

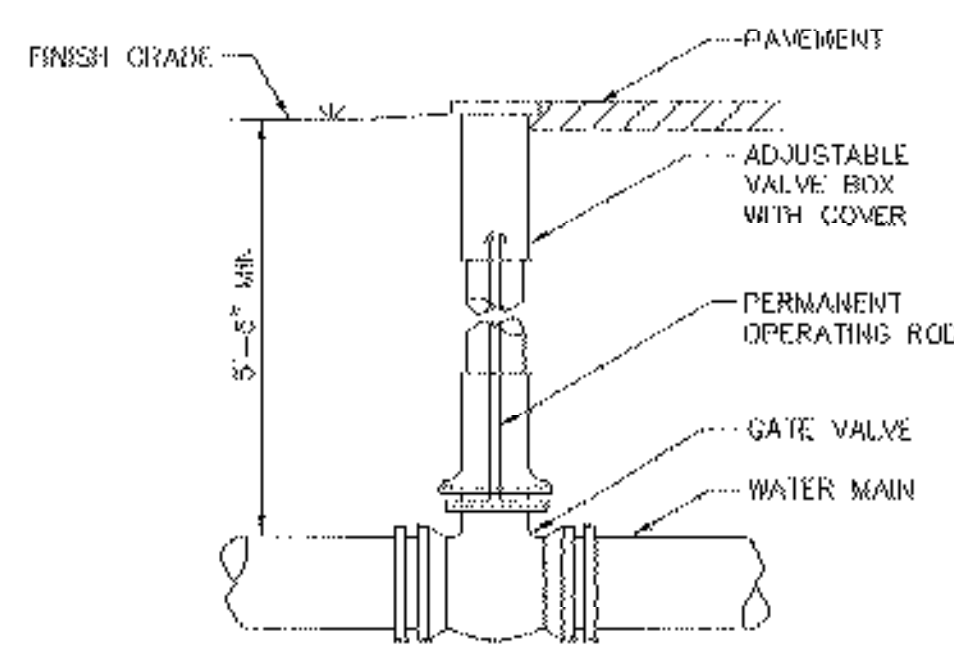
CONCRETE THRUST BLOCK DETAILS
NOT TO SCALE

AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS IN SQUARE FEET

PIPE SIZE (IN)	SOFT WET CLAY, SAND OR SILT	DRY SAND	COMPACT COARSE SAND OR GRAVEL HARDPAN
DEAD END OR TEE			
8 OR LESS	15	5	4
10	24	8	6
12	34	11	8
1/4 BEND			
8 OR LESS	21	7	5
10	33	11	8
12	48	16	12
1/8 BEND			
8 OR LESS	12	4	3
10	18	6	5
12	28	9	7
1/16 BEND			
8 OR LESS	6	2	2
10	9	3	2
12	13	4	3
SOIL BEARING CAPACITIES (APPROXIMATE)			
	1250 lbs./ft. ²	4000 lbs./ft. ²	8000 lbs./ft. ²

