

**GENERAL NOTES**

- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY REGULATIONS. ALL CONSTRUCTION SHALL BE COMPLETED FOLLOWING CURRENT CITY STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE NOTICE TO UTILITY COMPANIES A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION, AS FOLLOWS:  
KANSAS ONE-CALL 687-2470  
THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:  
AT&T 1-800-246-8464  
BLACK HILLS ENERGY (GAS) 1-800-694-8989  
CITY OF WICHITA WATER & SEWER 1-316-219-8921  
CITY OF WICHITA STORMWATER 1-316-268-4090  
CITY OF WICHITA TRAFFIC 1-316-268-4034  
COX COMMUNICATIONS 1-888-249-3530  
KANSAS GAS SERVICE 1-888-482-4850  
WESTAR ENERGY 1-800-544-4857
- UTILITY SERVICE LINES, POLES, ETC. ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS, IN THE OPINION OF THE ENGINEER, THAT 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 OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WILL REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE CITY ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.
- THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS NOTICE PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
- THE ENGINEERING DIVISION SHALL FIELD LOCATE WATER VALVES ONE TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY CONTRACTOR AT HIS OWN EXPENSE. VALVE BOXES AND WATER METERS WITHIN THE PROJECT LIMITS SHALL BE ADJUSTED TO MATCH FIELD GRADES BY THE CONTRACTOR.
- IF TRAFFIC WILL BE IMPACTED BY CONSTRUCTION, A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CITY TRAFFIC ENGINEER, BRIAN COON AT [traffic@wichita.gov](mailto:traffic@wichita.gov) BEFORE CONSTRUCTION CAN BEGIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL MEASURES TO FACILITATE CONSTRUCTION. ALL CONSTRUCTION ZONE MARKINGS AND SIGNAGE SHALL CONFORM TO THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS PUBLISHED BY THE US DEPT. OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION. ALL COSTS ASSOCIATED WITH CONSTRUCTION MARKINGS AND SIGNAGE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- ALL AREAS DISTURBED DURING CONSTRUCTION THAT WILL NOT BE UNDER PROPOSED PAVEMENT SHALL BE SEEDED AND MULCHED. COST SHALL BE CONSIDERED SUBSIDIARY TO PROJECT SEEDING.
- CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
- EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS COMPANIES AND IS EITHER FROM COMPANY UTILITY DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.
- A PORTION OF EXCESS EXCAVATED MATERIAL SHALL BE MOUNDED AROUND MANHOLES WHICH EXTEND MORE THAN ONE (1) FOOT ABOVE THE EXISTING GROUND. SUCH MOUND SHALL BE CONSTRUCTED WITH NEW DEVELOPMENT A SIX (6) FOOT DIAMETER FLAT TOP WITH 4 TO 1 SIDE SLOPES DOWN TO THE ORIGINAL GROUND. THE ELEVATION OF THE FLAT TOP OF THE MOUND SHALL BE 0.4 FOOT BELOW THE TOP OF THE MANHOLE.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.
- CONNECTING TO EXISTING MANHOLES:  
WHERE CONNECTION TO AN EXISTING MANHOLE THAT DOES NOT HAVE AN EXISTING STUB OR THE STUB IS UNSUSABLE DUE TO ELEVATION GRADE OR ALIGNMENT, THE CONTRACTOR SHALL BORE CUT INTO EXISTING MANHOLE WALL TO MAKE CONNECTION USING APPROVED WATER STOP GASKET, AND RESHAPE THE EXISTING MANHOLE INVERT TO PROVIDE SMOOTH FLOW. THE COST TO CONNECTING TO EXISTING MANHOLES IS INCIDENTAL TO THE PROJECT.
- THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.
- 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 SEWER MAINTENANCE DIVISION (316-268-4073) PRIOR TO STARTING AND BY-PASSING OF SEWAGE FLOWS.
- ALL TRAFFIC CONTROL DEVICES IN THE WORK ZONE (INCLUDING MARKINGS AND SIGNS) AND THEIR INSTALLATION AND MAINTENANCE SHALL COMPLY WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL TRAFFIC CONTROL DEVICES IN THE TRAVELED WAY OR CLEAR ZONE SHALL BE CRASHWORTHY (NCHRP REPORT 350 OR MASH COMPLIANT).  
[http://safety.fhwa.dot.gov/roadway\\_dept/policy\\_guide/road\\_hardware/wzd](http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/wzd)
- ALL CONSTRUCTION EQUIPMENT, INCLUDING VEHICLES, MATERIALS, AND DEBRIS, SHALL BE STORED OUTSIDE OF THE CLEAR ZONE. WHERE THIS CANNOT BE ACHIEVED THE CONTRACTOR SHALL PLACE APPROPRIATE SIGNS, OBJECT IDENTIFIERS, AND/OR BARRICADES IN COMPLIANCE WITH MUTCD.
- EXCEPT WHEN REQUIRED FOR SAFETY, TRAFFIC CONTROL SHALL NOT BLOCK ANY LANES OR SIDEWALKS WHEN WORK IS NOT BEING PERFORMED.
- FOLLOW THE LINK BELOW FOR DETAILS ON SPECIFIC CITY OF WICHITA STANDARD DETAILS:  
<http://www.wichita.gov/PWU/Pages/Regulations.aspx>
- THE FORCE MAIN SHALL BE FULLY RESTRAINED.
- ANY PRODUCT PROPOSED AS AN APPROVED EQUAL, MUST BE SUBMITTED AND APPROVED DURING PROJECT BIDDING. ANY PRODUCT SUBMITTED FOR "APPROVED EQUAL" REVIEW DURING CONSTRUCTION WILL BE REJECTED.
- DEVELOPER FOR THIS PROJECT IS:  
GEORGE LAHAM  
LAHAM DEVELOPMENT  
150 N. MARKET  
WICHITA, KS, 67202  
(316) 292-3950

