APPENDIX B

STANDARD DETAILS

E-1 Conduit Trench
E-2 Junction Box
E-3 Commercial Street Light ** Residential Detail Needed**

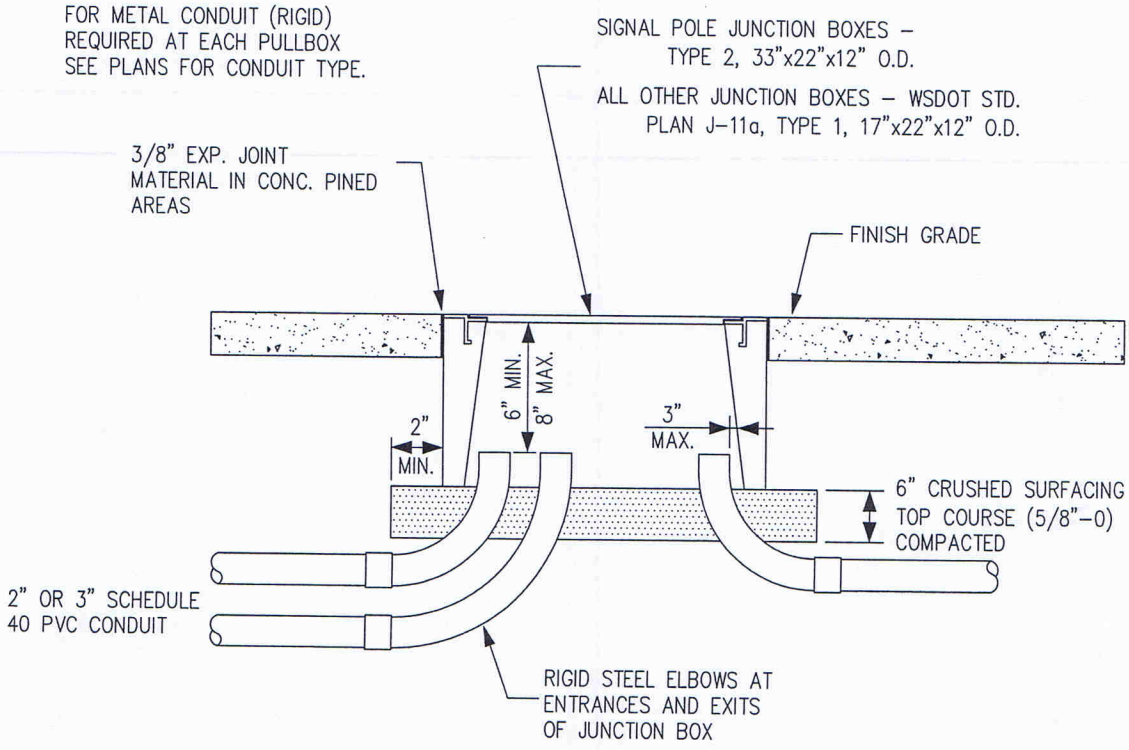
SD-1 Catch Basin Type 1/1L
SD-2 Catch Basin Type 2

SS-1 Sewer Manhole Type 1
SS-2 Sewer Cleanout
SS-3 Sewer Drop Connection
SS-4 Sewer Manhole Adjustment
SS-5 Sewer/Storm Drain Pipe Trench Section
SS-6 Manhole Safety Step
SS-7 Side Sewer Connection

ST-1 Roadway Section – Major Collector
ST-2 Roadway Section – Minor Collector
ST-3 Roadway Section - Local Access- No Parking
ST-4 Roadway Section - Local Access-Parking
ST-5 Concrete Curb & Gutter
ST-6 Concrete Sidewalk Sections
ST-7 Sidewalk Ramp
ST-8 Sidewalk Jointing
ST-9 Residential Driveway Entrance
ST-10 Monument
ST-11 Asphalt Sidewalk Ramp
ST-12 Trench Surfacing Repair
ST-13 Cul-de-Sac Layout

W-1 Water Main Trench
W-2 Fire Hydrant Assembly
W-3 Water Service
W-4 Water Meter Box
W-5 Water Valve Box
W-6 Air Release Valve
W-7 Blow Off Assembly
W-8 Concrete Thrust Blocking
W-9 Hydrant Guard Posts

NOTE:
GROUND ROD FOR PVC CONDUIT
OR NO. 8 AWG BONDING JUMPER
FOR METAL CONDUIT (RIGID)
REQUIRED AT EACH PULLBOX
SEE PLANS FOR CONDUIT TYPE.

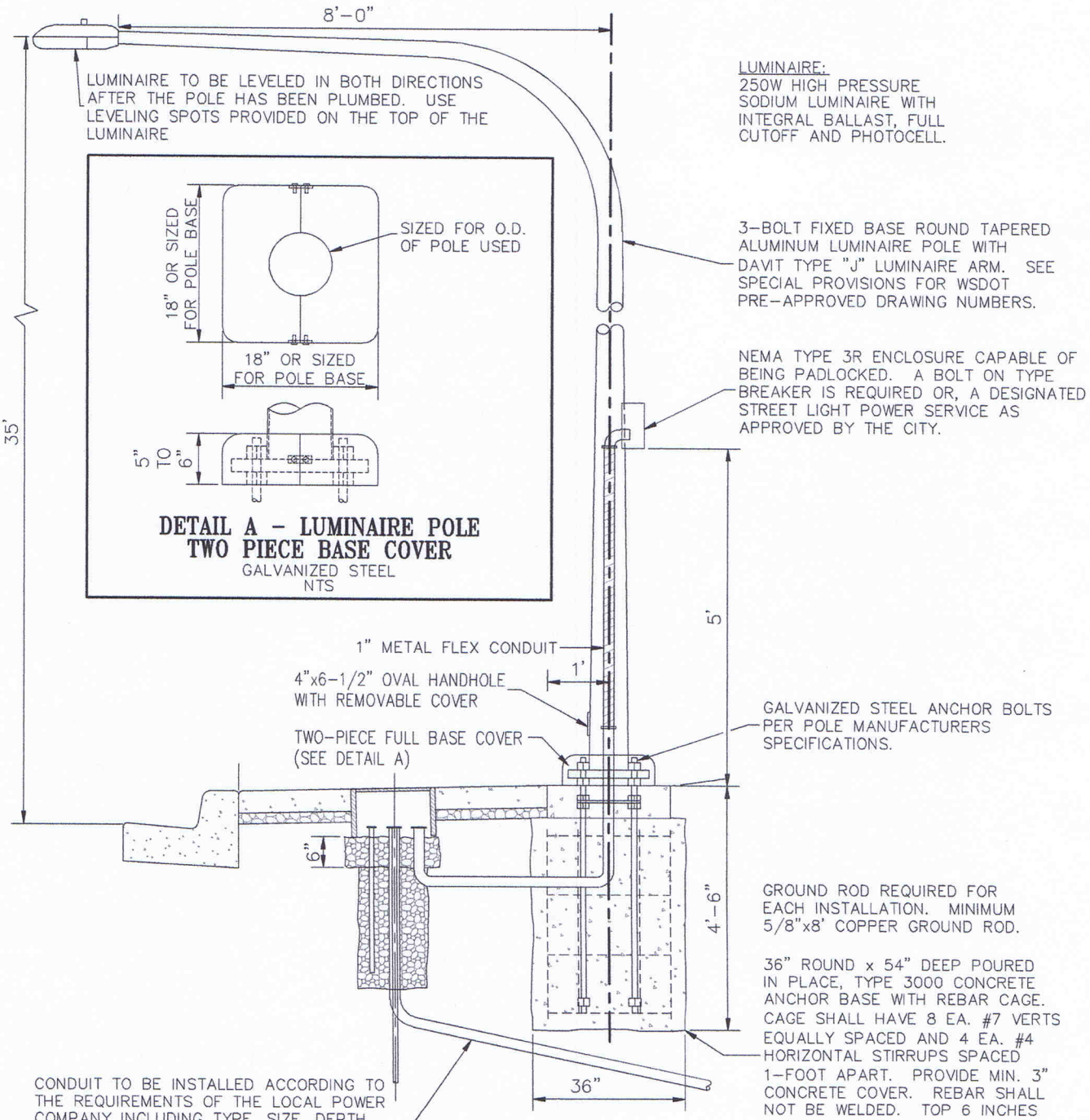


CONDUIT ENTRANCE AT JUNCTION BOX

NOT TO SCALE

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr



TYPICAL SECTION
NTS

COMMERCIAL STREET LIGHT DETAIL

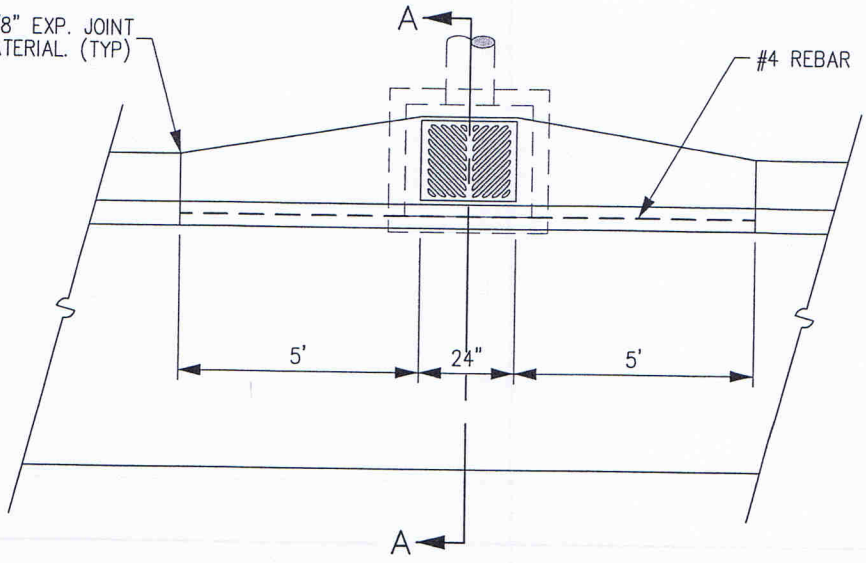
NOT TO SCALE

NOTES:

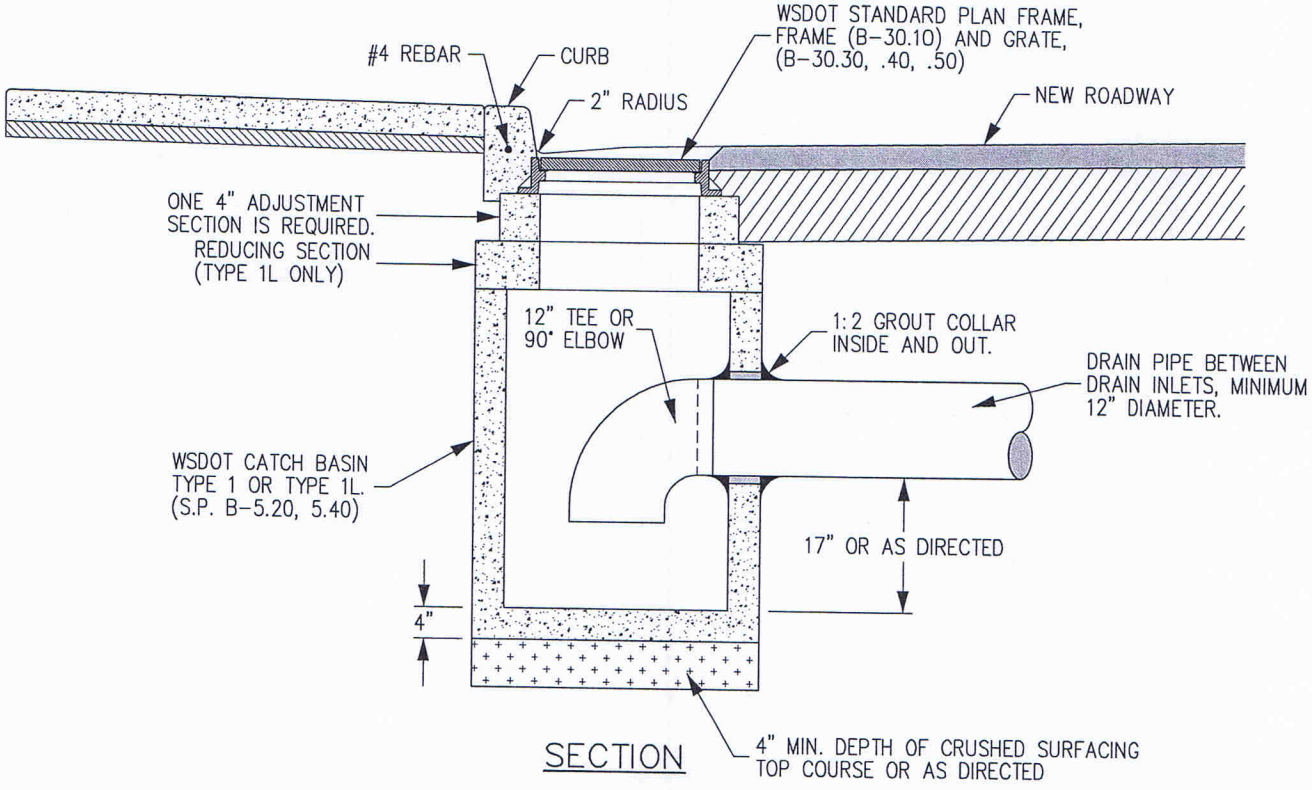
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	11/08		
Revision	Date	Description	Appr

CITY OF ZILLAH-STANDARD DETAIL	COMMERCIAL STREET LIGHT	E-3



PLAN



SECTION

CATCH BASIN DETAIL

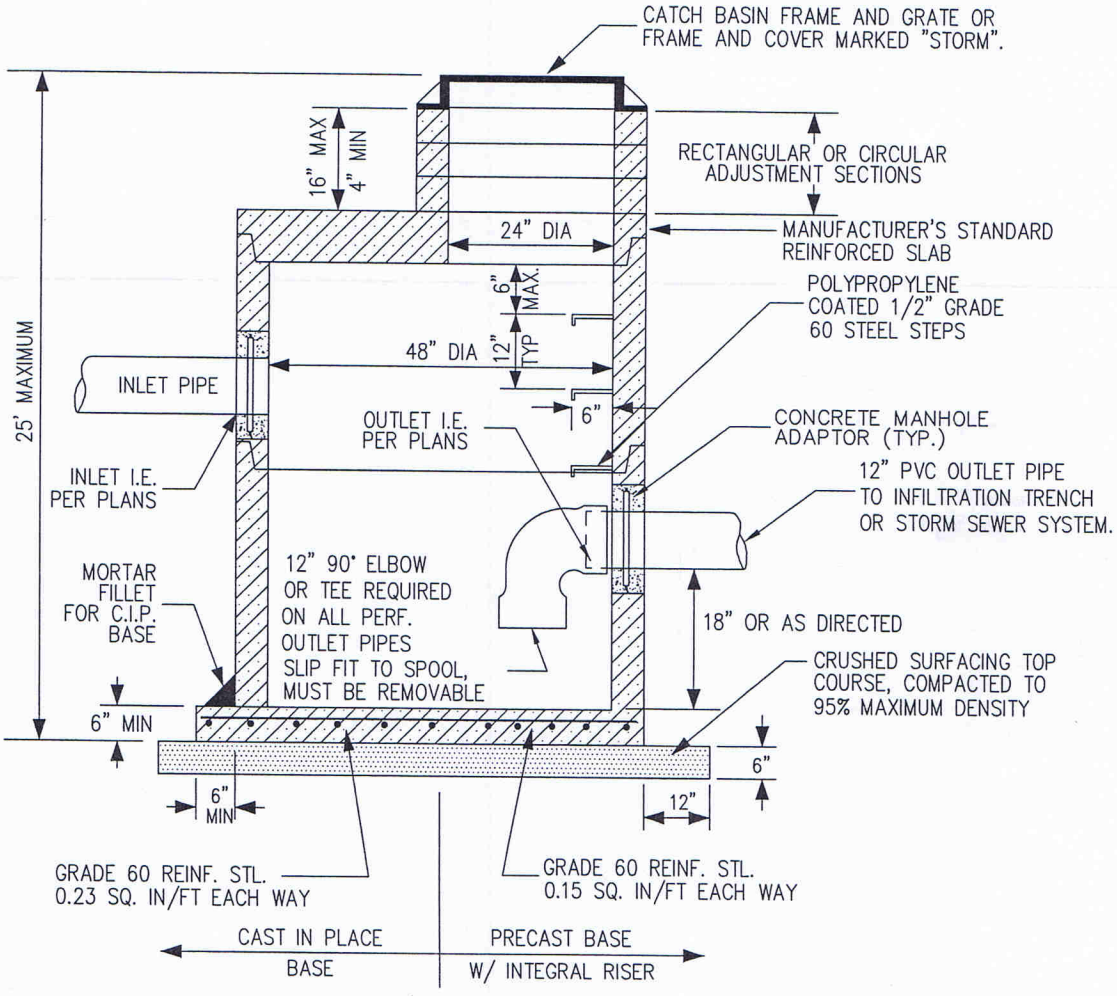
NOT TO SCALE

NOTES:

