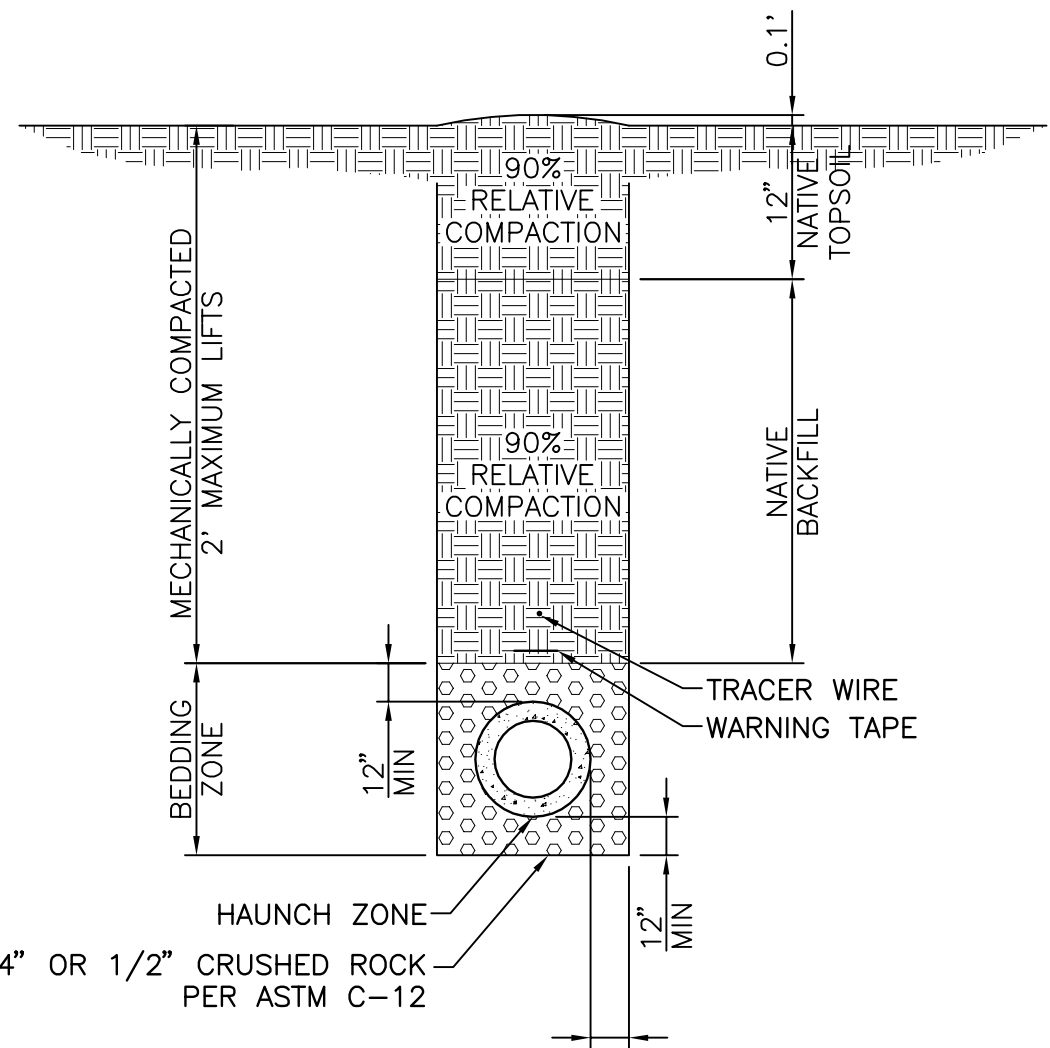


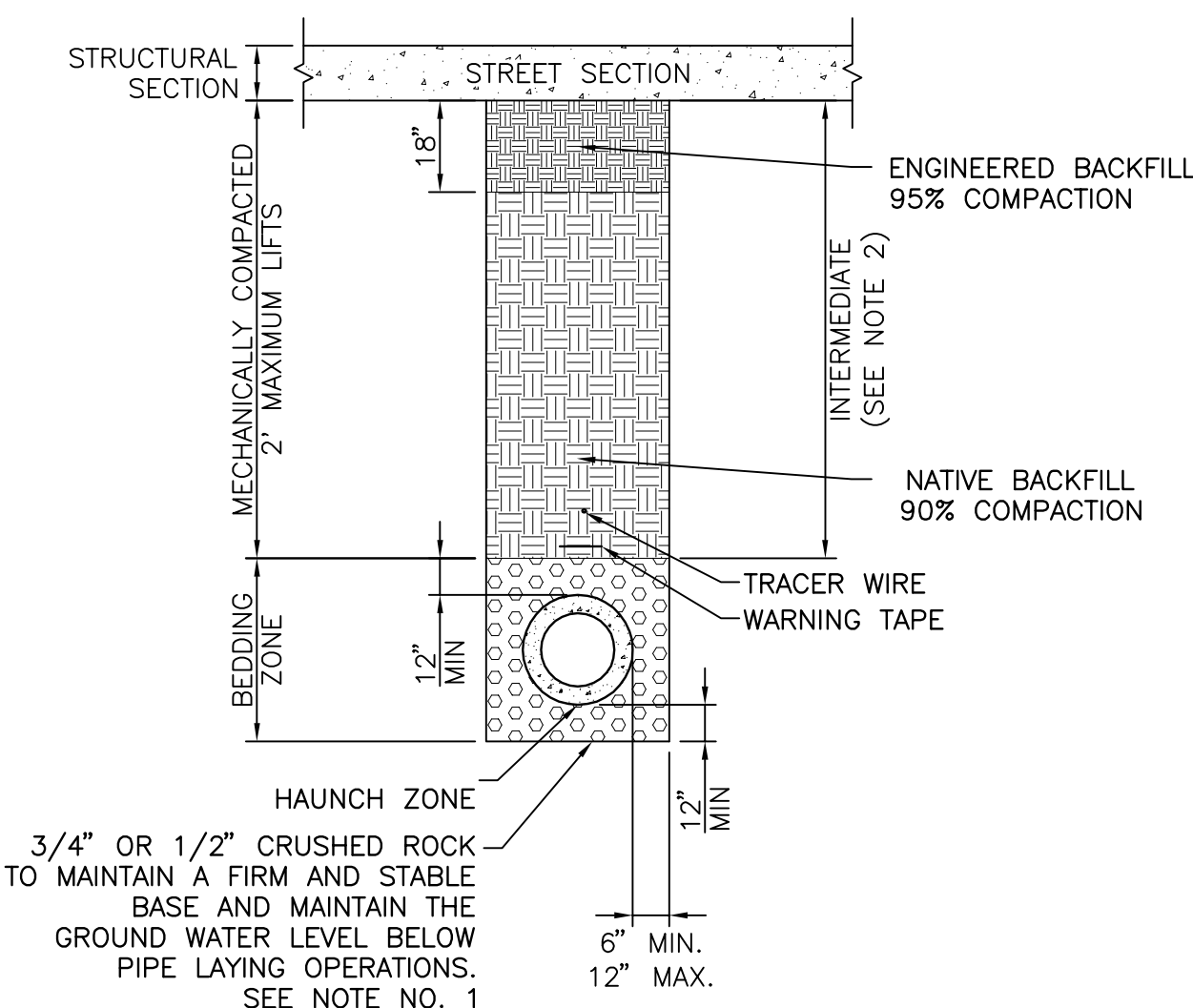
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P:\Projects\WUXU0039\Drawings\WUXU0039\_001\DWG\3-21-12 11:14:01 AM Greenes PH-B1\4-L-600 Drainage & Util Plan.dwg 3-21-12 11:14:01 AM



