

APPENDIX "A"

3. DUCTILE IRON FITTINGS C-153

Fittings shall be Ductile Iron and conform to ANSI/AWWA C153/A21.53, ANSI/AWWA C111/A21.11 and ANSI/AWWA C110/A21.10.

Fittings shall be Mechanical Joints or Push-on Joints, Tar coated (Seal), and Cement-mortar lined per ANSI A21.4 (AWWA/C104).

- PACIFIC STATES
- SIP INDUSTRIES
- SIGMA CORPORATION
- STAR PIPE PRODUCTS
- TYLER PIPE COMPANY
- UNION FOUNDRY
- U.S. PIPE
- ONE BOLT INC. (ASTM/A536 Restraint Joint Fittings)
- PIPELINE COMPONENTS, INC. (M.J. Compact Fittings – All Sizes; M.J. Full Body Fittings – All Sizes and Push On Fittings – 4" – 8")

4. FIRE HYDRANTS

Super Hydrant (6" x 1-4 x 2-2 ½"), EMWD Standard Drawings B-516 & B-517.

- AVK – Series 24 – Model 90 (24-90)
- CLOW - Model: El Rancho 2060 Bronze and Model: 860
- JONES - Model: J-3765 Bronze
- LONG BEACH IRON - Model: LBIW 615
- LONG BEACH IRON - Model: Series 130 Bronze (New Pattern)

Standard Hydrant (6" x 1-4 x 1-2 ½"), EMWD Standard Drawings B-362 & B-356

- AVK - Series 24 – Model 70 (24-70)
- CLOW - Model: El Rancho 2050 Bronze and Model: Ranger 850, F850, F860 Cast Iron
- JONES - Model: J-3700 Bronze, Model: J4040, J4060 Cast Iron
- LONG BEACH IRON - Model: Series 125 Bronze - New Pattern and Model: 611 East Bay

Intermediate Hydrant (6" x 2-2 ½"), EMWD Standard Drawings B-360 & B-354.

- CLOW - Model: Clow Rich Ranger 945
- JONES - Model: J-3720
- LONG BEACH IRON - Model: 601-613 Rich East Bay

5. FRAMES AND COVERS

Manhole Covers & Frames - 24" & 36" - Standard Drawing SB-61

- ALHAMBRA FOUNDRY - Model: A-1251 & A-1254
- EVERETT ENTERPRISES - Model: GTS - Pont-A-Mousson
- FAMEX - B&W Precast Construction - Model: F-1251 & F-1254
- NEENAH FOUNDRY - Model: R-1593
- RIVERSIDE FOUNDRY - Model #1254 and #1251
- SOUTHBAY FOUNDRY - Model: SBF-1251 & SBF-1254. Model SBF-1348 with Pick Hole for EMWD Std. Dwg. SB #30.
- NORFOLK CASTING CORP. – Model #NC-254
- STAR PIPE PRODUCTS – Model #1254

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Manhole Covers & Frames - Locking

- ALHAMBRA FOUNDRY - Model: A-1175
- FAMEX FOUNDRY - Model: F-1251
- NEENAH FOUNDRY - Model: R-1251
- SOUTHBAY FOUNDRY - Model: SBF-1251
- LONG BEACH IRON WORKS - Model RE85R3PD GTS
- Manhole Shafts, Cones, Flat Tops & Grade Rings - 24" - 48"
- AMERICAN PIPE
- ASSOCIATED CONCRETE
- B&W PRECAST CONSTRUCTION
- INLAND CONCRETE
- HOWARD ENTERPRISES
- MAR-CON PRODUCTS
- SAN DIEGO PRECAST
- SOUTHWEST CONCRETE

6. METERS

- a. Propeller
 - McCROMETER - Model: MG-900 Series, MW-900 Series and MW-500 Series.
- b. Magnetic (Sewer)
- c. Small Domestic
 - PRECISION METER COMPANY - Bronze Multi-Jett (Domestic Use)
- d. Compound Meters (cubic feet registers) (strainer required)
Sensus Tech, Inc.
 - Omni C-2 3" - 8" Model Series SRH (Absolute Encoded Register and Pulse Output)
- e. Turbine Meters (cubic feet registers) (strainer required)
Sensus Tech, Inc.
 - Omni T-2 2" - 10" Model Series "W" (Absolute Encoded Register and Pulse Output)
(Landscape Use Only)

7. METER BOXES

- a. Concrete or Polymer Concrete EMWD Standard Drawing B-590, B-591, B-342, B-344
 - ARMORCAST PRODUCTS - 12" x 20", A6000485SA (No. 37) 5/8" Polymer Concrete
13" x 24", A6001946PC-12 (No. 38) 1" Polymer Concrete
 - BROOKS PRODUCTS - 17" x 30", Model No. 66 and 30" x 48", Model No. 68
 - EISEL ENTERPRISES (H&C) - 17" x 30", Model # 666B and 30" x 48", Model # 68MB
 - J&R CONCRETE - 12"x20", Model No. 4½ (No. 37) Polymer Concrete
13"x24", Model W5 ¼ "P" (No. 38) Polymer Concrete
17" x 30", Model No. 6B
30" x 48", Model No. 8
 - ASSOCIATED CONCRETE PRODUCTS - 12" x 20", Cat #WPB111812C21 (#437) Polymer Concrete and Cat #WPC1118RLC11
13" x 24", Cat #WPB132412A21 (#438) Polymer Concrete and Cat #WPC1324RLC11

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b. Meter Boxes and Vaults - Cross Reference Chart

Valve Box Equals

<u>BROOKS PRODUCTS</u>	<u>EISEL ENTERPRISES</u>	<u>J&R CONCRETE PRODUCTS</u>
#1-RD	#1R-VB-CC	#1-R
#1-RT	#2VB-VC	#2-R
#3-RT	#10VB-VC	#3-R
#4-TT	#4TT VB-VC	#4-T
#1-SP	#1RVB-CC	#5-R

Utility Vault Equals

<u>SIZE</u>	<u>BROOKS</u>	<u>EISEL ENTERPRISES</u>	<u>J&R CONCRETE PRODUCTS</u>
4'x4'	#W-300 Series	#EM 4848	#4400-1W
4'x6'6"	#W-500 Series	#EM 4878	#4660-2W
4'6"x8'6"	#W-510 Series	#EM 60108	#4686-1W
4'x 7'9"	#W-600 Series	#EM 4896	#4700-1W
4'6"x10'6"	#W-610 Series	#EM 60132	#5106-1W
6'x8'	#W-680 Series	#EM 7296	n/a
			#5080W

c. Vaults

- BEST CONCRETE PRODUCTS - Model: MCT-4 and MCT-5
- ASSOCIATE CONCRETE - As approved by Engineering.
- ARMORCAST PRODUCTS - Polymer Concrete only.

d. Domestic Meter Box Lid Covers

- ARMORCAST PRODUCTS - Model # A6000484-H1
- JR CONCRETE - Model # PC 412 QRP

8. MISCELLANEOUS BRASS

a. Corp Stops

- FORD - F-1000 Series, F-600 Series, FB700 Series
- JONES - J-3401 Series, J-1500 Series, J-1505 Series, J-1929 Series, J-1930 Series,
- J-1935 Series
- McDONALD - 4701-T, 4701-22 and 4701
- MUELLER - H-15000 Series, H-15008 Series, H-15000(w/110), H-15013 (w/IPT),
- H-15023 (w/IPT) and H-15008

b. Curb Stops

- FORD - ZV-3W
- JONES - J-182
- MCDONALD - 10621S
- MUELLER - H-11026
- PUBCO - 2110

c. Elbows

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d. Angle Stops

- FORD - KY43-444W, FV23-666W, FV23-777W, FV43-666W, FV43-777W
- JONES - J-4201, J-1973W, J-1975W
- - MUELLER - H-14258, H-14277, Mueller (110)
- - McDONALD - 4602-T and 4602-22

e. Brass Saddles

*Service Saddles for A.C. Pipe - 4" thru 12"

- JONES - Model: J-975, J-979

*Service Saddles for C-900 Pipe - 4" thru 12"

- JONES - Model: J-996R, J-996
- McDONALD - Model: 3805
- MUELLER - Model: H-13000
- ROMAC - Model: B-101, B-202
- FORD - Model S902 & S912 (Style B2 piece bolted design)
- CAMBRIDGE BRASS - #800 series hinged bronze saddle - 3/4" - 2"

*Service Saddles for Ductile Iron Pipe - 4" thru 36"

- - FORD - Model: F-101, F-202
- - ROMAC - Model: Romac 101, Romac 202
- - SMITH-BLAIR - Model: Rockwell 311, Rockwell 313

*Tapping Saddles for A.C., C-900, and Ductile Iron Pipe. Size 4" - 24"

- - FORD - Model: Fast-Sleeve 18-8 All Stainless Steel
- - JCM IND. - Model: JCM-432 All Stainless Steel, JCM-452 All Stainless Steel 14" & above.
- - POWERSEAL PRODUCTS - Model: 3490 All Stainless Steel
- - ROMAC - Model: SST 18-8 All Stainless Steel
- - SMITH BLAIR INC. - #663 (4" - 24") AND #665 (6" - 12")

*NOTE: Size 10" & above require double strap.

9. PIPE

a. Cement Mortar Lined & Coated Pipe

- AMERON CONCRETE PIPE
- CONTINENTAL PIPE
- NORTHWEST PIPE & CASING
- ROSCOE-MOSS
- MID AMERICA PIPE

b. Ductile Iron Pipe - EMWD Spec. 15057 - AWWA C-600, AWWA C-151, AWWA C-150, & AWWA C-104

- PACIFIC STATES
- U.S. PIPE

c. High Density Polyethylene Pipe

J-M Manufacturing Company, Inc.
Chevron Phillips Chemical Company

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d. Polyvinyl Chloride Pipe C-900/C-905

4" - 12" - C-900, EMWD Spec. 02768 & 15064

14" - 36" - C-905, EMWD Spec. 15064

- CARLON PIPE - Carlon
- CERTAIN-TEED CORP.
- JOHN-MANSVILLE COMPANY - JM
- PW PIPE
- VINYL-TECH - White Knight
- DIAMOND PLASTICS CORP. - 4" - 24"

e. PVC Pipe (Sewer) - Note: See 1.a (Fittings and pipe shall be from the same manufacturer when they make both. If only pipe is made, fittings from 1.a shall be used).

- ARMCO PIPE - Contech
- CARLON PIPE
- CERTAIN-TEED CORP.
- P.W. PIPE
- JOHNS-MANSVILLE COMPANY
- VINYL-TECH - White Knight
- DIAMOND PLASTICS CORP. - SDR 35 PVC
- SYRACO INC - SDR 35 PVC
- LAMSON VYLON - 21" thru 48"

f. PVC Sewer Fittings (4" - 8"), gravity use only

- GPK
- MULTI-FITTINGS CORP.
- JOHNS-MANSVILLE CO.

g. Reinforced Concrete Pipe (Sewer)

- AMERON
- HYDRO CONDUIT
- RIALTO PIPE

h. Vitrified Clay Pipe (Sewer) - Note: Fittings to be same as pipe.

- BUILDING PRODUCTS CO. (MCP) - JCP Compression Joints
- GLADDING McBEAN CO. - "Speed-Seal"
- MISSION CLAY PRODUCTS - "Band Seal"
- PACIFIC CLAY PRODUCTS - "Wedgelock"

10. PRECAST MANHOLES - Manhole Shafts, Cones, Flat Tops & Grade Rings 24" - 48"

- AMERICAN PIPE
- AMERICAN HIGHWAY PRODUCTS
- ASSOCIATED CONCRETE
- B&W PRECAST CONSTRUCTION
- HOWARD ENTERPRISES
- INLAND CONCRETE
- MAR-CON PRODUCTS
- SAN DIEGO PRECAST
- SOUTHWEST CONCRETE

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11. RESTRAINING JOINT DEVICES

- EBBA IRON – 2000 PV Series - 4" - 24" (C-900 & C-905)
 - 1100 Series - 3" - 48"
 - 2100 Series - 4" - 12" (C-900)
 - 2800 Series - 14" - 36" (C-905)
- NAPPCO/SIGMA CORP. - Model: PV-LOK Model PVM - 2" - 12"
 - PV-LOK Model PVP - 2" - 12"
 - ONE LOK - 4" - 36"
- U.S. PIPE - Field Lok Gaskets - 4" - 12"
- FORD - Uni-flange Series No. 200, 900, 1300 & 1400
 - Uni-flange Series 1500 restraint joint for PVC pipe - 4" - 12"
 - Uni-flange Series 1390 restraint joint for PVC pipe
- ROMAC INDUSTRIES –
 - Grip Ring - 4" - 12"
 - RomaGrip PVC Restrainer 3" - 24".
- STAR - Allgrip 3600 - 4" - 12" for C900 and ductile iron pipe
 - Series 1000 - 4" - 12" for C-900
 - Series 1100 - 4" - 12" for C-900/C-905
 - PVC Grip 3500 - 4" - 16" for C-900
 - Stargrip 3000 - 4" - 36" for D.I.P.

12. VALVES

a. Gate Valves

Bronze Threaded - EMWD Standard Drawing B-590 thru B-344B
NRS - 1/2"

- HAMMOND VALVE COMPANY - Model: 606-125 psi
- MILWAUKEE VALVE COMPANY - Model: 105-200 psi
- STOCKHAM VALVE COMPANY - Model: B-103-200 psi

NRS - 3/4" - 1" - *To be used in customer side of meter installation only. EMWD Standard Drawing B-591

- AMERICAN VALVE COMPANY - Model: Milano, M-300
- FAIRBANKS VALVE - Model: 125-S 250
- *F&F VALVE - Model: 710-Brass
- *KITZ VALVE - Code No. 27 Fig. AKH
- MILWAUKEE VALVE - Model: 1105M & 105
- NIBCO VALVE - Model: T-113 Domestic
- *PIONEER ENTERPRISES - Model: GTI-0102 & 0103
- RED AND WHITE VALVE - Model: B-206
- STOCKHAM VALVE - Model: B-103
- WOLVERINE VALVE - Model: 50293

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a. Gate Valves *(continued)*

NRS 1-1/2" - 2"

- AMERICAN VALVE - Model: 3-F Bronze
- MILWAUKEE VALVE - Model: 1105M & 105
- NIBCO VALVE - Model: T-113, Domestic
- STOCKHAM VALVE - Model: B-103

Cast Iron with 2" Operating Nut - 2" Blow-offs

- IOWA VALVE - Model: List 14
- MUELLER VALVE - Model: A-2380-8 and A-2380-6
- CLOW VALVE
- RENSSSELSER VALVE - Model: Ludlow, List 13A
- STOCKHAM VALVE

IBBM - Horizontal, Double-Disc IBBM with By-Pass - 24"

- AMERICAN FLOW SYSTEMS - Model: A.D. "50-Line"
- CLOW - Model: Clow F5070
- MUELLER VALVE COMPANY - Model: A-2380-6

Resilient Seat - Flanged

R.S.G.V. - AWWA C-509, AWWA C-515 and AWWA C-550.

To meet EMWD Spec. 15102, Size 4" - 36"

- AMERICAN AVK COMPANY - Model: 25 AVK
- AMERICAN FLOW CONTROL COMPANY - Model: AFC-500 for 4"-12" or Series 2500 for 4"-36"
- ACIPCO - Model: 82-200W-77785-7
- CLOW - Model: Clow RW, Class 150
- KENNEDY - Model: Kennedy RS, Class 150
- M&H - Model: M&H A-4067
- MUELLER COMPANY - Model: A-2360
- STOCKHAM COMPANY - Model: Stockham G700-0
- TYLER - DRS 250
- WATEROUS COMPANY - Model: Waterous #AFC-500
- U.S. PIPE - Model: Metroseal, RS Class 150

b. Butterfly Valves

EMWD Spec. 15103 - Class 150, AWWA C-504

- AMERICAN FLOW CONTROL - Model: A.D. 150, Size 4" - 48"
- CLOW - Model: Clow BFV, Class 150, Size 4" - 72"
- DEZURIK COMPANY - Model: Dezurik BFV, Class 150, Size 4" - 20"
- KENNEDY (Mueller Co.) - Model: Kennedy BFV, Class 150, Size 4" - 72"
- CRISPIN (Previously CMB Industries) - K-FLO Model 500 Series, 3"-20" and K-FLO 47 Series, 24" - 48"
- KUBOTA - Model: Kubota BFV, Class 150, Size 24" - 48"
- M&H COMPANY - Model: 4500, Class 150, Size 4" - 24"
Model: 1450, Class 150B, Size 30" - 48"
- MUELLER COMPANY - Model: Mueller Lineseal III, Size 4" - 24"
Model: Mueller Lineseal III, Size 30" - 48" (with Ductile Iron Disc)

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- PRATT VALVE COMPANY -

Model: Pratt Ground Hog BFV. Class 150 with no power operation allowed.

Size 4" - 12"

Model: Pratt Ground Hog with power operation allowed with knowledge of turns.

Size 14" - 48"

Model: Pratt Triton XR-70 with handwheel. Size 24" - 48"

Class 250

- DEZURIK - Model: Dezurik

- CRISPIN (Previously CMB Industries) - Model: K-FLO Model 500 series

- PRATT/WATTS - Model: H.P. 250

Coatings - All valves larger than 12" in diameter shall have all AWWA C-550 Ferrous parts epoxy coated thermosetting.

c. Check Valves - Bronze Threaded

Bronze Swing Check Valve - Threaded 3/4" thru 2"

- HAMMOND VALVE CO. - Model No. 946 Bronze

- MILWAUKEE VALVE CO. - Model No. 510 & 511

- STOCKHAM VALVE CO. - Model No. B-320

d. Check Valves Flanged

Check valves shall be single disc, swing type, with spring and lever when so specified on the Bidding Sheet. EMWD Spec. No. 15111

- APCO VALVE CO.

- CLOW CO.

- KENNEDY VALVE CO.

- M&H CO.

- MUELLER CO.

- STOCKHAM CO.

e. Ball Valves - AWWA C507

- LUNKENHEIMER COMPANY

- MARPAC, INC.

- VALVE TECHNOLOGY CO. - Models D-7410-7420 and D7421-7432 Series

Meter Ball Valves - with Handles

- A.Y. MCDONALD - Model 6101 MWH 3/4" and 1"

- THE FORD METER BOX CO., INC. - Model B13-332 W - 3/4"
Model B13-444 - 1"

- JAMES JONES - Model J1908W - 3/4" and 1"

f. Detector Checks

Single Detector Check - Less By-Pass, EMWD Standard Drawing B-389, B-390, B-573 (4" - 10")

- AMES - Model: A113-225, A113-226

- Model: A113-227, A113-228

- Model: 1000 Epoxy Coated

- FEBCO - Model: 906-UL

- GLOBE - Model: B

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- HERSEY - Model: EDC III
- KENNEDY - Model: Grinnell 1371-G
- PRATT-WATTS - Model: 07F-UL/FM approved.

Double Check Detector Assemblies - EMWD Standard Drawing B-657 (3/4" - 10")
**PER LATEST EDITION OF USC - FOUNDATION FOR CROSS-CONNECTION CONTROL
AND HYDRAULIC RESEARCH "LIST OF APPROVED BACKFLOW PREVENTION
ASSEMBLIES."**

Reduced Pressure Detector Assemblies

- AMES - Model: 5000 RPDA
- FEBCO - Model: 826YD
- HERSEY - Model: 6CM-RPDA
- PRATT-WATTS - Model: 909DDCM2, 909DDC

g. Reduced Pressure Assemblies

(3/4" - 10") - For High Hazard Service

**PER LATEST EDITION OF USC - FOUNDATION FOR CROSS-CONNECTION CONTROL
AND HYDRAULIC RESEARCH "LIST OF APPROVED BACKFLOW PREVENTION
ASSEMBLIES."**

(2 1/2" - 10") - For Automatic Fire Sprinkler Systems containing Toxic Substances

- AMES - Model: 5000 RPDA
- FEBCO - Model: 826YD
- HERSEY - Model: 6CM RPDA
- PRATT-WATTS - Model: 909 Series

h. Double Check Assemblies

(3/4" - 10") - For Non-Toxic Service

**PER LATEST EDITION OF USC - FOUNDATION FOR CROSS-CONNECTION CONTROL
AND HYDRAULIC RESEARCH "LIST OF APPROVED BACKFLOW PREVENTION
ASSEMBLIES."**

(4" - 10") - For Automatic Sprinkler Systems containing Non-Toxic Substance

- AMES - Model: 3000 DCDA, 3000 DCDC
- CLA-VAL - Model: 16
- FEBCO - Model: 806 YD
- MUELLER - Model: Hersey DDCII
- WATTS - Model: 709DDC
- WILKINS - Model: DCDA

Double Check Detector Assemblies - EMWD Standard Drawing B-657 (3/4" - 10")
**PER LATEST EDITION OF USC - FOUNDATION FOR CROSS-CONNECTION CONTROL
AND HYDRAULIC RESEARCH "LIST OF APPROVED BACKFLOW PREVENTION
ASSEMBLIES."**

i. Plug Valves

(3" - 24") - Ballcentric

- HENRY PRATT CO. - Pratt Keystone - 580 Series, #898

*Other Manufacturers as Approved by Engineering

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13. ZINC CAPS

- RELIANCE ZINC CAPS
- MARS ZINC CAPS

14. WIRING

a. Telemetry Cable

ALCATEL DEDW - Telemetry wire, Double jacketed, filled polyethylene jacket for burial 5-mil copper shield, solid strand 6-pair, 19 gauge copper wire Alcatel DEDW.
(Approximately 5,000 ft. Rolls)

Distributors - CLIFFORD OF VERMONT
Phone No. 1-800-451-4381

b. Telemetry Hardware

CHARLES INDUSTRIES - Pedestal Model No. CPLM8-1/GTE
ENTRELEC - Terminal Model No. M4/6.SNB 0115686.13
Terminal End Stop Model No. 114836.00
DIN Rail Model No. 101598.26
3M - Splice Kit Model No. 72-N2

Distributors - CHARLES INDUSTRIES
Phone No. (847) 806-6300

ESD ELECTRICAL
Phone No. (760) 747-2211

ROYAL WHOLESALE ELECTRIC
Phone No. (951) 683-6625

- c. Locating Wire - EMWD Std. Drawing B-656#14-1 UF Black Copper- Insulated Locating Wire
- d. Insulated CP Test Connections & Blow-Off Connections EMWD Std. Drawing B-582 & B-379
#4 HMW - Pe (High Molecular Wt-Polyethylene Coated) Stranded Wire Black #12 TW - Solid Wire - Green or Yellow
- e. Variable Frequency Drive

15. VARIABLE FREQUENCY DRIVES (VFD's)

Variable Frequency Drives

- ABB - Model ACS 600 Direct Torque Control up to 350 hp (Western Switch).
- ALLEN BRADLEY
- TOSHIBA

APPENDIX 2

EVMWD SPECIFICATIONS

BOOK 3

ELSINORE VALLEY MUNICIPAL WATER DISTRICT

8" AND 12" WATERLINES
AND APPURTENANCES

ELSINORE VALLEY MUNICIPAL WATER DISTRICT
APPROVED MATERIALS LIST
AND
UTILITY INTERRUPTION REQUEST

**ELSINORE VALLEY MUNICIPAL WATER DISTRICT
APPROVED MATERIALS LIST
FOR USE ON NEW CONSTRUCTION OF
POTABLE AND RECYCLED WATER FACILITIES**

<u>ITEMS</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>
ADAPTER, FLANGE COUPLING	4" and larger, mechanical x flange. Steel or Ductile Iron construction without anchor pins, epoxy coated, 304 stainless steel bolts and nuts	Ford FFCA Style Romac FCA501, FC400 Smith-Blair 912, 913 Uni-Flange
AIR/VACUUM VALVE ENCLOSURE	12 Gauge Steel, Clam Shell Hinged Construction, Use Enclosure Size As Indicated Below. 1" and 2" Air Vac Sizes Use: 16" x 24" 4" and 6" Air Vac Sizes Use: 24" x 36" Powder Polyester Coated: Safety Yellow for Potable Water OSHA Safety Purple for Recycled Water	Pipeline Products-ELSI 1624, ELSI 2436
BACKFLOW PREVENTER	Reduced Pressure Principal Type Assemblies as Approved by the State of California, Department of health Services.	Febco 826 YD, (RPDA) Febco 860, 880V, 860V, 880 Febco 856, 831, 825YA, 825Y Watts 709 DCD AOSY Wilkins 950 DA, 450 DA, 975XLSE, 975XL, 975XLV, 375, 975, 375DA, 975DA
CASING END SEAL	1/4" Thick Styrene Butadiene Rubber Sheet End Seal. Use 1" Wide Stainless Steel Bands.	Advances Products & Systems Cascade Water Works Calpico
CASING SPACER	Polyethylene Casing Spacer, Center Restrained, Position Type with PVC Liner and Non- metallic Anti-friction Runners	Advances Products & Systems Cascade Water Works Calpico
COATING, MASTIC	Cold Applied Coal Tar or Epoxy Based Single Component, Self-Priming, Heavy duty Protective Exterior Coating for Buried Metal	Carboline Bitumastic 50 Devco Devtar 5A Tnemec HB Tnemecol 46- 465, HB Theme-Tar 46H-413

**ELSINORE VALLEY MUNICIPAL WATER DISTRICT
APPROVED MATERIALS LIST
FOR USE ON NEW CONSTRUCTION OF
POTABLE AND RECYCLED WATER FACILITIES**

<u>ITEMS</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>
COATING, WATERPROOF	Epoxy Resin Based Cementitious Trowel Grade Protective Waterproofing for Concrete	Sika Top Seal 107 STO CR 241
COATINGS, WELDED STEEL RESERVOIR	Interior Prime Coat	Tnemec Pota-Pox 80, Red Devoe Bar-Rust 233H Stripe Coat - Buff Primer Coat - White
	Interior Intermediate Coat	Tnemec Pota-Pox 80, Beige Devoe Bar-Rust 233H Stripe Coat - White Intermediate Coat - Buff
	Interior Finish Coat	Tnemec Pota-Pox, White Devoe Bar-Rust 233H, White
	Exterior Prime Coat	Tnemec Series 91 Hydro-Zinc Bar-Rust 233H
	Intermediate Coat, Color Selected by District	Tnemec Hi-Build Epoxiline Series 66 Devthane 378H
	Finish Coat, Color Selected by District	Tnemec Endura-Shield III Devthane 378H
CORPORATION STOP, MIP X COMPRESSION	Bronze MIP x Compression thread Ball Valve (T-Head only) 1" and 2" Full Opening	Ford FI100-4, FI100-7 Jones J-1935 A. Y. McDonald Mueller
COUPLING	Three Part Compression Coupling (Both Ends) for 1" and 2" Copper Pipe	Ford C44-G Series A. Y. McDonald Jones Smith Blair
COUPLING, C900 PVC DEFLECTION	4" through 12" Solid PVC for Obtaining Deflection Only. Provides 5 Degree Maximum Deflection	Any AWWA Compliant

**ELSINORE VALLEY MUNICIPAL WATER DISTRICT
APPROVED MATERIALS LIST
FOR USE ON NEW CONSTRUCTION OF
POTABLE AND RECYCLED WATER FACILITIES**

<u>ITEMS</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>
COUPLING, C900 PVC CLOSURE OR REPAIR	4" through 12" Solid PVC for Closure or Repair	Multi Certainteed Ipex Any AWWA Compliant
COUPLING, C905 PVC CLOSURE OR REPAIR	16" through 36" Solid PVC for Closure or Repair	Multi Certainteed Ipex Nyloplast Any AWWA Compliant
COUPLING, INSULATED, COMPRESSION X	Three Part Compression Insulated Coupling (Both Ends) for 1" Copper Pipe	A. Y. McDonald 4755DBT Mueller N-35403 Ford Jones
COMPRESSION COUPLING, STRAIGHT FLEXIBLE	4" and Larger, Ductile Iron Construction, Slip x Slip, Epoxy Coated with 304 or 316 Stainless Steel Bolts and Nuts. For Use on PVC, DI, or Steel Pipe.	Ford FCI (DI) Romac 501 (DI) Smith-Blair 411(Stl.), 441 (DI)
COUPLING, TRANSITION FLEXIBLE	4" and Larger, Ductile Iron Construction, Slip x Slip, Epoxy Coated with 304 or 316 Stainless Steel Bolts and Nuts. For Use on AC, PVC, DI, or Steel Pipe	Ford FC2A (DI) Romac 501 (DI) Smith-Blair 413 (Stl.), 411 (DI)
DISMANTLING JOINT	4" and Larger Stell Spigot ASTM A283 Grade C, Flange Adaptor Steel or Ductile Iron ASTM A536 Grade 65-45-12.	Viking Johnson
ELL, FIRE HYDRANT BURY, DUCTILE IRON	6" Ductile Iron Bury Ells, Long Radius, Flg x MJ/PO	Clow South Bay Foundry Star Pipe Products Sigma
ELL, COMPRESSION TYPE	1" and 2" Bronze Ell Compression x Compression for Copper Pipe	Ford L44-Q Series Jones J-2611

STANDARD SPECIFICATIONS
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APPROVED MATERIALS LIST
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**ELSINORE VALLEY MUNICIPAL WATER DISTRICT
APPROVED MATERIALS LIST
FOR USE ON NEW CONSTRUCTION OF
POTABLE AND RECYCLED WATER FACILITIES**

<u>ITEMS</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>
FIRE HYDRANT, 150 PSI	6" Standard 150 PSI Wet Barrel or Bronze Fire Hydrant with Six-hole Bolt Pattern.	Jones J3700, J3765
FITTING, DUCTILE IRON	Flanged, Mechanical, Joint or Push-on Tees, Bends, Crosses, Reducers, Adapters, etc., for Water Lines 4" and Larger. Manufactured per AWWA C100, C111, C153. Double Cement Mortar Lines.	Pipeline Components Tyler U.S. Pipe Star Pipe Products Sigma
GASKET	1/8" Thick Full Ring Gasket Face Aramid Fiber Bound with Nitrile. No Asbestos Content	Calpico Johns-Manville Tripac 5000 APS
GASKET, RUBBER RING	1/8" Thick, Rubber Ring Type, 250 PSI Maximum. For 4 " Through 24" Pipe Flanges	Calpico Johns-Manville US Pipe APS
JOINT RESTRAINT ASSEMBLY	360 Degree Wedge Type Restraint System for Ductile Iron, C900 PVC, and steel Pipe, Size 6" through 24".	Ford Uniflange 1300 Series Ford Uniflange 1500 Series Romac EBAA Iron Viking Johnson
LUBRICANT, PIPE GASKET	Rubber Gasket Pipe Lubricant for Use on PVC or Ductile Iron Pipe Joints, NSF Listing Required, and AWWA Compliant	EBAA Iron
METER BOX	19" x 25 3/4" Plastic Polymer or Concrete Meter Box and Cover for 1" Water Services.	Carson Industries 1320B-15D J & R Concrete Applied Engineering Products
METER BOX	27 1/4" x 40 1/2" Plastic Polymer or Concrete Meter Box with 2-Piece Lid for 2" and 3" Water Services.	Carson Industries 1730B-P15L J & R Concrete Applied Engineering Products

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**ELSINORE VALLEY MUNICIPAL WATER DISTRICT
APPROVED MATERIALS LIST
FOR USE ON NEW CONSTRUCTION OF
POTABLE AND RECYCLED WATER FACILITIES**

<u>ITEMS</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>
METER BOX, TRAFFIC LID	1"	J&R Concrete
REINFORCED FIBERGLASS	2"	
METER STOP, ANGLE COMPRESSION X METER	1" Bronze Angle Meter Stop (Ball Valve) with 90 Degree Lock Wing, Inlet 110 Style Compression x Outlet Swivel Meter Nut	Ford BA43-444W-Q Jones J-1963W Mueller B24258-1 A. Y. McDonald
METER STOP, ANGLE COMPRESSION X METER	2" Bronze Angle Meter Stop (Ball Valve) with 90 Degree Lock Wing, Inlet 110 Style Compression x Flange	Ford BFA43-777W-Q Jones J-1975WSG Mueller B-24276 A. Y. McDonald
METER, WATER		District to Supply
MORTAR, REPAIR	Two Component, Lot Shrinkage, Cement Based with High Compressive and Bonding Strength	Sika top 122,123 STO CR 735, CR 740
PIPE, COPPER TUBING	1" and 2" type K Soft Seamless Tubing	Halstead Lee Mueller
PIPE, DUCTILE IRON	For Water Lines 4" and Larger Manufactured per AWWA C111, C115, C150, C151. Double Cement Mortar Lined.	American Pipe Pacific States U.S. Pipe Tyler Pipe
PIPE, PVC C900	For Water Lines 4" through 12" and 8" Gate Wells. Class 150 Minimum, and any AWWA Compliant.	J-M Pacific Western Vinyletech
PIPE, PVC C905	For Water Lines 16" and Larger. Class 165 Minimum and any AWWA Compliant.	