**LIFT STATION & FORCE MAIN**

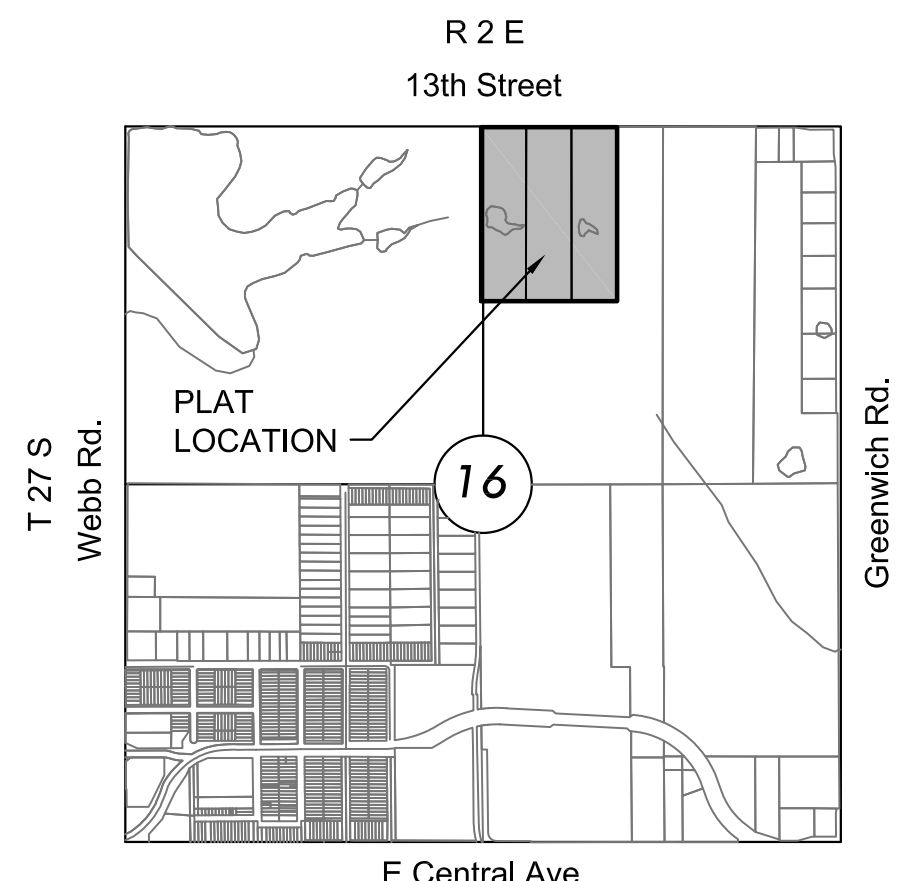
TO SERVE

**VERANDA ADDITION**

**MAIN 31**  
EAST 13th ST NORTH @ NORTH VERANDA DR  
WICHITA, KS 67206  
**PROJECT NO. 468-85386**  
THE CITY OF WICHITA, KANSAS  
GARY JANZEN, P.E. - CITY ENGINEER  
**OCA NO. 628305**

Insepector: Zach Reginer	
Engineer: Kevin Yale	
Contractor: McCullough Excavation	
Superintendent: Rob Gray	
Description	QTY
Force Main	
Pipe, SS Force Main 4"	667 lf
Pipe, SS 8" PVC SDR-35	40 lf
45 Deg Bends, 4"	4 ea
Pipe, SS Force Main 4" DICL	2 lf

**As-Built**  
Release Date: 6/17/2020  
Completion Date:  
: apr 01/04/2021



**VICINITY MAP**

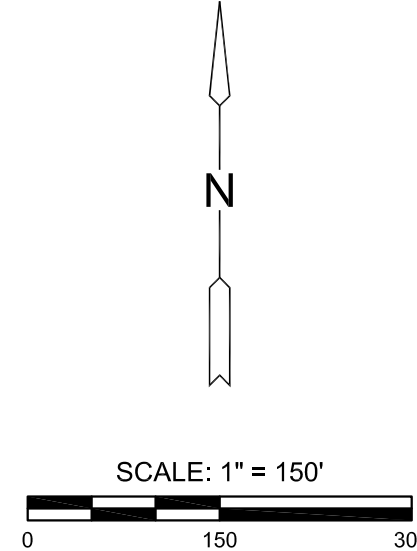
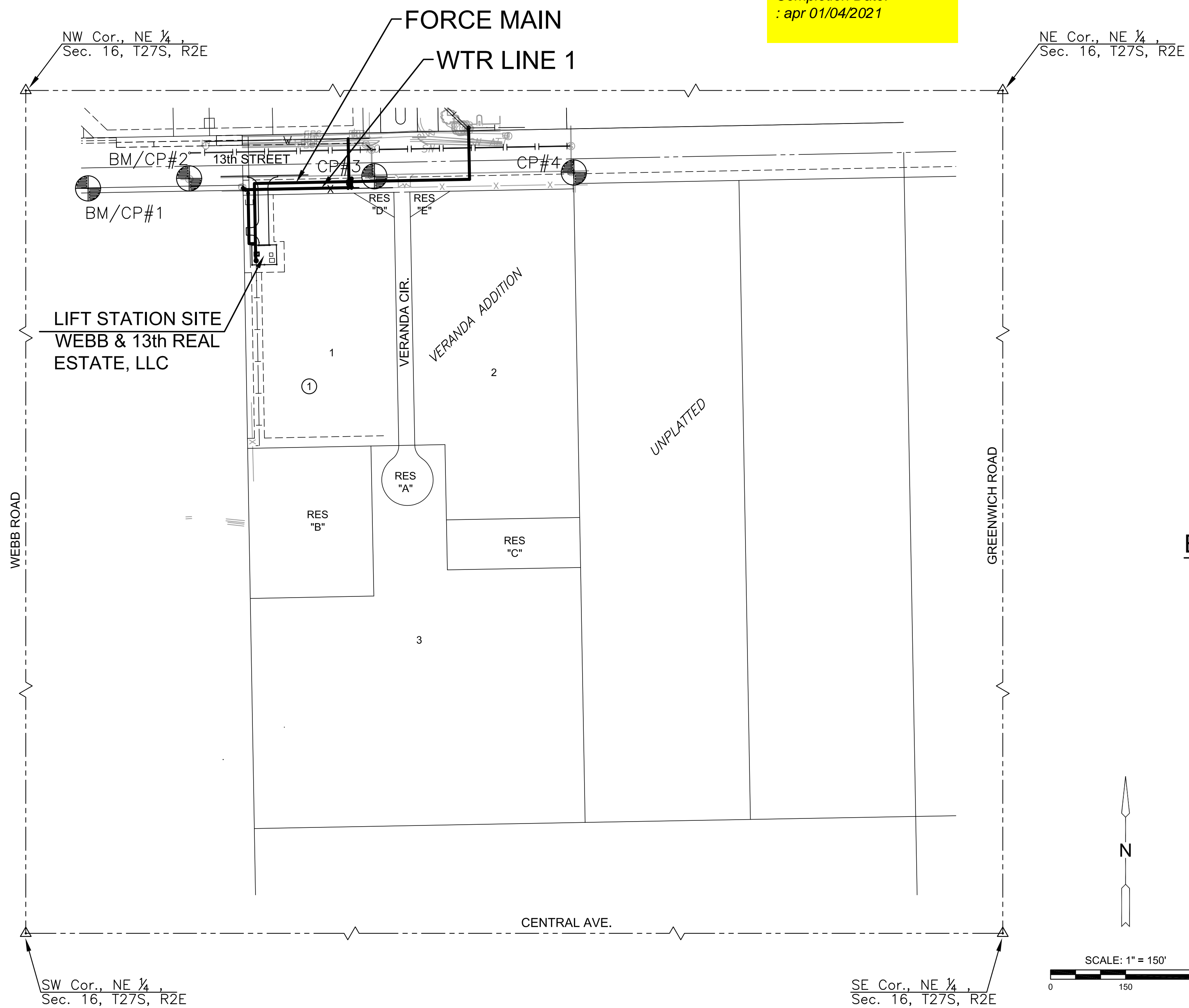
No Scale

**INDEX TO DRAWINGS**

SHEET NO.	DESCRIPTION
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02	DEMO & EROSION CONTROL SHEET
03	SITE PLAN
04-08	LIFT STATION DETAILS
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20	FINAL PLAT
21-24	ELECTRICAL PLANS
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**BENCH MARKS/CONTROL POINTS**

BM/CP#1	Chiseled "X" and square N=1694381.300 E=1683340.242 ELEV.=1377.820 (NAVD88)
BM/CP#2	Magnail in Chiseled "X" N=1694401.257 E=1683542.233 ELEV.=1378.300 (NAVD88)
CP#3	Magnail w/ MKEC ID washer N=1694405.429 E=1683912.609 ELEV.=1383.390 (NAVD88)
CP#4	Magnail w/ MKEC ID washer N=1694412.863 E=1684311.498 ELEV.=1390.300 (NAVD88)