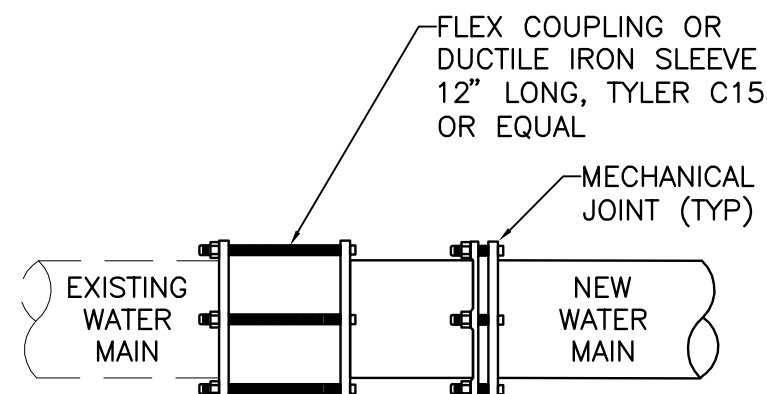
- NOTES:
1. BEDDING ZONE SHALL CONSIST OF 3/4" OR 1/2" CRUSHED ROCK PER ASTM C-12. CRUSHED ROCK SHALL BE PLACED IN A MANNER SUCH AS SHOVEL-SLICING SPADE OR SHOVEL RODDING TO INSURE CONSOLIDATION OF HAUNCH ZONE.
  2. INTERMEDIATE BACKFILL REQUIREMENTS SHALL BE AS REQUIRED BY THE SOILS ENGINEER.
  3. BEDDING FOR WATER PIPE SHALL BE SAND PER ASTM C33.

