

NOTES:

1. DRINKING WATER VALVES SHALL BE INSTALLED ON THE FLANGE OF THE TEE OR CROSS. DO NOT PLACE IN CROSS-GUTTERS.
2. PRESSURIZED IRRIGATION VALVES SHALL BE PLACED AT MID-BLOCK LOCATIONS.
3. STORM DRAIN AND DRINKING WATER MAINS SHALL BE LOCATED ON THE NORTH AND EAST SIDES OF THE STREET.
4. SANITARY SEWER AND PRESSURIZED IRRIGATION MAINS SHALL BE LOCATED ON THE SOUTH AND WEST SIDES OF THE STREET.
5. ADA COMPLIANT PEDESTRIAN RAMPS SHALL BE PLACED ON ALL CORNERS OF INTERSECTIONS.



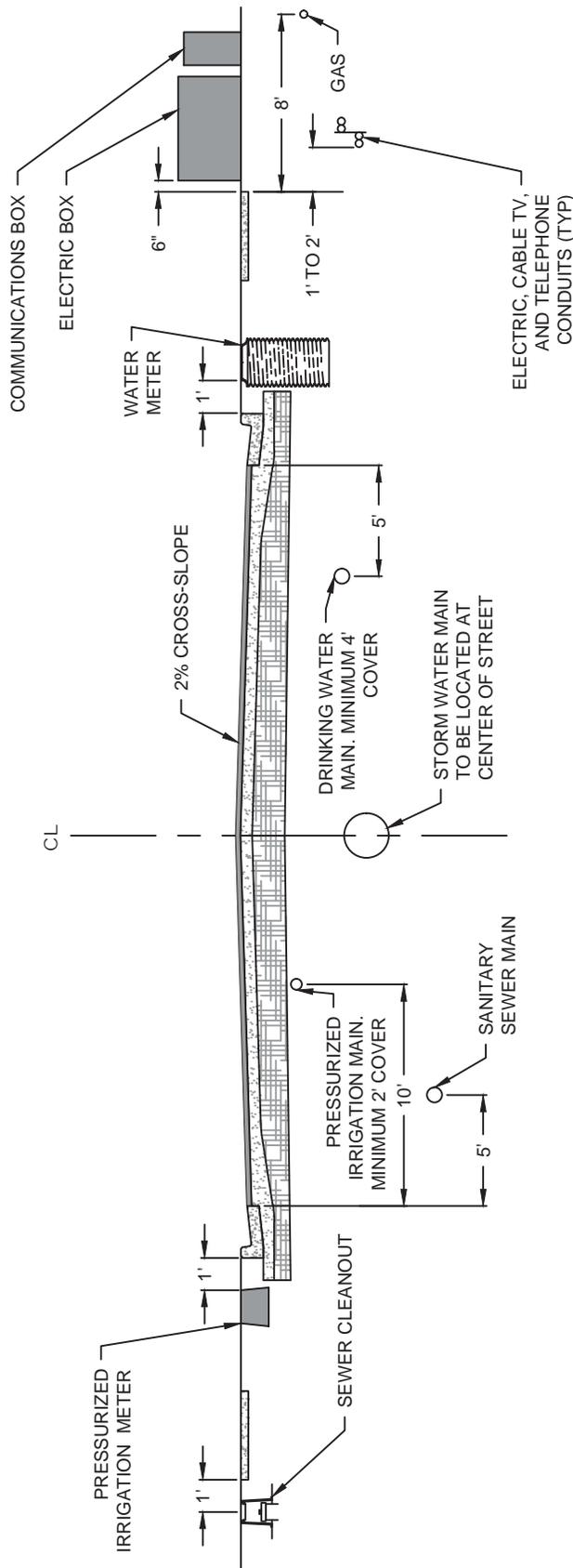
SPANISH FORK CITY  
 40 SOUTH MAIN STREET  
 SPANISH FORK, UT 84660  
 (801) 804-4550

STANDARD DRAWING

UTILITY LOCATIONS AT INTERSECTIONS

DRAWN: JLR  
 DESIGN: CJP  
 CHECK: CMT  
 DATE: 6/22/16

SCALE:  
 NONE  
 STANDARD  
 2



- NOTES:
1. MODIFY THIS STANDARD TO SHOW ACTUAL STREET WIDTHS AND CROSS SECTION AS PER SOILS REPORT AND MINIMUM CITY STANDARDS AND THEN PLACE IN DEVELOPMENT PLANS.
  2. ALL UTILITY BOXES AND EQUIPMENT SHALL BE LOCATED ON THE STREET SIDE OF MASONRY WALL.
  3. ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNEE.



