOVED".

15. THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, AND BANKS TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE. WHERE EXISTING ENTRANCE PIPE, DRAINAGE PIPE, SIGNS, FENCES, LANDSCAPING, ETC., CONFLICT WITH THE PROPOSED WORK HEREIN, THEY SHALL BE REMOVED AND REPLACED OR RESET, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

16. THE CONTRACTOR SHALL INSTALL AND/OR MAINTAIN EROSION CONTROL METHODS AS SPECIFIED ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL THROUGH THE COMPLETION OF THIS PROJECT. INSTALLATION OF THESE EROSION CONTROL DEVICES DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF ABATING SOIL EROSION. THE FOLLOWING QUANTITIES ARE ESTIMATED, AND SHOULD BE CONSIDERED THE MINIMUM EFFORT REQUIRED.

17. THE CONTRACTOR SHALL TAKE CARE TO PREVENT SILT AND DEBRIS FROM ENTERING ANY STORM DRAINAGE SYSTEM DURING CONSTRUCTION. PIPES OR STRUCTURES WHICH CONTAIN MATERIALS FROM THE CONTRACTORS ACTIVITIES SHALL BE THOROUGHLY CLEANED BY THE CONTRACTOR, AT THEIR OWN EXPENSE, PRIOR TO THE FINAL INSPECTION.

18. RECONSTRUCTION OF EROSION CONTROL MEASURES WHICH ARE DESTROYED BY WIND, FLOOD, FIRE, OR BY THE ACTIONS OF THE CONTRACTOR OR OTHERS SHALL BE PERFORMED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST. WHERE ADJUSTMENTS IN QUANTITIES ARE REQUIRED BY FIELD CONDITIONS, THERE SHALL BE NO ADJUSTMENT IN UNIT PRICE.

19. ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCHING, AND/OR RE-SEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO "SITE RESTORATION".

20. THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH TEMPORARY RYE GRASS. RYE GRASS SEED SHALL BE PLANTED AT A MINIMUM RATE OF SIX (6) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. THIS TEMPORARY SEEDING MAY BE OMITTED ONLY IF PERMANENT SEEDING/SODDING IS APPLIED. TEMPORARY SEEDING OR PERMANENT SEEDING/SODDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA HAS BEEN DISTURBED.

21. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION STAKING. STAKING AND BENCH MARKS DESTROYED DURING CONSTRUCTION OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

22. CONTRACTOR SHALL MAINTAIN UNINTERRUPTED UTILITY SERVICE TO ADJACENT FACILITIES DURING CONSTRUCTION, UNLESS OTHERWISE APPROVED BY OWNER.

23. WRITTEN REQUEST TO THE OWNER WILL BE REQUIRED 72 HOURS PRIOR TO A SCHEDULED UTILITY OUTAGE. THE FIRE DEPARTMENT MUST BE NOTIFIED OF ANY FIRE HYDRANTS OR WATER MAINS TAKEN OUT OF SERVICE.

24. ELECTRIC, COMMUNICATION AND MECHANICAL DEMOLITION ARE NOT SHOWN ON CIVIL SHEETS. REFERENCE SITE ELECTRICAL AND MECHANICAL PLANS FOR ELECTRICAL, COMMUNICATION, AND MECHANICAL DEMOLITION.

25. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO DEMOLITION TO DETERMINE DEMOLITION ITEMS THAT ARE TO BE SALVAGED TO THE OWNER. SALVAGEABLE ITEMS ARE TO BE DELIVERED TO THE OWNER AT LOCATIONS DIRECTED BY THE OWNER. ALL NON-SALVAGED ITEMS ARE TO BE DISPOSED OFF-SITE BY THE CONTRACTOR. COORDINATE ALL SITE CONSTRUCTION WITH ELECTRICAL, MECHANICAL, LANDSCAPING, AND ARCHITECTURAL PLANS, AS WELL AS PRIVATE UTILITY COMPANIES.

26. CONTRACTOR SHALL PROVIDE NECESSARY MEANS TO PROTECT THE PUBLIC AND TO PROHIBIT ACCESS TO CONSTRUCTION SITE WHILE MAINTAINING ACCESS TO EXISTING FACILITIES.

27. ALL ITEMS LOCATED IN DEMOLITION LIMITS NOT SHOWN SHALL BE IDENTIFIED AND COORDINATED WITH THE OWNER PRIOR TO DEMOLITION.

28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW OF SEWAGE THROUGH CONSTRUCTION. CONTRACTOR'S PROPOSED METHOD FOR MAINTAINING SEWAGE FLOW SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER PRIOR TO STARTING AND BY-PASSING OF SEWAGE FLOWS.

29. THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.

30. MAINTAIN A MINIMUM OF 10-FOOT HORIZONTAL SEPARATION BETWEEN ALL WATER LINES (MAINS, SERVICES, AND FIRE HYDRANTS) AND ALL SANITARY SEWER LINES (MAINS, SERVICES, AND MANHOLES). ALL SEPARATIONS DISTANCES ARE TO BE MEASURED FROM EDGE-TO-EDGE, AT THE CLOSEST POINT.

31. MAINTAIN A MINIMUM OF 2-FOOT VERTICAL SEPARATION BETWEEN ALL WATER LINES (MAIN AND SERVICES) AND ALL GRAVITY SANITARY SEWER LINES (MAINS, SERVICES, AND MANHOLES) AT CROSSINGS. ALL SEPARATION DISTANCES ARE TO BE MEASURED FROM EDGE-TO-EDGE, AT THE CLOSEST POINT.

32. MAINTAIN A MINIMUM OF 2-FOOT VERTICAL SEPARATION BETWEEN ALL WATER LINES (MAINS AND SERVICES) AND ALL PRESSURIZED SANITARY SEWER LINES (FORCE MAINS AND SERVICES) AT CROSSINGS. WATERLINES MUST ALWAYS BE PLACED ABOVE PRESSURIZED SANITARY SEWER LINES WHERE THEY CROSS. ALL SEPARATION DISTANCES ARE TO BE MEASURED FROM EDGE-TO-EDGE, AT THE CLOSEST POINT.

UTILITY CONTACTS

JEFF CROSBY
WICHITA SANITARY SEWER
8TH FLOOR - CITY HALL
455 N. MAIN
WICHITA, KS 67202
316-268-4329

GREG LOLLEY
WICHITA WATER
8TH FLOOR - CITY HALL
455 N. MAIN
WICHITA, KS 67202
316-268-4334

JOE HICKLE
WICHITA STORM SEWER
8TH FLOOR - CITY HALL
455 N. MAIN
WICHITA, KS 67202
316-268-4307

SHANE PRICE
EVERGY
1900 E. CENTRAL (3RD FLOOR)
PO BOX 208
WICHITA, KS 67201
316-261-6315

SHANNON BRINKMEYER
AT&T WICHITA CENTRAL UNIT
154 N. BROADWAY, ROOM 210
WICHITA, KS 67202
316-268-2931

SARA PROCTOR
KANSAS GAS SERVICE
1021 E. 26TH ST. NORTH
WICHITA, KS 67219
316-832-3178

THERESA LANDRY
NUSTAR ENERGY
7340 W. 21ST STREET NORTH,
SUITE 200
WICHITA, KS 67205
316-721-7037

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CITY OF WICHITA

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LICENSED
26008
09/03/2025
KANSAS
PROFESSIONAL ENGINEER

COW LIFT STATION NO. 4
IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
DATE	MAY 2025
PM	RWG
DESIGNED BY	TBK
DRAWN BY	CAE
CHECKED BY	RWG

GENERAL NOTES

CU002

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GENERAL SHEET NOTES

1. INFORMATION SHOWN IS RECORD INFORMATION.

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COW LIFT STATION NO. 4 IMPROVEMENTS

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Issue:

JOB NO.	237043-010
DATE	MAY 2025
PM	RWG
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KEY MAP & BYPASS PLAN

CU101

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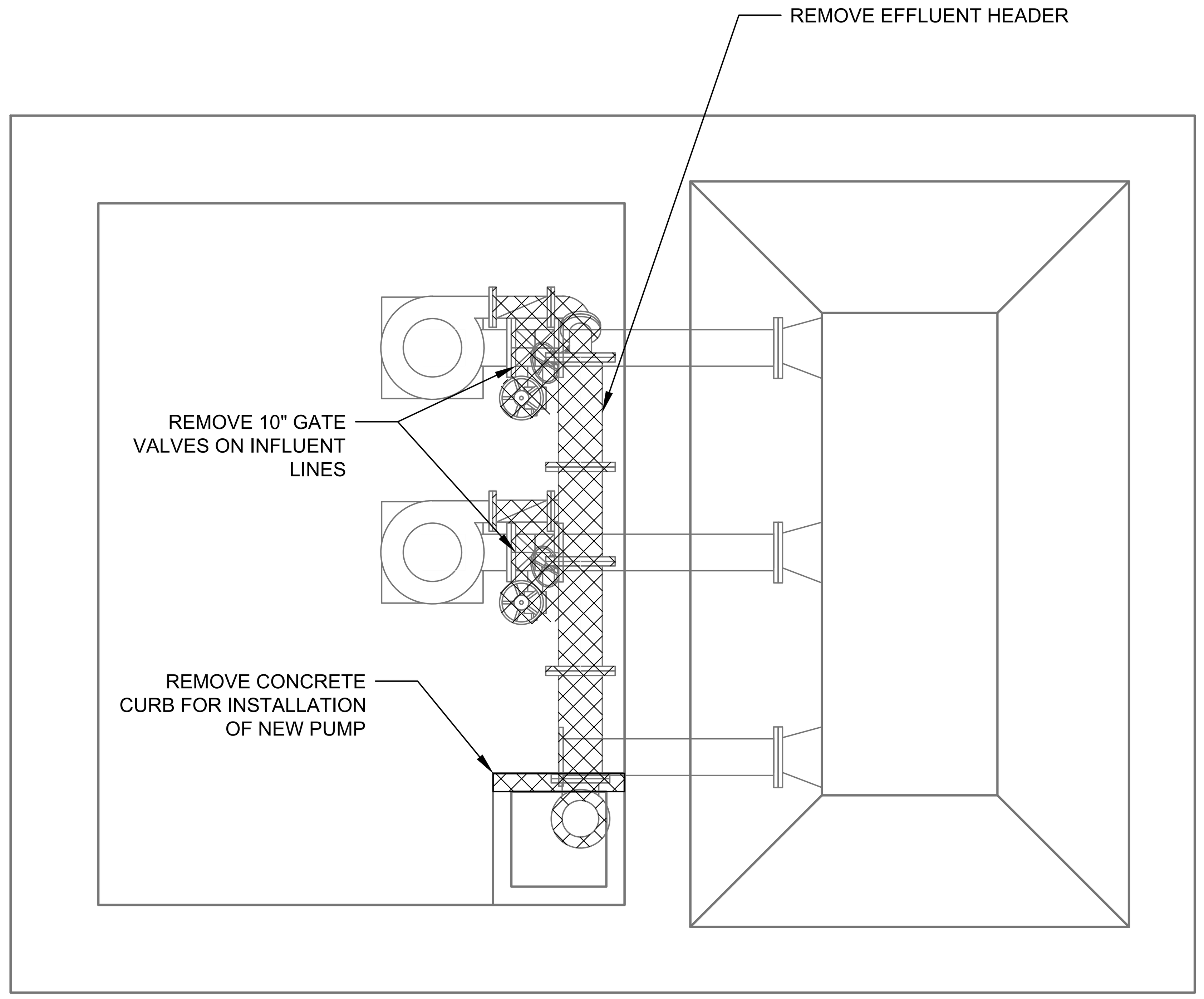
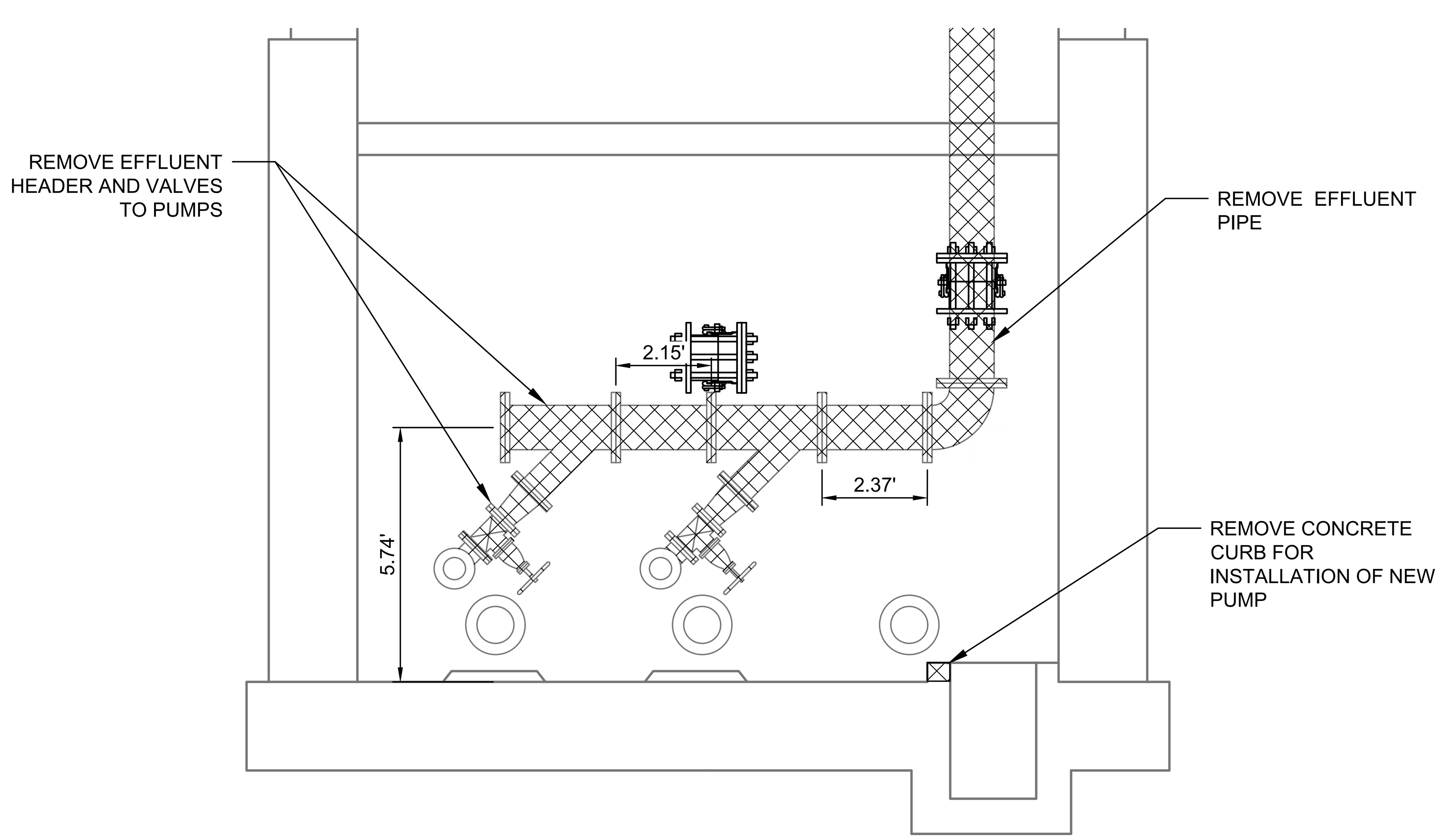


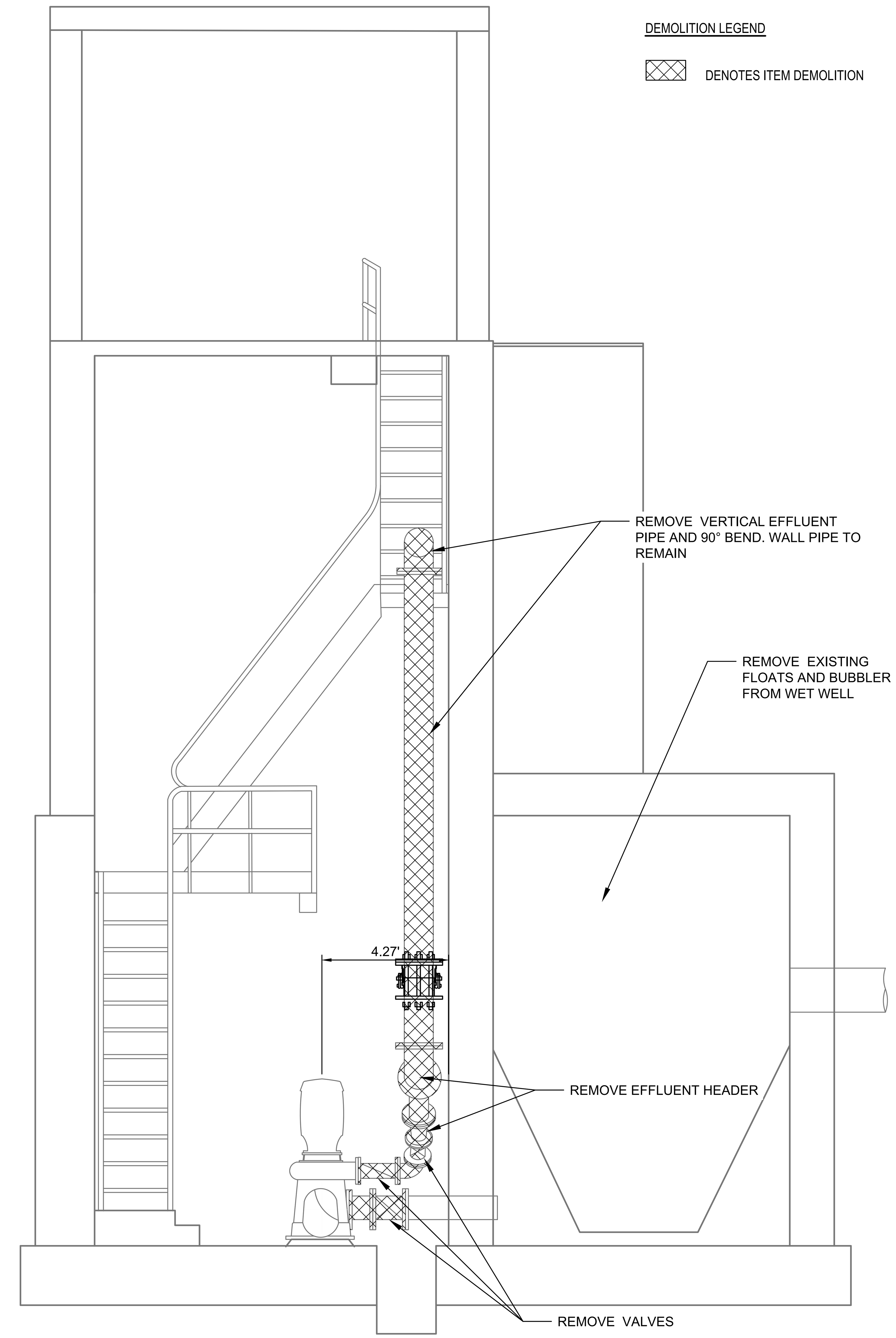
A PLAN
3/8"=1'-0"



2 SECTION 2
3/8"=1'-0"

DEMOLITION LEGEND

DENOTES ITEM DEMOLITION



1 SECTION 1
3/8"=1'-0"

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LIFT STATION DEMO PLAN & SECTIONS

