

BENCH MARKS

BM-201
ELEV: 1,365.01 (NAVD 88)
CHISELED SQUARE SOUTHWEST CORNER INLET
SOUTH SIDE WEBB ROAD MAIN
ENTRANCE EAST SIDE WEBB ROAD.

BM-202
ELEV: 1,371.74 (NAVD 88)
CHISELED SQUARE EAST SIDE MANHOLE ON
CONCRETE PAD +/- 450' SOUTH OF
WEBB ROAD MAIN ENTRANCE IN PARKING LOT

BM-203
ELEV: 1,369.65 (NAVD 88)
CHISELED SQUARE SOUTH CURB NORTH END PLANT 3
+/- 25' SOUTH OF FIRE
HYDRANT "BFH 018"

BM-204
ELEV: 1,381.57 (NAVD 88)
CHISELED SQUARE CENTER OF CONCRETE ELCTRIC
DUCT BANK "RED
CONCRETE" NORTH OF SOUTH EDGE OF PAVEMENT

BM-205
ELEV: 1,385.66 (NAVD 88)
CHISELED SQUARE SE CORNER RETAINING WALL EAST
SIDE BLDG 96

BM-206
ELEV: 1,377.49 (NAVD 88)
CHISELED SQUARE NW CORNER ELECTRIC BOX
#W12F36099 NE OF PLANT 3
BLDG

HORIZONTAL CONTROL POINTS

CP-101
N: 1,688,046.6781 E: 1,680,953.8984
CHISELED + ON MANHOLE PAD NORTH SIDE OF WEBB ROAD MAIN
ENTRANCE EAST SIDE WEBB ROAD
1. 17.4' W TO EAST CURB WEBB ROAD
2. 31.67' SW TO NORTHEAST CORNER AREA INLET
3. 2.84' SW TO CENTER MANHOLE

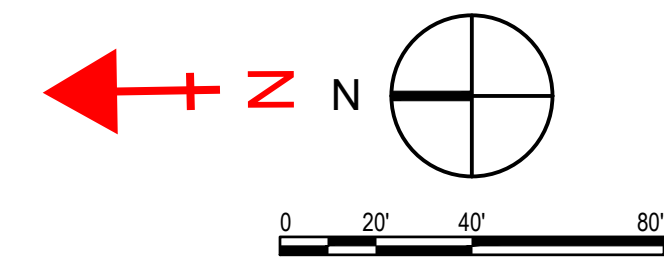
CP-102
N: 1,687,441.7725 E: 1,680,952.9368
#4 BAR WITH PEC CP CAP IN GRASS EAST SIDE WEBB ROAD
1. 6.17' W TO EAST CURB WEBB ROAD
2. 81.25' NNE TO CHISELED SQUARE ON EAST SIDE MANHOLE PAD
3. 118.5' E TO MAG NAIL IN SOUTH FACE LIGHT POLE

CP-103
N: 1,686,815.9874 E: 1,681,006.4280
#4 BAR W/PEC CP CAP SOUTH SIDE NORTH ENTRANCE PLANT 3
1. 9.67' WNW TO TO CHISELED SQUARE
2. 25' SSW TO TOP CENTER FIRE HYDRANT "BFH 018"
3. 4' N TO SOUTH EDGE CONCRETE DRIVE
4.

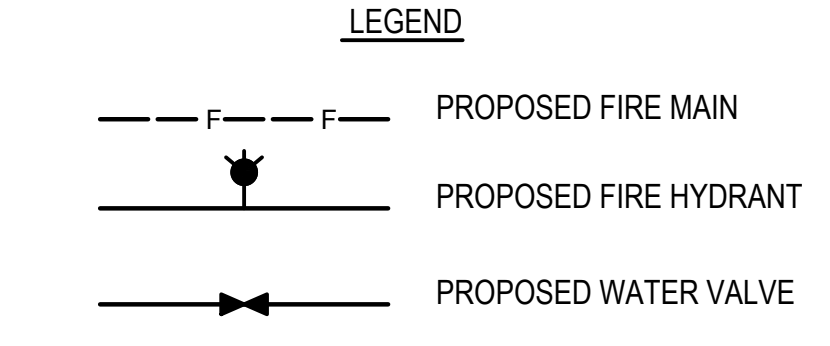
CP-104
N: 1,687,638.7254 E: 1,682,559.0478
MAG NAIL IN ASPHALT EAST OF ELECTRIC DUCT BANK EAST OF
TAXIWAY
1. 4.44 W TO CHISELED SQUARE IN ELECTRIC DUCT BANK "RED
CONCRETE"
2. 30.47 SW TO SIGN "NO DUMPING OR STORAGE"
3. 88.37 ESE TO WEST END SIGN "WARNING AIRCRAFT TAXIWAY"

CP-105
N: 1,687,526.8456 E: 1,682,142.5539
MAG NAIL SW CORNER PAVED AREA SOUTHEAST OF BLDG 96
1. 12.1 SW TO CENTER OF ELECTRIC MH
2. 114.1 NNW TO CHISELED SQUARE SE CORNER RETAINING WALL
3. 76.62 WNW TO SOUTHEAST CORNER BLDG 96

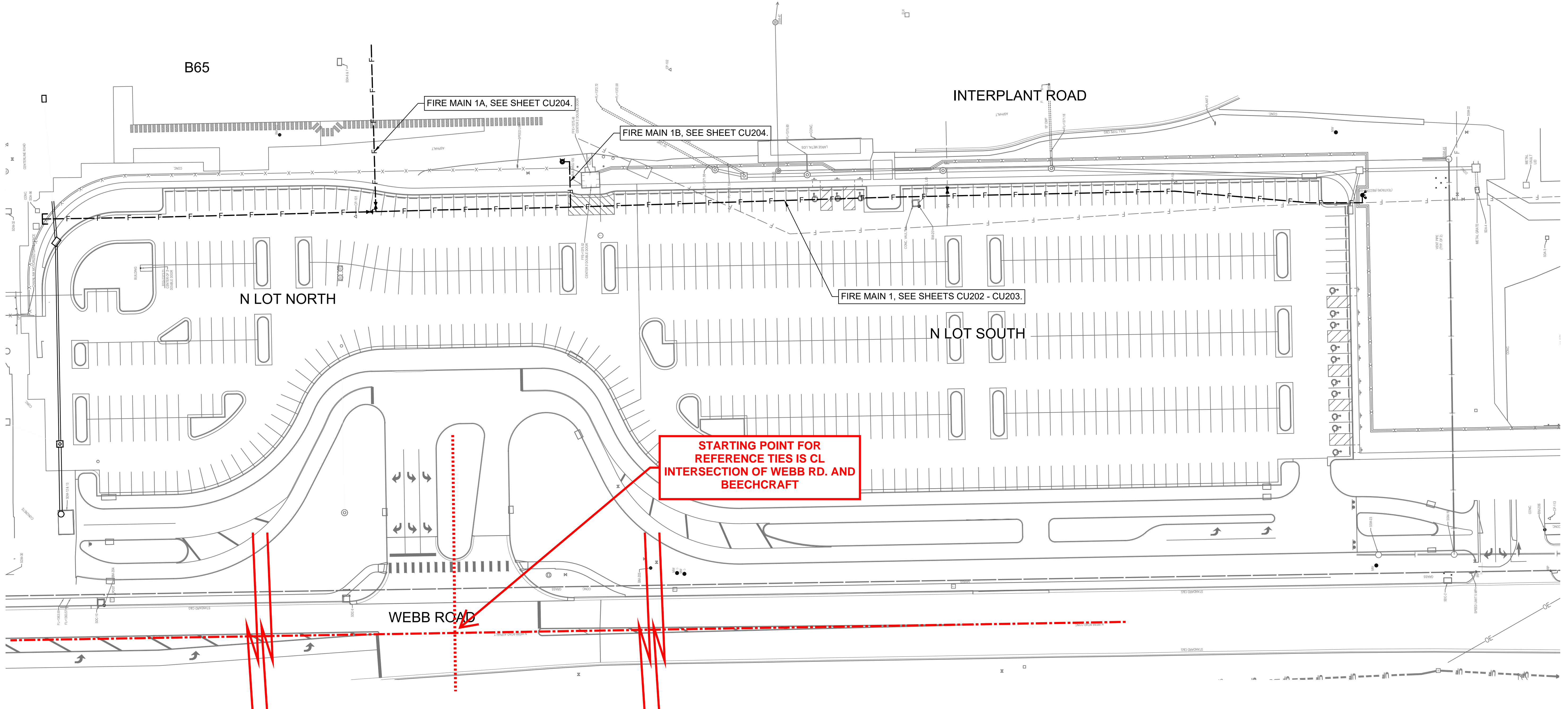
CP-106
N: 1,686,991.4139 E: 1,682,000.2159
#4 BAR W/PEC CP CAP IN GRASS NE OF PLANT 3 BLDG.
1. 59.33 S TO NW CORNER CONCRETE PAD FOR ELECTRIC BOX
#W012G90776
2. 97.05 SSW TO CHISELED SQUARE NW CORNER PAD ELECTRIC BOX
#W12F36099
3. 81.93 WNW TO SE CORNER PAD FOR TRANSFORMER #TS748397



