



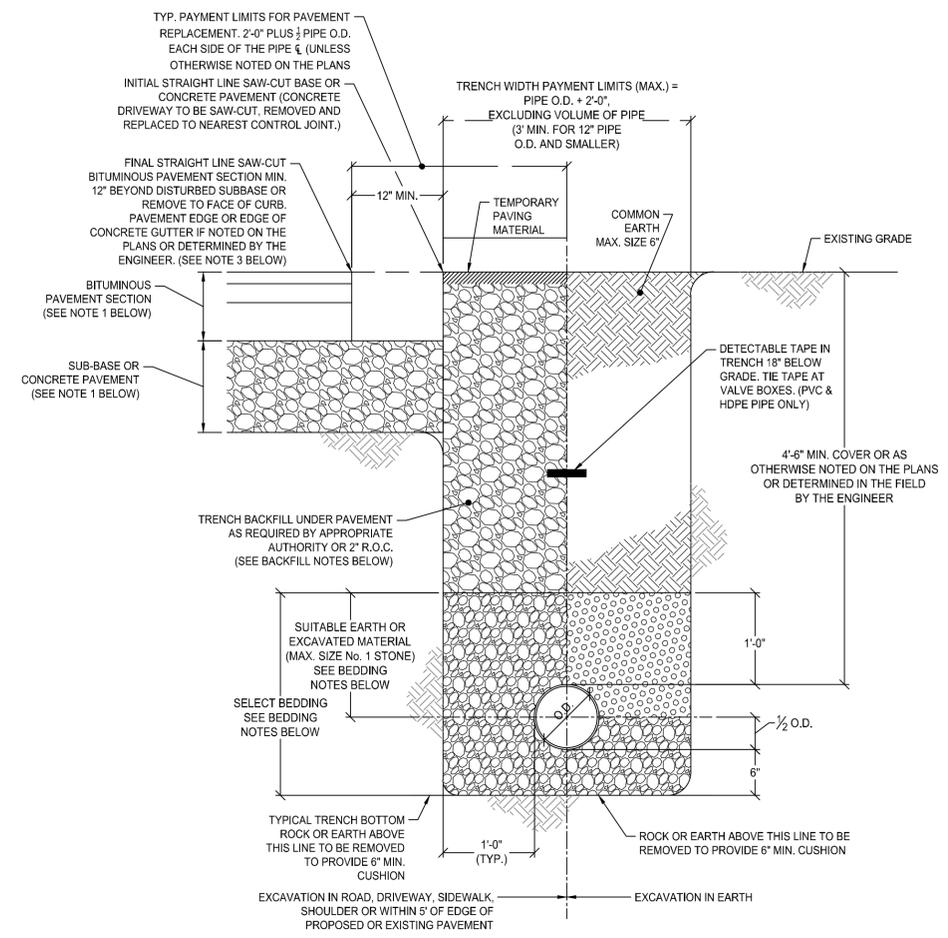
VILLAGE OF HOLLEY

SIDEWALK AND WAERLINE IMPROVEMENTS

NYS DOT PIN 4760.99



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**NOTE 1:**  
REPLACE PAVEMENT IN THICKNESS AND KIND, OR AS REQUIRED BY APPROPRIATE AUTHORITY.

**A. MINIMUM STANDARD FOR DRIVEWAY**  
CONCRETE: 6" - 4000 P.S.I. CONCRETE WITH 4x4 - W2.9xW2.9 W.W.F. 6" - 2" R.O.C. SUB BASE COURSE  
ASPHALT: 1 1/2" - NYS DOT ITEM 402.098303 TOP 2" - NYS DOT ITEM 402.198903 BINDER 9" - 2" R.O.C. SUB BASE COURSE  
STONE: 1/2" - No. 1A STONE COMPACTED ON SURFACE 12" - 2" R.O.C. SUB BASE COURSE

**B. MINIMUM STANDARD FOR ROAD**  
CONCRETE: 9" - 4000 P.S.I. CONCRETE WITH 6x6 W2.9xW2.9 W.W.F. TOP AND BOTTOM 12" - 2" R.O.C. SUB BASE COURSE  
ASPHALT: 1 1/2" - NYS DOT ITEM 402.098303 TOP 5" - NYS DOT ITEM 402.198903 BINDER 12" - 2" R.O.C. SUB BASE COURSE  
TYPE 2 (2-6" LIFTS)  
N.Y.S.D.O.T. 1 1/2" - NYS DOT ITEM 402.098203 TOP 2" - NYS DOT ITEM 402.198903 BINDER 8 1/2" - NYS DOT ITEM 402.378903 BASE 12 1/2" - NYS DOT ITEM 304.12 TYPE 2 SUB BASE COURSE  
\*TACK COAT ALL VERTICAL SURFACES

**C. MINIMUM STANDARD FOR STABILIZED SHOULDER**  
1 1/2" - NYS DOT ITEM 402.098303 TOP 2 1/2" - NYS DOT ITEM 402.198903 BINDER

**C. FULL DEPTH SELECT MATERIAL FOR BACKFILL (2" R.O.C. STONE) WILL BE REQUIRED WHEN ANY PART OF THE TRENCH EXCAVATION IS IN OR WITHIN FIVE FEET OF THE EDGE OF ROADWAY, DRIVEWAY, SIDEWALK OR STABILIZED ROAD SHOULDER, OR AS DETERMINED IN THE FIELD BY THE ENGINEER.**

**D. ALL SELECT MATERIAL TO BE COMPACTED IN 6" LIFTS, AS PER ASTM-2774.**

**NOTE 3:**  
DEPENDING ON FIELD CONDITIONS, IF FINAL SAWCUT FOR ASPHALT DRIVEWAY IS 2'-6" OR LESS FROM EDGE OF ROADWAY PAVEMENT OR BITUMINOUS SHOULDER, THE REMAINING PAVEMENT STRIP MAY REQUIRE MILLING & OVERLAY AS DETERMINED IN THE FIELD BY THE ENGINEER. ANY PAVEMENT DAMAGED AS A RESULT OF CONTRACTORS MEANS AND METHODS WILL NOT BE PAID FOR UNDER THIS WORK.

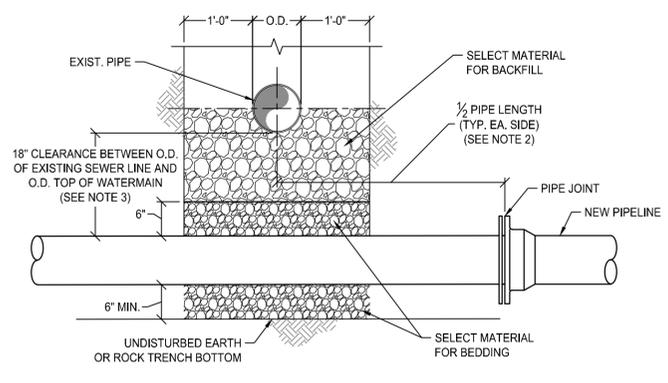
**NOTE 4:**  
IF REQUIRED, STONE SHOULDER BREAK SHALL BE 2 FT. WIDE BY 2 INCHES MINIMUM DEPTH OF COMPACTED 1" R.O.C. STONE, UNLESS OTHERWISE NOTED OR DETERMINED IN THE FIELD BY THE ENGINEER.

**NOTE 2: BEDDING/BACKFILL FOR PRESSURE PIPE**

**A. No. 1 STONE BEDDING IS REQUIRED FROM 6" BELOW TO SPRINGLINE OF PIPE WITH PAYMENT INCLUDED UNDER PIPE ITEM.**

**B. CONTINUE BEDDING TO 1'-0" OVER PIPE WHERE EXCAVATION IS WITHIN PROPOSED OR EXISTING PAVEMENT OR STABILIZED SHOULDER, EXISTING DRIVEWAY, WITHIN 5' OF EDGE OF PROPOSED OR EXISTING PAVEMENT, IN AREAS OF ROCK EXCAVATION OR WHERE EXCAVATED MATERIAL IS NOT ACCEPTABLE TO THE TOWN ENGINEER.**

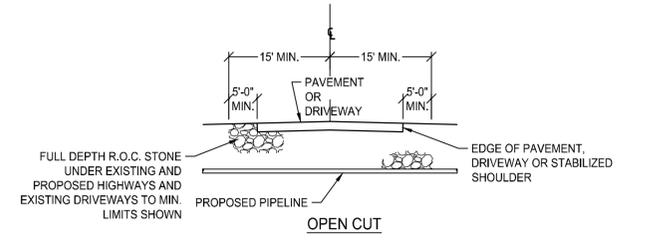
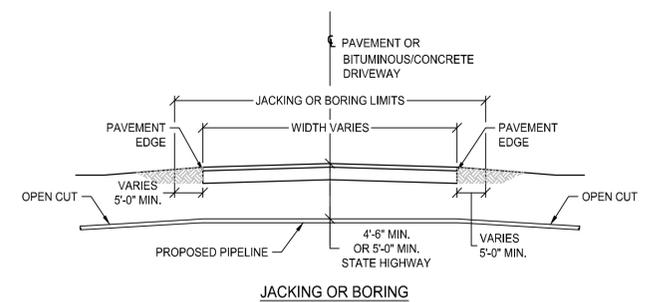
1 TYPICAL WATERLINE TRENCH DETAIL SCALE: N.T.S.