LIFT STATION & FORCE MAIN FOR  
**VERANDA ADDITION**  
WICHITA, KANSAS

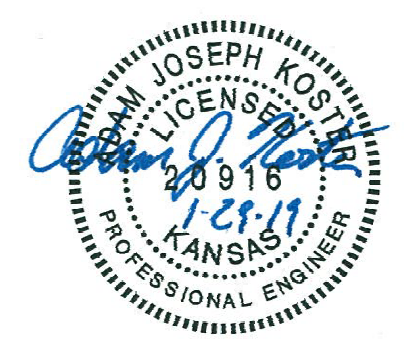
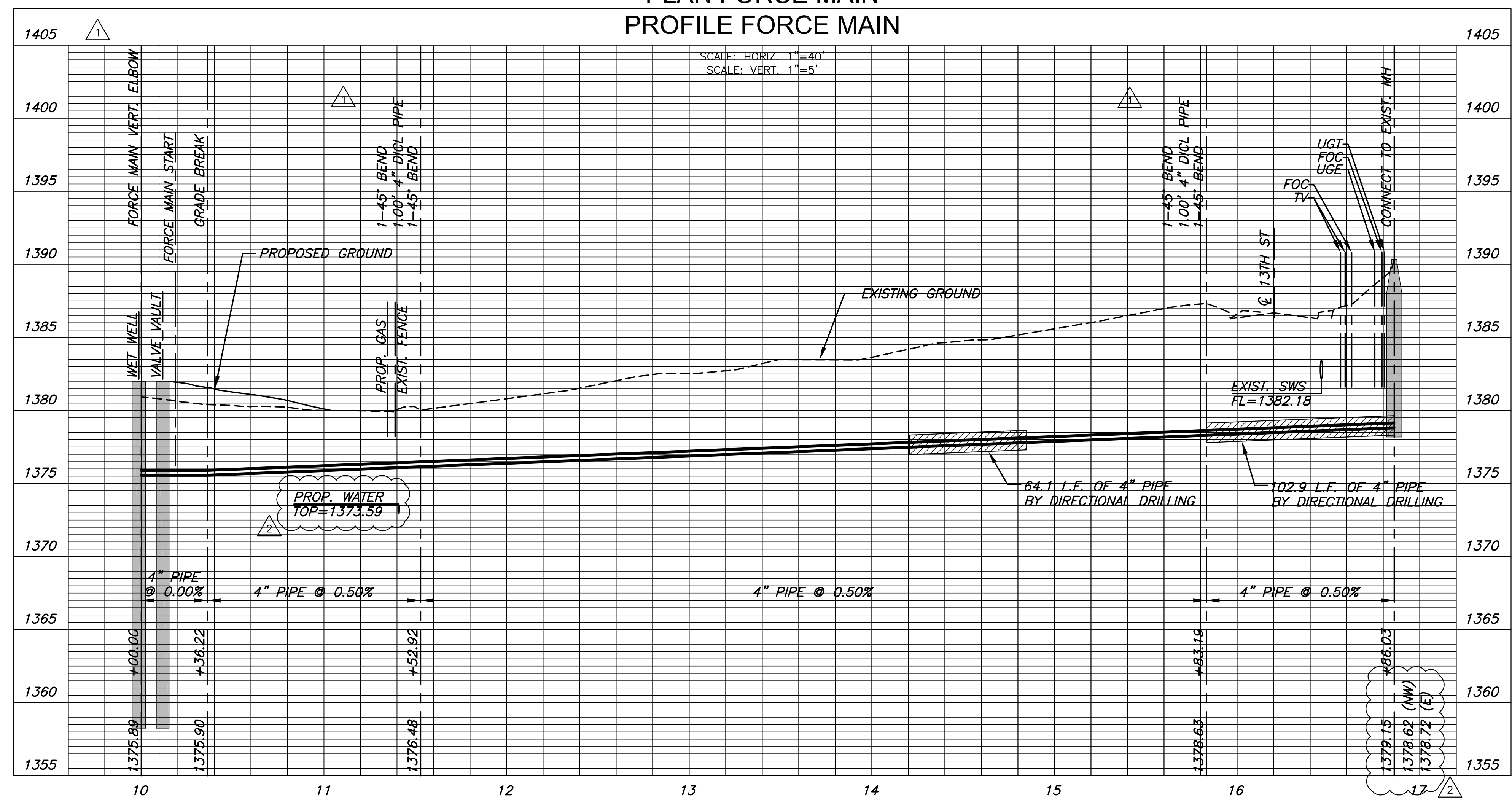
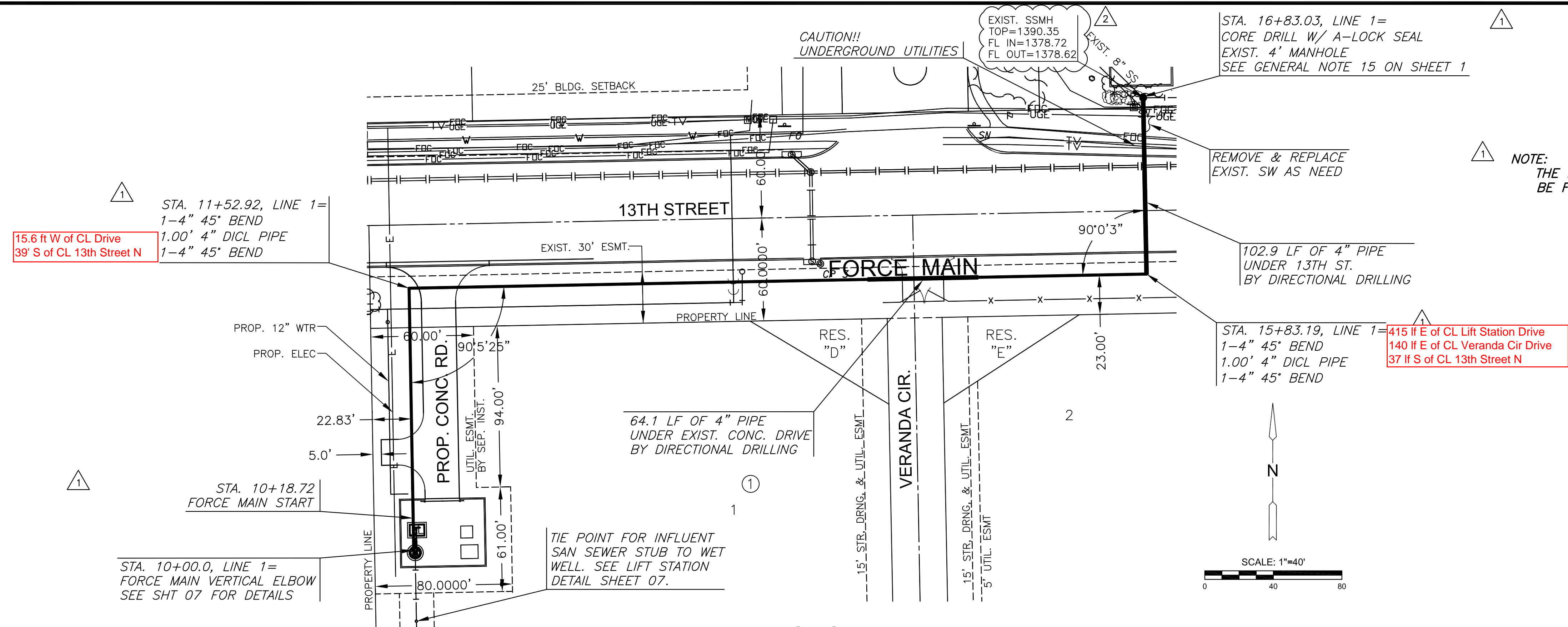
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**TITLE SHEET**