**ELSINORE VALLEY MUNICIPAL WATER DISTRICT
APPROVED MATERIALS LIST
FOR USE ON NEW CONSTRUCTION OF
POTABLE AND RECYCLED WATER FACILITIES**

<u>ITEMS</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>
PIPE, STEEL CEMENT MORTAR LINED AND COATED (CML&C)	Steel Cylinder, Per A WW A M11 and Section 15061. 10 Gage Minimum Wall Thickness (special approval required for other fabricators based on experience and quality history).	Ameron Northwest
POLYETHYLENE ENCASEMENT	8-mil Thick Polyethylene Encasement Sleeve for Ductile Iron Pipe (DIP) per AWWA C 105 and Recycled PVC, CML&C, or DIP Non-Purple Water Pipe.	PE encasement by US Pipe Blue for Potable Water Purple for Recycled Water
PUMP, VERTICAL TURBINE		ITT Goulds Pumps Peerless Pump Company Peabody Floway
SERVICE SADDLE FOR ACP	Cast Brass ASTM B62 Body with Silicone Bronze Double or Stainless Steel Straps, Outlet Sizes 1" and 2"	Ford 202B Jones J-979 Smith-Blair 323 Mueller
SERVICE SADDLE FOR PVC C900 AND DI PIPE	Bronze or Brass Saddle with Stainless Steel four Bolt Strap(s), Thread Outlet for Sizes 1" and 2" for Pipe Sizes 4" through 12"	Ford 202BS Jones J-969 Mueller BR2S Series Smith Blair Romac 202BS AY McDonald 3846
SERVICE SADDLE FOR PVC C905 AND DI PIPE	Stainless Steel Saddle with Stained Steel Six Bolt Strap, Thread Outlet for Sizes 1" and 2" for Pipe Sizes 16" and Larger	Ford FS202 Romac 305
TAPE, WARNING/ IDENTIFICATION	6" Wide, Warning/Identification (Non-Metallic) Marking Tape for Buried Facilities.	Calpico, Type 1 Line-Tec, Type B Terra Tape, Standard 250
TAPPING SLEEVE FOR ACP, CI, DI, AND PVC PIPE	Fabricated Stainless Steel Tapping Sleeve for 4" through 12" Hot Taps. Stainless Steel Bolts and Nuts and Full Mat Gasket.	Romac SST III Power Seal Smith-Blair

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**ELSINORE VALLEY MUNICIPAL WATER DISTRICT
APPROVED MATERIALS LIST
FOR USE ON NEW CONSTRUCTION OF
POTABLE AND RECYCLED WATER FACILITIES**

<u>ITEMS</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>
VALVE, AIR RELEASE AND VACUUM RELIEF	Pressure Air Release and Vacuum Relief Valve, Cast Iron Body, Stainless Steel Float, Bronze Plug	APCO Cla Val Valmatic
VALVE, BALL	Bronze, Straight, Compression x Compression for 1" and 2" Valves (Threaded, both male & female)	Ford B44-444-Q, B44-777-Q Jones J-1949SG Mueller B-25209
VALVE, BALL	Keyed MIP x MIP	
VALVE, BALL WITH LOCKING TABS (Meter Customer Valve)	2" Bronze, Straight, Compression x Compression with Locking Tabs and Brass Handle (Threaded both male & female, no locking tabs, S.H.)	Ford B44- 777 -QW Jones J-1949SGW Mueller B-25146 AY McDonald 6100 MW
VALVE, BALL (Meter Customer Valve)	1" Bronze, Straight, Meter Swivel, MIP x MIP (Purple Handle for Recycled Water)	Ford HB 34S Jones J-1908W Mueller B-24351-1 AY McDonald HB6101M
VALVE, BREAK-OFF CHECK	Break-off check valve for fire hydrants. Use when indicated on Approved Plans.	Long Beach LB 400
VALVE, BUTTERFLY	16" and Larger, A WW A C504, Class B. Thermosetting for Fusion Bonded Epoxy Coated and Lined (150 psi Max), Seat in the body.	M & H 1450, 4500 Mueller Linesal III Pratt Groundhog
VALVE, DETECTOR CHECK	Fire Detector Check	AMES 3000 SS Febco 806YD Wilkins 350DA, 950 DA
VALVE, GATE, RESILIENT WEDGE (RWGV)	4" through 12" Non-Rising Low Zinc Bronze or Stainless Steel Stem, Ductile or Cast Iron Body and Bonnet, Encapsulated Wedge per AWWA C509 or C515 with Epoxy Coated Interior. Manufactured to AWWA C509 or C515	American FC, Series 2500 Clow M&H Mueller American Darling (Compliant w/C509 or C515)

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**ELSINORE VALLEY MUNICIPAL WATER DISTRICT
APPROVED MATERIALS LIST
FOR USE ON NEW CONSTRUCTION OF
POTABLE AND RECYCLED WATER FACILITIES**

<u>ITEMS</u>	<u>DESCRIPTION</u>	<u>MANUFACTURER</u>
VALVE, INSULATED BALL	1" Bronze, Straight, Compression X Compression, Insulated Type	Mueller N-35209
VALVE, LOCKABLE BALL	3/4" and 1" Bronze Customer Shut- off(Ball Valve), Inlet FIP x Compression, Lockable Tabs, with Lever Handle	Ford B13-332W w/ HT34 B13-444W w/ HT34 Jones J-1908W
VALVE, LOCKABLE BALL	1-1/2" and 2" Bronze Customer Shut- off(Ball Valve), Inlet FIP x Compression, Lockable Tabs, with Lever Handle	Ford BF13-666W w/ HB-67S, BF13- 777W w/HB-67S Jones J-1913W
VALVE, PRESSURE REDUCING	For Water Main Pressure Reducing, 4" through 16"	Cla- Val 90G-01
VALVE, PRESSURE REGULATING	For Service Connections, 3/4" / 1"	Wilkins Watts Febco
VALVE, WELL LID	Ductile Iron Machined Frame with Ductile Iron Lid. See Standard Drawings for Markings	South Bay
WATER TEST STATION ENCLOSURE	12 Gauge Steel 8" x 36", Single Lockable Door, Powder Polyester Coated Potable Water Color: Safety Yellow Recycled Water Color: OSHA Safety Purple	Pipeline Products WTS-ELSI
WARNING/ID TAPE		Calpico, Type 1 Line-Tec, Type 1 T. Christy Enterprises, Type 1 Northtown
WIRE, TRACER	#10 AWG Solid Copper UF Type Wire, with Cross Linked Polyethylene Insulation. White or Yellow in Color	Cosberg Industries Paige Baron



Utility Interruption Request

Date: _____

Project Number: _____

Project Name: _____

To Construction Manager: _____

From Contractor: _____

1. Pothole Record Submittal Date: _____

2. Party requesting the Interruption: _____

3. What is being interrupted?

Sewer ☐ Water ☐ Recycled ☐ Potable ☐ Agricultural ☐ Other ☐ _____

Size: _____ inches Material: ACP ☐ DI ☐ HDP ☐ RCP ☐ Other ☐ _____

3. Location: Station _____ Elevation _____

Geographical location _____

4. When: Day _____ Time _____ Hours _____

5. Details for reason of interruption: _____

6. Equipment being used and any pertinent bypass procedures: _____

District is to receive this request 10 business days in advance of requested interruptions.

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: Identification and summary description of the Project, the Work, location, Owner furnished products, activities by others, coordination, and early occupancy by Owner.

1.02 LIMITS

- A. The Work is located in the County of Riverside, and is described in this Section.

1.03 THE WORK

- A. The Work consists of construction of approximately 829 linear feet of 12-inch diameter potable water pipeline and approximately 156 linear feet of 8-inch diameter potable water pipeline with appurtenant valves, fire hydrants, blow-offs, air and vacuum release valves, connections to existing water mains, pavement restoration and other appurtenant work as set forth in the Contract Documents, for a complete and usable facility.

1.04 LOCATION OF PROJECT

- A. The Work is located along the following streets:
 - 1. Newport Road
 - 2. Goetz Road

1.05 ACTIVITIES BY OTHERS

- A. Owner, utilities, and others may perform activities within Project area while the Work is in progress.
 - 1. Schedule the Work with Owner, utilities, and others to minimize mutual interference.
- B. Cooperate with others to minimize interference and delays.
 - 1. When cooperation fails, submit recommendations and perform Work in coordination with work of others as directed.

1.06 CONSTRUCTION INSPECTION

- A. The Owner will furnish inspection of the Work and references to the Inspector or Engineer in the Contract Documents shall be understood to mean the Owner.
- B. Portions of the Work will be inspected by representatives from the County of Riverside.

1.07 DRAWINGS

- A. The Drawings forming a part of the Contract Documents are listed on Sheets 1-6 of the Construction Drawings entitled "Elsinore Valley Municipal Water District, 8" & 12" Water Relocation Plans, Audie Murphy Ranch MS. 3909."
- B. The Elsinore Valley Municipal Water District Standard Specifications and Drawings dated September 2006 are hereby incorporated into the Contract Documents by reference. More specifically the following Standard Drawings have been identified as being required for the construction of the Work. This listing does not limit the requirement for using the Standard Drawings for any portion of the Work for which they may be applicable.

<u>Standard Drawing No.</u>	<u>Drawing Title</u>
W-2	Pipe Separation Requirements
W-3	Water Pipe Bedding and Trench Backfill
W-6	Pipeline Separation Requirements
W-7	6" Fire Hydrant Assembly
W-9	Water Service Connector for 1" or 3/4" Meter
W-11	Standard Meter Box
W-12	Meter Box for Existing Sidewalk Areas Only
W-13	Valve Well and Riser Detail
W-15	Valve Support and Anchor Blocking Detail
W-16	1" and 2" Air and Vacuum Release Valves
W-19	6" Blow-off Assembly
W-20	Typical Sampling Point Installation
W-24	Water Test Station Cover for W-17
W-27	Paving Detail Around Valves
STD. No. 818	County of Riverside – Utility Trench Backfill
CP-1 to CP-6	Cathodic Protection

- C. EVMWD will not accept thrust blocks (Std. Dwg. W-4) for thrust restraint. Where thrust blocks are noted on standard drawings, provide acceptable restrained joints.

PART 2 PRODUCTS

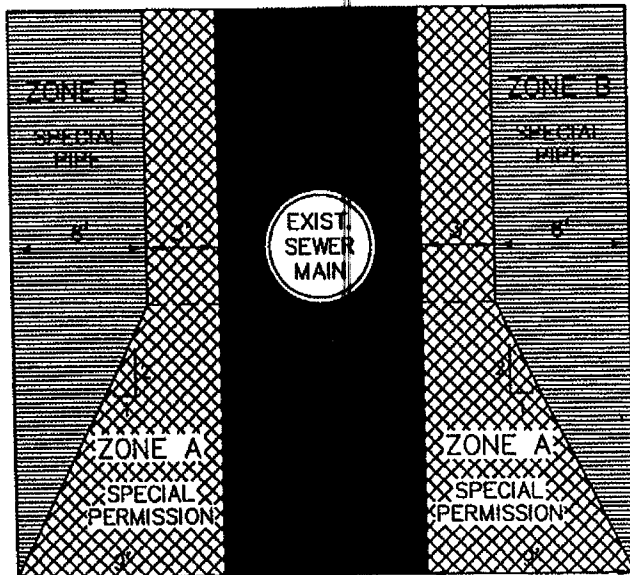
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PART 3 EXECUTION

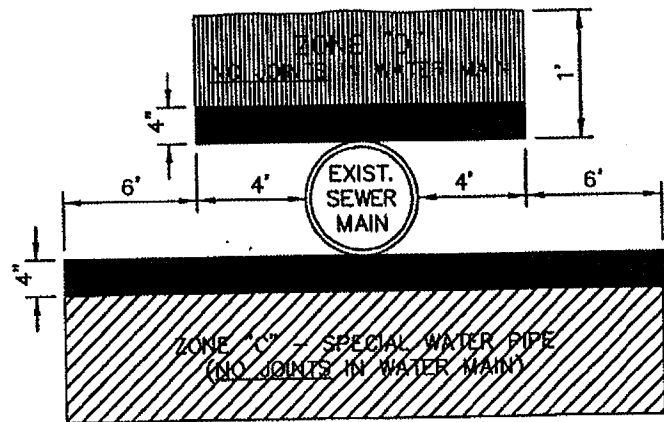
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END OF SECTION

PARALLEL CONSTRUCTION



PERPENDICULAR CONSTRUCTION



NOTES:

1. SEPARATION OF WATER MAIN FROM SEWER AND OTHER NON-POTABLE FLUIDS SHALL BE IN ACCORDANCE WITH STATE OF CALIFORNIA DEPARTMENT OF HEALTH SERVICES GUIDANCE MEMO NO. 2003-02.
2. DIMENSIONS ARE FROM OUTSIDE OF WATER MAIN TO OUTSIDE OF SEWER OR NON-POTABLE FLUID PIPELINES.
3. WATER MAINS ARE NOT PERMITTED WITHIN ANY OF THE ABOVE INDICATED ZONES UNLESS CONSTRUCTED IN CONFORMANCE WITH THE SPECIAL REQUIREMENTS AS SHOWN BELOW.
4. WATER AND SEWER MAINS SHALL BE INSTALLED IN SEPARATE TRENCHES. WATER MAINS SHALL BE INSTALLED AT LEAST 10- FEET HORIZONTALLY FROM, AND A MINIMUM OF 1-FOOT ABOVE SANITARY SEWERS WHEN PARALLEL TO THE SEWER MAIN AND A MINIMUM OF 1-FOOT HIGHER THAN SANITARY SEWERS WHEN CROSSING THE SEWER MAIN.

ZONE

SPECIAL SEWER CONSTRUCTION REQUIREMENTS



NO WATER MAINS PARALLEL TO SANITARY SEWER MAIN SHALL BE CONSTRUCTED WITHOUT PRIOR WRITTEN APPROVAL FROM THE DEPARTMENT OF HEALTH SERVICES.



SPECIAL WATER PIPE - RUBBER GASKETED CLASS 200 PRESSURE RATED WATER PIPE (OR 14 PER AWWA 900) OR EQUIVALENT; OR DUCTILE IRON PIPE WITH COMPRESSION JOINTS.



NO JOINTS IN WATER MAIN - SPECIAL WATER PIPE, SEE ZONE B PIPE MATERIAL



NO JOINTS IN WATER MAIN.



CONSTRUCTION PROHIBITED IN THIS AREA.

REVISION	BY	APPR	DATE

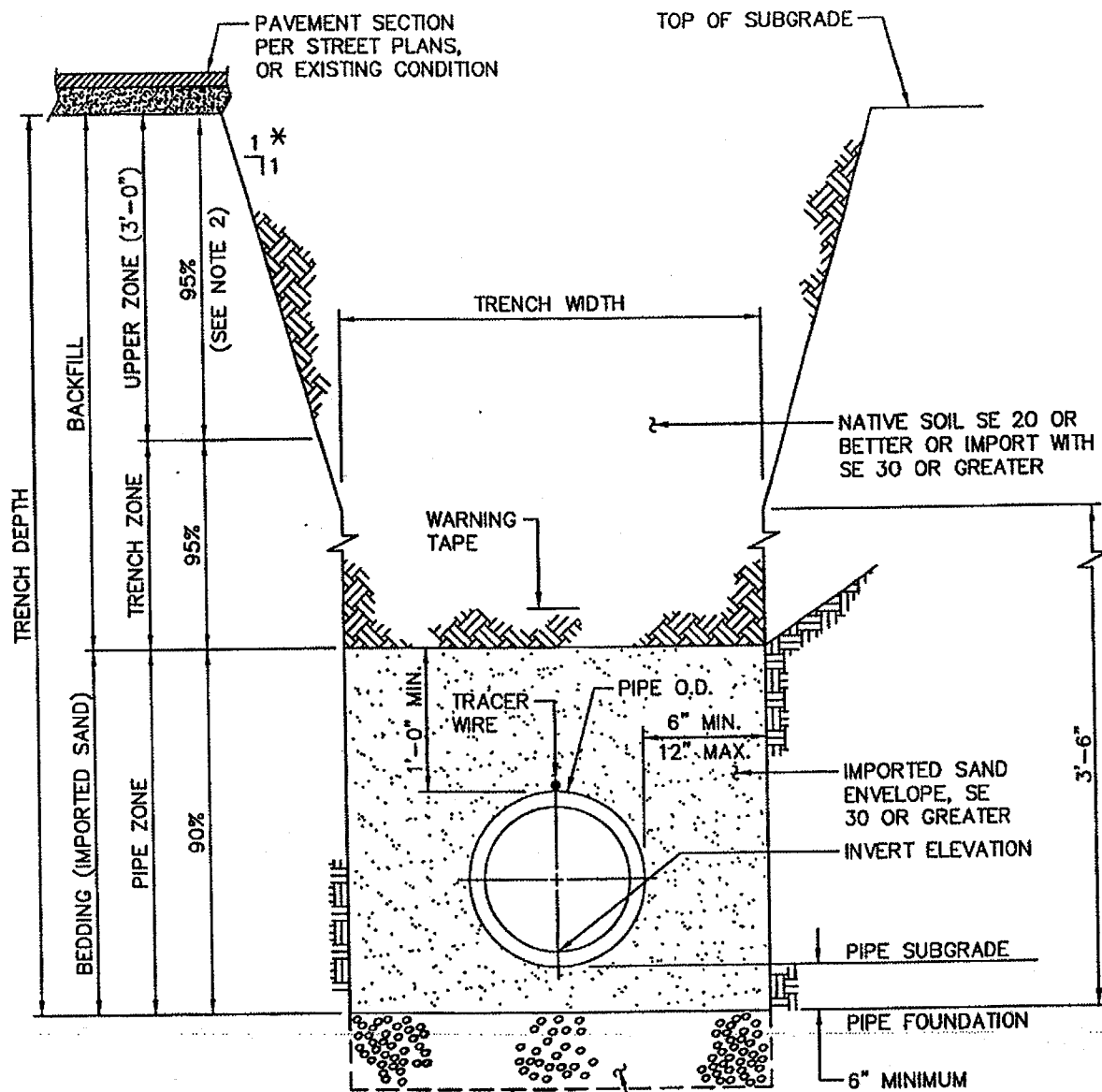


PHILIP M. MILLER R.C.E. 30860 DATE

PIPELINE SEPARATION REQUIREMENTS

STD. DWG. NO.

W-2



IF UNSUITABLE SOIL IS ENCOUNTERED,
GEOTECHNICAL ENGINEER IS TO
DETERMINE THE DEPTH OF REMOVAL
AND SIZE OF FOUNDATION ROCK
AND FILTER FABRIC REQUIREMENTS
AND SUBMIT FOR DISTRICT REVIEW

* LAYBACK SLOPE MUST BE VERIFIED AND/OR
RECOMMENDED IN PROJECT GEOTECHNICAL REPORT

NOTES:

1. PAVING DICTATED BY LOCAL JURISDICTION.
2. 95% MAXIMUM DENSITY, MINIMUM AS DETERMINED BY ASTM D1557.
3. MAXIMUM 5' TRENCH DEPTH ALLOWED WITHOUT REQUIRED SAFETY OPERATION PERMIT.
4. CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ALL TRENCHING AND EXCAVATION IN ACCORDANCE WITH CALIFORNIA CODE OF REGULATIONS, TITLE 8.
5. EXCAVATION, BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH SECTION 02223 OF THE STANDARD SPECIFICATIONS.

REVISION	BY	APPR	DATE



PHILIP M. MILLER R.C.E. 30680 DATE

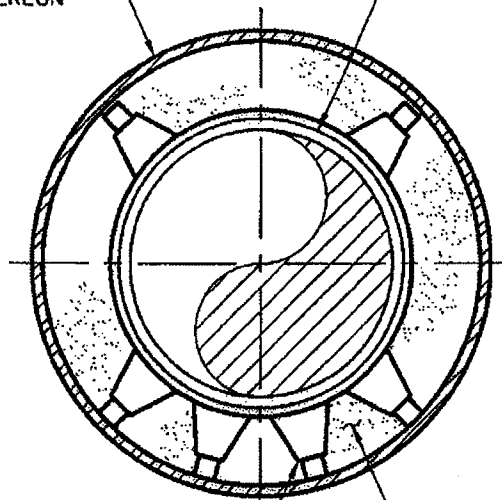
WATER PIPE BEDDING AND TRENCH BACKFILL

STD. DWG. NO.

W-3

STEEL PIPE WITH MINIMUM PLATE THICKNESS AND MINIMUM INSIDE DIAMETER PER SCHEDULE HEREON

CARRIER PIPE CENTERED IN CASING



FOR PVC CARRIER PIPE, USE POLYETHYLENE CASING INSULATORS WITH POLYETHYLENE SKIDS, FOR CML&C STEEL AND DUCTILE IRON CARRIER PIPE, USE STAINLESS STEEL BAND SPACERS AND INSULATORS WITH GLASS FILLED POLYMER PLASTIC RUNNERS. ALL CASING INSULATORS SHALL BE DESIGNED BY THE MANUFACTURER FOR APPLICATION GIVEN THE PARTICULAR CARRIER PIPE O.D. AND CASING PIPE I.D. ALL BOLTS AND BANDS SHALL BE TYPE 304 STAINLESS STEEL.

ANNULAR SPACE BETWEEN CASING AND CARRIER PIPE TO BE FILLED WITH AIR BLOWN SAND.

CASING SCHEDULE

NOMINAL PIPE SIZE	MINIMUM CASING SIZE	MIN. WALL
8"	16" I.D.	1/4"
12"	20" I.D.	5/16"
16"	30" I.D.	3/8"
18"	32" I.D.	3/8"
20"	36" I.D.	3/8"
24"	42" I.D.	1/2"
30"	48" I.D.	1/2"
36"	56" I.D.	5/8"
42"	60" I.D.	3/4"

NOTES:

1. SPACING BETWEEN THE CASING INSULATORS SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS EXCEPT THAT THERE SHALL BE AT LEAST 4 CASING INSULATORS PER PIPE SECTION, ONE 12" FROM EACH JOINT AND ONE CENTERED. ADDITIONALLY, ONE INSULATOR SHALL BE INSTALLED 12" FROM EACH END OF THE CASING.
2. BOTH ENDS OF THE CASING BETWEEN THE CASING AND CARRIER PIPE MUST BE SEALED WATERTIGHT USING AN END SEAL, SELECTED FROM APPROVED MATERIALS LIST. BANDS SHALL BE TYPE 304 STAINLESS STEEL.
3. ALL STEEL CASING PIPE JOINTS SHALL BE WELDED FULL CIRCUMFERENCE.
4. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
5. ABOVE CASING THICKNESS ARE FOR OPEN TRENCH ONLY. FOR JACKED CASING SEE SPECIFICATION NO. 15130.

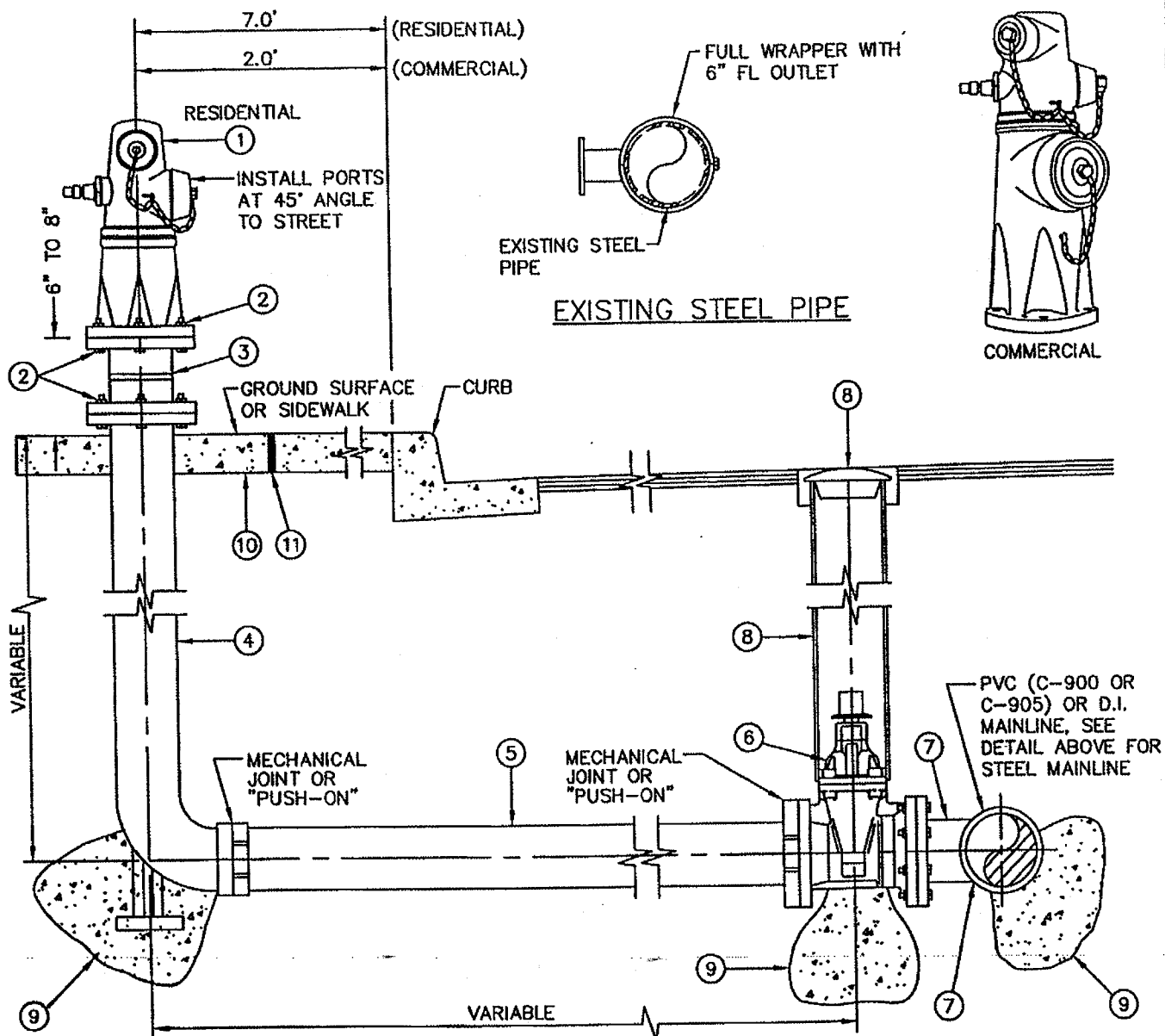
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STEEL CASING
FOR WATER MAINS

STD. DWG. NO.