- USE VANED GRATES WHEN STREET GRADE EXCEEDS 4%.
- FRAMES AND GRATES SHALL BE MANUFACTURED IN THE UNITED STATES.
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	CATCH BASIN	SD–1



48" DIA. TYPE 2 CATCH BASIN (S.P. B-10.20)

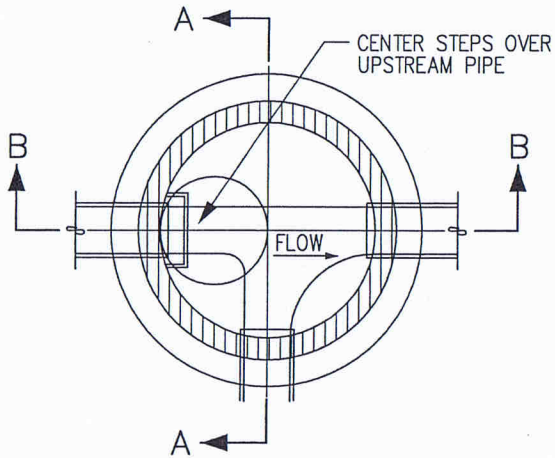
NOT TO SCALE

NOTES:

- FRAMES AND GRATES SHALL BE MANUFACTURED IN THE UNITED STATES.
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

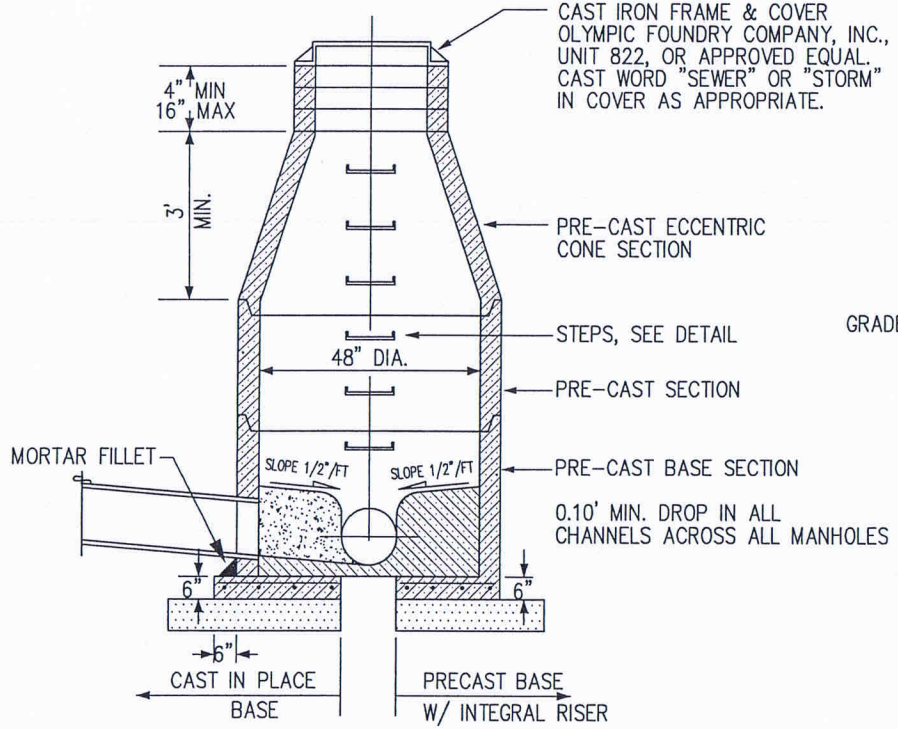
ORIG.	11/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	TYPE 2 CATCH BASIN	SD–2

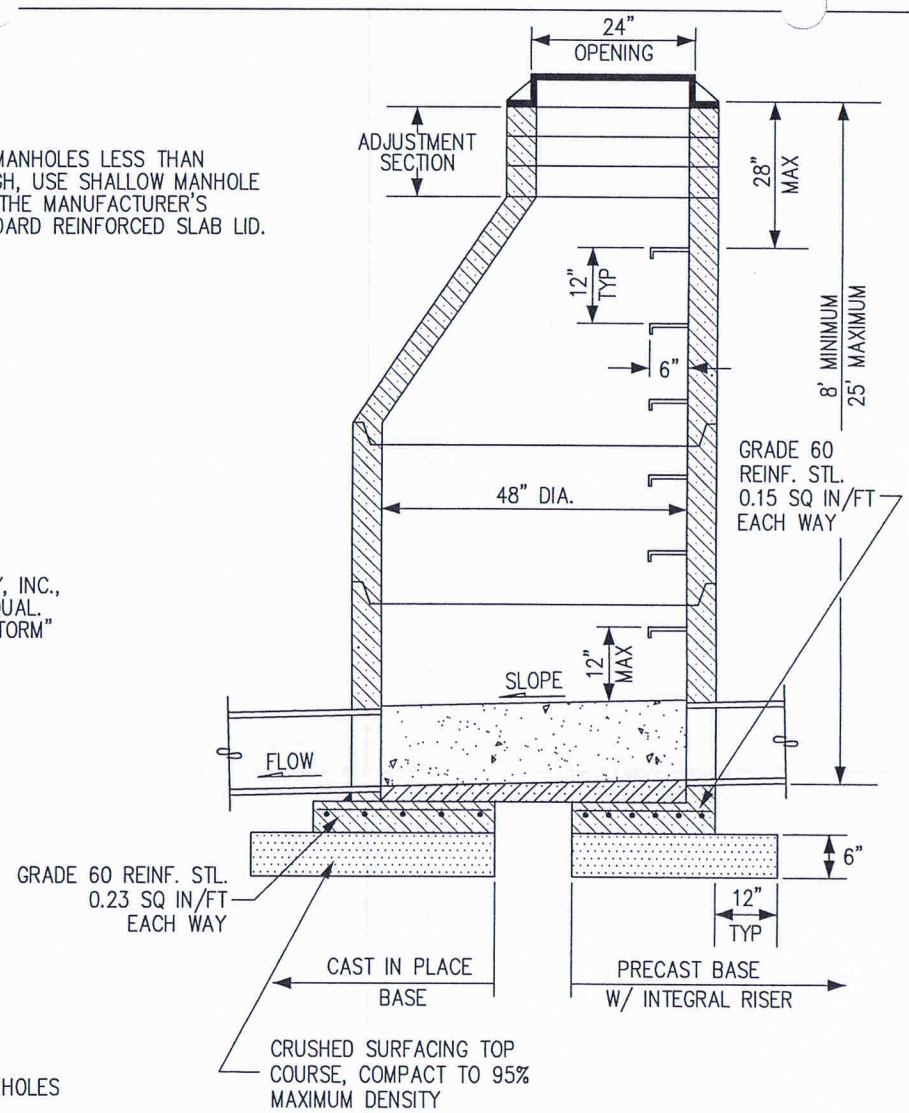


PLAN VIEW

FOR MANHOLES LESS THAN 8' HIGH, USE SHALLOW MANHOLE WITH THE MANUFACTURER'S STANDARD REINFORCED SLAB LID.



SECTION A–A



SECTION B–B

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

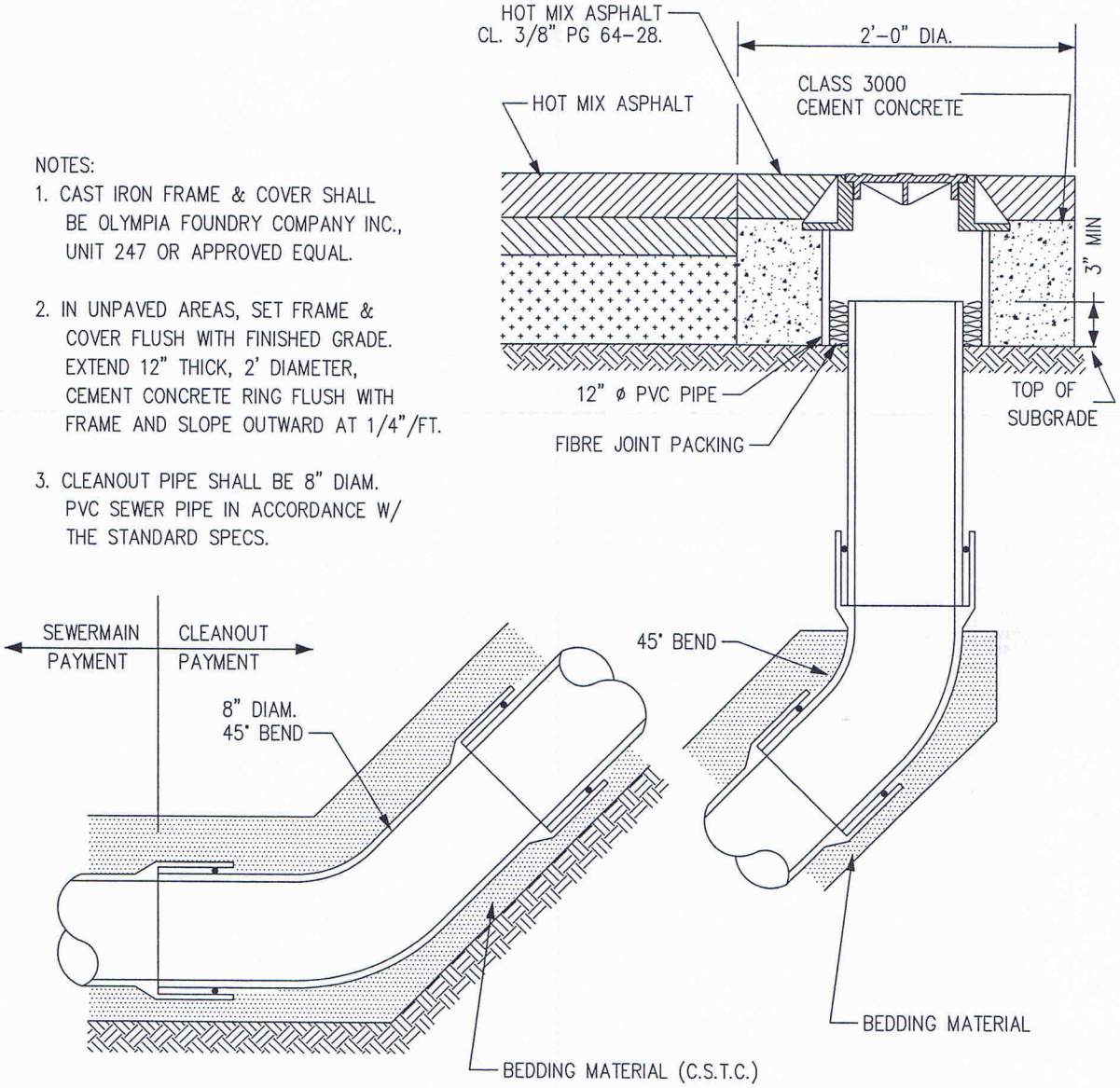
CITY OF ZILLAH–STANDARD DETAIL	MANHOLE (TYPE 1)	SS–1

NOTES:

1. CAST IRON FRAME & COVER SHALL BE OLYMPIA FOUNDRY COMPANY INC., UNIT 247 OR APPROVED EQUAL.

2. IN UNPAVED AREAS, SET FRAME & COVER FLUSH WITH FINISHED GRADE. EXTEND 12" THICK, 2' DIAMETER, CEMENT CONCRETE RING FLUSH WITH FRAME AND SLOPE OUTWARD AT 1/4"/FT.

3. CLEANOUT PIPE SHALL BE 8" DIAM. PVC SEWER PIPE IN ACCORDANCE W/ THE STANDARD SPECS.



SANITARY SEWER CLEANOUT

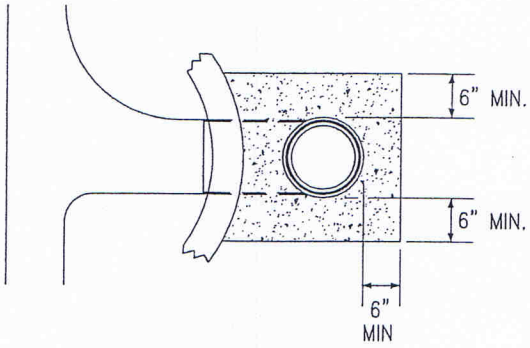
NOT TO SCALE

NOTES:

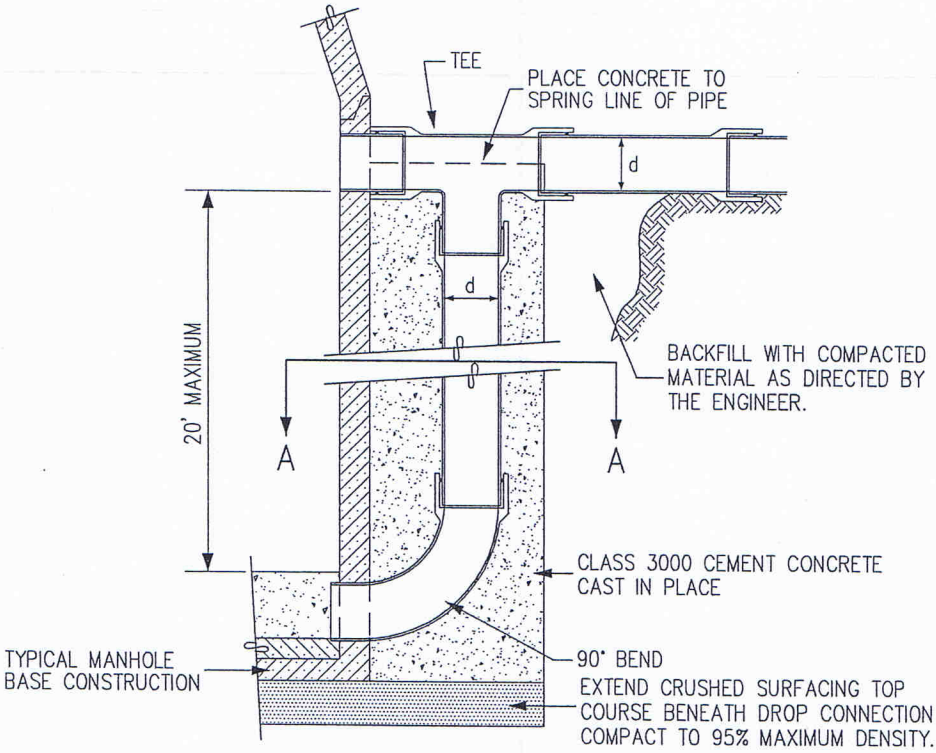
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	11/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	SANITARY SEWER CLEANOUT	SS–2



SECTION A–A



PROFILE VIEW

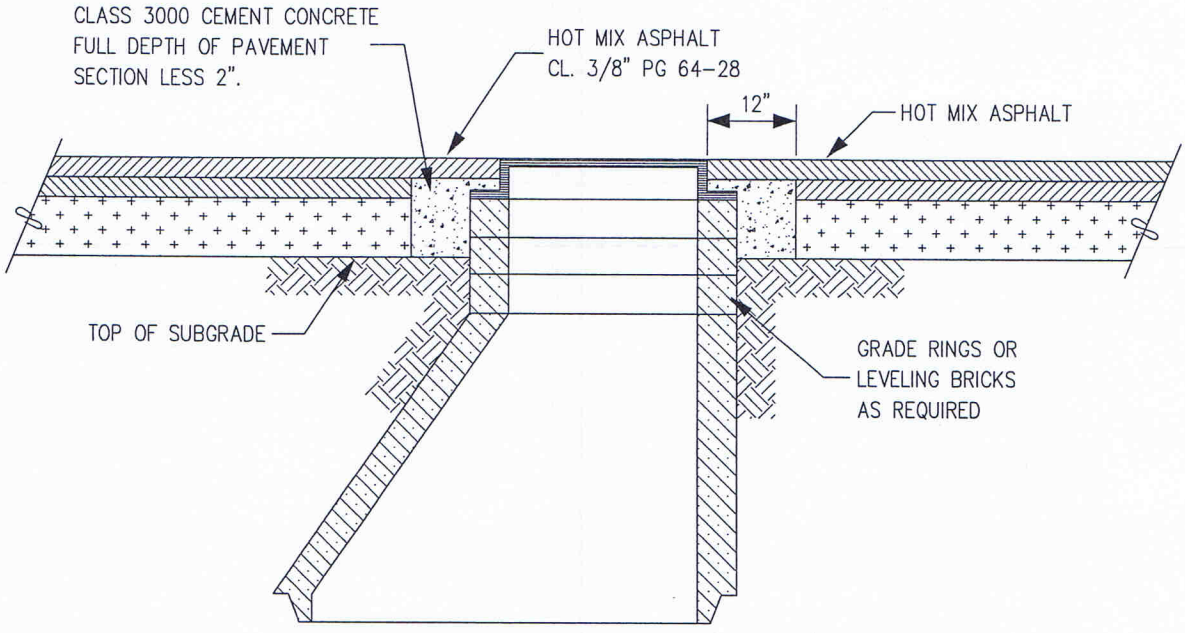
DROP CONNECTION

NOT TO SCALE

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	DROP CONNECTION	SS–3



NOTES:

1. MANHOLES SHALL BE ADJUSTED TO FINISHED GRADE AFTER PLACEMENT OF THE FINAL LIFT OF ASPHALT PAVEMENT.

2. GRADE RINGS AND/OR LEVELING BRICKS SHALL BE GROUTED IN PLACE AND BE WATER TIGHT.

3. IN UNPAVED AREAS, PROVIDE 12" THICK, 5' DIA. CEMENT CONCRETE RING AROUND TOP OF MANHOLE. SET MANHOLE FRAME FLUSH W/ FINISHED GRADE AND SLOPE CONCRETE OUTWARD AT 1/4"/FT.