**NOTES:**

- ALL EXISTING UTILITIES MUST BE SUPPORTED DURING CONSTRUCTION OF THE NEW PIPELINE.
- WHEN CROSSING A SEWERLINE WITH A NEW WATERMAIN, OR A WATERMAIN WITH A NEW SEWERLINE, THE NEW PIPELINE SHALL BE PLACED SO THAT BOTH JOINT ENDS ARE AS FAR AS POSSIBLE FROM EXISTING PIPELINE.
- MAINTAIN 10'-0" MIN. HORIZONTAL AND 18" MIN. VERTICAL SEPARATION BETWEEN WATERMAIN AND SEWERLINE, UNLESS OTHERWISE NOTED OR APPROVED.

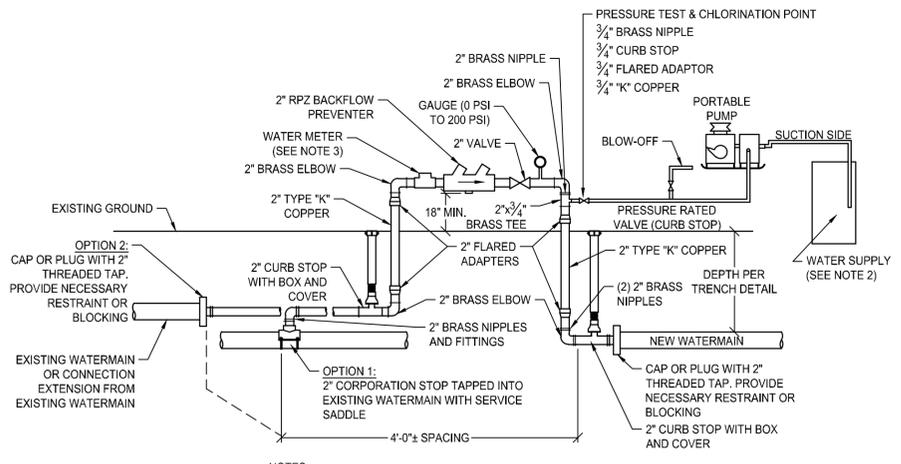
2 TYPICAL PIPE CROSSING DETAIL SCALE: N.T.S.



3 EXISTING PAVEMENT AND DRIVEWAY CROSSING DETAIL SCALE: N.T.S.

**WATERLINE CONSTRUCTION NOTES:**

- ALL WATERMAIN PIPING SHALL BE PVC (DR-18, CLASS 150, AWWA C900) OR DUCTILE IRON (CLASS 52), DOUBLE THICKNESS CEMENT LINING AND BITUMINOUS EXTERIOR COATING, AS SHOWN OR NOTED ON THE PLANS.
- ALL WATERMAIN CARRIER PIPING THROUGH CASING PIPES SHALL BE DUCTILE IRON (CLASS 52), DOUBLE THICKNESS CEMENT LINING AND BITUMINOUS EXTERIOR COATING OR PVC (DR-18, CLASS 150, AWWA C900).
- UNLESS OTHERWISE NOTED ON THE DRAWINGS OR DETERMINED BY THE ENGINEER IN FIELD, MINIMUM PIPE COVER SHALL BE 4'-6" FOR WATER MAINS AND WATER SERVICES.
- UNLESS OTHERWISE NOTED ON THE PLANS OR AS DETERMINED IN THE FIELD BY THE ENGINEER, ALL WATER SERVICES SHALL BE 1" DIAMETER. THE ACTUAL NUMBER AND LOCATIONS OF WATER SERVICES SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION.
- NO 90 DEGREE BENDS SHALL BE INSTALLED IN THE WATERMAIN UNLESS SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER.
- THRUST RESTRAINTS FOR WATER MAIN PIPING SHALL BE INSTALLED AT ALL CHANGES IN DIRECTION, CHANGES IN SIZE, DEAD ENDS OR OTHER LOCATIONS WHERE SHOWN OR NOTED ON THE DESIGN PLANS OR AS DETERMINED IN THE FIELD BY THE ENGINEER.
- THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" OF VERTICAL SEPARATION AND 10' OF HORIZONTAL SEPARATION BETWEEN THE O.D. OF WATER MAINS AND THE O.D. OF SANITARY OR STORM SEWER PIPING. THE CONTRACTOR SHALL EXCAVATE IN ADVANCE OF THE WORK TO DETERMINE REQUIRED CHANGES IN GRADE NECESSARY TO INSTALL THE WATER MAIN. REFER TO THE STANDARD DETAILS FOR WATER MAIN INSTALLATION WHERE THE REQUIRED SEPARATIONS CAN NOT BE MAINTAINED.
- ALL NEW WATERLINE VALVES, HYDRANTS, SAMPLING POINTS AND OTHER APPURTENANCES ARE TO BE LOCATED WITHIN THE HIGHWAY RIGHTS-OF-WAY OR PERMANENT EASEMENTS.
- ALL HYDRANTS TO BE PLACED AT 1' INSIDE HYDRANT RIGHT-OF-WAY LINE, OR BACKLINE OF PERMANENT EASEMENT WITH "STEAMER" NOZZLE FACING THE ROADWAY UNLESS OTHERWISE NOTED ON THE PLANS OR DETERMINED IN THE FIELD BY THE ENGINEER. (REFER TO HYDRANT SETTING DETAILS).
- ONLY ONE CONNECTION FOR A WATER SOURCE MAY BE MADE TO ANY EXISTING WATER MAIN PRIOR TO DISINFECTION AND HEALTH DEPARTMENT APPROVAL OF COMPLETED WORKS.
- BACTERIOLOGICAL SAMPLING POINTS ARE TO BE INSTALLED AT APPROXIMATELY 1,200' INTERVALS AND AT END OF ALL WATERLINE SECTIONS AS SHOWN ON THE PLANS OR AS DETERMINED IN THE FIELD BY THE ENGINEER.
- ALL WATER MAINS SHALL BE TESTED AND DISINFECTED ACCORDING TO THE SPECIFICATIONS AND THE APPROVAL OF THE ENGINEER, AND THE HEALTH DEPARTMENT.
- ALL WATER FOR TESTING AND FLUSHING MUST BE PAID FOR BY THE CONTRACTOR. CONTRACTOR TO COORDINATE WITH THE OWNER FOR REQUIRED METERING EQUIPMENT.
- THE CONTRACTOR IS RESPONSIBLE TO CONTACT U.F.P.O./DIG SAFELY NEW YORK A MINIMUM OF 48 HOURS PRIOR TO DIGGING ANY TEST PITS OR TRENCH EXCAVATION WITHIN THE EXISTING RIGHTS-OF-WAY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEER (3) WORKING DAYS IN ADVANCE AND AFFECTED CUSTOMERS 48 HOURS IN ADVANCE, OF ANY PROPOSED SHUT-DOWN OF EXISTING WATERMANS. THE CONTRACTOR SHALL HAVE ALL LABOR, EQUIPMENT AND MATERIALS ON-SITE AND READY TO USE PRIOR TO BEGINNING ANY SHUT-DOWNS OR REMOVING ANY EXISTING FACILITIES.
- EACH SHUTDOWN OF EXISTING WATER MAINS SHALL BE LIMITED TO EIGHT CONSECUTIVE HOURS OR LESS.
- ONLY VILLAGE WATER DEPARTMENT PERSONNEL SHALL OPERATE EXISTING WATER VALVES. THE CONTRACTOR IS ADVISED THAT WATER TIGHT CONDITIONS MIGHT NOT EXIST WHEN EXISTING VALVES ARE CLOSED. DUE TO THIS PROBLEM, SHUTDOWNS MIGHT NOT BE PROVIDED AT THE TIME REQUESTED OR EXPECTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY LOCATIONS, CONNECTIONS, SIZES AND MATERIALS OF ALL EXISTING WATER MAINLINE PRIOR TO MAKING CONNECTIONS.
- ALL EXISTING UTILITY PIPING, INCLUDING CULVERT PIPES, EXPOSED BY THIS WORK, MUST BE SUPPORTED, BEDDED AND BACKFILLED AS PER THE UTILITY OWNER REQUIREMENTS AND/OR THE "TYPICAL PIPE CROSSING" DETAIL.
- FULL DEPTH SELECT MATERIAL FOR BACKFILL WILL BE REQUIRED FOR ALL OPEN CUT CROSSINGS OF WALKWAYS, PAVEMENT, SHOULDERS AND DRIVEWAYS UNLESS OTHERWISE NOTED ON PLANS OR DETERMINED IN THE FIELD BY THE ENGINEER.