W-6



NOTE: CERTAIN INSTALLATION CONDITIONS MAY REQUIRE RESTRAINED JOINTS FOR HYDRANT RUNS.

ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
(1)	1	6" FIRE HYDRANT	2 OUTLET RES., 3 OUTLET COMMERCIAL	6 HOLE FL, SEE PAINT SPECS.
(2)	AS REQD	BREAK-OFF BOLTS WITH NUTS ON TOP OF FLANGE	5/8"x3" HEX HEAD ZINC PLATED	NUTS ON TOP OF FLANGE, FILL BREAK-OFF BOLT HOLES W/ SILICON OR EPOXY
(3)	1	GROOVED BREAK-OFF SPOOL	FLxFL, 6 HOLE, 6" OR 8" REDUCER	SPOOL ABOVE SURFACE
(4)	1	FIRE HYDRANT BURY	6 HOLE FLxMJ/P.O./FL	VARIABLE HEIGHT IF 8" D.I.
(5)	1	6" OR 8" HYDRANT RUN PIPE	PVC C-900, OR DUCTILE IRON	PEXPE CANNOT CROSS STREET C
(6)	1	6" OR 8" RESILIENT WEDGE GATE VALVE	FLxMJ/P.O./FL	INCLUDES VALVE SUPPORT BLOCK
(7)	1	TEE W/ 6" OR 8" OUTLET	FL OUTLET	HOT TAP OR CUT IN TEE IF EXIST. MAIN
(8)	1	8" VALVE WELL AND CAP	STD. DWG. NO. W-13	
(9)	2	THRUST BLOCK	STD. DWG. NO. W-4	
(10)	1	4'x4'x8" THK CONCRETE SPLASH PAD		
(11)	1	COLD JOINT STRIP		

REVISION	BY	APPR	DATE

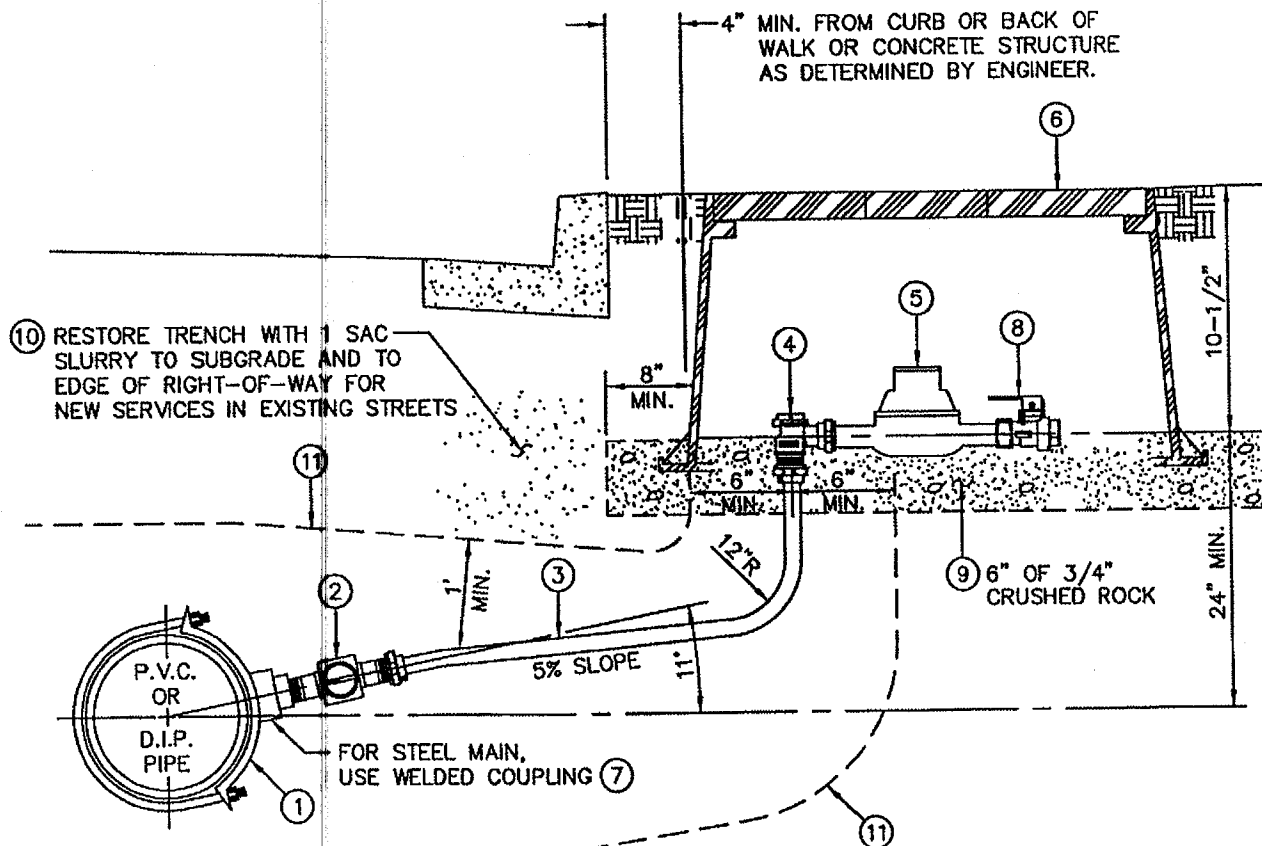


PHILLIP M. MILLER R.C.E. 30680 DATE

FIRE HYDRANT ASSEMBLY

STD. DWG. NO.

W-7



NOTE:

1. RANGE SADDLES NOT ALLOWED.

*SEE APPROVED MATERIALS LIST

ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
(1)	1	SERVICE SADDLE	STRAP TO BE S.S.	SEE MATERIALS LIST
(2)	1	1" BRONZE CORP. STOP	I.P. X C.T.S. COMPRESSION *	
(3)	1	COPPER TUBING	1" TYPE K, SOFT	ONE PIECE ONLY, NO SPLICES
(4)	1	1" ANGLE METER STOP (BALL VALVE)	C.T.S. COMPRESSION X METER *	
			SWIVEL NUT, & J-128H BUSHING	
(5)	1	WATER METER	1" OR 3/4", SUPPLIED & INSTALLED BY	
(6)	1	WATER METER BOX	DISTRICT. COLOR: GREEN, SEE W-11 *	
(7)	1	STD. BLACK PIPE COUPLING	1" I.P. THREADED, WELDED ON	COAT COUPLING W/ SAME MATERIAL AS PIPE
(8)	1	BRONZE BALL VALVE	1" I.P. X C.T.S. COMPRESSION	SUPPLIED & INSTALLED BY DISTRICT
(9)	1	WATER METER & BOX PAD	42" x 35" x 6" 3/4" CRUSHED ROCK	PAD FOR METER AND BOX
(10)	1	SLURRY BACKFILL	1 SAC	FOR NEW SERVICES IN EXISTING STREETS
(11)	1	TRENCH WITH SAND ENVELOPE	SE ≥ 30	12" MIN. & 24" MAX. TRENCH WIDTH

REVISION	BY	APPR	DATE

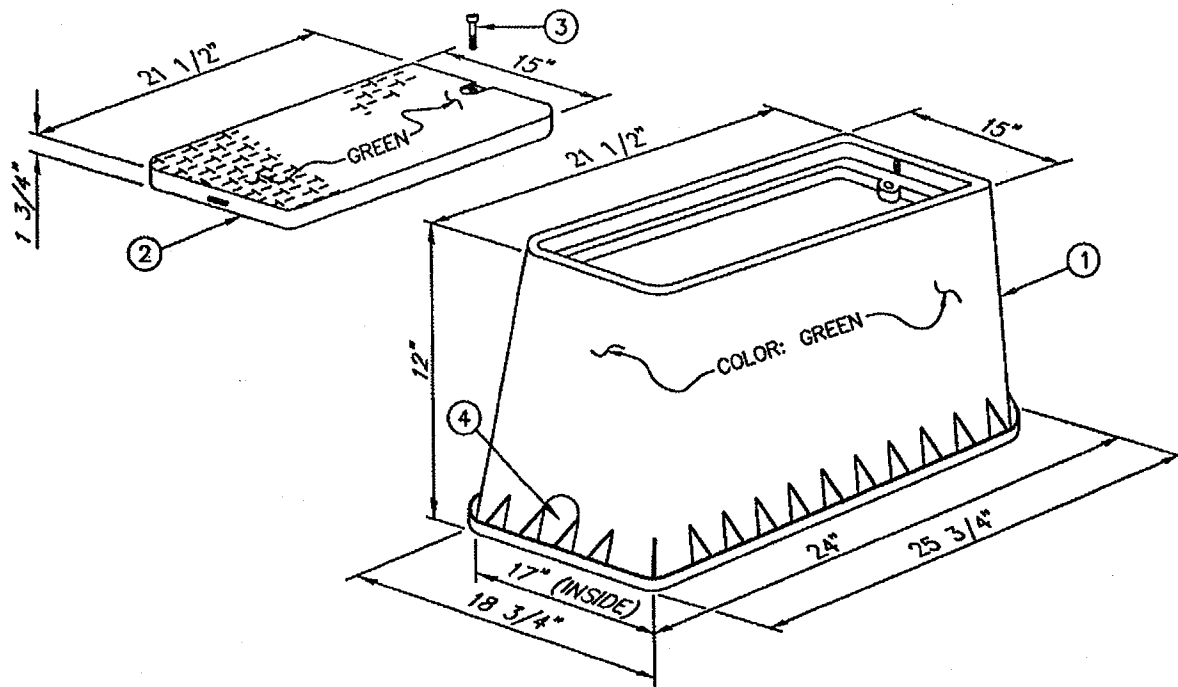


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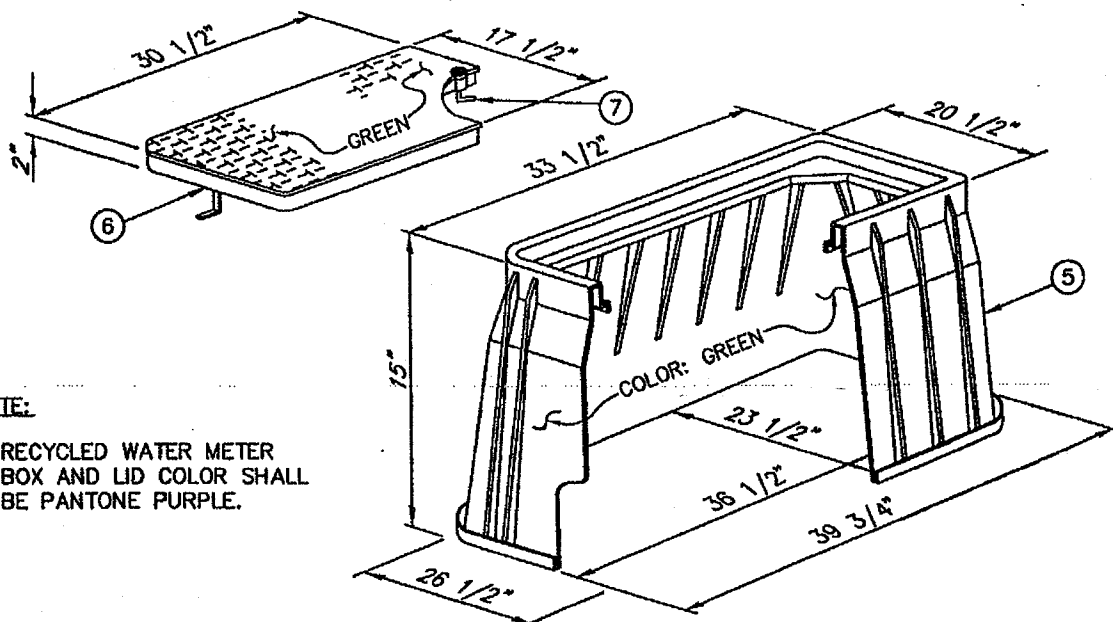
WATER SERVICE CONNECTION FOR 1" OR 3/4" METER

STD. DWG. NO.

W-9



3/4" TO 1" METERS



2" TO 3" METERS

NOTE:

1. RECYCLED WATER METER BOX AND LID COLOR SHALL BE PANTONE PURPLE.

ITEM	DESCRIPTION
①	METER BOX - (METER READING BOLT DOWN)
②	METER BOX LID - (BOLT DOWN)
③	3/8" x 2 1/2" BOLT
④	3" x 4" KNOCK OUTS (OPTIONAL - 2 PLACES)
⑤	METER BOX - (METER READING CAPTIVE L-BOLT DOWN)
⑥	METER BOX LID - (CAPTIVE L-BOLT LOCK)
⑦	3/8" L-BOLT LOCK (CAPTIVE)

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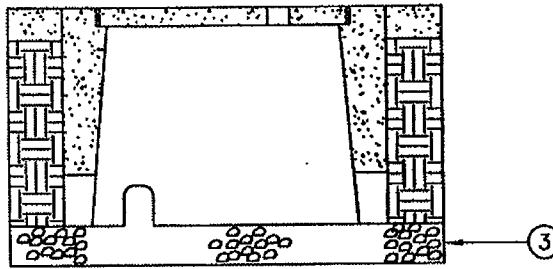


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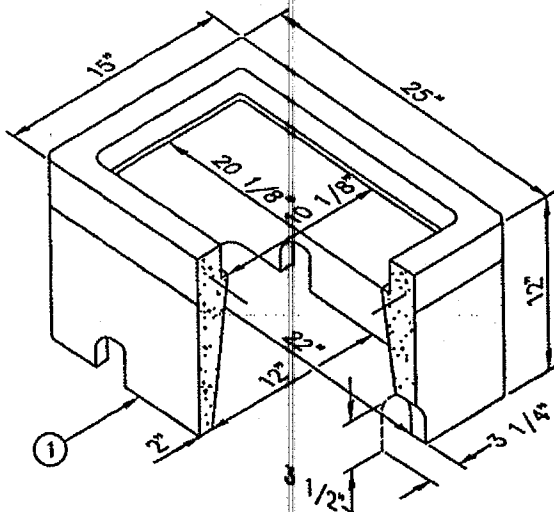
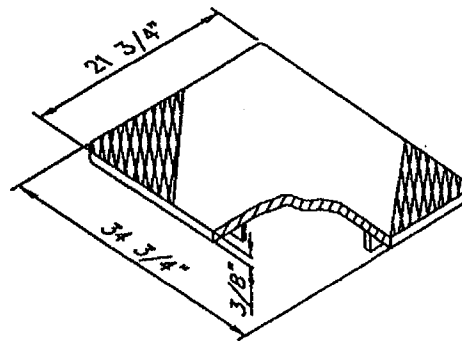
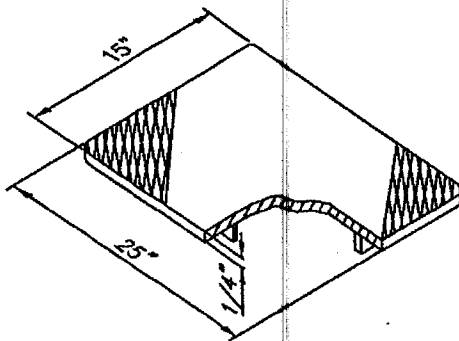
STANDARD METER BOX

STD. DWG. NO.

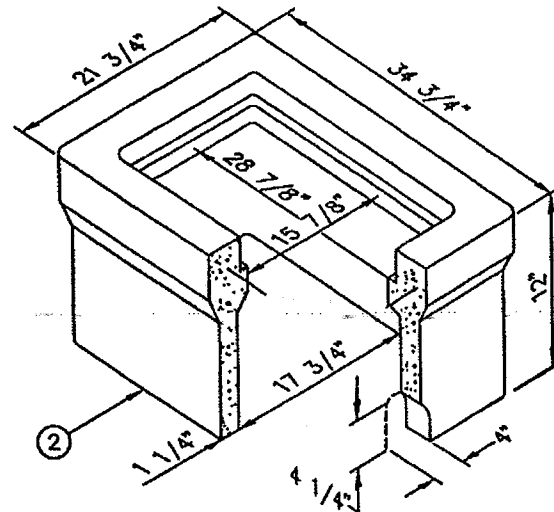
W-11



TYPICAL METER BOX INSTALLATION



3/4" TO 1" SERVICE



2" TO 3" SERVICE

NOTES:

1. ALL TRAFFIC AREA LIDS SHALL BE REINFORCED FIBERGLASS. SEE APPROVED MATERIALS LIST.
2. RECYCLED WATER METER LIDS SHALL BE PURPLE.

ITEM	DESCRIPTION
①	METER BOX
②	METER BOX - (FOR TRAFFIC AREA)
③	PAD TO BE 8" CLASS 2 BASE

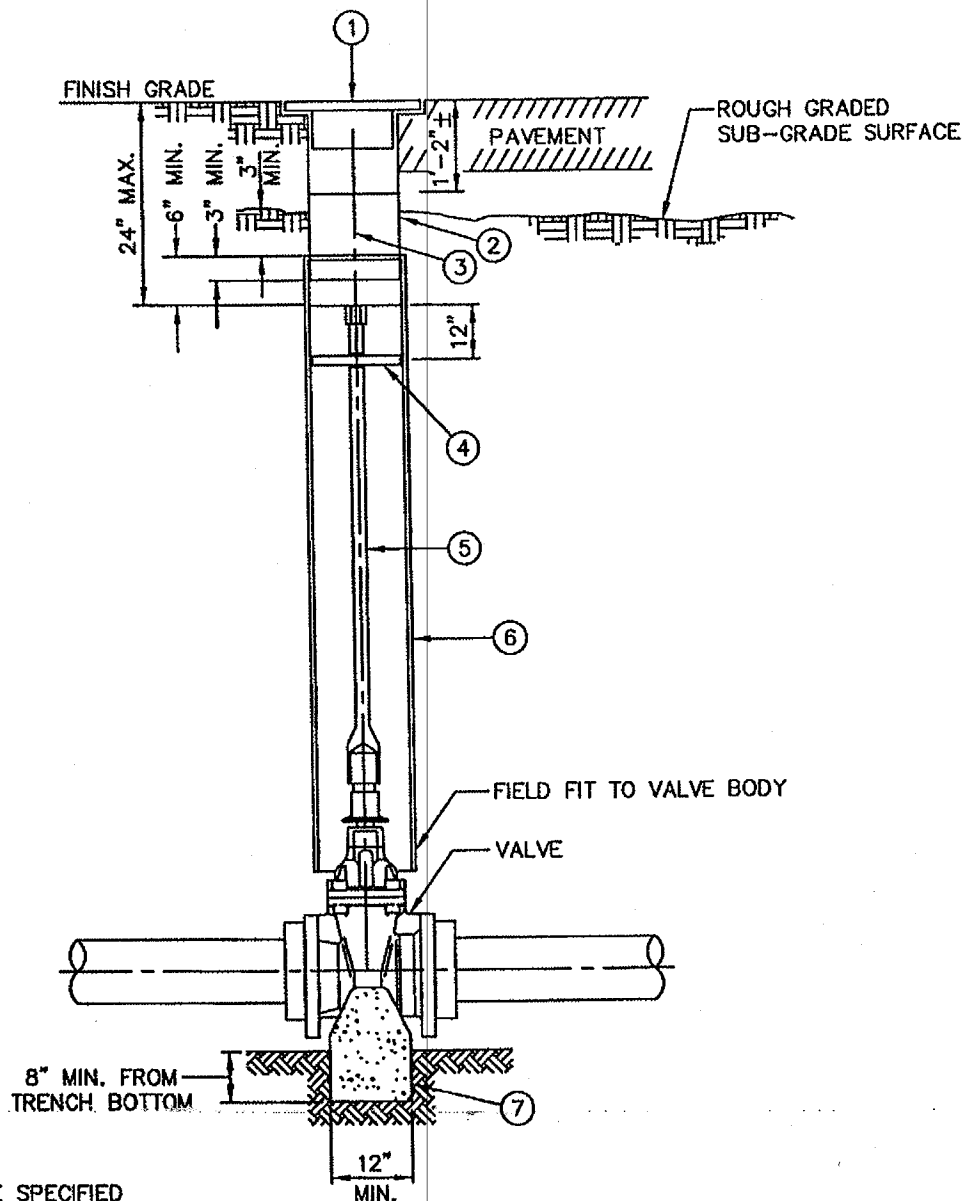
REVISION	BY	APPR	DATE

EVMWD Elmore Valley Municipal Water District	METER BOXES FOR EXISTING SIDEWALK AREAS ONLY	STD. DWG. NO. W-12
PHILIP M. MILLER R.C.E. 30680 DATE		

BRACING PLATE
PLAN VIEW

AXONOMETRIC
VIEW

TOP VIEW
SLIP CAN



NOTES:
EXCEPT OTHERWISE SPECIFIED

1. CONTRACTOR SHALL RAISE SLIP CAN TO GRADE AFTER STREET IS PAVED WHERE PAVING IS PROPOSED.
2. ALL VALVE CANS SHALL BE EXPOSED AT ALL TIMES DURING CONSTRUCTION UNLESS BURIAL FOR GRADING IS AUTHORIZED BY THE INSPECTOR.
3. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.
4. WELL CAPS FOR RECYCLED WATER SHALL BE PURPLE AND MARKED "EVMWD RECYCLED WATER".

ITEM	DESCRIPTION
(1)	8" VALVE WELL CAP W/ 4" SKIRT PAINTED SAFETY PRECAUTION BLUE ENAMEL & PRIMER, & MARKED "E.V.M.W.D. WATER" ON CAP
(2)	8" O.D.x18 GA. SPLIT VALVE CAN TOP SECTION, GALVANIZED FOR SLIP CAN, SLIP CAN LENGTH 12", 18" OR 24" AS REQ'D
(3)	4"x4" REDWOOD POST IF VALVE HAS BLIND FLANGE PER STD. DWG. NO. W-14
(4)	1/8" + 1/32" SOLID DISC 7-3/4" DIA. TACKWELD BRACING PLATE TO STEM AT 5' INTERVALS
(5)	PROVIDE VALVE STEM EXTENSION WHERE DEPTH TO OPERATOR NUT EXCEEDS 5'
(6)	8" PVC, SDR-35 OR C-900 FOR GATE VALVES 3" AND LARGER, 6" PVC FOR GATE VALVES LESS THAN 3" DIAMETER
(7)	VALVE SUPPORT BLOCK PER STD. DWG. NO. W-15

REVISION	BY	APPR	DATE

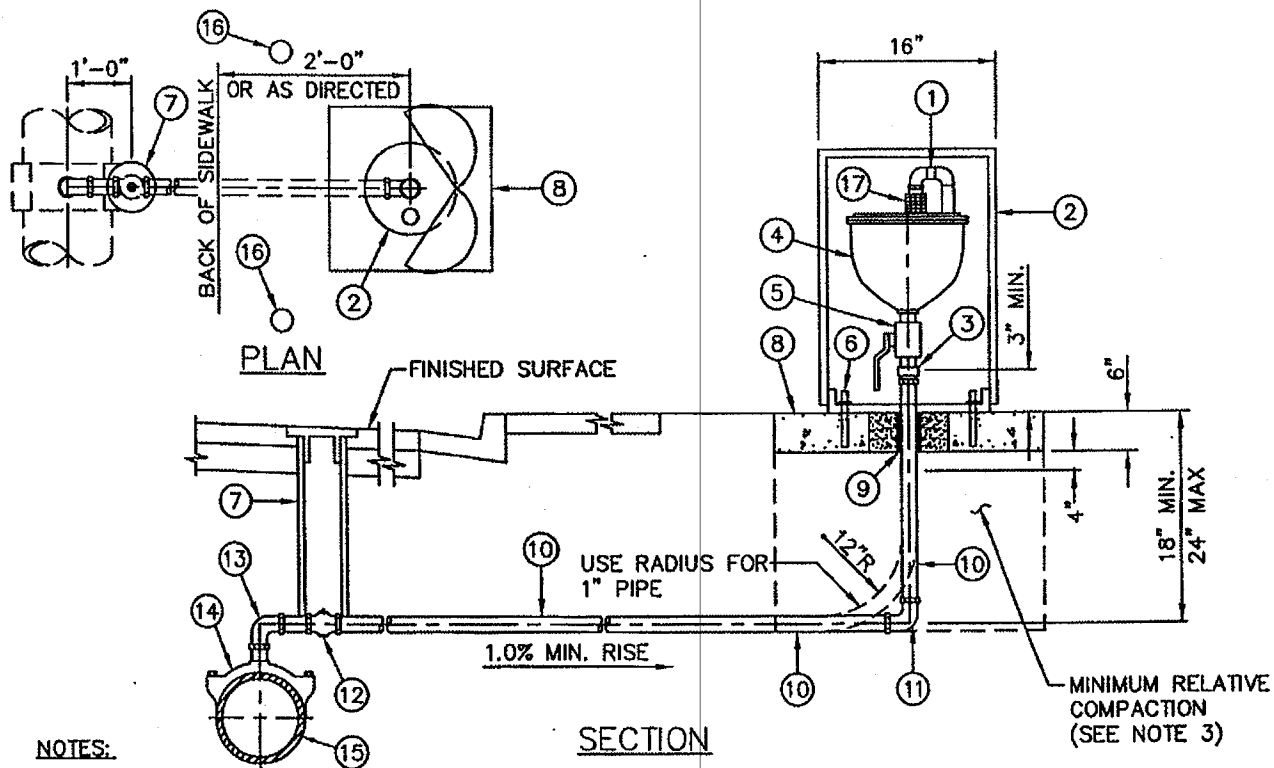


PHILIP M. MILLER R.C.E. 30980 DATE

VALVE WELL AND
RISER DETAIL

STD. DWG. NO.