PROJECT NO.	468-85386	
DATE	JAN 2019	
SCALE	1" = 150'	
DESIGNED	DRAWN	CHECKED
AJK	RWB	MAB
0	ISSUED FOR BID	1-15-19
NO.	REVISION	DATE

SHEET NO.  
01 OF 25

J:\PROJECTS\2018\1801010816\_COW\_S&S\_MAINS1\_VERANDAADD\_18816 CAD\SHS\05 CIVIL\SANITFORCE MAIN\18816-05-2201\_FMDWG  
 PLOTTED: Tuesday, January 29, 2019 @ 10:56AM



LIFT STATION & FORCE MAIN FOR  
**VERANDA ADDITION**  
 WICHITA, KANSAS

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**FORCE MAIN PLAN & PROFILE**

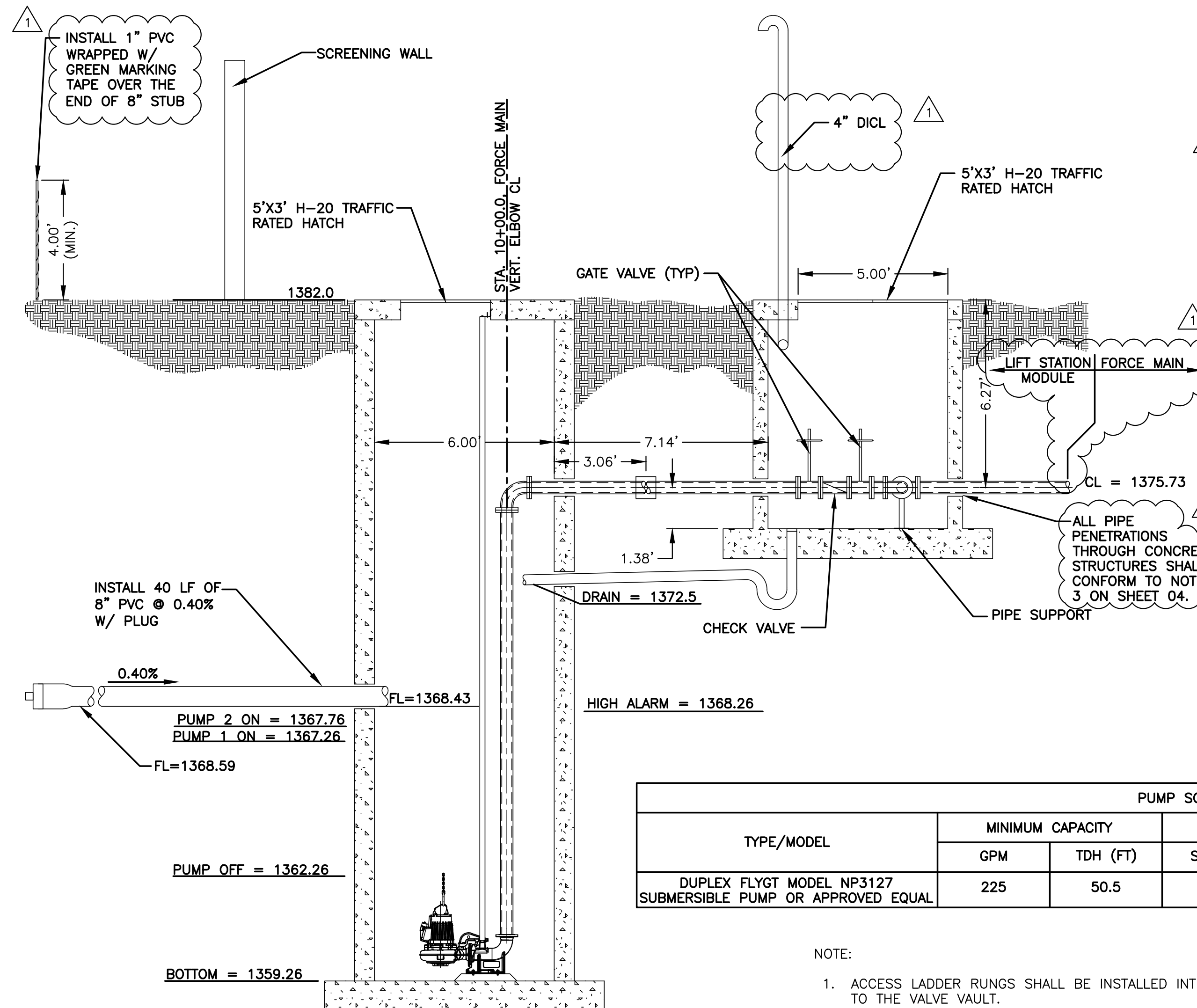
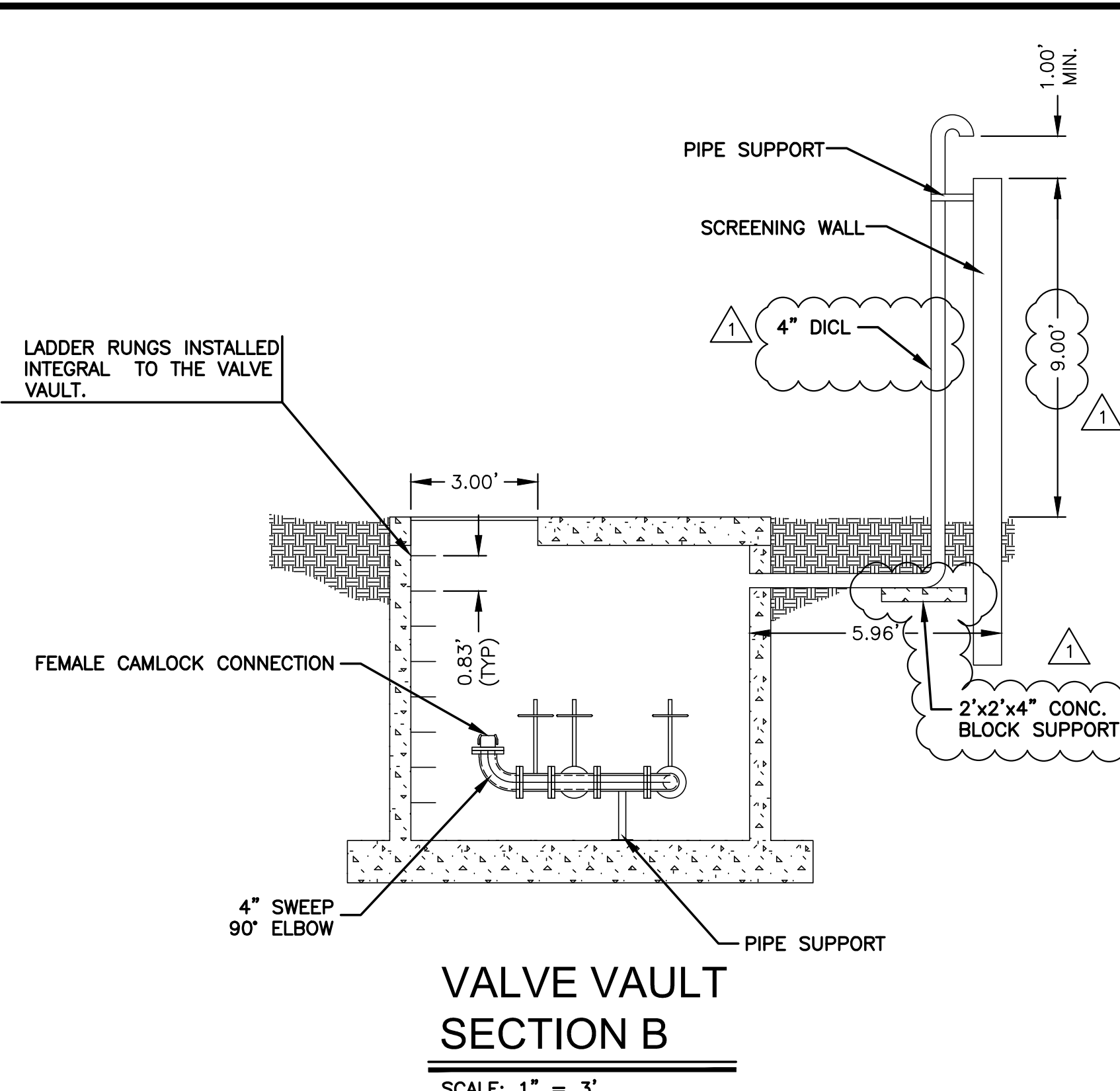
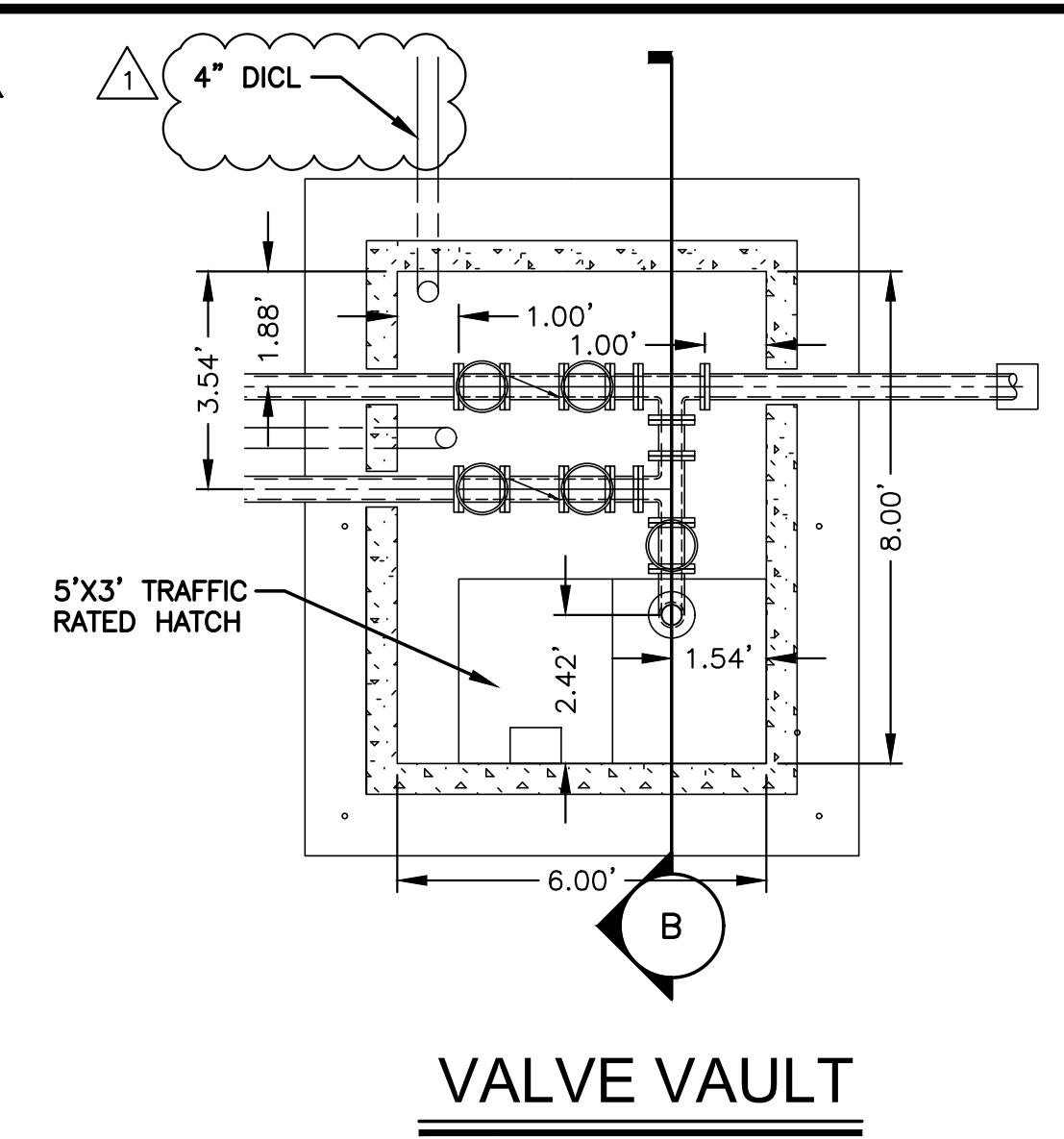
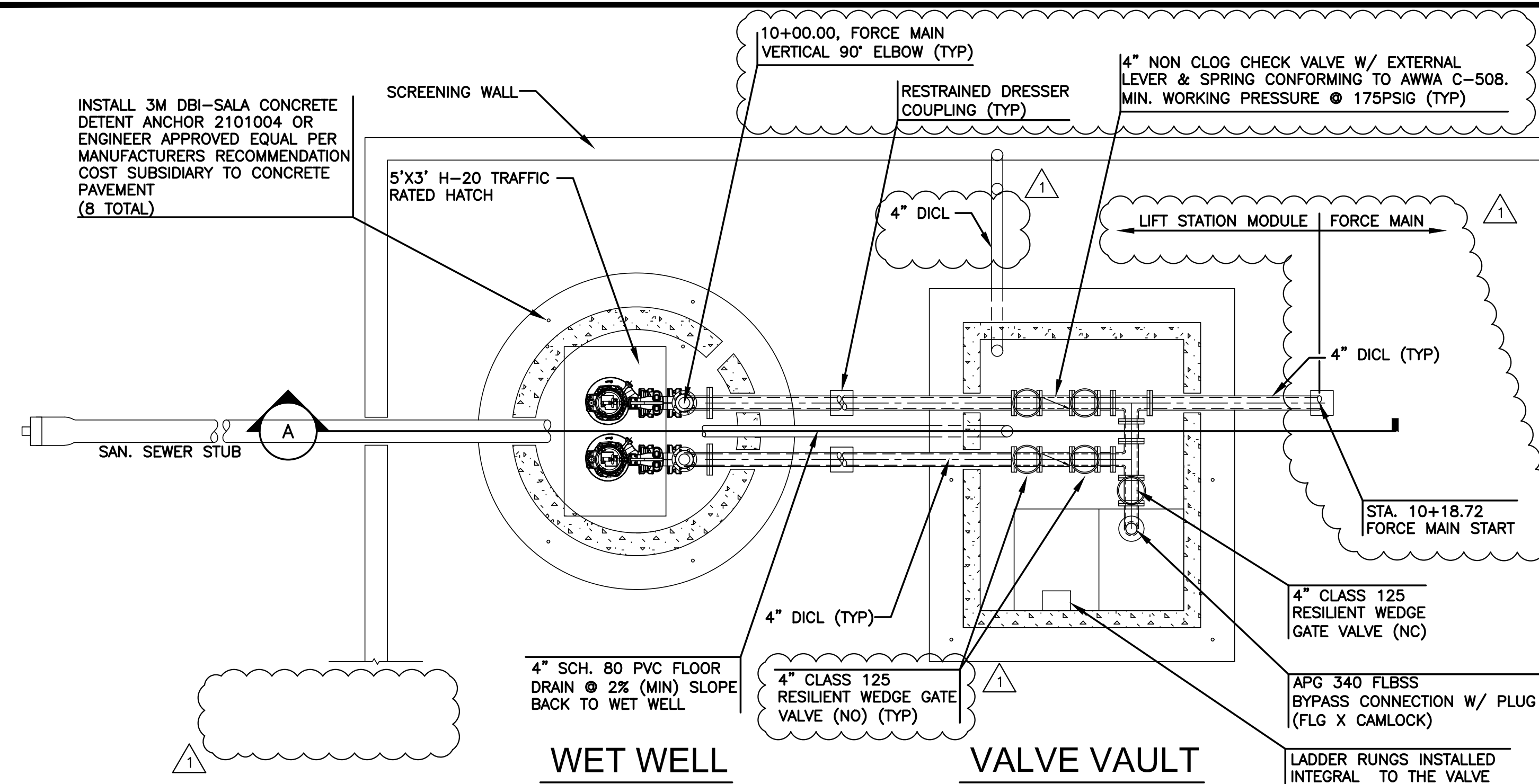
PROJECT NO.	468-85386	
DATE	JAN 2019	
SCALE	1" = 40'	
DESIGNED	DRAWN	CHECKED
AJK	RWB	MAB
NO.	REVISION	DATE
2	CITY COMMENTS	1-29-19
1	REVISIONS	1-28-19
0	ISSUED FOR BID	1-15-19