**NOTES:**

- BACTERIOLOGICAL WATER SAMPLES SHALL BE TAKEN WITHIN 20 FEET OF THE BEGINNING AND END STATIONS OF EACH SECTION OF WATERMAIN AND AT MAXIMUM 1200 FT. SPACING.
- FOR PRESSURE TESTING PROVIDE CLEAN WATER SUPPLY. FOR DISINFECTION PROVIDE CHLORINATED WATER SUPPLY.
- WATER METERS ARE REQUIRED FOR MEASUREMENT OF LEAKAGE LOSS AND OVERALL AMOUNT OF PUBLIC WATER USED.
- INITIAL CONNECTION TO THE EXISTING WATERMAIN TO BE LEFT CLOSED UNTIL AFTER NEW MAIN IS TESTED AND DISINFECTED.
- SECONDARY CONNECTION(S) TO EXISTING WATERMAIN(S) CANNOT BE PERFORMED UNTIL AFTER NEW MAIN IS TESTED AND DISINFECTED.

4 PRESSURE TESTING AND DISINFECTION APPARATUS SCHEMATIC DETAIL SCALE: N.T.S.

FILENAME: P:\481301\HOLLEY SIDEWALK IMPROVEMENTS\COMPOSITE WATER DETAILING LAYOUT WLD-1 DATE: 6/18/2019 3:49:04 PM LAYOUT: WLD-1



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NO.	REVISIONS	DATE
A	ISSUED FOR NYS/DH REVIEW	6/19/19

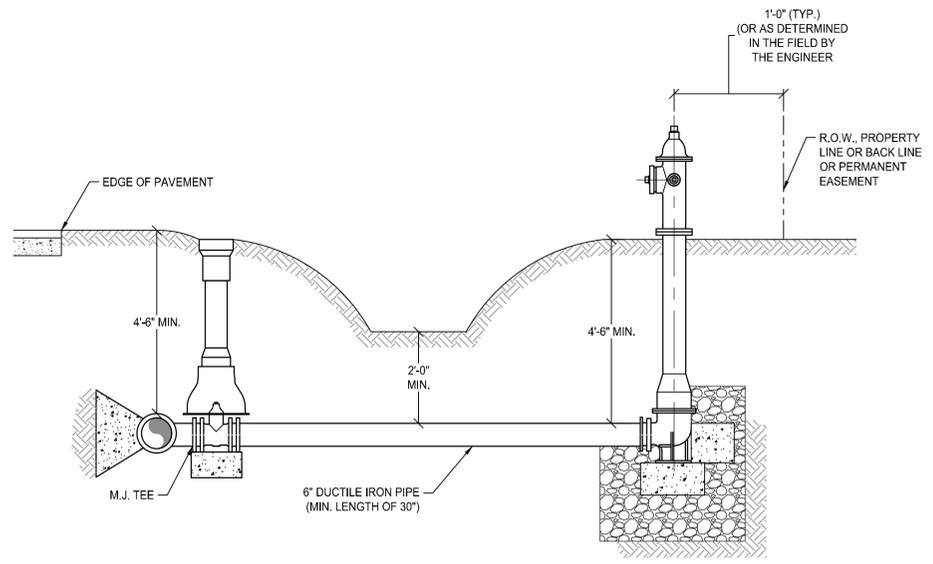
DWG. TITLE

**WATERLINE DETAILS**

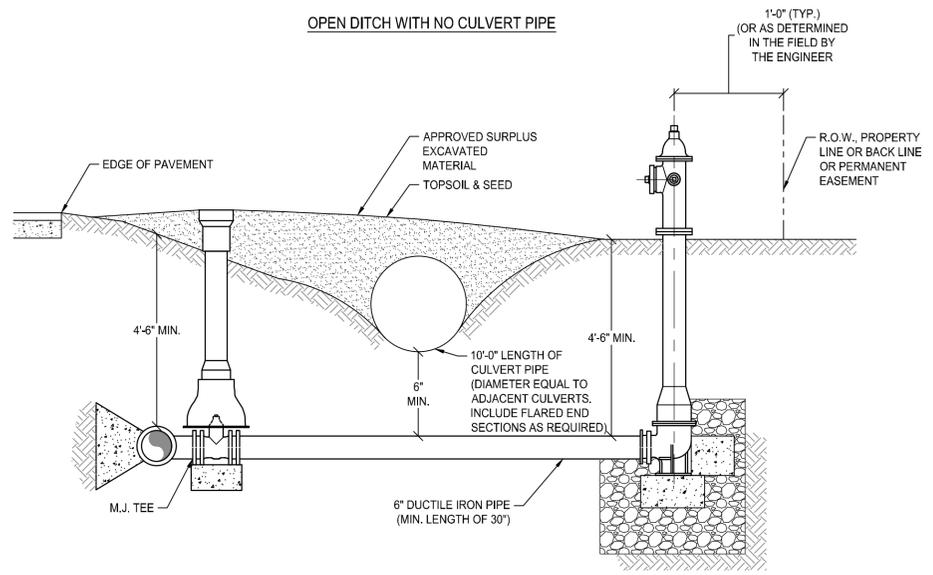


DATE: JUNE 2019  
SCALE: AS NOTED  
DWN: JAC CHK: MFL  
PROJ. No. 481301 / 481302  
DWG. No.

**WLD-1**

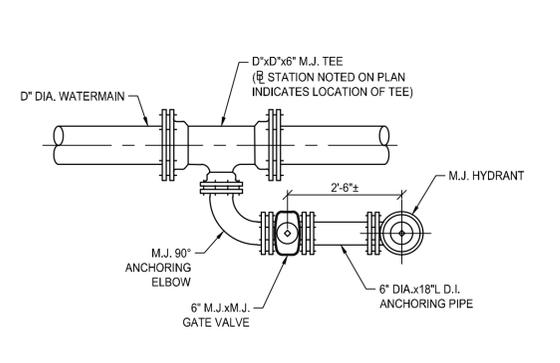


OPEN DITCH WITH NO CULVERT PIPE

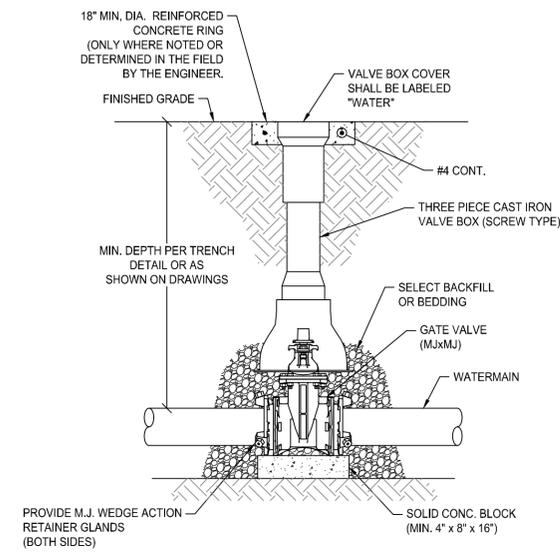


CLOSED DITCH WITH CULVERT PIPE

1 TYPICAL HYDRANT SETTING DETAIL FOR DITCH CROSSINGS  
SCALE: N.T.S.

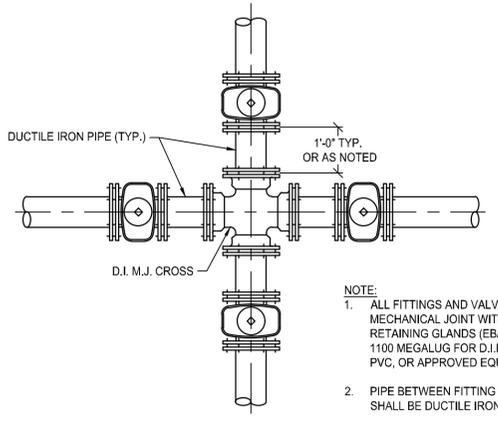


2 SPECIAL HYDRANT SETTING DETAIL  
SCALE: N.T.S.



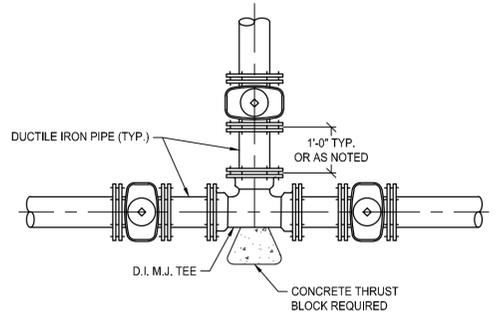
- NOTES:
- C.I. GATE VALVE 4" TRHU 12" DIA. (MFR. MUELLER CO OR APPROVED EQUAL) WITH MECHANICAL JOINT, WEDGE ACTION RETAINING GLANDS (MFR. EBAA IRON SERIES 1100 MEGALUG FOR D.I.P., 2000PV FOR PVC OR APPROVED EQUAL).
  - VALVE SHALL NOT SUPPORT VALVE BOX
  - VALVE SHALL BE POLYETHYLENE WRAPPED ACCORDING TO SPECIFICATIONS

3 TYPICAL GATE VALVE SETTING DETAIL  
SCALE: N.T.S.



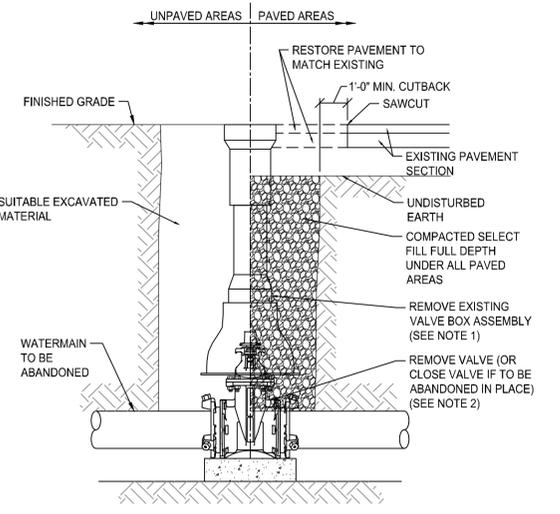
- NOTE:
- ALL FITTINGS AND VALVES TO BE MECHANICAL JOINT WITH WEDGE ACTION RETAINING GLANDS (EBAA IRON SERIES 1100 MEGALUG FOR D.I.P., 2000PV FOR PVC, OR APPROVED EQUAL.)
  - PIPE BETWEEN FITTING AND VALVES SHALL BE DUCTILE IRON.