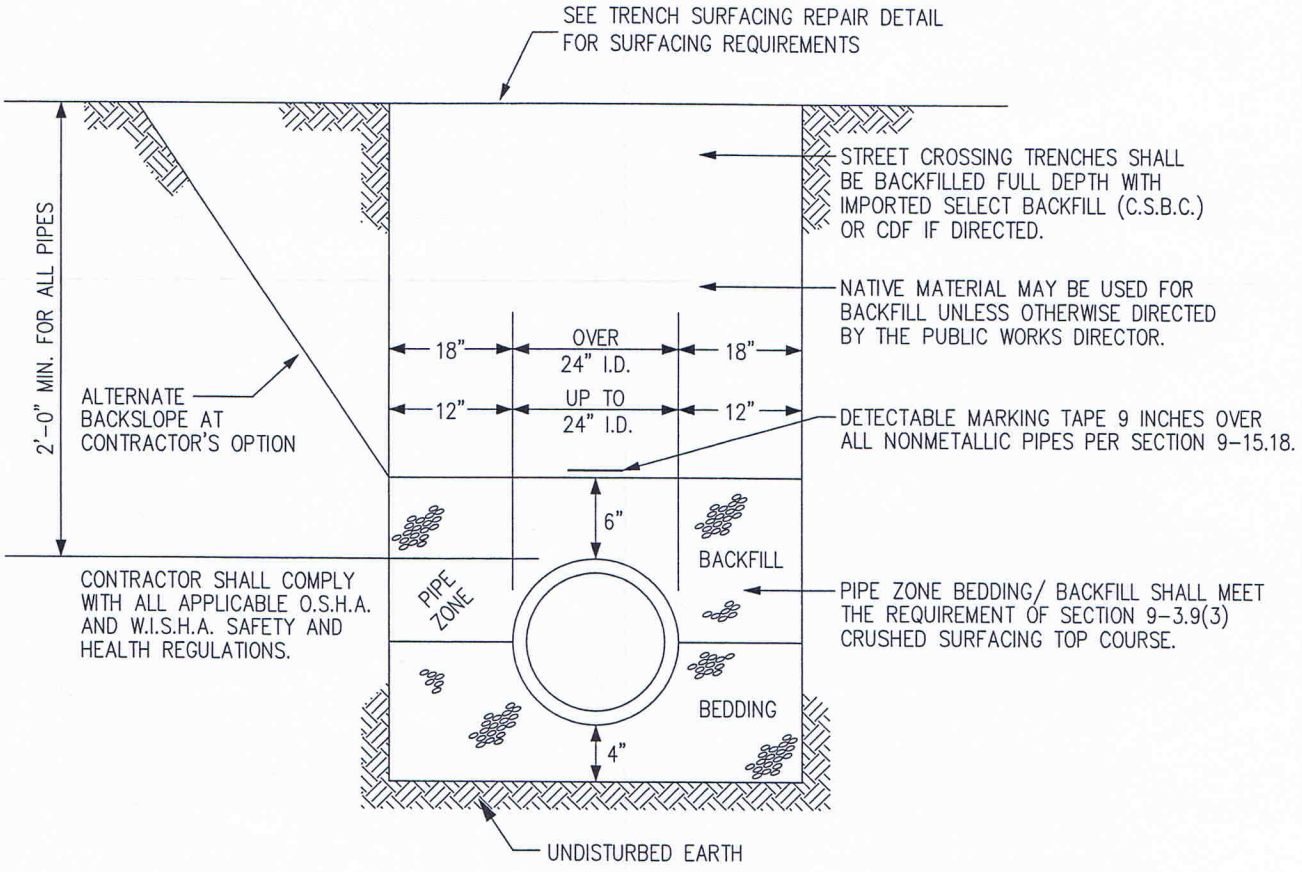
MANHOLE ADJUSTMENT DETAIL

NOT TO SCALE

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	MANHOLE ADJUSTMENT DETAIL	SS–4



SANITARY/ STORM SEWER TRENCH

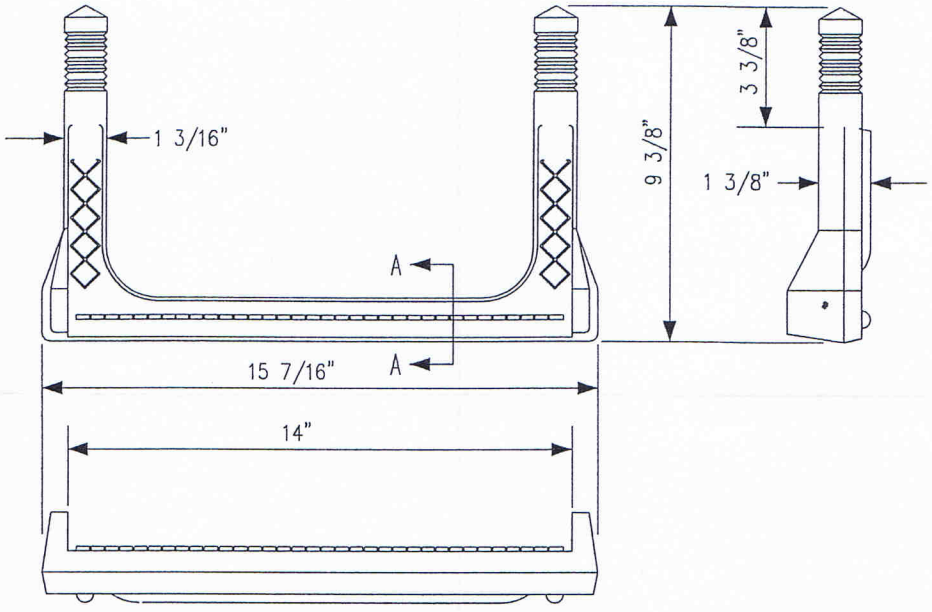
NOT TO SCALE

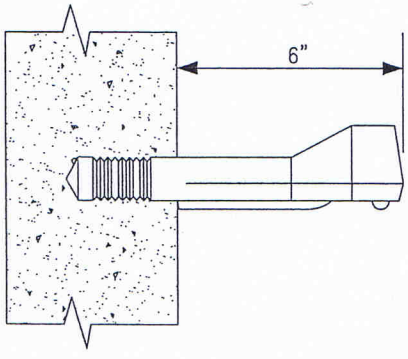
NOTES:

- FOR 4" AND 6" SIDE SEWERS, INSTALL IMPORTED PIPE BEDDING A MINIMUM OF 3" THICK ON ALL SIDES OF PIPE.
- MECHANICAL TAMPING AND COMPACTION REQUIRED AS DIRECTED BY THE CITY. WATER SETTLING MAY ONLY BE USED OUTSIDE THE ROADWAY PRISM WHEN APPROVED BY THE CITY.
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

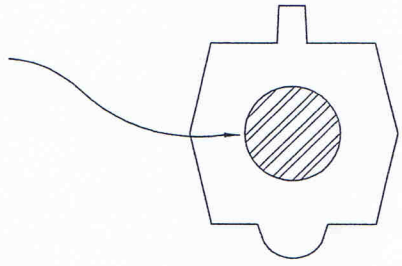
ORIG.	11/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	SEWER PIPE TRENCH	SS–5





COPOLYMER POLYPROPYLENE
PLASTIC 1/2" GRADE 60
STEEL REINFORCEMENT



SECTION A-A

NOTE:

MANHOLE STEPS SHALL BE COPOLYMER POLYPROPYLENE PLASTIC COATED 1/2" GRADE 60 STEEL REINFORCEMENT, MODEL PS2-PF, AS MANUFACTURED BY M.A. INDUSTRIES INC., OR APPROVED EQUAL

MANHOLE SAFETY STEP

NOT TO SCALE

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH-STANDARD DETAIL	MANHOLE SAFETY STEP	SS-6

CITY OF ZILLAH – STANDARD DETAIL

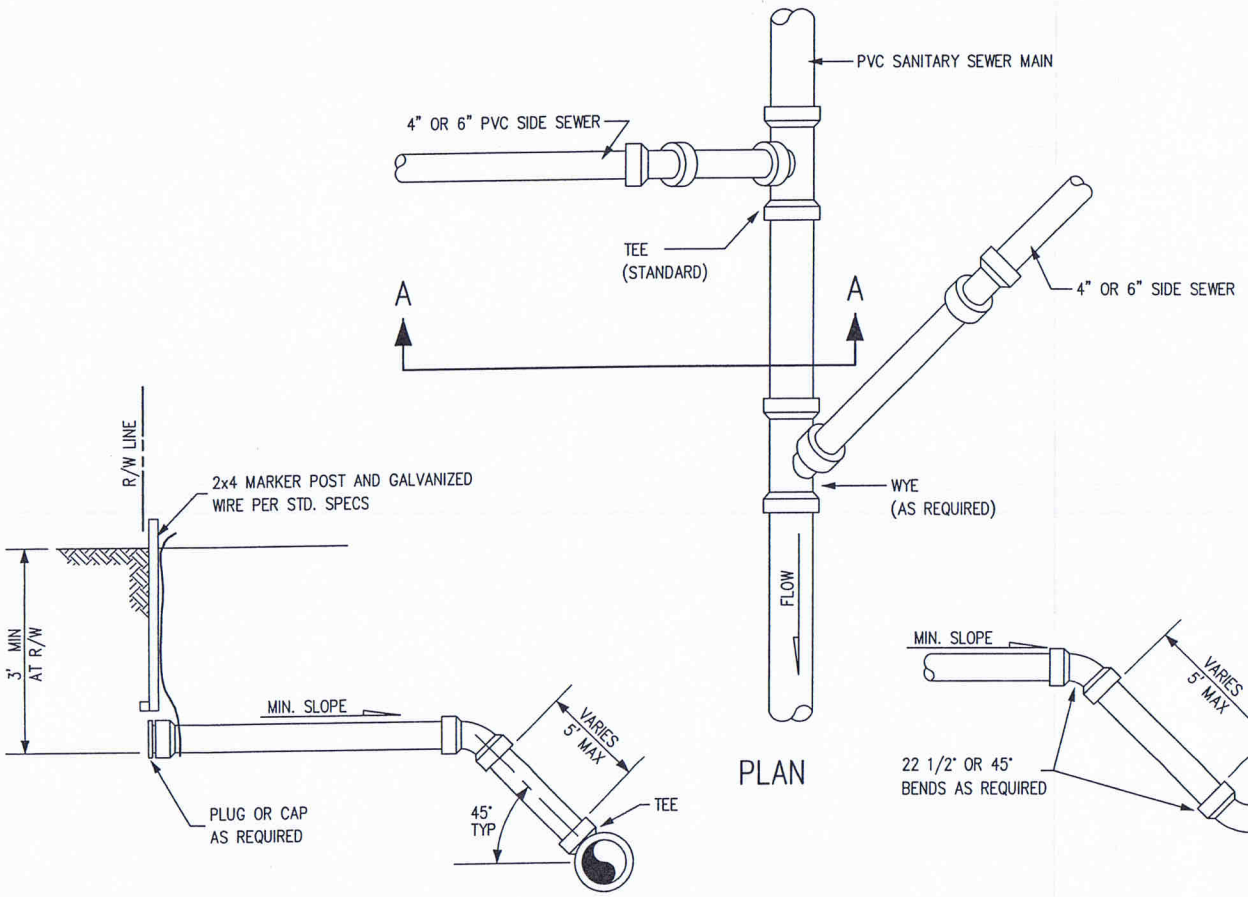
SIDE SEWER CONNECTION

SS-7

NOTES:

- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

Revision	Date	Description	Appr
ORIG.	10/06		

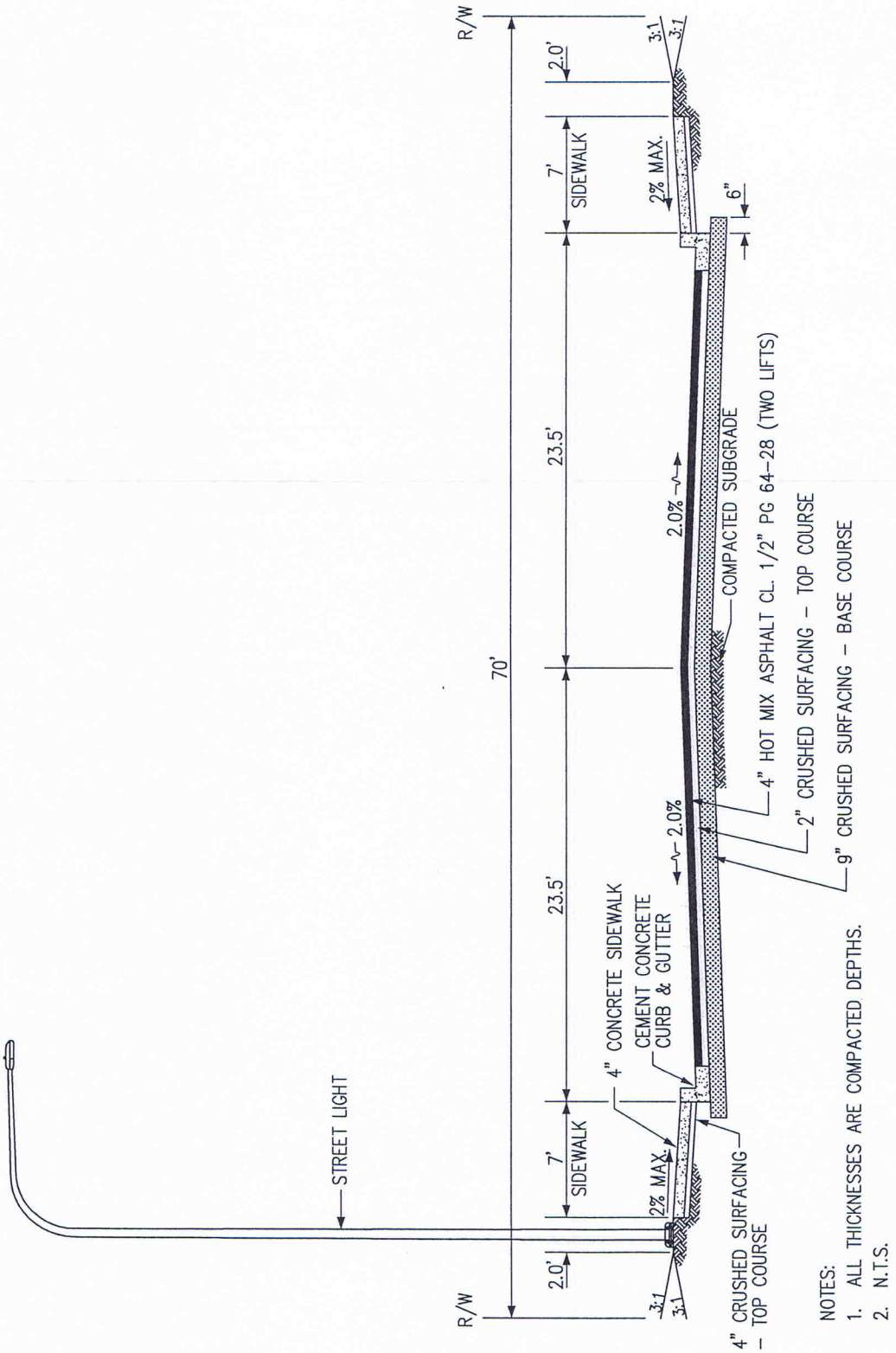


NOTES:

1. SIDE SEWERS SHALL BE INSTALLED PER SEC. 7–18 OF THE STANDARD SPECIFICATION.
2. SERVICE CONNECTIONS 8" OR LARGER MUST BE MADE AT MANHOLE.
3. IF 5' MAXIMUM SLOPED DISTANCE IS INSUFFICIENT FOR SIDE SEWER CONNECTION, INSTALL SIDE SEWER RISER PER DETAIL.
4. ROTATE SANITARY SEWER MAIN TEE OR WYE 45° UPWARD.
5. TEES OR WYES SHALL BE INSTALLED IN NEW SANITARY SEWER MAINS. WHEN INSTALLING SIDE SEWERS IN EXISTING MAINS, CONNECTION SHALL BE MADE BY MACHINE MADE TAP AND APPROVED SADDLE.
6. WHERE DEPTH IS INSUFFICIENT TO ALLOW CONNECTION AS SHOWN, CONNECT SERVICE AS DIRECTED BY THE PUBLIC WORKS DIRECTOR.
7. TERMINATE SIDE SEWER AT R/W LINE UNLESS OTHERWISE DIRECTED BY THE PUBLIC WORKS DIRECTOR OR SHOWN OTHERWISE ON PLANS.
8. ALL SIDE SEWER MATERIALS SHALL BE PVC SEWER PIPE CONFORMING TO THE REQUIREMENTS OF SECTION 9–05.12 OF THE STD. SPECS.