W-13



NOTES:

1. VALVE PLACEMENT ON RURAL ROADWAYS WHERE CURB AND GUTTER AND SIDEWALKS ARE NOT PRESENT WILL BE AT THE DISCRETION OF THE FIELD INSPECTOR.
2. AIR AND VACUUM VALVES INSTALLED FOR THE USE OF RECYCLED WATER SHALL BE IDENTIFIED AS DESCRIBED IN SECTION 15100 OF THE SPECIFICATIONS.
3. COMPACTION UNDER CONCRETE PAD SHALL BE 95% OR GREATER, FROM THE BOTTOM OF THE PAD TO THE BOTTOM OF THE SERVICE LINE TRENCH.
4. ENCLOSURE FOR POTABLE WATER MAINS SHALL BE POWDER COATED WITH "SAFETY YELLOW", FOR RECYCLED WATER COLOR SHALL BE PURPLE.
5. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

ITEM	DESCRIPTION
(1)	PVC SCH 80 CLOSE NIPPLE AND 2-SCH 80 STREET ELLS AND INSECT SCREEN
(2)	VALVE ENCLOSURE, POWDER COATED
(3)	BRONZE MIPT X COMPRESSION ADAPTER
(4)	AUTOMATIC COMBINATION AIR RELEASE AND VACUUM RELIEF VALVE (SEE SECTION 15100 OF SPECIFICATIONS)
(5)	BRONZE BALL VALVE WITH FIPT
(6)	1/2" X 3" STAINLESS STEEL DROP-IN ANCHORS (3 EA. @ 120° APART)
(7)	6" SDR 35 SEWER PIPE GATE WELL WITH CAP (FOR 2" ONLY)
(8)	2'-6" X 2'-6" X 6" THICK CONCRETE SLAB
(9)	1/2" THICK BLACK FOAM SLEEVE
(10)	REQUIRED LENGTH COPPER PIPE TYPE "K" (SOFT)
(11)	90° BRONZE COMPRESSION ELL (2" ONLY)
(12)	COMPRESSION BALL VALVE WITH TEE HEAD
(13)	BRONZE FIPT X MIPT STREET ELL
(14)	SERVICE SADDLE PER APPROVED MATERIALS LIST, STRAPS TO BE S.S.
(15)	WATER MAIN
(16)	GUARD POST PER EVMWD STANDARD DRAWING W-26 (WHEN NO SIDEWALK OR CURB IS PRESENT)
(17)	STAINLESS STEEL SCREEN TO VENT OUTLET

REVISION	BY	APPR	DATE



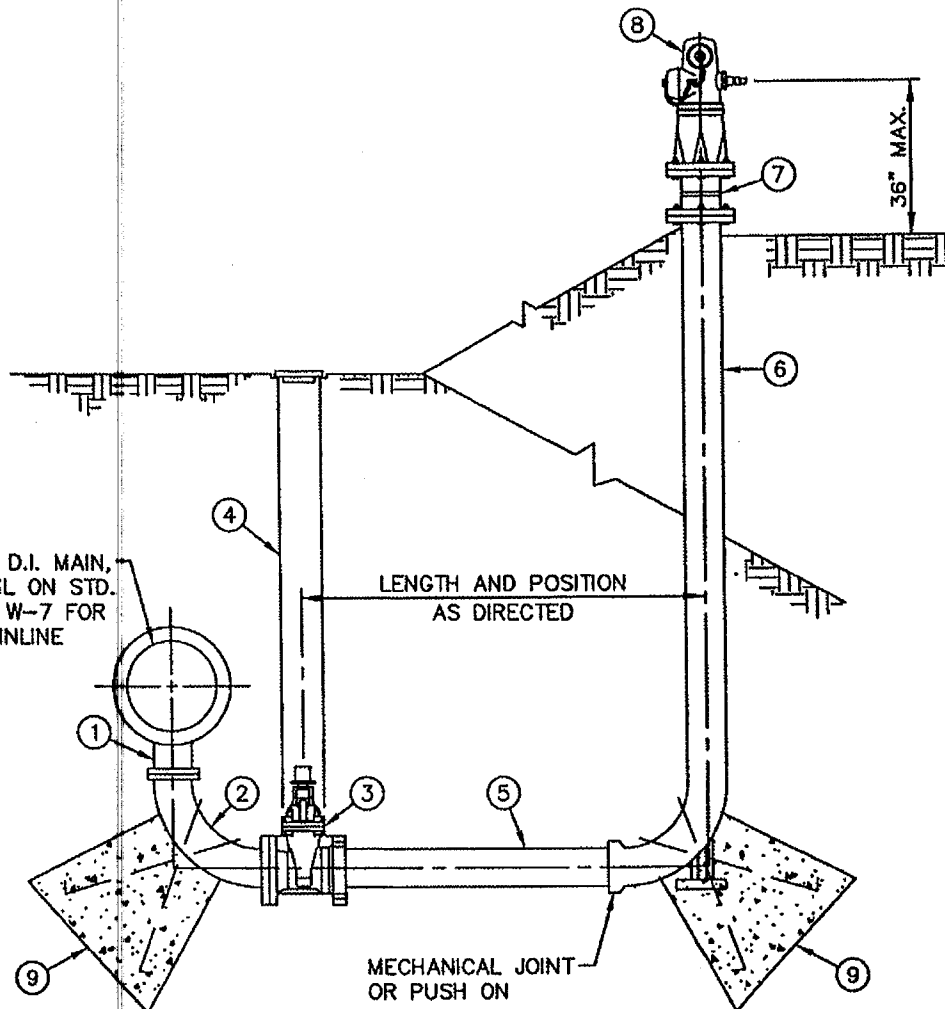
PHILIP M. MILLER R.G.E. 30680 DATE

1' AND 2' AUTOMATIC COMBINATION AIR RELEASE & VACUUM RELIEF VALVE INSTALLATIONS

STD. DWG. NO.

W-16

P.V.C. OR D.I. MAIN,
SEE DETAIL ON STD.
DWG. NO. W-7 FOR
STEEL MAINLINE



NOTES:

1. CERTAIN INSTALLATION CONDITIONS MAY REQUIRE RESTRAINED JOINTS.
2. THRUST BLOCK FOR TEE NOT SHOWN FOR CLARITY PURPOSES.
3. BLOW-OFF (HYDRANT BODY) TO BE PAINTED "SAFETY YELLOW" FOR POTABLE WATER.

ITEM	EACH	DESCRIPTION	SPEC.	REMARKS
①	1	STD. 6" TEE BRANCH	D.I. FLG ON 6" BRANCH	SET VERTICALLY DOWN
②	1	6" 90° LONG RADIUS BEND	D.I. 6" LONG RADIUS, FLxFL	WITH THRUST BLOCK
③	1	6" GATE VALVE	SEE W-8, W-14 AND W-15	RESILIENT WEDGE, FLGxMJ/PO/FLG
④	1	8" VALVE WELL AND CAP	SEE W-8 AND W-13	
⑤	1	6" PIPE BLOWOFF RUN	STD. DWG. W-8	P.E.xP.E. P.V.C. C-900 OR D.I.P.
⑥	1	6" STD. FIRE HYDRANT BURY	STD. DWG. W-8	6 HOLE FLxMJ/PO/FLG (VARIABLE HEIGHT)
⑦	1	6" GROOVED BREAK OFF SPOOL, BOLTS AND NUTS	6", 6 HOLE, SEE W-8	SPOOL ABOVE SURFACE, PAINTED, NUTS ON TOP OF FLANGE, FILL BREAK OFF HOLES WITH SILICON OR EPOXY
⑧	1	6" RESIDENTIAL FIRE HYDRANT	SECTION 15109	4"x2-1/2" JAMES JONES JJ-3700, PAINTED
⑨	1	THRUST BLOCK	STD. DWG. W-4	

REVISION	BY	APPR	DATE

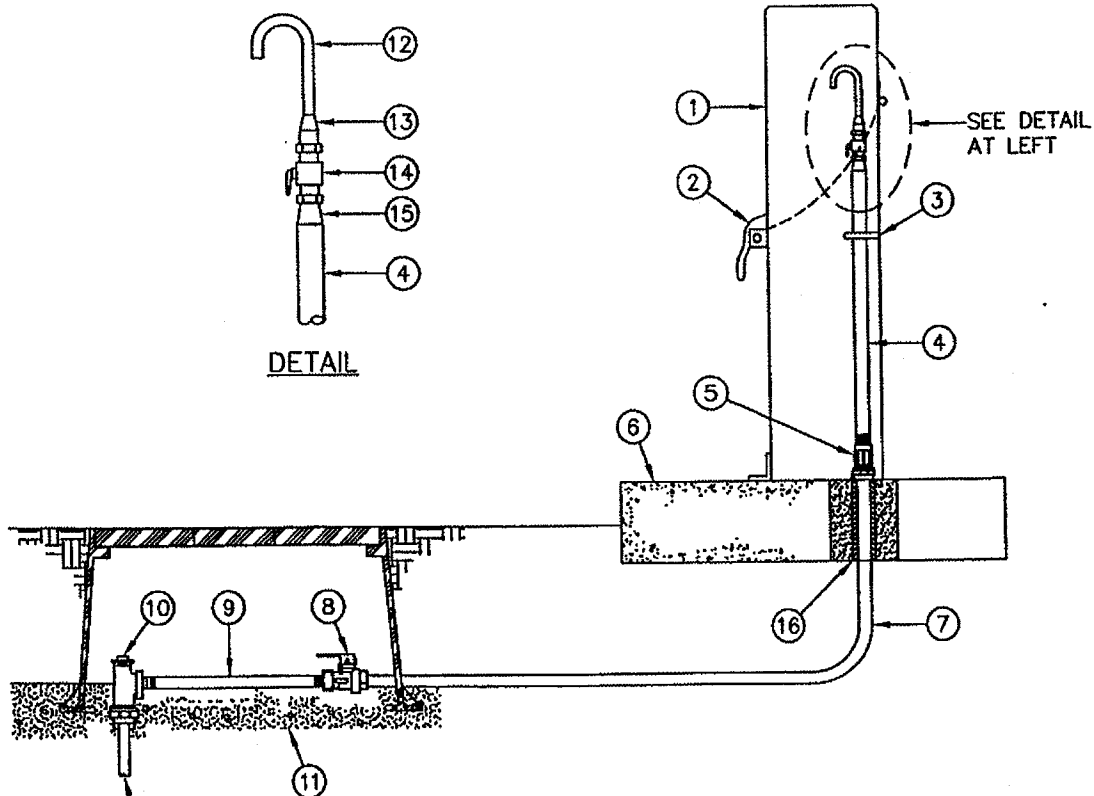


PHILIP M. MILLER R.C.E. 30680 DATE

6" BLOW-OFF ASSEMBLY

STD. DWG. NO.

W-19



SERVICE FROM MAINLINE
PER STD. DWG. W-9

NOTES:

1. BOX SHOULD BE LOCATED NEAR A STATIONARY OBJECT, SUCH AS A POWER POLE, FOR PROTECTION, OR PLACE SUFFICIENT CONCRETE AROUND RISER OR BELOW GROUND.
2. LOCATIONS AND NUMBERS OF SAMPLING POINT WILL BE DESIGNATED BY E.V.M.W.D. IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA ADMINISTRATIVE CODE TITLE 22 DEPARTMENT OF HEALTH.
3. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

ITEM	DESCRIPTION
(1)	WATER TEST STATION COVER, POWDER COATED, PER STD. DWG. W-24
(2)	LOCK-HATCH
(3)	U BOLT
(4)	1" BRASS OR COPPER M.I.P. THREAD x M.I.P. THREAD
(5)	J-2607 1" COUPLING COMPRESSION x F.I.P. THREAD
(6)	CONCRETE PAD PER STD. DWG. W-24
(7)	1" P.V.C. SCH 40
(8)	1" BALL VALVE
(9)	1" BRASS PIPE
(10)	1" ANGLE METER STOP
(11)	3/4" CRUSHED ROCK PER STD. DWG. W-9
(12)	1/2" COPPER PIPE
(13)	1/2" x 1/2" COMPRESSION NIPPLE
(14)	1/2" BALL VALVE FIPT x FIPT
(15)	3/4" SWEAT x 1/2" ADAPTOR
(16)	1/2" THICK BLACK FOAM SLEEVE

REVISION	BY	APPR	DATE

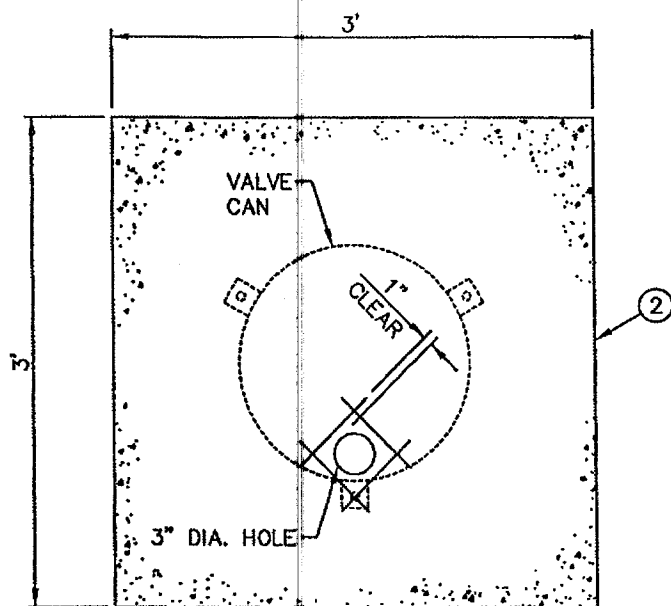


PHILIP M. MILLER R.C.E. 30880 DATE

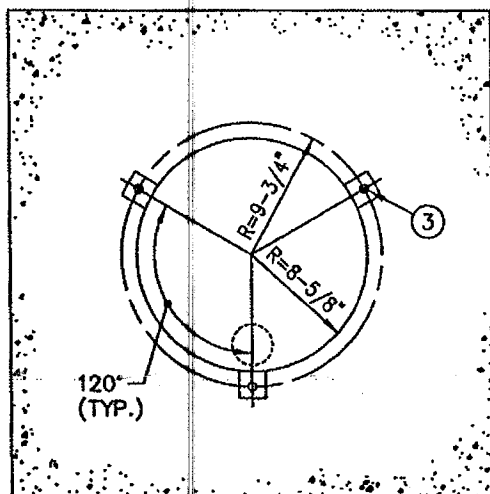
TYPICAL SAMPLING POINT INSTALLATION

STD. DWG. NO.

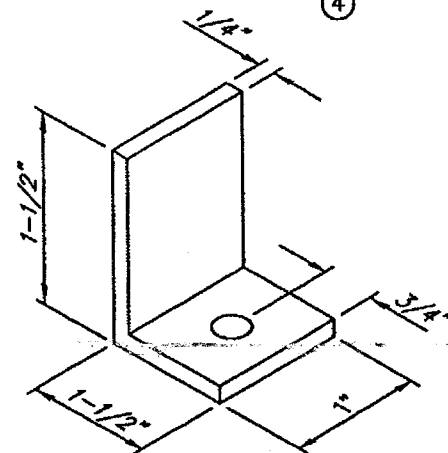
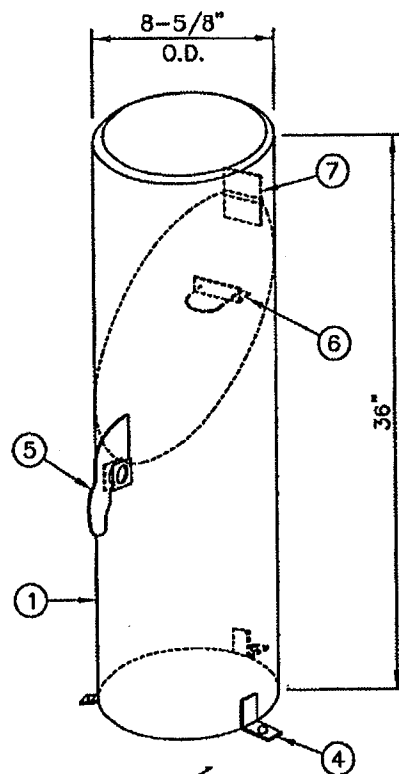
W-20



CONCRETE PAD



VALVE CAN



CLIP DETAIL

NOTES:

1. STEEL CAN SHALL BE 12 GAGE.
2. LEG MOUNTS SHALL HAVE 1/2" DIA. HOLES.
3. MATERIALS SHALL BE SELECTED FROM APPROVED MATERIALS LIST.
4. COLOR SHALL BE "SAFETY YELLOW" FOR POTABLE WATER AND PURPLE FOR RECYCLED WATER.

ITEM	DESCRIPTION
①	SAMPLING POINT ENCLOSURE, POWDER COATED
②	CONCRETE PAD, 3'x3'x6"
③	1/2" DIA. STUDS, TYPICAL OF 3 PLACES ("REDHEAD" TYPE ANCHORS)
④	3 EACH 1/4" "L" CLIPS WITH 1/4" FILLET WELD AND 9/16" DIA. HOLE, SEE DETAIL HEREON
⑤	LOCK-ALIGNMENT LATCH
⑥	INSIDE MOUNT AND U-BOLT
⑦	HINGE

REVISION	BY	APPR	DATE

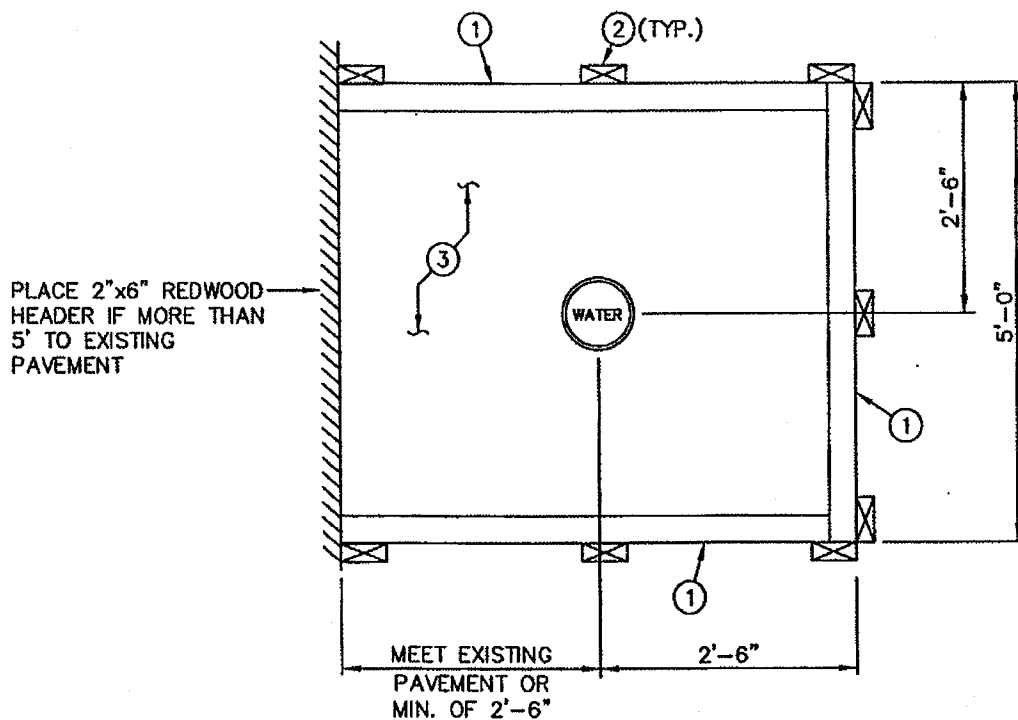


PHILLIP M. MILLER R.C.E. 30680 DATE

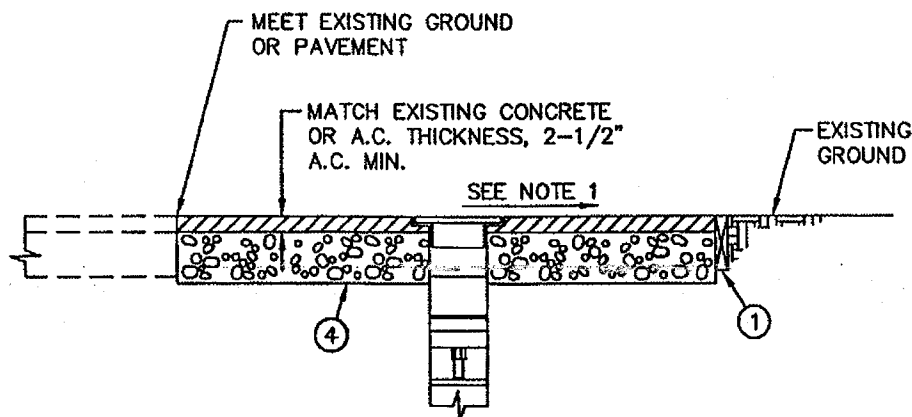
SAMPLING POINT
COVER

STD. DWG. NO.

W-24



PLAN



SECTION

NOTES:

1. SLOPE WILL CONFORM TO RIVERSIDE COUNTY ROAD IMPROVEMENTS STANDARDS AND SPECIFICATIONS, OR MEET EXISTING CONDITIONS AS DIRECTED BY ENGINEER.
2. VALVES LOCATED IN LANDSCAPED AREAS SHALL HAVE A 2'x2' CONCRETE PAD INSTALLED.
3. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

ITEM	DESCRIPTION
①	2"x6" REDWOOD HEADERS IF REQUIRED BY ENGINEER OR AS DIRECTED
②	2"x4"x18" STAKES (3 PER SIDE) AT 30" O.C.
③	AREA TO BE PAVED
④	6" OF 3/4" CLASS 2 CRUSHED AGGREGATE BASE

REVISION	BY	APPR	DATE



PHILIP M. MILLER R.C.E. 30880 DATE

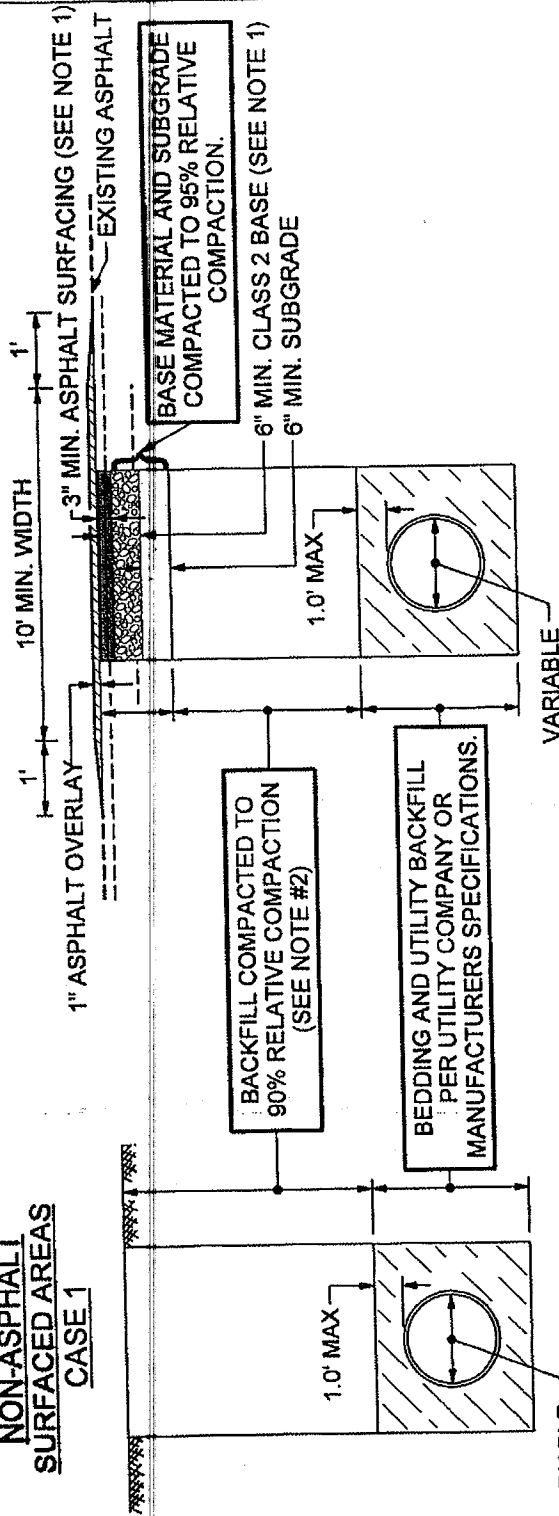
PAVING DETAIL
AROUND VALVES

STD. DWG. NO.

W-27

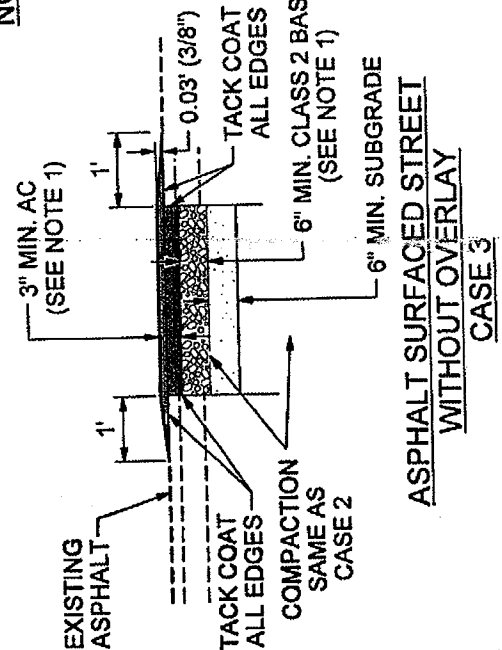
ASPHALT SURFACED STREETS WITH OVERLAY CASE 2

NON-ASPHALT SURFACED AREAS CASE 1



NOTES:

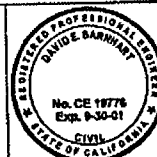
1. REPLACE STRUCTURAL SECTION AS FOLLOWS:
SURFACING: EXISTING THICKNESS; OR 3" MIN. A.C., TYPE B.
BASE: CLASS 2 A.B. IN SAME THICKNESS AS EXISTING
BASE MATERIAL, 6" MIN. AS DIRECTED BY THE INSPECTOR.
2. MAXIMUM LIFT THICKNESS IS 8 INCHES; MAXIMUM LIFT THICKNESS WHEN PONDING AND JETTING IS 4 FEET.
3. WHEN A FIRM FOUNDATION IS NOT ENCOUNTERED, DUE TO SOFT, SPONGY OR OTHER UNSUITABLE MATERIAL, SUCH MATERIAL SHALL BE REMOVED TO THE LIMITS DIRECTED BY THE DIRECTOR OF TRANSPORTATION OR AFFECTED UTILITY COMPANY AND THE RESULTING EXCAVATION BACKFILLED WITH PIPE BEDDING MATERIAL.



APPROVED BY:

David E. Barnhart
DIRECTOR OF TRANSPORTATION
DAVID E. BARNHART, RCE 19776

DATE: 12/15/97

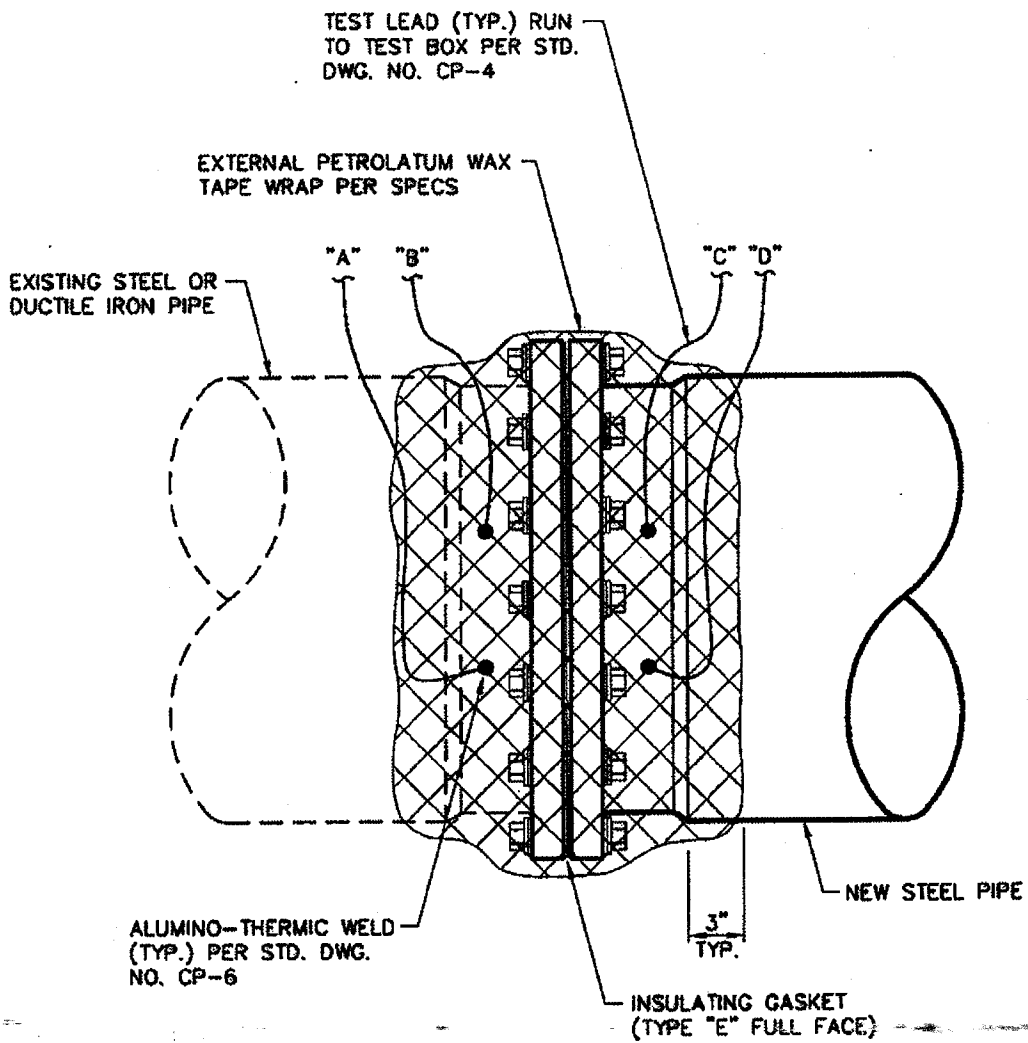


COUNTY OF RIVERSIDE

**UTILITY
TRENCH BACKFILL**

STANDARD NO. 818

REVISIONS		REV.	BY.	APR'D	DATE	REV.	BY.	APR'D	DATE
8-77	12-97	1				4			
4-90		2				5			
11-95		3				6			



NOTES:

1. FULL LENGTH INSULATING SLEEVES REQUIRED AT ALL THRU-FLANGE BOLTS OR STUDS. HALF LENGTH SLEEVES REQUIRED AT THREADED BOLT HOLES AT VALVE BONNET AND BASE.
2. NO TEST STATION REQUIRED ON BLOW-OFF INSULATORS.