5 3 & 4-WAY VALVE SETTING DETAIL  
SCALE: N.T.S.



- NOTES:
- FOR FINAL RESTORATION REQUIREMENTS SEE TYPICAL TRENCH DETAIL AND CONTRACT SPECIFICATIONS.
  - REFER TO THE GENERAL REQUIREMENTS OF THE PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS REGARDING PRELIMINARY CLEANUP.

6 TRENCH DETAIL FOR PRELIMINARY CLEAN UP  
SCALE: N.T.S.



- NOTES:
- ENTIRE VALVE BOX ASSEMBLY TO BE REMOVED UNLESS OTHERWISE DETERMINED IN THE FIELD BY THE ENGINEER.
  - VALVE REMOVAL OR ABANDONMENT AS NOTED ON THE PLANS OR AS DETERMINED IN THE FIELD BY THE ENGINEER.

4 VALVE BOX ABANDONMENT  
SCALE: N.T.S.



VILLAGE OF  
HOLLEY

SIDEWALK AND  
WAERLINE  
IMPROVEMENTS

NYS DOT PIN 4760.99



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DWG. TITLE

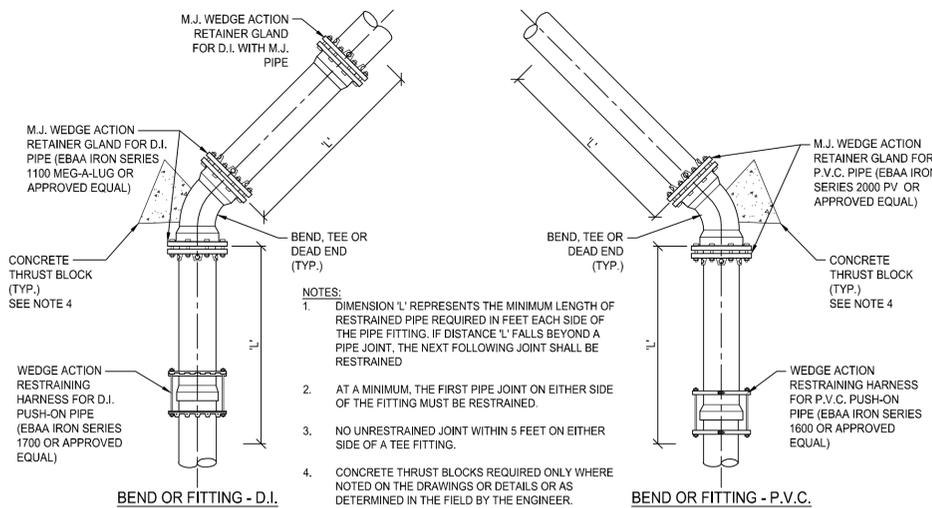
WATERLINE DETAILS



DATE: JUNE 2019  
SCALE: AS NOTED  
DWN: JAC CHK: MFL  
PROJ. No. 481301 / 481302  
DWG. No.

WLD-2

FILENAME: P:\481301\HOLLEY\_SIDEWALK\_IMPROVEMENTS\_TRANSPORTATION\_WATER\_DETAILING\_LAYOUT\_WLD-2 DATE: 6/19/2019 3:49:12 PM LAYOUT: WLD-2



- NOTES:**
- DIMENSION 'L' REPRESENTS THE MINIMUM LENGTH OF RESTRAINED PIPE REQUIRED IN FEET EACH SIDE OF THE PIPE FITTING. IF DISTANCE 'L' FALLS BEYOND A PIPE JOINT, THE NEXT FOLLOWING JOINT SHALL BE RESTRAINED.
  - AT A MINIMUM, THE FIRST PIPE JOINT ON EITHER SIDE OF THE FITTING MUST BE RESTRAINED.
  - NO UNRESTRAINED JOINT WITHIN 5 FEET ON EITHER SIDE OF A TEE FITTING.
  - CONCRETE THRUST BLOCKS REQUIRED ONLY WHERE NOTED ON THE DRAWINGS OR DETAILS OR AS DETERMINED IN THE FIELD BY THE ENGINEER.

**RESTRAINED JOINT SCHEDULE FOR HORIZONTAL & VERTICAL UPWARD FACING FITTINGS**  
NOTE: FOR 2000 P.S.F. SOIL BEARING AT 150 PSI TEST PRESSURE

**FOR PVC AND POLYETHYLENE WRAPPED DUCTILE IRON PIPE (D.I.P.)**

PIPE SIZE	1 1/4" BEND		2 1/2" BEND		45° BEND		90° BEND		TEE BRANCH, VALVE OR DEAD END	
	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)
4"	0.5	1.1	2.2	2.2	5.4	5.4	16.0	16.0		
6"	0.8	1.7	3.5	3.5	8.3	8.3	24.6	24.6		
8"	1.1	2.3	4.7	4.7	11.4	11.4	33.5	33.5		
10"	1.4	2.9	6.0	6.0	14.4	14.4	42.0	42.0		
12"	1.7	3.5	7.2	7.2	17.5	17.5	50.7	50.7		
16"	2.3	4.7	9.7	9.7	23.4	23.4	67.3	67.3		
24"	3.5	7.0	14.6	14.6	35.2	35.2	99.2	99.2		

**FOR BARE DUCTILE IRON PIPE (D.I.P.)**

PIPE SIZE	1 1/4" BEND		2 1/2" BEND		45° BEND		90° BEND		TEE BRANCH	
	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)
4"	0.5	0.9	1.9	1.9	4.7	4.7	11.0	11.0		
6"	0.7	1.4	3.0	3.0	7.2	7.2	16.9	16.9		
8"	1.0	2.0	4.1	4.1	9.9	9.9	23.0	23.0		
10"	1.2	2.5	5.1	5.1	12.4	12.4	28.8	28.8		
12"	1.5	3.0	6.2	6.2	15.1	15.1	34.7	34.7		
16"	2.0	4.0	8.4	8.4	20.2	20.2	46.0	46.0		
24"	3.0	6.0	12.5	12.5	30.2	30.2	67.8	67.8		

**RESTRAINED JOINT SCHEDULE FOR DOWNWARD FACING VERTICAL BENDS**  
NOTE: FOR 2000 P.S.F. SOIL BEARING AT 150 PSI TEST PRESSURE

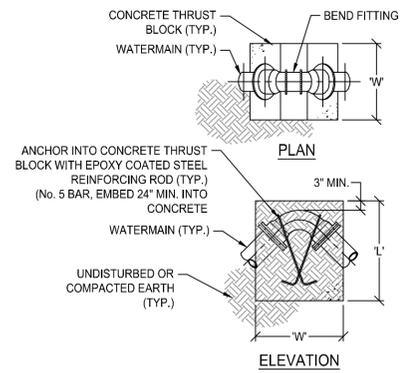
**FOR PVC AND POLYETHYLENE WRAPPED DUCTILE IRON PIPE (D.I.P.)**

PIPE SIZE	1 1/4" BEND		2 1/2" BEND		45° BEND		90° BEND		TEE BRANCH	
	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)
4"	1.8	3.7	7.7	7.7	18.7	18.7	16.0	16.0		
6"	2.8	5.7	11.9	11.9	28.8	28.8	24.6	24.6		
8"	3.9	7.8	16.2	16.2	39.2	39.2	33.5	33.5		
10"	4.8	9.8	20.3	20.3	49.0	49.0	42.0	42.0		
12"	5.8	11.8	24.5	24.5	59.2	59.2	50.7	50.7		
16"	7.7	15.7	32.6	32.6	78.7	78.7	67.3	67.3		

**FOR BARE DUCTILE IRON PIPE (D.I.P.)**

PIPE SIZE	1 1/4" BEND		2 1/2" BEND		45° BEND		90° BEND		TEE BRANCH	
	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)	L' (FT.)	W' (FT.)
4"	1.1	2.2	4.5	4.5	11.0	11.0				
6"	1.7	3.4	7.0	7.0	16.9	16.9				
8"	2.3	4.6	9.5	9.5	23.0	23.0				
10"	2.8	5.7	11.9	11.9	28.8	28.8				
12"	3.4	6.9	14.4	14.4	34.7	34.7				
16"	4.5	9.2	19.1	19.1	46.0	46.0				