**B1 TRENCH BACKFILL (OUTSIDE PAVED AREAS)**  
NOT TO SCALE

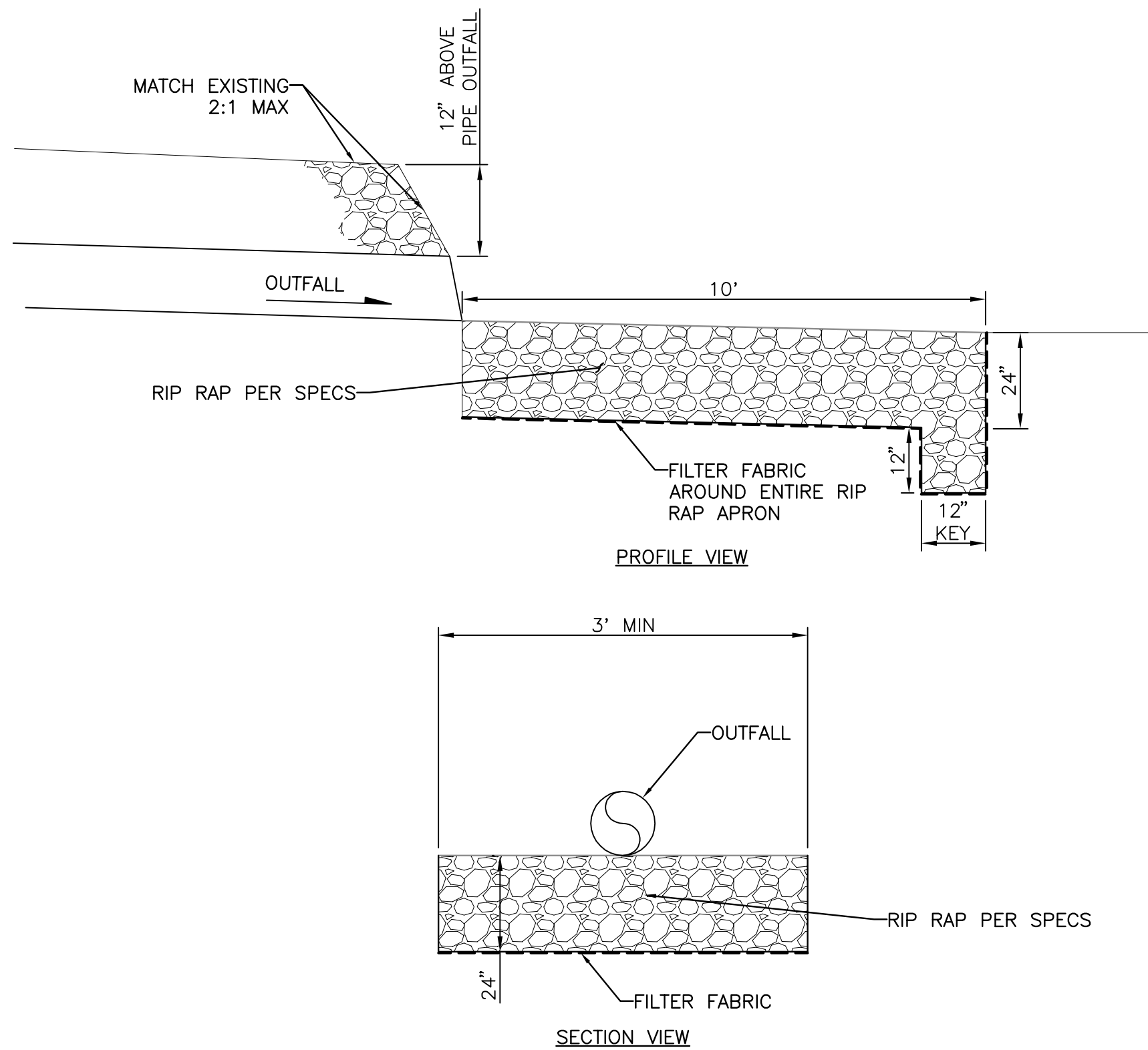


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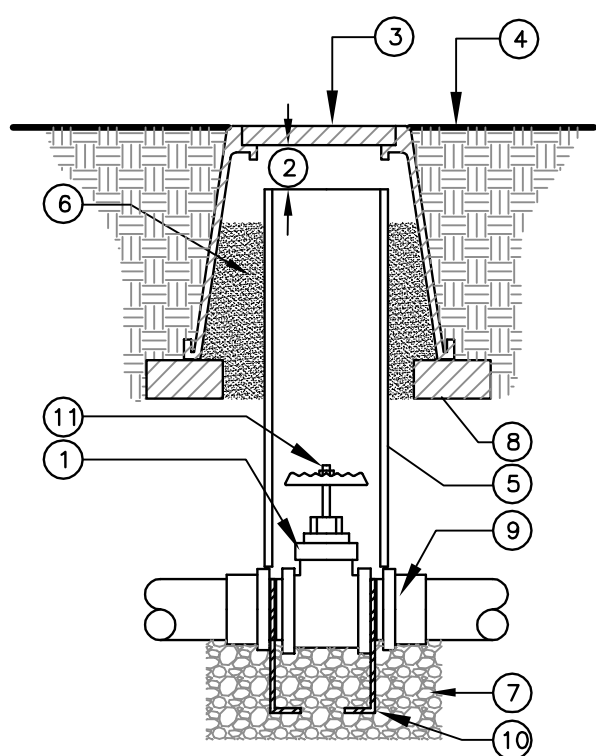
**B2 TRENCH BACKFILL (EXISTING AND NEW STREETS)**  
NOT TO SCALE