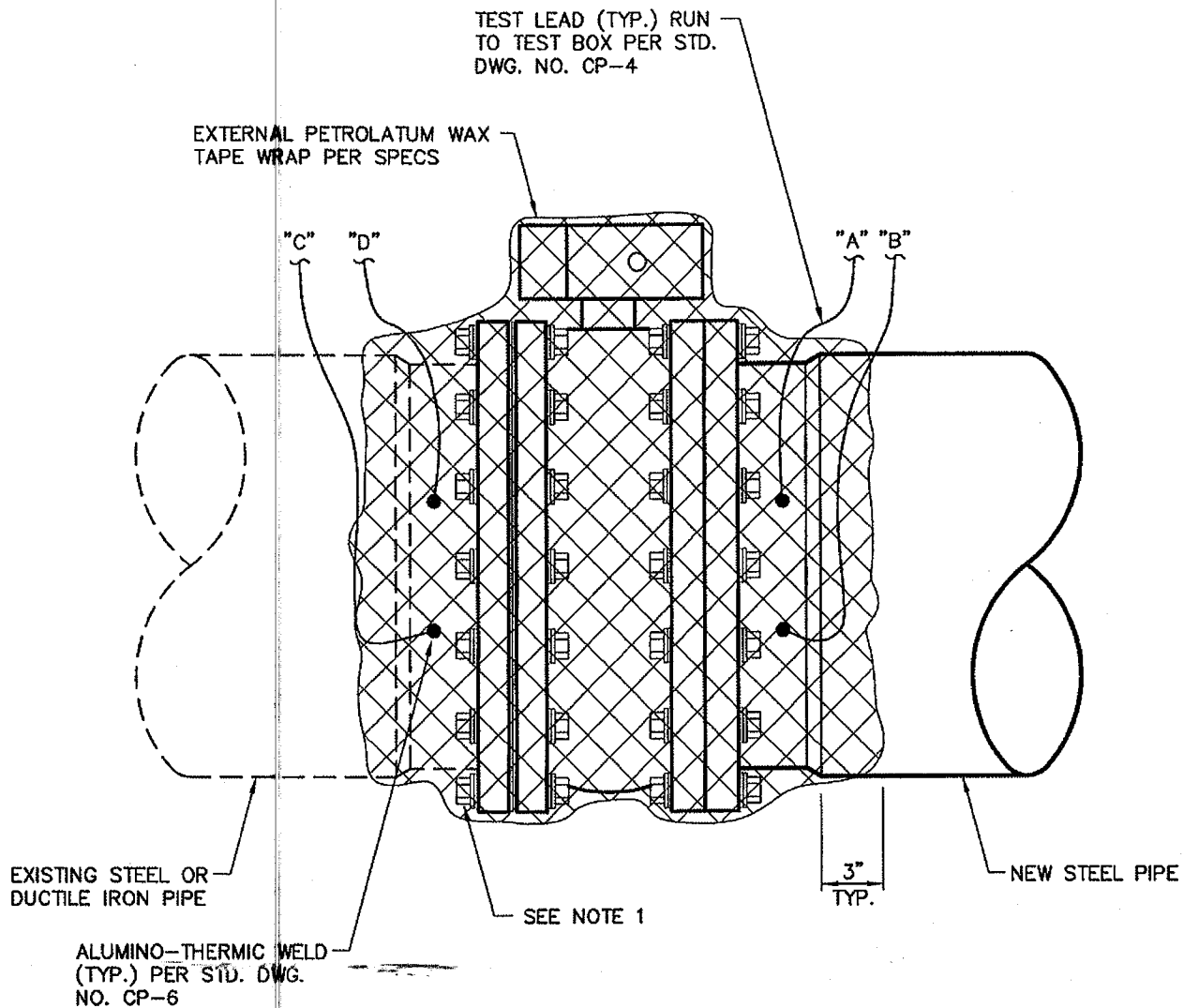
REVISION	BY	APPR	DATE



BURIED INSULATING FLANGE

STD. DWG. NO.

CP-1



NOTES:

1. FULL LENGTH INSULATING SLEEVES REQUIRED AT ALL THRU-FLANGE BOLTS OR STUDS. HALF LENGTH SLEEVES REQUIRED AT THREADED BOLT HOLES AT VALVE BONNET AND BASE.
2. NO TEST STATION REQUIRED ON BLOW-OFF INSULATORS.

REVISION	BY	APPR	DATE

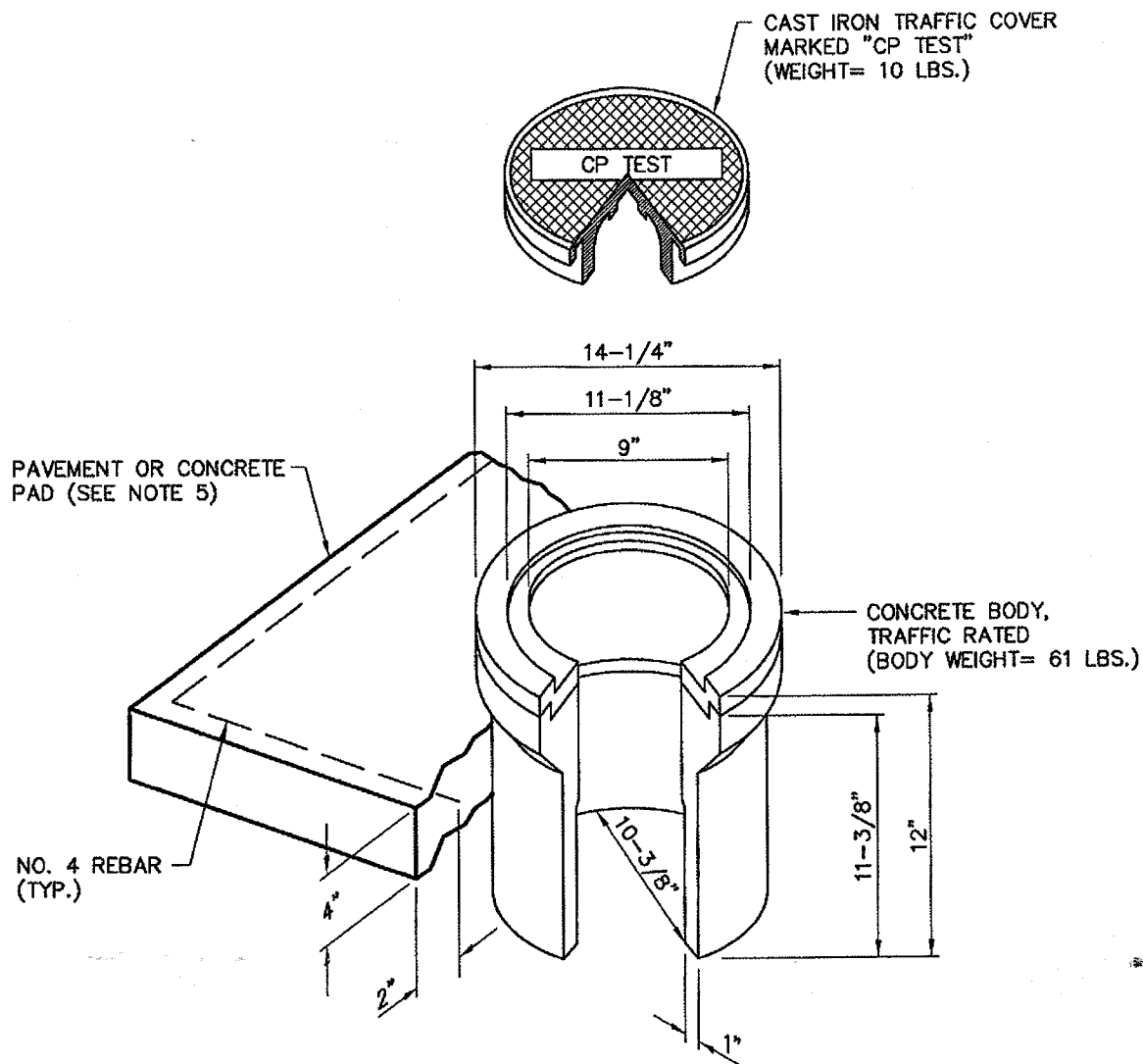


PHILLIP M. MILLER R.C.E. 30680 DATE

**BURIED INSULATING FLANGE
AT VALVE**

STD. DWG. NO.

CP-2



NOTES:

1. CONCRETE BODY, OCCASIONAL TRAFFIC RATED - CHRISTY NO. G5.
2. ALL WIRES SHALL HAVE 18" MIN. SLACK IN BOX.
3. BOTTOM OF TEST BOX SHALL BE NATIVE SOIL. DO NOT PLACE ROCK, GRAVEL OR SAND IN TEST BOX.
4. TEST BOX SHALL BE LOCATED IN SIDEWALK STRIP.
5. PROVIDE 26"x26"x4" THICK REINFORCED SQUARE CONCRETE PAD AROUND TEST BOXES AT UNPAVED SITES.

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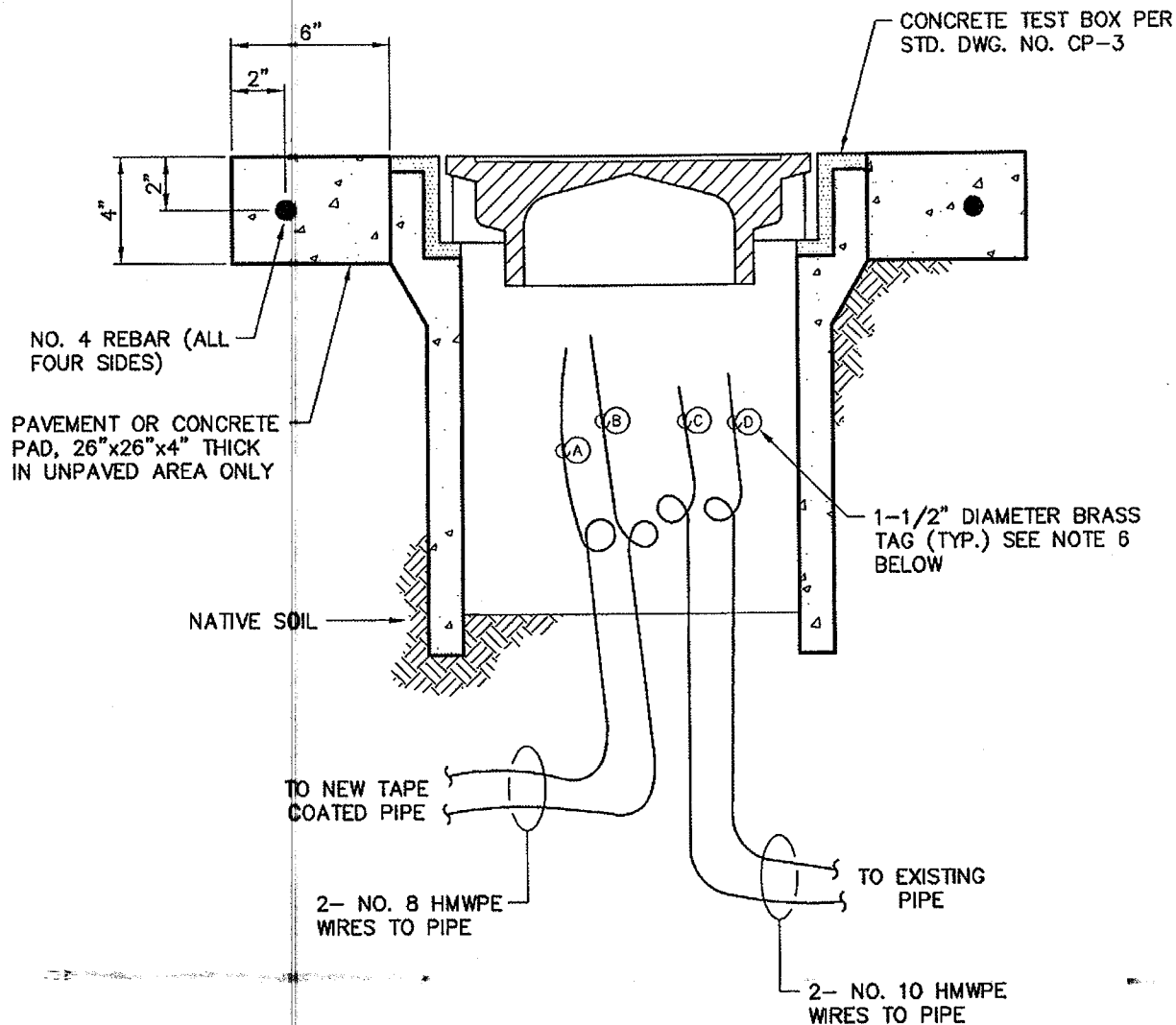


PHILLIP M. MILLER R.C.E. 30680 DATE

AT-GRADE TEST BOX

STD. DWG. NO.

CP-3



NOTES:

1. TOP OF TEST BOX SHALL BE SET FLUSH WITH GRADE.
2. ALL WIRES SHALL HAVE 18" MIN. SLACK IN BOX.
3. BOTTOM OF TEST BOX SHALL BE NATIVE SOIL. DO NOT PLACE ROCK, GRAVEL OR SAND IN TEST BOX.
4. TEST BOX SHALL BE LOCATED IN SIDEWALK STRIP.
5. PROVIDE 26"x26"x4" THICK REINFORCED SQUARE CONCRETE PAD AROUND TEST BOXES AT UNPAVED SITES.
6. BRASS TAGS SHALL BE STAMPED WITH 1/4" HIGH CHARACTERS AND SHALL IDENTIFY PIPE SIZE, MATERIAL, SERVICE AND DIRECTION.

REVISION	BY	APPR	DATE

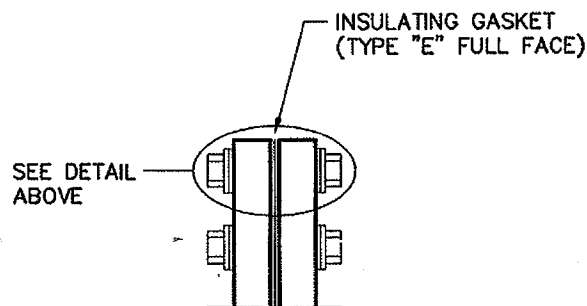
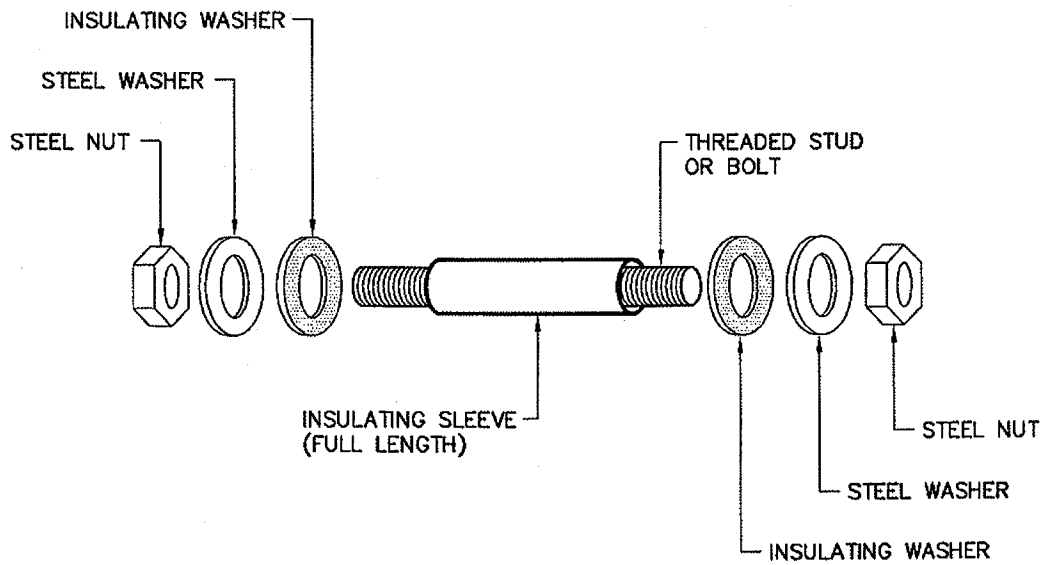


PHILLIP M. MILLER R.C.E. 30680 DATE

INSULATING FLANGE TEST STATION

STD. DWG. NO.

CP-4



NOTES:

1. GASKET SHALL BE TYPE "E" FULL FACE PHENOLIC WITH O-RING.
2. SLEEVE SHALL BE G10 CLASS.
3. WASHERS SHALL BE G10 CLASS.

REVISION	BY	APPR	DATE

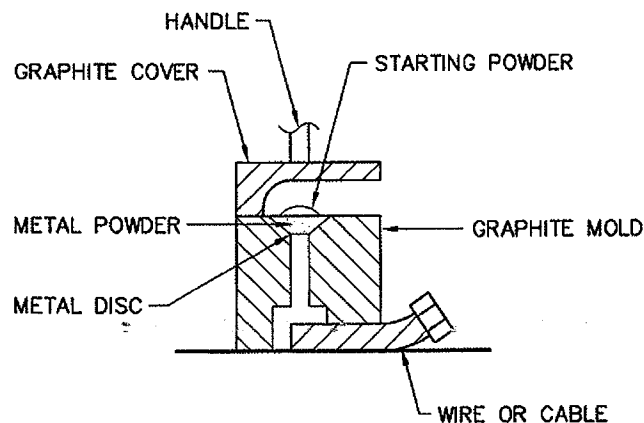
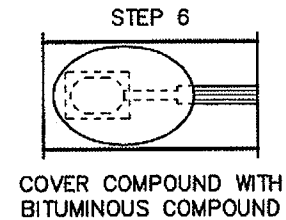
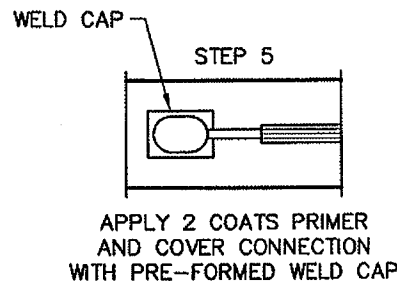
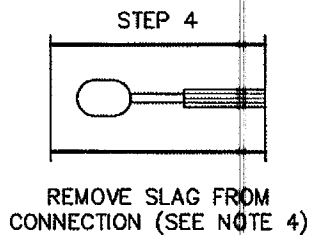
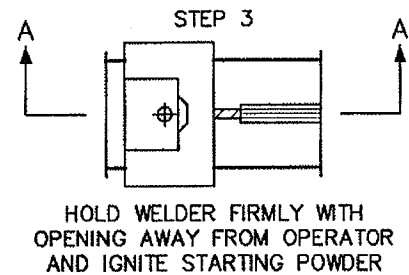
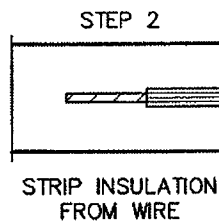
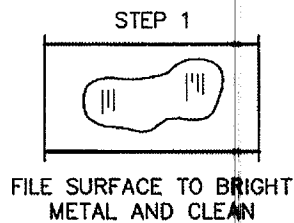


PHILLIP M. MILLER R.C.E. 30680 DATE

INSULATING FLANGE KIT MATERIALS

STD. DWG. NO.

CP-5



WELDER SECTION A-A

NOTES:

1. WELDER SHOWN IS FOR HORIZONTAL SURFACES. FOR VERTICAL SURFACES, SIDEWELDER IS REQUIRED.
2. ATTACH ONE (1) WIRE PER WELD. ALL WIRE WELDS SHALL BE 3" APART MINIMUM.
3. ALL EXPOSED METAL (STRUCTURE, WIRE AND WELD) SHALL BE COVERED WITH TWO (2) COATS OF PRIMER AND AN ELASTOMERIC WELD CAP, THEN OVER-COATED WITH BITUMINOUS COMPOUND OVERLAPPING PIPE COATING BY 2" MINIMUM.
4. ALL WELDS SHALL BE TESTED BY STRIKING THE WELD WITH A TWO (2) POUND HAMMER WHILE PULLING FIRMLY ON THE WIRE. ANY WELDS BROKEN OR LOOSENED SHALL BE RE-WELDED AND RE-TESTED. THE SURFACE MUST BE RE-GROUND AND CLEAN BEFORE RE-WELDING. ALL WELD SLAG SHALL BE REMOVED FROM THE WELD.

REVISION	BY	APPR	DATE



PHILLIP M. MILLER R.C.E. 30680 DATE

ALUMINO-THERMIC WELD

STD. DWG. NO.

CP-6

SECTION 01015

GENERAL PROVISIONS

PART 1 GENERAL

1.01 DESCRIPTION

This Section covers general provisions and requirements for the Work and is supplementary to the Conditions of the Contract.

A. Requirements Included in this Section. Principal items are:

1. Applicable Codes
2. Abbreviations
3. Shop Drawings and Certificates
4. Quality Assurance
5. Controls
6. Precedence of Construction Documents

1.02 CONSTRUCTION SCHEDULE REQUIRED

- A. A construction schedule shall be submitted not less than one week prior to the Pre-construction Conference that allows the least disturbance to the existing facilities and operation of the entire system and identifies the critical path through the schedule which will result in successful, timely completion of the project.

1.03 APPLICABLE CODES

This Article summarizes without limitation the laws and codes by which the Work has been designed and to which the Contractor shall conform in the prosecution of the Work. The Contractor shall make available for their use at the site, such copies of laws, regulations, or codes applicable to the Work as the Owner or Engineer may request of him.

- A. Laws and Regulations. As specified in Articles 11 and 13 of the General Conditions.

B. Codes.

1. Title 8, Industrial Relations, California Administrative Code, Chapter 4, Division of Industrial Safety, Safety Orders.
2. Title 19, Public Safety, California Administrative Code, State Fire Marshall.
3. National Fire Protection Association.
4. State and Local Public Health Codes.

C. Standard Specifications.

1. Standard Specifications for Public Works Construction, 2000 edition, adopted by Southern California Joint Committee of APWA-AGC. (Herein referred to as the "Standard Specifications" or "SSPWC").
2. Design and Construction Standards for Water Systems, Elsinore Valley Municipal Water District. (Herein referred to as "EVMWD Standard Specifications").

1.04 ABBREVIATIONS

- A. This Article summarizes without limitation in the abbreviations and symbols used in the Contract Documents. Abbreviations used in the Contract Documents shall be interpreted according to their recognized and well-known technical or trade meanings; such abbreviations include, but are not limited to, the following:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction, Inc.
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
APWA	American Public Works Association
ASA	American Standards Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing and Materials
AWS	American Welding Society
AWWA	American Water Works Association
CALTRANS	State of California, Department of Transportation
CS	Commercial Standard, US Department of Commerce
HI	Hydraulics Institute
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration, US Department of Labor, as defined in the General Conditions
PCA	Portland Cement Association
PS	Product Standard, US Department of Commerce
SSPWC	Standard Specifications for Public Works Construction
UBC	Uniform Building Code
UL	Underwriter's Laboratories, Inc.

1.05 QUALITY ASSURANCE

- A. Testing Laboratory Qualifications. Whether employed by the Owner or Contractor, the Testing Laboratory shall be licensed to conduct and perform testing services in the state and jurisdiction where the Work is located. All testing shall be performed under the direct supervision and control of a qualified registered professional engineer employed by the laboratory. Costs of re-testing or re-inspection caused by work not meeting specification shall be deducted from the funds due to the Contractor.
- B. Foundation for Soils Engineer. The owner may employ and pay for the services of registered Foundation or Soils Engineers to observe the specified portions of the Work and to supervise or perform testing pertaining to the observed Work. If re-testing is required because the Contractor did not meet specification requirements, all costs shall be deducted from the funds due to the Contractor.
- C. Source Quality Control. To the extent specified herein or in other sections, the Testing Laboratory shall obtain samples of various materials at the source of supply and test the

GENERAL PROVISIONS

01015-2

8" AND 12" WATER RELOCATION

materials for compliance with the Contract Documents. The Testing Laboratory shall tag, seal, label, or otherwise suitably identify the bulk materials so sampled, and no such materials shall be used in the Work until the test reports are submitted to and approved by the Engineer. The applicable tests shall be repeated at the specified intervals, whenever the source of supply is changed, or whenever the characteristics of the materials change or vary in the opinion of the Engineer.

- D. Laboratory Test or Inspection Reports. Each report shall be signed and certified by the supervising engineer of the Testing Laboratory. Unless otherwise specified, the Testing Laboratory shall submit five (5) copies of each report to the Engineer.
- E. Soils Engineer's Reports. These reports shall be certified and submitted to the Engineer. A copy of each report will be furnished to the Contractor by the Engineer.
- F. Sampling. Field samples will be selected and obtained by the Testing Laboratory or Inspector unless otherwise specified.
- G. Laboratory Test Procedures. Testing shall conform to the requirements specified. If no procedure or test method is specified, testing shall comply with the material specification referenced unless otherwise directed by the Engineer.
- H. Contractor Furnished Assistance. When requested, furnish access, facilities, and labor assistance at the site as necessary for the duties to be performed by the Testing Laboratory and Inspector, including ladders, hoisting, temporary lighting, temporary water supply and like services.
- I. Test Schedule and Test Costs. The owner will pay the cost of testing for field slump, concrete strength, optimum moisture and soil compaction. The Contractor shall perform all other testing required by the Contract Documents at his expense. The Contractor shall pay the Owner, in accordance with the General Conditions, any cost the Owner incurs for tests when the tested material or equipment fails the test and for re-testing caused by failure disclosed in previous tests.

1.06 CONTROLS.

- A. Trench Cutting and Surface Replacement. The Contractor shall furnish all necessary materials and shall replace all concrete slabs, pavement, curb, gutters and other improvements removed or damaged by his operation to its original state in a manner satisfactory to the Owner.
- B. Working Areas. Drawings indicate the site and related areas furnished or owned by Owner for prosecution of the Work. Keep all areas clean, orderly, and free of hazards, and leave in a clean condition acceptable to Owner, and governing authorities.
- C. Storage and Parking Areas. Limited area will be available at the site. Additional needed area shall be legally obtained by the Contractor at no added expense to the Owner.
- D. Construction Utilities. Refer to paragraph 3.1 of the General Conditions. Furnish the temporary piping, wiring, and other services necessary to distribute utilities to the places where Work is performed. Conform to Division 16 as to construction wiring and install

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power circuits separately from lighting and communication circuits. Install construction lighting when Work is performed at night or under deficient daylight conditions to ensure correct performance and to provide for inspection and safe working conditions.

- E. Construction Aids. Comply with OSHA requirements and applicable laws, ordinances, rules, regulations, and orders pertaining to construction machinery and equipment, hoists, cranes, scaffolding, staging, materials handling facilities, tools, appliances and other construction aids. OSHA requirements shall govern where mandatory; otherwise, comply with most stringent requirements.
- F. Transportation Facilities. Investigate the availability of transportation facilities and make necessary arrangements for delivery of materials to the site. Determine the condition and availability of public roads, access, rights-of-way, and of restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress at the site.
- G. Site Access. Construct as required for the Work. Provide surfacing as required to prevent dust nuisance or impassable conditions, and prevent oil staining and dirt accumulation on public streets used for access. Provide board ramps and covers with warning signs or barriers, or equivalent, where vehicles cross public curbs and walks and remove at end of each day's operation; furnish flagman guard when such access is in use. Maintain site and temporary roadway drainage by ditches, culverts, and similar items as required. Access to adjacent property must be maintained during construction activities.
- H. Disposal Area. The Contractor shall locate a suitable area for legal disposal of surplus construction material from the Work and shall acquire the necessary permits, if any.
- I. Access to Work. The Owner, its inspectors, agents, and other employees, shall at all times and for any purpose have access to the Work and the premises used by the Contractor, and the Contractor shall provide safe and proper facilities therefore. Furthermore, the Owner, its inspectors, and agents shall, at all times, have immediate access to all places of manufacture where machinery or materials are being manufactured, produced, or fabricated for use under these specifications, and shall have full facilities for determining that all such machinery or materials are being made strictly in accordance with the specifications and drawings. The Contractor shall, whenever so requested, give the Owner access to the proper invoices, bills of lading, delivery slips, etc., shall provide scales and assistance for weighing, or assistance for measuring any of the materials.

END OF SECTION

SECTION 01150

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 DESCRIPTIONS

- A. This Section defines the Unit and Lump Sum Prices and the manner in which they will be used to determine measurement and payment for all items included in the Bid Sheet under Elsinore Valley Municipal Water District 8" & 12" Waterline Relocation.