CU501

SAVED 5/16/2025 9:10:09 AM BY CHRIS.EPP
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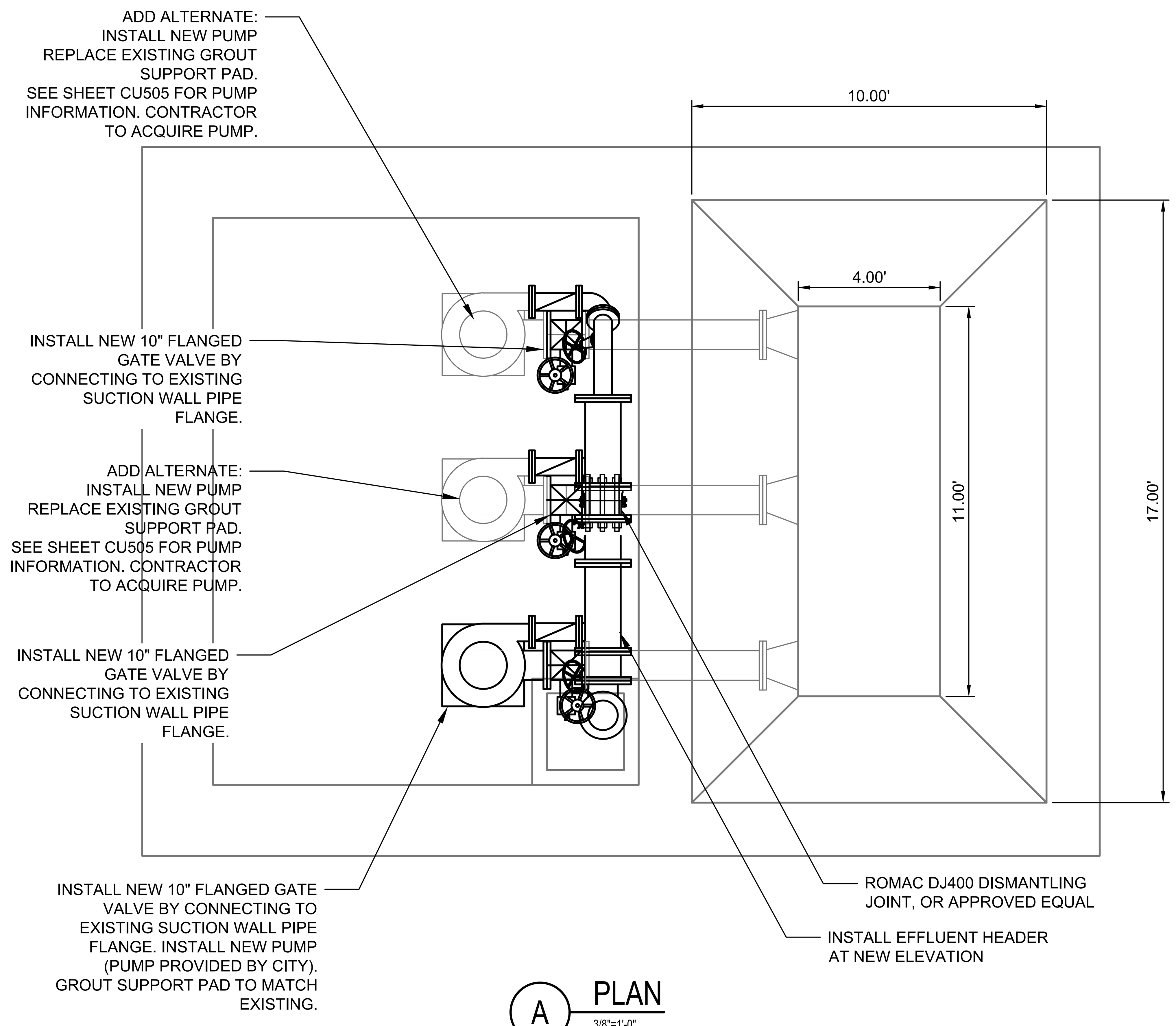
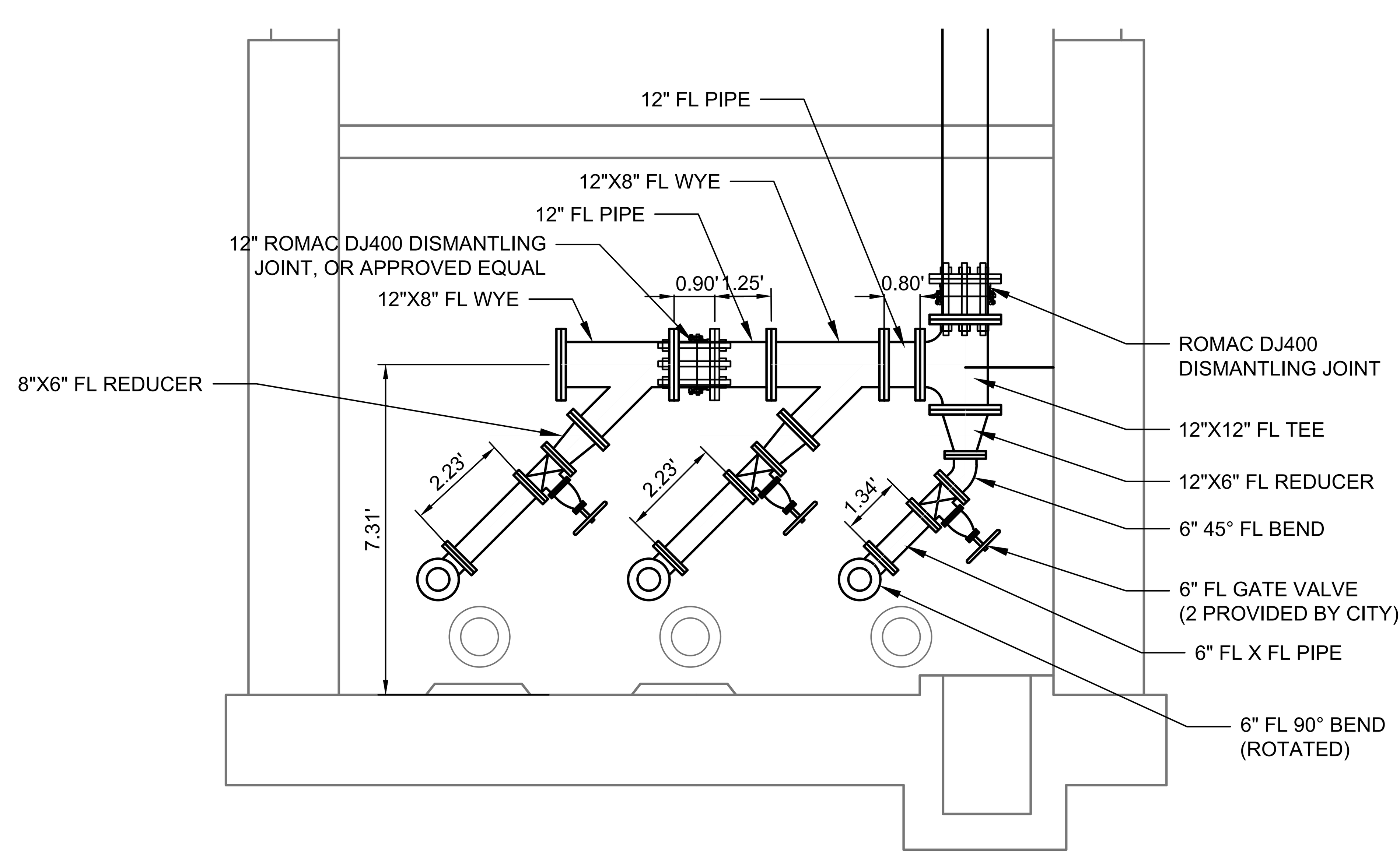
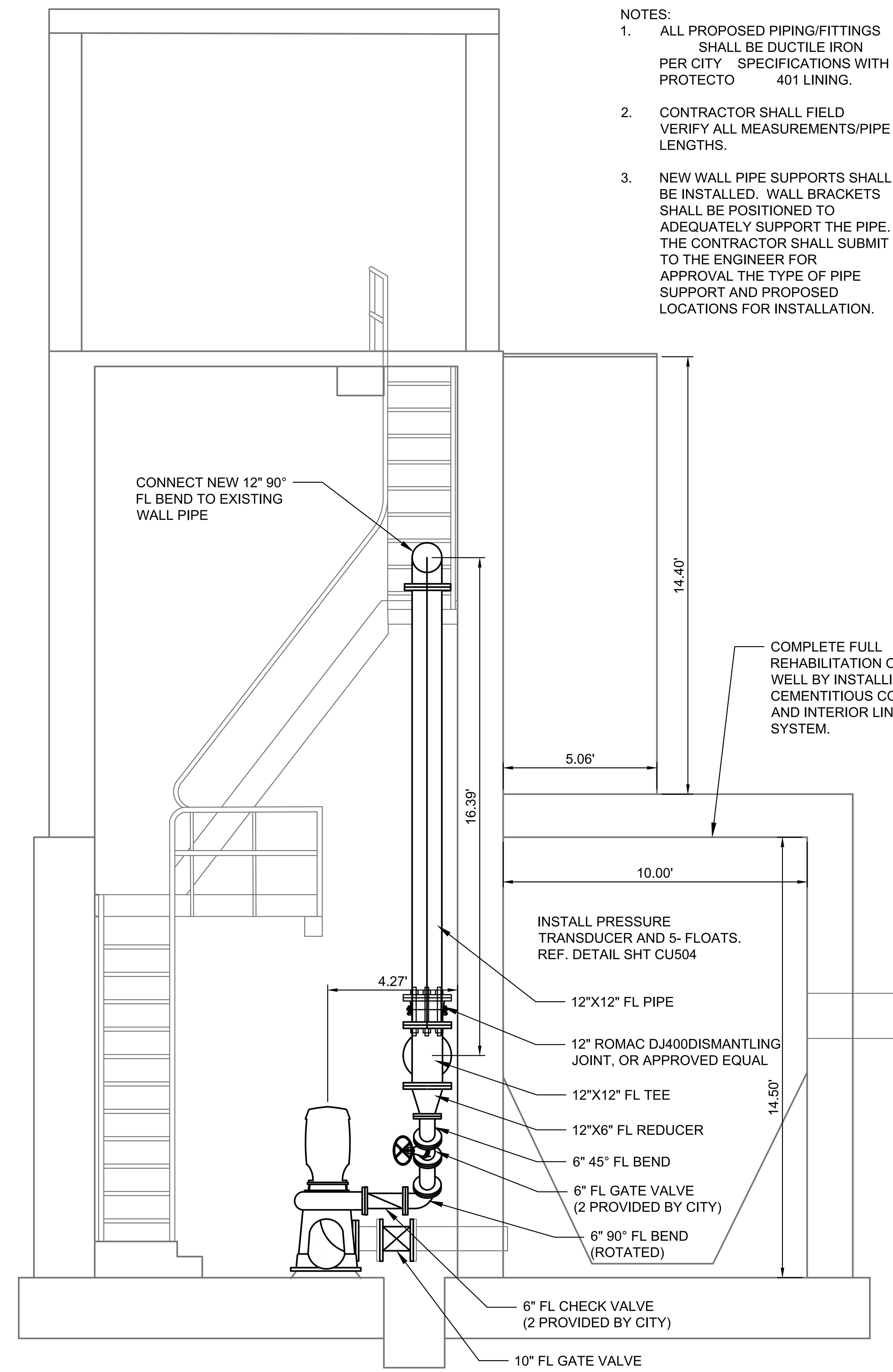


A PLAN
3/8"=1'-0"



2 SECTION 2
3/8"=1'-0"

NOTES:
1. ALL PROPOSED PIPING/FITTINGS SHALL BE DUCTILE IRON PER CITY SPECIFICATIONS WITH PROTECTO 401 LINING.
2. CONTRACTOR SHALL FIELD VERIFY ALL MEASUREMENTS/PIPE LENGTHS.
3. NEW WALL PIPE SUPPORTS SHALL BE INSTALLED. WALL BRACKETS SHALL BE POSITIONED TO ADEQUATELY SUPPORT THE PIPE. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL THE TYPE OF PIPE SUPPORT AND PROPOSED LOCATIONS FOR INSTALLATION.



1 SECTION 1
3/8"=1'-0"

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LIFT STATION IMPROVEMENT
PLAN & SECTIONS

CU502

SAVED 9/3/2025 10:38:41 AM BY TREVOR KAUFMAN
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WALL PIPE TO REMAIN. CONNECT NEW 90° BEND TO FLANGE

REMOVE EXISTING WALL PIPE SUPPORTS AND INSTALL NEW SUPPORTS WITH PIPE.

REROUTE CONDUIT AS REQUIRED TO ALLOW INSTALLATION OF NEW PIPE AND SUPPORTS.

REMOVE EXISTING WALL PIPE SUPPORTS AND INSTALL NEW SUPPORTS WITH PIPE AT PROPOSED ELEVATION.

A PHOTO 1
N.T.S.

REPLACE INFLUENT GATE VALVES. WALL PIPES TO REMAIN.

B PHOTO 2
N.T.S.

REPLACE EFFLUENT PIPING AND VALVES

C PHOTO 3
N.T.S.

CUT IN BACK FLOW PREVENTER WATTS MODEL: 009 OR APPROVED EQUAL. ADJUST PIPING AS NEEDED.

D PHOTO 4
N.T.S.

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EXISTING LIFT STATION PHOTOS

CU503

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REPLACE BUBBLER AND EXISTING FLOATS WITH PRESSURE TRANSDUCER AND FLOATS.
SEE DETAIL THIS SHEET

A PHOTO 5
N.T.S.

REMOVE CONCRETE WALL AS REQUIRED FOR VALVE/PUMP INSTALLATION.

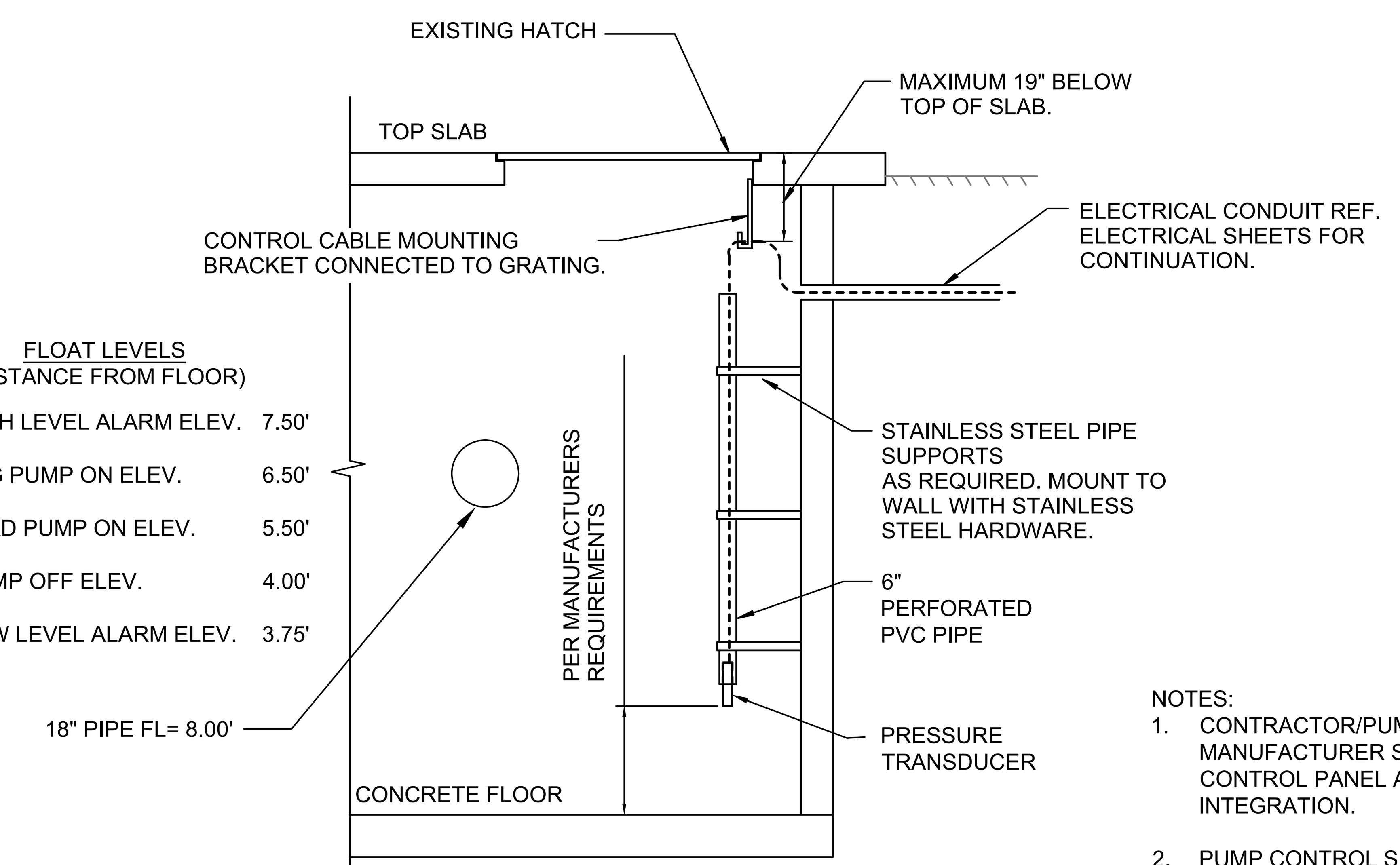
B PHOTO 6
N.T.S.

REMOVE EXISTING BLIND FLANGE AND INSTALL STAINLESS STEEL VENT PIPE WITH FABRICATED STAINLESS STEEL ODOR CONTROL CARBON VENT FILTER (CITY TO PROVIDE FABRICATED FILTER).

C PHOTO 7
N.T.S.

FLOAT LEVELS
(DISTANCE FROM FLOOR)

HIGH LEVEL ALARM ELEV.	7.50'
LAG PUMP ON ELEV.	6.50'
LEAD PUMP ON ELEV.	5.50'
PUMP OFF ELEV.	4.00'
LOW LEVEL ALARM ELEV.	3.75'



D PRESSURE TRANSDUCER DETAIL
N.T.S.

NOTES:
1. CONTRACTOR/PUMP MANUFACTURER SHALL PROVIDE CONTROL PANEL AND INTEGRATION.
2. PUMP CONTROL SHALL UTILIZE PRESSURE TRANSDUCER AS PRIMARY CONTROL WITH FLOATS AS SECONDARY CONTROL.
3. PUMPS SHALL ALTERNATE BETWEEN LEAD, LAG, AND SPARE PUMP.

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EXISTING LIFT STATION PHOTOS

CU504

SAVED 5/16/2025 9:16:11 AM BY CHRIS.EPP
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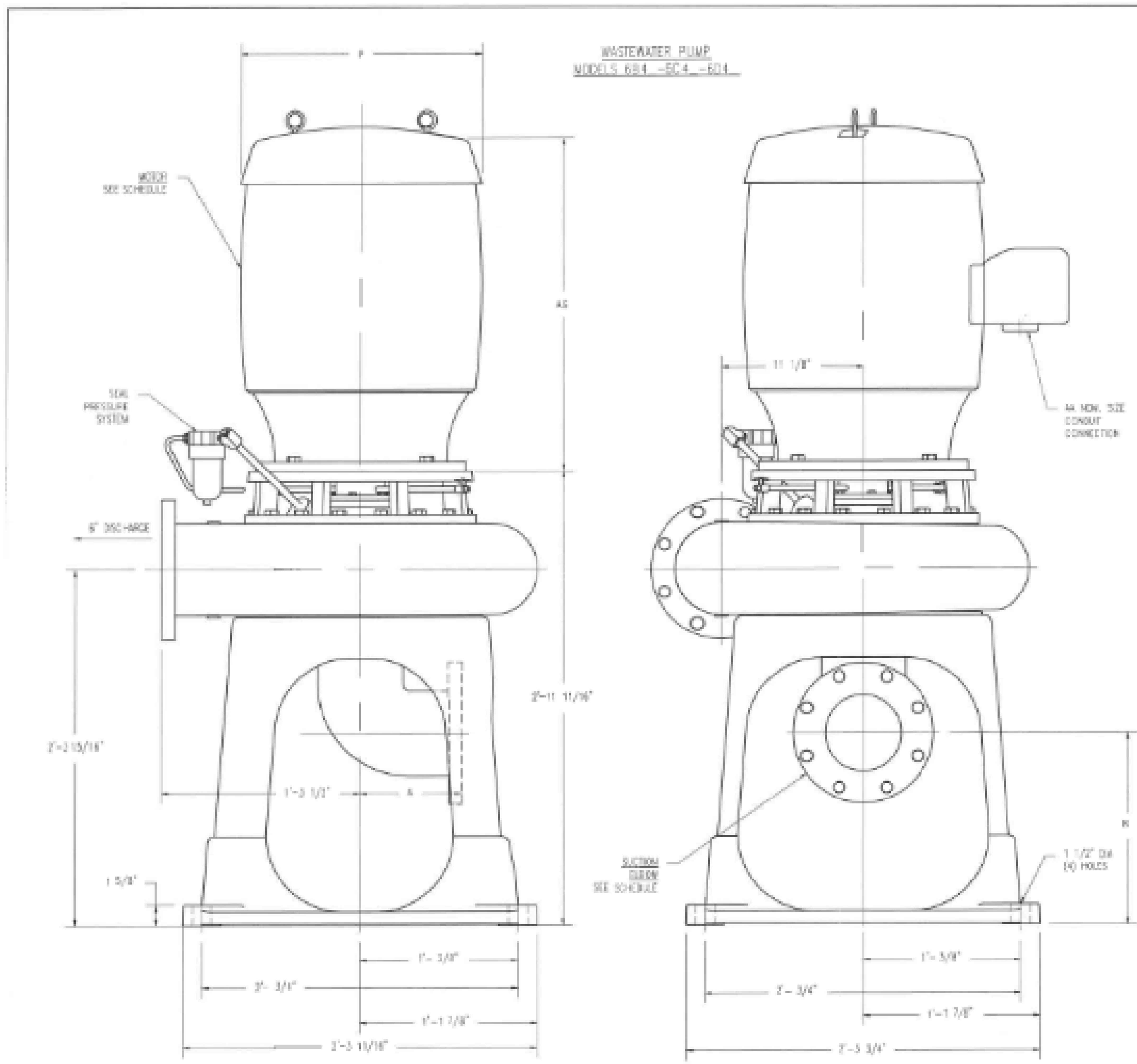
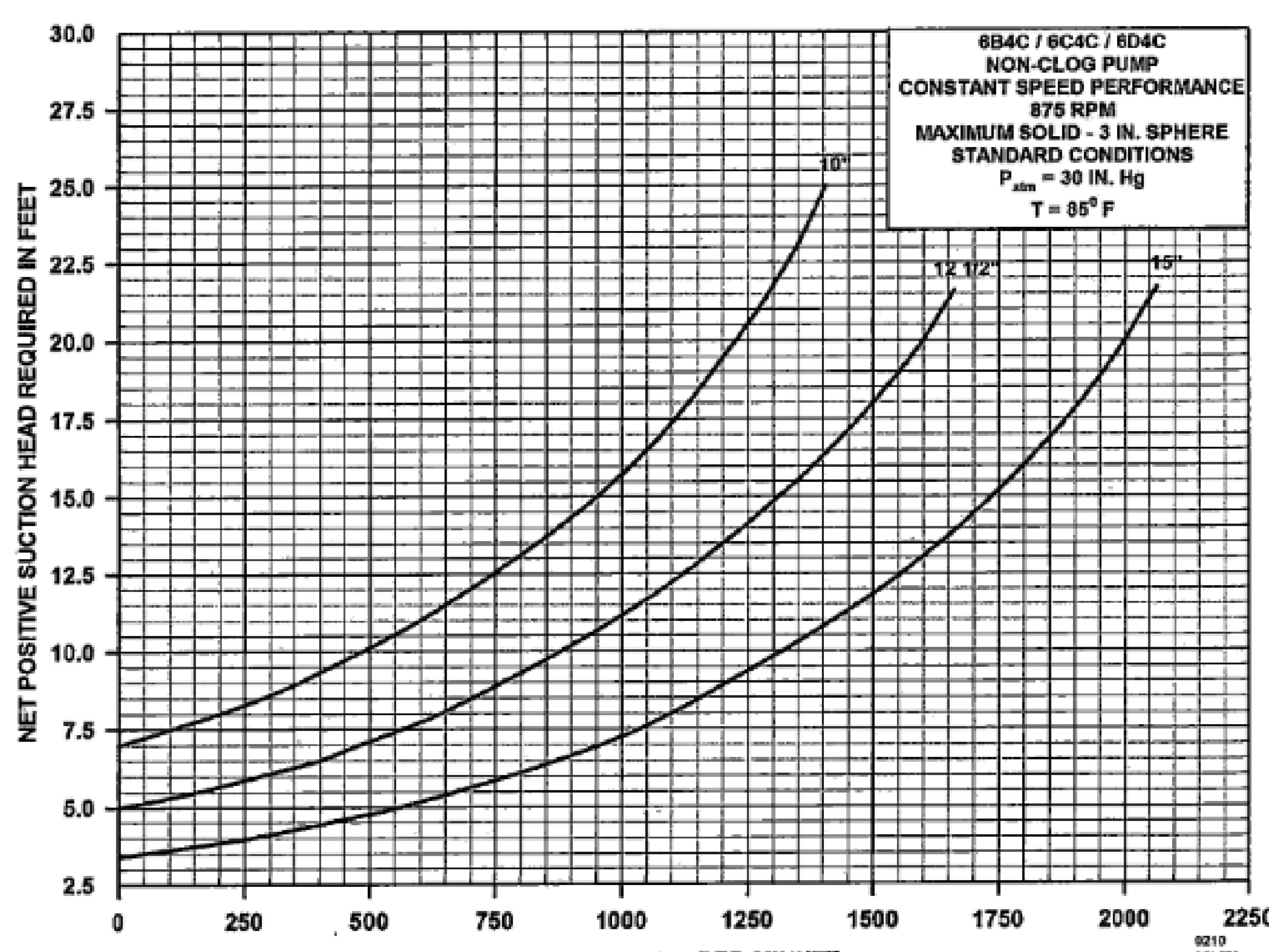


MOTOR SCHEDULE

PUMP MODEL	HORSE POWER 1800 R.P.M.	1200 R.P.M.	900 R.P.M.	MOTOR DIMS. AC (MAX).	P (MAX).	AA
6B4_	------	------	5	1'-11"	1'-4"	1"
	------	10	7 1/2	2'-1"	1'-4"	1 1/4"
6C4_	------	------	10	2'-3"	1'-4"	1 1/4"
	------	20	15	2'-5"	1'-4"	1 1/2"
6D4_	------	25	20	2'-5"	1'-6 7/8"	2"
	------	30	25	2'-7"	1'-8 7/8"	2"
	------	40	------	2'-7"	1'-10 3/4"	2"
	75	50	------	2'-7"	1'-10 3/4"	3"
	100	60	------	2'-10 3/8"	1'-9 1/4"	4"
	125	------	------	2'-10 3/8"	1'-9 1/4"	4"
	150	------	------	3'-3 3/4"	2'-0 1/2"	4"
	200	------	------	3'-3 3/4"	2'-0 1/2"	4"

ELBOW SCHEDULE

S&L PART NO.	ELBOW SIZE	DIM A	DIM B
28B6551A	6" X 6" (STD)	6"	1'-3 1/8"
28B6552A	6" X 8" (STD)	9"	1'-2 1/8"
28B6520	6" X 10" (STD)	11"	1'-0 1/8"
28B6520	6" X 12" (STD)	1'-0"	11 1/8"



Sewage Pump Order

Date EO Prepared: 06/06/
Job Serial Number: 19-02533-00

Location: Wichita, KS	**Engineer:**
Purchaser: City of Wichita	**Project:** LS #4 **Inq #:** WA-35799
Prepared By: Charles (Chad) Early	**Job SN:** 19-02533-00-V **Config. Number:** 80000
Rep Firm: Ray Lindsey Company	**Companions:**

Electrical Service Data: 3 Phase 60 Cycle 460 Volts

PUMP DATA		MOTOR DATA	
Design Characteristics (GPM@TDH)	850 @ 27	Motor Horsepower	15
Pump Model	6C4C	Motor RPM	900
Impeller Diameter	12 1/4	Electrical Data	3/60/460
Rotation	CW	Conduit Box Location	A
Mechanical Seal Size	2-1/8	Motor Serial Number Code	
Suction Elbow Size	6" x 10"		
Suction Elbow Type	Standard		
Pump Discharge Location	5		
Pump Serial Number			

Original Serial Number
RA-02070, RA-02107

SPECIAL MODIFICATIONS - ADDITIONS - AUXILIARY EQUIPMENT

Item No.	Item Description
1.	Finish Per CS-1-A
2.	Motor To be Rated for <3,000' ASL.
3.	Pump Assembley to include 6C4C stand, p/n: 60D191 and volute, p/n: 60D190.
4.	Ship Loose: A. One (1) Touch-Up Paint Kit, p/n: H87A424. B. One (1) Suction Piping Hardware Kit, p/n: H87A492AD. C. One (1) Discharge Piping Hardware Kit, p/n: H87A492AB. D. Two (2) Volute Gaskets, p/n: 60A105B.

O&M Manuals

Preliminary:	0	Marketing /Comm:	1	Start-Up:	0
With Equipment:	1	Rep:	1	Customer:	4
CD-ROM:	1			TOTAL:	8

NOTE:
1. PUMP INFORMATION PROVIDED IS FOR THE PUMP TO BE PROVIDED BY CITY. CONTRACTOR SHALL ORDER SAME PUMP FOR ADD ALTERNATE PUMP REPLACEMENTS (IF AWARDED).