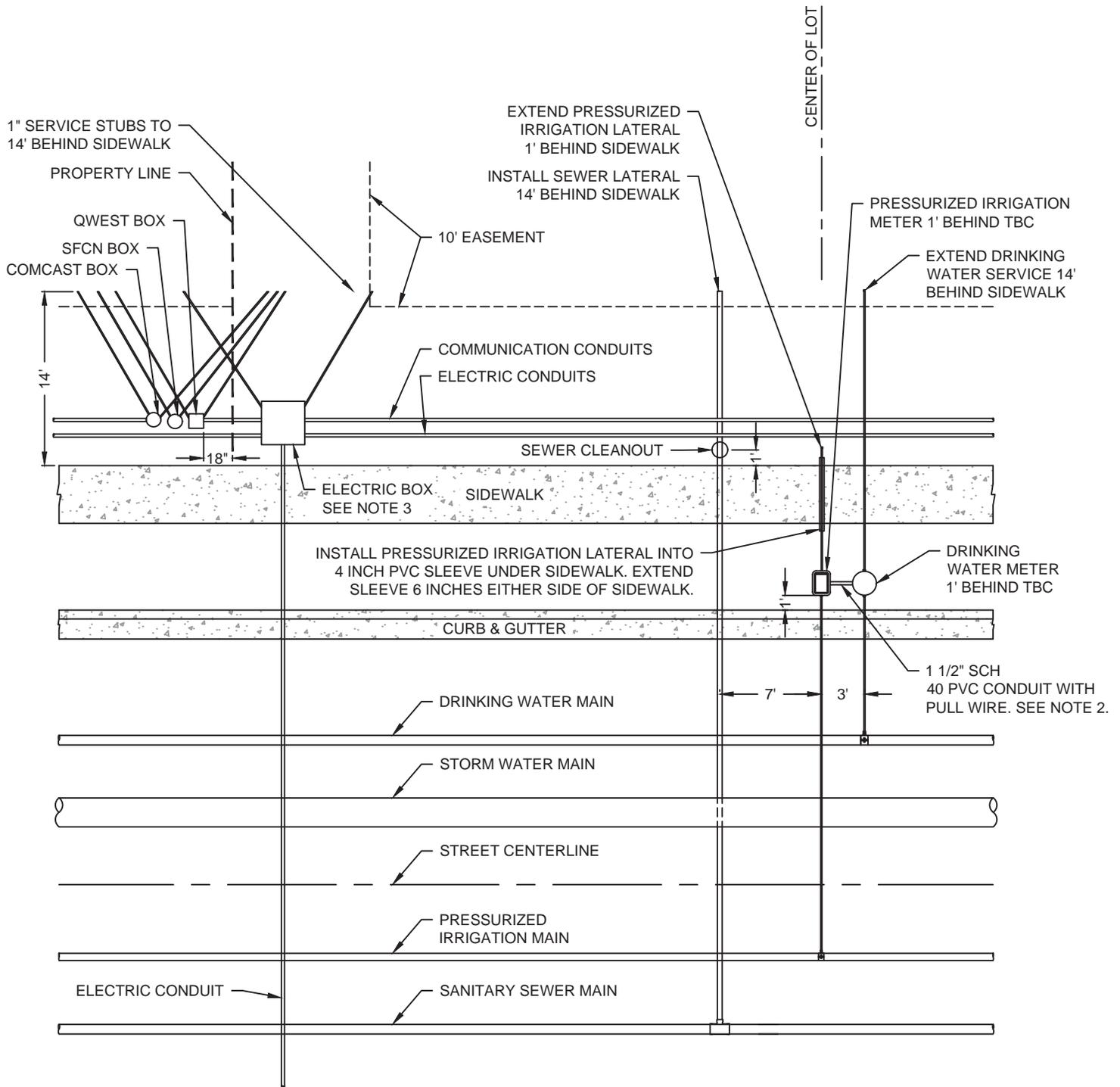
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## STANDARD DRAWING