SIDE SEWER CONNECTIONS

NOT TO SCALE

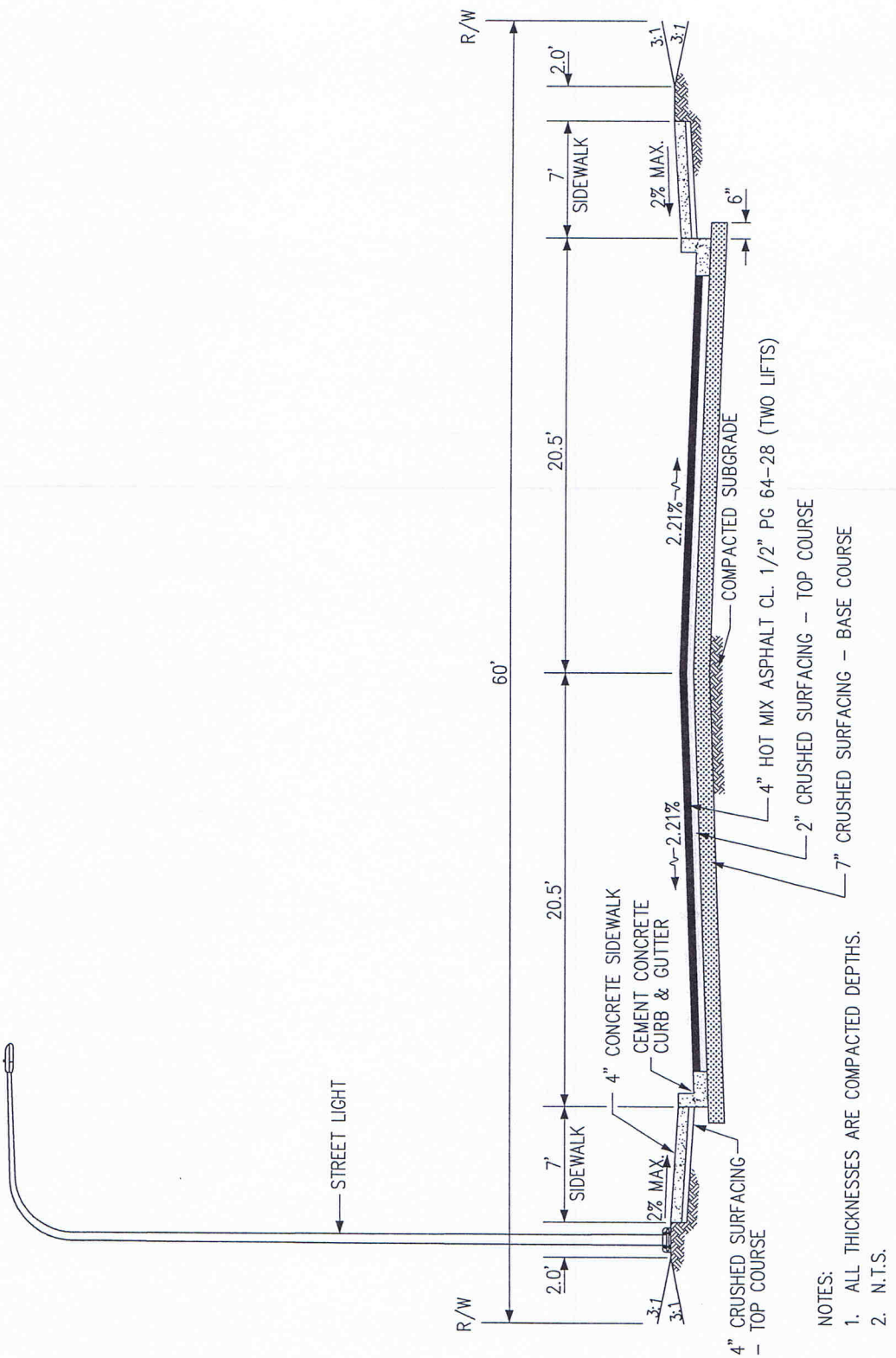


NOTES:
1. ALL THICKNESSES ARE COMPACTED DEPTHS.
2. N.T.S.

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

Revision	Date	Description	Appr
ORIG.	11/06		

CITY OF ZILLAH–STANDARD DETAIL	ROADWAY SECTION–MAJOR COLLECTOR	ST–1

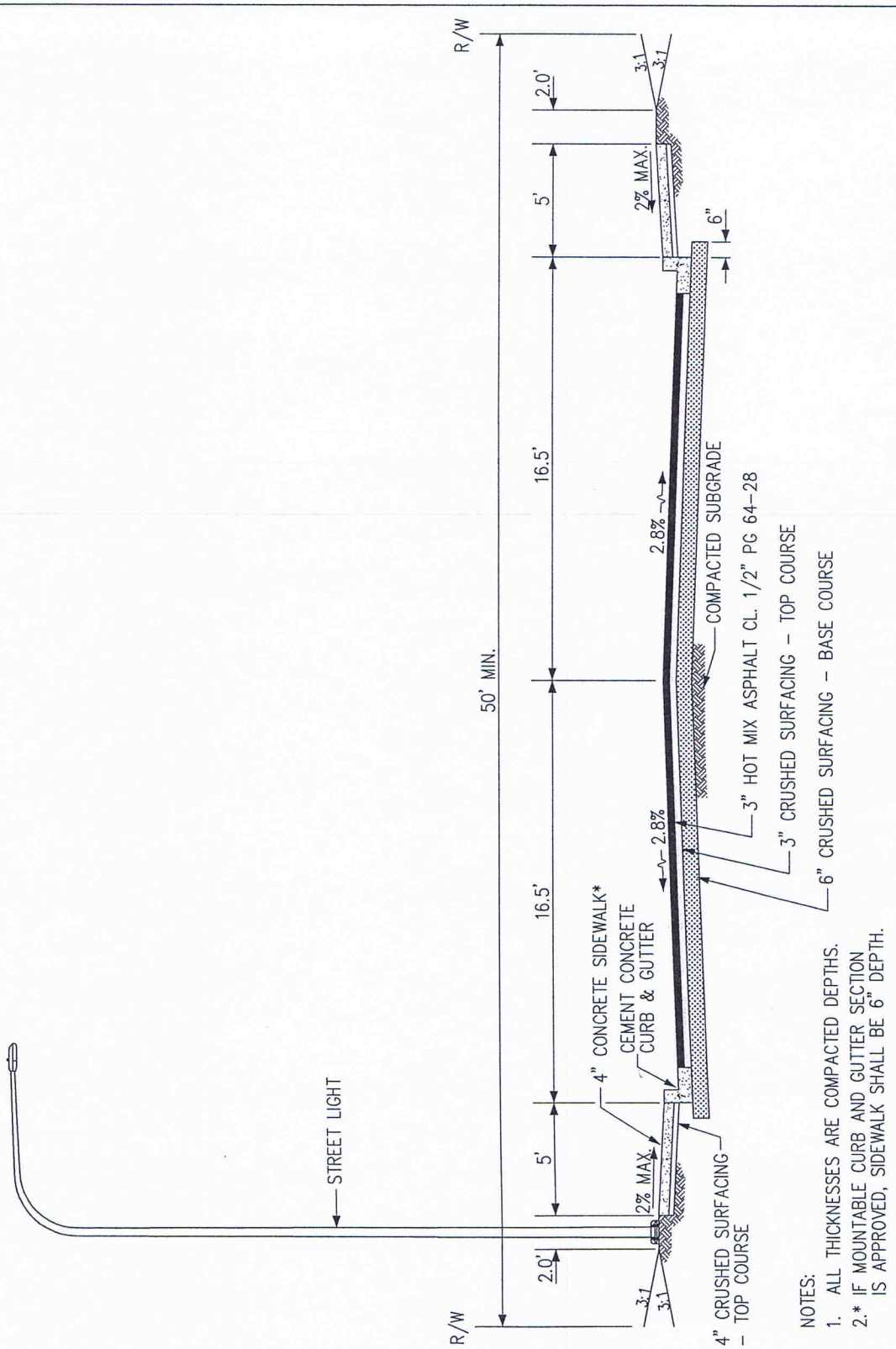


NOTES:
1. ALL THICKNESSES ARE COMPACTED DEPTHS.
2. N.T.S.

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

Revision	Date	Description	Appr
ORIG.	11/06		

CITY OF ZILLAH–STANDARD DETAIL	ROADWAY SECTION–MINOR COLLECTOR	ST–2

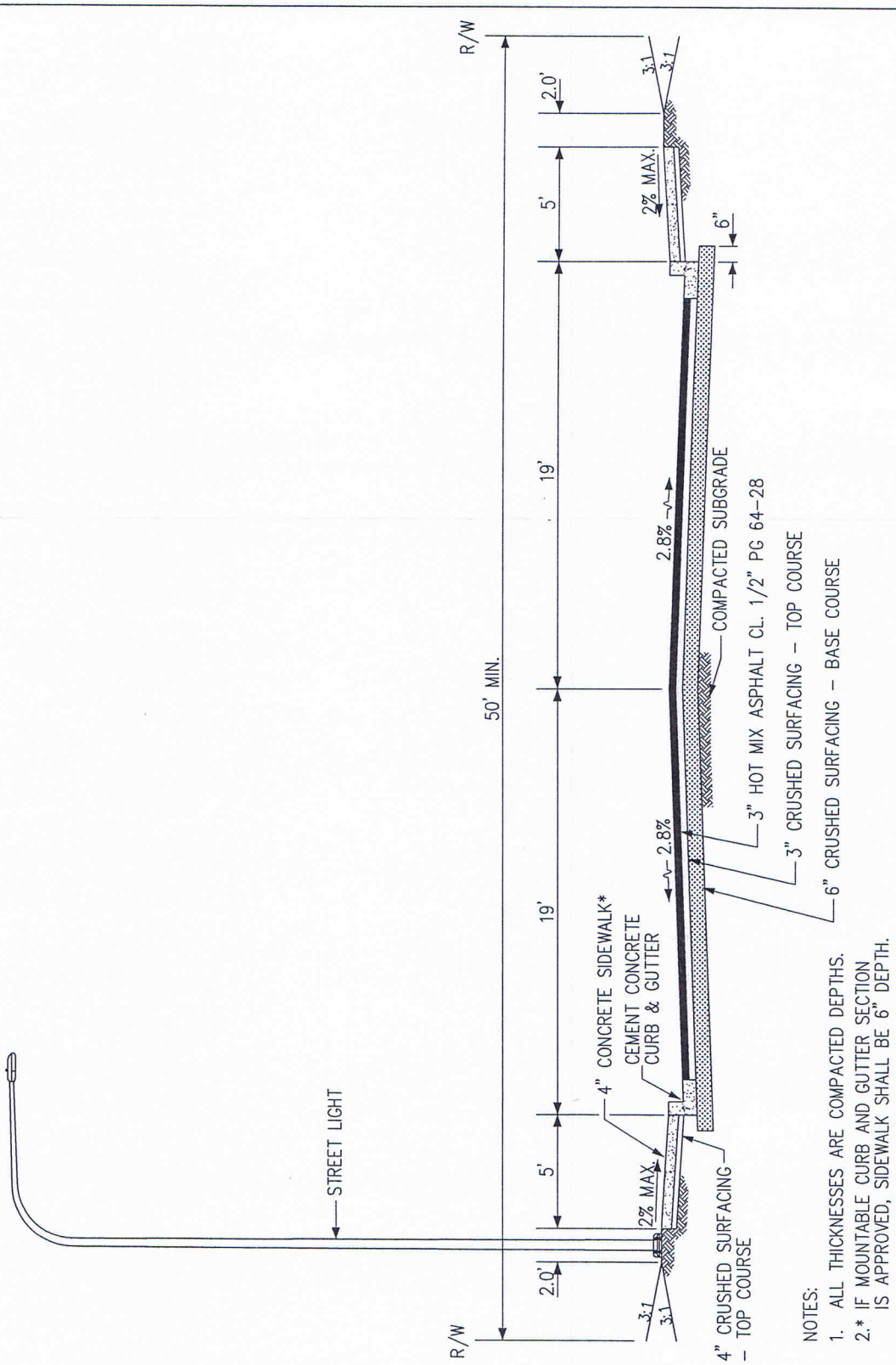


NOTES:
1. ALL THICKNESSES ARE COMPACTED DEPTHS.
2. * IF MOUNTABLE CURB AND GUTTER SECTION IS APPROVED, SIDEWALK SHALL BE 6" DEPTH.
3. N.T.S.

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

Revision	Date	Description	Appr
ORIG.	11/06		

CITY OF ZILLAH–STANDARD DETAIL	ROADWAY SECTION–LOCAL ACCESS (RESIDENTIAL) NO PARKING ALLOWED	ST–3



NOTES:
1. ALL THICKNESSES ARE COMPACTED DEPTHS.
2.* IF MOUNTABLE CURB AND GUTTER SECTION IS APPROVED, SIDEWALK SHALL BE 6" DEPTH.
3. N.T.S.