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

CITY OF WICHITA

TREVOR KAUFMAN
LICENSED
26008
09/03/2025
KANSAS
PROFESSIONAL ENGINEER

COW LIFT STATION NO. 4
IMPROVEMENTS

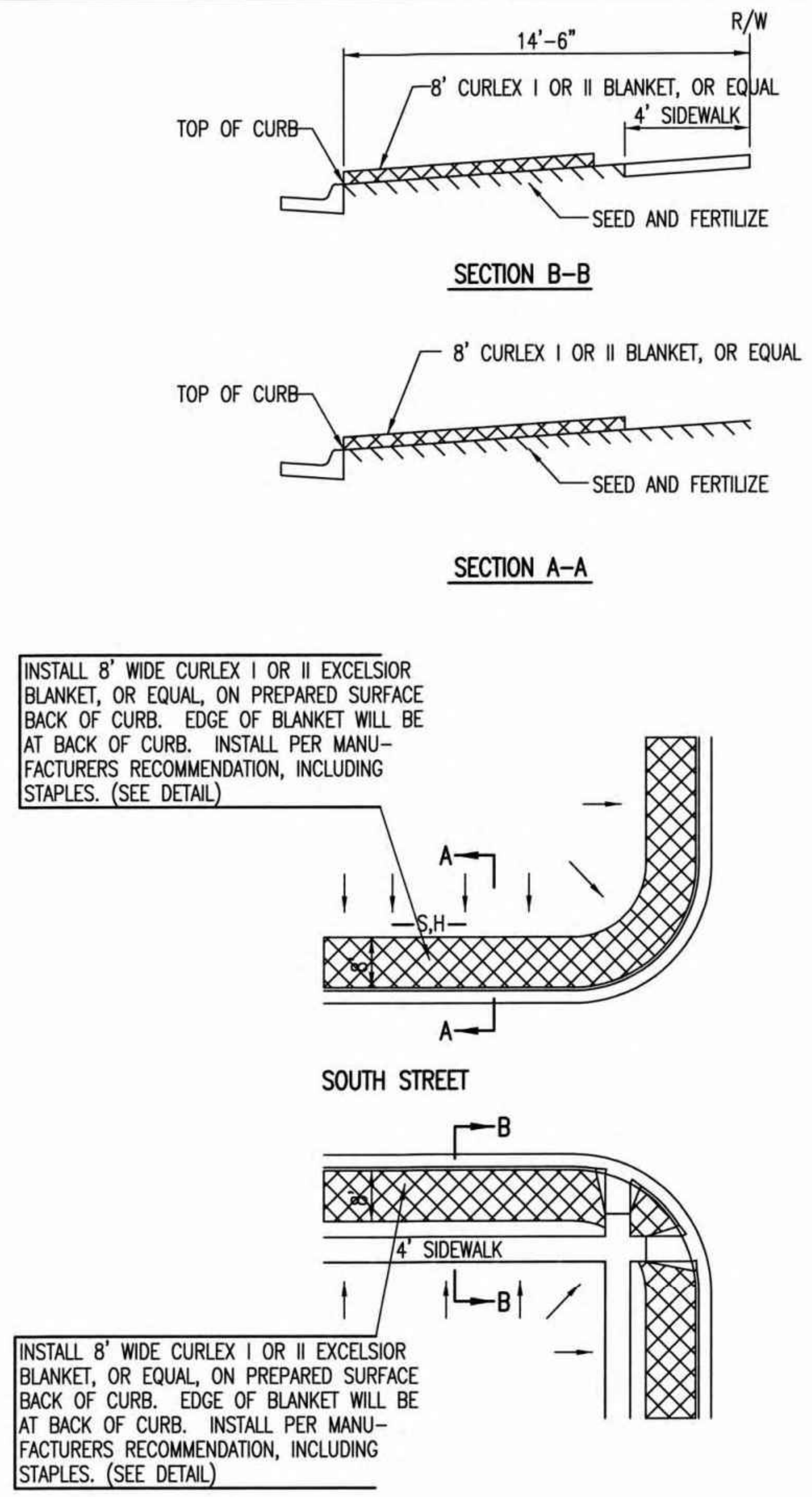
PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
DATE	MAY 2025
PM	RWG
DESIGNED BY	TBK
DRAWN BY	CAE
CHECKED BY	RWG

PUMP INFORMATION

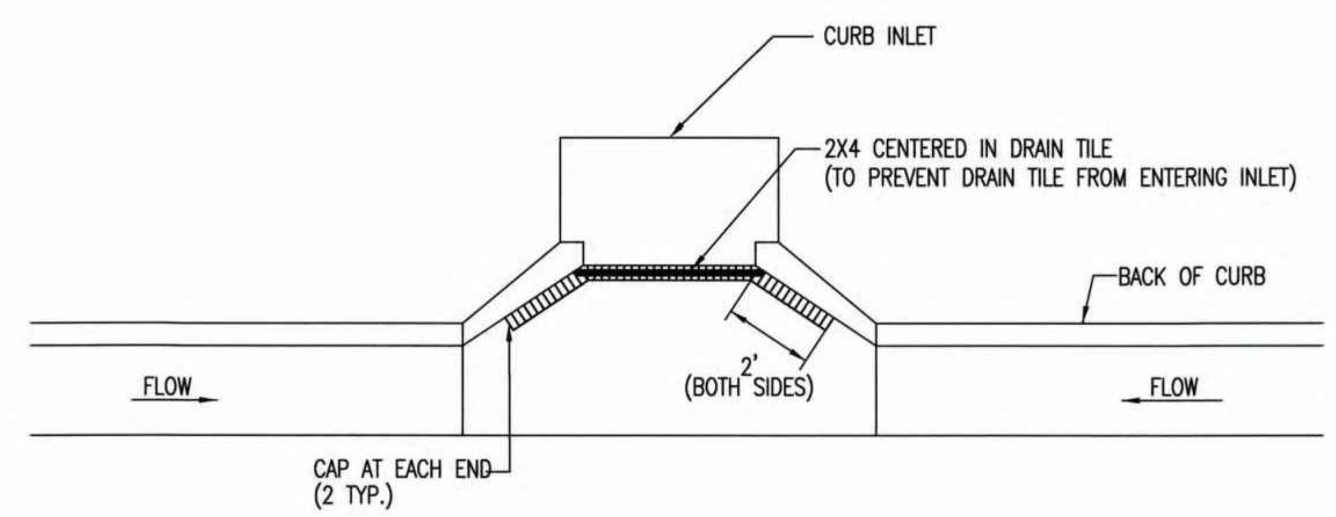
CU505



GENERAL NOTES

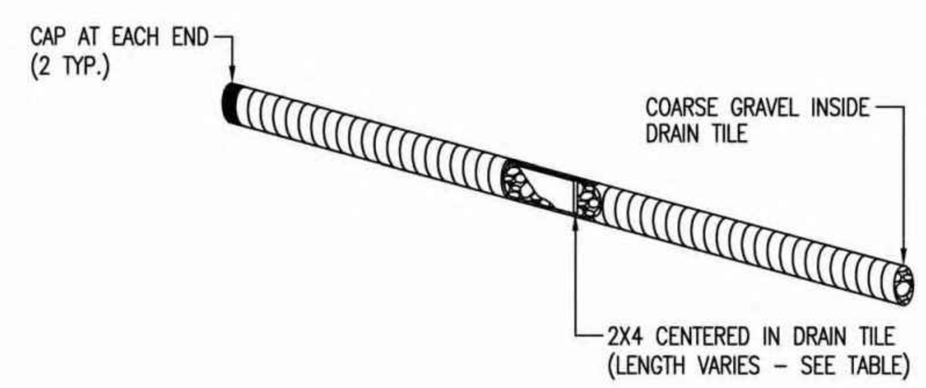
1. EXCELSIOR MAT TO BE INSTALLED WHEN SOD IS NOT SPECIFIED ON PROJECT.
2. EXCELSIOR BLANKET TO BE INSTALLED OVER SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
3. AFTER INSTALLATION OF EXCELSIOR BLANKET, AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB AND INTO THE GUTTER, SUPPLEMENTAL EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS NEEDED, TO FIX THE PROBLEM.

BACK OF CURB PROTECTION DETAIL

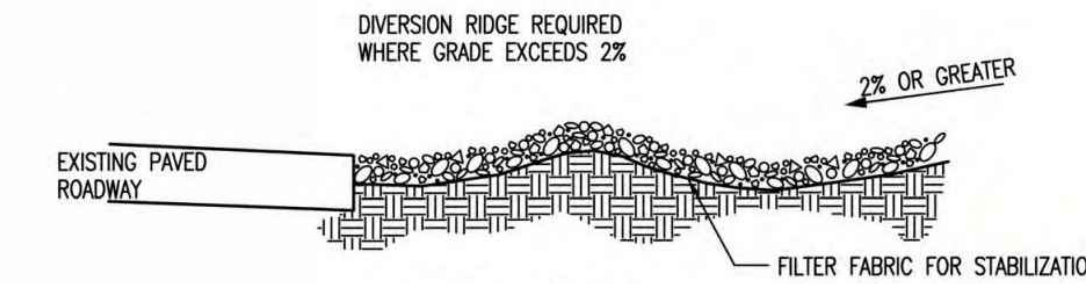


NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

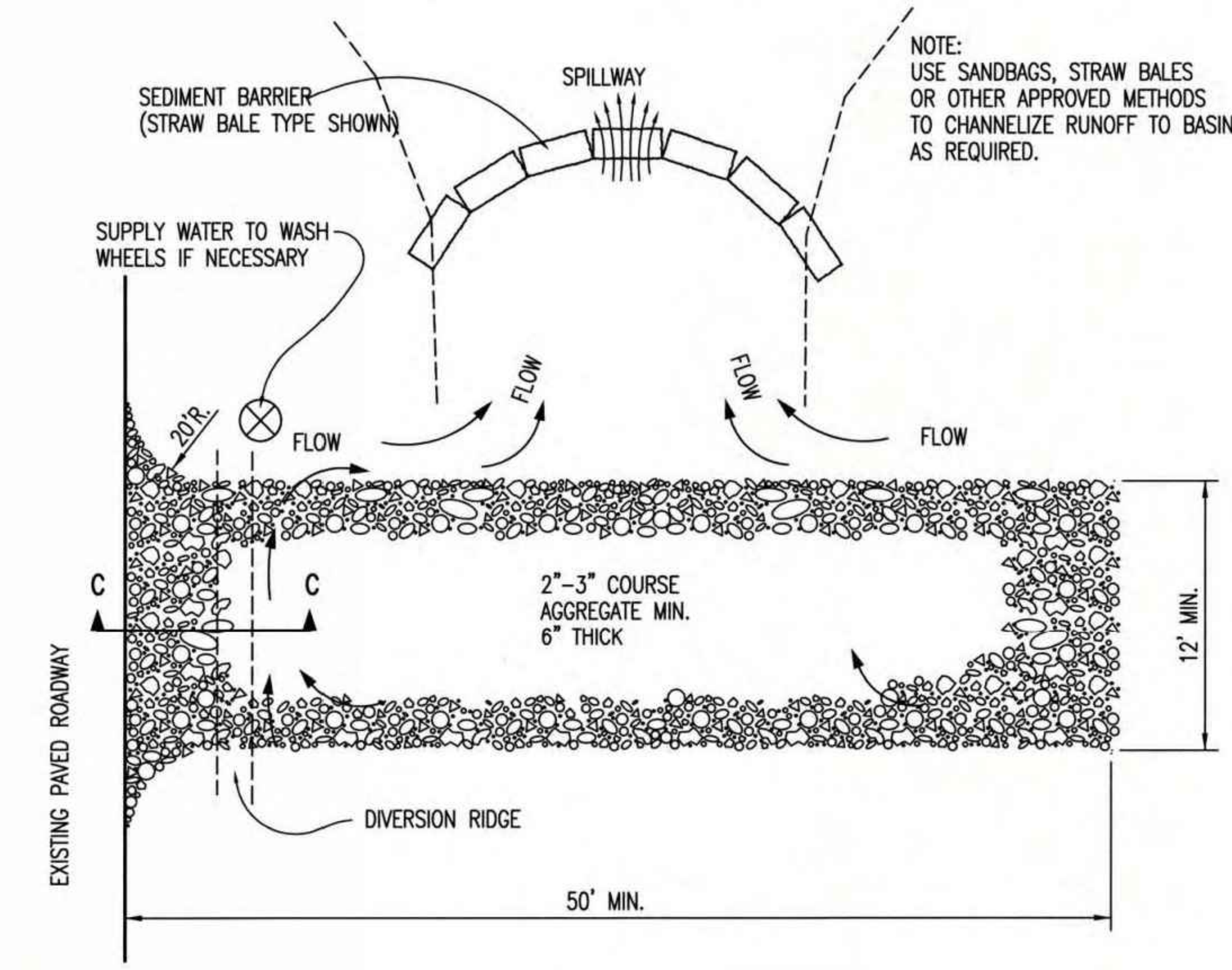
2X4 LENGTH	INLET TYPE	INLET OPENING
5'-6"	1-A	5'-0"
10'-6"	1-A	10'-0"
15'-6"	1-A	15'-0"



CURB INLET PROTECTION
4" PERFORATED PIPE W/ GRAVEL



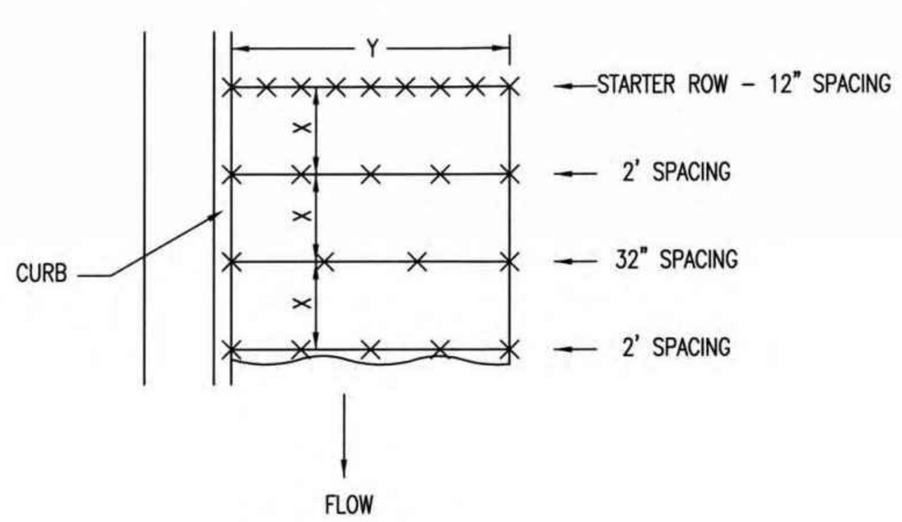
SECTION C-C



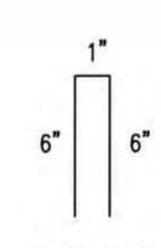
STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN, AS SHOWN ABOVE.
4. DRIVE ENTRANCES ONTO RESIDENTIAL LOTS WILL NOT BE REQUIRED TO HAVE THE SEDIMENT BARRIER SHOWN, BUT WHEEL WASHING MAY BE REQUIRED IF STABILIZED ENTRANCE IS NOT SUFFICIENT TO KEEP MUD FROM BEING TRACKED ONTO ADJACENT STREET. ENTRANCE SHALL EXTEND FROM BACK OF CURB TO DWELLING.



STAPLE PATTERN
NOTES: USE 6" SEAM OVERLAP
(X & Y = RECOMMENDED BY MANUFACTURE)



STAPLE

DETAILS FOR APPROVED EROSION CONTROL MAT

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 10204 KANSAS PROFESSIONAL ENGINEER
05/20/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

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

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

CITY OF WICHITA

COW LIFT STATION NO. 4 IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

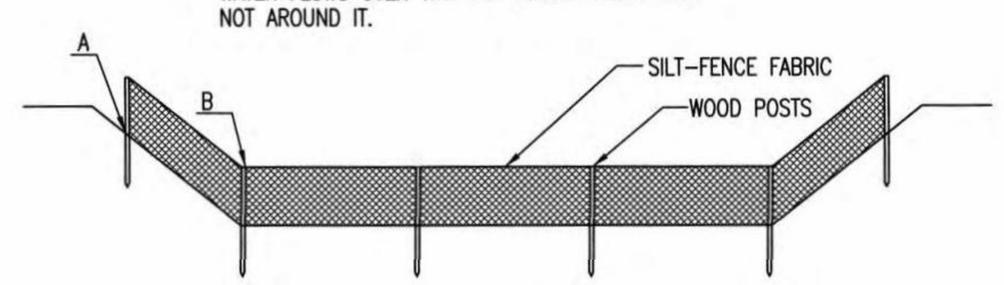
JOB NO.	237043-010
DATE	MAY 2025
PM	RWG
DESIGNED BY	TBK
DRAWN BY	CAE
CHECKED BY	RWG

EROSION CONTROL DETAILS

CU506

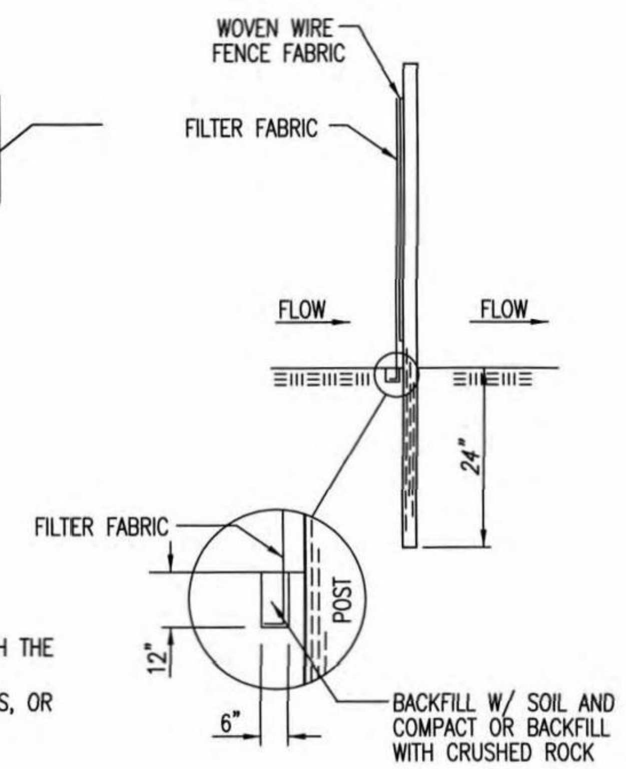
SAVED 2/12/2025 2:51:28 PM BY CHRIS EPP
PLOTTED 9/2/2025 12:01:42 PM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2023\237043\010\PEC\DRAWINGS\237043-010-CU506.DWG

NOTE: POINT A MUST BE HIGHER THAN POINT B SO THAT WATER FLOWS OVER THE SILT FENCE FABRIC AND NOT AROUND IT.



ELEVATION

SILT FENCE DITCH CHECKS
(STREAM PROTECTION)



ANCHOR TRENCH DETAIL

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED.
WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK, NOT OVER IT. SILT FENCE DITCH CHECKS OFTEN FAIL WHEN OVERTOPPED.
SILT FENCE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE SILT FENCE SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE TOP OF THE LOW POINT OF THE FENCE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
SILT FENCE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED. ROCK CHECKS SHOULD BE USED INSTEAD.
SILT FENCE SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.

THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK DITCH GRADE (%)	SPACING CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS AT LEAST 12" DEEP BY 6" WIDE.
EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK.
PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSTREAM SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSTREAM EDGE OF THE TRENCH.
LINE TWO SIDES OF THE TRENCH WITH THE FABRIC AS SHOWN ON DETAIL. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE ON THE UPSTREAM SIDE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS. JUST DOWNSTREAM OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 24". PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

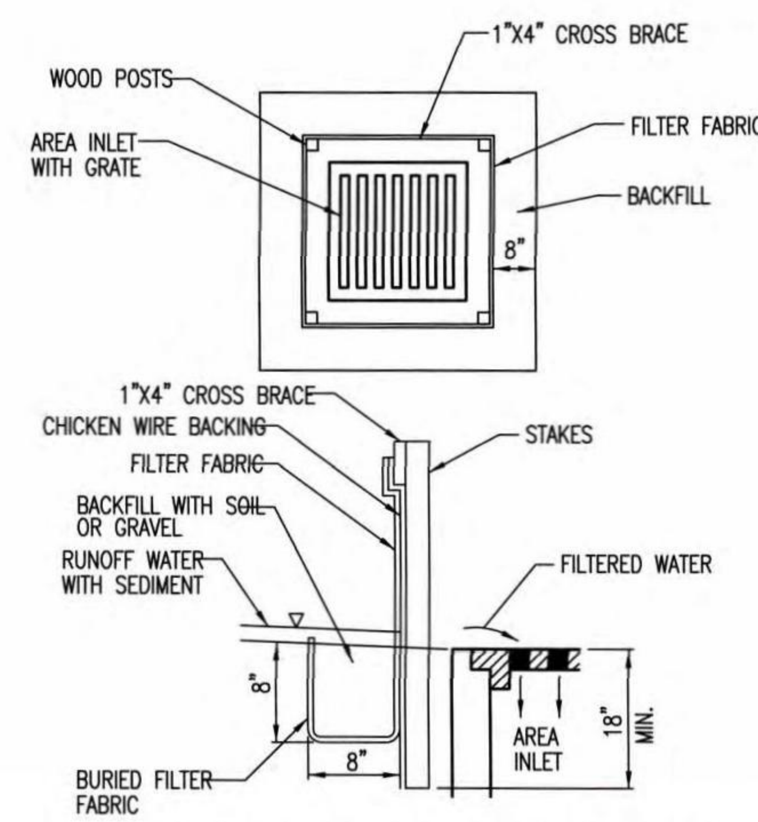
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE DITCH CHECK–NOT OVER IT. PLACE SILT FENCE IN DITCHES WHERE IT IS UNLIKELY THAT IT WILL BE OVERTOPPED. SILT FENCE INSTALLATIONS QUICKLY DETERIORATE WHEN WATER OVERTOPS THEM.
DO NOT PLACE SILT FENCE POSTS ON THE UPSTREAM SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE A SILT FENCE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE SILT FENCE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE FENCE IS HIGHER THAN THE LOW POINT ON THE TOP OF THE FENCE.
DO NOT PLACE SILT FENCE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.

INSPECTION AND MAINTENANCE:

SILT FENCE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SILT FENCE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE WIRE OR POLYMERIC MESH BACKING USED TO HELP SUPPORT THE SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
THE MATERIAL USED TO FRAME THE TOPS OF THE POSTS SHOULD BE 1" BY 4" BOARDS.
SILT FENCE FABRIC AND SUPPORT BACKING SHOULD BE ATTACHED TO THE WOODEN POSTS AND FRAME WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

PLACE A SILT FENCE DROP INLET BARRIER IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED.
WATER SHOULD FLOW THROUGH SILT FENCE, NOT OVER IT. SILT FENCE BARRIERS FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
WHEN USED AS A BARRIER FOR AREA INLETS, SILT FENCE FABRIC AND POSTS MUST BE SUPPORTED AT THE TOP BY A WOODEN FRAME.
WHEN A SILT FENCE BARRIER FOR AREA INLETS IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 8" DEEP BY 8" WIDE.
DRIVE POSTS TO A DEPTH OF AT LEAST 18" AROUND THE PERIMETER OF THE AREA INLET.
THE DISTANCE BETWEEN POSTS SHOULD BE 4' OR LESS. IF THE DISTANCE BETWEEN TWO ADJACENT CORNER POSTS IS MORE THAN 4', ADD ANOTHER POST(S) BETWEEN THEM.
CONNECT THE TOPS OF ALL THE POSTS WITH A WOODEN FRAME MADE OF 1" BY 4" BOARDS. USE NAILS OR SCREWS FOR FASTENING.
ATTACH THE WIRE OR POLYMERIC–MESH BACKING TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC LONG ENOUGH TO WRAP AROUND THE PERIMETER OF THE AREA INLET. ADD MORE LENGTH FOR OVERLAPPING THE FABRIC JOINT. PLACE THE EDGE OF THE FABRIC IN THE TRENCH, STARTING AT THE OUTSIDE EDGE OF THE TRENCH. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT FENCE FABRIC SHOULD REMAIN EXPOSED.
ATTACH THE SILT FENCE TO THE OUTSIDE OF THE POST/FRAME STRUCTURE WITH STAPLES, WIRE, ZIP TIES, OR NAILS. THE JOINT SHOULD BE OVERLAPPED TO THE NEXT POST.