UTILITY LOCATIONS FOR STREET CROSS SECTIONS

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	3



**NOTES:**

1. ON CORNER LOTS, DRINKING WATER AND PRESSURIZED IRRIGATION SERVICE LATERALS SHALL BE LOCATED NEAR THE CORNER WITHIN THE SIGHT TRIANGLE .
2. THE PULL WIRE IN THE CONDUIT CONNECTING THE DRINKING WATER AND PRESSURIZED IRRIGATION BOXES SHALL EXTEND 15 INCHES INTO EACH BOX. BURY CONDUIT 12" BELOW GRADE.
3. IF 2 ELECTRIC BOXES ARE TO BE LOCATED ADJACENT TO EACH OTHER, LOCATE 1 BOX ON EACH SIDE OF A PROPERTY LINE BETWEEN 2 LOTS.
4. MAINTAIN 10' MINIMUM SEPARATION BETWEEN WATER AND SEWER LATERALS.
5. ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNEE.



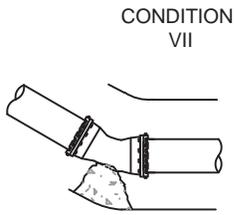
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**STANDARD DRAWING**

UTILITY LOCATIONS FOR BUILDING LOTS

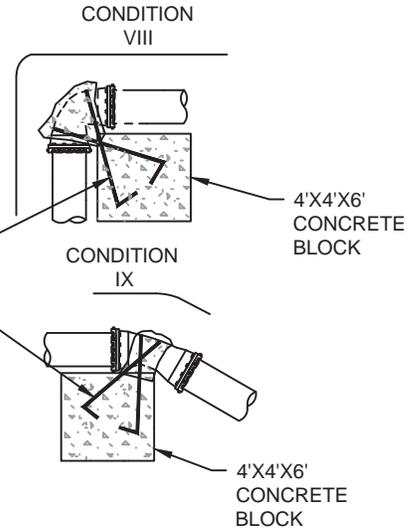
DRAWN:	JLR
DESIGN:	CJP
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DATE:	6/22/16

