

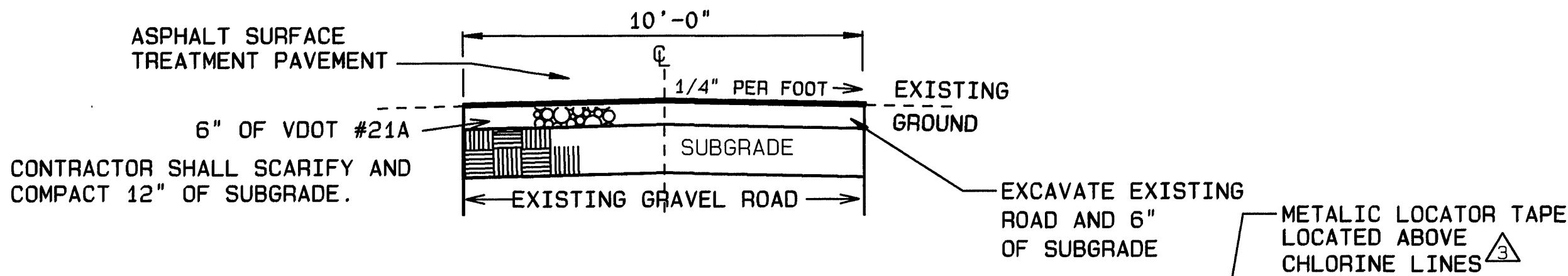
GENERAL NOTES:

1. THE 36 INCH WATER LINE IN PLAN AND PROFILE IS SHOWN AT THE DIMENSION OF CLASS 50 DUCTILE IRON PIPE. IF ANY OTHER TYPE OF PIPE IS USED, THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL UTILITY DEPTHS FOR MAINTAINING A SPECIFIED SEPARATION BETWEEN A UTILITY AND THE WATER LINE.
2. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH MR. ART PENDLETON, WITH THE ROANOKE GAS COMPANY AT (703) 983-3847, BEFORE ANY WORK IS DONE NEAR THE 475 P.S.I. GAS LINE THAT IS SHOWN ON SHEETS RW2 AND RW3. REFER TO NOTE 1. ON SHEET RW2 FOR SPECIFIC CONSTRUCTION INSTRUCTIONS. THE CONTRACTOR SHALL ALSO HAVE A REPRESENTATIVE FROM THE ROANOKE GAS COMPANY PRESENT AT ALL TIMES DURING CONSTRUCTION NEAR THE GAS LINE. THE CONTRACTOR SHALL ALSO CONSIDER OUR CONSTRUCTION INSTRUCTIONS FOR THIS AREA AS THE REQUIRED MINIMUM AND SHALL FOLLOW ANY CONSTRUCTION SPECIFICATIONS AND GUIDELINES THAT THE ROANOKE GAS COMPANY HAS PERTAINING TO THIS AREA.
3. NO LOCALIZED HIGH OR LOW POINTS IN THE WATER LINE WILL BE ALLOWED.
4. ALL BENDS AND TEES SHALL HAVE THRUST BLOCKS AND RESTRAINED JOINTS PER DETAILS ON SHEET RW5. EACH OF THE RESTRAINED JOINTS SHALL BE DESIGNED TO WITHSTAND AND TRANSMIT THE LONGITUDINAL THRUST FORCES DUE TO A PIPE PRESSURE OF 300 PSI. THRUST FORCES SHALL BE RESTRAINED BY TRANSMITTING THESE FORCES TO PIPE WALL BY MEANS OF FLEXIBLE-TIED JOINTING SYSTEMS WHICH SHALL BE ACCOMPLISHED AT THE JOINT AND NOT BETWEEN JOINTS. FOR DUCTILE IRON PIPE, THE SYSTEM TO BE USED SHALL BE CLOW "SUPER LOCK", AMERICAN "LOK-RING", U.S. PIPE "TR-FLEX" OR APPROVED EQUAL. MECHANICAL JOINT RETAINING GLANDS WITH SET SCREWS WILL NOT BE ACCEPTED. REFER TO TABULATION ON SHEET RW5 FOR RESTRAINED DISTANCES. ALL NUTS AND BOLTS SHALL BE STAINLESS STEEL.
5. ALL 36 INCH WATER LINE THAT IS ENCASED IN CONCRETE SHALL HAVE RESTRAINED JOINTS.