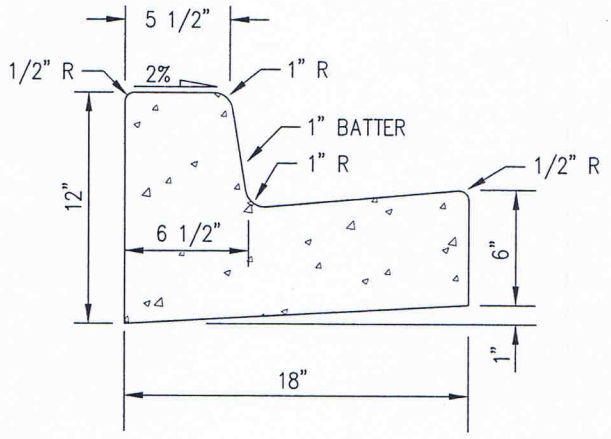
NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	11/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL

ROADWAY SECTION–LOCAL ACCESS (RESIDENTIAL) ON STREET PARKING ALLOWED

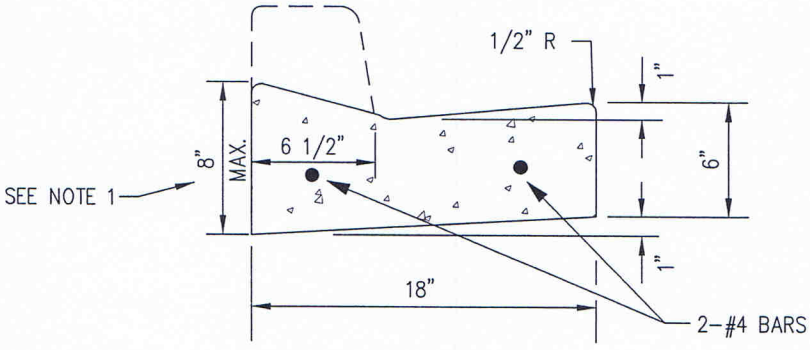
ST–4



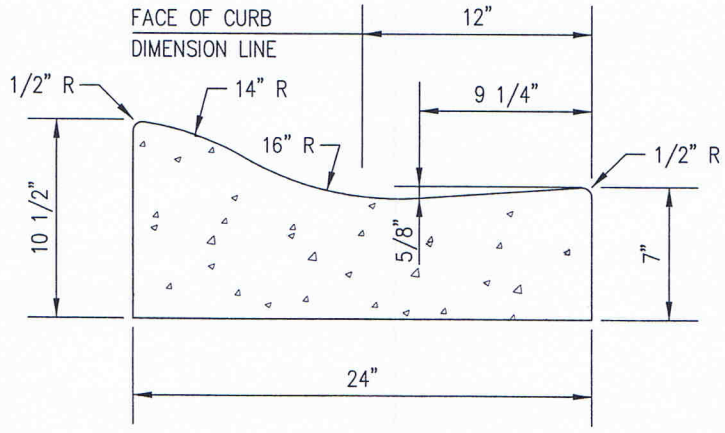
FULL HEIGHT – BARRIER

NOTES:

1. AS DIRECTED BY THE PUBLIC WORKS DIRECTOR. MAY VARY DEPENDING UPON GRADE OF SIDEWALK AND DRIVEWAY BEYOND CURB. BACK OF CURB WILL BE 6 1/2" HIGH AT SIDEWALK RAMPS.
2. 3/8" THICK MASTIC EXPANSION JOINT TO BE PLACED AT ALL POINTS OF TANGENCY.
3. FOR STATIONARY FORM CONSTRUCTION STANDARD PLATES AND HALF PLATES TO BE PLACED AT 10'–0" INTERVALS.
4. FOR SLIP–FORM CONSTRUCTION, PROVIDE FULL DEPTH JOINTS AT 10'–0" INTERVALS.
5. BACKFILL BEHIND CURB SHALL EXTEND FROM TOP OF CURB BACK TO A POINT AS DIRECTED BY THE THE PUBLIC WORKS DIRECTOR. THE TOP 4" OF BACKFILL SHALL BE OF A FINE GRADED MATERIAL SUITABLE FOR LAWNS, AND BE DAMPENED AND MECHANICALLY COMPACTED TO OBTAIN A REASONABLE LEVEL OF COMPACTION.



DEPRESSED – DRIVEWAY

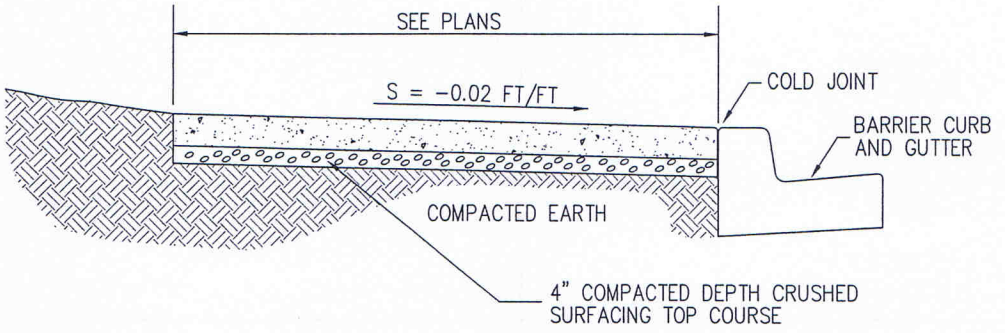


MOUNTABLE – ROLLED

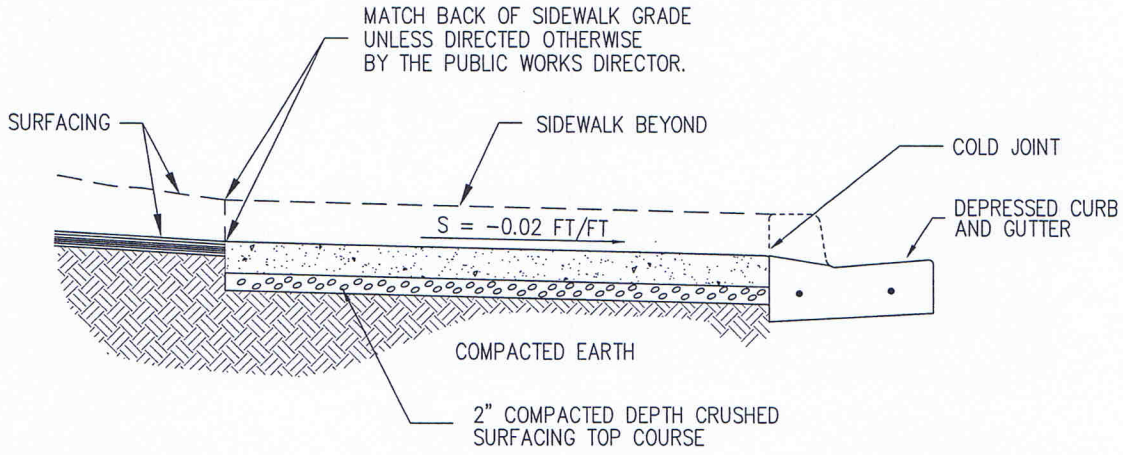
NOTES:
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	CONCRETE CURB & GUTTER	ST–5



4" THICK SIDEWALK SECTION

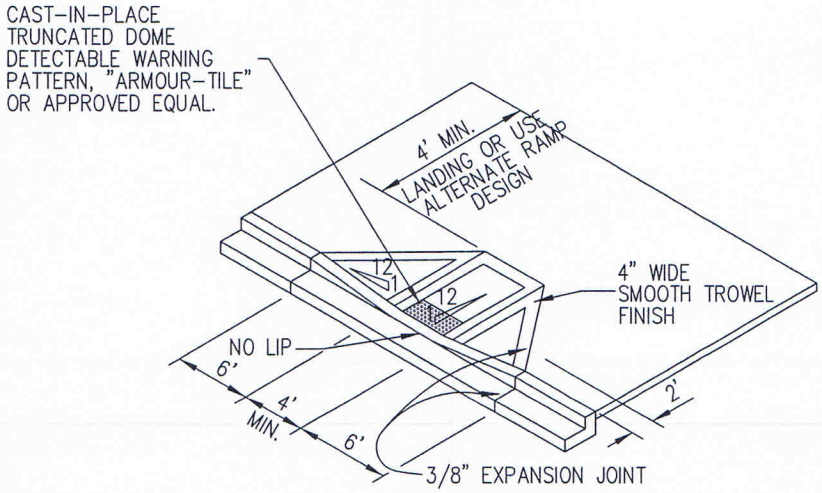


6" THICK SIDEWALK SECTION AT DRIVEWAY ENTRANCES AND BEHIND MOUNTABLE CURB

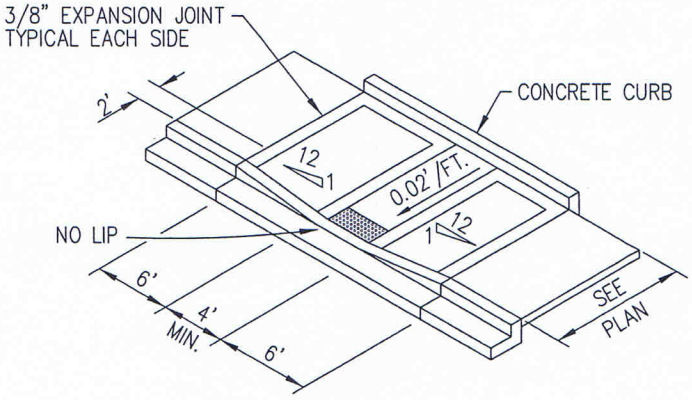
NOTES:
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	CONCRETE SIDEWALK SECTIONS	ST–6



STANDARD



ALTERNATE

SIDEWALK RAMP DETAIL

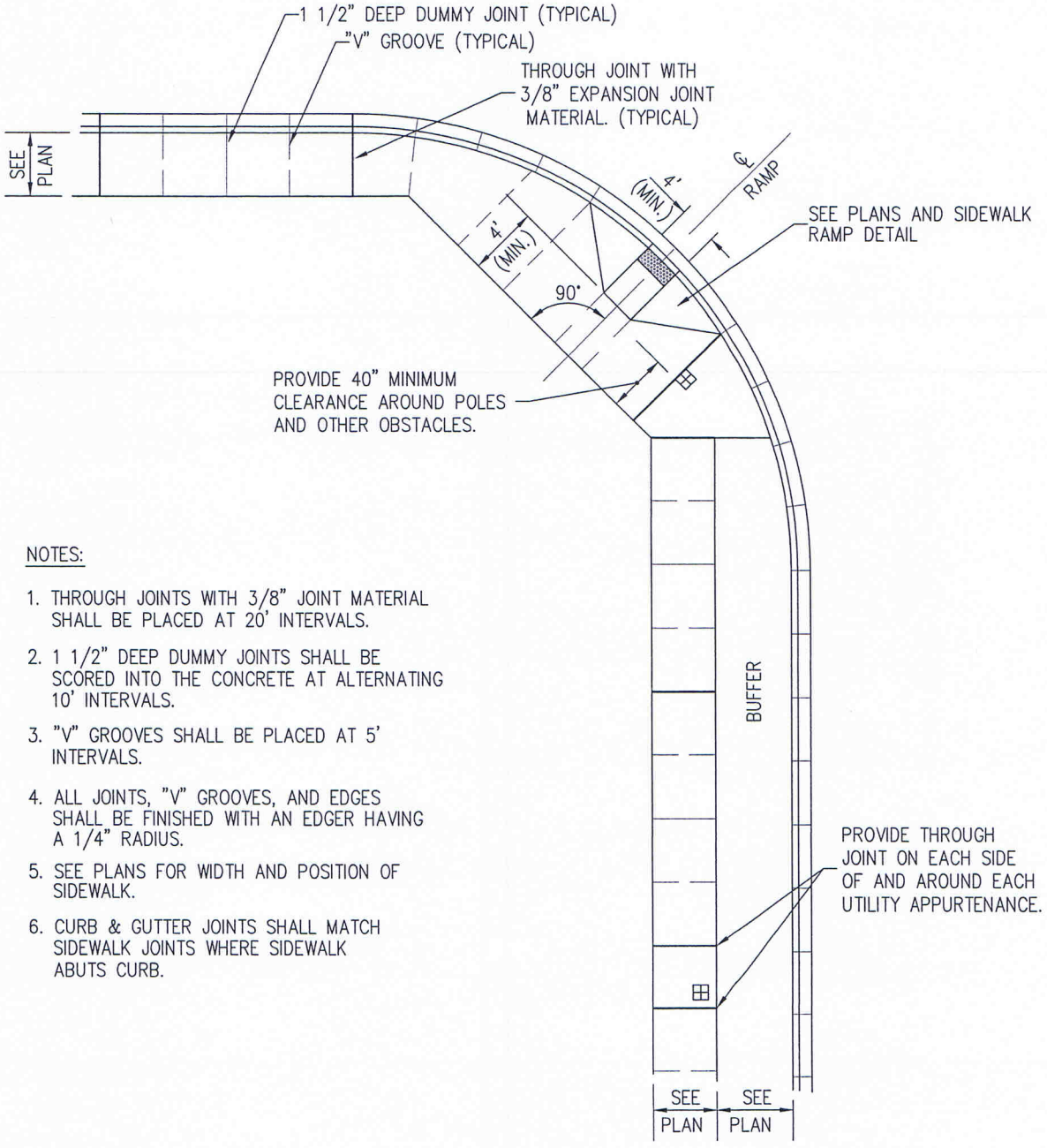
NOT TO SCALE

NOTES:

- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	SIDEWALK RAMP DETAIL	ST–7



NOTES:

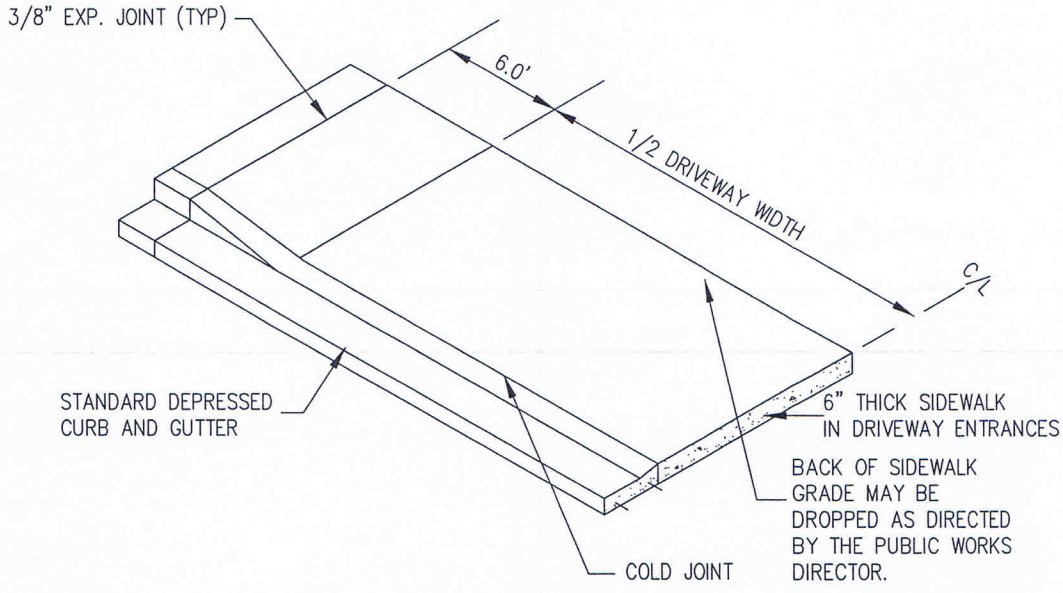
1. THROUGH JOINTS WITH 3/8" JOINT MATERIAL SHALL BE PLACED AT 20' INTERVALS.
2. 1 1/2" DEEP DUMMY JOINTS SHALL BE SCORED INTO THE CONCRETE AT ALTERNATING 10' INTERVALS.
3. "V" GROOVES SHALL BE PLACED AT 5' INTERVALS.
4. ALL JOINTS, "V" GROOVES, AND EDGES SHALL BE FINISHED WITH AN EDGER HAVING A 1/4" RADIUS.
5. SEE PLANS FOR WIDTH AND POSITION OF SIDEWALK.
6. CURB & GUTTER JOINTS SHALL MATCH SIDEWALK JOINTS WHERE SIDEWALK ABUTS CURB.

NOTES:

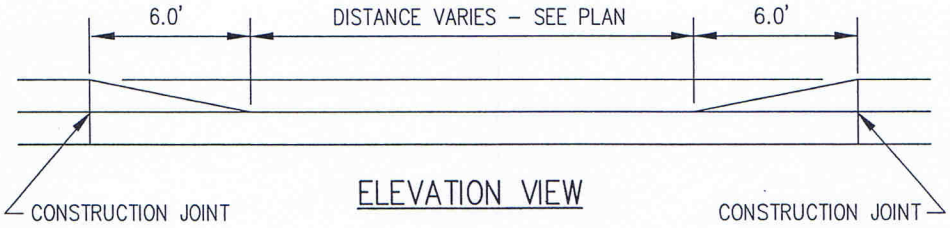
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	SIDEWALK JOINTING	ST–8



ISOMETRIC VIEW



ELEVATION VIEW

NOTE:
REINFORCEMENT NOT SHOWN FOR CLARITY. EXTEND REINFORCEMENT TO CONSTRUCTION JOINTS.