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**LIFT STATION DETAIL**

PROJECT NO.	468-85386	
DATE	JAN 2019	
SCALE	AS NOTED	
DESIGNED	DRAWN	CHECKED
AJK	RWB	MAB
NO.	REVISION	DATE
1	REVISIONS	1-28-19
0	ISSUED FOR BID	1-15-19

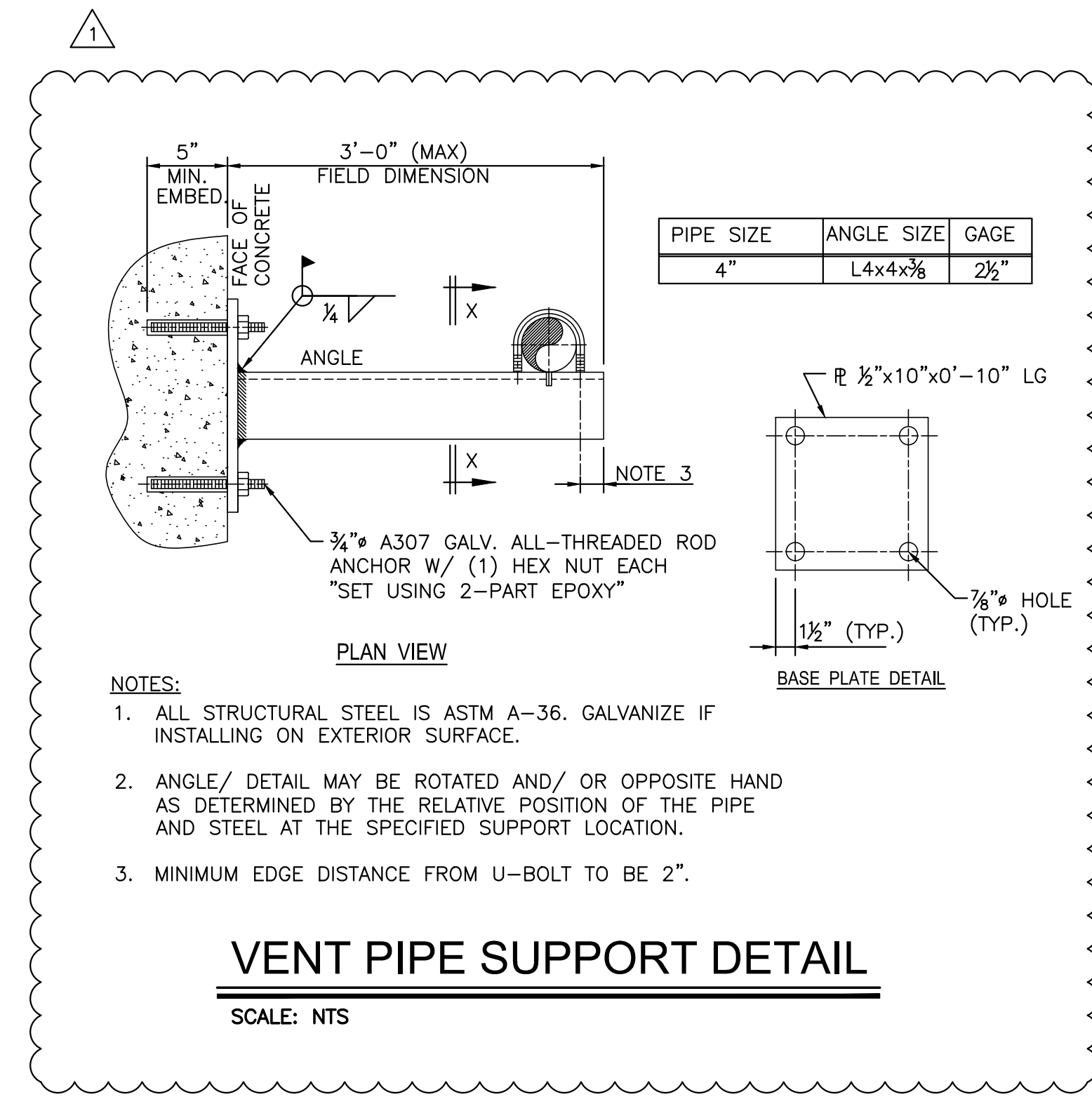
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 PLOTTED: Monday, January 28, 2019 @ 02:39PM