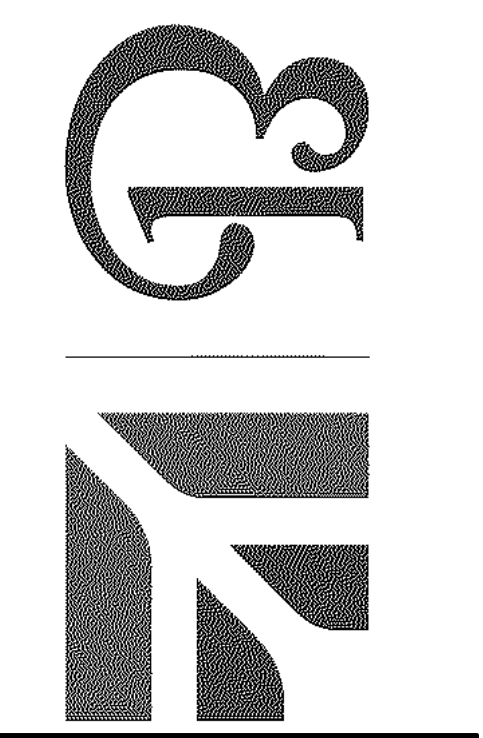
ENTIRE SHEET ADDED



MABCD REVIEWER:



SAVED 10/19/2023 11:49:56 AM BY CHANCE SWANEY
PLOTTED 10/19/2023 11:55:46 AM BY CHANCE SWANEY
J:\WICHITA-FACIL\2022\228003\066\MUNIDRAWINGS\228003-066-CU201 KEY PLAN.DWG



Date	Description
10/19/2023	ASI #3

EAST CAMPUS
N-LOT SOUTH PARKING LOT
IMPROVEMENTS
WICHITA, KS

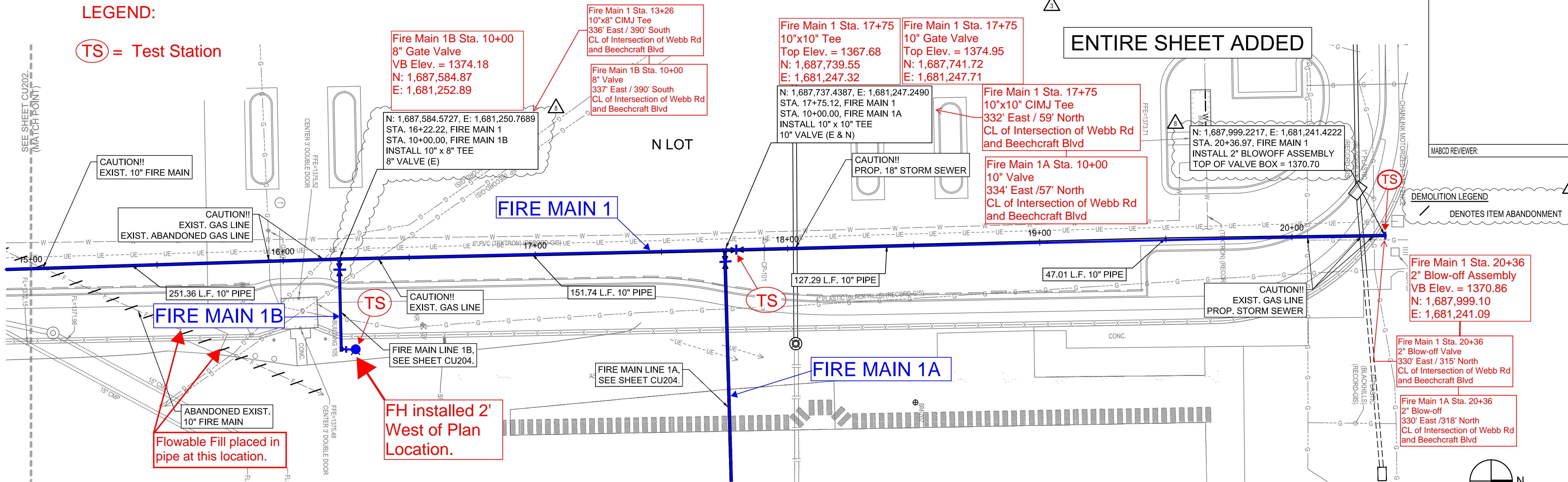
JOB NUMBER:	228003-066
DATE:	02/27/2023
DRAWN:	NCL
CHECKED:	JAG

KEY PLAN

CU201
EAST CAMPUS

LEGEND:

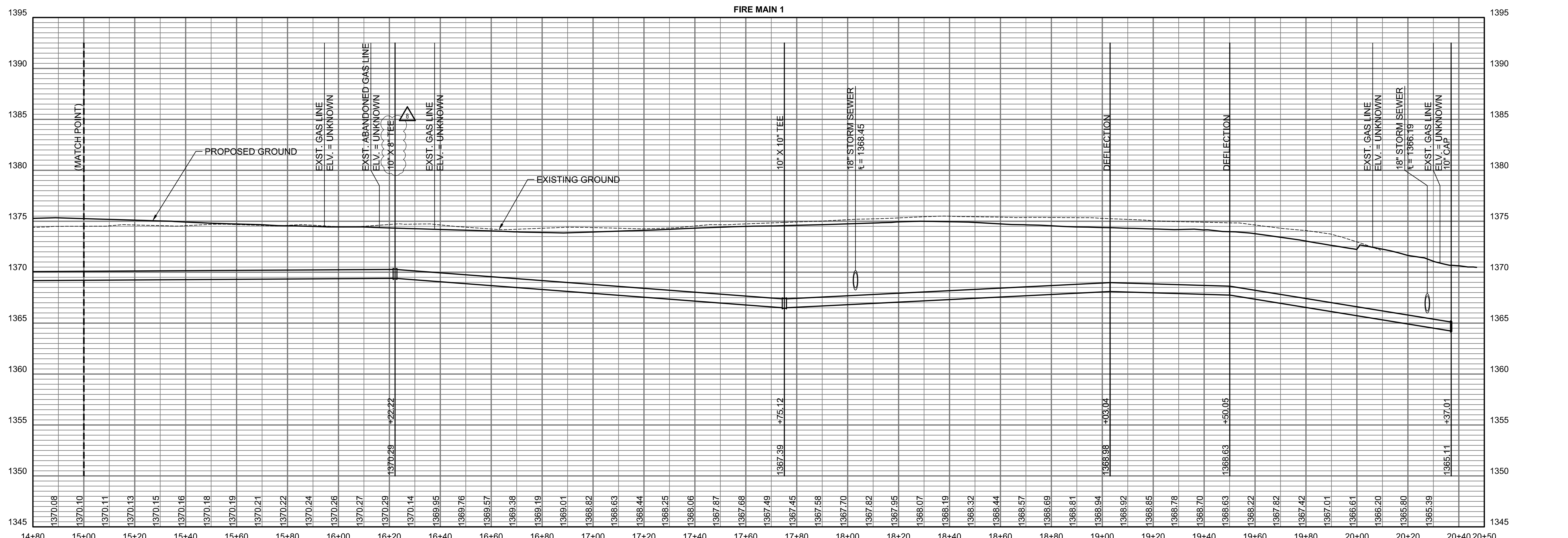
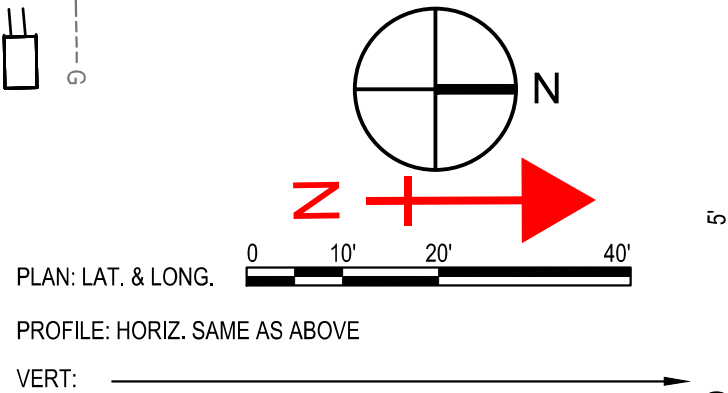
(TS) = Test Station



STARTING POINT FOR REFERENCE TIES IS CL INTERSECTION OF WEBB RD. AND BEECHCRAFT

Northings and Eastings:
State Plane Coordinates - Kansas Grid South - NAD83.
Elevations: NAVD88
Survey Shots By: James Ralston - Baughman Company, P.A.

COORDINATE WITH TEXTRON AVIATION, BRYAN URBAN (1.316.570.3250) FOR ISOLATING EXISTING FIRE MAIN PRIOR TO CONSTRUCTION.