RESIDENTIAL DRIVEWAY ENTRANCE

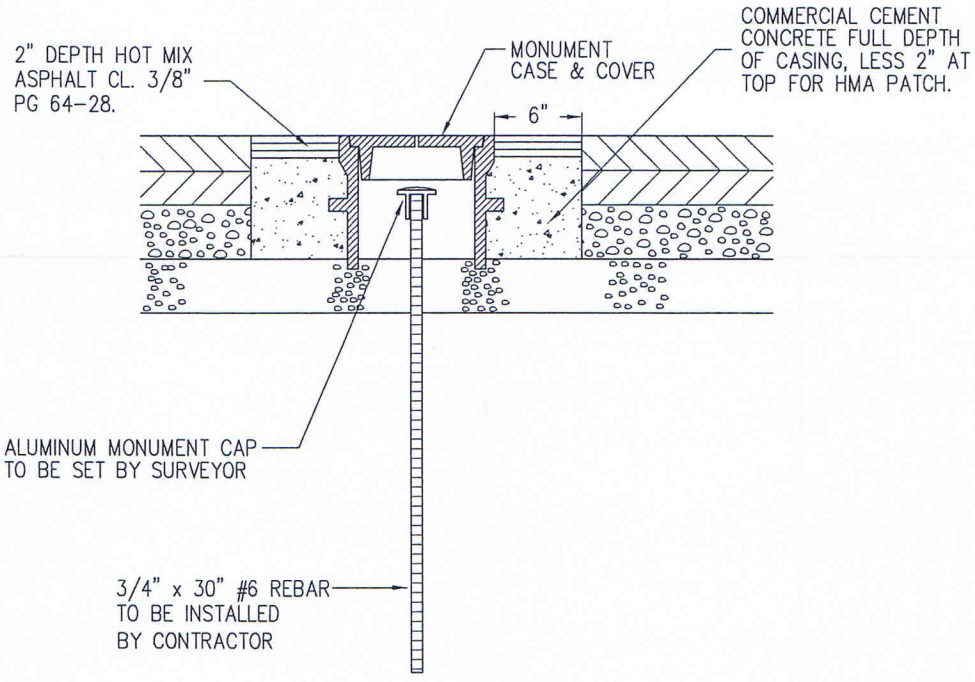
NOT TO SCALE

NOTES:

- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	DRIVEWAY ENTRANCE	ST–9



NOTES:

1. TOP OF MONUMENT CAP SHALL BE 3" BELOW FINISH GRADE
2. MONUMENT, MONUMENT CASE & COVER TO BE PLACED AFTER FINAL LIFT OF HMA.
3. MONUMENT CASE, COVER AND RISERS SHALL BE THE REQUIREMENTS OF SECTION 9-22 AND MANUFACTURED BY OLYMPIC FOUNDARY OR EQUAL.

MONUMENT DETAIL

NOT TO SCALE

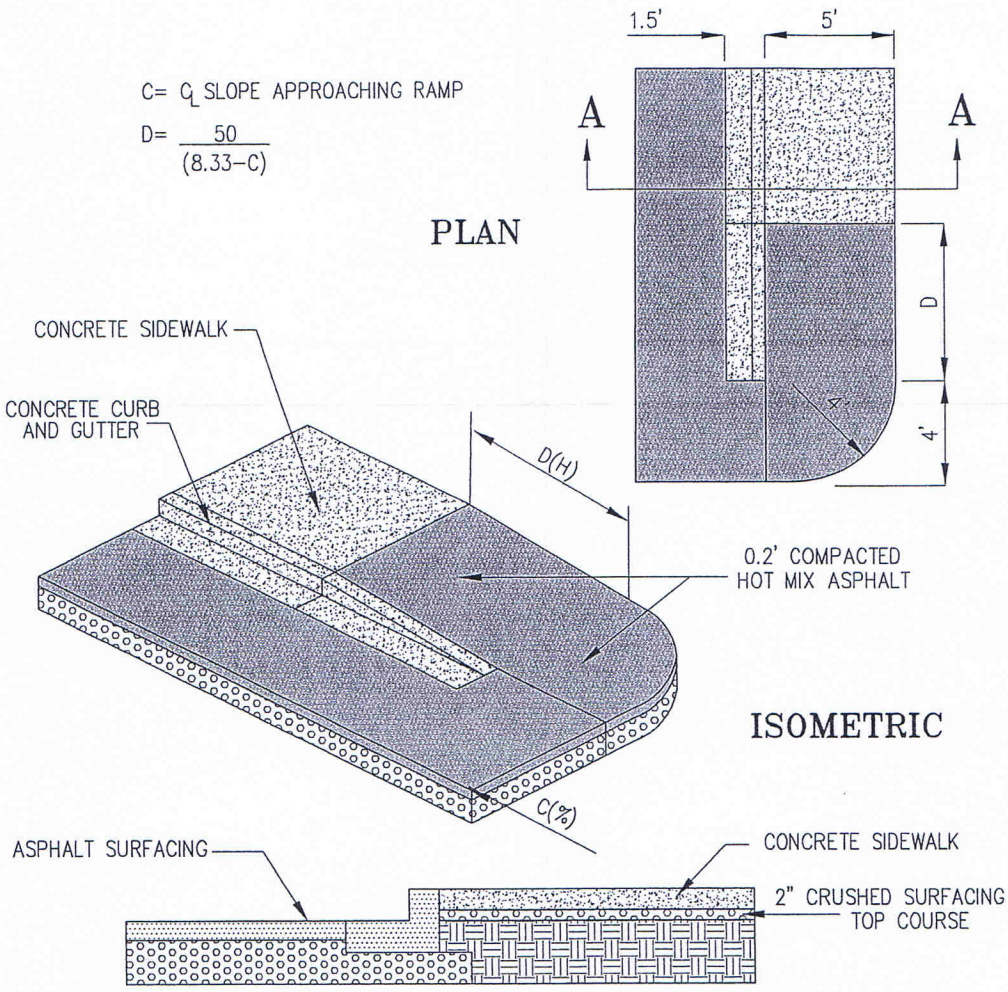
NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH-STANDARD DETAIL	MONUMENT	ST-10

C= C_L SLOPE APPROACHING RAMP

$$D = \frac{50}{(8.33 - C)}$$



SECTION A–A

ASPHALT SIDEWALK RAMP DETAIL

NOT TO SCALE

NOTE:
ONLY THE LATEST DETAIL, AS APPROVED BY
THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	ASPHALT SIDEWALK RAMP DETAIL	ST–11

CITY OF ZILLAH – STANDARD DETAIL

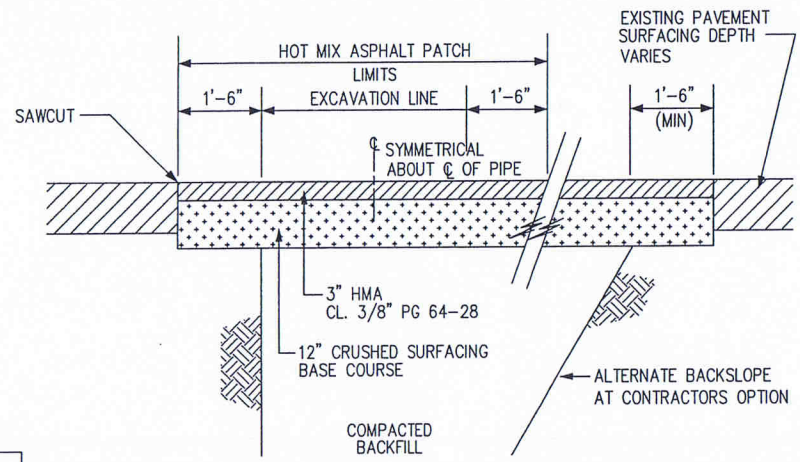
TRENCH SURFACING REPAIR

ST-12

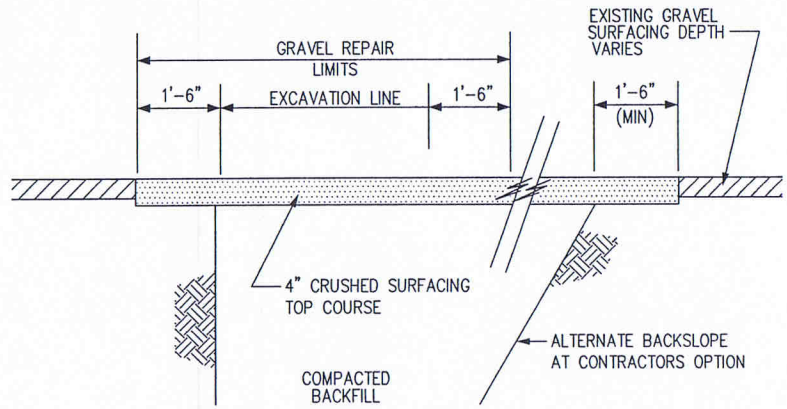
NOTES:

- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

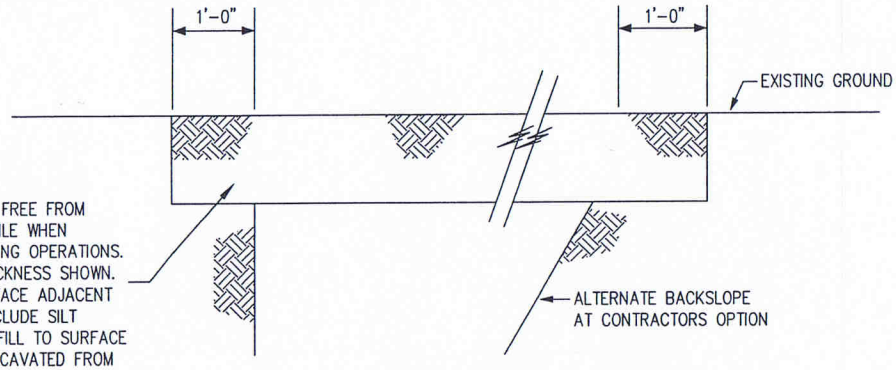
Revision	Date	Description	Appr
ORIG.	11/06		



ASPHALT PAVEMENT SURFACING



GRAVEL SURFACING



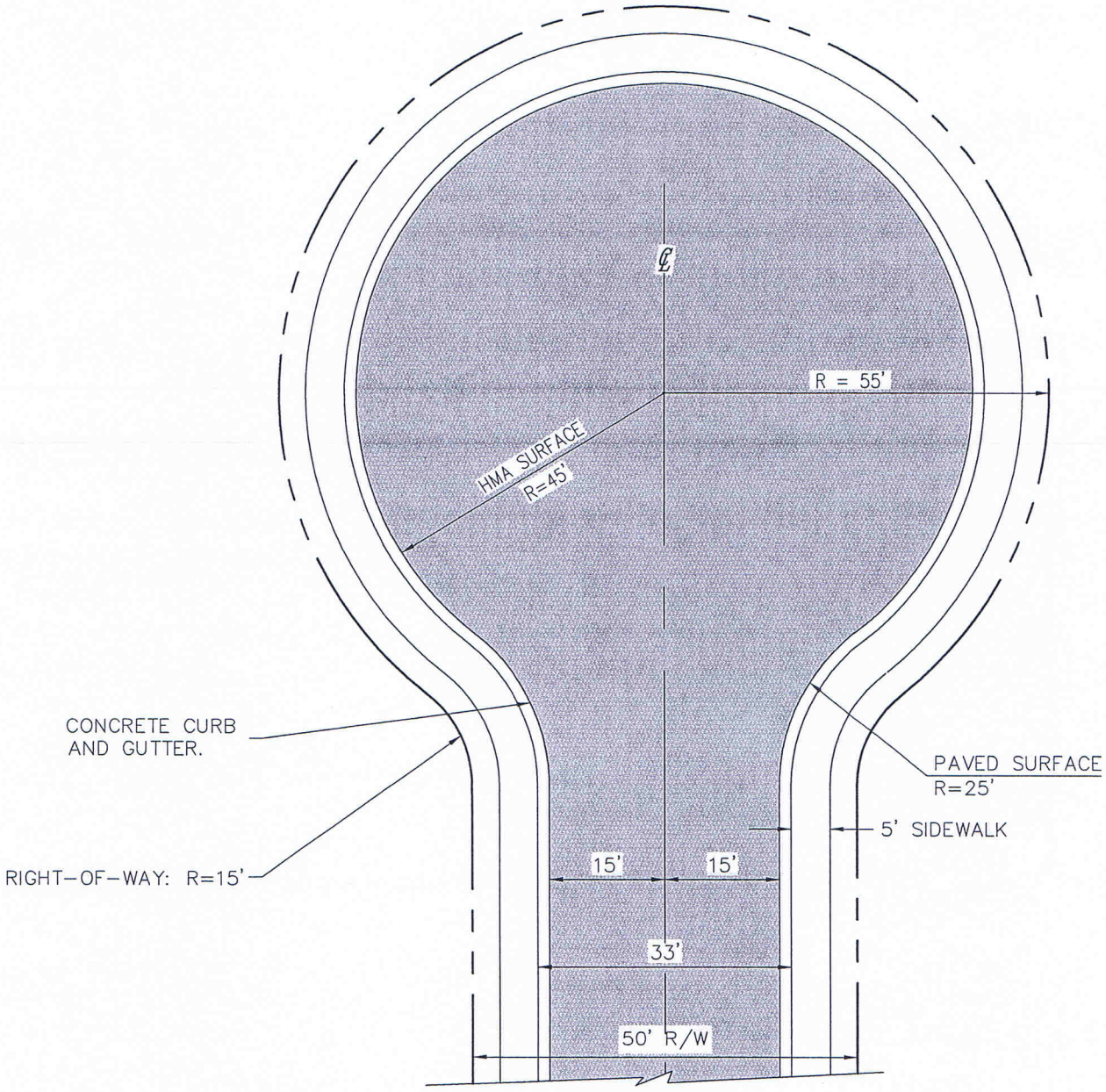
UNSURFACED AREAS

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCH SURFACE RESTORATION BEYOND THE PAYMENT LIMITS SHOWN, INCLUDING WIDER TRENCH SECTIONS RESULTING FROM LAYING BACK TRENCH SIDES AT THE CONTRACTORS OPTION. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR SURFACE REPAIR BEYOND THE PAYMENT LIMITS.
2. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR TRENCH SURFACING REPAIR IN UNSURFACED AREAS.
3. HMA PATCHING WILL BE COMPLETED WITHIN THREE DAYS.
4. ALL THICKNESS ARE COMPACTED DEPTH.