NOTE: WHEN A SILT FENCE BARRIER FOR AREA INLET IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

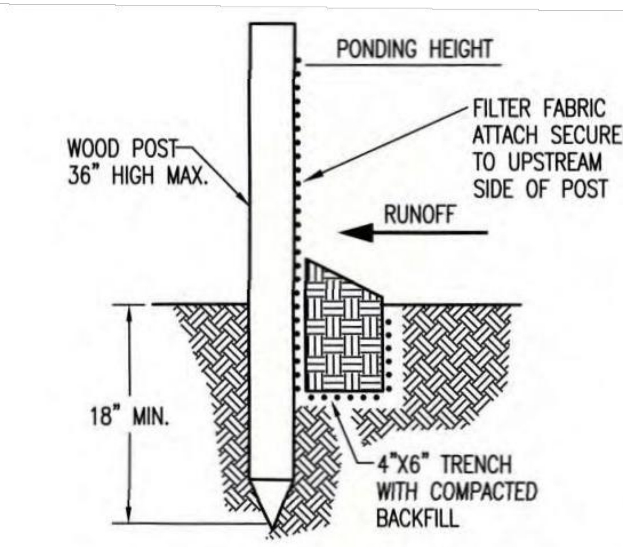
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WATER SHOULD FLOW THROUGH A SILT FENCE BARRIER FOR AREA INLET–NOT OVER IT. PLACE A SILT FENCE BARRIER FOR AREA INLET IN A LOCATION WHERE IT IS UNLIKELY TO BE OVERTOPPED. SILT FENCE BARRIER FOR AREA INLETS OFTEN FAIL WHEN REPEATEDLY OVERTOPPED.
DO NOT PLACE POSTS ON THE OUTSIDE OF THE SILT FENCE BARRIER FOR AREA INLET. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESISTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT INSTALL SILT FENCE BARRIER FOR AREA INLETS WITHOUT FRAMING THE TOP OF THE POSTS. THE CORNER POSTS AROUND AREA INLETS ARE STRESSED IN TWO DIRECTIONS WHEREAS A NORMAL SILT FENCE IS ONLY STRESSED IN ONE DIRECTION. THIS ADDED STRESS REQUIRES MORE SUPPORT.

INSPECTION AND MAINTENANCE:

SILT FENCE BARRIER FOR AREA INLETS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE SILT FENCE?
DOES THE SILT FENCE SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



SILT FENCE BARRIERS

MATERIAL SPECIFICATION:

SILT FENCE FABRIC SHOULD CONFORM TO THE AASHTO M288 96 SILT FENCE SPECIFICATION.
THE POSTS USED TO SUPPORT THE SILT FENCE FABRIC SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
SILT FENCE FABRIC SHOULD BE ATTACHED TO THE WOODEN POSTS WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, SILT FENCE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
SILT FENCE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT–OF–WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 6" DEEP BY 4" WIDE.
MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
ROLL OUT A CONTINUOUS LENGTH OF SILT FENCE FABRIC ON THE DOWNSLOPE SIDE OF THE TRENCH.
PLACE THE EDGE OF THE FABRIC IN THE TRENCH STARTING AT THE TOP UPSLOPE EDGE. LINE ALL THREE SIDES OF THE TRENCH WITH THE FABRIC. BACKFILL OVER THE FABRIC IN THE TRENCH WITH THE EXCAVATED SOIL AND COMPACT. AFTER FILLING THE TRENCH, APPROXIMATELY 24" TO 36" OF SILT–FENCE FABRIC SHOULD REMAIN EXPOSED.
LAY THE EXPOSED SILT FENCE UPSLOPE OF THE TRENCH TO CLEAR AN AREA FOR DRIVING IN THE POSTS.
JUST DOWNSLOPE OF THE TRENCH, DRIVE POSTS INTO THE GROUND TO A DEPTH OF AT LEAST 18".
PLACE POSTS NO MORE THAN 4' APART.
ATTACH THE SILT FENCE TO THE ANCHORED POST WITH STAPLES, WIRE, ZIP TIES, OR NAILS.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICABLE, DO NOT PLACE SILT FENCE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. WHEN THE FLOW CONCENTRATES, IT OVERTOPS THE BARRIER AND THE SILT FENCE SLOPE BARRIER QUICKLY DETERIORATES.
DO NOT PLACE SILT–FENCE POSTS ON THE UPSLOPE SIDE OF THE SILT FENCE FABRIC. IN THIS CONFIGURATION, THE FORCE OF THE WATER IS NOT RESTRICTED BY THE POSTS, BUT ONLY BY THE STAPLES (WIRE, ZIP TIES, NAILS, ETC.). THE SILT FENCE WILL RIP AND FAIL.
DO NOT PLACE SILT FENCE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT SUFFICIENTLY ANCHORED, IT WILL WASH OUT.
SILT FENCE SLOPE BARRIERS MUST BE DUG INTO THE GROUND–SILT FENCE AT GROUND LEVEL DOES NOT WORK BECAUSE WATER WILL FLOW UNDERNEATH.

INSPECTION AND MAINTENANCE:

SILT FENCE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DO THE SILT FENCES SAG EXCESSIVELY?
HAS THE SILT FENCE TORN OR BECOME DETACHED FROM THE POSTS?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05/30/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SILT FENCE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
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CITY OF WICHITA

COW LIFT STATION NO. 4 IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

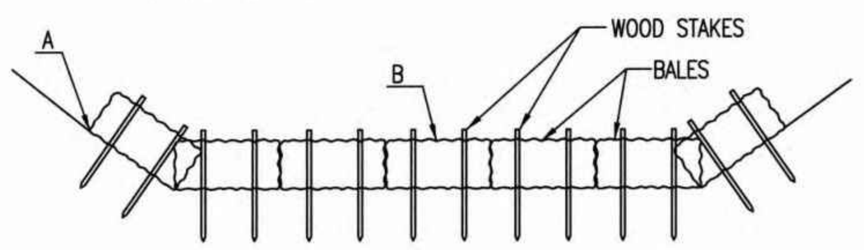
JOB NO.	237043-010
DATE	MAY 2025
PM	RWG
DESIGNED BY	TBK
DRAWN BY	CAE
CHECKED BY	RWG

EROSION CONTROL DETAILS

CU507

SAVED 2/12/2025 2:51:19 PM BY CHRIS.EPP
PLOTTED 9/2/2025 12:01:46 PM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2023\237043\010\PEC\DRAWINGS\237043-010-CU507.DWG

NOTE: POINT A MUST BE HIGHER THAN POINT B
SO THAT WATER FLOWS OVER THE BALES AND
NOT AROUND THEM.



STRAW BALE DITCH CHECKS

MATERIAL SPECIFICATION:

BALE DITCH CHECKS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
OPTIONAL: THE DOWNSTREAM SCOUR APRON SHOULD BE CONSTRUCTED OF A DOUBLE-NETTED STRAW EROSION-CONTROL BLANKET AT LEAST 6' WIDE.
OPTIONAL: THE METAL LANDSCAPE STAPLES USED TO ANCHOR THE EROSION-CONTROL BLANKET SHOULD BE AT LEAST 8" LONG.

PLACEMENT:

BALE DITCH CHECKS SHOULD BE PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
THE DITCH CHECK SHOULD EXTEND FAR ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE. THIS PREVENTS WATER FROM FLOWING AROUND THE CHECK.
STRAW BALE DITCH CHECKS SHOULD NOT BE PLACED IN DITCHES WHERE HIGH FLOWS ARE EXPECTED.
ROCK CHECKS SHOULD BE USED INSTEAD.
BALES SHOULD BE PLACED IN DITCHES WITH SLOPES OF 6% OR LESS. FOR SLOPES STEEPER THAN 6%, ROCK CHECKS SHOULD BE USED.
THE FOLLOWING TABLE PROVIDES CHECK SPACING FOR A GIVEN DITCH GRADE:

DITCH CHECK SPACING

DITCH GRADE (%)	CHECK SPACING (FEET)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH PERPENDICULAR TO THE DITCH FLOWLINE THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. EXTEND THE TRENCH IN A STRAIGHT LINE ALONG THE ENTIRE LENGTH OF THE PROPOSED DITCH CHECK. PLACE THE SOIL ON THE UPSTREAM SIDE OF THE TRENCH-IT WILL BE USED LATER.
OPTIONAL: ON THE DOWNSTREAM SIDE OF THE TRENCH, ROLL OUT A LENGTH OF EROSION-CONTROL BLANKET (SCOUR APRON) EQUAL TO THE LENGTH OF THE TRENCH. PLACE THE UPSTREAM EDGE OF THE EROSION-CONTROL BLANKET ALONG THE BOTTOM UPSTREAM EDGE OF THE TRENCH. THE EROSION CONTROL BLANKET SHOULD BE ANCHORED IN THE TRENCH WITH ONE ROW OF 8" LANDSCAPE STAPLES PLACED ON 18" CENTERS. THE REMAINDER OF THE EROSION-CONTROL BLANKET (THE PORTION THAT IS NOT LYING IN THE TRENCH) WILL SERVE AS THE DOWNSTREAM SCOUR APRON. THIS SECTION OF THE BLANKET SHOULD BE ANCHORED TO THE GROUND WITH 8" LANDSCAPE STAPLES PLACED AROUND THE PERIMETER OF THE BLANKET ON 18" CENTERS. THE REMAINDER OF THE BLANKET SHOULD BE ANCHORED USING TWO EVENLY SPACED ROWS OF 8" LANDSCAPE STAPLES ON 18" CENTERS PLACED PERPENDICULAR TO THE FLOWLINE OF THE DITCH.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSTREAM SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP AND EXTEND UPSTREAM NO MORE THAN 24".

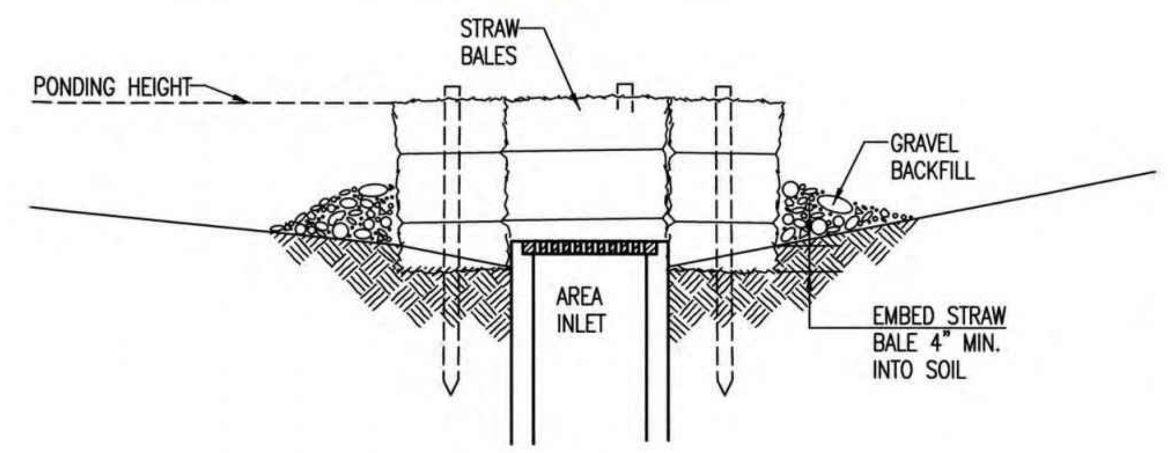
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

DO NOT PLACE A BALE DITCH CHECK DIRECTLY IN FRONT OF A CULVERT OUTLET. IT WILL NOT STAND UP TO THE CONCENTRATED FLOW.
DO NOT PLACE BALE DITCH CHECKS IN DITCHES THAT WILL LIKELY EXPERIENCE HIGH FLOWS. THEY WILL NOT STAND UP TO CONCENTRATED FLOW.
FOLLOW PRESCRIBED DITCH-CHECK SPACING GUIDELINES. IF SPACING GUIDELINES ARE EXCEEDED, EROSION WILL OCCUR BETWEEN THE DITCH CHECKS.
DO NOT ALLOW WATER TO FLOW AROUND THE DITCH CHECK. MAKE SURE THAT THE DITCH CHECK IS LONG ENOUGH SO THAT THE GROUND LEVEL AT THE ENDS OF THE CHECK IS HIGHER THAN THE TOP OF THE LOWEST CENTER BALE.
DO NOT PLACE BALE DITCH CHECKS IN CHANNELS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE CHECK IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE DITCH CHECKS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE CHECK.

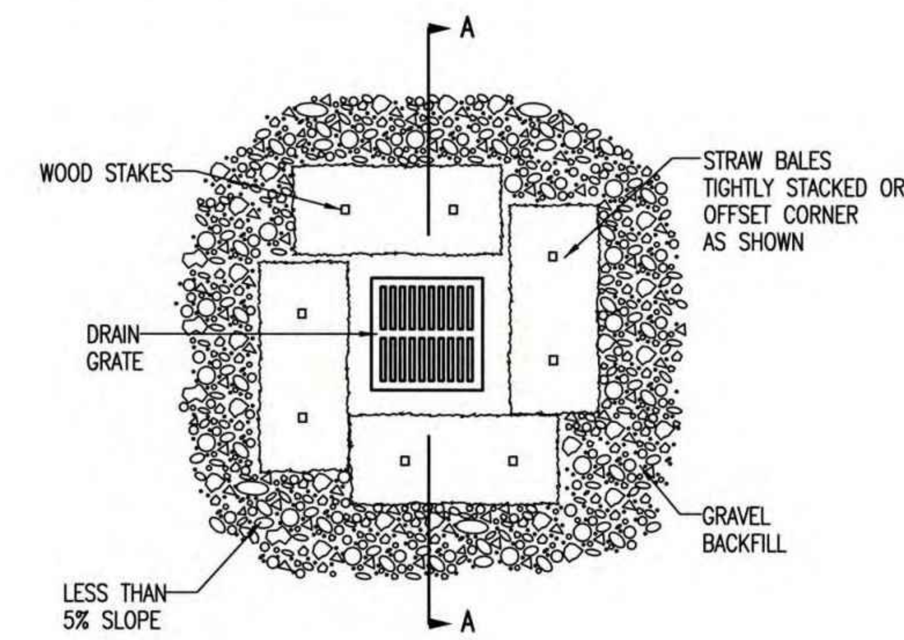
INSPECTION AND MAINTENANCE:

BALE DITCH CHECKS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW AROUND THE DITCH CHECK?
DOES WATER FLOW UNDER THE DITCH CHECK?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES AND/OR SCOUR APRONS (OPTIONAL) DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE DITCH CHECK?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

MATERIAL SPECIFICATION:

BALE AREA INLET BARRIERS SHOULD BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

BALE AREA INLET BARRIERS SHOULD BE PLACED DIRECTLY AROUND THE PERIMETER OF A DROP INLET.
WHEN A BALE AREA INLET BARRIER IS LOCATED NEAR AN INLET THAT HAS STEEP APPROACH SLOPES, THE STORAGE CAPACITY BEHIND THE BARRIER IS DRASTICALLY REDUCED. TIMELY REMOVAL OF SEDIMENT MUST OCCUR FOR A BARRIER TO OPERATE PROPERLY IN THIS LOCATION.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH AROUND THE PERIMETER OF THE AREA INLET THAT IS AT LEAST 4" DEEP BY A BALE'S WIDTH WIDE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. SOME BALES MAY NEED TO BE SHORTENED TO FIT INTO THE TRENCH AROUND THE AREA INLET. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS.
STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE RECEIVING SIDE OF THE BARRIER AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.
NOTE: WHEN A BALE AREA INLET BARRIER IS PLACED IN A SHALLOW MEDIAN DITCH, MAKE SURE THAT THE TOP OF THE BARRIER IS NOT HIGHER THAN THE PAVED ROAD. IN THIS CONFIGURATION, WATER MAY SPREAD ONTO THE ROADWAY CAUSING A HAZARDOUS CONDITION.

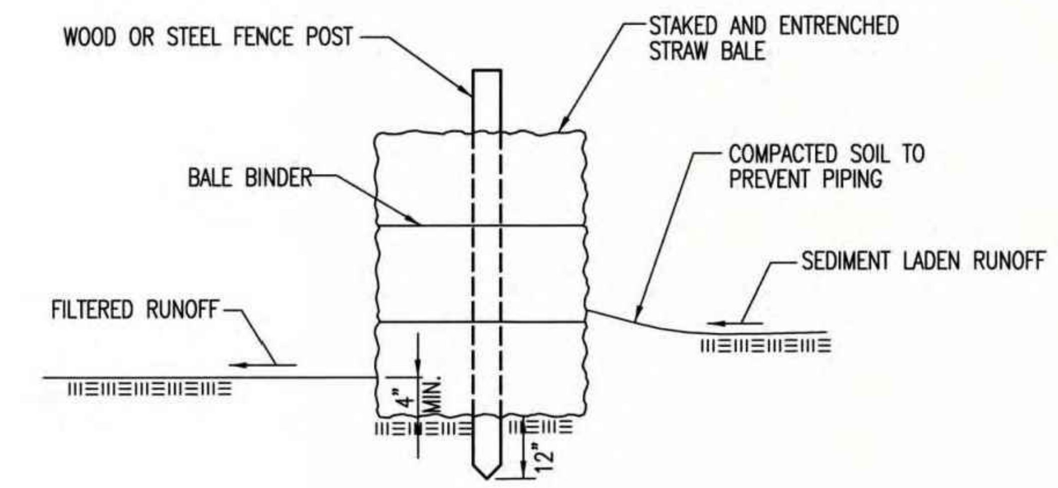
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

BALES SHOULD BE PLACED DIRECTLY AGAINST THE PERIMETER OF THE AREA INLET. THIS ALLOWS OVERTOPPING WATER TO FLOW DIRECTLY INTO THE INLET INSTEAD OF ONTO NEARBY SOIL CAUSING SCOUR.
BALE AREA INLET BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE AREA INLET BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

DOES WATER FLOW UNDER THE AREA INLET BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE AREA INLET BARRIER?



STRAW BALE BARRIERS

MATERIAL SPECIFICATION:

BALE SLOPE BARRIERS MAY BE CONSTRUCTED OF WHEAT STRAW, OAT STRAW, PRAIRIE HAY, OR BROMEGRASS HAY THAT IS FREE OF WEEDS DECLARED NOXIOUS BY THE KANSAS STATE BOARD OF AGRICULTURE.
THE STAKES USED TO ANCHOR THE BALES SHOULD BE A HARDWOOD MATERIAL WITH THE FOLLOWING MINIMUM DIMENSIONS: 2" SQUARE (NOMINAL) BY 4' LONG.
TWINE SHOULD BE USED TO BIND BALES. THE USE OF WIRE BINDING IS PROHIBITED BECAUSE IT DOES NOT BIODEGRADE READILY.

PLACEMENT:

A SLOPE BARRIER SHOULD BE USED AT THE TOE OF A SLOPE WHEN A DITCH DOES NOT EXIST. THE SLOPE BARRIER SHOULD BE PLACED ON NEARLY LEVEL GROUND 5' TO 10' AWAY FROM THE TOE OF A SLOPE. THE BARRIER IS PLACED AWAY FROM THE TOE OF THE SLOPE TO PROVIDE ADEQUATE STORAGE FOR SETTLING OUT SEDIMENT.
WHEN PRACTICABLE, BALE SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW.
BALE SLOPE BARRIERS CAN ALSO BE PLACED ALONG RIGHT-OF-WAY FENCE LINES TO KEEP SEDIMENT FROM CROSSING ONTO ADJACENT PROPERTY. WHEN PLACED IN THIS MANNER, THE SLOPE BARRIER WILL NOT LIKELY FOLLOW CONTOURS.

PROPER INSTALLATION METHOD:

EXCAVATE A TRENCH THE LENGTH OF THE PLANNED SLOPE BARRIER THAT IS 4" DEEP AND A BALE'S WIDTH WIDE. MAKE SURE THAT THE TRENCH IS EXCAVATED ALONG A SINGLE CONTOUR. WHEN PRACTICABLE, SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. PLACE THE SOIL ON THE UPSLOPE SIDE OF THE TRENCH FOR LATER USE.
PLACE THE BALES IN THE TRENCH, MAKING SURE THAT THEY ARE BUTTED TIGHTLY. TWO STAKES SHOULD BE DRIVEN THROUGH EACH BALE ALONG THE CENTERLINE OF THE DITCH CHECK, APPROXIMATELY 6" TO 8" IN FROM THE BALE ENDS. STAKES SHOULD BE DRIVEN AT LEAST 12" INTO THE GROUND.
ONCE ALL THE BALES HAVE BEEN INSTALLED AND ANCHORED, PLACE THE EXCAVATED SOIL AGAINST THE UPSLOPE SIDE OF THE CHECK AND COMPACT IT. THE COMPACTED SOIL SHOULD BE NO MORE THAN 3" TO 4" DEEP.

LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

WHEN PRACTICAL, DO NOT PLACE BALE SLOPE BARRIERS ACROSS CONTOURS. SLOPE BARRIERS SHOULD BE PLACED ALONG CONTOURS TO AVOID A CONCENTRATION OF FLOW. CONCENTRATED FLOW OVER A SLOPE BARRIER CREATES A SCOUR HOLE ON THE DOWNSLOPE SIDE OF THE BARRIER. THE SCOUR HOLE EVENTUALLY UNDERMINES THE BALES AND THE BARRIER FAILS.
DO NOT PLACE BALE SLOPE BARRIERS IN AREAS WITH SHALLOW SOILS UNDERLAIN BY ROCK. IF THE BARRIER IS NOT ANCHORED SUFFICIENTLY, IT WILL WASH OUT.
BALE SLOPE BARRIERS MUST BE DUG INTO THE GROUND. BALES AT GROUND LEVEL DO NOT WORK BECAUSE THEY ALLOW WATER TO FLOW UNDER THE BARRIER.

INSPECTION AND MAINTENANCE:

BALE SLOPE BARRIERS SHOULD BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 1/2" OR MORE. THE FOLLOWING IS A LIST OF QUESTIONS THAT SHOULD BE ADDRESSED DURING EACH INSPECTION:

ARE THERE ANY POINTS ALONG THE SLOPE BARRIER WHERE WATER IS CONCENTRATING?
DOES WATER FLOW UNDER THE SLOPE BARRIER?
DOES WATER FLOW THROUGH SPACES BETWEEN ABUTTING BALES?
ARE ANY BALES DISLODGED?
ARE BALES DECOMPOSING DUE TO AGE AND/OR WATER DAMAGE?
DOES SEDIMENT NEED TO BE REMOVED FROM BEHIND THE SLOPE BARRIER?

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05/15/15

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STRAW BALE DITCH CHECK AND BARRIER DETAILS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

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CITY OF WICHITA

COW LIFT STATION NO. 4 IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
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EROSION CONTROL DETAILS

CU508

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PLOTTED 9/2/2025 12:01:51 PM BY KURTIS DEKAT
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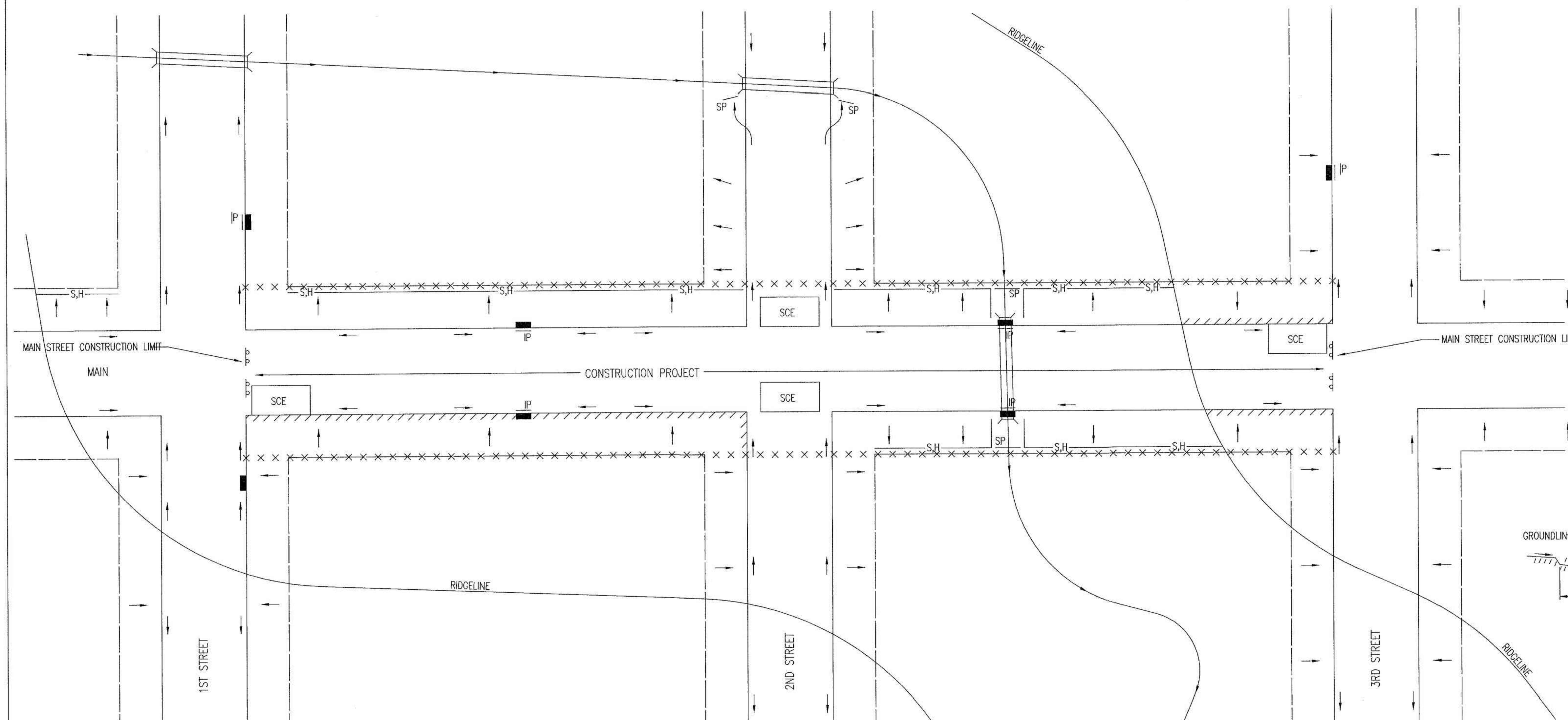
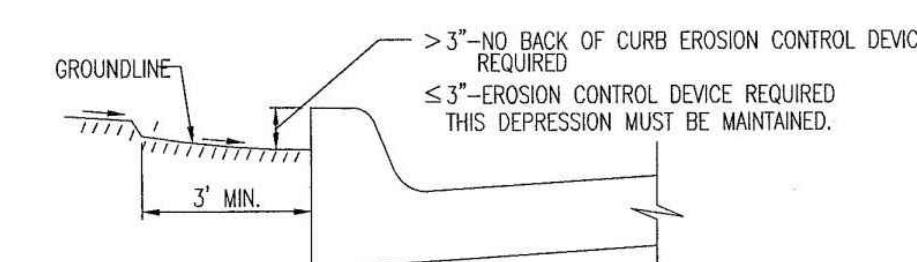
GENERAL NOTES

1. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPES OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.
4. FOR PROJECTS DISTURBING LESS THAN 1 ACRE, CONTRACTORS ARE ENCOURAGED TO PREPARE STORMWATER POLLUTION PREVENTION PLANS PRIOR TO CONSTRUCTION. EROSION CONTROL DEVICES MUST BE USED ON ALL PROJECTS.
5. FAILURE TO USE AND MAINTAIN EROSION CONTROL DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE CONTRACTOR TO THE PENALTIES PROVIDED FOR THEREIN.
6. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE A DIFFERENT DEVICE OTHER THAN THOSE SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED AS LONG AS THEY ARE EFFECTIVE AND MAINTAINED.