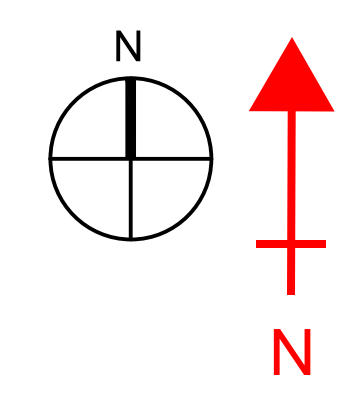
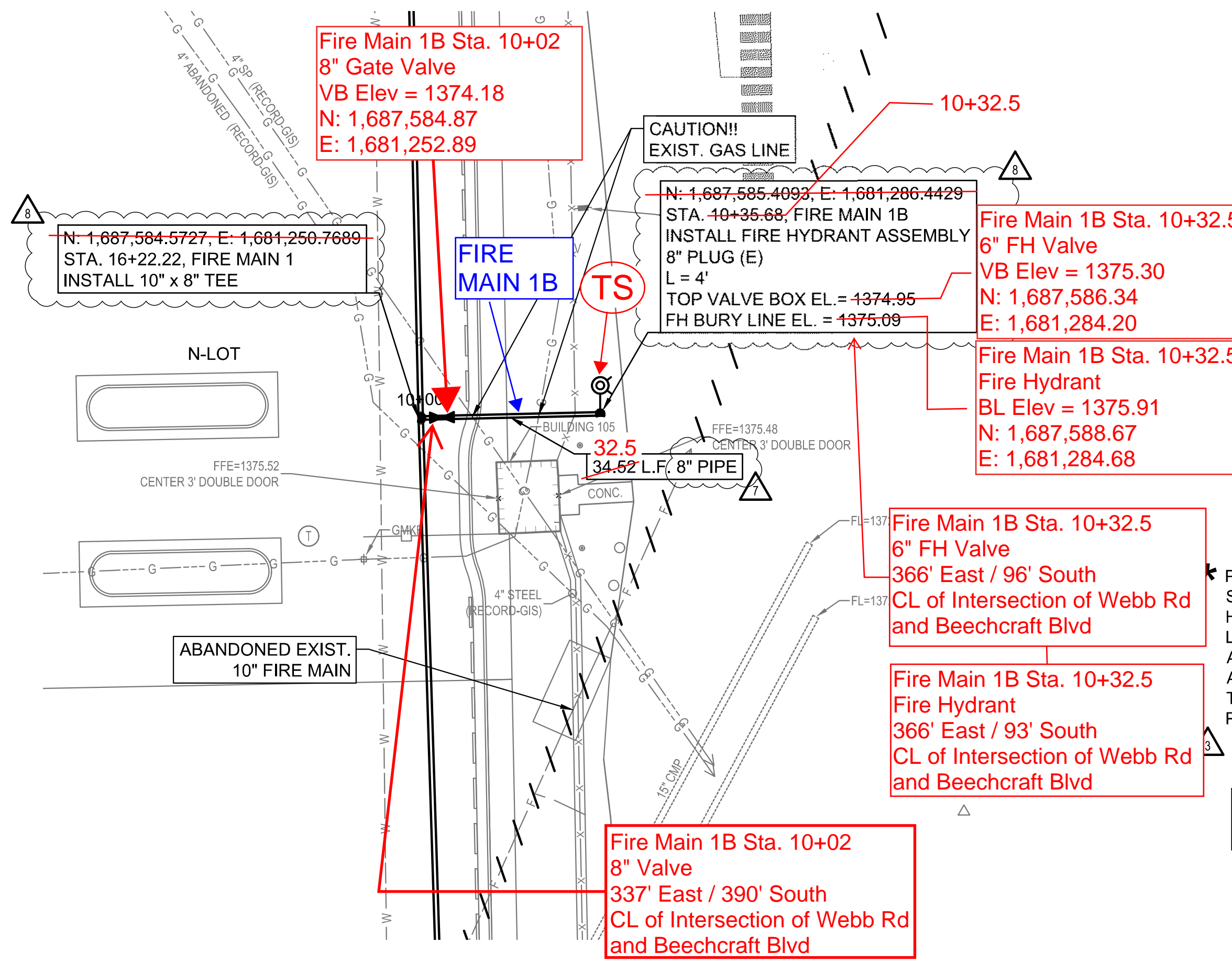
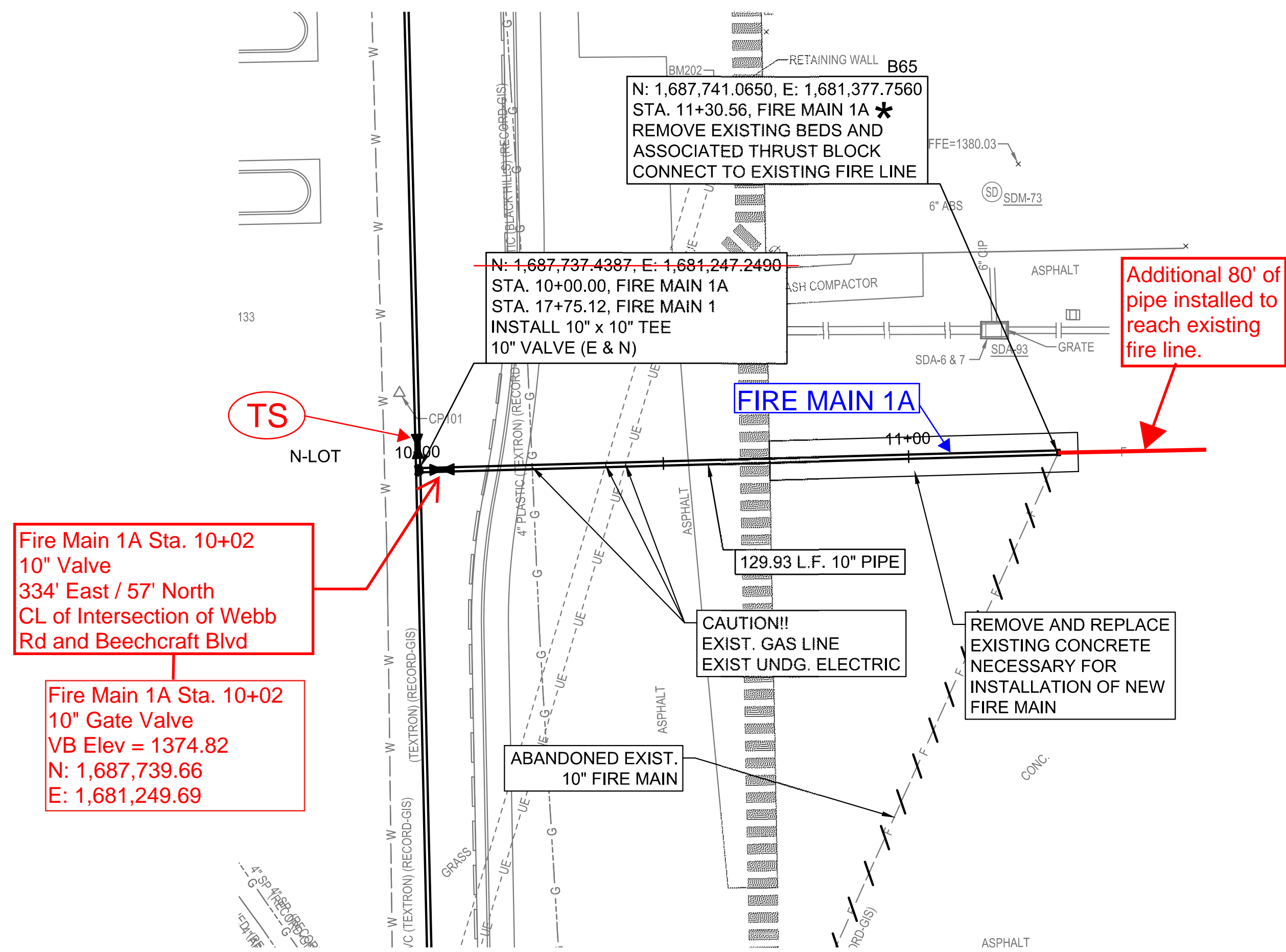


Date	Description
3 10/19/2023	ASI #3
8 11/21/2023	ASI #8

JOB NUMBER:	228003-066
DATE:	02/27/2023
DRAWN:	NCL
CHECKED:	JAG

SAVED 11/21/2023 11:27:23 AM BY CHANCE SWANEY
PLOTTED 11/21/2023 12:01:10 PM BY CHANCE SWANEY
U:\WICHITA-FACIL\2022\228003\066\MUNI\DRAWINGS\228003-066-CU203 FIRE MAIN 1 PLAN & PROFILE.DWG

SAVED 11/21/2023 11:43:39 AM BY CHANCE SWANEY
 PLOTTED 11/21/2023 12:01:29 PM BY CHANCE SWANEY
 U:\WICHITA-FACIL\2022\228003\066\MUNI\DRAWINGS\228003-066-CU204 FIRE MAIN 1 & 1A PLAN & PROFILE.DWG