TRENCH SURFACING REPAIR

NOT TO SCALE



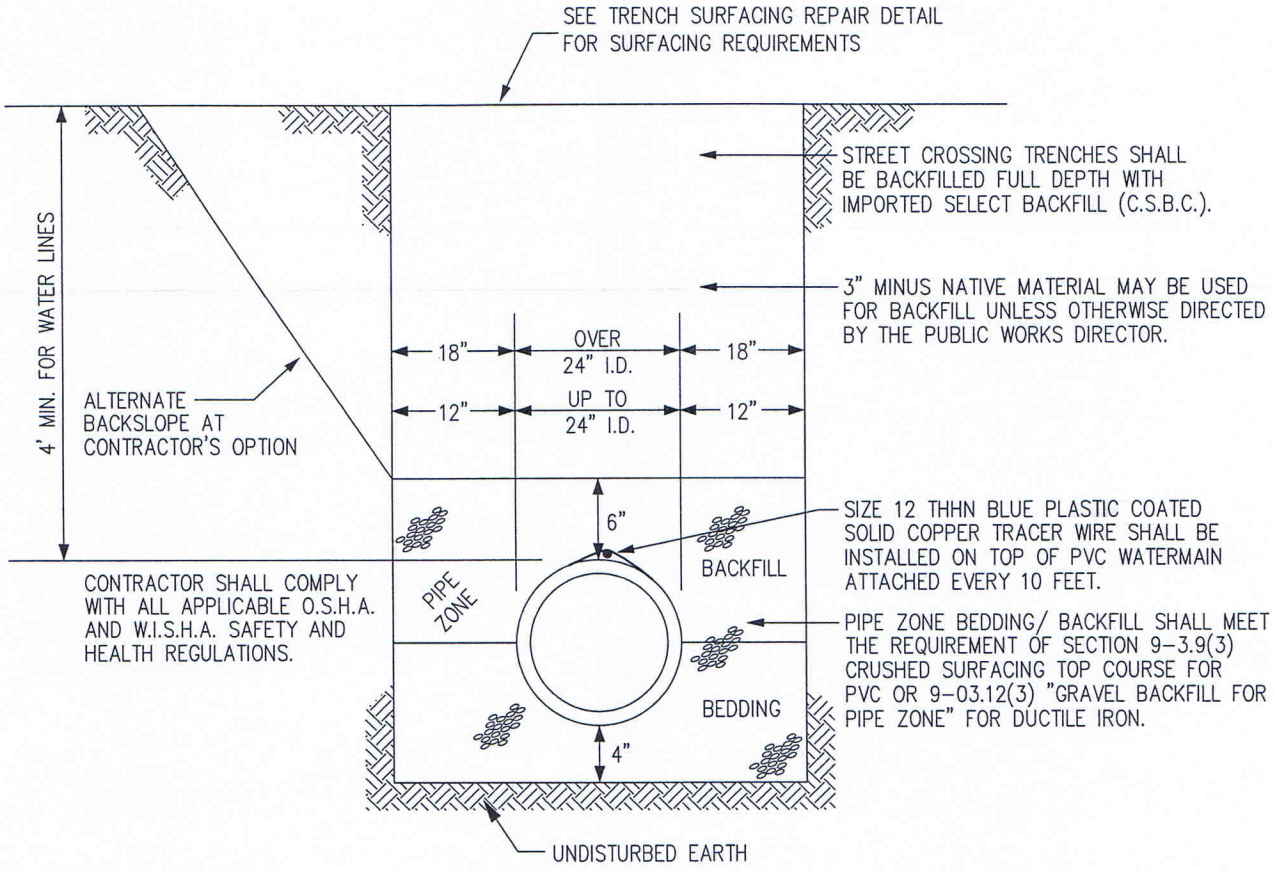
PLAN VIEW
NTS

NOTES:

- CUL-DE-SAC STREETS SHALL BE A MAXIMUM OF 500 FEET IN LENGTH.
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	11/06		
Revision	Date	Description	Appr

CITY OF ZILLAH-STANDARD DETAIL	FULL CUL-DE-SAC LAYOUT	ST-13



TYPICAL WATERMAIN TRENCH

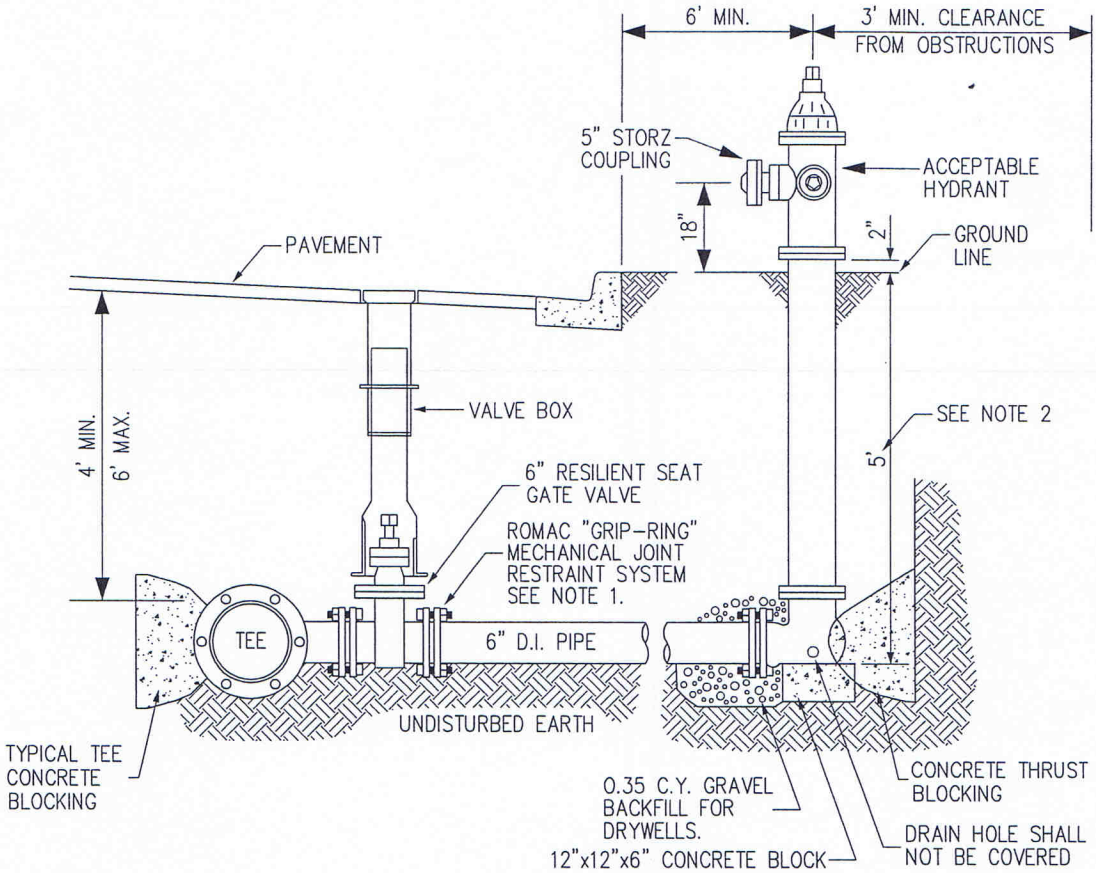
NOT TO SCALE

NOTES:

- FOR WATER SERVICES, INSTALL IMPORTED PIPE BEDDING A MINIMUM OF 3" THICK ON ALL SIDES OF PIPE.
- MECHANICAL TAMPING AND COMPACTION REQUIRED AS DIRECTED BY THE CITY. WATER SETTLING MAY ONLY BE USED OUTSIDE THE ROADWAY PRISM WHEN APPROVED BY THE CITY.
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	11/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	WATERMAIN TRENCH	W–1



TYPICAL FIRE HYDRANT ASSEMBLY

NOT TO SCALE

ACCEPTABLE HYDRANTS:

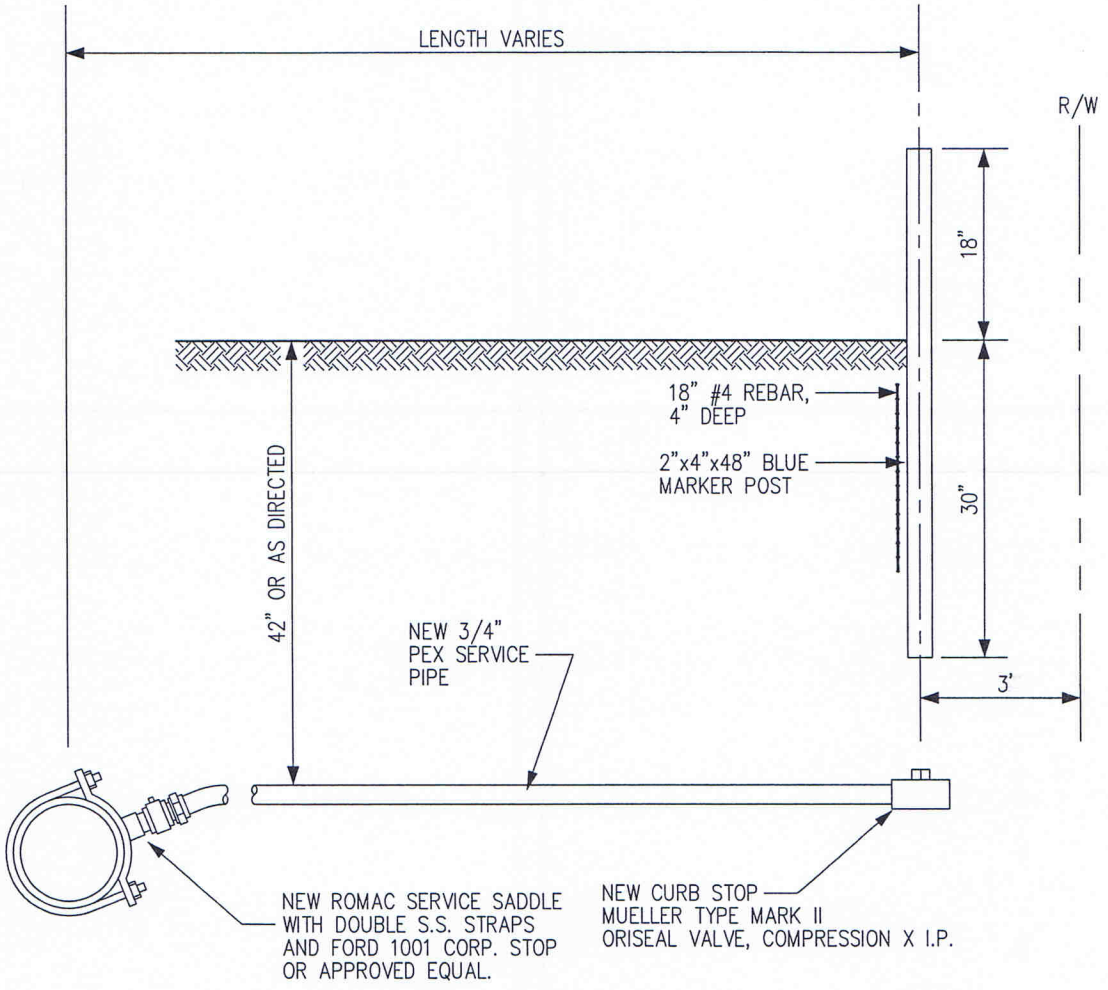
- MUELLER CENTURION
- M&H 929 RELIANT

NOTES:

- ROMAC "GRIP-RING" MECHANICAL JOINT ACCESSORY PACK SHALL BE USED ON ALL MECHANICAL JOINT CONNECTIONS FROM TEE TO HYDRANT.
- MINIMUM HYDRANT DEPTH IS 5 FEET. THIS DISTANCE MAY INCREASE WHEN HYDRANTS ARE INSTALLED ON DISTRIBUTION MAIN SIZES LARGER THAN 6 INCHES IN DIAMETER.
- ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	11/06		
Revision	Date	Description	Appr

CITY OF ZILLAH-STANDARD DETAIL	TYPICAL FIRE HYDRANT	W-2



WATER SERVICE

NOT TO SCALE

NOTES:

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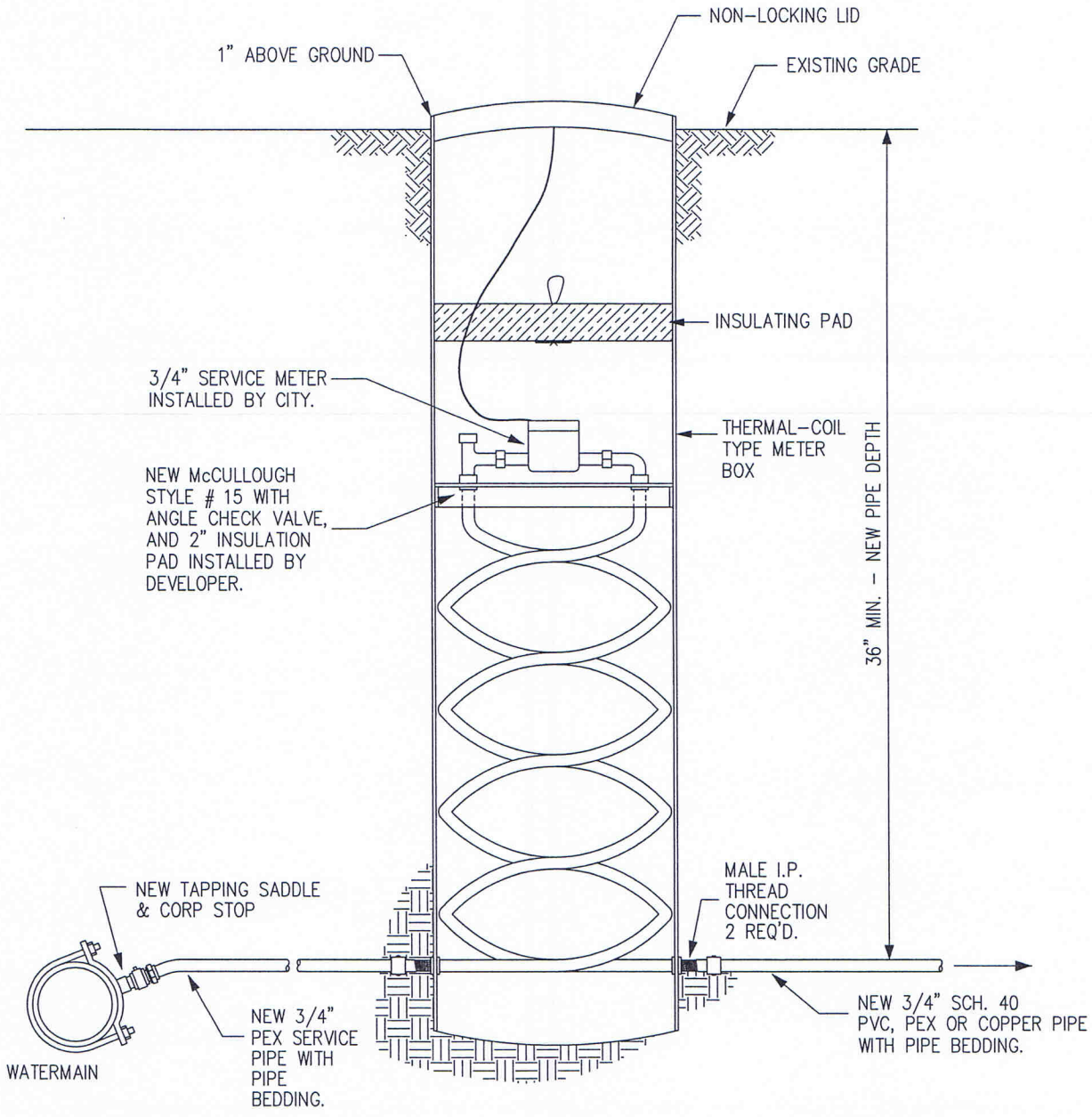
ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	WATER SERVICE	W–3



WATER METER BOX

NOT TO SCALE

NOTES:

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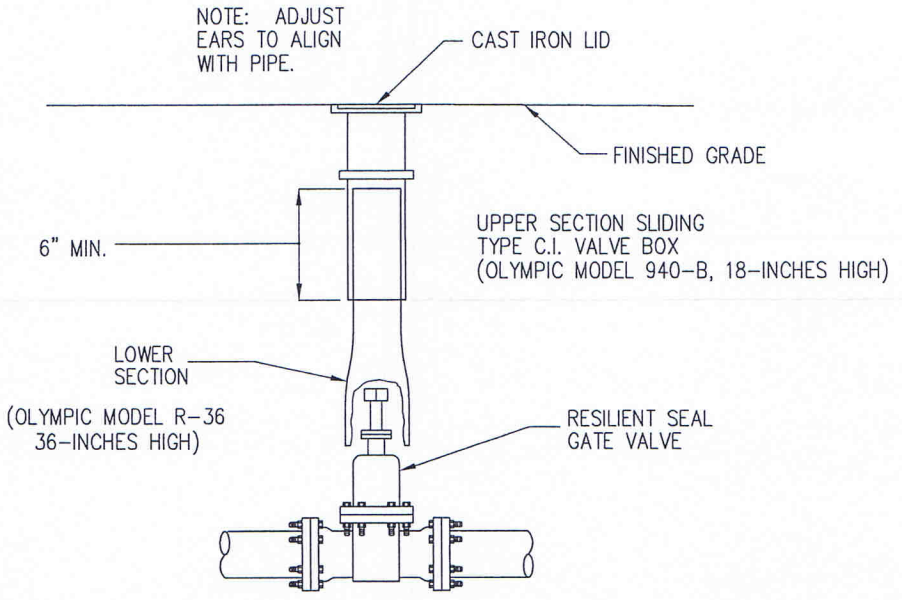
ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH-STANDARD DETAIL	WATER METER BOX	W-4



VALVE SIZE AND ENDS AS SPECIFIED OR INDICATED ON PLANS. INSTALLATION IS SIMILAR FOR BUTTERFLY VALVE.