CURB BACKFILL DETAIL

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

LEGEND

———	R-O-W LIMITS
→	DRAINAGE FLOW PATH
× × × × ×	R/W LIMIT WITHIN CONSTRUCTION LIMIT
▬	STORM WATER INLETS
IP	INLET PROTECTION
—S,H—	SILT FENCE OR HAY BALE BARRIER
SP	STREAM PROTECTION
SCE	STABILIZED CONSTRUCTION ENTRANCE
//////	BACK OF CURB PROTECTION

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO KEEP ALL SEDIMENT CONFINED TO THE CONSTRUCTION SITE, AND OUT OF ALL UNDERGROUND PIPES, DITCHES, LAKES, AND OTHER DRAINAGE FACILITIES, AND OFF OF STREETS.
2. THE POINT OF COMPLIANCE IS GENERALLY THE RIGHT-OF-WAY LINES WITHIN THE LIMITS OF CONSTRUCTION.
3. EROSION CONTROL DEVICES WILL BE REQUIRED AT ALL POINTS ALONG THE PROJECT WHERE DISTURBED EARTH CAN DRAIN ONTO PRIVATE PROPERTY.
4. INLET PROTECTION DEVICES WILL BE REQUIRED WHEREVER WATER CAN DRAIN OFF THE PROJECT SITE INTO AN INLET, INCLUDING ANY SIDE STREET INLETS.
5. EROSION CONTROL DEVICES SHALL BE INSTALLED AT CREEK CROSSINGS SO AS TO PREVENT SEDIMENT FROM ENTERING THEREIN.
6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED, AS NEEDED, TO PREVENT MUD FROM TRACKING ONTO STREETS NOT UNDER CONSTRUCTION AND ON STREETS WITHIN THE PROJECT LIMITS IF TRAFFIC IS BEING MAINTAINED THROUGH THE PROJECT.
7. ANY MUD TRACKED ONTO STREETS MUST BE REMOVED AT THE END OF EACH WORK DAY.
8. THE CONTACTOR WILL BE REQUIRED TO PLACE EROSION CONTROL DEVICES BACK OF CURB, WHENEVER WATER CAN DRAIN OVER CURB, TO KEEP ERODED SOIL OUT OF THE GUTTERLINES, IN ACCORDANCE WITH THE FOLLOWING:
   A. THE DEVICE REQUIRED WILL BE APPROVED EROSION CONTROL MAT LISTED ON THE CITY'S APPROVED MATERIAL LIST. SAID BLANKET SHALL BE PLACED OVER THE APPROPRIATE SEED AND FERTILIZER, AS SPECIFIED IN THE PROJECT SPECIFICATIONS. (SEE SOIL EROSION BMPs – BACK OF CURB SEDIMENT BARRIER DETAILS)
   B. THIS DEVICE SHALL BE INSTALLED IMMEDIATELY WHENEVER THE CURB IS BACKFILLED TO WITHIN 3" OF THE TOP OF CURB. (SEE CURB BACKFILL DETAIL) OTHER BMP'S MAY BE REQUIRED AT LOCATIONS WHERE CONCENTRATED FLOW CARRIES SEDIMENT OVER THE CURB.
   C. ADDITIONALLY, OTHER EROSION CONTROL DEVICES (HAY BALES, SILT FENCE, ETC.) WILL BE INSTALLED AT LOCATIONS OF CONCENTRATED FLOW RESULTING IN SEDIMENT OVERRUNNING THE MAT.
   D. SHOULD THE PROJECT PLANS SPECIFY THAT THE RIGHT–OF–WAY IS TO BE SODDED, THE EXCELSIOR MAT WILL NOT BE REQUIRED SO LONG AS THE SOD IS PLACED WITHIN 48 HOURS AFTER CURB BACKFILL REACHES A HEIGHT OF 3" OR LESS FROM TOP OF CURB. (SEE CURB BACKFILL DETAIL)

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER 06/05/15

REVISION: JUNE 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STREET IMPROVEMENT PROJECTS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

CITY ENGINEER'S OFFICE
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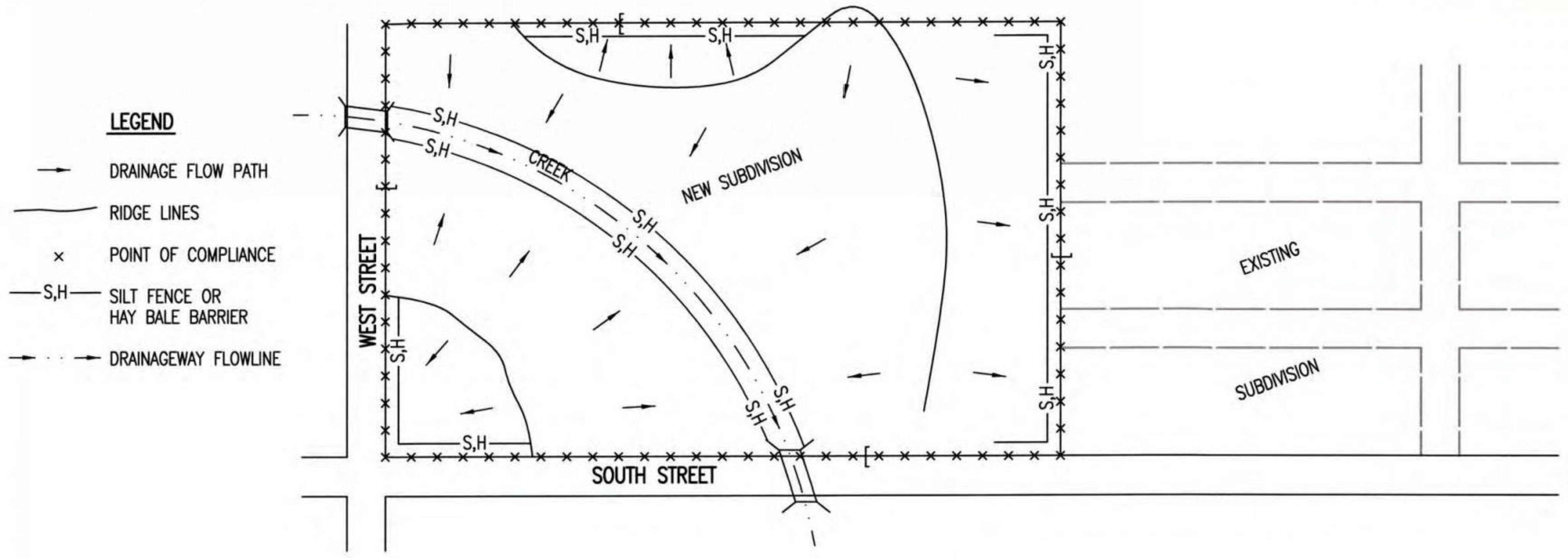
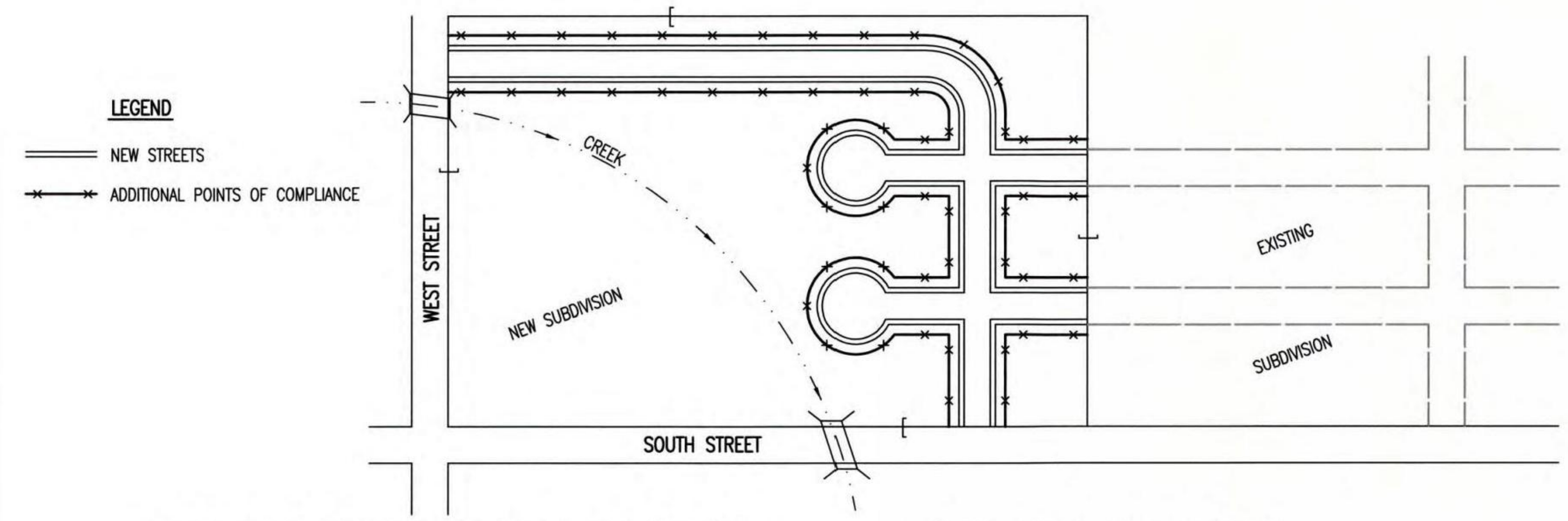
PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



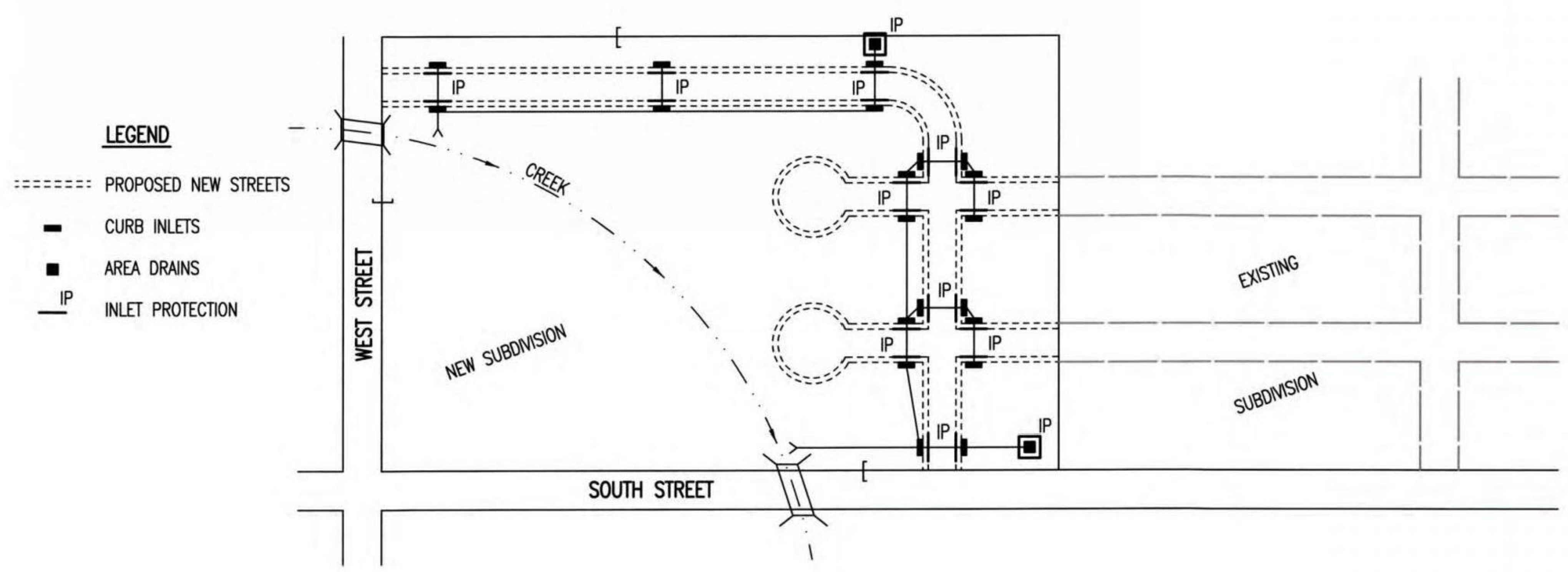
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. HAY BALES OR SILT FENCE MUST BE CONSTRUCTED ALONG THE PROPERTY LINE WHERE ON SITE WATER CAN DRAIN OFF THE PROPERTY. THESE EROSION CONTROL DEVICES WILL ALSO BE INSTALLED ALONG ANY DRAINAGE DITCH OR LAKE THAT CAN DISCHARGE.
3. SHOULD SILT OR SEDIMENT ENTER THE DITCHES OR STREETS ON THE ADJACENT BOUNDARY STREETS, APPROPRIATE EROSION CONTROL DEVICES WILL BE PLACED WITHIN THE SUBDIVISION TO PREVENT THIS.
4. ANY MUD TRACKED ONTO ADJACENT STREETS WILL BE REMOVED WITHIN 48 HOURS OR BY FRIDAY AT 6:00 PM, WHICHEVER IS EARLIER.
5. CONTRACTORS WORKING WITHIN THE SITE WILL NOT BE REQUIRED TO USE INDIVIDUAL EROSION CONTROL DEVICES AS LONG AS THOSE SPECIFIED ABOVE ARE IN PLACE AND BE EFFECTIVE. CONTRACTORS WORKING ON THE BOUNDARY LINE STREETS OR ON ADJACENT PROPERTIES TO EXTEND UTILITIES ARE EXPECTED TO USE EROSION CONTROL DEVICES AT THEIR WORK LOCATIONS, AS NEEDED.
6. UTILIZE STABILIZED CONSTRUCTION ENTRANCE AT ENTRANCE AND EXIT ONTO ANY EXISTING PUBLIC STREETS.
7. IF THE INITIAL EARTH WORK AND UTILITIES ARE DONE AS PART OF A PUBLIC IMPROVEMENT PROJECT, THESE EROSION CONTROL DEVICES WILL BE INSTALLED BY THE CONTRACTOR AS SPECIFIED IN THE INDIVIDUAL PROJECT CONTRACTS. THE CONTRACTOR WILL MAINTAIN THE DEVICES UNTIL COMPLETION OF THE CONTRACT, AT WHICH TIME THE DEVELOPER WILL ASSUME MAINTENANCE RESPONSIBILITIES. IF THESE CONTRACTS ARE NOT PUBLIC IMPROVEMENT PROJECTS, THE DEVELOPER WILL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE DEVICES.
8. WITHIN 14 DAYS OF COMPLETION OF EARTHWORK ACTIVITIES IN ANY GIVEN AREA, THAT AREA SHALL BE TEMPORARILY OR PERMANENTLY SEEDED AND MULCHED.

PHASE 3 – STREET CONSTRUCTION



1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION SHALL BE PROVIDED WHEN STREET SUBGRADE WORK IS COMPLETED.
   B. NON-SUMP LOCATIONS – PROVIDE INLET PROTECTION AS SOON AS BASE COURSE ASPHALT IS INSTALLED, BEFORE THE SURFACE COURSE LIFT.
3. EROSION CONTROL DEVICES WILL BE REQUIRED BACK OF CURB WHEREVER WATER CAN FLOW OVER THE CURB AND THE CURB HAS BEEN BACKFILLED TO WITHIN 3" OR LESS OF THE TOP OF CURB (SEE CURB BACKFILL DETAIL). FOR CURBS NOT YET ENTIRELY BACKFILLED (3" OR MORE BELOW TOP OF CURB), ADDITIONAL DEVICES WILL BE REQUIRED AT POINTS WHERE WATER BREAKS OVER CURB WHICH COULD RESULT IN THE PLACEMENT OF SEDIMENT IN THE GUTTER.
4. SEE DETAIL SHEET FOR BACK OF CURB PROTECTION.
5. THE BACK OF CURB PROTECTION SPECIFIED ON THIS PLAN MAY HAVE TO BE SUPPLEMENTED WITH HAY BALE OR SILT FENCE EROSION CONTROL DEVICES AT LOCATIONS WHERE CONCENTRATED FLOW RESULTS IN SEDIMENT BEING CARRIED OVER THE EXCELSIOR MATS.
6. THE STREET CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING BACK OF CURB EROSION CONTROL DEVICES.
7. THE INDIVIDUAL LOT OWNERS WILL BE RESPONSIBLE FOR MAINTAINING THE BACK OF CURB EROSION CONTROL DEVICES IN FRONT OF THEIR LOTS UNTIL SUCH TIME AS ADJACENT DISTURBED EARTH IS STABILIZED WITH GRASS OR SOD.

PHASE 2 – INSTALLATION OF STORM SEWER

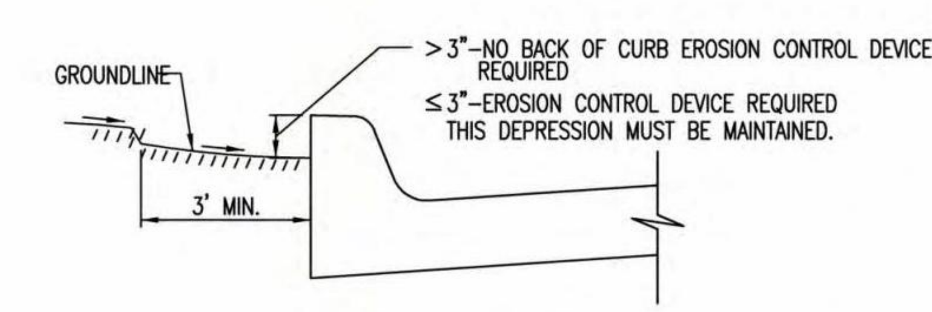


1. DURING THIS PHASE OF SUBDIVISION DEVELOPMENT, ALL EROSION CONTROL DEVICES REQUIRED IN PHASE 1 SHALL REMAIN IN PLACE AND BE MAINTAINED.
2. AS NEW STORM SEWERS, WITH INLETS, ARE INSTALLED, THE STORM SEWERS MUST NOW BE PROTECTED SO ALL NEW INLETS BECOME POINTS OF COMPLIANCE.
3. AREA DRAINS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, HAY BALE OR SILT FENCE PROTECTION WILL BE INSTALLED AROUND THEM.
4. CURB OPENING INLETS – AS SOON AS WATER CAN FLOW INTO THESE DRAINS, INLET PROTECTION DEVICES MUST BE INSTALLED. IF WATER CANNOT FLOW INTO CURB INLETS UNTIL STREET CONSTRUCTION IS COMPLETE, THEN STREET CONTRACTOR WILL INSTALL INLET PROTECTION. SEE PHASE 3 – STREET CONSTRUCTION.
5. THE STORM SEWER CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING THESE DEVICES.
6. THE SUBDIVISION DEVELOPER WILL MAINTAIN THESE EROSION CONTROL DEVICES ONCE INSTALLED.
7. ALL DISTURBED GROUND WILL BE FINAL GRADED AND TEMPORARILY OR PERMANENTLY SEEDED WITHIN 14 DAYS IF COMPLETION OF WORK IN ANY GIVEN PART OF THE SUBDIVISION.
8. ONCE ALL DISTURBED GROUND DRAINING TO AN INLET HAS BEEN RESTABILIZED WITH GRASS OR SOD, THE SUBDIVISION DEVELOPER WILL BE RESPONSIBLE FOR PERMANENTLY REMOVING THE INLET PROTECTION.

GENERAL NOTES

1. THE INTENT OF ALL EROSION CONTROL DEVICES IS TO PREVENT ERODED SOIL FROM ENTERING DITCHES, STORM SEWERS, LAKES, STREETS OR ANY OTHER OTHER DRAINAGE FEATURE.
2. THIS SHEET IS INTENDED TO PROVIDE GUIDELINES AS TO WHAT TYPE OF EROSION CONTROL DEVICES WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS. CONTRACTORS ARE EXPECTED TO BID PROJECTS ACCORDINGLY.
3. EROSION CONTROL DEVICES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS TO REMAIN EFFECTIVE. MAINTENANCE SHALL BE AS INDICATED ON SOIL EROSION BMP'S DETAIL SHEETS.
4. PERSONS DESTROYING EROSION CONTROL DEVICES SHALL BE RESPONSIBLE FOR IMMEDIATELY REPAIRING THEM OR INSTALLING SUITABLE REPLACEMENT DEVICES.
5. THE DEVELOPMENT OF ANY SUBDIVISION THAT DISTURBS 1 ACRE OR MORE WILL REQUIRE A FEDERAL/STATE NPDES STORMWATER PERMIT. THE PREPARATION OF A STORMWATER POLLUTION PREVENTION PLAN IS REQUIRED. EROSION CONTROL DEVICES ARE REQUIRED. THE DETAILS SHOWN ON THIS SHEET ARE THE MINIMUM STANDARDS TO BE SHOWN ON POLLUTION PREVENTION PLANS.
6. FOR SUBDIVISIONS SMALLER THAN 1 ACRE, SOIL EROSION DEVICES ARE REQUIRED. ALSO, DEVELOPERS AND CONTRACTORS ARE ENCOURAGED TO DEVELOP POLLUTION PREVENTION PLANS FOR EACH PROJECT PRIOR TO CONSTRUCTION.
7. FAILURE TO USE AND MAINTAIN SOIL EROSION DEVICES IS A VIOLATION OF SECTION 16.32 OF THE CITY CODE AND WILL SUBJECT THE SUBDIVISION DEVELOPER AND CONTRACTORS TO THE PENALTIES PROVIDED THEREIN.
8. THE APPLICATION OF EROSION CONTROL DEVICES SHOWN ON THIS SHEET IS FOR SITUATIONS NORMALLY ENCOUNTERED. FROM TIME TO TIME, SITUATIONS WILL ARISE THAT MAY REQUIRE DEVICES OTHER THAN THAT SHOWN. EROSION CONTROL DEVICES, OTHER THAN THOSE SHOWN, MAY BE UTILIZED SO LONG AS THEY ARE EFFECTIVE AND MAINTAINED.
9. A STABILIZED EARTH SURFACE IS DEFINED AS ONE THAT IS HARD SURFACED WITH CONCRETE, ASPHALT, OR THE LIKE, OR ONE ON WHICH 70% OF THE GRASS HAS GERMINATED ON THE ENTIRE SURFACE.