**B5 CONNECTION TO EXISTING WATER MAIN**  
NOT TO SCALE



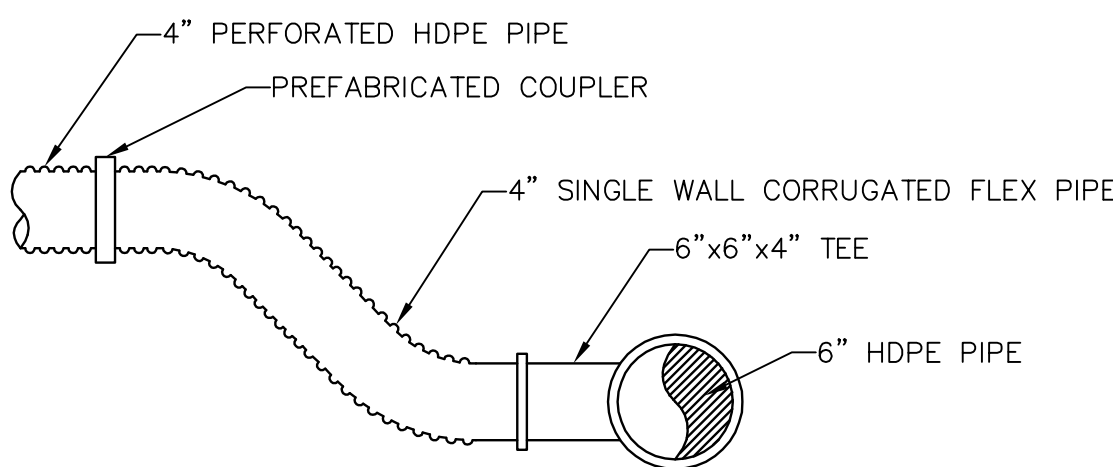
**B8 RIP RAP APRON**  
NOT TO SCALE



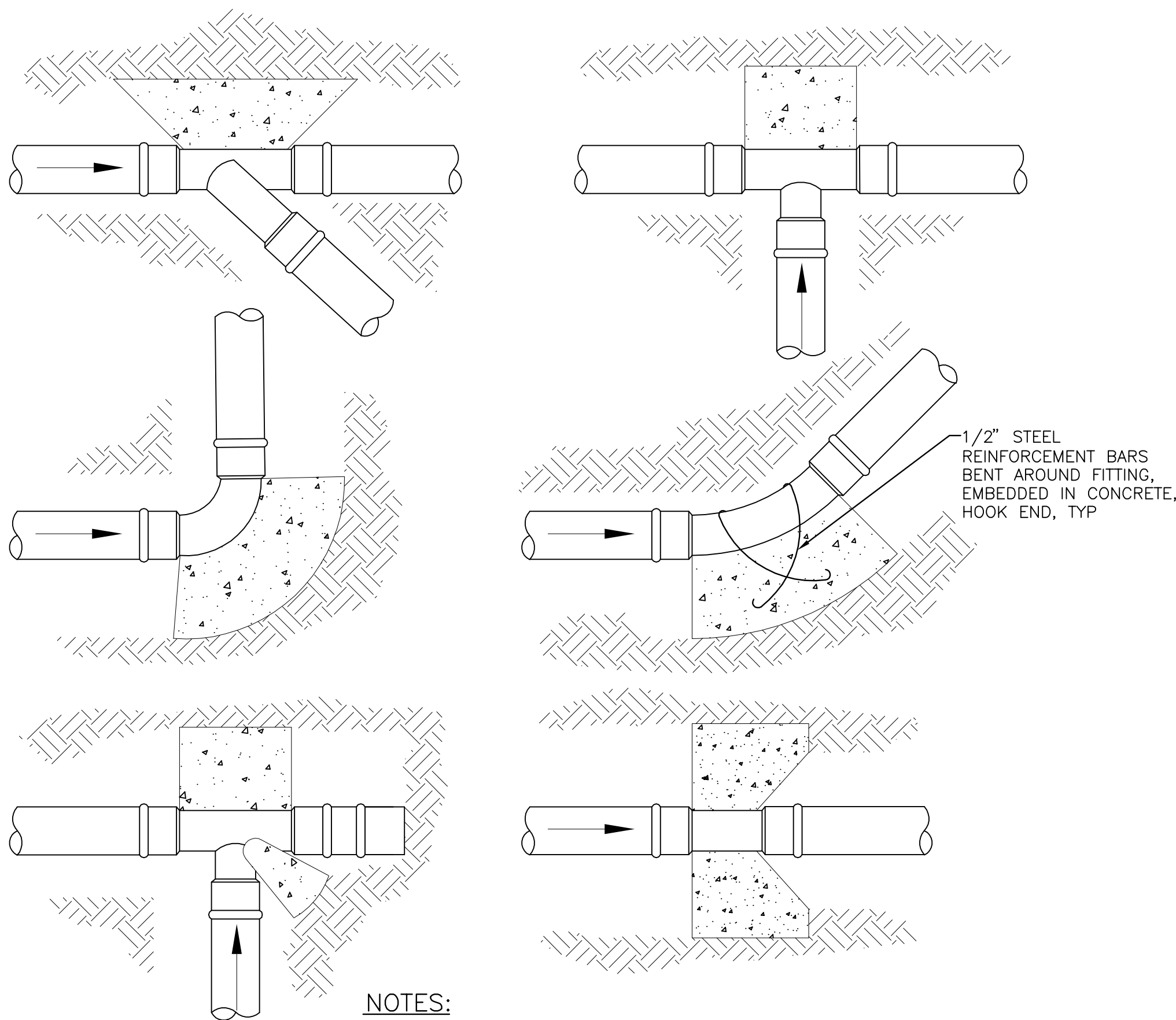
KEY NOTES:

1. GATE VALVES 3" AND LARGER SHALL BE EPOXY COATED WITH FLANGED ENDS WITH 2 INCH OPERATING NUT
2. ALLOW 3" BETWEEN VALVE BOX LID AND PIPE
3. 10" DIAMETER PLASTIC DUCTILE IRON OR CONCRETE ROUND VALVE BOX WITH BOLT LID DOWN. USE CONCRETE LID IN PAVED AREAS
4. FINISHED GRADE.
5. 6" DIAMETER SCH. 40 PVC PIPE. USE 8" DIAMETER FOR 6" HAND WHEELS.
6. PEA GRAVEL
7. 6" LAYER OF CLEAN PEA GRAVEL
8. COMMON BRICK; 4" MINIMUM
9. PVC FLANGES TYP. (2) PLACES
10. CONCRETE STABILIZER WITH #4 REBAR REINFORCEMENT FOR VALVES 4" OR LARGER ONLY
11. SQUARE OPERATING NUT FOR VALVES 3" OR LARGER

**D1 GATE VALVE**  
NOT TO SCALE



**E1 4" SINGLE WALL CORRUGATED PIPE CONNECTION DETAIL**  
NOT TO SCALE



NOTES:

1. DO NOT COVER JOINTS WITH CONCRETE.
2. SIZE THE THRUST BLOCKS AS SPECIFIED BY THE PIPE MANUFACTURER. IF NONE PROVIDED, SIZE THRUST BLOCK PER TABLE.
3. CONCRETE FOR THRUST BLOCKS PER SPECIFICATIONS.

TOTAL REQUIRED BEARING AREA — 200 PSI WATER PRESSURE				
NOMINAL PIPE DIAMETER (IN)	TOTAL BEARING AREA (SF)			
	90 DEGREE	45 DEGREE	22 1/2 DEGREE	11 1/2 DEGREE
4	3.84	2.08	1.06	0.53
6	7.93	4.29	2.19	1.13
8	13.65	7.38	3.77	1.89
10	20.53	11.11	5.66	2.85
12	29.03	15.71	8.01	4.02