**1 TYPICAL RESTRAINED JOINT DETAIL**  
SCALE: N.T.S.



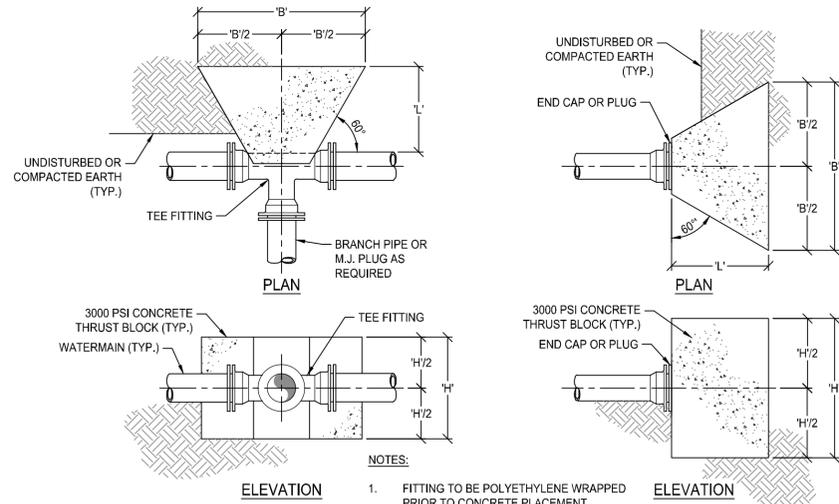
- NOTES:**
- FITTING TO BE POLYETHYLENE WRAPPED PRIOR TO CONCRETE PLACEMENT.
  - FOR UPWARD FACING VERTICAL BEND, USE DIMENSION SCHEDULE FOR HORIZONTAL AND UPWARD FACING VERTICAL BENDS.
  - THRUST BLOCKS TO BE PLACED TO ALLOW THE REMOVAL OF MECHANICAL NUTS AND BOLTS.

**MINIMUM DIMENSION SCHEDULE**

PIPE SIZE	1 1/4" BEND			2 1/2" BEND			45° BEND			90° BEND		
	L' (ft.)	W' (ft.)	CONCRETE VOLUME REQUIRE D (c.y.)	L' (ft.)	W' (ft.)	CONCRETE VOLUME REQUIRE D (c.y.)	L' (ft.)	W' (ft.)	CONCRETE VOLUME REQUIRE D (c.y.)	L' (ft.)	W' (ft.)	CONCRETE VOLUME REQUIRE D (c.y.)
4"	1.9	1.3	0.12	2.3	1.5	0.20	2.8	1.9	0.38	3.2	2.1	0.54
6"	2.4	1.6	0.23	3.0	2.0	0.46	3.7	2.5	0.85	4.2	2.8	1.20
8"	2.9	2.0	0.42	3.7	2.5	0.82	4.5	3.0	1.51	5.1	3.4	2.14
10"	3.4	2.3	0.65	4.3	2.8	1.28	5.2	3.5	2.37	5.9	3.9	3.35
12"	3.9	2.6	0.94	4.8	3.2	1.84	5.9	3.9	3.41	6.6	4.4	4.82
16"	4.7	3.1	1.67	5.8	3.9	3.28	7.2	4.8	6.06	8.0	5.4	8.56
24"	6.1	4.1	3.76	7.7	5.1	7.37	9.4	6.3	13.62	10.5	7.0	19.27

NOTE: FOR 2000 P.S.F. SOIL BEARING AT 150 PSI

**2 THRUST BLOCK DETAIL DOWNWARD FACING VERTICAL BEND**  
SCALE: N.T.S.



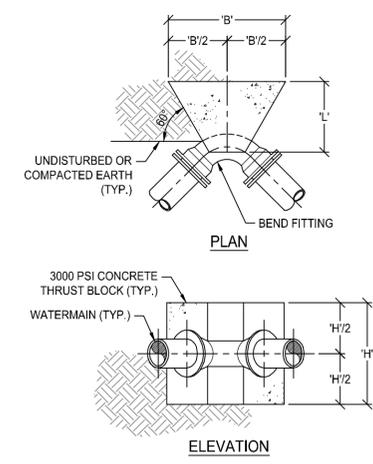
- NOTES:**
- FITTING TO BE POLYETHYLENE WRAPPED PRIOR TO CONCRETE PLACEMENT.
  - THRUST BLOCK REQUIRED FOR ALL 16" DIA. AND SMALLER MAINLINE TEES, HYDRANT LATERAL TEES AND TAPPING SLEEVE INSTALLATIONS.
  - THRUST BLOCKS TO BE PLACED TO ALLOW THE REMOVAL OF MECHANICAL NUTS AND BOLTS.

**MINIMUM DIMENSION SCHEDULE**

BRANCH TEE OR END CAP DIA.	H' (ft.)	B' (ft.)	L' (ft.)
4"	0.9	1.3	1.1
6"	1.3	1.9	1.6
8"	1.7	2.6	2.1
10"	2.1	3.2	2.6
12"	2.6	3.8	3.2
16"	3.4	5.1	4.2
24"	5.1	7.7	6.3

NOTE: FOR 2000 P.S.F. SOIL BEARING AT 150 PSI TEST PRESSURE

**4 THRUST BLOCK DETAIL FOR TEE FITTING**  
SCALE: N.T.S.



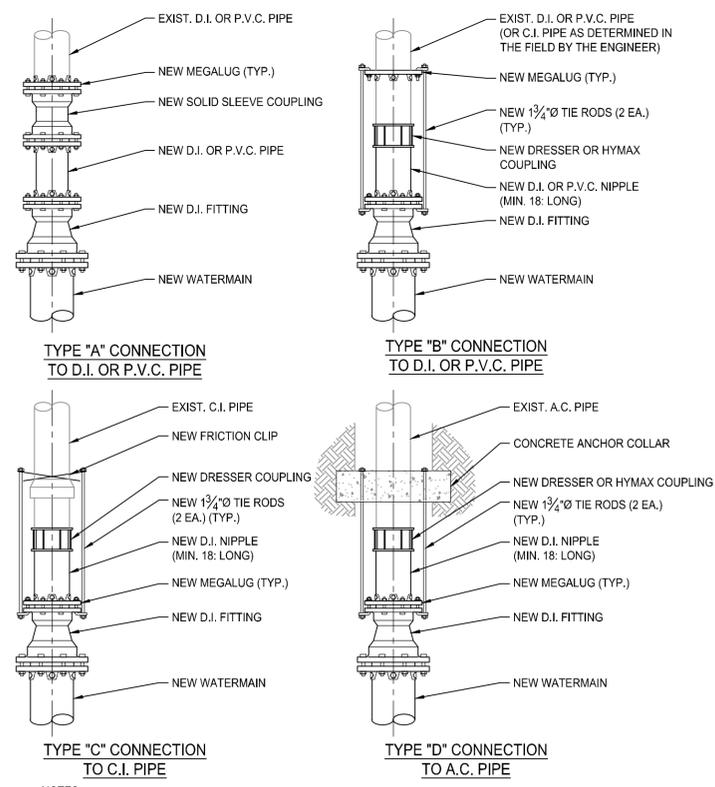
- NOTES:**
- FITTING TO BE POLYETHYLENE WRAPPED PRIOR TO CONCRETE PLACEMENT.
  - THIS DETAIL TO BE USED ALSO FOR UPWARD FACING VERTICAL BENDS.
  - THRUST BLOCKS TO BE PLACED TO ALLOW THE REMOVAL OF MECHANICAL NUTS AND BOLTS.

**MINIMUM DIMENSION SCHEDULE**

PIPE SIZE	1 1/4" BEND			2 1/2" BEND			45° BEND			90° BEND		
	H' (ft.)	B' (ft.)	L' (ft.)	H' (ft.)	B' (ft.)	L' (ft.)	H' (ft.)	B' (ft.)	L' (ft.)	H' (ft.)	B' (ft.)	L' (ft.)
4"	0.4	0.6	0.4	0.5	0.8	0.8	0.7	1.1	1.4	1.0	1.5	2.0
6"	0.6	0.8	0.6	0.8	1.2	1.2	1.1	1.7	2.0	1.5	2.3	3.1
8"	0.8	1.1	0.8	1.1	1.6	1.6	1.5	2.2	2.7	2.0	3.0	4.1
10"	0.9	1.4	1.0	1.3	2.0	2.0	1.9	2.8	3.4	2.5	3.8	5.1
12"	1.1	1.7	1.2	1.6	2.4	2.4	2.2	3.3	4.1	3.0	4.5	6.1
16"	1.5	2.3	1.6	2.1	3.2	3.2	3.0	4.5	5.4	4.0	6.1	8.2
24"	2.3	3.4	2.4	3.2	4.8	4.8	4.5	6.7	8.1	6.1	9.1	12.3

NOTE: FOR 2000 P.S.F. SOIL BEARING AT 150 PSI

**3 THRUST BLOCK DETAIL FOR HORIZONTAL AND UPWARD FACING VERTICAL BENDS**  
SCALE: N.T.S.



- NOTES:**
- VALVES AND TEES MAY BE HARNESSSED SIMILARLY.
  - HARNESSING IS FOR RESISTANCE TO INTERNAL PRESSURE-PIPE ITSELF MUST BE SUPPORTED ON FIRM BEDDING AND CAREFULLY BACKFILLED.
  - COAT ALL EXPOSED SURFACES OF HARNESS ASSEMBLY WITH BITUMINOUS COATING.
  - TIE RODS SHALL BE PLACED ON SIDES OF PIPE.