- NOTES:
- CONTRACTOR TO PROVIDE STRUCTURAL AND BUOYANCY CALCULATIONS, AS WELL AS DRAWINGS FOR THE WET WELL AND VALVE VAULT. DRAWINGS AND CALCULATIONS MUST BE SEALED BY A KANSAS LICENSED PROFESSIONAL STRUCTURAL ENGINEER.
  - FLOAT SWITCHES SHALL BE MOUNTED ON A 316SS FLOAT SWITCH MOUNTING BRACKET WITH HEVCO STYLE STRAIN RELIEF BUSHINGS OR CORD GRIPS. LEVEL CONTROL FLOATS AND PRESSURE TRANSDUCER NOT SHOWN FOR CLARITY.
  - ANY SOIL USED FOR BACKFILL AROUND THE WET WELL OR VALVE VAULT MUST BE COMPACTED TO 95% STD. DENSITY PER ASTM D698 IN NO MORE THAN 12" LIFTS.
  - ALL PIPE INSTALLED INSIDE OF WET WELL AND VALVE VAULT TO BE DUCTILE IRON (CLASS 52) UNLESS OTHERWISE NOTED ON THIS DRAWING. CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY SUPPORTING THE PIPES WITHIN THE STRUCTURES. SUPPORTS SHALL BE 316SS. SUPPORTS NOT SHOWN FOR CLARITY.
  - ACCESS HATCHES SHALL BE A HALLIDAY H1R3648 WITH A H-R RECESSED LOCK BOX OR APPROVED EQUAL. HATCHES MUST BE RATED FOR H-20 LOADING.
  - 316SS PUMP HOIST CHAINS SHALL BE INSTALLED FOR EACH PUMP. CHAIN AND 316SS HOOK FOR HOIST CHAIN NOT SHOWN FOR CLARITY.
  - TRANSFORMER, CONTROL BUILDING, CONTROL BUILDING FOUNDATION, CONTROLS, PUMPS, INTERNAL WET WELL AND VALVE VAULT PIPING, GUIDE RAILS, LIFTING CHAINS, WET WELL, FLOOR DRAIN, CHECK VALVES, GATE VALVES, PIPE SUPPORTS, HATCH, VALVE VAULT, VENT PIPE, & RESTRAINED DRESSER COUPLING SHALL BE CONSIDERED SUBSIDIARY TO THE "LIFT STATION MODULE". ALL PIPING SHOWN ON THIS SHEET IS SUBSIDIARY TO THE "LIFT STATION MODULE".
  - ALL FORCE MAIN DIP & VALVES WITHIN THE WET WELL AND VALVE VAULT SHALL BE PAINTED GRAY W/ 3 COATS OF 2 PART EPOXY.
  - THE ABOVE GRADE VENT PIPE SHALL BE PAINTED BLACK W/ 3 COATS OF 2 PART EPOXY.
  - ALL BOLTS SHALL BE 316SS.
  - A CONCRETE INVERT SHALL BE PLACED IN THE BOTTOM OF THE WET WELL IN ACCORDANCE WITH KDHE REQUIREMENTS.
  - CONTRACTOR TO PROVIDE 1-TRAILER MOUNTED CD103M Dri-Prime PUMP (OR ENGINEER'S APPROVED EQUAL). 30 L.F. OF 4" SUCTION HOSE AND 20 L.F. OF 4" DISCHARGE HOSE WITH ALL NECESSARY FITTINGS TO REMOVE SEWAGE FROM THE WET WELL AND CONNECT TO THE BY-PASS CONNECTION IN THE VALVE VAULT.

TYPE/MODEL	PUMP SCHEDULE			MOTOR		
	MINIMUM CAPACITY	MINIMUM CONN. SIZES		HP	RPM	ELECT.
DUPLIX FLYGT MODEL NP3127 SUBMERSIBLE PUMP OR APPROVED EQUAL	225 GPM	50.5 TDH (FT)	NA SUCTION, 4" DISCHARGE	7.5	1740	460/60/3

- NOTE:
- ACCESS LADDER RUNGS SHALL BE INSTALLED INTEGRAL TO THE VALVE VAULT.
  - PIPE SUPPORTS NOT SHOWN FOR CLARITY.



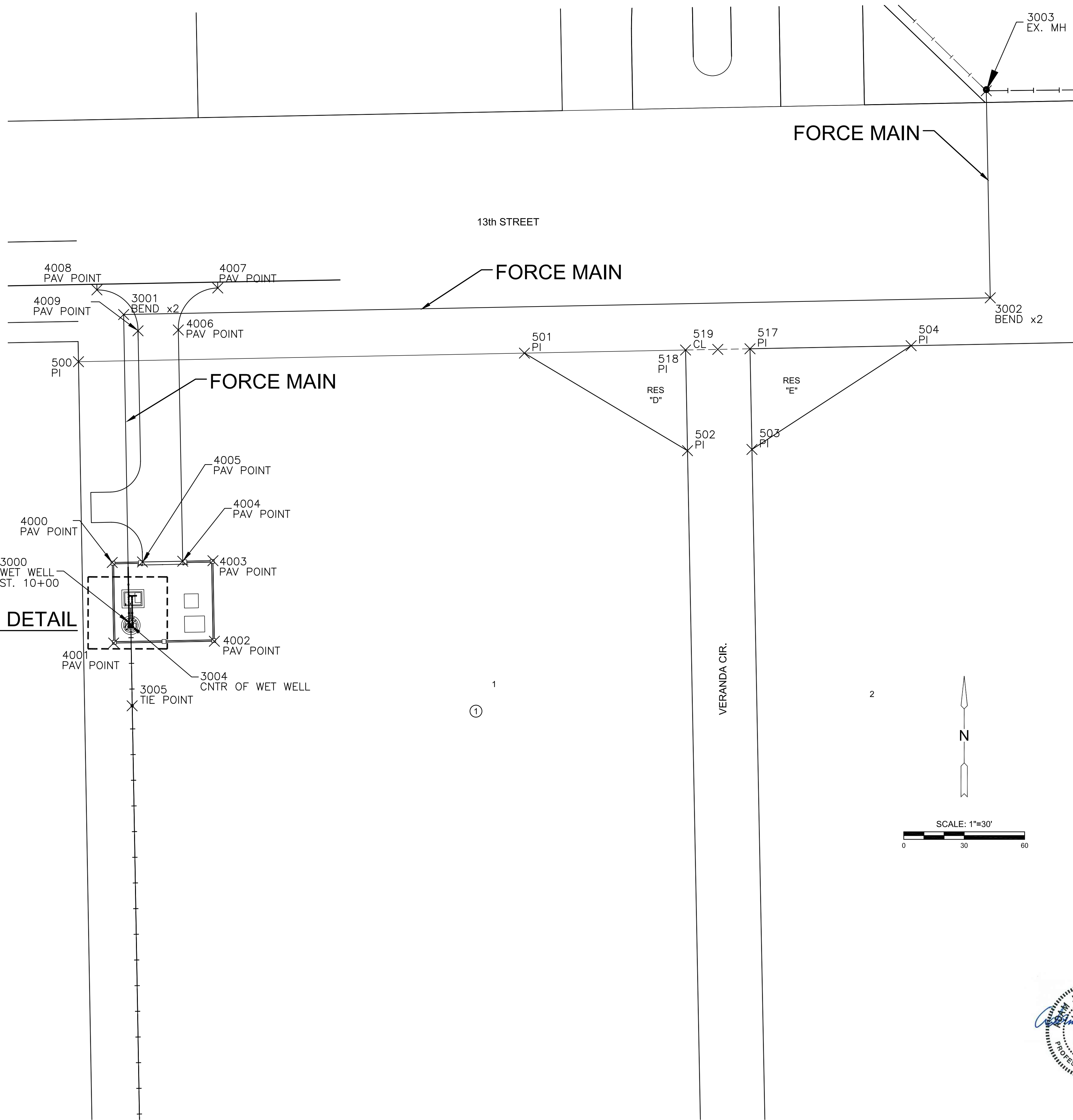
- NOTES:
- ALL STRUCTURAL STEEL IS ASTM A-36. GALVANIZE IF INSTALLING ON EXTERIOR SURFACE.
  - ANGLE/ DETAIL MAY BE ROTATED AND/ OR OPPOSITE HAND AS DETERMINED BY THE RELATIVE POSITION OF THE PIPE AND STEEL AT THE SPECIFIED SUPPORT LOCATION.
  - MINIMUM EDGE DISTANCE FROM U-BOLT TO BE 2".