SCALE:	NONE
STANDARD	4

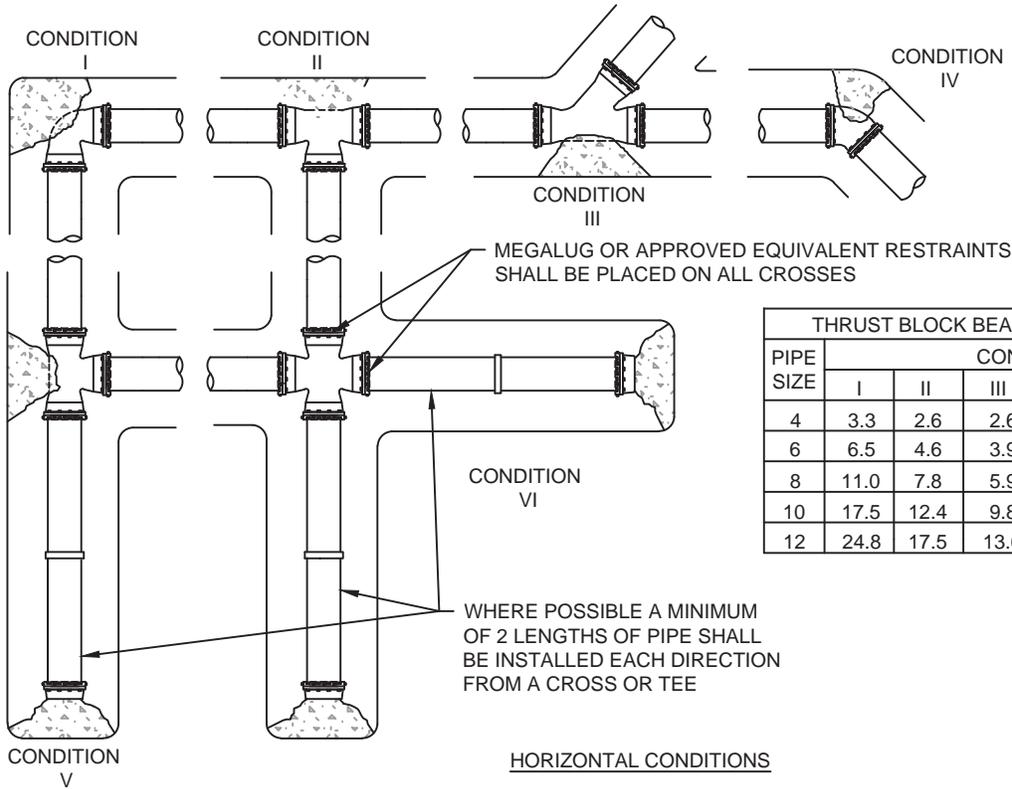


CONDITION VII

CEMENT MORTAR 2 #6 REBAR HAIRPINS. PAINT UNEMBEDDED PORTION OF BARS WITH 2 COATS OF COAL TAR EPOXY AND THEN COVER WITH 2" MIN. OF CEMENT MORTAR.



VERTICAL CONDITIONS



MEGALUG OR APPROVED EQUIVALENT RESTRAINTS SHALL BE PLACED ON ALL CROSSES

WHERE POSSIBLE A MINIMUM OF 2 LENGTHS OF PIPE SHALL BE INSTALLED EACH DIRECTION FROM A CROSS OR TEE

PIPE SIZE	THRUST BLOCK BEARING AREA SQ FT					
	CONDITION					
	I	II	III	IV	V	VII
4	3.3	2.6	2.6	1.3	2.6	1.3
6	6.5	4.6	3.9	2.0	4.6	2.0
8	11.0	7.8	5.9	3.3	7.8	3.3
10	17.5	12.4	9.8	5.2	12.4	5.2
12	24.8	17.5	13.6	7.8	17.5	7.8

HORIZONTAL CONDITIONS

NOTES:

- MECHANICAL RESTRAINING DEVICES INSTALLED ACCORDING TO THE STANDARD DRAWINGS MAY BE USED IN PLACE OF CONCRETE THRUST BLOCKS. USE MECHANICAL RESTRAINING IN UNSTABLE SOILS.
- ALL CONCRETE THRUST BLOCK BEARING FACES SHALL BE POURED AGAINST UNDISTURBED SOIL OR APPROVED COMPACTED BACKFILL.
- A MINIMUM APWA CLASS 2000 PORTLAND CEMENT CONCRETE SHALL BE USED ON ALL HORIZONTAL THRUST BLOCKS AND APWA CLASS 4000 ON VERTICAL.
- THRUST BLOCKS SHALL NOT INTERFERE WITH ACCESS TO JOINTS AND BOLTS.
- FITTINGS SHALL BE ENCASED IN AN 8 MIL VINYL WRAP PLASTIC COVER.
- ALL FITTING JOINTS SHALL BE MECHANICAL.
- HORIZONTAL THRUST BLOCKS FOR PIPE WITH LARGER THAN 12" I.D. SHALL HAVE A DESIGN SUBMITTED THAT IS STAMPED BY A LICENSED PROFESSIONAL ENGINEER.