**5 TYPICAL CONNECTION TO EXISTING WATERMAIN**  
SCALE: N.T.S.

FILENAME: P:\481301\HOLLEY\_SIDEWALK\_RECONSTRUCTION\DWG\DWG\TRANS\COMPOSITE WATER DETAILING.DWG DATE: 6/18/2019 3:49:18 PM LAYOUT: WLD-3



VILLAGE OF  
HOLLEY

**SIDEWALK AND  
WAERLINE  
IMPROVEMENTS**

NYS DOT PIN 4760.99



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DWG. TITLE

**WATERLINE DETAILS**



DATE: JUNE 2019  
SCALE: AS NOTED  
DWN: JAC CHK: MFL  
PROJ. No.: 481301 / 481302  
DWG. No.:

**WLD-3**



VILLAGE OF HOLLEY

SIDEWALK AND WAERLINE IMPROVEMENTS

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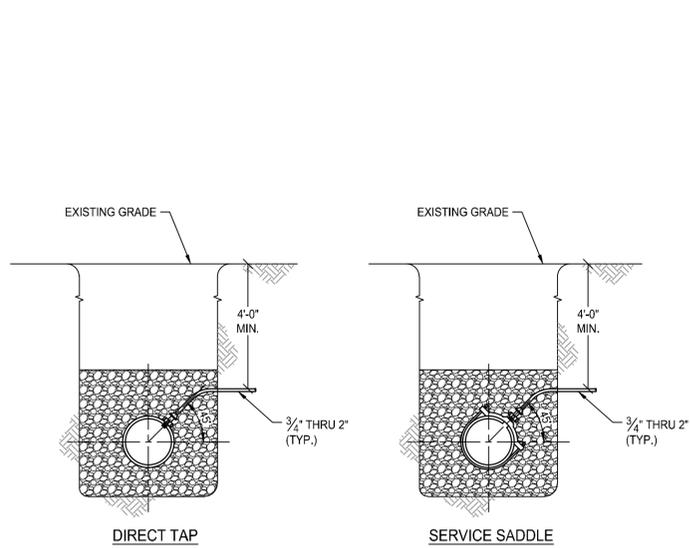
DWG. TITLE

WATERLINE DETAILS



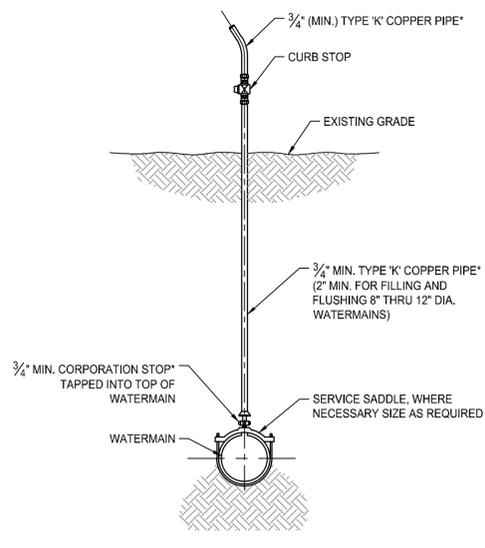
DATE: JUNE 2019  
SCALE: AS NOTED  
DWN: JAC CHK: MFL  
PROJ. No. 481301 / 481302  
DWG. No.

WLD-4



NOTE:  
A SERVICE SADDLE WILL BE REQUIRED FOR ALL SERVICES INSTALLED ON PVC WATERMAINS AND FOR ALL TAPS LARGER THAN 1 1/2" ON D.I. PIPE. SERVICE SADDLES TO BE DOUBLE STRAPPED BRONZE WITH O-RING CEMENTED IN PLACE.

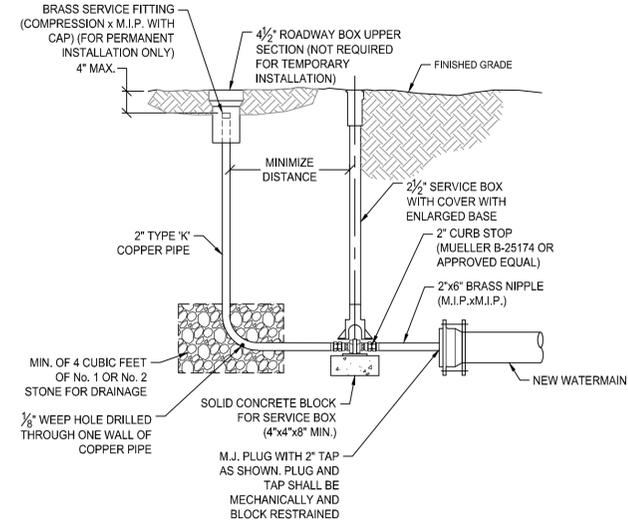
1 CORPORATION STOP DETAIL  
SCALE: N.T.S.



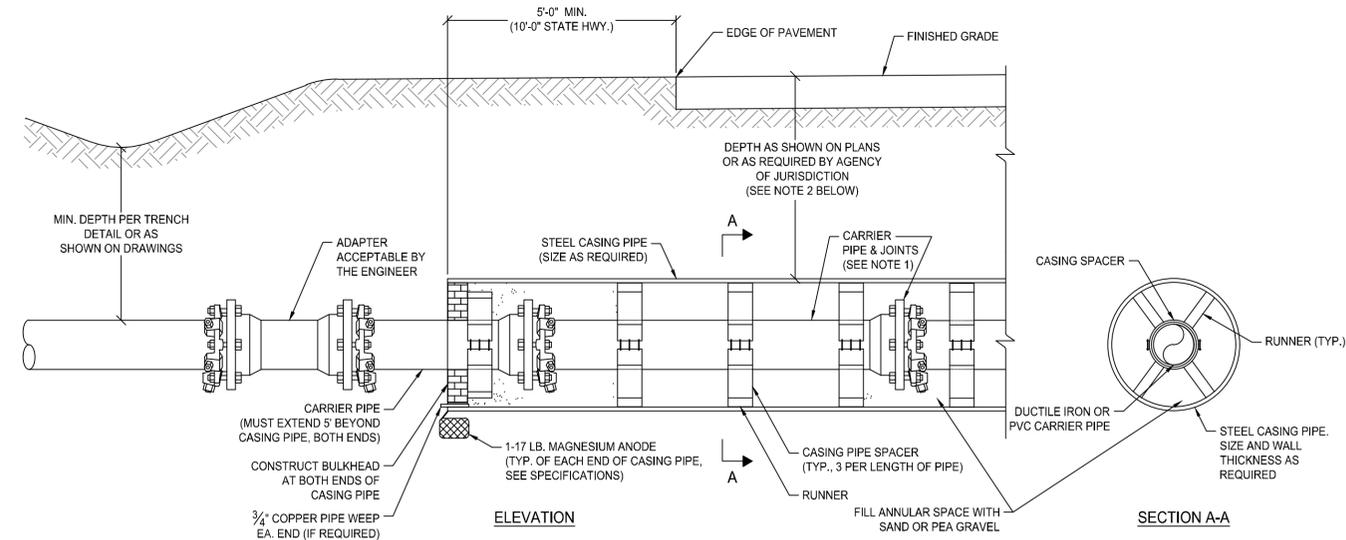
\* 1" MIN. REQUIRED IF SAMPLING POINT WILL BE USED FOR INDIVIDUAL SERVICE CONNECTION.

NOTE:  
AFTER COMPLETION OF TESTING, REPLACE CORPORATION STOP IN SERVICE SADDLE WITH A THREADED BRASS PLUG.

2 SAMPLING POINT DETAIL  
SCALE: N.T.S.



3 2" END BLOW-OFF ASSEMBLY DETAIL  
SCALE: N.T.S.



- NOTES:
- CARRIER PIPE THRU CASING SHALL BE EITHER: MECHANICAL JOINT DUCTILE IRON PIPE WITH WEDGE ACTION RETAINING GLANDS (EBAA SERIES 1100 OR APPROVED EQUAL); INTEGRAL RESTRAINED JOINT DUCTILE IRON PIPE (U.S. PIPE TR-FLEX OR APPROVED EQUAL); PUSH JOINT DUCTILE IRON PIPE WITH WEDGE ACTION RETAINING GLANDS (EBAA IRON SERIES 1700 MEGALUG OR APPROVED EQUAL); OR PUSH JOINT PVC PIPE WITH WEDGE ACTION RETAINING GLANDS (EBAA IRON SERIES 1600 MEGALUG, OR APPROVED EQUAL) UNLESS OTHERWISE NOTED ON PLANS.
  - MINIMUM COVER ON CASING = 4'-6" UNLESS OTHERWISE NOTED ON PLANS. (5'-0" MINIMUM UNDER STATE AND COUNTY HIGHWAYS).
  - HDPE CASING SPACERS AS MANUFACTURED BY ADVANCE PRODUCTS AND SYSTEMS, INC.; PIPELINE SEAL AND INSULATOR, INC.; OR APPROVED EQUAL.
  - THE PROPOSED NUMBER OF CASING SPACERS SHALL BE INSTALLED TO PROVIDE SUFFICIENT SUPPORT AS PER MANUFACTURERS RECOMMENDATIONS.