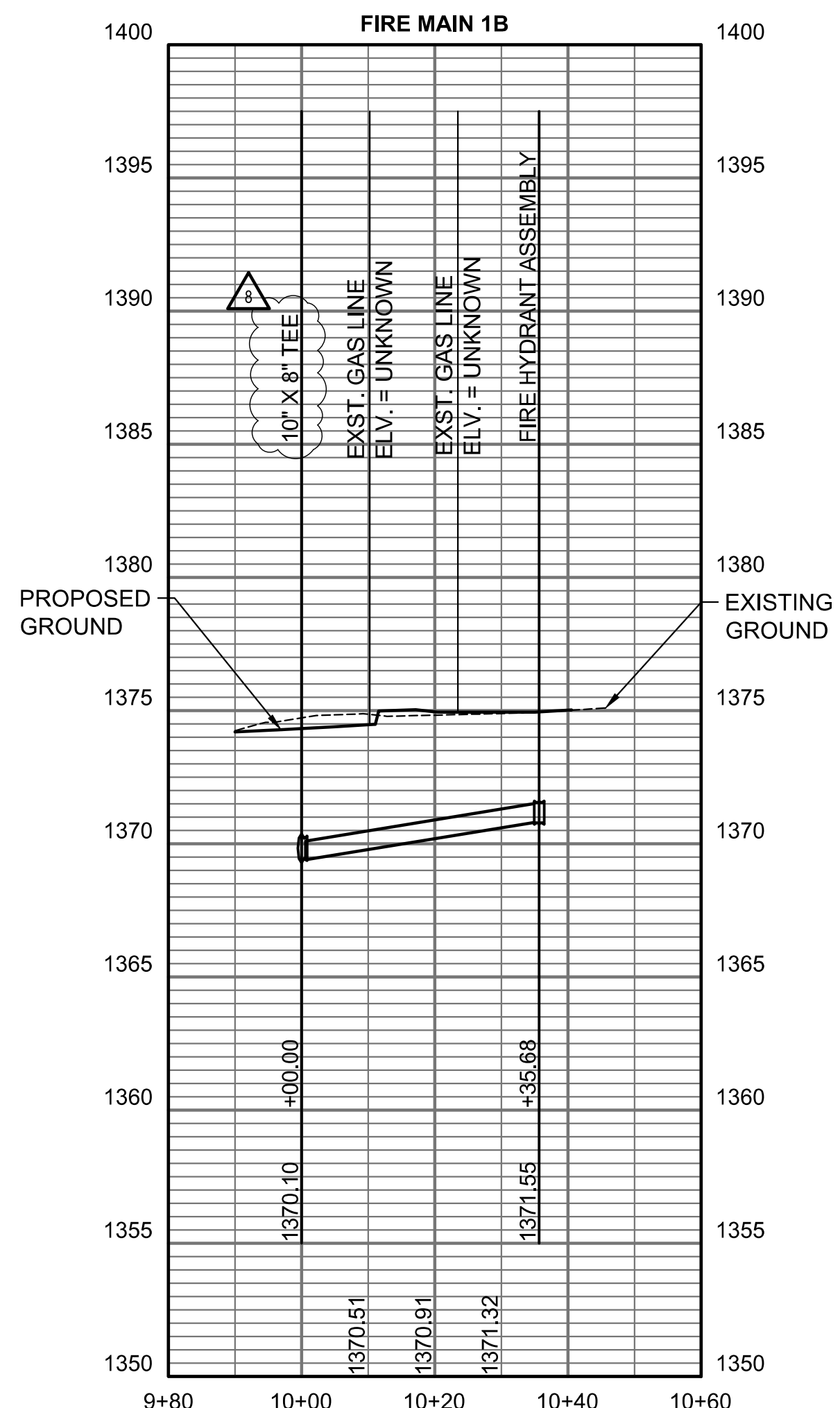
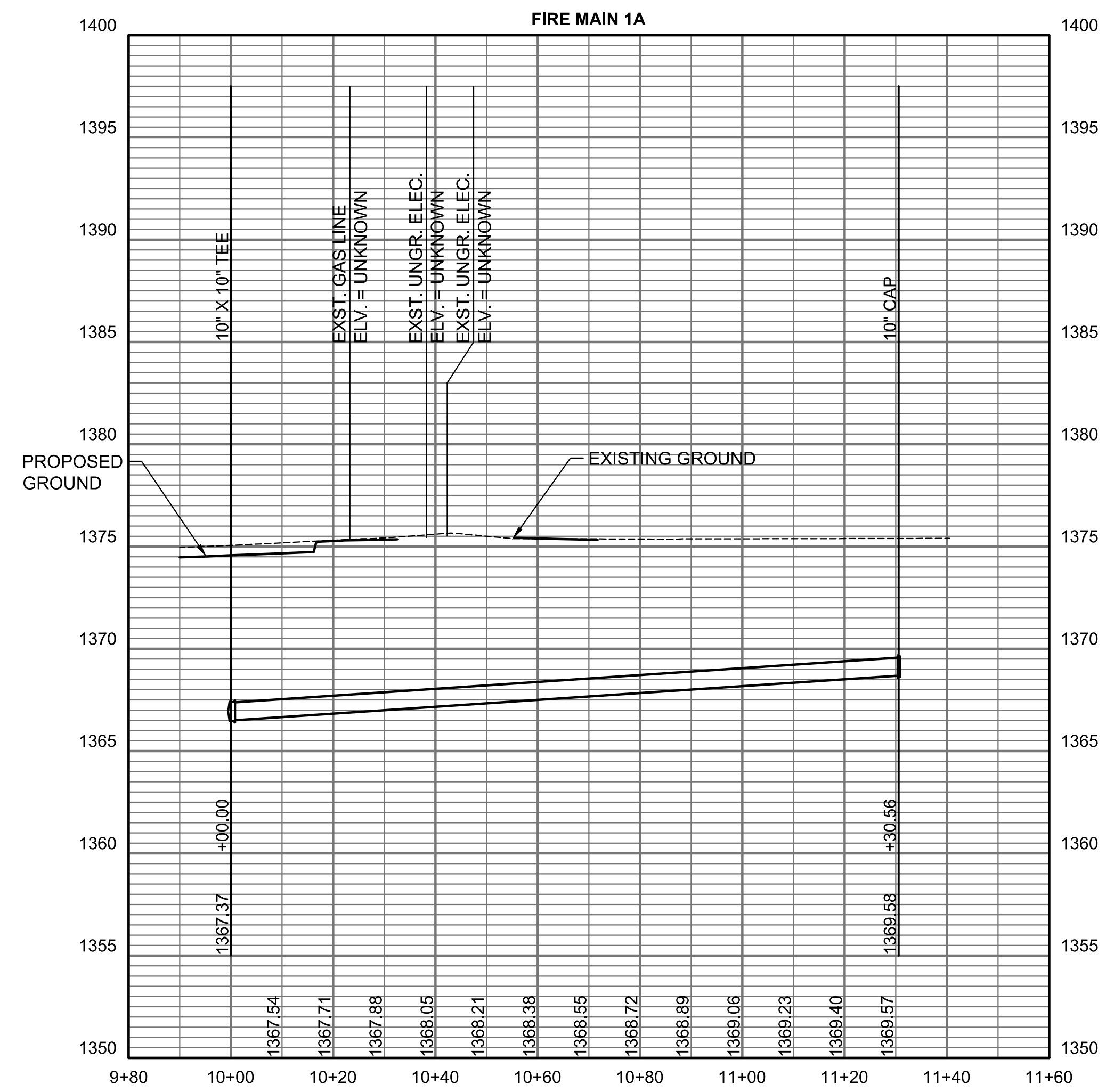
MABCD REVIEWER:
 DEMOLITION LEGEND
 DENOTES ITEM ABANDONMENT

EXISTING FIRE MAIN TO BE ABANDONED IN-PLACE AND FILLED WITH FLOWABLE FILL.
 PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 10" FIRE LINE TO VERIFY ITS HORIZONTAL AND VERTICAL LOCATION. THE WATERLINE LOCATION SHALL BE REPORTED TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

ENTIRE SHEET ADDED



COORDINATE WITH TEXTRON AVIATION, BRYAN URBAN (1,316,570,3250) FOR ISOLATING EXISTING FIRE MAIN PRIOR TO CONSTRUCTION.