SEE DETAIL SHEET FOR BACK OF CURB PROTECTION DETAIL



CURB BACKFILL DETAIL
(STREET CONSTRUCTION ONLY)

THIS IS A TEMPORARY MEASURE ONLY, WHEN APPROVED BY THE PROJECT ENGINEER. THE DIRT GRADE BEHIND THE CURB SHALL BE BROUGHT TO THE TOP OF CURB, WITH TEMPORARY EROSION CONTROL MAT OR PERMANENT VEGETATION PLACED, PRIOR TO THE COMPLETION OF ALL PROJECTS.

REVISION DATE: MAY 2013

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
05/20/13

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

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

SW-505

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CITY OF WICHITA

COW LIFT STATION NO. 4 IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
DATE	MAY 2025
PM	RWG
DESIGNED BY	TBK
DRAWN BY	CAE
CHECKED BY	RWG

EROSION CONTROL DETAILS

CU510

SAVED 2/12/2025 2:50:50 PM BY CHRIS EPP
PLOTTED 9/2/2025 12:02:00 PM BY KURTIS DEKAT
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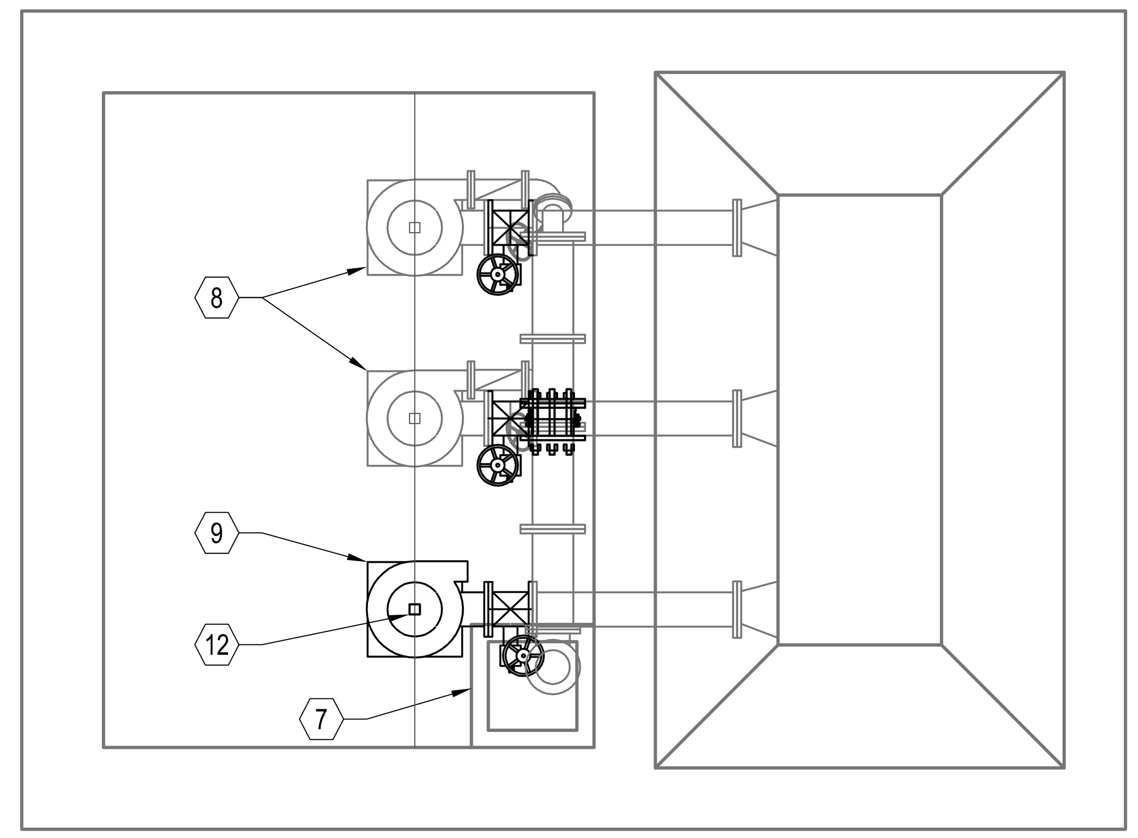
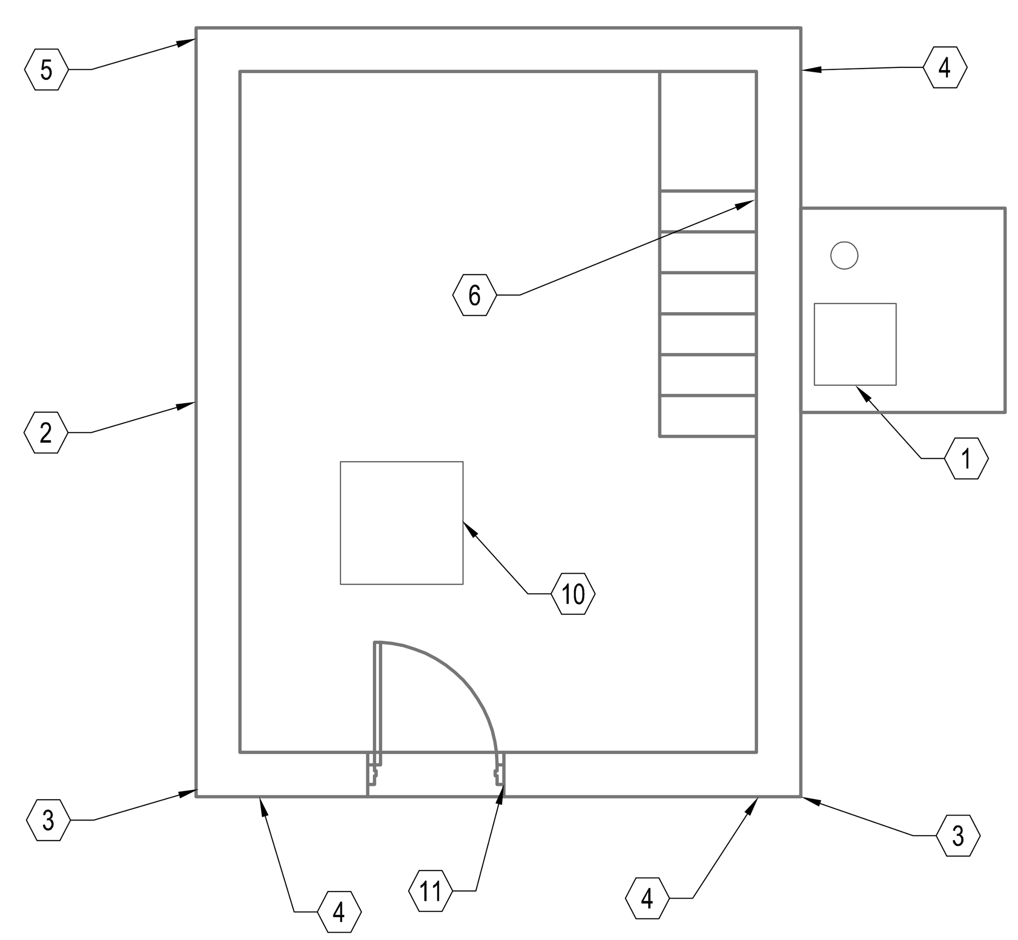


B LOWER LEVEL STRUCTURAL PLAN

1/4" = 1'-0"

PLAN NORTH



A GRADE LEVEL STRUCTURAL PLAN

1/4" = 1'-0"

PLAN NORTH

KEYED NOTES:

1. MECHANICALLY REMOVE LOOSE PAINT AND CORROSION ON HATCH AND FRAME. RE-COAT HATCH AND FRAME.
2. REMOVE LOOSE MORTAR IN BRICK JOINTS AND RE-TUCK AROUND ENTIRE BUILDING PERIMETER.
3. REPAIR DAMAGED FOUNDATION WALL WITH EPOXY INJECTION AND PATCHING MORTAR.
4. RESET LOOSE BRICKS NEAR TOP OF WALL.
5. PATCH OR REPLACE BRICK AT BASE OF WALL.
6. REMOVE LOOSE PAINT AND CORROSION ON STAIR STRINGERS AND TREADS. RE-PAINT STAIR.
7. REMOVE SUMP CURB. PATCH FLOOR AS NECESSARY.
8. REPLACE GROUT UNDER PUMPS WITH 5000 PSI MIN. NON-SHRINK GROUT.
9. INSTALL HIGH STRENGTH NON-SHRINK GROUT UNDER NEW PUMP.
10. REMOVE LOOSE CONCRETE AND APPLY PATCHING MORTAR AROUND FLOOR HATCH. REMOVE LOOSE PAINT AND CORROSION ON FLOOR HATCH AND RE-PAINT.
11. RE-INSTALL SEALANT AROUND DOOR FRAME.
12. WELD VERTICAL SQUARE TUBE AND HANGER LOOP DROP-DOWN ASSEMBLY TO OVERHEAD HOIST BEAM ABOVE NEW PUMP. MATCH DROP-DOWN ASSEMBLIES AT EXISTING PUMPS. PAINT TO MATCH.

REPAIR PROCEDURES

1. POLYMER MODIFIED PATCHING MORTAR
   - A. SAW CUT TO 1/8" DEPTH AROUND PERIMETER OF PATCH AREA. REMOVE ALL CRACKED AND LOOSE CONCRETE DOWN TO SOUND CONCRETE.
   - B. REMOVE 1/2" CONCRETE BEHIND EXPOSED REINFORCEMENT #3 OR GREATER, 1/4" FOR MESH REINFORCEMENT. THOROUGHLY CLEAN CONCRETE AND REINFORCING VIA BLAST SHOT, WIRE BRUSH, OR OTHER MECHANICAL MEANS. ALL CORROSION MUST BE REMOVED FROM ALL SIDES OF THE REINFORCING BARS.
   - C. APPLY SIKAQUICK VOH PER MANUFACTURER'S INSTRUCTIONS. SIKAQUICK WINTER BOOST MAY BE ADDED IN TEMPERATURES BETWEEN 20 AND 45°F. WORK PATCHING MORTAR INTO SUBSTRATE, FILLING ALL PORES AND VOIDS. COMPACT MORTAR AGAINST THE EDGE OF REPAIR AND AROUND EXPOSED REINFORCEMENT. FILL REMAINDER OF REPAIR AREA AND SCREED.
2. PRESSURE INJECTED EPOXY
   - A. SHOT BLAST OR OTHER MECHANICAL MEANS TO ROUGHEN SURFACE.
   - B. SET APPROPRIATE INJECTION PORTS AND SEAL PORTS AND CRACKS WITH SIKADUR 31, HI-MOD GEL OR SIKADUR 33.
   - C. AFTER EPOXY SEAL HAS CURED INJECT SIKADUR 35, HI-MOD LV INTO INJECTION PORTS PER MANUFACTURER'S INSTRUCTIONS.

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CITY OF WICHITA

DAVID K. CARPENTER LICENSED 23070 09/03/2025 KANSAS PROFESSIONAL ENGINEER

COW LIFT STATION NO. 4 IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
DATE	MAY 2025
PM	RWG
DESIGNED BY	DKC
DRAWN BY	DKC
CHECKED BY	KDW

STRUCTURAL PLAN

S-101

SAVED 9/3/2025 4:58:36 PM BY DAVID.CARPENTER
PLOTTED 9/3/2025 5:23:20 PM BY DAVID CARPENTER
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GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) & THE AMERICANS WITH DISABILITIES ACT (ADA).
2. REFER TO RELATED CIVIL DRAWINGS FOR RELATED INFORMATION.
3. REFER TO THE SPECIFICATIONS FOR DATA NOT ON THE DRAWINGS.
4. ALL MOUNTING HEIGHTS TO CENTERLINE OF ITEM UNLESS OTHERWISE NOTED. VERIFY ALL OUTLET LOCATIONS ON THE JOB PRIOR TO ROUGH-IN.
5. CONDUIT RUN W/CONDUCTORS AS INDICATED & GROUND WIRE SIZED PER N.E.C. 250.122. CONDUIT SIZE AS REQUIRED.
6. 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.
7. 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.

ELECTRICAL SHEET INDEX

SHEET NO.	DESCRIPTION
E001	ELECTRICAL GENERAL NOTES AND SYMBOLS
E111	ELECTRICAL DEMOLITION PLAN
E131	ELECTRICAL POWER PLAN
E501	ELECTRICAL DETAILS
E601	ELECTRICAL ONE-LINE DIAGRAM AND SCHEDULES
E602	ALTERNATE ONE-LINE DIAGRAMS AND SCHEDULES
E603	ELECTRICAL SCHEDULES

PEN WEIGHT LEGEND

SYMBOL	DESCRIPTION
ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN DARK SOLID LINES ARE NEW TO BE INSTALLED.	
	NEW DUPLEX GROUNDED RECEPTACLE
	NEW LIGHT FIXTURE
ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN LIGHT SOLID LINES ARE EXISTING TO REMAIN.	
	EXISTING DUPLEX GROUNDED RECEPTACLE TO REMAIN
	EXISTING LIGHT FIXTURE TO REMAIN
ALL DEVICES, LIGHT FIXTURES, ETC., DRAWN IN DARK DASHED LINES ARE TO BE REMOVED.	
	DUPLEX GROUNDED RECEPTACLE TO BE REMOVED
	LIGHT FIXTURE TO BE REMOVED

SYMBOL LIST

SYMBOL	DESCRIPTION	MOUNTING
A	LIGHT FIXTURE & FIXTURE LETTER	CEILING
A	STRIP LIGHT FIXTURE & FIXTURE LETTER	CEILING
O_A A	LIGHT FIXTURE & FIXTURE LETTER	CEILING
A	LIGHT FIXTURE & FIXTURE LETTER	WALL
	EXIT LIGHT (SHADING DENOTES EXIT FACE SIDE)	CEIL./WALL
A	LIGHT FIXTURE & FIXTURE LETTER	WALL
A	FIXTURE W/SHADED LAMP(S) ON EMERG. POWER	CEILING
	EMERGENCY BATTERY LIGHT FIXTURE	CEIL./WALL
\$ \$2 \$3 \$4	SWITCHES (1-POLE,2-POLE,3-WAY,4-WAY)	46"AFF
\$K \$P	SWITCHES (KEYED, PILOT)	46"AFF
a,b,c	INDICATES SWITCHING SCHEME	
NL	NIGHT LIGHT-WIRE AHEAD OF CONTROLS	
EM	LIGHT FIXTURE ON EMERGENCY POWER	
WP	WEATHERPROOF	
CT	SEE GENERAL NOTE 9	
AFF	ABOVE FINISHED FLOOR	
DF	DRINKING FOUNTAIN	
UON	UNLESS OTHERWISE NOTED	
	SINGLE GROUNDED RECEPTACLE	18"AFF
	DUPLEX GROUNDED RECEPTACLE	18"AFF
	CLG-MTD DUPLEX GROUNDED RECEPT.	CEILING MTD
	DOUBLE DUPLEX GROUNDED RECEPTACLE	18"AFF
	GROUND FAULT DUPLEX RECEPTACLE	18"AFF
	GROUND FAULT DOUBLE DUPLEX RECEPTACLE	18"AFF
	DUPLEX GRD. RECEPT. BOTTOM SWITCHED	18"AFF
A A	SPECIAL OUTLET (SEE SCHEDULE OR AS NOTED)	FLOOR/WALL
	SPECIAL DEVICE (AS NOTED)	
J	JUNCTION BOX	
F	FUSTAT BUSS #SSY	
'A'	BRANCH CIRCUIT PANEL & PANEL DESIG.	72" TO TOP
	ELECTRICAL DISTRIBUTION EQUIPMENT	
X-X X-X	EQUIPMENT - SEE EQUIPMENT CONNECTION SCHEDULE	
	CONDUIT SLEEVE (GEN NOTE 12)	
	CABLE TRAY (GEN NOTE 13)	
1	FEEDER DESIGNATION	
	EMERGENCY CIRCUIT	CEIL./WALL
	MASTER/SLAVE FIXTURE WHIP	CEILING
#10	CONDUIT HOME RUN, 1 CIRCUIT. 2#10 & 1#10 GRD. GEN. NOTE 7 & 8	CEIL./WALL
	CONDUIT RUN 2#12 & 1#12 GRD.- 1/2"C.	CEIL./WALL
	CONDUIT RUN 2#12 & 1#12 GRD.- 3/4"C.	EARTH/FLOOR
	CONDUIT HOME RUN, 1 CIRCUIT. 2#12 & 1#12 GRD. 1/2"C.	CEIL./WALL
	CONDUIT HOME RUN, 2 CIRCUITS. 4#12 & 1#12 GRD. 1/2"C.	CEIL./WALL
	CONDUIT HOME RUN, 3 CIRCUITS. 6#12 & 1#12 GRD. 1/2"C.	CEIL./WALL
	CONDUIT RUN PARTIAL CIRCUIT. 2#12 & 1#12 GRD. 1/2"C.	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

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CITY OF WICHITA

SEAN PATRICK GERETY
LICENSED
28753
09/03/2025
PROFESSIONAL ENGINEER
KANSAS

COW LIFT STATION NO. 4
IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
DATE	SEPTEMBER 2025
PM	RWG
DESIGNED BY	DCG
DRAWN BY	BAC
CHECKED BY	RWW

ELECTRICAL GENERAL NOTES AND SYMBOLS

E001

SAVED 2/27/2025 4:44:13 PM BY BEN.CHAPLIN
PLOTTED 9/3/2025 8:54:06 AM BY HADLEY WAMPLER
U:\WICHITA-CIVIL\2023\237043\010\ELEC\DRAWINGS\E001 ELECTRICAL GENERAL NOTES AND SYMBOLS.DWG

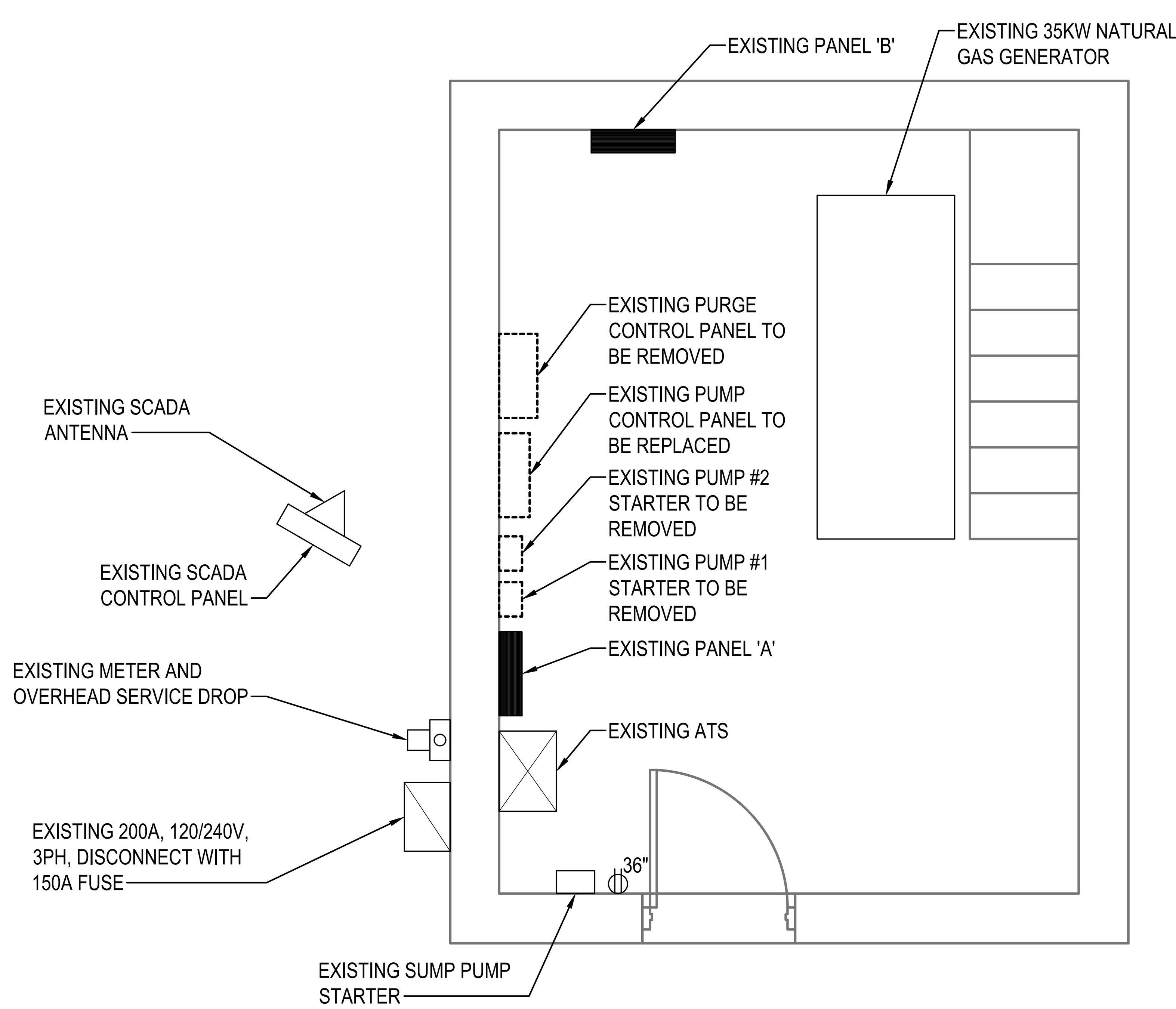
KEYED NOTES:

1. MOLDED CASE SWITCHES TO BE REPLACED IN PLACE UNDER ALTERNATE #1.

ALTERNATE #1:
REMOVE PUMP #1 AND #2, MOLDED CASE SWITCHES, AND ALL ASSOCIATED WIRING AND CONDUIT UP TO PANEL 'A' ON THE GROUND LEVEL. REPLACE ALL WIRING, CONDUIT, AND MOLDED CASE SWITCHES IN PLACE TO SERVE NEW PUMPS. REFERENCE SHEET E602 FOR ALTERNATE ONE-LINE DIAGRAMS.

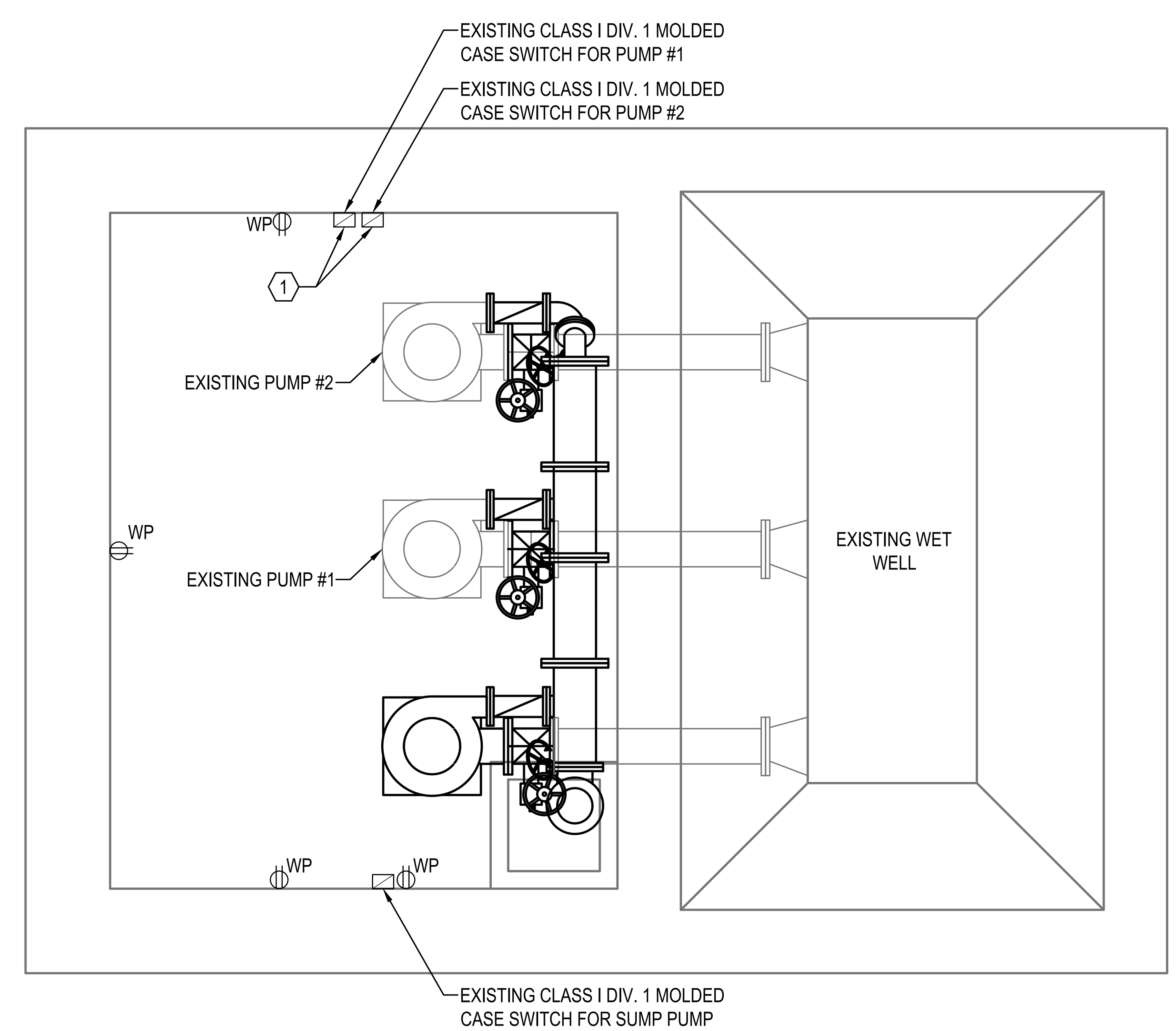
DEMOLITION NOTES:

1. DEMOLITION PLANS SHOW THE GENERAL EXTENT OF THE ELECTRICAL DEMOLITION WORK. THE ELECTRICAL CONTRACTOR SHALL DISCONNECT ELECTRICAL SERVICES TO ALL EQUIPMENT BEING REMOVED, SEE MECHANICAL PLANS. OWNER SHALL HAVE THE OPTION TO RETAIN REUSABLE ITEMS, SUCH AS COVERPLATES, RECEPTACLES, LIGHTS, PANELS, ETC. NOT BEING USED IN THE FINISHED WORK. COORDINATE WITH OWNER PRIOR TO STARTING DEMOLITION. PROPERLY AND LEGALLY DISPOSE OF ALL EQUIPMENT AND MATERIALS BEING REMOVED.
2. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING ALL OPENINGS IN EXISTING CONSTRUCTION AFTER REMOVAL OF EQUIPMENT, RACEWAY SYSTEMS, OUTLET BOXES, ETC.
3. WHERE EQUIPMENT AND OTHER DEVICES ARE BEING REMOVED, THE CIRCUITING SHALL BE REMOVED, IF POSSIBLE, BACK TO POINT OF SUPPLY. WHERE REQUIRED, CIRCUITING SHALL BE EXTENDED TO MAINTAIN CONTINUITY OF THE CIRCUIT OR OPERATION OF THE SYSTEM.
4. ALL DEVICES SHOWN DASHED ON THE DEMOLITION PLAN(S) SHALL BE REMOVED, UNLESS NOTED OTHERWISE.
5. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK.