1.02 PRICES REQUIRED

- A. In the Bid Sheet of the Bid Form, each Bidder shall quote Unit or Lump Sum Prices for the appropriate items of Work in the units stated in the Bid Form. Failure to quote on each Unit or Lump Sum Price item may cause rejection of the Bidder's entire bid at the discretion of the Owner.
- B. Unbalanced Prices: Proposed Unit and Lump Sum Prices which are so unbalanced as to be detrimental to the Owner's interests may be rejected or cause rejection of the Bidder's entire Bid, at the discretion of the Owner.
- C. Cost Included: Each proposed Unit Price or Lump Sum Price shall cover all costs and charges including without limitation the costs of material, fabrication, delivery, installation or application, supervision, safety, bond and insurance charges, overhead, profit, and taxes. Quoted Unit or Lump Sum Price shall be the exact amount per unit to be applied to the units or Work actually provided for the purpose of establishing the payment due the Contractor.
- D. Duration of Prices: Quoted Unit or Lump Sum Prices accepted by the Owner shall be held good and in effect until the Work is completed and accepted by the Owner, unless modified by Change Order.

1.03 MEASUREMENT AND PAYMENT FOR BID ITEMS

- A. This section defines the manner and method of measurement and payment for all items included in the Contract.
- B. Compensation for all materials, tools, labor, service, and all other items required to complete the work in conformity with the Contract Documents will be included in the payment provided in this Section unless specifically excluded. No other compensation will be made except for the items listed in the Bid Sheet. Work for which no separate payment has been provided will be considered as a subsidiary obligation of the Contractor, and the cost therefore shall be included in the applicable contract price for the item to which the work applied. All Measurements of work done will be made by the Owner.

C. Bid Items are as follows:

⁹¹
Bid Item No. 1: Furnish and install 12-inch restraint joint Ductile-iron Pipe, pressure Class 350, cement-mortar lined, polyethylene wrap pipe and appurtenances for a complete and operable water system, which will be measured on a linear foot basis for all work and materials required to construct the water system complete as shown in the drawings and as specified. Linear feet shall be measured in the horizontal plane. Payment shall include full compensation for water pipeline, excavation, removal of existing facilities, disposal of excess material, removal and disposal of unsuitable materials, provide approved backfill material, sand bedding, backfill compaction, concrete work, restrained joints, reducers, crosses, tees, bends, adapters, blind flanges, end caps, plugs, connectors, and other fittings, flange insulating kits, casings, testing, sterilization, protection of in-place items, pavement removal and replacement, and all appurtenances required or necessary for a completed water system. Payment for plugging of exposed ends of decommissioned pipe shall also be included within these bid items. Bridge casing for EVMWD pipeline shall be included with the bridge package. Unit price shall include hydrostatic testing and disinfection of pipelines and appurtenances in accordance with EVMWD Section 15044.

⁹²
Bid Item No. 2: The same as Bid Item No. 1 above, except the pipe shall be 8-inches in diameter.

⁹³
Bid Item No. 3: Furnish and install 20-inch ID steel casing per EVMWD Standard Drawing No. W-6 and Section 15130 modified with restraining Ford/Uni-flange casing spacers.

^{94 & 95}
Bid Item No. 4: Furnish and install 6-inch and 8-inch Blow-off Assembly per EVMWD Standard Drawing No. W-19 with mainline tee positioned downward, for a complete and operable blowoff system, which will be measured as per each basis for all work and materials required to construct the blow-off complete as shown on the drawings and as specified. Payment based on such measurement shall constitute full compensation for blow-off, bury, ductile iron pipe, fire hydrant, blind flange, gate valve, valve box and cover, tee, all gaskets, bolts and nuts, concrete thrust blocks, painting, polyethylene wrap, excavation, bedding, backfill, compaction, including foundation and paving.

^{96 & 97}
Bid Item No. 5: Furnish and install 8-inch and 12-inch Resilient-wedge Gate Valve per EVMWD Standard Drawing No. W-13, which will be measured on a per each basis for all work and materials to construct this item as shown in the drawings and as specified. Payment shall include full compensation for valve, gaskets, bolts and nuts, blind flange, valve box and cover, paving around valve cover, polyethylene wrap and appurtenances including all required excavation, bedding, backfill, compaction, paving, and all other work and appurtenances required or necessary to complete the facility.

⁹⁹
Bid Item No. 6: Provision and installation for making and completing system interconnections shall include, but not be limited to, all labor, materials, tools, equipment and all other incidentals, all site clearing, temporary support and / or relocation of existing utilities, excavation, pipe materials, restrained joints, bedding backfill, compaction, fittings, appurtenances, dewatering, tracer tape, polyethylene

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encasement, removal and disposal of trench spoils, erosion and sediment control, temporary resurfacing, surface restoration, clean up, and all pavement and base replacement and marking affected by the Contractor's construction activities.

Bid Item No. ¹⁰⁰~~7~~ Provision and installation of potable water service reconnection shall include but not be limited to all labor, materials, tools, equipment and all other incidentals, excavation beyond the trench limits for the water main, disposal of spoils material, removal and disposal of the existing service connection as required to facilitate the connection to the new water main, dewatering, pipe provisions for all sizes, installation, couplings to connect new construction, bedding, backfill, compaction, sidewalk, curb and gutter, cleaning, temporary resurfacing, and all pavement and base replacement and marking affected by the Contractor's construction activities and all other work necessary for a complete installation. Limits of reconnection are from the new water main to the existing meter. Installation per EVMWD Standard Drawing No. W-9 and District Standard Specifications.

Bid Item No. ¹⁰²~~8~~ Preparing, maintaining and supplying project record documents in accordance with EVMWD Section 01770.

END OF SECTION

SECTION 01770

CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Specific administrative procedures, closeout submittals, and forms to be used at substantial completion and final completion of Work, and project record documents.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01300: Shop Drawings and Submittal (Volume I)
B. Section 01400: Quality Control (Volume I)
C. Section 01740: Cleaning and Final Cleaning
D. Section 01750: Starting and Adjusting
E. Section 01781: Record Drawings
F. Section 01783: Operating and Maintenance Data
G. Section 01787: Product Warranties
H. Section 01820: Demonstration and Training
I. Section 7: Project Closeout Procedure of the Design Guidelines from the Elsinore Valley Municipal Water District's Supplemental Standard Specifications and Drawings, Volume II, Reservoirs, Water Booster Pump Station, Well Facilities, and Sewage Lift Stations.

1.03 QUALITY CONTROL

- A. Upon completion of Contract, Work shall be tested and ready for operation. Work shall fulfill its intended purpose as described in Contract Documents, in submittals, and in manufacturer's literature.
- B. Where connections or disruptions have been made to existing work, repair, reactivate, refill and recharge components, restoring them to preconstruction conditions. Follow procedures of authorities having District-ship or jurisdiction for work involving existing utilities and services.

1.04 SUBMITTALS

- A. Furnish the following submittals:

Submittal	Description
Monument Survey	Show record locations of monuments or benchmarks disturbed and reset by Contractor. Monument survey shall be sealed by surveyor and submitted to District.

Various	Refer to Section 7: Project Closeout Procedures from Elsinore Valley Municipal Water District Supplemental Standard Specifications and Drawings, Volume II.
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1.05 UNIT PRICES

- A. Payment for monument survey required in Contract Documents will be included in the price bid for items of work for which monument survey is required.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 FIELD QUALITY CONTROL

- A. Refer to Section 7: Project Closeout Procedures from Elsinore Valley Municipal Water District.
- B. Eleven month warranty inspection shall be conducted prior to release of bonds. Any work failing to comply with specifications or performance standards stated in manufacturers submittals or printed promotional literature will at that time be tagged as defective and scheduled for repair. Repair all defective work in strict accordance with the Contract Documents and to the satisfaction of the District.
1. District will establish inspection date and will notify Contractor at least 30 days in advance.
 2. Warranty Inspection Report will be prepared by District and delivered to Contractor. It will set forth the number and type of failures observed and the names of persons making the inspection.
 3. Repairs shall proceed promptly. Upon completion of inspection and receipt of Inspection Report, District will establish a date for Contractor to proceed with remedial Work. Delay on the part of the Contractor to proceed with remedial work on schedule shall constitute a breach of this Contract. In such case, District may proceed to have defects remedied as outlined in Contract Documents.
 4. Costs of warranty inspection and repair shall be borne by Contractor, who shall include an appropriate amount for testing and repair in his bid. No additional allowance will be paid by District for Warranty Inspection and repairs.

3.02 ADJUSTING AND CLEANING

- A. Valve box cover elevations are not shown on drawings. Determine and set cover elevations in field so that finished rim elevations are flush with finished pavement where directed by District.

3.03 EXTRA STOCK/SPARE PARTS

- A. Spare parts required shall be delivered in manufacturer's original containers labeled to completely describe contents and equipment for which it is furnished.

END OF SECTION

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SECTION 15044 HYDROSTATIC TESTING OF PRESSURE PIPELINES

PART 1 - GENERAL

1.01 DESCRIPTION

This section describes the requirements and procedures for pressure and leakage testing of all ductile iron (DI) and polyvinyl chloride (PVC) pressure mains.

1.02 RELATED WORK SPECIFIED ELSEWHERE

- A. Disinfection of Pipe: Section 15041
- B. Backflow Prevention: Section 15112
- C. Ductile Iron Pipe and Fittings: Section 15056
- D. PVC Pressure Pipe: Section 15064

1.03 SUBMITTALS

- A. Submit shop drawings in accordance with Standard Specification Section 01300.
- B. Submit plan testing pressure pipeline. Plan should indicate source of water to fill pipeline, locations of temporary air release valves and blow-offs, equipment and materials required to deliver the potable water to the testing area, temporary thrust block locations and proposed point of discharge of the test water.
- C. Submit request for potable water source from the District 96 hours in advance of testing date.

1.04 REQUIREMENTS PRIOR TO TESTING

- A. All piping, valves, fire hydrants, services, and related appurtenances shall be installed prior to testing.
- B. The pipe trench shall have trench zone backfill placed and compacted with a minimum of 3.0-feet of material over the pipe.
- C. All concrete anchor blocks shall be allowed to cure until a minimum strength of 2,500 psi is achieved before testing.
- D. Pressure tests on exposed and aboveground piping shall be conducted only after the entire piping system has been installed and attached to pipe supports, hangers or anchors as shown on the Approved Plans.

1.05 CONCURRENT HYDROSTATIC TESTING AND DISINFECTION OF PIPELINES

Hydrostatic testing of pipelines shall be performed prior to or concurrently with the disinfection operations. In the event repairs are necessary, as indicated by the hydrostatic test, the District may require additional disinfection testing. Any costs associated with additional disinfection testing after said repairs shall be borne by the Contractor at no additional cost to the District.

1.06 CONNECTION TO EXISTING MAINS

Hydrostatic testing shall be performed prior to connections to existing mains. District authorization for connection to the existing system shall be given only on the basis of acceptable hydrostatic, disinfection and bacteriological test results. Connection to existing mains shall be performed in accordance with Section 15000, General Piping Systems and Appurtenances.

PART 2 - MATERIALS

2.01 WATER

- A. Potable water shall be used for hydrostatic testing of potable and recycled water mains when such testing is performed separately from disinfection operations.
- B. Potable water shall be supplied by a District-approved source. Make-up water for testing shall also be potable water.
- C. A chlorinated water solution, in accordance with section 15041, shall be used to charge the line and for make-up water when hydrostatic testing and disinfection operations are combined.

2.02 CONNECTIONS

- A. Testing water shall be supplied through a metered connection equipped with a backflow prevention device in accordance with Section 15112 at the point of connection to the potable water source used.
- B. The Contractor shall provide any temporary piping needed to deliver potable water to the piping that is to be tested.

PART 3 - EXECUTION

3.01 GENERAL

- A. The Contractor shall provide the District with a minimum of four working days notice prior to the requested date and time for hydrostatic tests.
- B. The Contractor shall furnish all labor, materials, tools, and equipment for testing.
- C. Temporary blocking during the tests will be permitted only at temporary plugs, caps or where otherwise directed by the District.
- D. All valves and appurtenances shall be operated during the test period. The test shall be conducted with valves in the open position.

- E. At the onset of testing, all valves, air vacuum assemblies, blowoffs, and services shall be monitored for possible leakage and repairs made, if necessary, before the test proceeds. The appurtenances shall be monitored through the duration of the testing.
- F. For pipe with porous lining, such as cement mortar, the pipe shall be filled with water and placed under a slight pressure for a minimum of two working days prior to the actual hydrostatic test.

3.02 FIELD TEST PROCEDURE

- A. Before applying the specified test pressure, care shall be taken to release all air within the pipe and appurtenances to be tested. Air shall be released through services, fire hydrants, air release valves, or other approved locations.
- B. A four (4) hour hydrostatic pressure test shall be performed after the pipe and all appurtenances have been installed and after any trench backfill compaction with heavy-duty compaction equipment has been completed. The hydrostatic test pressure shall be 50 psi above the working pressure of the pipe at the lowest point in the section being tested and shall be at least equal to the design class of the pipe at the highest point in the line.

The test pressure shall be applied and continuously maintained by pumping for a period of four (4) hours. During the pumping phase of the test, the test pressure shall be maintained at not less than 95% of the specified test pressure at all times.

At the end of the fourth (4th) hour, the pressure shall meet the requirements stated above. Pumping shall then be discontinued for one hour and the drop in pressure shall be recorded. Pumping shall then be resumed to restore the initial test pressure, and the quantity of water pumped into the line shall be accurately measured. This measured quantity shall not exceed that which would result from leakage at the following rates:

1. ~~The allowable leakage for steel (flanged or welded) and ductile iron (flanged) pipe shall be zero.~~
2. The leakage for polyvinyl chloride (PVC) pipe, and for steel or ductile- iron pipes with rubber joints shall be considered as the total amount of water pumped into the pipe system after the fifth (5th) hour of testing. Allowable leakage during the fifth (5th) hour shall be in accordance with the following formula:

$$\frac{2 \text{ gal} \times \text{nominal diameter of pipe (in)} \times \text{length of pipe (ft)}}{24 \text{ (hrs)} \times 5,280 \text{ (ft)}}$$

If the leakage exceeds the allowable loss, the leak points shall be located and repaired as required by the District. All defective pipe, fittings, valves and other appurtenances discovered shall be removed and replaced with sound material. Additional disinfection shall be performed as necessary per Section 15041. The hydrostatic test shall be repeated until the leakage does not exceed the rate specified above. All visible leaks shall be similarly repaired.

END OF SECTION

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SECTION 15130 JACKED PIPE CASING

PART 1 GENERAL

1.01 DESCRIPTION

This section includes materials and installation of jacked pipe casings. Where the contractor proposes to install pipelines using directional drilling or boring, a complete submittal of the methods and materials shall be made to the District prior to the initiation of the work.

1.02 REFERENCE STANDARDS

The publications listed below form part of this specification to the extent referenced and are referred to in the text by the basic designation only. References shall be made to the latest edition of said standards unless otherwise called for.

- ASTM A 36/A 36M - Standard Specification for Carbon Structural Steel
- ASTM A 283/A 283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
- ASTM A 568/A 568M - Standard Specification for Steel, Sheet and Strip, Carbon, Hot-Rolled, and Structural Quality Cold Rolled

1.03 RELATED WORK SPECIFIED ELSEWHERE

- A. EVMWD Standard Drawings
- B. Trenching, Backfilling and Compacting: Section 02223
- C. Testing of Gravity Sewer: Section 15043
- D. Hydrostatic Testing of Pressure Pipe: Section 15044
- E. CML&C Steel Pipe and Specials: Section 15076

1.04 SERVICE APPLICATION

Generally, pipe casings are used for protection of utilities (carrier pipes) and may be installed for future utility installations. Pipe casings shall be used in conjunction with the installation of potable water, recycled water, and sewer mains in areas shown on the Approved Plans or as directed by the District.

1.05 PROTECTION OF EXISTING UTILITIES AND FACILITIES

The contractor shall be responsible for the care and protection in place of all existing utilities, facilities, and structures that may be encountered in or near the area of the work.

1.06 SAFETY AND PERMITTING REQUIREMENTS

- A. Pipe jacking and boring projects 30-inch in diameter or larger are required to be classified by the State of California, Department of Industrial Relations, Division of Occupational Safety and Health.
- B. Protection of workers in trench excavation shall be as required by the State of California Construction Safety Orders, the State of California State Health and Safety Code, the requirements of CAL-OSHA.
- C. All excavations shall be performed, protected, and supported as required for safety and in the manner set forth in the operation regulations prescribed by CAL-OSHA.
- D. It shall be the Contractor's responsibility to obtain excavation permits, traffic control permits, or other applicable permits from the local agency which has jurisdiction.
- E. A pre-job safety conference with representatives of the Division of Occupational Safety, CAL-OSHA, the District, the Contractor and Contractor's employees shall be held before the work begins.
- F. Contractors performing this type of work are required to hold a current C-34 or General Engineering Contracting License from the State of California.

1.07 DESIGN REQUIREMENTS

- A. Pipe casing shall be provided for the carrier piping where shown on the Approved Plans or as required by the District or local agency. The sizes and material type for pipe casing shall be as detailed in Part 2 of this Section.
- B. The District may select a greater steel thickness and diameter as appropriate for the intended application.

1.08 SUBMITTALS

The contractor shall provide to the District and the agency, or agencies, of jurisdiction a drilling, boring, and jacking plan prior to commencing boring operations. The submittal shall include:

- A. Configuration of the jacking pits and jacking pit bracing or shoring. Pit excavations deeper than 20-inch require the shoring system to be certified by a Registered Civil Engineer.
- B. The pipe casing material to be used. Include pipe material type, wall thickness, and welding details.
- C. Casing spacers and end seals.
- D. Jacking plan and profile drawing detailing the placement of the jacked casing.
- E. Installation procedure.
- F. Manufacturer and type of liquid epoxy paint, including proposed steel preparation and application methods to be used.

- G. The jacking machinery and jacking head proposed to be used.
- H. Summary of the backfilling method to be used.
- I. Worker Protection and Safety Plan.
- J. Cathodic Protection.

1.09 DELIVERY AND HANDLING

Proper care shall be used to prevent damage in handling, moving and placing the pipe casing. All pipe-casing materials shall be lowered into the trench in a manner that prevents damage. The pipe casing shall not be dropped, dragged or handled in a manner that will cause dents, cracks, or other damage to the pipe casing.

1.10 CASING SPACERS AND END SEALS

Casing spacers and end seals shall be used for all pipe installations within casings. If the carrier pipe is not installed within the casing as a continuous operation following completion of jacking, then bulkhead the portals and backfill the approach trenches. Bulkheads will be removed at a later time to allow for the installation of the carrier pipe.

PART 2 MATERIALS

2.01 PIPE CASINGS

Jacked pipe casings shall be steel.

- A. The minimum size and wall thickness of jacked steel pipe casings shall be as follows, unless otherwise required by the agency having jurisdiction over the road, utilities, or improvements.

<u>Carrier Pipe Size</u>	<u>Minimum Casing Size</u>	<u>Min. Steel Casing Wall Thickness</u>
6"	14"	3/8"
8"	16"	3/8"
10"	18"	3/8"
12"	20"	3/8"
16"	30"	1/2"
20"	36"	1/2"
24"	42"	1/2"

- B. Pipe casing for carrier pipe sizes larger than 24-inch shall be determined by the District.
- C. The Contractor may submit a greater steel thickness and diameter as appropriate for the method of work and loadings involved, as suitable for the site and as limited by possible interferences.
- D. Any deviations in the approved design shall be submitted to the District a minimum of fourteen (14) working days in advance of the jacking operation. The Contractor may

not proceed with any work until the District has approved the proposed alternate methods.

- E. It is the Contractor's responsibility to choose a size of casing at or above the minimum specified, and to insure that the jacking is done with a high degree of accuracy to permit installation of the carrier pipe to the lines and grades shown on the approved plans.
- F. Steel pipe casings, unless otherwise approved by the District, shall be butt-welded sheets (spiral welding of pipe not allowed) conforming to ASTM A 361A 36M, ASTM A 2831 A 283M, Grade D, or ASTM A 5701A 570M, Grade 33. Other steel grades may be used upon approval of the District.
- G. Steel pipe casings shall include the installation of an anode in accordance with the Standard Drawings, unless otherwise directed by the District.

2.02 CASING SPACERS

Casing spacers shall be stainless steel, centered-position type with PVC liner and non-metallic anti-friction runners in accordance with the Approved Materials List.

2.03 CASING END SEALS

Casing end seals, in accordance with the Approved Materials List, shall wrap around the casing and carrier pipe to provide a barrier to backfill material and seepage. The casing end seal shall be a minimum 1/4-inch thick styrene butadiene rubber sheet attached to the carrier pipe and casing with 1-inch wide stainless steel bands. Zippered casing end seals with stainless steel bands may also be used.

PART 3 - EXECUTION

3.01 TRENCH EXCAVATION, BACKFILL AND COMPACTION

Trenching, bedding, backfilling and compaction operations shall be performed in accordance with Section 02223.

3.02 JACKING PIT

- A. The approach trench for jacking or boring operations shall be adequately shored to safeguard existing substructures and surface improvements and to ensure against ground movement in the vicinity of the casing portal.
- B. Placement of equipment in the approach trench of the jacking pit shall be firmly bedded on the required line and grade using heavy timbers, structural steel, or concrete cradles of sufficient length to provide accurate control of jacking alignment. Provide space to insert the casing lengths to be jacked. Anchor the timbers and structural steel sections to ensure action of the jacks in line with the axis of the casing. Place a timber or structural steel bearing block between the jacks and the end of the casing to provide uniform bearing upon the casing end evenly distribute the jacking pressure.

- C. After jacking equipment and debris from the tunnel have been removed from the approach trench of jacking pit, prepare the bottom of the jacking pit as a pipe foundation. Remove all loose and disturbed materials below pipe grade to undisturbed earth and re-compact the material in accordance with Section 02223.

3.03 PIPE CASING INSTALLATION

Installation of pipe casings shall be as described below and in accordance with the Standard Drawings. Only workers experienced in jacking operations shall be used in performing the work of jacking and boring.

- A. The Contractor's attention is called to the fact that extreme care is required in placing the casing so as to permit the installation of the carrier pipe to the lines and grades shown on the Approved Plans.
- B. Gravity flow pipelines are designed at grades that do not permit variance from the lines and grade as shown on the Approved Plans.
- C. Fit a sectional shield or steel jacking head to the leading section of the casing. The shield or head shall extend around the outer surface of the upper two-thirds of the casing and project at least 18-inch beyond the driving end of the casing. It shall not protrude more than 1/2-inch beyond the outer casing surface.
- D. The leading section of casing shall be equipped with a jacking head securely anchored (thereto to prevent any wobble or variation in alignment during the jacking operation).
- E. To avoid loss of ground outside the casing, carry out excavation entirely within the jacking head and not in advance of the head. In general, excavated materials shall be removed from the casing as jacking progresses and no accumulation of excavated material within the casing will be permitted.
- F. A jacking band to reinforce the end of the pipe receiving the jacking thrust will be required.
- G. Control the application of jacking pressure and excavation of material ahead of the advancing casing to prevent it from becoming friction-bound or deviating from required line and grade. Do not encroach upon the minimum annular space detailed. Restrict the excavation of material to the least clearance to prevent binding in order to avoid settlement or possible damage to overlying structures or utilities.
- H. Steel casing sections shall be full-circumference butt-welded in the field. It shall be the Contractor's responsibility to provide stress transfer across the joints capable of resisting the jacking forces involved.
- I. Any voids around pipe casing shall be grouted solid.

3.04 CARRIER PIPE INSTALLATION

- A. Carrier pipe shall be pushed into the casing incorporating the use of casing spacers as described below.
- B. PVC or ductile-iron carrier pipe joints shall be restrained either by mechanical means or by use of splined gaskets.
- C. Steel carrier pipe sections shall be lap joint welded in accordance with Section 15076.
- D. Upstream and downstream elevations of the carrier pipe shall be verified prior to installing the end seals.
- E. The portion of carrier pipe installed within a casing shall have pressure, leakage, and infiltration testing completed in accordance with Section 15043 and 15044 prior to installation of the end seals.
- F. The treatment of the annular space between the carrier pipe and casing shall be in accordance with the Standard Drawings.

3.05 CASING SPACERS

Casing spacers shall be used to prevent the carrier pipe bell from touching the casing and to maintain a uniform space between the carrier pipe and casing interior. Casing spacers shall be installed on the carrier pipe at intervals per the manufacturer's recommendations with a minimum of three spacers per pipe section equally spaced.

3.06 CASING END SEALS

Casing end seals shall be installed in accordance with the manufacturer's recommendations. Carrier pipe shall pass hydrostatic or leakage tests in accordance with Sections 15043 or 15044 prior to the installation of casing end seals or backfilling operations.

END OF SECTION

AGREEMENT

THIS AGREEMENT is entered into at Riverside, California as of the date set forth below is between County of Riverside hereafter called "County" and **SEMA CONSTRUCTION, INC.** hereafter called "Contractor".

W I T N E S S E T H

RECITALS:

1. Contractor has submitted to County his Contractor's Proposal for the construction of County Project, **GOETZ ROAD AND NEWPORT ROAD COMPLETION OF IMPROVEMENTS, PROJECT NO. B8-0643**, in strict accordance with the Contract Documents identified below and County has accepted said Proposal.
2. Contractor states that he has reexamined his Contractor's Proposal and found it to be correct, has ascertained that his subcontractors are properly licensed and possess the requisite skill and forces, has reexamined the site and Contract Documents and is of the opinion that he can presently do the work in accordance with the Contract Documents for the money set forth in his Proposal to be paid as provided in the Contract Documents.

AGREEMENT:

IT IS AGREED BY THE PARTIES AS FOLLOWS:

1. Contract Documents. The entire contract consists of the following: (a) The Agreement. (b) The Notice Inviting Bids. (c) The Instruction to Bidders. (d) The Contractor's Proposal. (e) The Bid Bond. (f) The Payment Bond. (g) The Performance Bond. (h) The General Conditions. (i) The Special Provisions. (j) The Standard Specifications of the State of California Department of Transportation edition of May 2006 as modified in other portions of the Contract Documents. (k) The Standard Plans of the Department of Transportation identified on the plans or in the Special Provisions. (l) The Plans. (m) Addenda **(1 through 3)**. (n) The Determination of Prevailing Wage Rates for Public Work. (o) Any Change Orders issued. (p) Any additional or supplemental specifications, **including Exhibit "A" 'Items of Work Breakdown and Designation of Subcontractors'**, notice, instructions and drawings issued in accordance with the provisions of the Contract Documents. All of said Documents presently in existence are by this reference incorporated herein with like effect as if here set forth in full and upon the proper issuance of other documents they shall likewise be deemed incorporated. The Bid Bond is exonerated upon execution of this Agreement and the Payment Bond and Faithful Performance Bond.
2. The Work. Contractor shall do all things necessary to construct the work generally described in Recital No. 1 in accordance with the Contract Documents.

3. Liquidated Damages and Time of Completion. Attention is directed to the provisions in Section 8-1.06, "Time of Completion", and in Section 8-1.07, "Liquidated Damages", of the Standard Specifications and these Special Provisions.

The Contractor shall begin work within 15 days of the date stated within the written "Notice to Proceed".

The Contractor shall notify the Engineer, in writing, of his intent to begin work at least 72 hours before work is begun. The notice shall be delivered to the Transportation Department's Construction Engineer and shall specify the date the Contractor intends to start. If the project has more than one location of work, a separate notice shall be given for each location.

Should the Contractor begin work in advance of receiving a written "Notice to Proceed", any work performed by him in advance of the date stated in the "Notice to Proceed" shall be considered as having been done by him at his own risk and as a volunteer and subject to the following:

- (1) The Contractor shall, on commencing operations, take all precautions required for public safety and shall observe all the provisions in the Specifications and the Special Provisions.
 - (2) All work done according to the contract prior to the issuance of the "Notice to Proceed", will be considered authorized work and will be paid for as provided in the contract.
 - (3) The Contractor shall not be entitled to any additional compensation or an extension of time for any delay, hindrance or interference caused by or attributable to commencement of work prior to the issuance of the "Notice to Proceed".
4. Compensation. Contractor shall be paid in the manner set forth in the Contract Documents the amount of his Proposal as accepted by County, the above rates, subject to additions and deductions as provided in the Contract Documents. Said Proposal is on file in the Office of the Clerk of the Board of Supervisors of County.