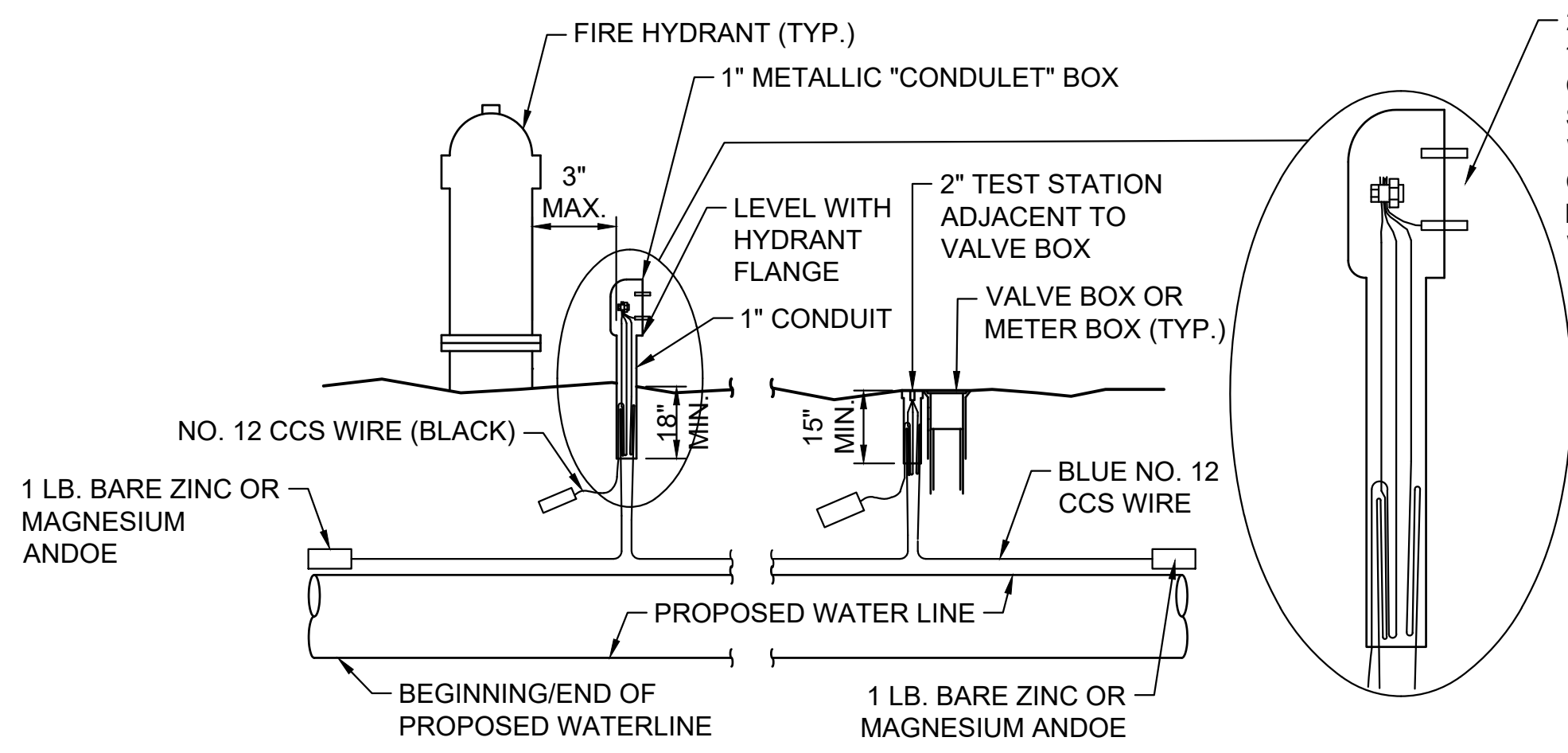
LEGEND:
 (TS) = Test Station

STARTING POINT FOR REFERENCE TIES IS CL INTERSECTION OF WEBB RD. AND BEECHCRAFT



EAST CAMPUS
 N-LOT SOUTH PARKING LOT
 IMPROVEMENTS
 WICHITA, KS

JOB NUMBER:	228003-066
DATE:	02/27/2023
DRAWN:	NCL
CHECKED:	JAG



TRACER WIRE NOTES

TRACER WIRE
CONDUCTIVE TYPE PIPE LOCATOR/TRACER WIRE SHALL BE INSTALLED TO LOCATE POLYVINYL CHLORIDE (PVC) OR ANY NONMETALLIC WATERLINE PIPES. THE WIRE SHALL EXTEND THE ENTIRE LENGTH OF THE PROPOSED PIPE. THE WIRE SHALL BE TAPE TO THE WATERLINE AND PULLED WITH THE PIPE. SNAKE BITE LOCKING WIRE CONNECTORS BY COPPERHEAD, OR APPROVED EQUAL, SHALL BE USED AT SPLICE LOCATIONS. ELECTRICAL TAPE SHALL COVER ALL SPLICES SO NO BARE WIRE IS EXPOSED. TEST STATIONS SHALL BE INSTALLED ADJACENT TO ALL FIRE HYDRANTS ALONG THE WATERLINE AND AT BLOWOFFS OR VALVES NEAR THE ENDS OF THE WATERLINES. ANY EXCEPTIONS TO THE LOCATION OF TEST STATIONS SHALL BE APPROVED BY THE ENGINEER. AT EACH TEST STATION, THE TRACER WIRE SHALL BE CONNECTED TO A 1 LB. ZINC OR MAGNESIUM ANODE. ANODES SHALL ALSO BE ATTACHED TO THE TRACER WIRE AT BOTH THE BEGINNING AND THE END OF THE PROPOSED WATERLINE. A TYPICAL LAYOUT OF THE TRACER WIRE AND TEST STATION IS PROVIDED IN THE ABOVE FIGURE.

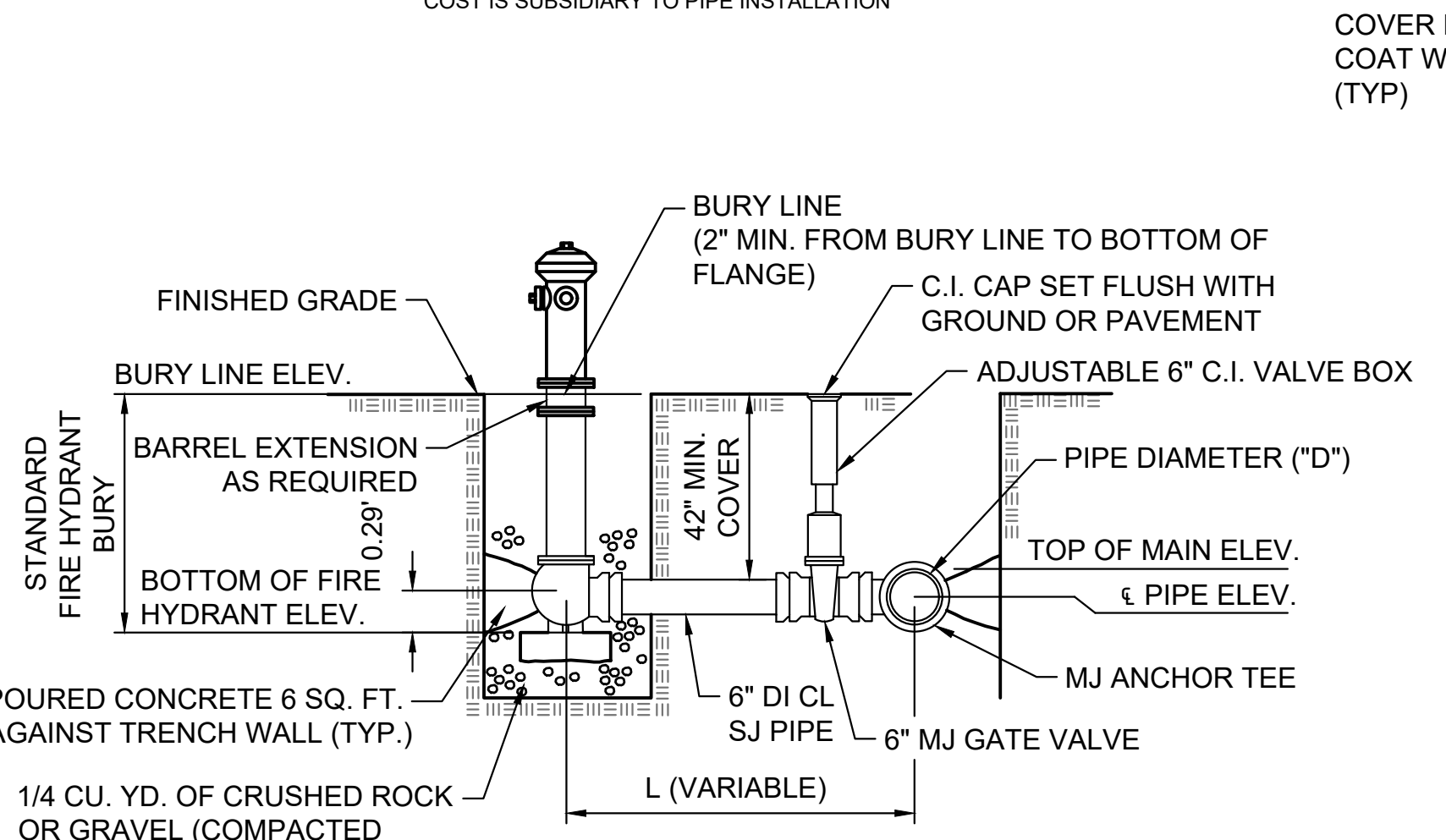
WIRE
THE TRACER WIRE SHALL BE BLUE NO. 12 CCS WIRE WITH THERMAL PLASTIC INSULATION AS MANUFACTURED BY COPPERHEAD OR APPROVED EQUAL. THE INSULATION SHALL BE HEAT, OIL, AND GASOLINE RESISTANT AS MANUFACTURED BY TEMPLE ELECTRIC OR APPROVED EQUAL. TO ALLOW FOR GRADE ADJUSTMENT, A MINIMUM OF 12" OF EXCESS WIRE SHALL BE COILED AT THE BOTTOM OF THE TEST STATION FOR ALL WIRES. THE INSULATION SHEATHING SHALL BE REMOVED SUCH THAT 1" BARE COPPER WIRE IS EXPOSED AT ALL POINTS OF CONNECTION. CONTRACTOR SHALL ATTACH WIRE BEING INSTALLED WITH PROPOSED WATER MAIN TO ANY TRACER WIRE INSTALLED WITH ADJACENT WATERLINE PROJECTS.