**VENT PIPE SUPPORT DETAIL**  
SCALE: NTS



PLOT123: Wednesday, January 16, 2019 @ 11:50AM

J:\PROJECTS\2018\1801010816\_COW\_S&S\_MAIN\1\_VERANDAADD\1816 CAD\SHS\05 CIVIL\SANITFORCE MAIN\1816-05-2500\_F.M.DWG



PLAT POINTS			
Point #	Northing	Easting	Desc.
500	1694367.70	1683650.31	PI
501	1694371.96	1683871.69	PI
502	1694323.51	1683952.64	PI
503	1694324.13	1683984.63	PI
504	1694375.66	1684063.65	PI
505	1694380.43	1684311.36	PI
508	1693113.96	1684334.04	PI
509	1693101.62	1683672.71	PI
517	1694374.12	1683983.67	PI
518	1694373.50	1683951.68	PI
519	1694373.81	1683967.67	CL

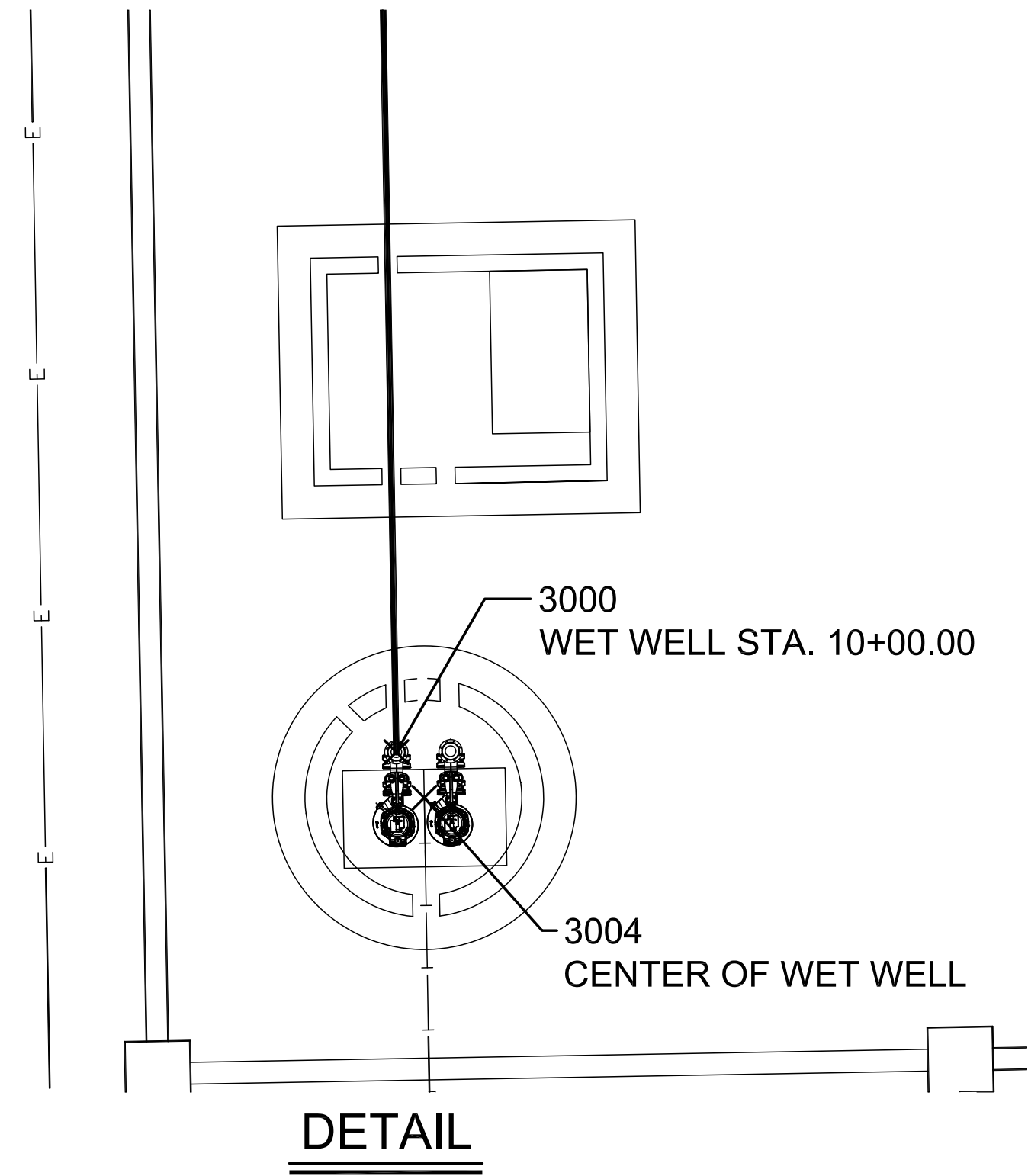
SANITARY POINTS			
Point #	Northing	Easting	Desc.
3000	1694238.24	1683675.44	WET WELL
3001	1694391.13	1683672.73	BEND x2
3002	1694399.42	1684102.93	BEND x2
3003	1694502.23	1684100.95	EX. MH
3004	1694236.83	1683676.30	CNTR OF WET WELL
3005	1694196.84	1683676.95	TIE POINT
4000	1694268.01	1683667.08	PAV POINT
4001	1694228.01	1683667.79	PAV POINT
4002	1694228.90	1683717.78	PAV POINT
4003	1694268.89	1683717.07	PAV POINT
4004	1694268.62	1683702.07	PAV POINT
4005	1694268.27	1683682.08	PAV POINT
4006	1694383.45	1683699.86	PAV POINT
4007	1694404.32	1683719.46	PAV POINT
4008	1694403.36	1683659.47	PAV POINT
4009	1694383.04	1683679.86	PAV POINT

**BENCH MARKS/CONTROL POINTS**

- BM/CP#1 Chiseled "X" and square  
N=1694381.300 E=1683340.242  
ELEV.=1377.820 (NAVD88)
- BM/CP#2 Magnail in Chiseled "X"  
N=1694401.257 E=1683542.233  
ELEV.=1378.300 (NAVD88)
- CP#3 Magnail w/ MKEC ID washer  
N=1694405.429 E=1683912.609  
ELEV.=1383.390 (NAVD88)
- CP#4 Magnail w/ MKEC ID washer  
N=1694412.863 E=1684311.498  
ELEV.=1390.300 (NAVD88)

DATUM:  
1) THE PROJECT HORIZONTAL DATUM IS BASED ON THE NAD83, KANSAS STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, (US SURVEY FEET DEFINITION), WITH A COMBINED ADJUSTMENT FACTOR (CAF) OF 1.000120014.  
ALL COORDINATE AND DIMENSIONS SHOWN ON THESE PLANS ARE MODIFIED TO GROUND VALUES.

THE FOLLOWING EQUATIONS CAN BE USED FOR CONVERSION:  
GROUND COORDINATES TO STATE PLANE COORDINATES = GROUND X 1/CAF  
STATE PLANE COORDINATES TO GROUND COORDINATES = STATE PLANE X CAF



LIFT STATION & FORCE MAIN FOR  
**VERANDA ADDITION**  
WICHITA, KANSAS

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**FORCE MAIN BUBBLE MAP**

PROJECT NO.	468-85386	
DATE	JAN 2019	
SCALE	1" = 30'	
DESIGNED	DRAWN	CHECKED
AJK	RWB	MAB
0	ISSUED FOR BID	1-15-19
NO.	REVISION	DATE