MATCH LINE CP #4014  
FOR CONTINUATION  
SEE SHEETS EP5 & K5

6. CONNECTION NO. 1 (ON SHEET RW4) SHALL BE MADE FIRST AFTER NEW RAW WATER LINE, LOW LIFT PUMP STATION, AND 12 MGD PRETREATMENT BASINS ARE READY FOR OPERATION. INTERFERENCE OF PLANT OPERATIONS SHALL BE A MAXIMUM OF 6 HRS FOR THIS CONNECTION. CONNECTION NO.4 (ON SHEET EP3) SHALL BE MADE SECOND, AFTER ABOVE FACILITIES ARE IN OPERATION. THIS CONNECTION SHALL TAKE A MAXIMUM OF 8 HOURS WHILE MAINTAINING A MINIMUM FLOW OF 12 MGD. NO INTERFERENCE OF PLANT OPERATION FOR CONNECTIONS NO. 2 AND 3 WILL BE ALLOWED. THE CONTRACTOR IS TO COORDINATE INTERFERENCE TIMES WITH THE OWNER. THE OWNER MAY DESIGNATE THE INTERFERENCE TIMES OCCUR AT NIGHT. THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE OWNER AND THE ENGINEER AT LEAST TWO WEEKS IN ADVANCE TO MAKING ANY OF THESE CONNECTIONS. NO CONNECTIONS WILL BE ALLOWED WITHOUT THE OWNER'S APPROVAL. THE CONTRACTOR WILL NOT BE ALLOWED TO CUT THE EXISTING 36 INCH PIPE TO MAKE THESE CONNECTIONS. ENTIRE JOINTS WILL HAVE TO BE REMOVED, EVEN IF REMOVING CONCRETE ENCASEMENT IS NECESSARY. A CONCRETE PIPE REPRESENTATIVE WITH PRICE BROTHERS COMPANY, 1-919-782-2668, OR APPROVED EQUAL MUST BE PRESENT WHEN THESE THREE CONNECTIONS ARE MADE.

7. PIPING SHALL BE DUCTILE IRON, STEEL, OR PRESTRESSED CONCRETE.
8. AREAS DISTURBED BY RAW WATER LINE INSTALLATION SHALL NOT REQUIRE TOPSOIL.