GOETZ ROAD AND NEWPORT ROAD COMPLETION OF IMPROVEMENTS

PROJECT NO. B8-0643

AGREEMENT

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
1	999990	MOBILIZATION	LS	1	25,000.00	25,000.00
2	066102	DUST ABATEMENT	LS	1	60,000.00	60,000.00
3	074020	WATER POLLUTION CONTROL	LS	1	116,000.00	116,000.00
4	120100	TRAFFIC CONTROL SYSTEM	LS	1	129,000.00	129,000.00
5	066105	RESIDENT ENGINEERS OFFICE	LS	1	55,000.00	55,000.00
6	170101	DEVELOP WATER SUPPLY	LS	1	5,000.00	5,000.00
7	160101	CLEARING AND GRUBBING	LS	1	10,000.00	10,000.00
8	-----	REVISED, SEE ALTERNATE BID SCHEDULE 2	-----	-----	-----	-----
9	190101	EARTHWORK / ROADWAY EXCAVATION /OVER EXCAVATION	CY	36,000	5.50	198,000.00
10	000003	DEMOLISHING EXISTING BLOCK WALL	LS	1	10,000.00	10,000.00
11	198001	IMPORT BORROW [EARTHWORK FILL, IN PLACE]	CY	26,400	6.58	173,712.00
12	000003	MISCELLANEOUS DIRECTED WORK	FA	1	25,000.00	25,000.00
13	510501	MINOR CONCRETE [PAVEMET (8" THICK) OVER CEMENT TREATED BASE (12" THICK), CRS 814 FOR BUS TURN OUT]	SQFT	1,700	7.50	12,750.00
14	510501	MINOR CONCRETE (CURB AND GUTTER) (CRS 200)	LF	5,560	11.00	61,160.00
15	510501	MINOR CONCRETE (TYPE "D" CURB) (CRS 204) [6"]	LF	3,980	11.00	43,780.00
16	510501	MINOR CONCRETE (TYPE "D" CURB) (CRS 204) [8"]	LF	2,950	11.00	32,450.00
17	510501	MINOR CONCRETE (CROSS-GUTTER) (CRS 209)	SQFT	2,740	6.50	17,810.00
18	510501	MINOR CONCRETE SIDEWALK (CRS401)	SQFT	20,700	2.80	57,960.00
19	510501	MINOR CONCRETE (CURB RAMP) (CRS 403 - CASE A)	EA	5	3,400.00	17,000.00
20	510501	MINOR CONCRETE (COMMERCIAL DRIVE APPROACH (CRS 207A W=30' R=15'))	SQFT	780	11.00	8,580.00
21	510501	MINOR CONCRETE V-DITCH INCLUDING DISSIPATER	LF	640	29.00	18,560.00
22	013903	PLACE ASPHALT CONCRETE DIKE (CRS 212) (6")	LF	1,400	3.10	4,340.00
23	260201	CLASS 2 AGGREGATE BASE	CY	12,200	25.00	305,000.00

AGREEMENT (CONTINUED)

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
24	390130	HOT MIX ASPHALT	TON	10,100	61.00	616,100.00
25	018031	GUARD RAILING (BARRICADE) (CRS 810)	LF	54	45.00	2,430.00
26	000003	METAL HAND RAILING PER A.P.W.A. 606-1 TYPE B	LF	125	58.00	7,250.00
27	832001	METAL BEAM GUARD RAILING	LF	63	20.00	1,260.00
28	839565	TERMINAL SYSTEM(TYPE SRT)	EA	1	2,500.00	2,500.00
29	017003	CATCH BASIN (RIV. CO. STD. 311)	EA	12	8,300.00	99,600.00
30	000003	FLO-GARD PLUS FILTER	EA	13	1,800.00	23,400.00
31	650014	18" REINFORCED CONCRETE PIPE	LF	235	80.00	18,800.00
32	650017	24" REINFORCED CONCRETE PIPE	LF	130	86.00	11,180.00
33	800300	CHAIN LINK FENCE [RCFC&WCD STD. DWG. NO. M-801]	LF	25	82.00	2,050.00
34	000003	JUNCTION STRUCTURE PER RCFC STD.NO. JS227 (BREAK INTO EXISTING 18" RCP)	EA	1	2,500.00	2,500.00
35	000003	MEDIAN DRAIN INLET (CALTRANS STD. DWG. D73, TYPE G1)	EA	1	4,000.00	4,000.00
36	665016	18" CORRUGATED METAL PIPE	LF	225	58.00	13,050.00
37	703220	18" CORRUGATED METAL PIPE RISER	EA	2	2,800.00	5,600.00
38	705001	END SECTION PER CAL TRANS D94A	EA	2	470.00	940.00
39	721025	ROCK SLOPE PROTECTION (2-TON, METHOD B)	CY	40	110.00	4,400.00
40	721007	ROCK SLOPE PROTECTION (1/2-TON, METHOD B)	CY	3,100	58.00	179,800.00
41	721007	ROCK SLOPE PROTECTION (1/2-TON METHOD A)	CY	340	52.00	17,680.00
42	840519	THERMOPLASTIC CROSSWALK AND PAVEMENT MARKING	SQFT	2,815	2.50	7,037.50
43	840656	PAINT TRAFFIC STRIPE (2 COAT)	LF	22,410	0.20	4,482.00
44	850102	PAVEMENT MARKER (REFLECTIVE)	EA	1,100	2.50	2,750.00
45	566011	ROADSIDE SIGN - ONE POST	EA	28	160.00	4,480.00

AGREEMENT (CONTINUED)

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
46	820107	DELINEATOR (CLASS 1) [TYPE Q]	EA	13	35.00	455.00
47	860811	DETECTOR LOOP	EA	15	150.00	2,250.00
48	860201	TRAFFIC SIGNAL AND LIGHTING [NEWPORT ROAD & GOETZ ROAD INTERSECTION]	LS	1	111,700.00	111,700.00
49	861502	TRAFFIC SIGNAL MODIFICATION[GOETZ ROAD & CANYON LAKE DRIVE]	LS	1	139,800.00	139,800.00
50	203031	ERROSION CONTROL (HYDRO SEED) [LANDSCAPE SLOPE AREAS]	SQFT	28,210	0.10	2,821.00
51	150740	REMOVE AND SALVAGE SIGN [EXISTING]	EA	17	250.00	4,250.00
52	861349	REMOVE EXISTING TRAFFIC SIGNAL [GOETZ ROAD & NORMANDY ROAD]	LS	1	5,000.00	5,000.00
53	071325	TEMPORARY FENCE (TYPE ESA)	LF	1,200	3.00	3,600.00
54	000003	PRESSURE GROUTING (NORTH ABUTMENT)	LS	1	148,100.00	148,100.00
55	192003 (F)	STRUCTURE EXCAVATION (BRIDGE) TYPE (D)	CY	1,964	40.00	78,560.00
56	193003 (F)	STRUCTURE BACKFILL (BRIDGE)	CY	1,612	81.00	130,572.00
57	512253 (F)	FURNISH PRECAST/PRESTRESSED CONCRETE "BULB TEE" GIRDER	EA	12	24,000.00	288,000.00
58	512500 (F)	ERECT PRECAST/PRESTRESSED CONCRETE "BULB TEE" GIRDER	EA	12	1,200.00	14,400.00
59	510051 (F)	STRUCTURAL CONCRETE (BRIDGE FOOTING)	CY	452	260.00	117,520.00
60	510053 (F)	STRUCTURAL CONCRETE (BRIDGE)	CY	717	925.18	663,354.06
61	510086 (F)	STRUCTURAL CONCRETE, APPROACH SLAB TYPE N(S)	CY	180	600.00	108,000.00
62	519088 (F)	JOINT SEAL TYPE B (MR=1")	LF	202	60.00	12,120.00
63	520102 (P-F-S)	BAR REINFORCING STEEL (BRIDGE)	LB	263,800	0.60	158,280.00
64	839541	TRANSITION RAILING (TYPE WB)	EA	1	3,300.00	3,300.00
65	000003	SEISMIC EXPANSION JOINTS	EA	4	12,500.00	50,000.00
66	833140 (F)	CONCRETE BARRIER TYPE 26	LF	360	210.00	75,600.00
67	833088 (F)	TUBULAR HANDRAILING	LF	360	35.00	12,600.00

AGREEMENT (CONTINUED)

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
68	750501 (P-F)	MISCELLANEOUS METAL (BRIDGE)	LB	2,240	30.00	67,200.00
69	511035	ARCHITECTURAL FINISH (STONE VENEER)	SQFT	995	46.00	45,770.00
70	721810 (F)	SLOPE PAVING (CONCRETE) [SLOPE PROTECTION]	SQFT	10,000	7.00	70,000.00
71	703450 (P-F)	WELDED STEEL PIPE CASING (BRIDGE) (34" DIA)	LF	65	360.00	23,400.00
72	703450 (P-F)	WELDED STEEL PIPE CASING (BRIDGE) (12" DIA)	LF	186	140.00	26,040.00
73	703450 (P-F)	WELDED STEEL PIPE CASING (BRIDGE) (22" DIA)	LF	186	230.00	42,780.00
74	518002	SOUND WALL (MASONRY BLOCK WALL)	SQFT	15,412	13.00	200,356.00
75	000003	FURNISH & INSTALL 24"CML&P WATER INCLUDING FULL WELD DOUBLE PASS JOINTS [EMWD]	LF	126	180.00	22,680.00
76	000003	FURNISH & INSTALL 24"CML&C WATER INCLUDING FULL WELD DOUBLE PASS [EMWD]	LF	45	310.00	13,950.00
77	000003	FURNISH & INSTALL 24"PVC, CL-235 WATERLINE INCLUDING RESTRAIN JOINTS [EMWD]	LF	99	260.00	25,740.00
78	000003	FURNISH & INSTALL 2" AV&AR PER B-367 AND PER DETAIL D-34066 [EMWD]	EA	1	4,800.00	4,800.00
79	000003	FURNISH & INSTALL FLEX TEND [EMWD]	EA	2	24,700.00	49,400.00
80	000003	FURNISH & INSTALL 6" BLOWOFF PER B-568 [EMWD]	EA	1	4,900.00	4,900.00
81	000003	REMOVE CAP AND JOIN EXISTING 24" WATERLINE	EA	1	5,100.00	5,100.00
82	000003	PROVIDE CONCRETE CAP PER B-408 [EMWD]	CY	120	150.00	18,000.00
83	000003	PROVIDE AND INSTALL CORROSION PROTECTION PER DETAIL 2 [EMWD]	LS	2	4,600.00	9,200.00
84	000003	FURNISH & INSTALL 6" PVC, C-900, DR-18 RECYCLED WATER PIPELINES WITHOUT RESTRAINT [EMWD]	LF	351	38.00	13,338.00
85	000003	FURNISH & INSTALL 6" PVC, C-900, DR-18 RECYCLED WATER PIPELINES INCLUDING RESTRAINTS [EMWD]	LF	141	83.00	11,703.00
86	000003	FURNISH & INSTALL 12" PVC, C-900, DR-18 RECYCLED WATER PIPELINES INCLUDING RESTRAINTS [EMWD]	LF	200	71.00	14,200.00
87	000003	FURNISH & INSTALL 12" PVC, C-900, DR-18 RECYCLED WATER PIPELINES WITHOUT RESTRAINT [EMWD]	LF	325	56.00	18,200.00
88	000003	REMOVE 6" END CAP AND JOIN EXISTING 6" RECYCLED WATER PIPELINE [EMWD]	EA	1	4,000.00	4,000.00

AGREEMENT (CONTINUED)

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
89	000003	REMOVE 12" END CAP AND JOIN EXISTING 12" RECYCLED WATER PIPELINE [EMWD]	EA	2	3,000.00	6,000.00
90	000003	FURNISH AND INSTALL 12" FXH RSGV PER B-255 [EMWD]	EA	1	2,900.00	2,900.00
91	000003	FURNISH AND INSTALL 12-INCH DIAMETER DUCTILE IRON PIPE, CLASS 350, CEMENT MORTAR LINED AND POLYETHYLENE WRAP COMPLETE IN PLACE [EVMWD]	LF	829	89.00	73,781.00
92	000003	FURNISH AND INSTALL 8-INCH DIAMETER DUCTILE IRON PIPE, CLASS 350, CEMENT MORTAR LINED AND POLYETHYLENE WRAP COMPLETE IN PLACE. [EVMWD]	LF	87	220.00	19,140.00
93	000003	FURNISH AND INSTALL 20-INCH ID STEEL CASING PER EVMWD STANDARD DRAWING NO W-6	LF	32	260.00	8,320.00
94	000003	FURNISH AND INSTALL 6-INCH BLOW OFF ASSEMBLY PER EVMWD STD. DWG. NO. W-19, COMPLETE IN PLACE	EA	1	4,900.00	4,900.00
95	000003	FURNISH AND INSTALL 8-INCH BLOW OFF ASSEMBLY PER EVMWD STD. DWG. NO. W-19, COMPLETE IN PLACE	EA	1	6,400.00	6,400.00
96	000003	FURNISH AND INSTALL 8-INCH RESILIENT WEDGE GATE VALVE PER EVMWD SPECIFICATIONS AND STD. DWG. NO. W-13, COMPLETE IN PLACE	EA	2	2,900.00	5,800.00
97	000003	FURNISH AND INSTALL 12-INCH RESILIENT WEDGE GATE VALVE PER EVMWD SPECIFICATIONS AND STD. DWG. NO. W-13, COMPLETE IN PLACE	EA	2	3,200.00	6,400.00
98	-----	DELETED BY ADDENDUM	-----	-----	-----	-----
99	000003	CONNECTIONS TO EXISTING PIPELINES, COMPLETE IN PLACE	LS	1	24,000.00	24,000.00
100	000003	CONNECTION OF NEW PIPELINES TO EXISTING WATER METER, COMPLETE IN PLACE	LS	1	8,500.00	8,500.00
101	-----	DELETED BY ADDENDUM	-----	-----	-----	-----
102	000003	PREPARE, MAINTAIN AND SUPPLY AS-BUILT DRAWINGS AND NOTES AT COMPLETION OF WATER MAIN INSTALLATION PROJECT IN ACCORDANCE WITH EVMWD SECTION 01770, COMPLETE IN PLACE	LS	1	10,000.00	10,000.00
103	000003	PCC OVERFLOW DEVICE [PER SHEET 1&6 OF EARTHWORK PLANS]	SQFT	630	9.50	5,985.00
104	498016	16" CAST-IN-DRILLED-HOLE CONCRETE PILING (FOR SOUND WALL)	LF	2,616	45.00	117,720.00
105	510524	MINOR CONCRETE (FOR SOUND WALL)	CY	147	488.00	71,736.00
106	511035	ARCHITECTURAL TREATMENT (FOR SOUND WALL)	SQFT	29,307	6.00	175,842.00

AGREEMENT (CONTINUED)

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
107	000003	STONE VENEER (FOR SOUND WALL)	SQFT	1,517	43.00	65,231.00
108	000003	ADJUST MAINTENANCE MANHOLE TO GRADE [INCLUDING FRAME, 7 STORM DRAIN AND 1 FIBER OPTIC]	EA	8	2,700.00	21,600.00
109	192020	STRUCTURE EXCAVATION (TYPE D)[RETAINING (SCOUR) WALL]	CY	894	34.00	30,396.00
110	193013	STRUCTURE BACKFILL [RETAINING (SCOUR) WALL]	CY	491	82.00	40,262.00
111	510060	STRUCTURAL CONCRETE [RETAINING (SCOUR) WALL]	CY	225	600.00	135,000.00
112	520103	BAR REINFORCING STEEL [RETAINING (SCOUR) WALL]	LB	21,837	0.85	18,561.45

PROJECT SUBTOTAL, ITEMS 1-112:

Six million, ninety six thousand, nine hundred five dollars and one cent
WORDS

\$6,096,905.01

ALTERNATE BID SCHEDULE 1 (EMWD, EXTENSION 24" LINE)

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
113	000003	FURNISH & INSTALL 24"PVC, CL-235 WATERLINE WITHOUT RESTRAINT	LF	1,349	97.00	130,853.00
114	000003	FURNISH & INSTALL 24"PVC, CL-235 WATERLINE INCLUDING RESTRAINTS	LF	1,051	110.00	115,610.00
115	000003	FURNISH & INSTALL 6" FIRE HYDRANT PER B-362	EA	5	6,500.00	32,500.00
116	000003	FURNISH & INSTALL 42" HDPE CASING	LF	35	250.00	8,750.00
117	000003	REMOVE 24" END CAP	EA	1	1,400.00	1,400.00
118	000003	JOIN EXISTING 24" WATERLINE	EA	2	2,000.00	4,000.00
119	000003	FURNISH & INSTALL 12" PVC, C-900, CL-200 INCLUDING RESTRAINTS	LF	25	230.00	5,750.00
120	000003	FURNISH & INSTALL 12" PVC, C-900, DR-18 INCLUDING RESTRAINTS	LF	101	88.00	8,888.00

**AGREEMENT
(CONTINUED)**

ALTERNATE BID SCHEDULE 1 (EMWD, EXTENSION 24" LINE) (CONTINUED)

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
121	000003	FURNISH & INSTALL 1" AV&AR PER B-598	EA	1	5,500.00	5,500.00
122	000003	FURNISH & INSTALL 6" BLOWOFF PER B-568	EA	1	4,900.00	4,900.00
123	000003	FURNISH & INSTALL 12" RSGV PER B-255	EA	1	2,600.00	2,600.00
124	000003	FURNISH & INSTALL 24" RSGV PER B-255	EA	2	25,300.00	50,600.00
125	000003	REMOVE 18" BLIND FLANGE	EA	1	700.00	700.00
126	000003	REMOVE 18" FXF BFV	EA	1	1,300.00	1,300.00
127	000003	REMOVE EXISTING BLOWOFF AND INSTALL BLIND FLANGE	EA	2	3,000.00	6,000.00

PROJECT SUBTOTAL, ITEMS 113-127:

Three hundred seventy nine thousand three hundred fifty one dollars and zero cents
WORDS

\$379,351.00

ALTERNATE BID SCHEDULE 2 (COC INSURANCE)

ITEM No.	ITEM CODE	ITEM	UNIT	ESTIMATED QUANTITY	ITEM PRICE (IN FIGURES)	TOTAL (IN FIGURES)
128	000003	COURSE OF CONSTRUCTION INSURANCE	LS	1	16,000.00	16,000.00

PROJECT SUBTOTAL, ITEM 128:

Sixteen thousand dollars and zero cents
WORDS

\$16,000.00

PROJECT TOTAL, ITEMS 1-128:

Six million, four hundred ninety two thousand, two hundred fifty six dollars and one cent
WORDS

\$6,492,256.01

IN WITNESS WHEREOF the parties hereto have executed this agreement as of the date set forth below.

COUNTY OF RIVERSIDE

SEMA CONSTRUCTION, INC.

BY Marion Ashley
Chairman, Board of Supervisors
MARION ASHLEY

BY Melvin L. Browning

Dated OCT 19 2010

TITLE: Vice President
(If Corporation, Affix Seal)

ATTEST:

Kecia Harper-Ihem, Clerk of the Board

ATTEST:
CSR.Ch
Chuck Chapman

BY Deputy

TITLE: Vice President - Estimating

FORM APPROVED COUNTY COUNSEL
BY: NEAL R. KIPNS DATE

Licensed in accordance with an act providing for the registration of Contractors,

License No. 657770

Federal Employer Identification Number:
84-1163868

BY _____
"County"
(Seal)

"Corporation"
(Seal)



September 21, 2010

County of Riverside
14th St. Annex
3525 14th St.
Riverside, CA 92501
Attn: Saleem Baig

RE: Goetz Rd and Newport Rd Improvements e-mail dated 9-16-10

Dear Mr. Baig,

Per your request, please find below the "Items of Work Breakdown" as you requested and in conformance with your e-mail dated September 16, 2010.

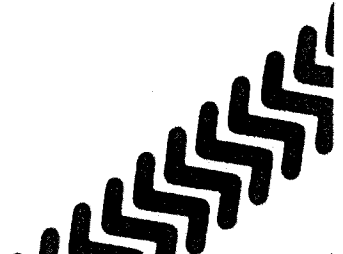
Bid #	Bid Description	Responsible
1	Mobilization	SEMA
2	Dust abatement	SEMA
3	Water pollution control	SEMA
4	Traffic control system	SEMA
5	Resident engineers office	SEMA
6	Develop water supply	SEMA
7	Clear and grub	SEMA
8	Revised see Alt bid sched 2	SEMA
9	Earthwork/Rdwy Ex & o/ex	SEMA
10	Demo exg block wall	SEMA
11	Import borrow (earthwork, FIP)	SEMA
12	Misc directed work	SEMA
13	Minor conc pvmnt o/CTB	SAMROD
14	Minor conc curb & gutter	SAMROD
15	Minor conc type D curb 6"	SAMROD
16	Minor conc type D curb 8"	SAMROD
17	Minor conc cross gutter	SAMROD
18	Minor conc sidewalk	SAMROD

**Heavy and Highway
General Contractors**

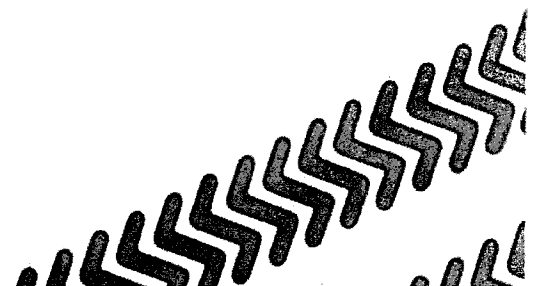
6 Orchard
Suite 150
Lake Forest
California
92630

(949) 470-0500
Fax: (949) 829-0100

657770 A



19	Minor conc curb ramp	SAMROD
20	Minor conc drive approach	SAMROD
21	Minor conc V-ditch w/dissipater	VDITCH
22	Place asp conc dike	Matich
23	Class 2 aggregate base	SEMA
24	Hot mix asphalt	Matich
25	Guard railing barricade	Alcorn
26	Metal hand railing type B	Alcorn
27	MBGR	Alcorn
28	Terminal system type SRT	Alcorn
29	Catch Basin	SEMA
30	Flo-gard plus filter	SEMA
31	18" RCP	SEMA
32	24" RCP	SEMA
33	CL Fence	Alcorn
34	Junction struct	SEMA
35	Median drain inlet	SEMA
36	18" Corrugated metal pipe	SEMA
37	18" Corrugated metal pipe riser	SEMA
38	End section	SEMA
39	Rock slope protection 2-ton, Meth B	Rock Strs
40	Rock slope protection 1/2-ton, Meth B	SEMA
41	Rock slope protection 1/2-ton, Meth A	Rock Strs
42	TP crosswalk & Pvmnt	OC Striping
43	Paint traffic stripe	OC Striping
44	Pvmnt mkr reflective	OC Striping
45	Roadside sign one post	SEMA
46	Delineator class 1 type Q	OC Striping
47	Detector loop	Sierra
48	Tffc sig & lighting (nwpt rd & Goetz)	SEMA
49	Tffc sig mod (Goetz & Cnyn Lk Dr)	Sierra
50	EC - Hydroseed/Landscape slope areas	Hydrospout
51	Remove & salvage sign Exg	SEMA
52	Remove tffc signal	Sierra
53	Temp fence Type ESA	Marina
54	Pressure grouting (no. abutment)	GSI
55	(F) Struct ex - bridge, type D	SEMA
56	(F) Struct backfill - Bridge	SEMA
57	(F) Furn PC/PS conc bulb tee girder	SEMA
58	(F) Erect PC/PS conc bulb tee girder	SEMA
59	(F) Struct conc (bridge footing)	SEMA
60	(F) Struct conc (bridge)	SEMA
61	(F) Struct conc, approach slab type N(S)	SEMA

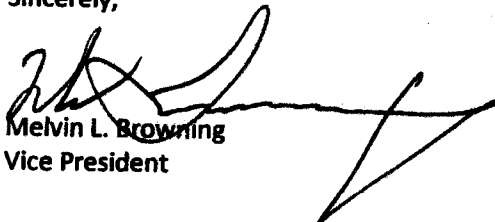


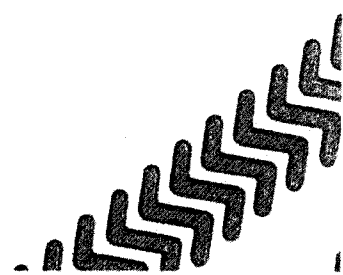
62	(F) Joint seal type B (MR=1")	SEMA
63	(PFS) Bar reinf steel - bridge	American
64	Transition railing type WB	Alcorn
65	Seismic expansion joints	SEMA
66	(F) Conc barrier type 26	ACL (Concrete), American Steel Placers (Steel)
67	(F) Tubular handrailing	Alcorn
68	(PF) Misc metal - bridge	SEMA
69	Architectural finish - stone veneer	Reycon
70	(F) Slope paving- conc,slope protect	SEMA
71	(PF) WSP casing - Bridge 34" dia	SEMA
72	(PF) WSP casing - Bridge 12" dia	SEMA
73	(PF) WSP casing - Bridge 22" dia	SEMA
74	Sound wall - masonry blk wall	SEMA
75	F&I 24" CML&P wtr inc FWDPJ	SEMA
76	F&I 24" CML&C wtr inc FWDP	SEMA
77	F&I 24" PVC, CL-235 wl inc RJ	SEMA
78	F&I 2" AV&AR	SEMA
79	F&I flex tend	SEMA
80	F&I 6" blowoff	SEMA
81	Remove cap & join exg 24" wl	SEMA
82	Provide conc cap	SEMA
83	F&I corrosion protection	SEMA
84	F&I 6" PVC, C-900, DR-18RWP w/o restraint	SEMA
85	F&I 6" PVC, C-900, DR-18RWP w/ restraint	SEMA
86	F&I 12" PVC, C-900, DR-18RWP w/restraint	SEMA
87	F&I 12" PVC, C-900, DR-18RWP w/o restraint	SEMA
88	Remove 6" ec & join exg 6" RWP	SEMA
89	Remove 12" ec & join exg 12" RWP	SEMA
90	F&I 12" FXH RSGV	SEMA
91	F&I 12" dia DIP, class 350, CML&PW in place	SEMA
92	F&I 8" dia DIP, class 350, CML&PW in place	SEMA
93	F&I 20" ID steel casing	SEMA
94	F&I 6" blowoff assembly	SEMA
95	F&I 8" blowoff assembly	SEMA
96	F&I 8" Resilient wedge gate valve	SEMA
97	F&I 12" Resilient wedge gate valve	SEMA
98	Deleted by addn 1	SEMA
99	Connections to exg pipelines, CIP	SEMA
100	Con of (N) pipelines to exg wtr mtr	SEMA
101	Deleted by addn 1	SEMA
102	P/M/S as built dwgs & notes	SEMA
103	PCC overflow device	SEMA
104	16" CIDH conc piling (snd wall)	SEMA

105	Minor conc for snd wall	American
106	Architectural Tmnt for snd wall	Griffith
107	Stone veneer for snd wall	Reycon
108	Adj maint MH to grade inc frame, sd & fo	SEMA
109	Str Exc (Ty D) Ret (Scour) Wall	SEMA
110	Str Backfill Ret (Scour) Wall	SEMA
111	Structure Concrete Ret (Scour) Wall	SEMA
112	Bar Reinf Steel Ret (Scour) Wall	American
113	F&I 24" PVC, CL-235 WL w/o restraint	SEMA
114	F&I 24" PVC, CL-235 WL w/ restraint	SEMA
115	F&I 6" Fire Hydrant	SEMA
116	F&I 42" HDPE casing	SEMA
117	Remove 24" end cap	SEMA
118	Join exg 24" water line	SEMA
119	F&I 12" PVC, C-900, CL-200 Inc restraints	SEMA
120	F&I 12" PVC, C-900, DR-18 inc restraints	SEMA
121	F&I 1" AV&AR	SEMA
122	F&I 6" blowoff	SEMA
123	F&I 12" RSGV	SEMA
124	F&I 24" RSGV	SEMA
125	Remove 18" blind flange	SEMA
126	Remove 18" FXF BFV	SEMA
127	Remove exg blowoff & inst blind flange	SEMA
128	Course of construction insurance	SEMA

If you have any questions please feel free to call anytime.

Sincerely,


Melvin L. Browning
Vice President



CONSENT MINUTES OF A SPECIAL MEETING OF THE
SHAREHOLDERS AND DIRECTORS OF SEMA CONSTRUCTION INC.

December 30, 2007

Having waived an actual meeting, a special meeting of the Board of Directors of Sema Construction, Inc. a Colorado Corporation (the "Company") was held with consent and approval of the Shareholders and Directors, effective on December 30, 2007. The following actions were taken and resolutions enacted with the approval and ratification of all Shareholders and Directors of the Company.

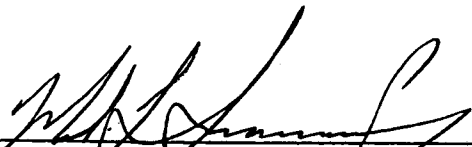
RESOLVED, that Melvin L. Browning, as Vice President of the California division, is authorized to sign subcontract agreements, purchase agreements, proposals and bid documents, owner change order and credit application/reference documents for the California division of the Company.

No other actions were taken, decisions made, or resolutions enacted.

DATED AND EFFECTIVE as of the day and year first written above.