TEST STATIONS
THE TEST STATION FOR FIRE HYDRANT APPLICATIONS SHALL BE A 1 INCH GALVANIZED "CONDULET" STYLE TEST STATION AS MANUFACTURED BY AGRA INDUSTRIES OR APPROVED EQUAL WITH A REMOVAL SOLID COVER HAVING TWO LEADS EXTENDING FROM THE FACE OR APPROVED EQUAL. THE TEST STATION FOR VALVE AND METER APPLICATIONS SHALL BE 2 INCH FLUSH STYLE TEST STATION T2PS3B AS MANUFACTURED BY HANDLEY INDUSTRIES OR APPROVED EQUAL. THE "CONDULET" STYLE TEST STATION SHALL BE ATTACHED TO A 1 INCH RIGID GALVANIZED CONDUIT WITH A MINIMUM LENGTH OF 36" AND PLASTIC END BUSHING. THE FLUSH STYLE SHALL HAVE THE WORD "WATER" STAMPED OR MOLDED INTO THE LID. ALL TEST STATIONS SHALL BE MANUFACTURED USING MOLDED BLUE TOPS OR SUFFICIENTLY COATED WITH BLUE ENAMEL PAINT. THE TRACER WIRE AND THE ANODE WIRE SHALL BE INSTALLED TO ALLOW 10 INCHES OF WIRE WITHIN THE TEST STATION. IN CONCRETE ENVIRONMENTS SUCH AS SIDEWALKS OR IN THE DOWNTOWN AREA THE CONTRACTOR SHALL USE THE FLUSH STYLE TEST STATION. THE LOCATION OF ALL TEST STATIONS SHALL BE APPROVED BY THE ENGINEER, RECORDED, AND SHOWN IN THE AS-BUILT DRAWINGS.

ANODES
THE ANODES SHALL BE 1 LB. BARE ZINC OR MAGNESIUM. THE ANODES SHALL BE BURIED AT THE SAME ELEVATION AS THE WATERLINE AT EACH TEST STATION. THE ANODES SHALL BE CONNECTED TO BLACK NO. 12 THIN ANNEALED SOFT COPPER WIRE WHICH SHALL BE EXTENDED TO THE TEST STATION.

TRACER WIRE DETAIL

NOT TO SCALE
COST IS SUBSIDIARY TO PIPE INSTALLATION

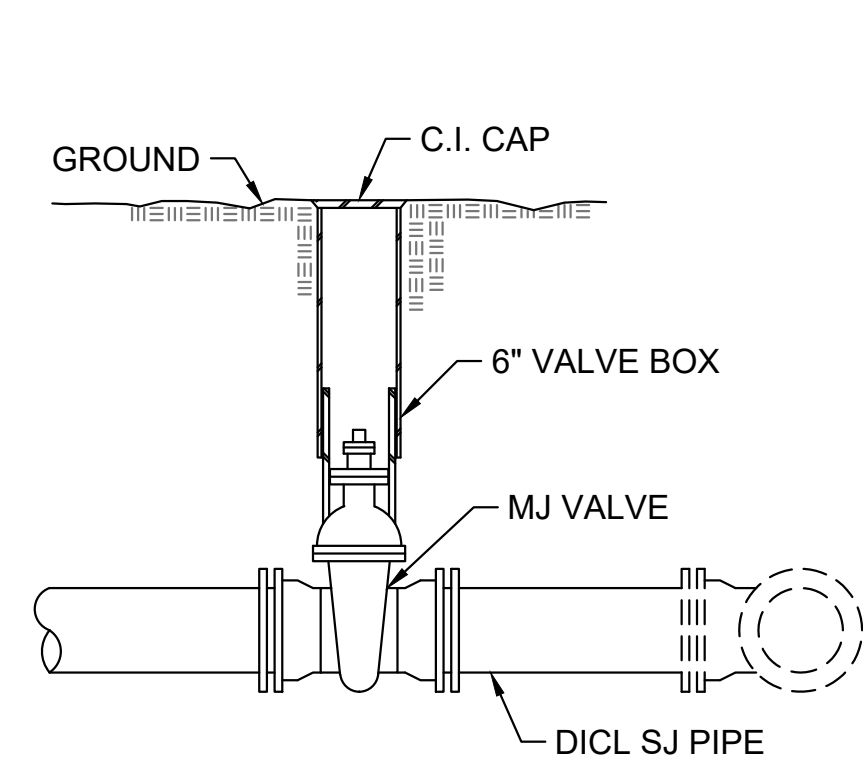


- FIRE HYDRANT ASSEMBLY NOTES**
- ALL BLOCKING TO BE POURED CONCRETE CLASS II.
 - MATERIAL LIST
 - 1 - MJ ANCHOR TEE (D" X 6")
 - 1 - 6" MJ GATE VALVE
 - 1 - 6" VALVE BOX
 - 6" DI CL SJ PIPE
 - 1 - FIRE HYDRANT
 - CONCRETE BLOCKING (AS REQUIRED)

FIRE HYDRANT REQUIRED				
LINE NO.	STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED
1B	10+35.68	1375.00	1371.75	3.5