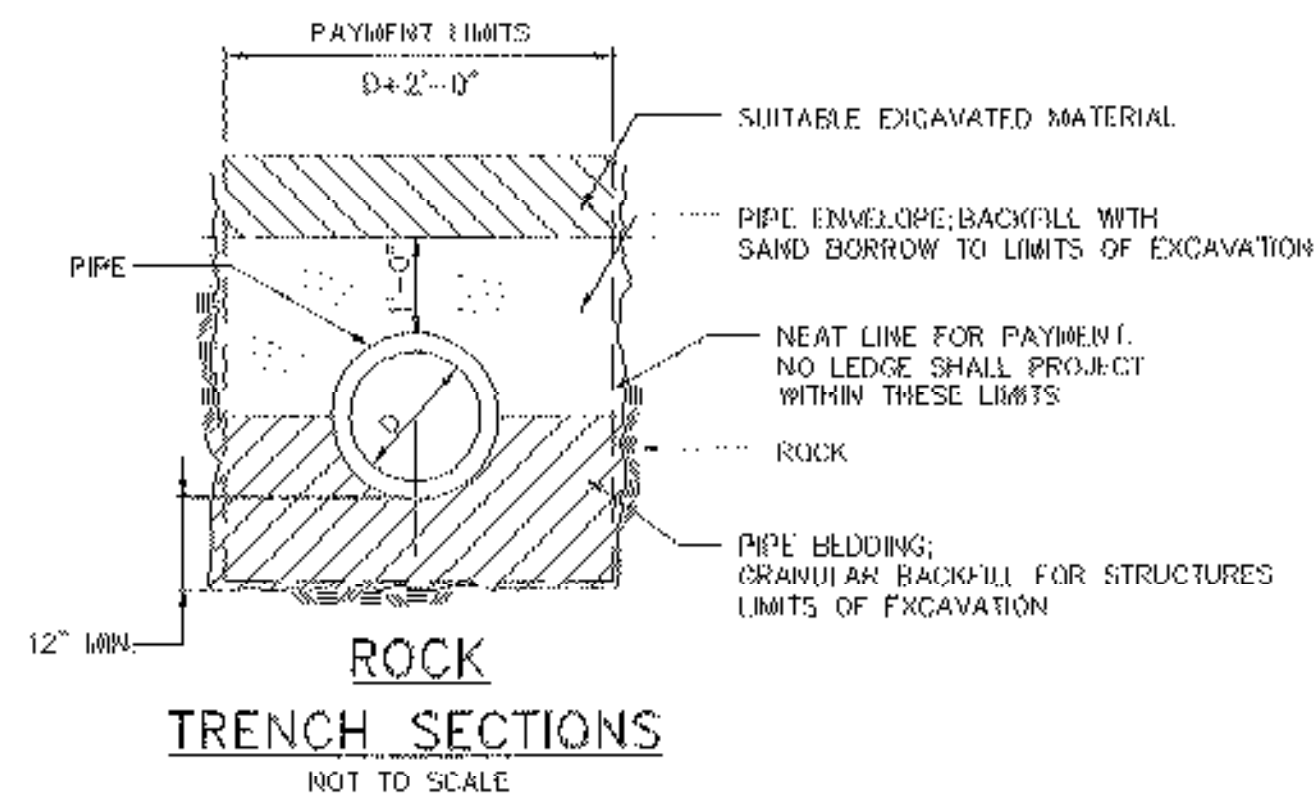
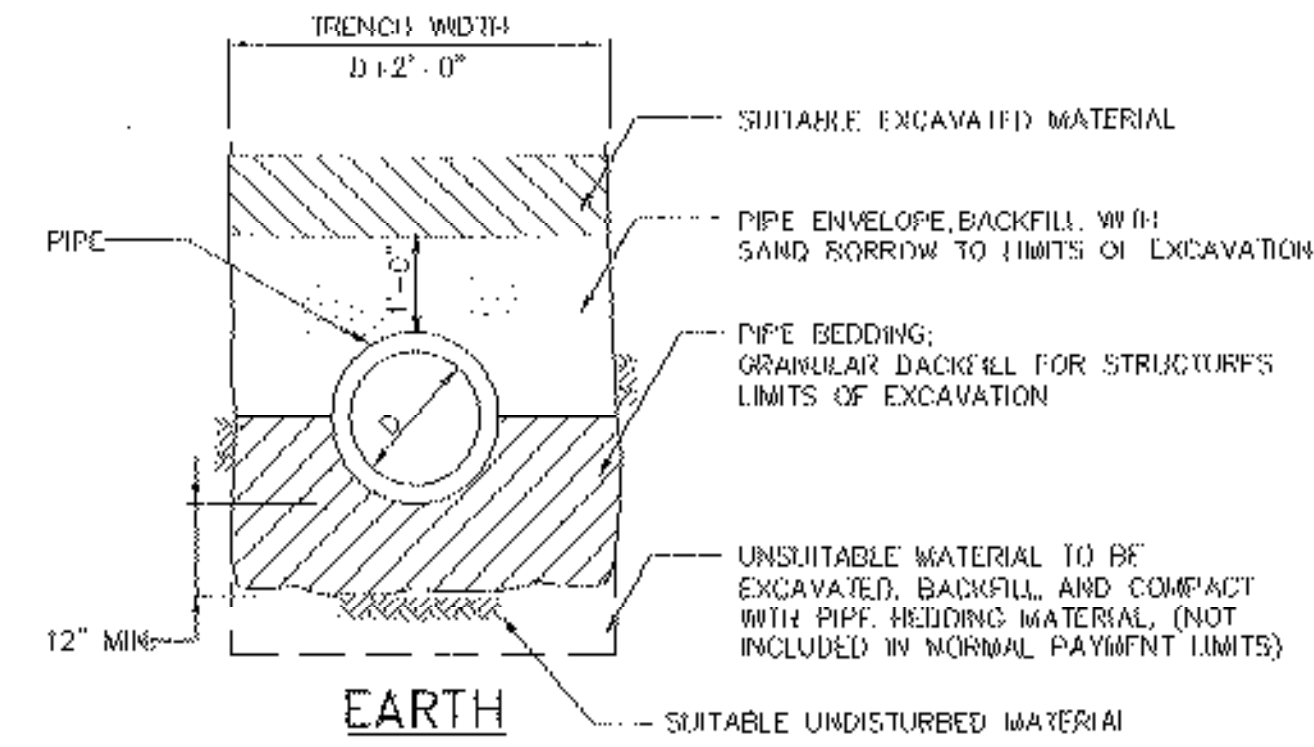
THRUST BLOCK TABLE NOTES