PLAN NORTH

A ELECTRICAL DEMOLITION PLAN - GROUND FLOOR
1/4"=1'-0"



PLAN NORTH

B ELECTRICAL POWER PLAN - PUMP LEVEL
1/4"=1'-0"

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CITY OF WICHITA

SEAN PATRICK GERETY LICENSED 28753 09/03/2025 KANSAS PROFESSIONAL ENGINEER

COW LIFT STATION NO. 4 IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
DATE	SEPTEMBER 2025
PM	RWG
DESIGNED BY	DCG
DRAWN BY	BAC
CHECKED BY	RWW

ELECTRICAL DEMOLITION PLAN

E111

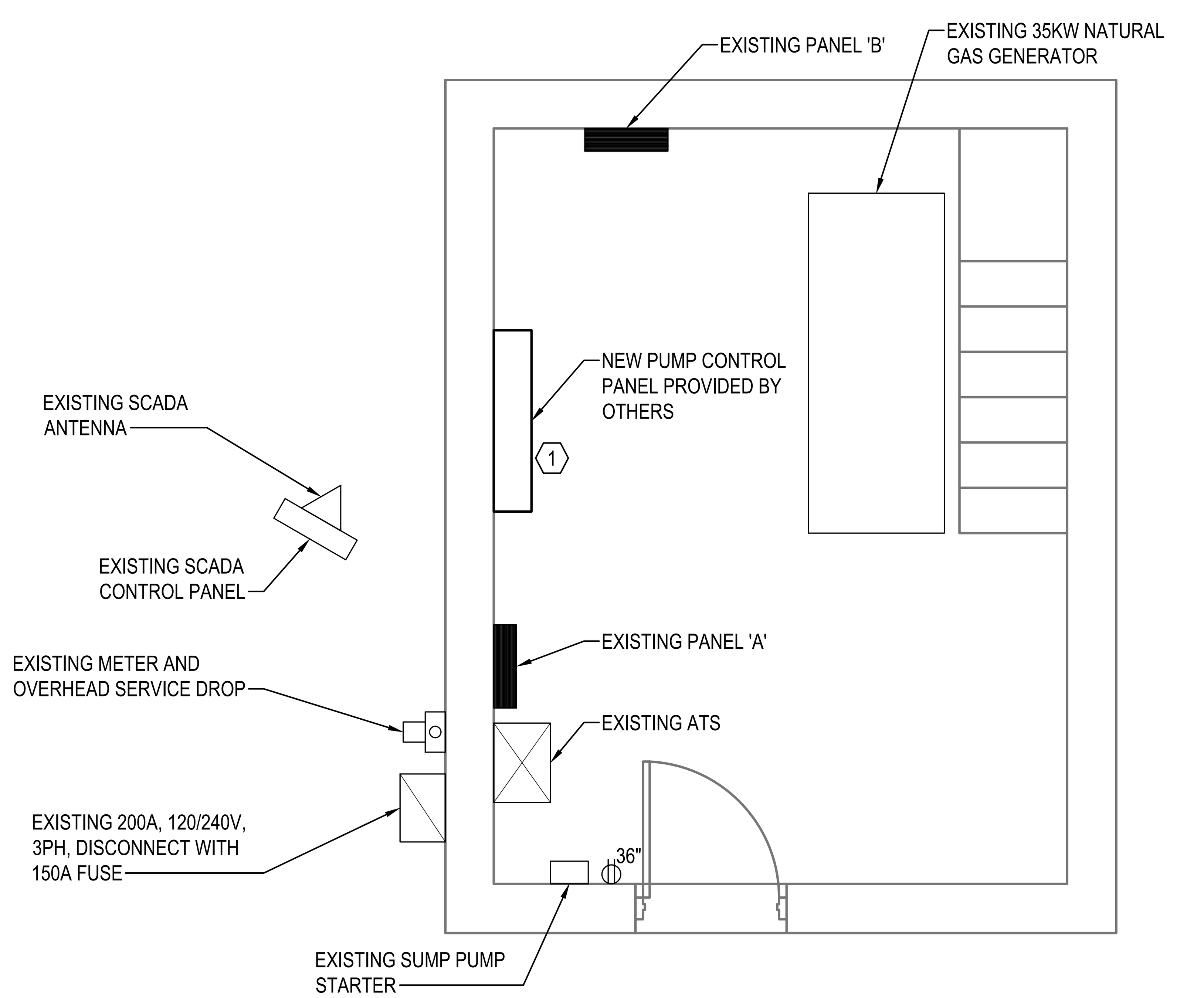
KEYED NOTES:

1. CONNECT EXISTING PUMP #1 AND #2 TO NEW STARTERS WITHIN NEW PUMP CONTROL PANEL. REWORK EXISTING CONDUIT AND WIRING AS REQUIRED.
2. MOLDED CASE SWITCHES TO BE REPLACED IN PLACE UNDER ALTERNATE #1.

ALTERNATE #1:
REMOVE PUMP #1 AND #2, MOLDED CASE SWITCHES, AND ALL ASSOCIATED WIRING AND CONDUIT UP TO PANEL 'A' ON THE GROUND LEVEL. REPLACE ALL WIRING, CONDUIT, AND MOLDED CASE SWITCHES IN PLACE TO SERVE NEW PUMPS. REFERENCE SHEET E602 FOR ALTERNATE ONE-LINE DIAGRAMS.

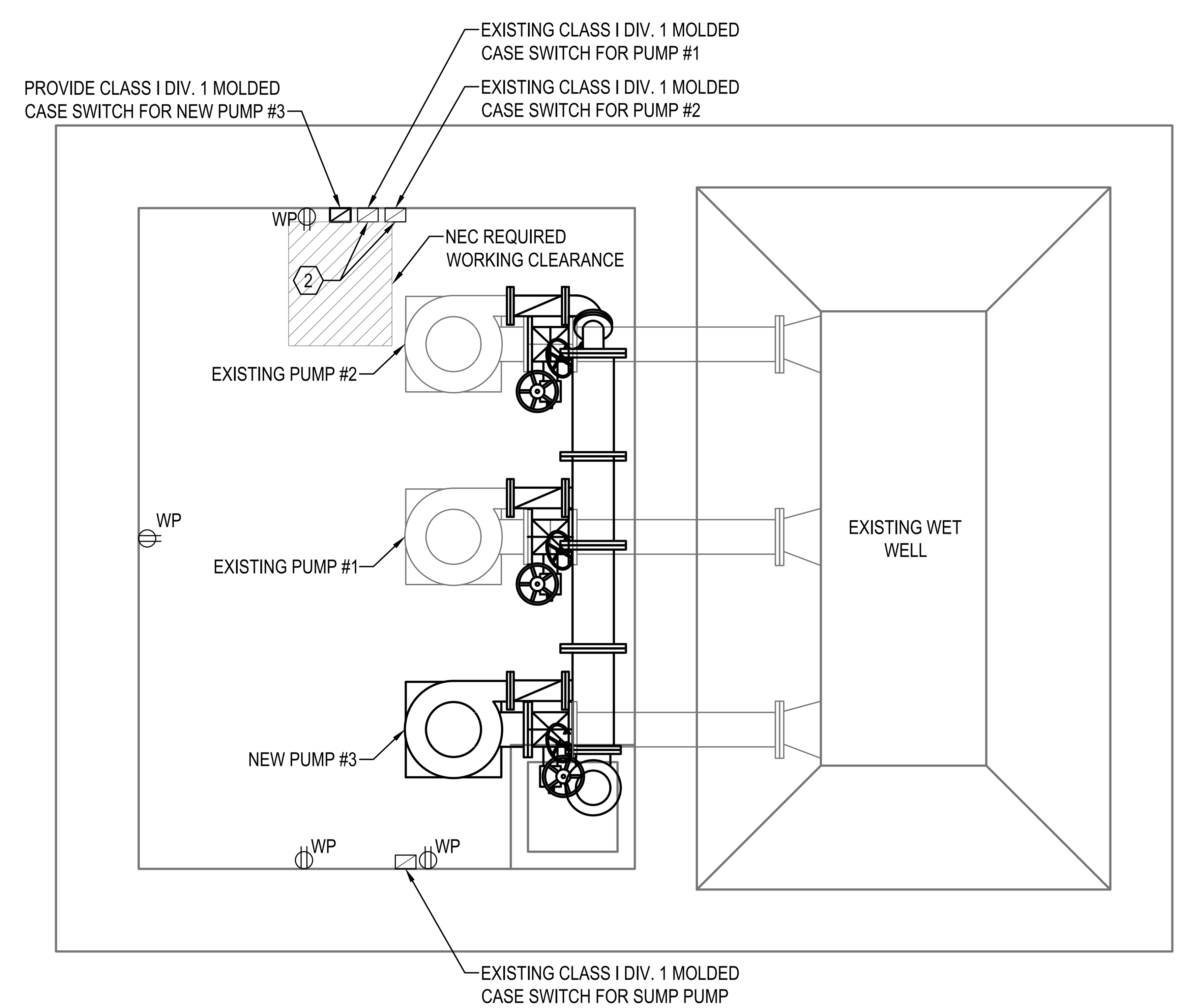
PLAN NOTES:

1. 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.
2. A GROUND CONDUCTOR SIZED PER N.E.C. ARTICLE 250 IS REQUIRED IN ALL CONDUITS.
3. FOR CONNECTION REQUIREMENTS TO MECHANICAL UNITS, SEE MECHANICAL EQUIPMENT CONNECTION SCHEDULE.
4. FOR ALL PENETRATIONS IN FIRE RATED WALLS AND CEILINGS, PROVIDE AN ASTM E814 COMPLIANT, U.L. LISTED THROUGH PENETRATION FIRE STOPPING SYSTEM THAT IS SPECIFIC TO THE WALL OR CEILING CONSTRUCTION ASSEMBLY.
5. ALL PIPING, CONDUIT, AND OUTLET BOXES (ELECTRIC, TELEPHONE, COMPUTER, ETC.) IN FIRE RATED WALLS OR CEILINGS SHALL BE CONSTRUCTED OF NON-COMBUSTIBLE MATERIAL.



A ELECTRICAL POWER PLAN - GROUND FLOOR
1/4"=1'-0"

PLAN NORTH



B ELECTRICAL POWER PLAN - PUMP LEVEL
1/4"=1'-0"

PLAN NORTH

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CITY OF WICHITA

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PROFESSIONAL ENGINEER

COW LIFT STATION NO. 4 IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
DATE	SEPTEMBER 2025
PM	RWG
DESIGNED BY	DCG
DRAWN BY	BAC
CHECKED BY	RWW

ELECTRICAL POWER PLAN

E131

SAVED 6/10/2025 8:12:24 AM BY BEN.CHAPLIN
PLOTTED 9/3/2025 8:54:14 AM BY HADLEY WAMPLER
U:\WICHITA-CIVIL\2023\237043\010\ELEC\DRAWINGS\E131 ELECTRICAL POWER PLAN.DWG

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CITY OF WICHITA

COW LIFT STATION NO. 4
IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

SERVES
RTU-1

SWITCHBOARD/DISTRIBUTION PANEL/MOTOR CONTROL CENTER BREAKER/SWITCH

SERVES
RTU #1
FED FROM DP:**
LPJ 200AMP

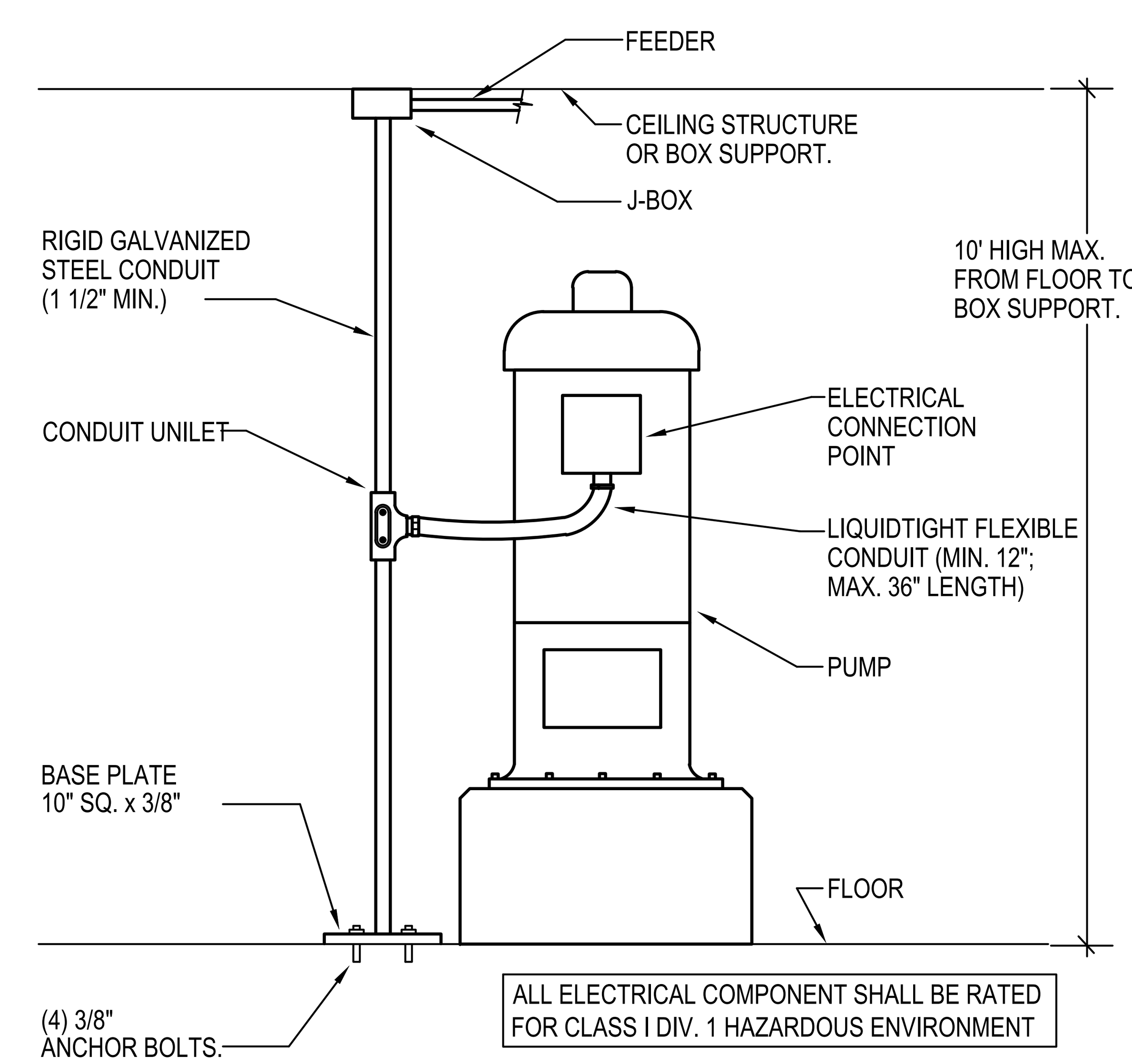
DISCONNECT SWITCH

PANEL K
FED FROM DP:**
120/208V.,3Ø,4W.
10,000 A.I.C.
PHASE A: BLACK — NEUTRAL: WHITE
PHASE B: RED — GROUND: GREEN
PHASE C: BLUE — ISO.GRD.: GRN/YEL

BRANCH CIRCUIT/DISTRIBUTION PANEL

2 TYPICAL NAME PLATES
NO SCALE

NOTE: SEE SPECIFICATION SECTION 260500 FOR NAME PLATE COLOR REQUIREMENTS.



1 PUMP CONNECTION DETAIL
NO SCALE

JOB NO.	237043-010
DATE	SEPTEMBER 2025
PM	RWG
DESIGNED BY	DCG
DRAWN BY	BAC
CHECKED BY	RWW

ELECTRICAL DETAILS

E501

SAVED 6/10/2025 8:23:02 AM BY BEN.CHAPLIN
PLOTTED 9/3/2025 8:54:17 AM BY HADLEY WAMPLER
U:\WICHITA-CIVIL\2023\237043\010\ELEC\DRAWINGS\E501 ELECTRICAL DETAILS.DWG

KEYED NOTES:

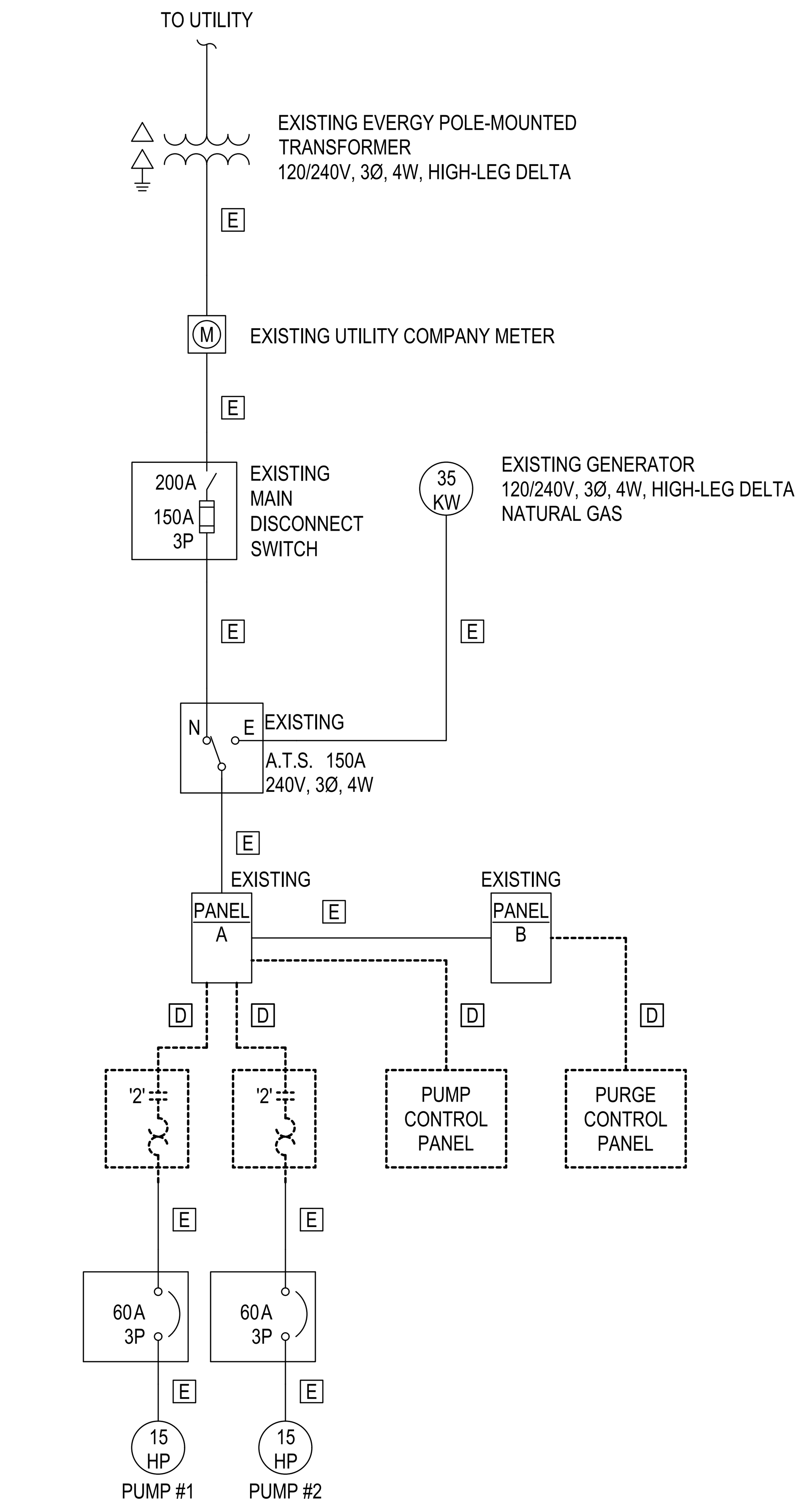
1. CONNECT TO FEED THRU LUGS IN EXISTING PANEL.
2. EXTEND EXISTING FEEDERS AS REQUIRED FOR CONNECTION TO NEMA ACROSS-THE-LINE STARTERS WITHIN NEW PUMP CONTROL PANEL.
3. PUMPS TO BE OPERATED AS A LEAD/LAG COMBINATION WITH ONE PUMP BEING REDUNDANT. PUMPS TO BE PROVIDED WITH VFDS.