NOTE: PROVIDE EXTENSION PIECE WHERE REQUIRED FOR VALVE BOX. (OLYMPIC MODEL 044, 12-INCHES HIGH)

WATER VALVE BOX

NOT TO SCALE

NOTE:
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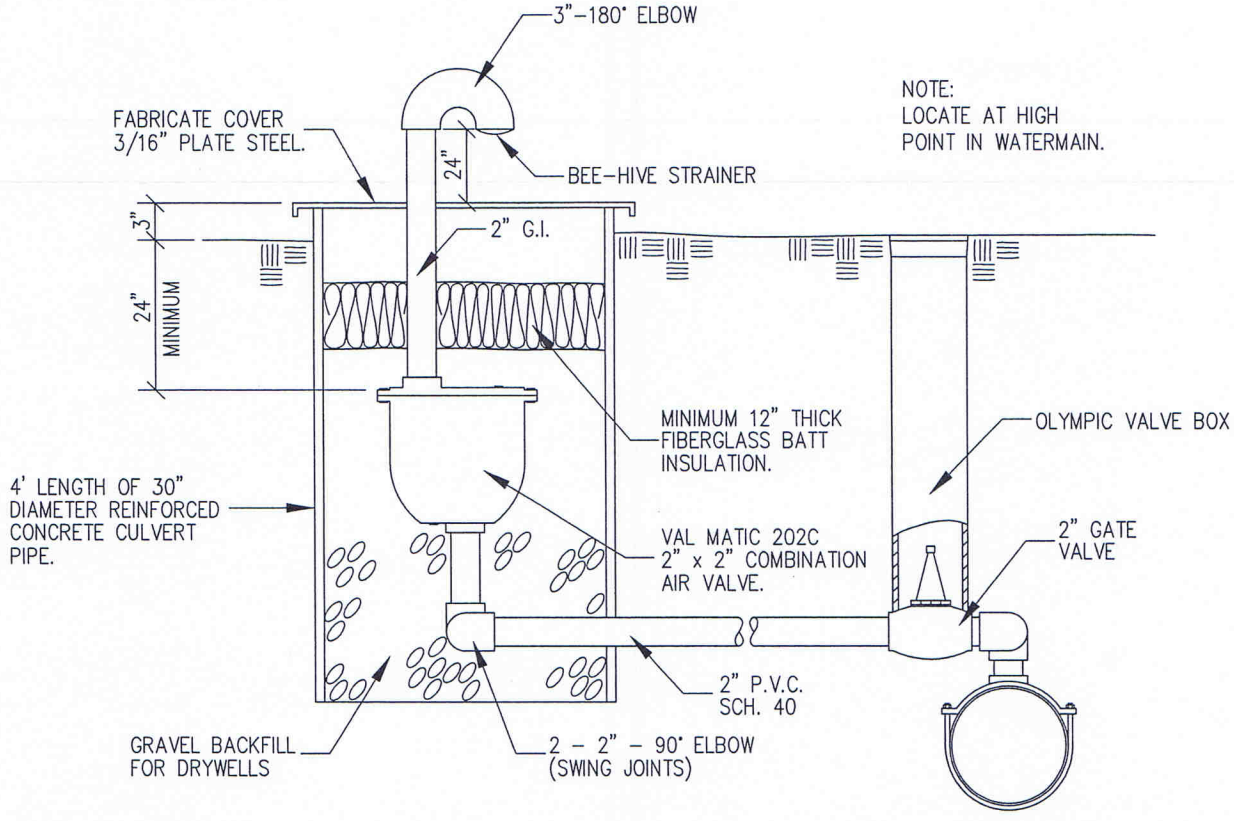
ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH-STANDARD DETAIL	WATER VALVE BOX	W-5



AIR RELEASE/AIR VACUUM VALVE ASSEMBLY

NOT TO SCALE

NOTES:

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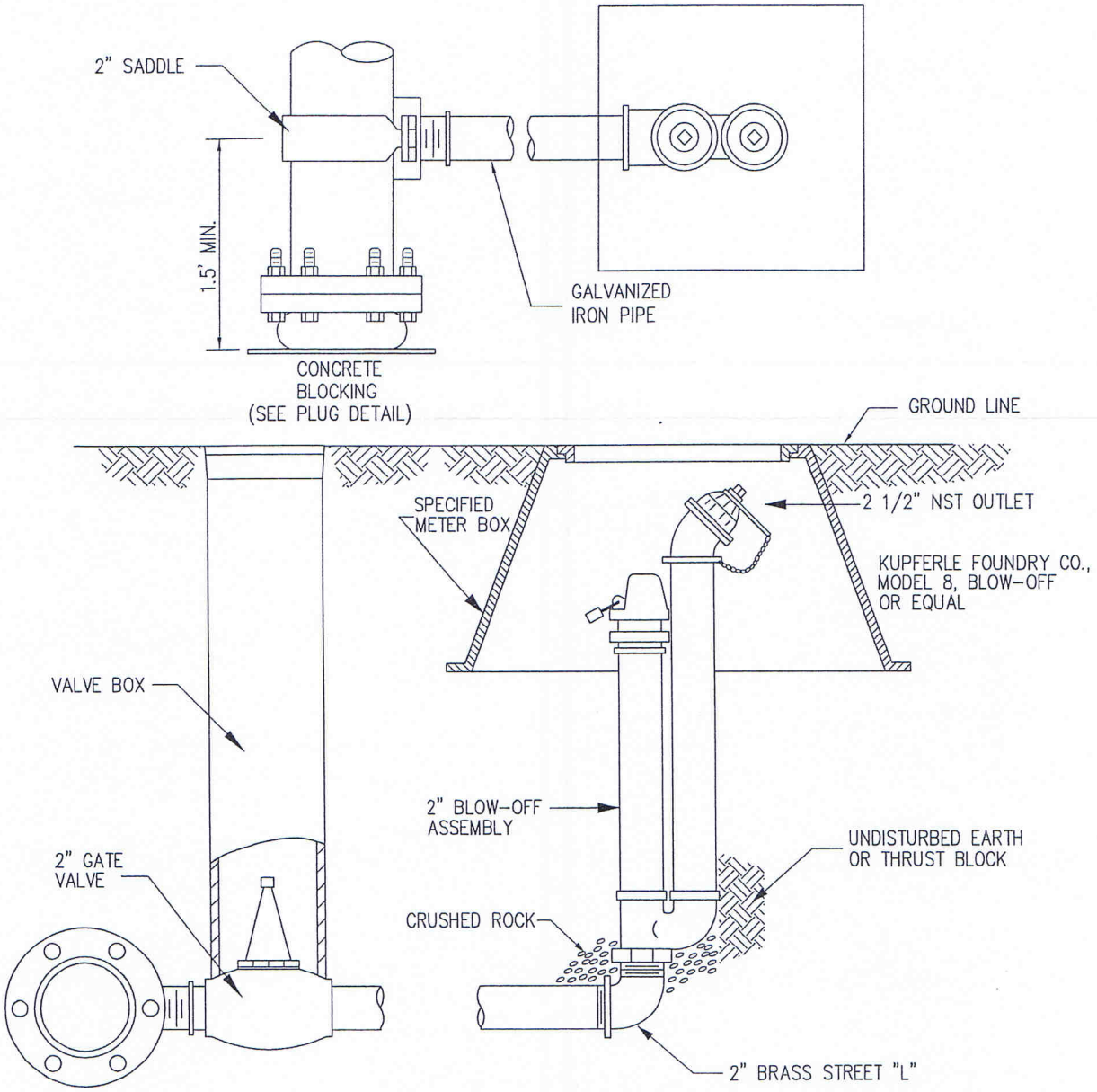
ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH-STANDARD DETAIL	AIR RELEASE/AIR VACUUM VALVE	W-6



BLOW - OFF DETAIL

NOT TO SCALE

NOTE:
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THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

ORIG.	10/06		
Revision	Date	Description	Appr

CITY OF ZILLAH-STANDARD DETAIL	BLOW - OFF DETAIL	W-7

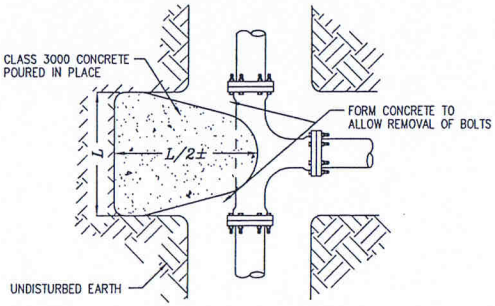
CITY OF ZILLAH – STANDARD DETAIL

TYPICAL THRUST BLOCKING

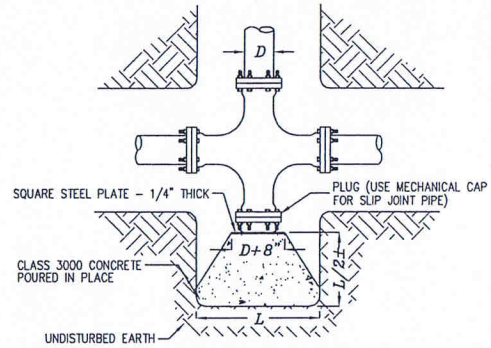
W-8

NOTE: ONLY THE LATEST DETAIL, AS APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE USED.

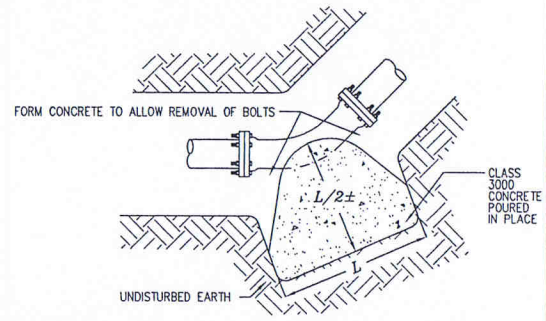
Revision	Date	Description	Appr
ORIG.	11/06		



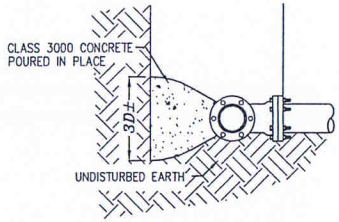
TEES



PLUGS AND CAPS



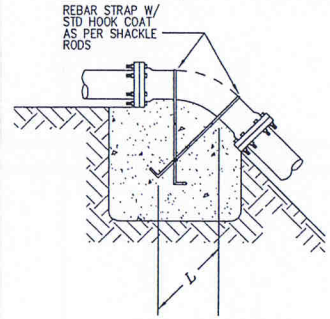
BENDS



SIDE VIEW
THIS VIEW TYPICAL OF ALL BLOCKING

NOTES:

1. D IS APPROXIMATE PIPE DIAMETER. THE ABOVE END AREAS ARE BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF AND 250 PSI TEST PRESSURE.
2. DIMENSIONS LISTED DENOTE MINIMUM STANDARDS FOR SOIL AND TEST PRESSURES SHOWN. SHOULD TEST PRESSURE AND/OR SOIL CONDITIONS VARY, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SPECIAL THRUST BLOCK DESIGN.
3. ALL FITTINGS AND/OR PIPE MAKING DIRECT CONTACT WITH CONCRETE SHALL BE WRAPPED WITH 4 MIL POLYETHYLENE SHEETING PRIOR TO PLACEMENT OF CONCRETE.



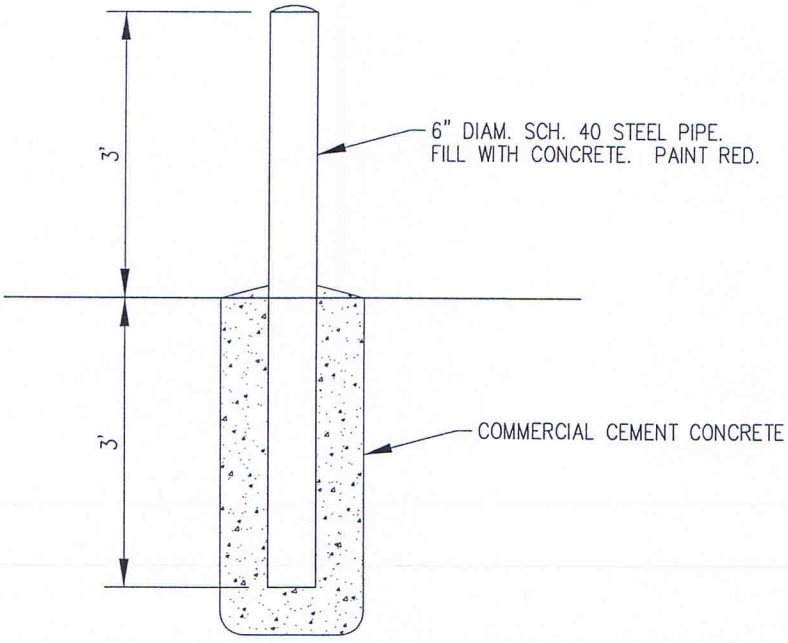
VERTICAL OVERBEND

MINIMUM END AREAS				
PIPE SIZE (D)	TEES & PLUGS	90° BENDS	45° BENDS	11 1/4° AND 22 1/2° BENDS
6"	5.1 SQ FT	7.2 SQ FT	3.9 SQ FT	2.0 SQ FT
8"	8.8 SQ FT	12.4 SQ FT	6.7 SQ FT	3.4 SQ FT
10"	14.3 SQ FT	20.2 SQ FT	11.0 SQ FT	5.6 SQ FT
12"	20.4 SQ FT	28.9 SQ FT	15.7 SQ FT	7.9 SQ FT
14"	27.7 SQ FT	39.2 SQ FT	21.2 SQ FT	10.7 SQ FT
16'	35.8 SQ FT	51.2 SQ FT	27.5 SQ FT	13.9 SQ FT

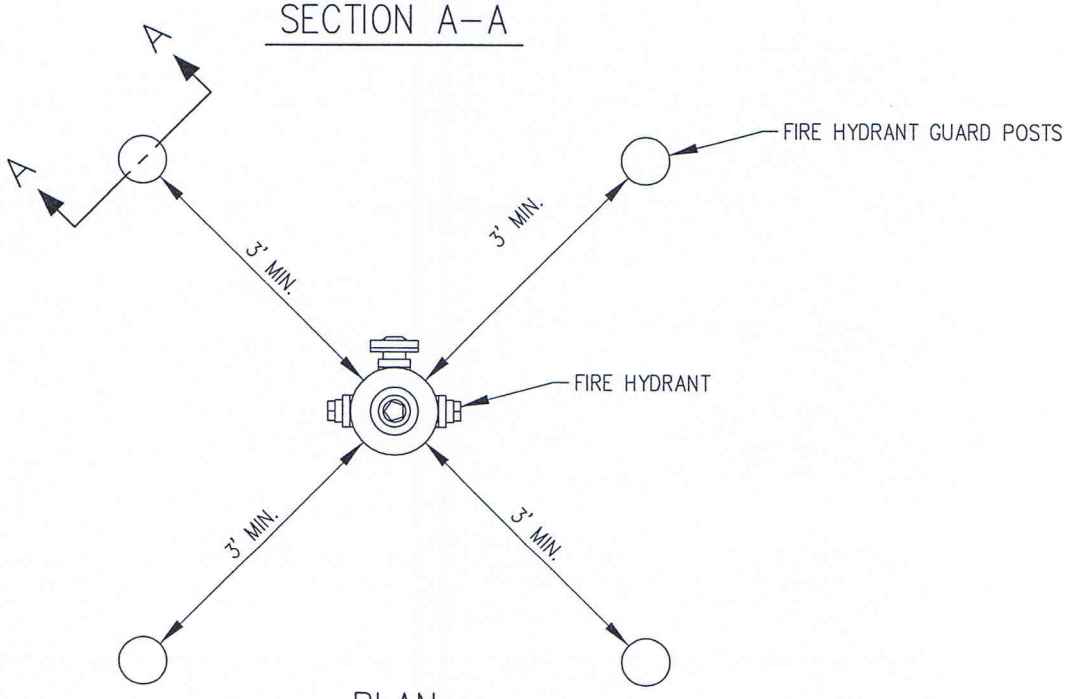
VERTICAL OVERBEND				
PIPE SIZE (D)	22 1/2° BEND	45° BEND	REBAR SIZE	L
6"	20 CU FT	39 CU FT	#5	2.0 FT
8"	34 CU FT	67 CU FT	#5	2.0 FT
10"	56 CU FT	110 CU FT	#5	2.0 FT
12"	79 CU FT	157 CU FT	#6	2.5 FT
14"	107 CU FT	212 CU FT	#7	3.0 FT
16'	139 CU FT	275 CU FT	#9	4.0 FT

TYPICAL THRUST BLOCKING

NOT TO SCALE



SECTION A–A



PLAN

FIRE HYDRANT GUARD POSTS

NOT TO SCALE

NOTE:
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ORIG.	11/06		
Revision	Date	Description	Appr

CITY OF ZILLAH–STANDARD DETAIL	FIRE HYDRANT GUARD POSTS	W–9