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STANDARD DRAWING

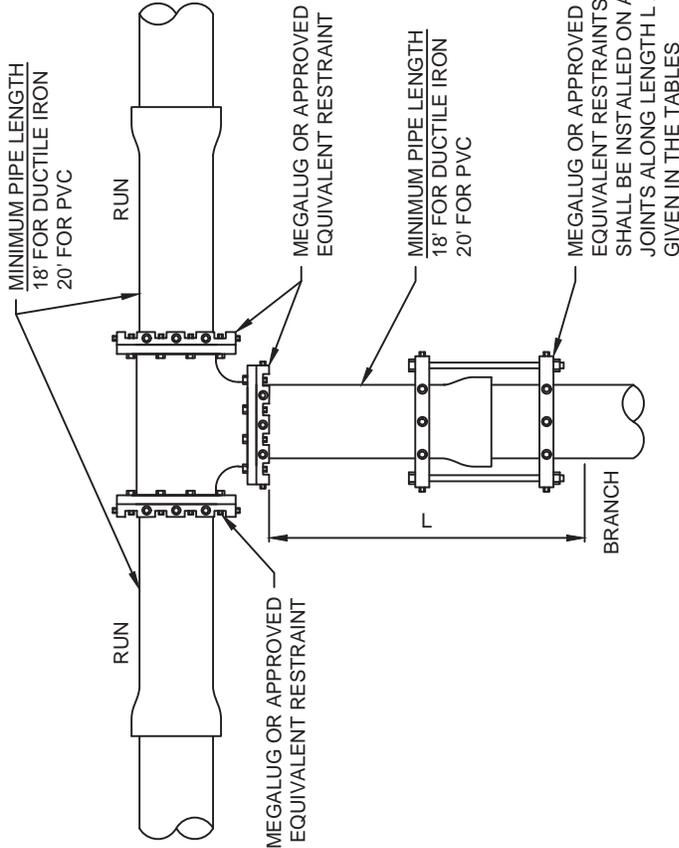
CONCRETE THRUST BLOCKS FOR PRESSURE PIPE

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE: NONE  
STANDARD 5

**CLASS A SOILS**  
 GW: WELL GRADED GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES  
 SW: WELL GRADED SANDS AND GRAVELLY SANDS, LITTLE OR NO FINES  
 GC: CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES  
 SC: CLAYEY SANDS, SAND-CLAY MIXTURES

**CLASS B SOILS**  
 GP: POORLY GRADED GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES  
 SP: POORLY GRADED SANDS AND GRAVELLY SANDS, LITTLE OR NO FINES  
 GM: SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES  
 SM: SILTY SANDS, SAND SILT MIXTURES  
 CL: INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY LAYS, LEAN CLAYS  
 ML: INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS



**PVC PIPE**

SOIL CONDITION & DEPTH OF PIPE	MECHANICAL RESTRAINT SPECIFICATION "L" IN FEET FOR BENDS ON SPECIFIED DIAMETERS														
	12"-4"	12"-6"	12"-8"	12"-10"	12"-12"	10"-4"	10"-6"	10"-8"	10"-10"	8"-4"	8"-6"	8"-8"	6"-4"	6"-6"	4"-4"
CLASS A NATIVE SOIL - 2' BURY	20	20	24	66	104	20	20	42	80	20	20	60	20	31	20
CLASS A NATIVE SOIL - 4' BURY	20	20	20	38	20	20	20	20	21	20	20	20	20	20	20
CLASS B NATIVE SOIL - 2' BURY	20	20	57	150	150	20	20	74	118	20	34	91	20	55	23
CLASS B NATIVE SOIL - 4' BURY	20	20	20	74	74	20	20	29	56	20	20	40	20	20	20

**DUCTILE IRON PIPE**

SOIL CONDITION & DEPTH OF PIPE	MECHANICAL RESTRAINT SPECIFICATION "L" IN FEET FOR BENDS ON SPECIFIED DIAMETERS														
	12"-4"	12"-6"	12"-8"	12"-10"	12"-12"	10"-4"	10"-6"	10"-8"	10"-10"	8"-4"	8"-6"	8"-8"	6"-4"	6"-6"	4"-4"
CLASS A NATIVE SOIL - 2' BURY	18	18	18	43	67	18	18	27	52	18	18	39	18	20	18
CLASS A NATIVE SOIL - 4' BURY	18	18	18	18	21	18	18	18	18	18	18	18	18	18	18
CLASS B NATIVE SOIL - 2' BURY	18	18	38	100	100	18	18	49	78	18	23	60	18	36	18
CLASS B NATIVE SOIL - 4' BURY	18	18	18	49	49	18	18	19	37	18	18	27	18	18	18