4 CASING PIPE DETAIL  
SCALE: N.T.S.

FILENAME: P:\481301 HOLLEY SIDEWALK RECONSTRUCTION\36 CAD\DWG\TRANS\COMPOSITE WATER DETAIL.DWG LAYOUT: WLD-4 DATE: 6/19/2019 3:49:26 PM



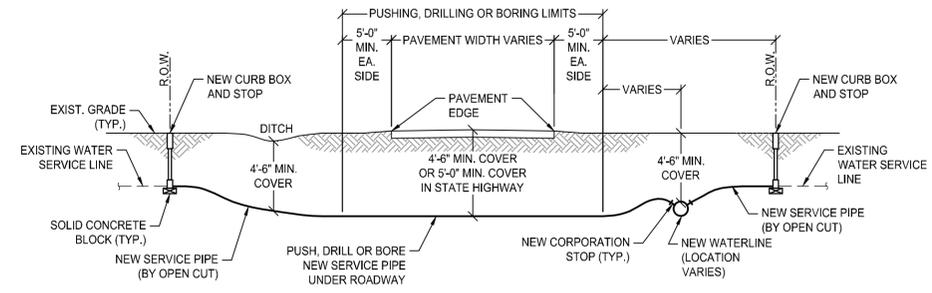
VILLAGE OF  
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IMPROVEMENTS**

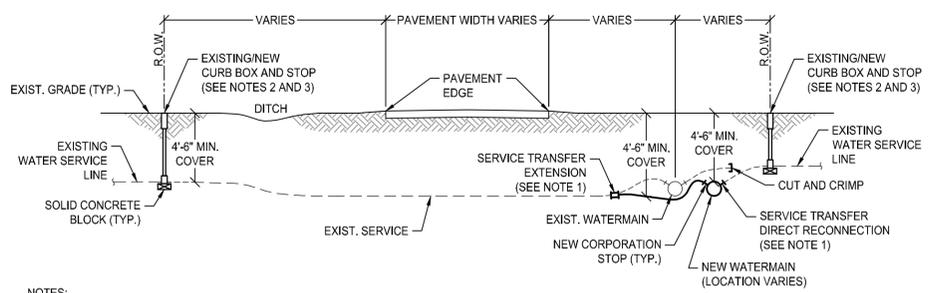
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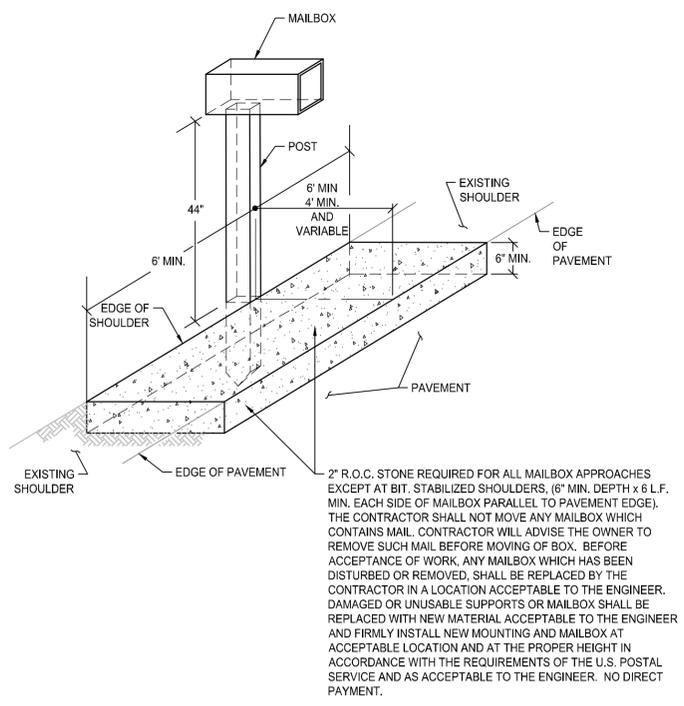
- NOTES:
- EXISTING SERVICES SHALL BE CRIMPED AND ABANDONED IN PLACE.
  - UNLESS OTHERWISE NOTED OR DETERMINED IN THE FIELD BY THE ENGINEER, ALL INDIVIDUAL WATER SERVICES 1" DIA. & SMALLER, WILL BE REPLACED WITH NEW 1" DIA. MATERIALS FROM THE NEW WATERLINE TO THE CONNECTION POINT AT THE RIGHT-OF-WAY. NEW MATERIALS SHALL INCLUDE NEW COPPER TUBE, REDUCER FITTING (AS NECESSARY), NEW CURB STOP, AND NEW CURB BOX.
  - EXISTING WATER SERVICE LINES OF LEAD, GALVANIZED STEEL, COPPER IN POOR CONDITION, OR LESS THAN 3/4" DIA., SHALL BE REPLACED WITH NEW 1" DIA. MATERIALS FROM THE NEW WATERLINE TO THE CONNECTION POINT AT THE R.O.W. NEW MATERIALS SHALL INCLUDE NEW COPPER TUBE, REDUCER FITTING (AS NECESSARY) NEW CURB STOP, AND NEW CURB BOX.
  - SERVICE SADDLES SHALL BE USED UNDER THE FOLLOWING CONDITIONS:
    - WHEN SERVICES ARE PLACED ON 4" OR SMALLER PIPES.
    - WHEN SERVICES LARGER THAN 1" ARE PLACED ON A 6" PIPE.
    - WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON AN 8" PIPE.
    - WHEN TAPPING ALL PLASTIC (PVC) PIPE.
    - WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON DUCTILE IRON PIPE.
    - WHEN TAPPING ALL ASBESTOS-CEMENT PIPE.
  - WATER SERVICE PIPE SHALL BE ONE CONTINUOUS PIECE OF PIPE WITH NO UNIONS OR COUPLINGS ALLOWED WITHIN LIMITS OF PAVEMENT.
  - ALL EXISTING AND NEW CURB BOXES ARE TO BE ADJUSTED TO MATCH EXISTING FINISHED GRADE.



- NOTES:
- UNLESS OTHERWISE NOTED ON THE PLANS, SERVICE TRANSFERS TO BE ALLOWED ONLY IF THE EXISTING SERVICE LINE IS GOOD TYPE K COPPER 3/4" OR LARGER AND ONLY WHERE APPROVED BY THE ENGINEER. THE EXISTING SERVICE LINE IS TO BE CUT AND CONNECTED DIRECTLY OR EXTENDED TO THE CORPORATION STOP ON THE NEW WATERLINE. NO OTHER FITTINGS WILL BE ALLOWED BETWEEN THE NEW WATERLINE AND THE NEW EXISTING CURB STOP.
  - WHERE THE EXISTING CURB BOX IS PREVIOUSLY DAMAGED, IT SHALL BE REPLACED, AS DETERMINED IN THE FIELD BY THE ENGINEER.
  - ALL CURB STOPS MUST BE CHECKED BY THE CONTRACTOR FOR PROPER OPERATION. WHERE THE EXISTING CURB STOP IS DETERMINED BY THE ENGINEER TO BE INOPERABLE OR IN THE IMPROPER LOCATION, A NEW CURB STOP & BOX SHALL BE CUT-IN AT THE RIGHT-OF-WAY LINE AND THE EXISTING CURB STOP & BOX ABANDONED.
  - SERVICE SADDLES SHALL BE USED UNDER THE FOLLOWING CONDITIONS:
    - WHEN SERVICES ARE PLACED ON 4" OR SMALLER PIPES.
    - WHEN SERVICES LARGER THAN 1" ARE PLACED ON A 6" PIPE.
    - WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON AN 8" PIPE.
    - WHEN TAPPING ALL PLASTIC (PVC) PIPE.
    - WHEN SERVICES LARGER THAN 1 1/2" ARE PLACED ON DUCTILE IRON PIPE.
    - WHEN TAPPING ALL ASBESTOS-CEMENT PIPE.
  - 1" TYPICAL WATER SERVICE LINE (OR MATCH EXISTING SIZE FOR APPROVED TRANSFERS, MIN. 3/4" DIA.).
  - WATER SERVICE PIPE SHALL BE ONE CONTINUOUS PIECE OF PIPE WITH NO UNIONS OR COUPLINGS ALLOWED WITHIN LIMITS OF PAVEMENT.
  - ALL EXISTING AND NEW CURB BOXES ARE TO BE ADJUSTED TO MATCH EXISTING FINISHED GRADE.