TOTAL REQUIRED VOLUME — 200 PSI WATER PRESSURE				
NOMINAL PIPE DIAMETER (IN)	TOTAL REQUIRED VOLUME PER NFPA, CU YD			
	90 DEGREE	45 DEGREE	22 1/2 DEGREE	11 1/2 DEGREE
4	0.29	0.11	0.03	0.01
6	0.61	0.23	0.06	0.02
8	1.05	0.40	0.11	0.03
10	1.57	0.60	0.17	0.04
12	2.22	0.85	0.23	0.06

**F5 THRUST BLOCKS**  
NOT TO SCALE

CONSTRUCTION DOCUMENTS

			<b>Carter Burgess</b> A Wholly Owned Subsidiary of Jacobs Consultants in Architecture, Engineering, Planning, and the Environment Sacramento Office 180 Promenade Circle, Suite 300 Sacramento, California 95834 (916) 929-3323 Fax (916) 929-1772		<table><tr><td colspan="2">Subconsultant List</td></tr><tr><td>DREYFUSS &amp; BLACKFORD</td><td>3540 FOLSOM BOULEVARD, SACRAMENTO, CA 95816 (916) 453-1234</td></tr><tr><td>CAPITAL ENGINEERING CONSULTANTS</td><td>11020 SUN CENTER DRIVE, RANCHO CORDOVA, CA 95670 (916) 851-3500</td></tr><tr><td>ECOM ENGINEERING INC.</td><td>1796 TRIBUTE ROAD, SUITE 100 SACRAMENTO, CA (916) 641-5600</td></tr><tr><td>BUEHLER &amp; BUEHLER STRUCTURAL ENGINEERS, INC.</td><td>600 Q STREET, STE. 200, SACRAMENTO, CA. 95811 (916) 443-0303</td></tr><tr><td>W.L. BURLE ENGINEERS, PA</td><td>111 S. WALNUT STREET, GREENVILLE, MS 38702 (662) 332-2619</td></tr><tr><td>AQUA ENGINEERING, INC.</td><td>4803 INNOVATION DRIVE, FORT COLLINS, CO 80525 (970) 229-9668</td></tr><tr><td>THE SIERRA WEST GROUP, LLC</td><td>2730 GATEWAY OAKS DRIVE, STE. 110 SACRAMENTO, CA. 95833 (916) 925-4000</td></tr></table>		Subconsultant List		DREYFUSS & BLACKFORD	3540 FOLSOM BOULEVARD, SACRAMENTO, CA 95816 (916) 453-1234	CAPITAL ENGINEERING CONSULTANTS	11020 SUN CENTER DRIVE, RANCHO CORDOVA, CA 95670 (916) 851-3500	ECOM ENGINEERING INC.	1796 TRIBUTE ROAD, SUITE 100 SACRAMENTO, CA (916) 641-5600	BUEHLER & BUEHLER STRUCTURAL ENGINEERS, INC.	600 Q STREET, STE. 200, SACRAMENTO, CA. 95811 (916) 443-0303	W.L. BURLE ENGINEERS, PA	111 S. WALNUT STREET, GREENVILLE, MS 38702 (662) 332-2619	AQUA ENGINEERING, INC.	4803 INNOVATION DRIVE, FORT COLLINS, CO 80525 (970) 229-9668	THE SIERRA WEST GROUP, LLC	2730 GATEWAY OAKS DRIVE, STE. 110 SACRAMENTO, CA. 95833 (916) 925-4000			N ATIONAL C EMETERY A DMINISTRATION		Drawing Title DRAINAGE & UTILITIES DETAILS		Project Title LOUISIANA NATIONAL CEMETERY GRAVESITE EXPANSION PHASE 1B		Date: MARCH 22, 2012
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							Approved: Director, Office of Construction Management		Building Number		Checked MS	Drawn SGA	Project No. 870CM3023B																		
							Approved: Director, Project Management Service		Location LOUISIANA NATIONAL CEMETERY ZACHARY, LOUISIANA		DRAWING NO. L-603		Dwg. 38 of 137																		
Revisions		Date																													

CONSTRUCTION DOCUMENTS

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