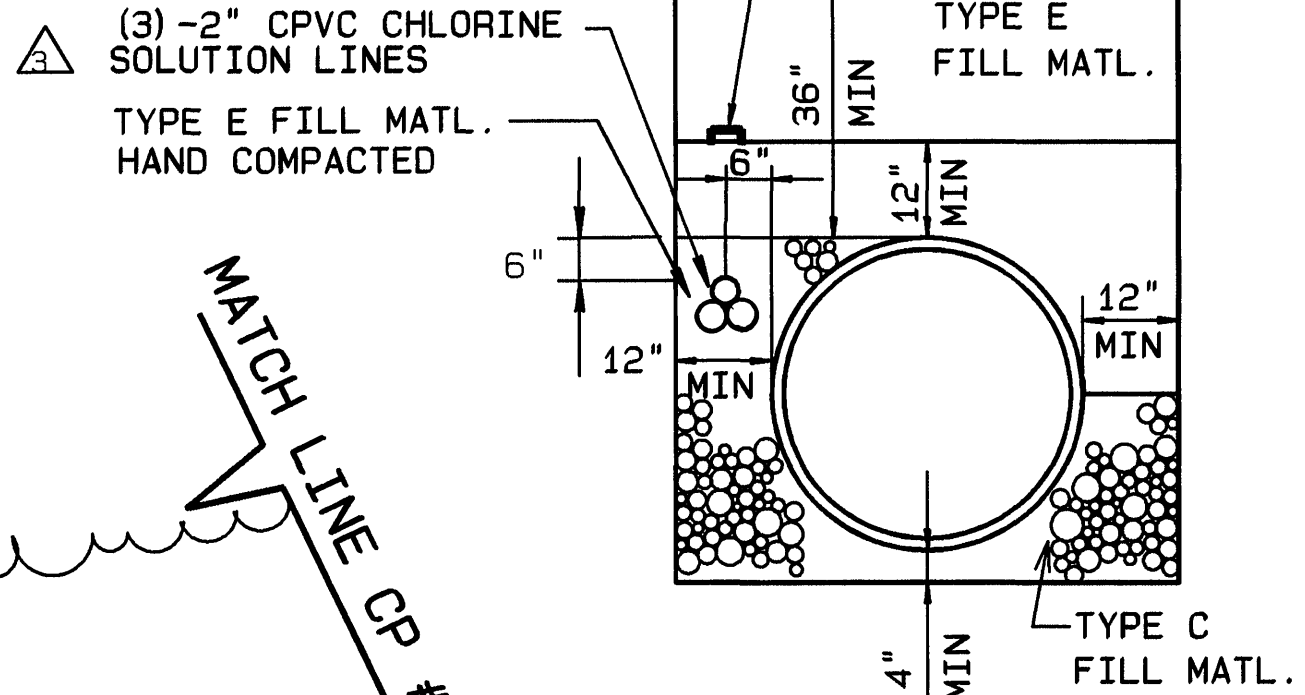


TYPE II ROAD IMPROVEMENTS

NOT TO SCALE

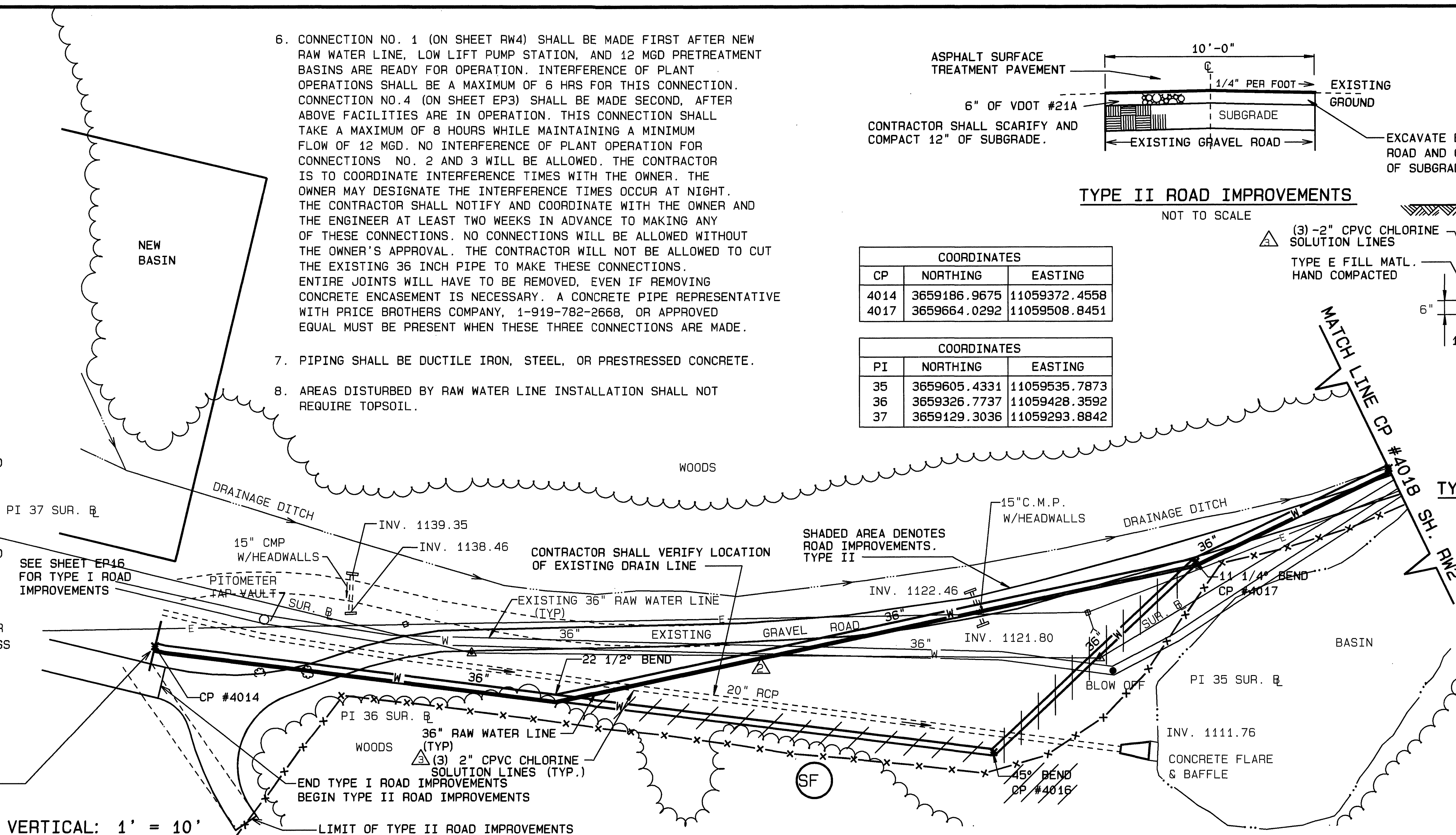
COORDINATES		
CP	NORTHING	EASTING
4014	3659186.9675	11059372.4558
4017	3659664.0292	11059508.8451