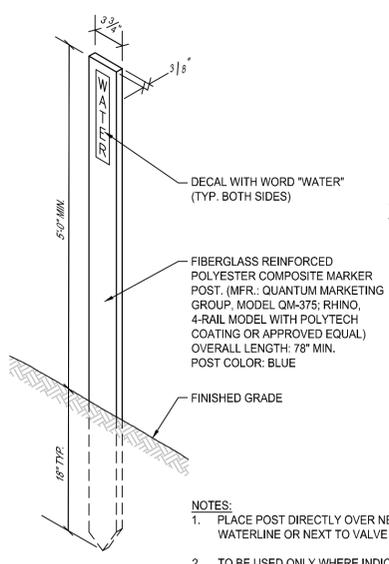
**1 SERVICE REPLACEMENT AND INSTALLATION DETAIL**  
SCALE: N.T.S.

**2 SERVICE TRANSFER AND CONNECTION DETAIL**  
SCALE: N.T.S.



2" R.O.C. STONE REQUIRED FOR ALL MAILBOX APPROACHES EXCEPT AT BIT. STABILIZED SHOULDERS, (6" MIN. DEPTH x 6 L.F. MIN. EACH SIDE OF MAILBOX PARALLEL TO PAVEMENT EDGE). THE CONTRACTOR SHALL NOT MOVE ANY MAILBOX WHICH CONTAINS MAIL. CONTRACTOR WILL ADVISE THE OWNER TO REMOVE SUCH MAIL BEFORE MOVING OF BOX. BEFORE ACCEPTANCE OF WORK, ANY MAILBOX WHICH HAS BEEN DISTURBED OR REMOVED, SHALL BE REPLACED BY THE CONTRACTOR IN A LOCATION ACCEPTABLE TO THE ENGINEER. DAMAGED OR UNSABLE SUPPORTS OR MAILBOX SHALL BE REPLACED WITH NEW MATERIAL ACCEPTABLE TO THE ENGINEER AND FIRMLY INSTALL NEW MOUNTING AND MAILBOX AT ACCEPTABLE LOCATION AND AT THE PROPER HEIGHT IN ACCORDANCE WITH THE REQUIREMENTS OF THE U.S. POSTAL SERVICE AND AS ACCEPTABLE TO THE ENGINEER. NO DIRECT PAYMENT.

**3 MAILBOX RESTORATION DETAIL**  
SCALE: N.T.S.



TYPICAL DECAL

- NOTES:
- PLACE POST DIRECTLY OVER NEW WATERLINE OR NEXT TO VALVE BOX.
  - TO BE USED ONLY WHERE INDICATED ON PLANS OR AS DETERMINED IN THE FIELD BY THE ENGINEER.

**4 FIBERGLASS WATERLINE MARKER POST DETAIL**  
SCALE: N.T.S.

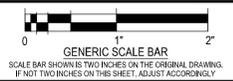


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**WATERLINE DETAILS**



DATE: JUNE 2019  
SCALE: AS NOTED  
DWN: JAC CHK: MFL  
PROJ. No. 481301 / 481302  
DWG. No.

**WLD-5**

FILENAME: P:\481301 HOLLEY SIDEWALK, RECONSTRUCTION\ISL\_CAD\DWG\TRANS\COMPOSITE WATER DETAILING LAYOUT\_WLD-5 DATE: 6/18/2019 3:49:34 PM LAYOUT: WLD-5



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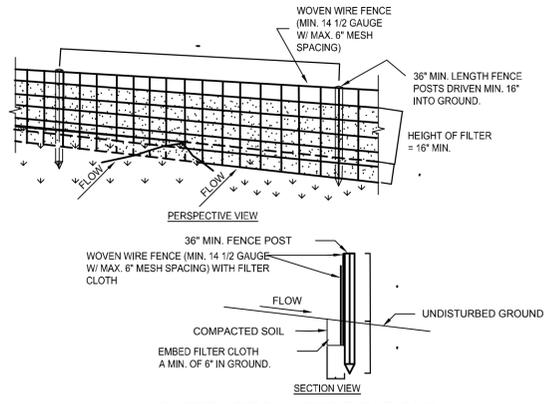
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**EROSION AND  
SEDIMENT CONTROL  
DETAILS**



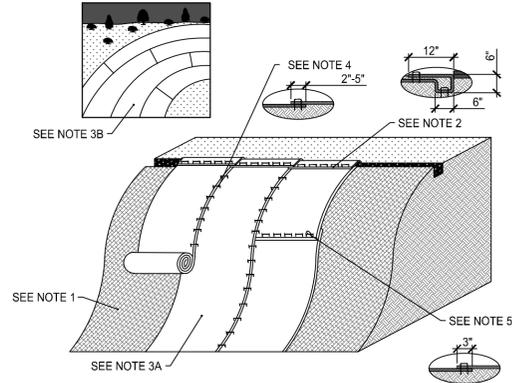
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DWG. No.

**WLD-6**



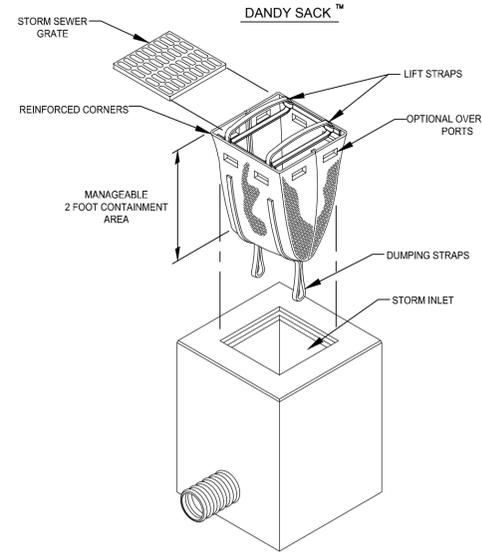
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
- FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
- PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

**1 SILT FENCE DETAIL**  
SCALE: N.T.S.



- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED. NOTE: WHEN USING CELL-O-SEED, DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" DEEP x 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UPSLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP's.
- ROLL THE RECP's (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2'-5" OVERLAP DEPENDING ON RECP's TYPE.
- CONSECUTIVE RECP's SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP's WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

**3 ROLLED EROSION CONTROL PRODUCTS**  
SCALE: N.T.S.



**DANDY SACK™**  
SPECIFICATIONS  
NOTE: THE DANDY SACK™ WILL BE MANUFACTURED IN THE U.S.A. FROM A WOVEN MONOFILAMENT FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

REGULAR FLOW DANDY SACK™ (BLACK)

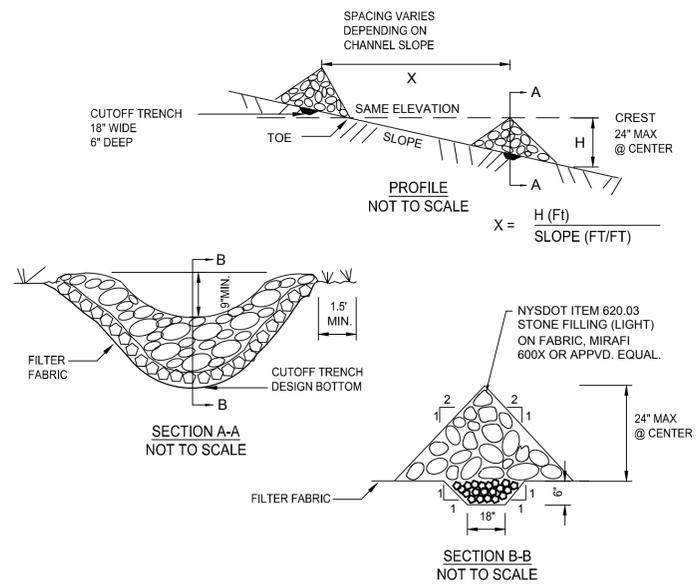
Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.78 (400) x 1.40 (315)
Grab Tensile Elongation	ASTM D 4632	%	15 x 15
Puncture Strength	ASTM D 4833	kN (lbs)	0.67 (150)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	5506 (800)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.87 (150) x 0.73 (165)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	2852 (70)
Permittivity	ASTM D 4491	Sec	0.90

HI-FLOW DANDY SACK™ (SAFETY ORANGE)

Mechanical Properties	Test Method	Units	MARV
Grab Tensile Strength	ASTM D 4632	kN (lbs)	1.62 (365) X 0.89 (200)
Grab Tensile Elongation	ASTM D 4632	%	24 X 10
Puncture Strength	ASTM D 4833	kN (lbs)	0.40 (90)
Mullen Burst Strength	ASTM D 3786	kPa (psi)	3097 (450)
Trapezoid Tear Strength	ASTM D 4533	kN (lbs)	0.51 (115) X 0.33 (75)
UV Resistance	ASTM D 4355	%	90
Apparent Opening Size	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
Flow Rate	ASTM D 4491	l/min/m <sup>2</sup> (gal/min/ft <sup>2</sup> )	5907 (145)
Permittivity	ASTM D 4491	Sec	2.1

\*Note: All Dandy Sacks™ can be ordered with optional oil absorbent pillows

**2 TEMPORARY DROP INLET PROTECTION**  
SCALE: N.T.S.



**CONSTRUCTION SPECIFICATIONS**

- STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
- SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
- EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
- PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
- ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE. MAXIMUM DRAINAGE AREA 2 ACRES.

**4 TEMPORARY CHECK DAM**  
SCALE: N.T.S.

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