GENERAL ONE-LINE DIAGRAM NOTES:

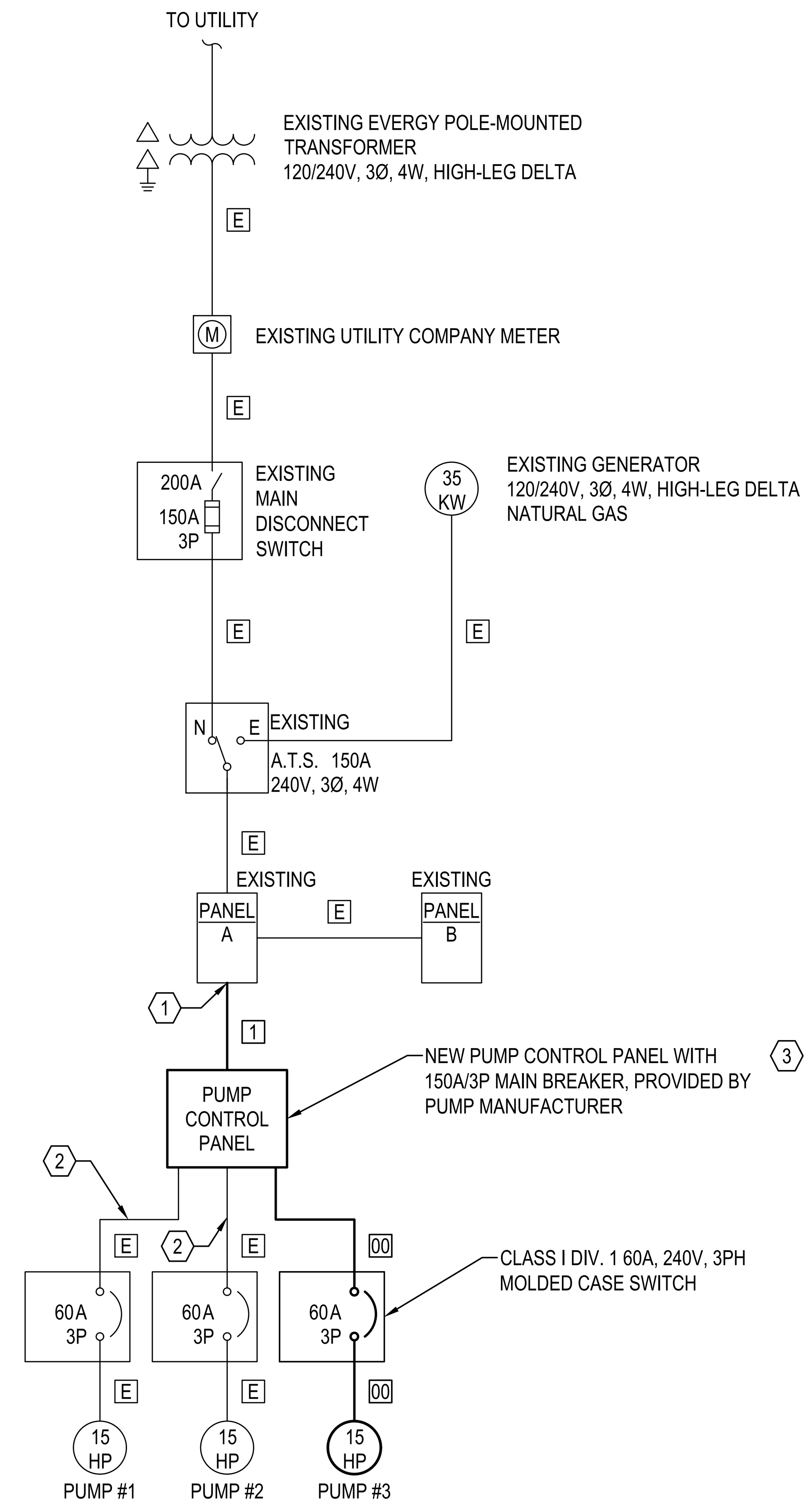
1. UNLESS OTHERWISE NOTED, ALL CIRCUIT BREAKERS AND/OR SWITCHES ARE THREE POLE.
2. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A LIGHT LINE, IS EXISTING TO REMAIN.
3. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK LINE, IS NEW WORK UNDER THIS CONTRACT.
4. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK DASHED LINE, IS TO BE REMOVED UNDER THIS CONTRACT.

FEEDER SCHEDULE

DESIG.	EQUIPMENT SERVED	CONDUCTORS SETS	CONDUCTORS NO.	CONDUCTORS SIZE	GROUND SIZE PER SET	ISOLATED GROUND SIZE	CONDUIT SIZE PER SET	SPARE CONDUIT
1	PUMP CONTROL PANEL: CP	1	4	#1/0 AWG CU	#6	--	2"C.	--
00	SEE PROCESS EQUIPMENT SCHEDULE				--	--	-"	--
A	EXISTING UTILITY PRIMARY FEEDER				--	--	-"	--
E	EXISTING FEEDER TO REMAIN				--	--	-"	--
D	EXISTING FEEDER TO BE REMOVED				--	--	-"	--



A DEMOLITION ONE-LINE DIAGRAM
NO SCALE



B PROPOSED ONE-LINE DIAGRAM
NO SCALE

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CITY OF WICHITA

SEAN PATRICK GERETY LICENSED PROFESSIONAL ENGINEER 28753 09/03/2025 KANSAS

COW LIFT STATION NO. 4 IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
DATE	SEPTEMBER 2025
PM	RWG
DESIGNED BY	DCG
DRAWN BY	BAC
CHECKED BY	RWW

ELECTRICAL ONE-LINE DIAGRAMS AND SCHEDULES

E601

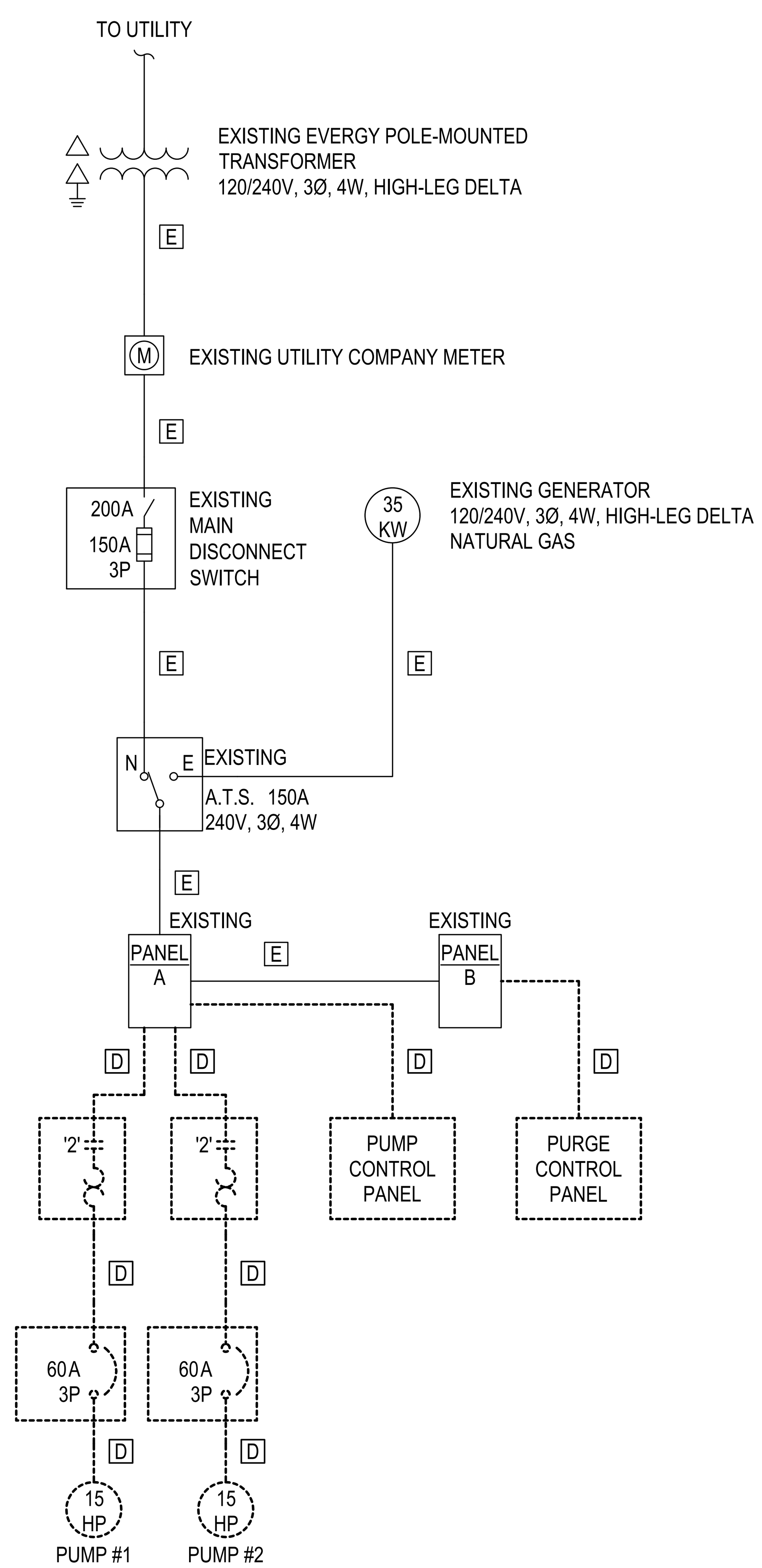
SAVED 6/10/2025 9:21:11 AM BY BEN.CHAPLIN
PLOTTED 9/3/2025 8:54:20 AM BY HADLEY.WAMPLER
U:\WICHITA-CIVIL\2023\237043\010\ELEC\DRAWINGS\E601 ELECTRICAL ONE-LINE DIAGRAMS AND SCHEDULES.DWG

KEYED NOTES:

1. CONNECT TO FEED THRU LUGS IN EXISTING PANEL.
2. PUMPS TO BE OPERATED AS A LEAD/LAG COMBINATION WITH ONE PUMP BEING REDUNDANT. PUMPS TO BE PROVIDED WITH VFDS.

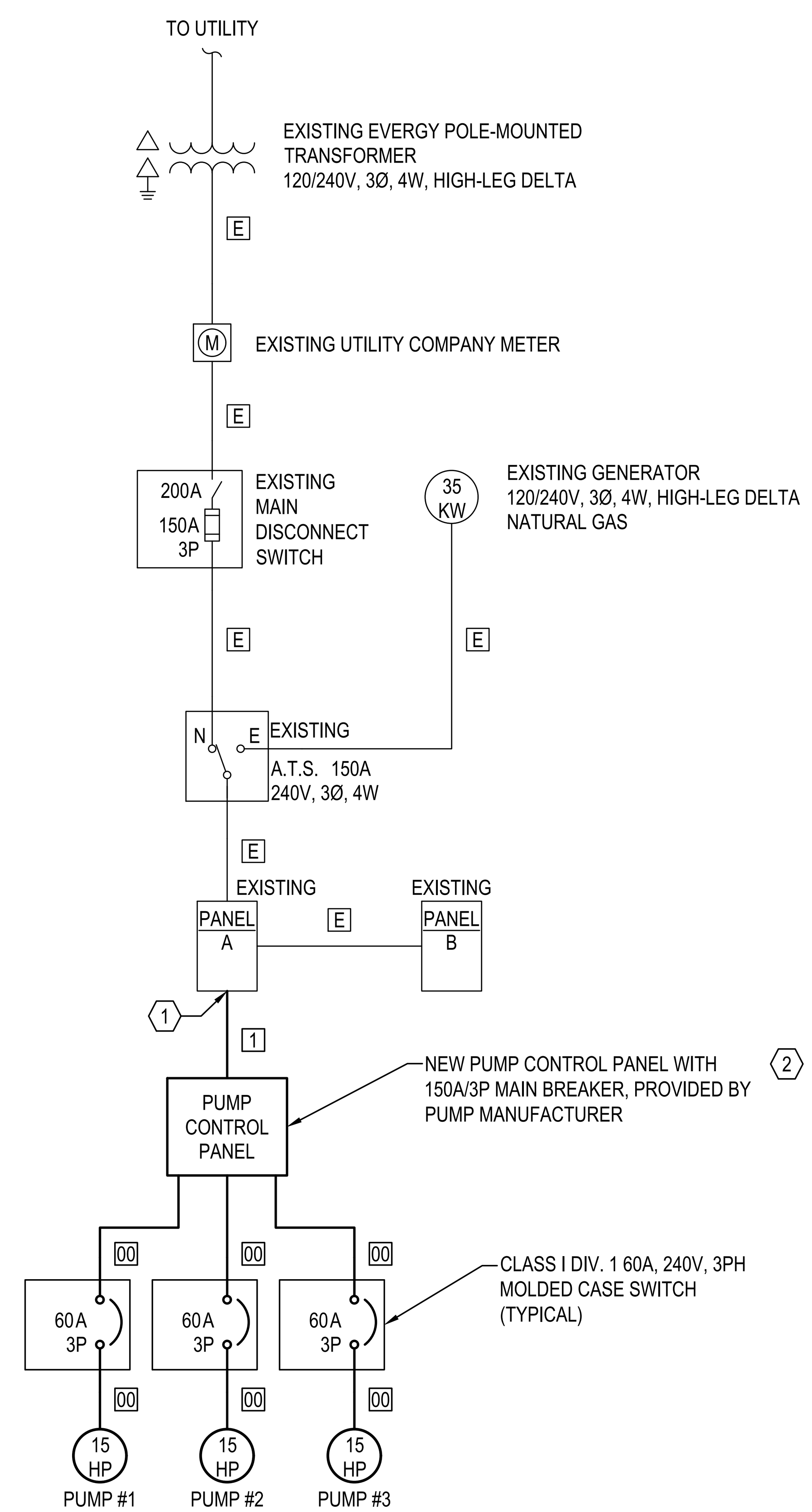
GENERAL ONE-LINE DIAGRAM NOTES:

1. UNLESS OTHERWISE NOTED, ALL CIRCUIT BREAKERS AND/OR SWITCHES ARE THREE POLE.
2. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A LIGHT LINE, IS EXISTING TO REMAIN.
3. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK LINE, IS NEW WORK UNDER THIS CONTRACT.
4. ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK DASHED LINE, IS TO BE REMOVED UNDER THIS CONTRACT.



A — ALTERNATE DEMOLITION ONE-LINE DIAGRAM

NO SCALE



B — ALTERNATE ONE-LINE DIAGRAM

NO SCALE

FEEDER SCHEDULE

DESIG.	EQUIPMENT SERVED	CONDUCTORS			GROUND SIZE PER SET	ISOLATED GROUND SIZE	CONDUIT SIZE PER SET	SPARE CONDUIT
		SETS	NO.	SIZE				
1	PUMP CONTROL PANEL: CP	1	4	#1/0 AWG CU	#6	--	2"C.	--
00	SEE PROCESS EQUIPMENT SCHEDULE				--	--	-"	--
A	EXISTING UTILITY PRIMARY FEEDER				--	--	-"	--
E	EXISTING FEEDER TO REMAIN				--	--	-"	--
D	EXISTING FEEDER TO BE REMOVED				--	--	-"	--

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CITY OF WICHITA

SEAN PATRICK GERETY
LICENSED
28753
09/03/2025
PROFESSIONAL ENGINEER
KANSAS

COW LIFT STATION NO. 4 IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

JOB NO.	237043-010
DATE	SEPTEMBER 2025
PM	RWG
DESIGNED BY	DCG
DRAWN BY	BAC
CHECKED BY	RWW

ALTERNATE ONE-LINE DIAGRAMS AND SCHEDULES

E602

SAVED 6/10/2025 8:45:23 AM BY BEN.CHAPLIN
PLOTTED 9/3/2025 8:54:23 AM BY HADLEY WAMPLER
U:\WICHITA-CIVIL\2023\237043\010\ELEC\DRAWINGS\E602 ALTERNATE ONE-LINE DIAGRAMS AND SCHEDULES.DWG

EXISTING SCADA PANEL

LOCATION:
LIFT STATION

CIRCUIT NO.	EQUIPMENT SERVED/ MARK	CONNECT: DEVICE	CONNECT: CTL. PNL.	CONNECT: STARTER	CONNECT: VFD	DESCRIPTION/FUNCTION	CONDUCTORS IN CABLE	DISCRETE	ANALOG	DIGITAL	INPUT	OUTPUT	REMARKS
I-0	PUMP 1	-	X	-	-	PUMP 1 RUN	2 #14	X	-	-	X	-	EXISTING I/O TO REMAIN.
I-1	PUMP 2	-	X	-	-	PUMP 2 RUN	2 #14	X	-	-	X	-	EXISTING I/O TO REMAIN.
I-2	CP	-	X	-	-	TELEMETRY POWER FAIL	2 #14	X	-	-	X	-	EXISTING I/O TO REMAIN.
I-3	PUMP 3	-	-	-	-	PUMP 3 RUN	2#14	X	-	-	X	-	NEW I/O CONNECTION FROM CP
I-4	--	-	-	-	-	SPARE	--	-	-	-	-	-	SPARE
I-5	WET WELL	-	X	-	-	HIGH WET WELL	2 #14	X	-	-	X	-	EXISTING I/O TO BE REPLACED - FROM CP
I-6	--	-	-	-	-	SPARE	--	-	-	-	-	-	SPARE
I-7	STATION	-	X	-	-	STATION FLOODING	2 #14	X	-	-	X	-	EXISTING I/O TO BE REPLACED - FROM CP
II-0	--	-	-	-	-	SPARE	--	-	-	-	-	-	SPARE
II-1	--	-	-	-	-	SPARE	--	-	-	-	-	-	SPARE
II-2	GEN	X	-	-	-	ALTERNATE POWER SOURCE	2 #14	X	-	-	X	-	EXISTING I/O TO REMAIN.
II-3	PUMP 3	-	-	-	-	PUMP FAIL #3	2#14	X	-	-	X	-	NEW I/O CONNECTION FROM CP
II-4	WET WELL	-	X	-	-	LOW WET WELL	2 #14	X	-	-	X	-	EXISTING I/O TO BE REPLACED - FROM CP
II-5	PUMP 1	-	X	-	-	PUMP FAIL #1	2 #14	X	-	-	X	-	EXISTING I/O TO REMAIN.
II-6	PUMP 2	-	X	-	-	PUMP FAIL #2	2 #14	X	-	-	X	-	EXISTING I/O TO REMAIN.
II-7	ATS	X	-	-	-	MAIN POWER FAIL	2 #14	X	-	-	X	-	EXISTING I/O TO REMAIN.

LIFT STATION CONTROLS:

THE PUMP MANUFACTURER SHALL SUPPLY A CONTROL PANEL FOR STATION. IT SHALL BE DESIGNED TO OPERATE TWO PUMPS AS SPECIFIED HEREIN. THE CONTROL PANEL SHALL BE HOUSED N A NEMA-4X STAINLESS STEEL ENCLOSURE EQUIPPED WITH MAIN DISCONNECT SWITCH. ALL COMPONENTS, SWITCHES, INDICATOR LIGHTS, ETC. SHALL BE MOUNTED ON THE EXTERIOR DOOR TO BE EASILY VISIBLE WITHOUT OPENING THE ENCLOSURE. THE CONTROL PANEL SHALL BE UL 508A APPROVED AS A COMPLETE ASSEMBLY. THE CONTROL SYSTEM SHALL BE DESIGNED AND TESTED AT THE PUMP MANUFACTURER'S FACILITY, BY THE PUMP MANUFACTURER. DOCUMENTATION ON THE WARRANTY FOR THE CONTROL SYSTEM SHALL BE PROVIDED BY THE PUMP MANUFACTURER, FACTORY DIRECT, NOT THE LOCAL REPRESENTATIVE OR DISTRIBUTOR. STANDARD CATALOG LITERATURE IS NOT ACCEPTABLE. LITERATURE MUST INCLUDE SPECIFICS RELATING TO THE PROJECT AND THE INDIVIDUAL EQUIPMENT SUPPLIED. THE PUMP MANUFACTURER MUST SUBMIT CERTIFIED TEST RESULTS TO THE ENGINEER. THE TEST MUST BE PERFORMED WITH THE ACTUAL PUMPS BEING SUPPLIED FOR THIS PROJECT. PUMP MANUFACTURER MUST SUBMIT PROOF OF SUCH COMPLIANCE PRIOR TO SYSTEM ACCEPTANCE.

CONTROL PANEL NOTES:

1. CONDUIT FOR ANALOG CABLES SHALL TERMINATE IN EQUIPMENT ENCLOSURE AS CLOSE AS POSSIBLE TO THE TERMINALS. ANALOG CABLES SHALL NOT PASS NEAR TO CABLES OR EQUIPMENT OPERATING OVER 24V.
2. INTERNAL AND EXTERNAL I/O SHALL BE LANDED ON TERMINAL STRIPS.
3. I/O IDENTIFIED ON CONTROL DIAGRAM SHEETS ARE FOR INPUTS AND OUTPUTS EXTERNAL TO THE EQUIPMENT CONTROL PANEL. I/O NECESSARY FOR THE COMPLETE FUNCTIONALITY OF THE EQUIPMENT (INTERNAL I/O) SHALL BE PROVIDED BY THE EQUIPMENT MANUFACTURER. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUIT AND WIRING AS REQUIRED FOR COMPLETE FUNCTIONALITY OF EQUIPMENT AS SPECIFIED AND AS IDENTIFIED BY THE MANUFACTURER. COORDINATE FIELD WIRING REQUIREMENTS WITH EQUIPMENT MANUFACTURER.

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.

1 2 EXIST. PANEL: A

W/FEED THRU LUGS, W/GRD. BUS

240/120 VOLTS, 3 PHASE, 4 WIRE
150 AMP MAIN BKR, SURFACE MTD.
65000 AIC LABELED

CIRC NO.	LOAD V. A.	LOAD TYPE	LOAD DESCRIPTION	P.	AMP SIZE	PHASE	AMP SIZE	P.	LOAD DESCRIPTION	LOAD TYPE	LOAD V. A.	CIRC NO.
4 1			SPARE	3	40	A	40	3	SPARE			2 4
3	-------	---	-------		-------	B	-------		-------	---	-------	4
5	-------	---	-------		-------	C	-------		-------	---	-------	6
7			SPACE	3		A	50	3	SPARE			8
9	-------	---	-------		-------	B	-------		-------	---	-------	10
11	-------	---	-------		-------	C	-------		-------	---	-------	12
13		EX	PANEL 'B' TRANSFORMER	2	30	A	20	2	SPARE			14
15	-------	---	-------		-------	B	-------		-------	---	-------	16
17			SPARE	2	20	C			SPACE			18
19	-------	---	-------		-------	A			SPACE			20
21			SPACE			B			SPACE			22
23			SPACE			C			SPACE			24

1 EXISTING CIRCUIT BREAKERS AND LOADS TO REMAIN.
2 CONNECT NEW PUMP CONTROL PANEL TO FEED THRU LUGS OF PANEL.
3 VERIFY THAT PHASE B IS HIGH LEG. MEASURE VOLTAGE AND PROVIDE LABEL PER NEC 408.3(F)(1).
4 BREAKER MADE SPARE DUE TO DEMOLITION.

EXIST. PANEL: A	CONNECTED KVA: PH-A	PH-B	PH-C	TOTAL	DEMAND FACTOR	KVA	CONT. FACT	SIZING AMPS: TOTAL	PH-A	PH-B	PH-C
Largest Motor	0.0	0.0	0.0	0.0	1	0.0	0.25	10.5	10.5	10.5	10.5
Motor	11.6	11.6	11.6	34.9	1	34.9	1	84.0	84.0	84.0	84.0
Power	1.5	1.5	0.0	3.0	1	3.0	1	7.2	10.8	10.8	0.0
Spare					0.2	7.6	1	18.2	18.2	18.2	18.2
TOTAL KVA:	13.1	13.1	11.6	37.9		45.5		TOTAL AMPS:	PH-A	PH-B	PH-C
TOTAL AMPS:	94.8	94.8	84.0	91.2				120.0	123.6	123.6	112.7

1 2 EQUIPMENT CONNECTION SCHEDULE

PROCESS EQUIPMENT CONNECTIONS

	UNIT DESIG.	UNIT VOLTAGE	LOAD: H.P.	LOAD: FLA	LOAD: KVA	PANEL DEVICE: CIRCUIT NUMBER	PANEL DEVICE: BKR. AMPS	PANEL DEVICE: SW. AMPS	PANEL DEVICE: FUSE AMPS	PANEL DEVICE: POLE	PANEL DEVICE: NEMA START. SIZE	DEVICE AT UNIT: BKR. AMPS	DEVICE AT UNIT: SW. AMPS	DEVICE AT UNIT: FUSE AMPS	DEVICE AT UNIT: POLE	DEVICE AT UNIT: NEMA START. SIZE	DEVICE AT UNIT: OTHER	SETS	FEEDER DESCRIPTION OR SEE THE FEEDER SCHEDULE	REMARKS OR SEE THE INDICATED NOTES BELOW
	P	PUMP																		
4 3	1	240/3	15	42.0	17.46	CP	90			3	VFD	60			3			1	3 #2 AWG THWN; #8 AWG GRD; 1-1/2" C.	
4 3	2	240/3	15	42.0	17.46	CP	90			3	VFD	60			3			1	3 #2 AWG THWN; #8 AWG GRD; 1-1/2" C.	
4	3	240/3	15	42.0	17.46	CP	90			3	VFD	60			3			1	3 #2 AWG THWN; #8 AWG GRD; 1-1/2" C.	

1 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.

2 SIZE FUSES FOR MOTOR FUSTATS BASED ON 125% OF MANUFACTURER'S NAMEPLATE FULL LOAD AMPERAGE UNLESS OTHERWISE NOTED ON THE DRAWINGS.

3 PUMP AND DISCONNECT ARE EXISTING TO REMAIN IN BASE BID, REPLACED IN KIND UNDER ALTERNATE #1.

4 DEVICE AT UNIT SHALL BE A CLASS I DIV. 1 MOLDED CASE SWITCH.

5 VFD TO BE PROVIDED BY PUMP SUPPLIER IN CONTROL PANEL.

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CITY OF WICHITA

SEAN PATRICK GERETY
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28753
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PROFESSIONAL ENGINEER

COW LIFT STATION NO. 4
IMPROVEMENTS

PAUL GUNZELMAN, P.E. - CITY ENGINEER
CITY OF WICHITA PROJECT NO. 468-2025-010835

Issue:

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ELECTRICAL SCHEDULES

E603