FIRE HYDRANT ASSEMBLY

NOT TO SCALE

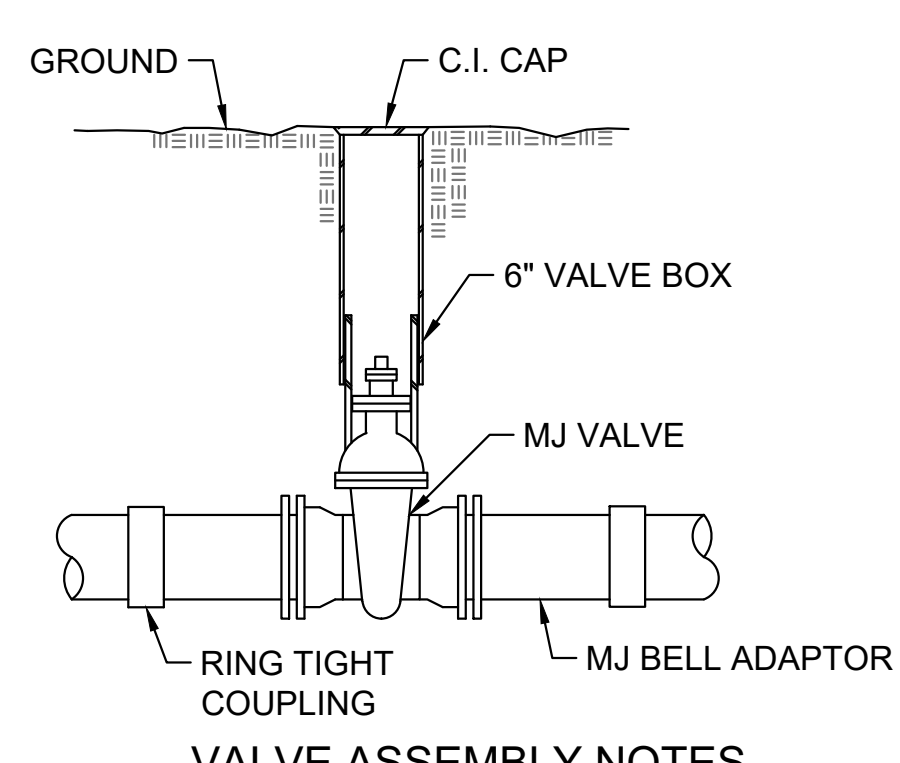


VALVE ASSEMBLY NOTES

- MATERIAL LIST
 - 1 - MJ GATE VALVE
 - 2 LF - DI CL SJ PIPE
 - 1 - 6" VALVE BOX

VALVE ASSEMBLY DETAIL

NOT TO SCALE

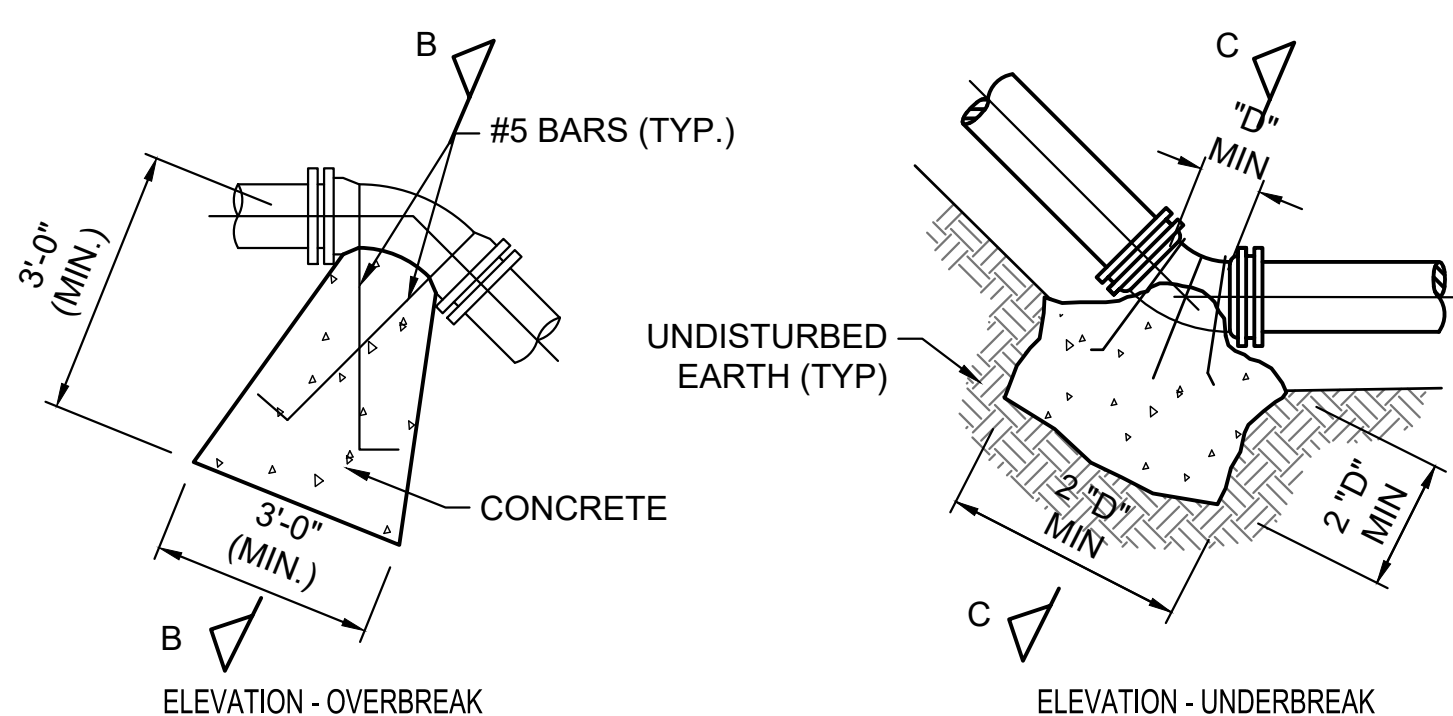


VALVE ASSEMBLY NOTES

- MATERIAL LIST
 - 1 - MJ GATE VALVE
 - 1 - 6" VALVE BOX
 - 2 - RING TIGHT COUPLINGS
 - 2 - MJ BELL ADAPTORS

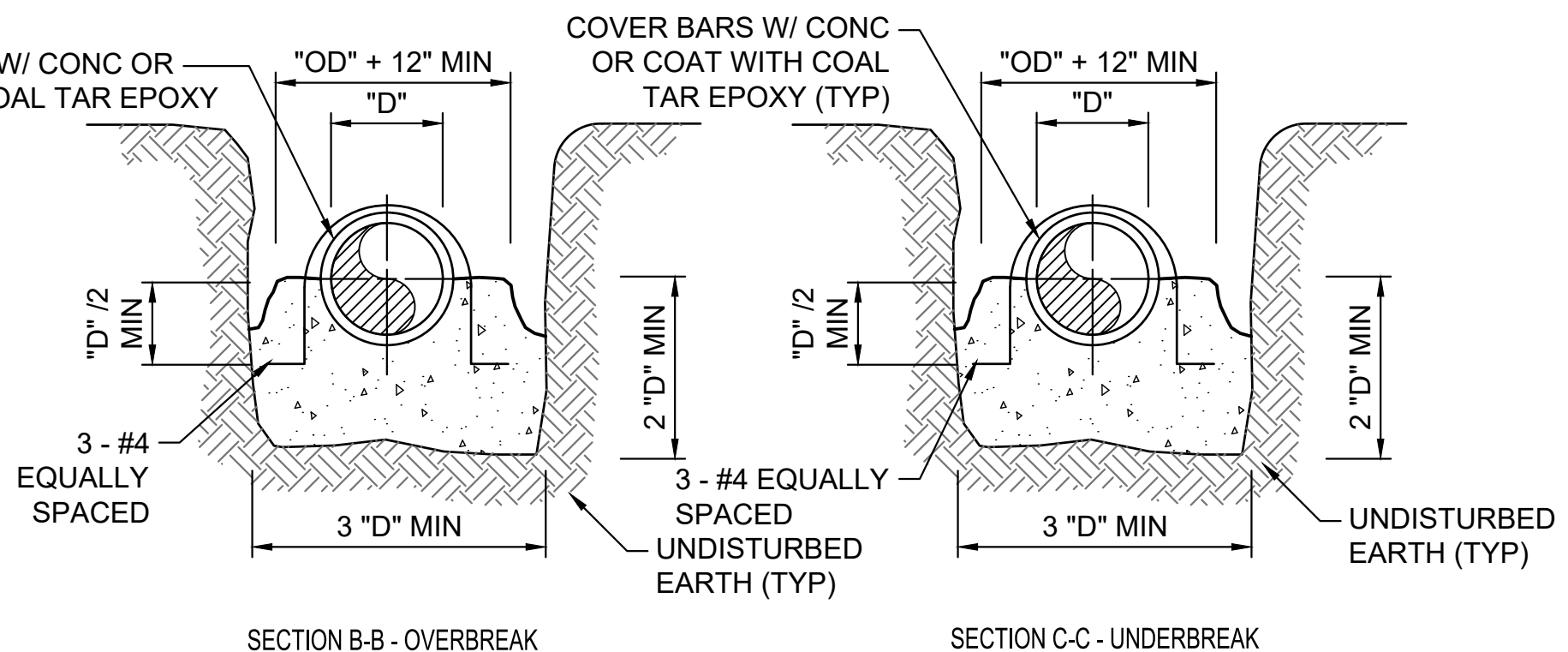
LINE VALVE ASSEMBLY DETAIL

NOT TO SCALE



ELEVATION - OVERBREAK

ELEVATION - UNDERBREAK



SECTION B-B - OVERBREAK

SECTION C-C - UNDERBREAK

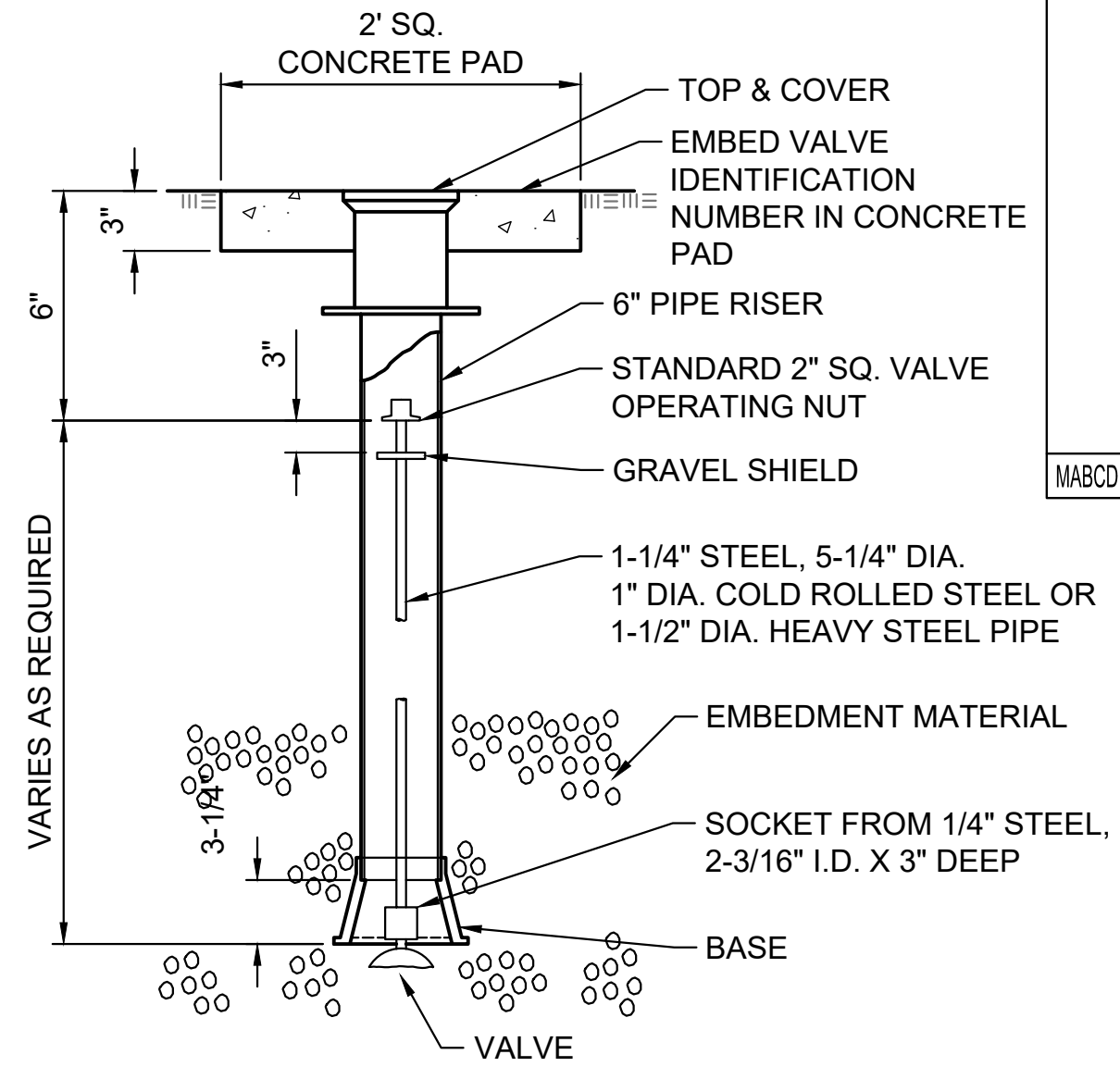
VERTICAL THRUST BLOCKS

ANGLE	11 1/4"		22 1/2"	
	VOLUME (CY)	VOLUME (CY)	VOLUME (CY)	VOLUME (CY)
D (IN.)	11 1/4"	22 1/2"	45	90
4 TO 8	0.7	1.4	2.8	5.0
10 TO 12	1.5	3.0	5.8	10.7
16 TO 18	3.3	6.5	12.7	23.5
20	4.0	8.0	15.6	28.8
24	5.7	11.3	22.2	41.0