Approved and Signed:


Thomas G. Ames, Director


Melvin L. Browning, Director


Bradley J. Spies, Director

PERFORMANCE BOND

Recitals:

1. **SEMA CONSTRUCTION INC.** (Contractor) has entered into an Agreement with COUNTY OF RIVERSIDE (County) for construction of public work known **GOETZ ROAD AND NEWPORT ROAD COMPLETION OF IMPROVEMENTS, PROJECT NO. B8-0643.**
2. _____, a _____ corporation (Surety), is the Surety under this Bond.

Agreement:

We, Contractor, as Principal, and Surety, as Surety, jointly and severally agree, state, and are bound unto County, as obligee, as follows:

1. The amount of the obligation of this Bond is 100% of the estimated contract price for the Project of \$ **6,492,256.01 (Six million, four hundred ninety two thousand, two hundred fifty six dollars and one cent)**, and inures to the benefit of County.
2. This Bond is exonerated by Contractor doing all things to be kept and performed by it in strict conformance with the Contract Documents for the Project, otherwise it remains in full force and effect for the recovery of loss, damage and expense of County resulting from failure of Contractor to so act. All of said Contract Documents are incorporated herein.
3. This obligation is binding on our successors and assigns.
4. For value received, Surety stipulates and agrees that no change, time extension, prepayment to Contractor, alteration or addition to the terms and requirements of the Contract Documents or the work to be performed thereunder shall affect its obligations hereunder and waives notice as to such matters, except the total contract price cannot be increased by more than 10% without approval of Surety.

THIS BOND is executed as of _____.

By _____

By _____

By _____

Type Name _____

Its Attorney in Fact
"Surety"

Title _____

"Contractor"

(Corporate Seal)

(Corporate Seal)

NOTE: This Bond must be executed by both parties with corporate seal affixed. All signatures must be acknowledged. (Attach acknowledgements).

PAYMENT BOND

(Public Work - Civil Code 3247 et seq.)

The makers of this Bond are SEMA CONSTRUCTION INC., as Principal and Original Contractor and _____, a corporation, authorized to issue Surety Bonds in California, as Surety, and this Bond is issued in conjunction with that certain public works contract to be executed between Principal and COUNTY OF RIVERSIDE a public entity, as Owner, for \$ 6,492,256.01 (Six million, four hundred ninety two thousand, two hundred fifty six dollars and one cent), the total amount payable. THE AMOUNT OF THIS BOND IS ONE HUNDRED PERCENT OF SAID SUM. Said contract is for public work generally consisting of GOETZ ROAD AND NEWPORT ROAD COMPLETION OF IMPROVEMENTS, PROJECT NO. B8-0643.

The beneficiaries of this Bond are as is stated in 3248 of the Civil Code and requirements and conditions of this Bond are as is set forth in 3248, 3249, 3250 and 3252 of said code. Without notice, Surety consents to extension of time for performance, change in requirements, amount of compensation, or prepayment under said contract.

DATED: _____

Original Contractor - Principal

Surety

By _____

By _____
Its Attorney In Fact

Title _____

(If corporation, affix seal)

(Corporate Seal)

(Corporate Seal)

STATE OF CALIFORNIA }
COUNTY OF _____ } ss. SURETY'S ACKNOWLEDGEMENT

On _____ before me, _____ personally appeared, _____, known to me, or proved to me on the basis of satisfactory evidence, to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacities, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

Notary Public (Seal)

Note: This Bond must be executed by both parties with corporate seal affixed for each party. All signatures must be notarized.

PERFORMANCE BOND

Bond No. 09003939

Recitals:

1. **SEMA CONSTRUCTION INC.** (Contractor) has entered into an Agreement with COUNTY OF RIVERSIDE (County) for construction of public work known **GOETZ ROAD AND NEWPORT ROAD COMPLETION OF IMPROVEMENTS, PROJECT NO. B8-0643.**
2. Fidelity and Deposit Company of Maryland, a Maryland corporation (Surety), is the Surety under this Bond.

Agreement:

We, Contractor, as Principal, and Surety, as Surety, jointly and severally agree, state, and are bound unto County, as obligee, as follows:

1. The amount of the obligation of this Bond is 100% of the estimated contract price for the Project of \$ **6,492,256.01 (Six million, four hundred ninety two thousand, two hundred fifty six dollars and one cent)**, and inures to the benefit of County.
2. This Bond is exonerated by Contractor doing all things to be kept and performed by it in strict conformance with the Contract Documents for the Project, otherwise it remains in full force and effect for the recovery of loss, damage and expense of County resulting from failure of Contractor to so act. All of said Contract Documents are incorporated herein.
3. This obligation is binding on our successors and assigns.
4. For value received, Surety stipulates and agrees that no change, time extension, prepayment to Contractor, alteration or addition to the terms and requirements of the Contract Documents or the work to be performed thereunder shall affect its obligations hereunder and waives notice as to such matters, except the total contract price cannot be increased by more than 10% without approval of Surety.

THIS BOND is executed as of 9-28-10

By SEMA Construction, Inc.

By Melvin L. Browning

Title Vice President
"Contractor"

(Corporate Seal)

Fidelity and Deposit Company of Maryland

By Angela M. Tindol

Type Name Angela M. Tindol

Its Attorney in Fact
"Surety"

(Corporate Seal)

NOTE: This Bond must be executed by both parties with corporate seal affixed. All signatures must be acknowledged. (Attach acknowledgements).

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

State of California

County of Orange

On 9/28/10
Date

before me, Jennifer D. Lewis
Here Insert Name and Title of the Officer

personally appeared Melvin L. Browning, Vice President
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person~~(s)~~ whose name~~(s)~~ is~~are~~ subscribed to the within instrument and acknowledged to me that he~~she/they~~ executed the same in his~~her/their~~ authorized capacity~~(ies)~~, and that by his~~her/their~~ signature~~(s)~~ on the instrument the person~~(s)~~, or the entity upon behalf of which the person~~(s)~~ acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Place Notary Seal Above

Signature: Jennifer D. Lewis
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Performance & Payment Bond

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: Melvin L. Browning

☒ Corporate Officer — Title(s): Vice President

☐ Individual

☐ Partner — ☐ Limited ☐ General

☐ Attorney in Fact

☐ Trustee

☐ Guardian or Conservator

☐ Other: _____

Signer Is Representing: _____
SEMA Construction, Inc.

RIGHT THUMBPRINT
OF SIGNER
Top of thumb here

Signer's Name: _____

☐ Corporate Officer — Title(s): _____

☐ Individual

☐ Partner — ☐ Limited ☐ General

☐ Attorney in Fact

☐ Trustee

☐ Guardian or Conservator

☐ Other: _____

Signer Is Representing: _____

RIGHT THUMBPRINT
OF SIGNER
Top of thumb here



STATE OF Colorado

COUNTY OF Denver

} SS.

On 9-28-10, before me, Mona D. Weaver

PERSONALLY APPEARED Angela M. Tindol

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature

Mona D. Weaver

This area for Official Notarial Seal

My commission expires: 10/27/2013

OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

CAPACITY CLAIMED BY SIGNER

- ☐ INDIVIDUAL
☐ CORPORATE OFFICER

TITLE(S)

- ☐ PARTNER(S) ☐ LIMITED
☐ GENERAL

☒ ATTORNEY-IN-FACT

☐ TRUSTEE(S)

☐ GUARDIAN/CONSERVATOR

☐ OTHER: _____

DESCRIPTION OF ATTACHED DOCUMENT

Performance & Payment Bond

TITLE OF TYPE OF DOCUMENT

NUMBER OF PAGES

DATE OF DOCUMENT

SIGNER IS REPRESENTING:

NAME OF PERSON(S) OR ENTITY(IES)

Fidelity and Deposit Company of Maryland

SIGNER(S) OTHER THAN NAMED ABOVE

PAYMENT BOND

Bond No. 09003939

(Public Work - Civil Code 3247 et seq.)

The makers of this Bond are SEMA CONSTRUCTION INC., as Principal and Original Contractor and Fidelity and Deposit Company of Maryland _____, a corporation, authorized to issue Surety Bonds in California, as Surety, and this Bond is issued in conjunction with that certain public works contract to be executed between Principal and COUNTY OF RIVERSIDE a public entity, as Owner, for \$ 6,492,256.01 (Six million, four hundred ninety two thousand, two hundred fifty six dollars and one cent), the total amount payable. THE AMOUNT OF THIS BOND IS ONE HUNDRED PERCENT OF SAID SUM. Said contract is for public work generally consisting of GOETZ ROAD AND NEWPORT ROAD COMPLETION OF IMPROVEMENTS, PROJECT NO. B8-0643.

The beneficiaries of this Bond are as is stated in 3248 of the Civil Code and requirements and conditions of this Bond are as is set forth in 3248, 3249, 3250 and 3252 of said code. Without notice, Surety consents to extension of time for performance, change in requirements, amount of compensation, or prepayment under said contract.

DATED: 9-28-10

SEMA Construction, Inc.
Original Contractor - Principal

Fidelity and Deposit Company of Maryland
Surety

By Melvin L. Browning

By Angela M. Tindol
Its Attorney In Fact
Angela M. Tindol

Title Vice President

(If corporation, affix seal)

(Corporate Seal)

(Corporate Seal)

COLORADO
STATE OF ~~CALIFORNIA~~
COUNTY OF DENVER

} ss. SURETY'S ACKNOWLEDGEMENT

On _____ before me, Mona D. Weaver personally appeared, Angela M. Tindol, known to me, or proved to me on the basis of satisfactory evidence, to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacities, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public Mona D. Weaver

Notary Public (Seal)

My Commission Expires: 10/27/2013

Note: This Bond must be executed by both parties with corporate seal affixed for each party. All signatures must be notarized.

Power of Attorney
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY

KNOW ALL MEN BY THESE PRESENTS: That the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, and the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, corporations of the State of Maryland, by WILLIAM J. MILLS, Vice President, and GERALD F. HALEY, Assistant Secretary, in pursuance of authority granted by Article VI, Section 2, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, does hereby nominate, constitute and appoint **Mona D. WEAVER, John BROWNING, Anuj JAIN, Sheila J MONTOYA, Charles M. MCDANIEL, Angela M. TINDOL and Duane C. TROMBETTA, all of Denver, Colorado, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed, **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the Company at its office in Baltimore, Md., in their own proper persons. This power of attorney revokes that issued on behalf of Mona D. WEAVER, Anuj JAIN, Sheila J MONTOYA, Charles M. MCDANIEL, Angela M. TINDOL, John BROWNING, dated September 22, 2009.

The said Assistant Secretary does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article VI, Section 2, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President and Assistant Secretary have hereunto subscribed their names and affixed the Corporate Seals of the said FIDELITY AND DEPOSIT COMPANY OF MARYLAND, and the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, this 15th day of March, A.D. 2010.

ATTEST:

FIDELITY AND DEPOSIT COMPANY OF MARYLAND
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY



Gerald F. Haley

Gerald F. Haley Assistant Secretary

By:

William J. Mills

William J. Mills

Vice President

State of Maryland }
City of Baltimore } ss:

On this 15th day of March, A.D. 2010, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, came WILLIAM J. MILLS, Vice President, and GERALD F. HALEY, Assistant Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, and the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and they each acknowledged the execution of the same, and being by me duly sworn, severally and each for himself depose and saith, that they are the said officers of the Companies aforesaid, and that the seals affixed to the preceding instrument is the Corporate Seals of said Companies, and that the said Corporate Seals and their signatures as such officers were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.



Constance A. Dunn

Constance A. Dunn

Notary Public

My Commission Expires: July 14, 2011

EXTRACT FROM BY-LAWS OF FIDELITY AND DEPOSIT COMPANY OF MARYLAND

"Article VI, Section 2. The Chairman of the Board, or the President, or any Executive Vice-President, or any of the Senior Vice-Presidents or Vice-Presidents specially authorized so to do by the Board of Directors or by the Executive Committee, shall have power, by and with the concurrence of the Secretary or any one of the Assistant Secretaries, to appoint Resident Vice-Presidents, Assistant Vice-Presidents and Attorneys-in-Fact as the business of the Company may require, or to authorize any person or persons to execute on behalf of the Company any bonds, undertaking, recognizances, stipulations, policies, contracts, agreements, deeds, and releases and assignments of judgements, decrees, mortgages and instruments in the nature of mortgages,....and to affix the seal of the Company thereto."

EXTRACT FROM BY-LAWS OF COLONIAL AMERICAN CASUALTY AND SURETY COMPANY

"Article VI, Section 2. The Chairman of the Board, or the President, or any Executive Vice-President, or any of the Senior Vice-Presidents or Vice-Presidents specially authorized so to do by the Board of Directors or by the Executive Committee, shall have power, by and with the concurrence of the Secretary or any one of the Assistant Secretaries, to appoint Resident Vice-Presidents, Assistant Vice-Presidents and Attorneys-in-Fact as the business of the Company may require, or to authorize any person or persons to execute on behalf of the Company any bonds, undertaking, recognizances, stipulations, policies, contracts, agreements, deeds, and releases and assignments of judgements, decrees, mortgages and instruments in the nature of mortgages,....and to affix the seal of the Company thereto."

CERTIFICATE

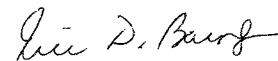
I, the undersigned, Assistant Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, and the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that the Vice-President who executed the said Power of Attorney was one of the additional Vice-Presidents specially authorized by the Board of Directors to appoint any Attorney-in-Fact as provided in Article VI, Section 2, of the respective By-Laws of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, and the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990 and of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed."

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies,

this _____ day of _____, _____.



Assistant Secretary

Company Profile

FIDELITY AND DEPOSIT COMPANY OF MARYLAND

1400 AMERICAN LANE, 19TH FLOOR TOWER 1
SCHUAMBURG, IL 60196-1056
800-382-2150

Agent for Service of Process

KAREN HARRIS, C/O CORPORATION SERVICE COMPANY 2730 GATEWAY OAKS DRIVE, SUITE 100
SACRAMENTO, CA 95833

Unable to Locate the Agent for Service of Process?

Reference Information

NAIC #:	39306
NAIC Group #:	<u>0212</u>
California Company ID #:	2479-4
Date authorized in California:	January 01, 1982
License Status:	UNLIMITED-NORMAL
Company Type:	Property & Casualty
State of Domicile:	MARYLAND

Lines of Insurance Authorized to Transact

The company is authorized to transact business within these lines of insurance. For an explanation of any of these terms, please refer to the [glossary](#).

AIRCRAFT
AUTOMOBILE
BOILER AND MACHINERY
BURGLARY
CREDIT
FIRE
LIABILITY
MARINE
MISCELLANEOUS
PLATE GLASS
SPRINKLER
SURETY
TEAM AND VEHICLE
WORKERS' COMPENSATION



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
09/27/2010

PRODUCER MARSH USA, INC. 600 RENAISSANCE CENTER, SUITE 2100 DETROIT, MI 48243 Attn: RAFFLES Fax (313) 393-6950 26067 -00177-RAF-10/11	THIS CERTIFICATION IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.	
	INSURERS AFFORDING COVERAGE	NAIC #
	INSURER A: American Zurich Insurance Co.	
	INSURER B: N/A	N/A
	INSURER C: Zurich American Insurance Company	16535
INSURED SEMA CONSTRUCTION, INC. 7353 S. EAGLE STREET CENTENNIAL, CO 80112-4223	INSURER D:	
	INSURER E:	

COVERAGES

4

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
C		GENERAL LIABILITY	GLO3486335	04/01/2010	04/01/2011	EACH OCCURRENCE \$ 2,000,000
		<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000
		<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				MED EXP (Any one person) \$ 10,000
		GENERAL AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC				PERSONAL & ADV INJURY \$ 1,000,000
						GENERAL AGGREGATE \$ 4,000,000
						PRODUCTS - COM/POP AGG \$ 2,000,000
C		AUTOMOBILE LIABILITY	BAP3486333	04/01/2010	04/01/2011	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
		<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person) \$
		<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident) \$
		<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident) \$
<input checked="" type="checkbox"/> HIRED AUTOS						
<input checked="" type="checkbox"/> NON-OWNED AUTOS						
		GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT \$
		<input type="checkbox"/> ANY AUTO				OTHER THAN EA ACC \$
						AUTO ONLY: AGG \$
		EXCESS / UMBRELLA LIABILITY				EACH OCCURRENCE \$
		<input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				AGGREGATE \$
		<input type="checkbox"/> DEDUCTIBLE				\$
		<input type="checkbox"/> RETENTION \$				\$
A		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	WC3486331	04/01/2010	04/01/2011	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER
		E.L. EACH ACCIDENT \$ 1,000,000				
		E.L. DISEASE - EA EMPLOYEE \$ 1,000,000				
		E.L. DISEASE - POLICY LIMIT \$ 1,000,000				
		ANY PROPRIETOR/PARTNER/EXECUTIVE Y/N OFFICER/MEMBER EXCLUDED? <input checked="" type="checkbox"/> N				
		(Mandatory in NH) If yes, describe under SPECIAL PROVISIONS below				
		OTHER				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

RE: PROJECT NO. B8-0643; GOETZ ROAD AND NEWPORT ROAD COMPLETION OF IMPROVEMENTS. WAIVER OF SUBROGATION APPLIES TO WORKERS' COMPENSATION IN FAVOR OF THE CERTIFICATE HOLDER WHERE REQUIRED BY WRITTEN CONTRACT. (SEE ATTACHED ENDORSEMENT). WORKERS' COMPENSATION DOES NOT APPLY TO MONOPOLISTIC STATES (ND, OH, WA AND WY), PUERTO RICO OR THE VIRGIN ISLANDS.

CERTIFICATE HOLDER

CHI-002905516-01

CANCELLATION

COUNTY OF RIVERSIDE TRANSPORTATION DEPT
3525 14TH STREET
RIVERSIDE, CA 92501

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ~~NOT~~ MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, ~~NO FURTHER NOTICE SHALL BE GIVEN TO THE CERTIFICATE HOLDER BY ANY OTHER MEANS.~~

AUTHORIZED REPRESENTATIVE
of Marsh USA Inc.
John C Hurley

IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

This Certificate of Insurance does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

ADDITIONAL INFORMATION

CHI-002905516-01

DATE (MM/DD/YY)
09/27/2010**PRODUCER**

MARSH USA, INC.
600 RENAISSANCE CENTER,
SUITE 2100
DETROIT, MI 48243
Attn: RAFFLES Fax (313) 393-6950
26067 -00177-RAF-10/11

INSURERS AFFORDING COVERAGE**NAIC #****INSURED**

SEMA CONSTRUCTION, INC.
7353 S. EAGLE STREET
CENTENNIAL, CO 80112-4223

INSURER F:

INSURER G:

INSURER H:

INSURER I:

TEXT

The County of Riverside, its directors, officers, special districts, board of supervisors, employees, agents and representatives, the City of Menifee, its officers, directors, agents and employees, the City of Canyon Lake, its officers, directors, agents and employees, Eastern Municipal Water District (EMWD), its officers, directors, agents and employees, Elsinore Valley Municipal Water District (EVMWD), its officers, directors, agents and employees, Southern California Edison Company, its officers, directors, agents and employees, Verizon Communications, its officers, directors, agents and employees, Time-Warner Communications, its officers, directors, agents and employees, and Southern California Gas Company, its officers, directors, agents and employees are named as additional insured for general & auto liability only, but only as respects to liability arising from the operations of the insured and where required by written contract. (See Attached Endorsements)

CERTIFICATE HOLDER

COUNTY OF RIVERSIDE TRANSPORTATION DEPT
3525 14TH STREET
RIVERSIDE, CA 92501

AUTHORIZED REPRESENTATIVE
of Marsh USA Inc.
John C Hurley



Additional Insured – Automatic – Owners, Lessees Or Contractors



Policy No.	Exp. Date of Pol.	Eff. Date of End.	Agency No.	Addl. Prem.	Return Prem.
GLO3486335	04/01/11	04/01/10			

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Named Insured: SEMA Construction

Address (including ZIP Code): 7353 S. Eagle Street, Centennial, CO 80112-4223

This endorsement modifies insurance provided under the:
Commercial General Liability Coverage Part

- A. **Section II – Who Is An Insured** is amended to include as an insured any person or organization who you are required to add as an additional insured on this policy under a written contract or written agreement:

The County of Riverside, its directors, officers, special districts, board of supervisors, employees, agents and representatives, the City of Menifee, its officers, directors, agents and employees, the City of Canyon Lake, its officers, directors, agents and employees, Eastern Municipal Water District (EMWD), its officers, directors, agents and employees, Elsinore Valley Municipal Water District (EVMWD), its officers, directors, agents and employees, Southern California Edison Company, its officers, directors, agents and employees, Verizon Communications, its officers, directors, agents and employees, Time-Warner Communications, its officers, directors, agents and employees, and Southern California Gas Company, its officers, directors, agents and employees.

- B. The insurance provided to the additional insured person or organization applies only to "bodily injury", "property damage" or "personal and advertising injury" covered under **SECTION I - Coverage A - Bodily Injury And Property Damage Liability** and **Section I - Coverage B - Personal And Advertising Injury Liability**, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf; and resulting directly from:
 - a. Your ongoing operations performed for the additional insured, which is the subject of the written contract or written agreement; or
 - b. "Your work" completed as included in the "products-completed operations hazard", performed for the additional insured, which is the subject of the written contract or written agreement.

- C. However, regardless of the provisions of paragraphs A. and B. above:

1. We will not extend any insurance coverage to any additional insured person or organization:
 - a. That is not provided to you in this policy; or
 - b. That is any broader coverage than you are required to provide to the additional insured person or organization in the written contract or written agreement; and
2. We will not provide Limits of Insurance to any additional insured person or organization that exceed the lower of:

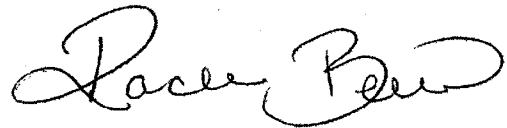
- a. The Limits of Insurance provided to you in this policy; or
 - b. The Limits of Insurance you are required to provide in the written contract or written agreement.
- D. The insurance provided to the additional insured person or organization does not apply to:
- "Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering or failure to render any professional architectural, engineering or surveying services including:
- 1. The preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and
 - 2. Supervisory, inspection, architectural or engineering activities.
- E. The additional insured must see to it that:
- 1. We are notified as soon as practicable of an "occurrence" or offense that may result in a claim;
 - 2. We receive written notice of a claim or "suit" as soon as practicable; and
 - 3. A request for defense and indemnity of the claim or "suit" will promptly be brought against any policy issued by another insurer under which the additional insured may be an insured in any capacity. This provision does not apply to insurance on which the additional insured is a Named Insured, if the written contract or written agreement requires that this coverage be primary and non-contributory.
- F. For the coverage provided by this endorsement:
- 1. The following paragraph is added to Paragraph 4.a. of the Other Insurance Condition of **Section IV – Commercial General Liability Conditions**:

This insurance is primary insurance as respects our coverage to the additional insured person or organization, where the written contract or written agreement requires that this insurance be primary and non-contributory. In that event, we will not seek contribution from any other insurance policy available to the additional insured on which the additional insured person or organization is a Named Insured.
 - 2. The following paragraph is added to Paragraph 4.b. of the Other Insurance Condition of **Section IV – Commercial General Liability Conditions**:

This insurance is excess over:

Any of the other insurance, whether primary, excess, contingent or on any other basis, available to an additional insured, in which the additional insured on our policy is also covered as an additional insured by attachment of an endorsement to another policy providing coverage for the same "occurrence", claim or "suit". This provision does not apply to any policy in which the additional insured is a Named Insured on such other policy and where our policy is required by written contract or written agreement to provide coverage to the additional insured on a primary and non-contributory basis.
- G. This endorsement does not apply to an additional insured which has been added to this policy by an endorsement showing the additional insured in a Schedule of additional insureds, and which endorsement applies specifically to that identified additional insured.

Any provisions in this Coverage Part not changed by the terms and conditions of this endorsement continue to apply as written.



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**DESIGNATED INSURED**

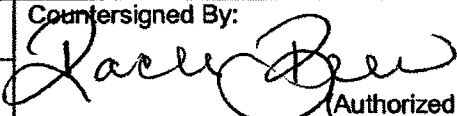
This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
GARAGE COVERAGE FORM
MOTOR CARRIER COVERAGE FORM
TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by this endorsement.

This endorsement identifies person(s) or organization(s) who are "insureds" under the Who Is An Insured Provision of the Coverage Form. This endorsement does not alter coverage provided in the Coverage Form.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Endorsement Effective: 4/1/10	Countersigned By:  (Authorized Representative)
Named Insured: Sema Construction, Inc.	

SCHEDULE

Name of Person(s) or Organization(s): As required by contract or agreement - The County of Riverside, its directors, officers, special districts, board of supervisors, employees, agents and representatives, the City of Menifee, its officers, directors, agents and employees, the City of Canyon Lake, its officers, directors, agents and employees, Eastern Municipal Water District (EMWD), its officers, directors, agents and employees, Elsinore Valley Municipal Water District (EVMWD), its officers, directors, agents and employees, Southern California Edison Company, its officers, directors, agents and employees, Verizon Communications, its officers, directors, agents and employees, Time-Warner Communications, its officers, directors, agents and employees, and Southern California Gas Company, its officers, directors, agents and employees.

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to the endorsement.)

Each person or organization shown in the Schedule is an "insured" for Liability Coverage, but only to the extent that person or organization qualifies as an "insured" under the Who Is An Insured Provision contained in **Section II** of the Coverage Form.

WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE POLICY

WC 00 03 13

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

This endorsement changes the policy to which it is attached effective on the inception date of the policy unless a different date is indicated below.

(The following "attaching clause" need be completed only when this endorsement is issued subsequent to preparation of the policy.)

This endorsement, effective on 4/01/10 at 12:01 A.M. standard time, forms a part of
(DATE)

Policy No. WC3486708 of the American Zurich Ins. Co.
(NAME OF INSURANCE COMPANY)

issued to SEMA CONSTRUCTION, INC.

Premium (if any) \$ -


Authorized Representative

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

The County of Riverside, its directors, officers, special districts, board of supervisors, employees, agents and representatives, the City of Menifee, its officers, directors, agents and employees, the City of Canyon Lake, its officers, directors, agents and employees, Eastern Municipal Water District (EMWD), its officers, directors, agents and employees, Elsinore Valley Municipal Water District (EVMWD), its officers, directors, agents and employees, Southern California Edison Company, its officers, directors, agents and employees, Verizon Communications, its officers, directors, agents and employees, Time-Warner Communications, its officers, directors, agents and employees, and Southern California Gas Company, its officers, directors, agents and employees.

As required per agreement or contract

Company Profile

AMERICAN ZURICH INSURANCE COMPANY

1400 AMERICAN LANE
SCHAUMBURG, IL 60196
800-987-3373

Agent for Service of Process

KAREN HARRIS, C/O CORPORATION SERVICE COMPANY 2730 GATEWAY OAKS DRIVE, SUITE
100 SACRAMENTO, CA 95833

Unable to Locate the Agent for Service of Process?

Reference Information

NAIC #:	40142
NAIC Group #:	<u>0212</u>
California Company ID #:	2931-4
Date authorized in California:	November 16, 1983
License Status:	UNLIMITED-NORMAL
Company Type:	Property & Casualty
State of Domicile:	ILLINOIS

Lines of Insurance Authorized to Transact

The company is authorized to transact business within these lines of insurance. For an explanation of any of these terms, please refer to the glossary.

AUTOMOBILE
BOILER AND MACHINERY
BURGLARY
COMMON CARRIER LIABILITY
DISABILITY
FIRE
LIABILITY
MARINE
MISCELLANEOUS
PLATE GLASS
SPRINKLER
TEAM AND VEHICLE
WORKERS' COMPENSATION

Company Profile

ZURICH AMERICAN INSURANCE COMPANY

1400 AMERICAN LANE
SCHAUMBURG, IL 60196-1056
800-382-2150

Agent for Service of Process

KAREN HARRIS, C/O CORPORATION SERVICE COMPANY 2730 GATEWAY OAKS DRIVE, SUITE 100
SACRAMENTO, CA 95833

Unable to Locate the Agent for Service of Process?

Reference Information

NAIC #:	16535
NAIC Group #:	<u>0212</u>
California Company ID #:	4581-5
Date authorized in California:	January 01, 1999
License Status:	UNLIMITED-NORMAL
Company Type:	Property & Casualty
State of Domicile:	NEW YORK

Lines of Insurance Authorized to Transact

The company is authorized to transact business within these lines of insurance. For an explanation of any of these terms, please refer to the glossary.

AIRCRAFT
AUTOMOBILE
BOILER AND MACHINERY
BURGLARY
COMMON CARRIER LIABILITY
CREDIT
DISABILITY
FIRE
LIABILITY
MARINE
MISCELLANEOUS
PLATE GLASS
SPRINKLER
SURETY
TEAM AND VEHICLE
WORKERS' COMPENSATION