- FIGURES BASED ON 300 PSI.
- FOR PIPE SIZES NOT LISTED USE NEXT LARGER PIPE SIZE.
- WHEN MORE THAN ONE SOIL TYPE IS ENCOUNTERED, THE ONE WITH LEAST BEARING CAPACITY SHALL BE USED.
- RETAINING RODS OR RESTRAINED JOINT PIPE, AS APPROVED BY THE ENGINEER, SHALL BE USED IN PLACE OF THRUST BLOCKS WHEN MUCK IS ENCOUNTERED.

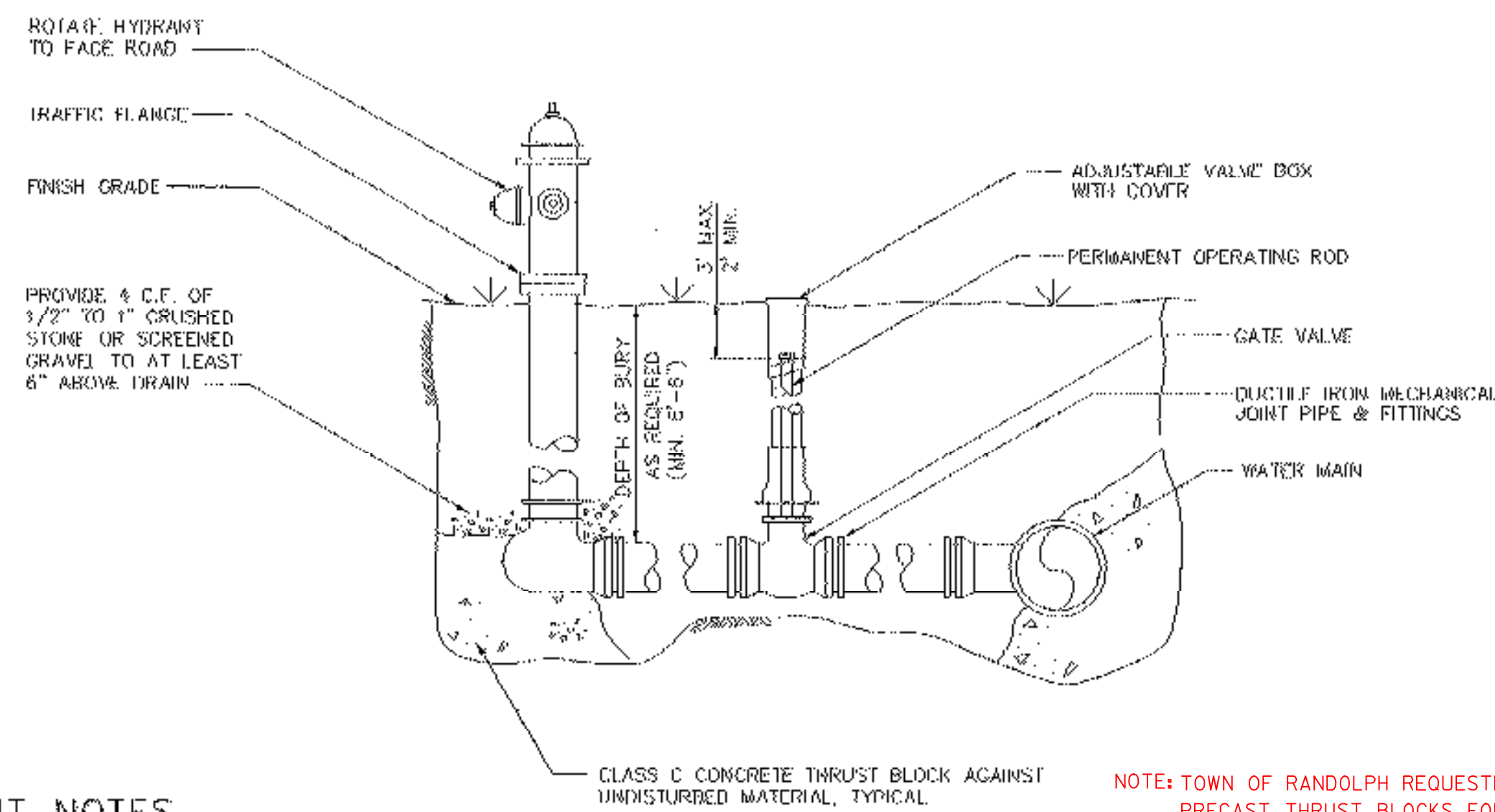


NOTE: UNLESS OTHERWISE INDICATED ALL GATE VALVES SHALL HAVE PERMANENTLY INSTALLED OPERATING RODS TERMINATING AT LEAST 2'-0" AND NOT MORE THAN 3'-0" BELOW THE TOP OF THE VALVE BOX.

BURIED GATE VALVE DETAIL
NOT TO SCALE



ROCK TRENCH SECTIONS
NOT TO SCALE



HYDRANT NOTES

- HYDRANT TO BE PLUMB.
- TRAFFIC FLANGE HEIGHT TO BE ABOVE FINISH GRADE AS RECOMMENDED BY THE MANUFACTURER.
- ALL HYDRANTS TO BE COVERED WITH BURLAP BAGS UNTIL HYDRANTS ARE IN SERVICE AND UNDER OPERATION BY THE OWNER.
- SEE PROFILE FOR DEPTH OF WATER MAIN AT HYDRANT LOCATIONS. (HYDRANT EXTENSIONS MAY BE USED TO ALLOW TRAFFIC FLANGE TO BE AT PROPER DISTANCE ABOVE GROUND.)

HYDRANT WITH VALVE DETAIL
NOT TO SCALE

NOTE: TOWN OF RANDOLPH REQUESTED PRECAST THRUST BLOCKS FOR ALL TEES, BENDS, AND CAPS.

SEQUENCE OF CONSTRUCTION NOTES:

- CONTRACTOR SHALL NOTIFY TOWN OF RANDOLPH IN WRITING TWO WEEKS PRIOR TO SHUTTING OFF WATER ACROSS THE EXISTING BRIDGE. CONTRACTOR SHALL COORDINATE WITH TOWN PERSONNEL FOR OPERATION OF GATE VALVES. ONLY TOWN PERSONNEL SHALL OPERATE GATE VALVES.
- FIRE HYDRANT AT STA. 141.35 SHALL BE RELOCATED AS SHOWN ON THESE PLANS. WORK FOR RELOCATING THE HYDRANT SHALL BE PAID FOR UNDER ITEM 629.29 "RELOCATE HYDRANT". ADDITIONAL PIPE NECESSARY FOR RELOCATION SHALL BE PAID FOR UNDER ITEM 629.24 "DUCTILE IRON PIPE, CEMENT-LINED". THE FIRE HYDRANT SHALL BE RELOCATED PRIOR TO INSTALLATION OF THE TEMPORARY DETOUR. THE ELEVATION OF THE RELOCATED FIRE HYDRANT SHALL MATCH PROPOSED GRADING CONDITIONS.
- NEW WATER MAIN SHALL BE CONSTRUCTED, PRESSURE TESTED AND DISINFECTED BY THE CONTRACTOR. CONSTRUCTION OF THE WATER MAIN ACROSS THE BRIDGE SHALL BE PAID FOR UNDER ITEM 629.60 "WATER MAIN ON BRIDGE (12-IN)" TO THE LIMITS SHOWN ON THESE PLANS. CONSTRUCTION BEYOND THE ITEM 629.60 "WATER MAIN ON BRIDGE (12-IN)" SHALL BE PAID FOR UNDER THE APPROPRIATE ITEMS AS SPECIFIED IN THE VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- AFTER SUCCESSFUL PRESSURE TESTING AND DISINFECTING, CONNECTIONS SHALL BE MADE TO THE EXISTING WATER SYSTEM AS SHOWN ON THESE PLANS.
- CONTRACTOR SHALL COORDINATE WITH TOWN OF RANDOLPH PERSONNEL FOR ACTIVATION OF WATER MAIN.