VERTICAL THRUST BLOCKS CONCRETE VOLUME

THRUST BLOCK DETAILS (VERTICAL FITTINGS)

NOT TO SCALE

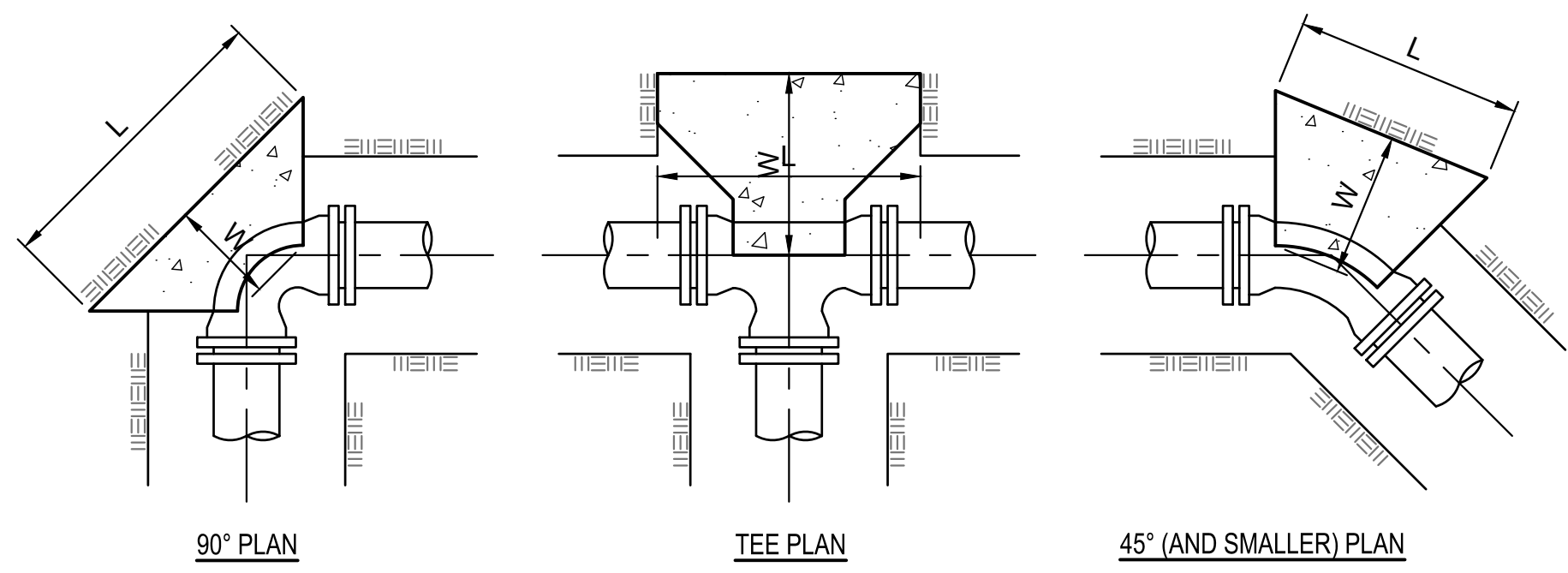


VALVE BOX NOTES

- ONE VALVE STEM REQUIRED FOR EACH BURIED VALVE.

VALVE BOX DETAIL

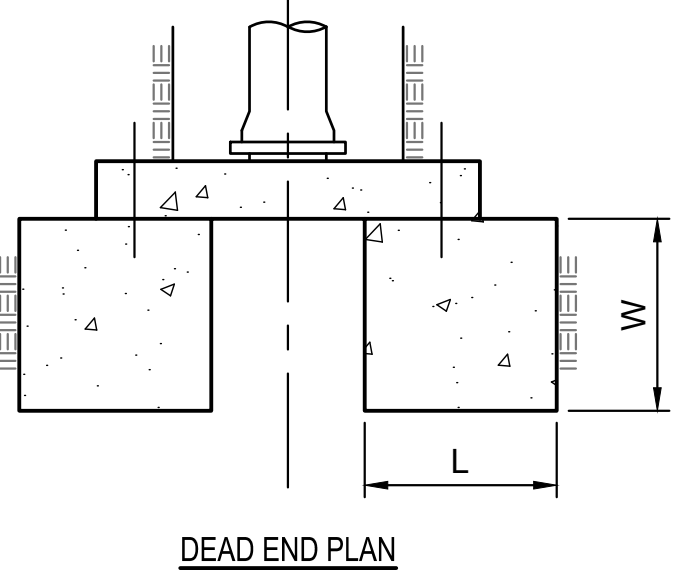
NOT TO SCALE



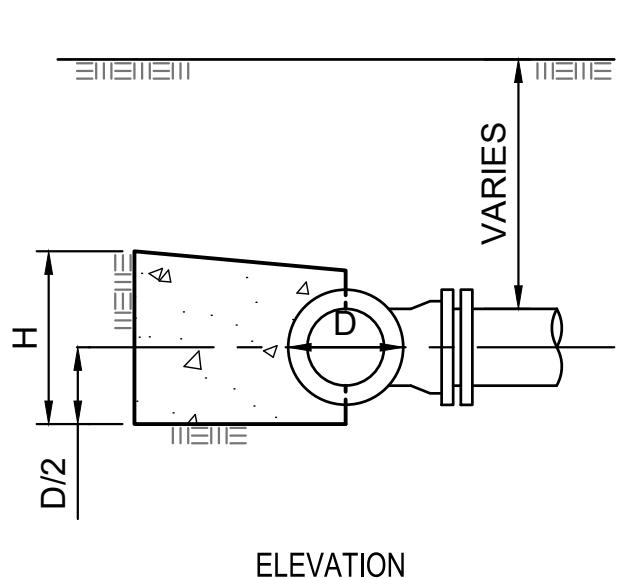
90° PLAN

TEE PLAN

45° (AND SMALLER) PLAN



DEAD END PLAN

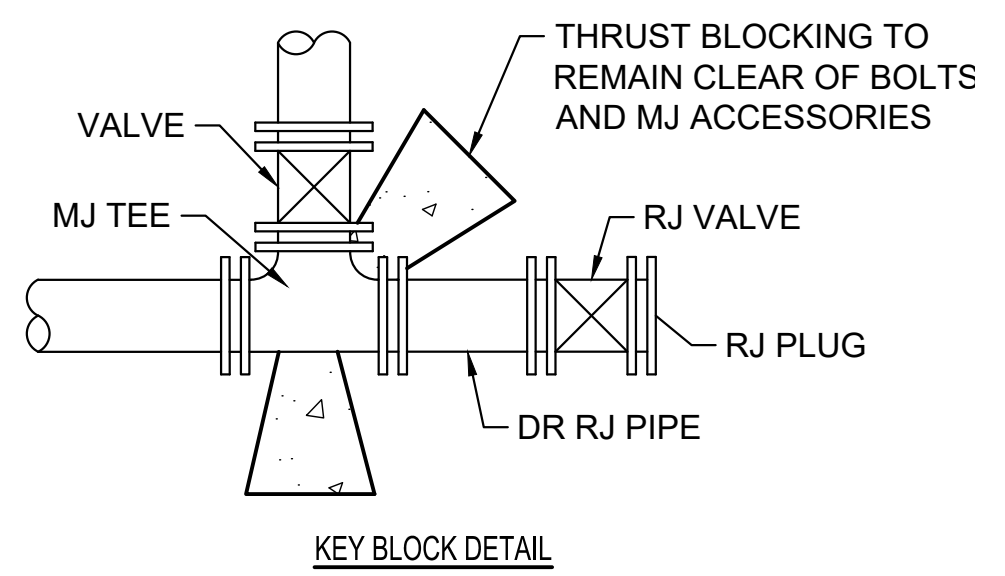


ELEVATION

THRUST BLOCK SCHEDULE				
LINE SIZE	FITTINGS & ANGLE	DIM. "L"	DIM. "H"	DIM. "W"
6"	11 1/4°	1'-6"	1'-0"	1'-0"
6"	22 1/2°	1'-9"	1'-6"	1'-6"
6"	45°	2'-6"	2'-0"	2'-0"
6"	90°	3'-0"	3'-0"	3'-0"
6"	DE	1'-6"	2'-6"	2'-0"
8" x 6"	TEE	3'-0"	2'-6"	2'-6"
8"	11 1/4°	1'-6"	1'-6"	1'-6"
8"	22 1/2°	2'-6"	2'-0"	2'-0"
8"	45°	3'-0"	3'-0"	3'-0"
8"	90°	4'-6"	3'-6"	3'-6"
8"	DE	2'-0"	3'-0"	3'-0"
10"	11 1/4°	2'-6"	2'-0"	2'-0"
10"	22 1/2°	3'-6"	3'-0"	3'-0"
10"	45°	5'-0"	4'-0"	4'-0"
10"	90°	8'-0"	4'-6"	4'-6"
10"	DE	3'-0"	4'-6"	4'-6"
10"x10"	TEE	6'-0"	4'-6"	4'-6"

THRUST BLOCK DETAILS (HORIZONTAL FITTINGS)

NOT TO SCALE



KEY BLOCK DETAIL

Date	Description
3 10/19/2023	ASI #3

JOB NUMBER:	228003-066
DATE:	02/27/2023
DRAWN:	NCL
CHECKED:	JAG