COORDINATES		
PI	NORTHING	EASTING
35	3659605.4331	11059535.7873
36	3659326.7737	11059428.3592
37	3659129.3036	11059293.8842

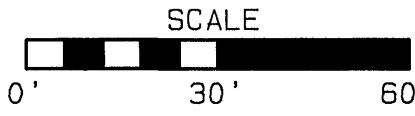


RAW WATER LINE  
TYPICAL TRENCH SECTION

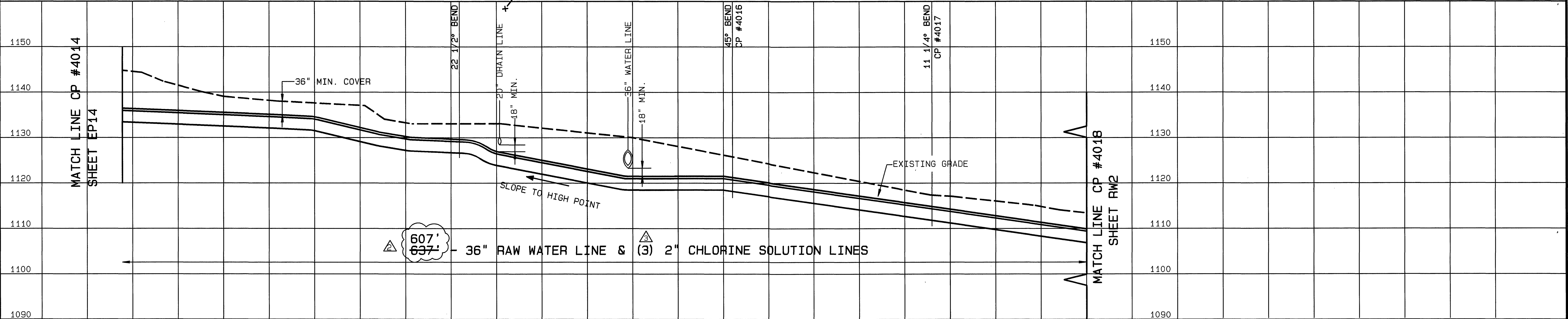
NOT TO SCALE



RECORD DRAWING



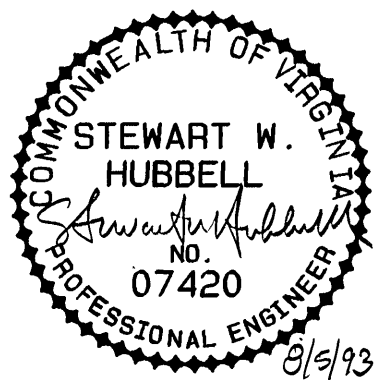
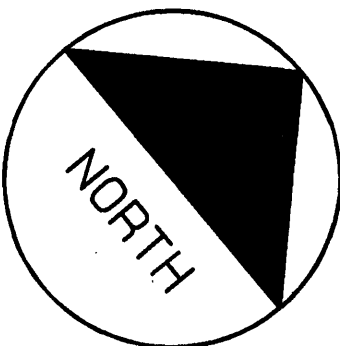
SCALE: HORIZONTAL: 1" = 30' VERTICAL: 1" = 10'



MATTERN & CRAIG  
CONSULTING ENGINEERS • SURVEYORS  
ROANOKE VIRGINIA

ALVORD, BURDICK & HOWSON  
ENGINEERS CHICAGO

DESIGNED:  
RFP  
DRAWN:  
ASB  
CHECKED:  
JSL



REV	DATE	DESCRIPTION	BY	APP.
1	8/92	MISCELLANEOUS	DSG	RWB
2	1/93	ALIGNMENT CHANGE 36" WATER LINE	ARB	RWB
3	5/93	C.O. #3	CLD	RWB

CARVINS COVE FILTER PLANT IMPROVEMENTS - PHASE I  
ROANOKE, VIRGINIA

RAW WATER LINE  
PLAN & PROFILE

DATE  
MARCH 1992  
COMM. NO.  
1138  
SHEET  
RW1A