HEAT TRACE NOTES:

- CONTRACTOR SHALL INSTALL HEAT TRACE ON THE BRIDGE AS SHOWN IN THESE PLANS AND DESCRIBED IN THE CONTRACT DOCUMENTS.
- PAYMENT FOR THE HEAT TRACE ON THE BRIDGE SHALL BE CONSIDERED INCIDENTAL TO ITEM 629.60, "WATER MAIN ON BRIDGE (12-IN)". CONDUIT AND WIRE REQUIRED TO CONNECT THE HEAT TRACE TO THE POWER SOURCE SHALL BE PAID FOR UNDER ITEM 678.21, "ELECTRICAL CONDUIT" AND ITEM 678.24, "ELECTRICAL WIRING" RESPECTIVELY.
- THE HEAT TRACE ELECTRICAL CONTROL PANEL SHALL BE LOCATED SO AS TO COINCIDE WITH THE ELECTRICAL CONTROL PANEL FOR THE BRIDGE LIGHTS.
- THE POWER STANCHION REQUIRED FOR THE HEAT TRACE ELECTRICAL CONTROL PANEL SHALL BE COMBINED WITH THE STANCHION REQUIRED FOR THE BRIDGE LIGHTS. THERE SHALL ONLY BE ONE POWER STANCHION FOR THIS PROJECT. THE STANCHION SHALL CONFORM TO STANDARD E-175. PAYMENT FOR STANCHION SHALL BE MADE UNDER ITEM 678.28, "POWER STANCHION".

QUANTITIES

205.51	SAND BORROW	40 CY
204.20	TRENCH EXCAVATION OF EARTH	170 CY
204.50	GRANULAR BACKFILL FOR STRUCTURES	40 CY
622.10	INSULATION BOARD	0.50 MFBM
629.24	DUCTILE IRON PIPE, CEMENT LINED (12 IN)	200 LF
629.24	DUCTILE IRON PIPE, CEMENT LINED (8 IN)	70 LF
629.24	DUCTILE IRON PIPE, CEMENT LINED (4 IN)	10 LF
629.27	GATE VALVE WITH VALVE BOX (8 IN)	3 EA
629.29	RELOCATE HYDRANT	1 EA
629.42	TRANSFER TO NEW SYSTEM - WATER SYSTEM	1 LS
629.60	WATER MAIN ON BRIDGE (12-IN)	1 LS
678.21	ELECTRICAL CONDUIT(2" - PVC, SCHEDULE 40)	100 LF
678.21	ELECTRICAL CONDUIT(2" - PVC, SCHEDULE 80)	50 LF
678.24	ELECTRICAL WIRING	150 LB

WATER MAIN DETAIL SHEET 2

PROJECT NAME:	RANDOLPH	PLOT DATE:	29-AUG-2006
PROJECT NUMBER:	BRF 0241(29)	DRAWN BY:	
FILE NAME:	s88j096water3.dgn	CHECKED BY:	
PROJECT LEADER:	W. Symonds	SHEET	92 OF 135
DESIGNED BY:	DuBois & King, Inc.		

NOTE: INFORMATION ON THIS SHEET IS FOR THE WATER MAIN AND DETAILS ONLY. REFER TO OTHER DRAWINGS FOR BRIDGE AND ROADWAY DETAILS.