**NOTES:**

- ALL RESTRAINING DEVICES SHALL BE INSTALLED ACCORDING TO THESE REQUIREMENTS OR MANUFACTURER SPECIFICATIONS, WHICHEVER IS MOST CONSERVATIVE.
- FOR TRANSITIONS BETWEEN PVC AND DUCTILE IRON PIPE USE THE PVC TABLE.
- MECHANICAL RESTRAINTS FOR PIPE LARGER THAN 12" IN DIAMETER MUST BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER.
- MECHANICAL RESTRAINTS MAY ONLY BE USED ON PVC OR DUCTILE IRON PIPE.



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**STANDARD DRAWING**

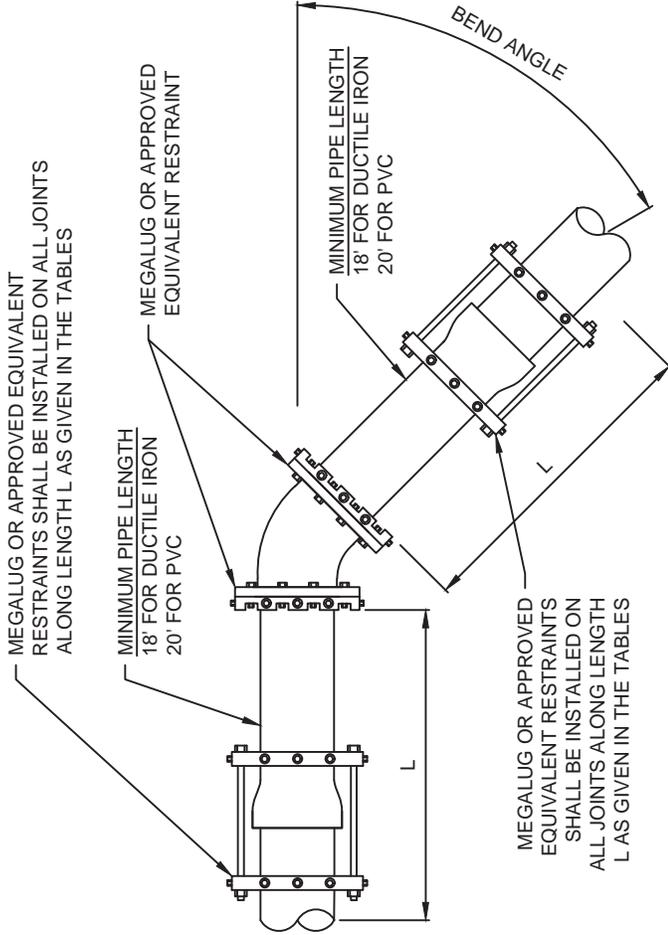
MECHANICAL RESTRAINING DEVICES FOR PRESSURE PIPE TEES

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	6

**CLASS A SOILS**  
 GW: WELL GRADED GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES  
 SW: WELL GRADED SANDS AND GRAVELLY SANDS, LITTLE OR NO FINES  
 GC: CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES  
 SC: CLAYEY SANDS, SAND-CLAY MIXTURES

**CLASS B SOILS**  
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 SP: POORLY GRADED SANDS AND GRAVELLY SANDS, LITTLE OR NO FINES  
 GM: SILTY GRAVELS; GRAVEL-SAND-SILT MIXTURES  
 SM: SILTY SANDS, SAND SILT MIXTURES  
 CL: INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY LAYS, LEAN CLAYS  
 ML: INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS



MEGALUG OR APPROVED EQUIVALENT RESTRAINTS SHALL BE INSTALLED ON ALL JOINTS ALONG LENGTH L AS GIVEN IN THE TABLES

**PVC PIPE**

SOIL CONDITION & DEPTH OF PIPE	11 1/4° BEND				22 1/2° BEND				45° BEND				90° BEND			
	12"	10"	8"	6"	12"	10"	8"	6"	12"	10"	8"	6"	12"	10"	8"	6"
CLASS A NATIVE SOIL - 2' BURY	20	20	20	20	20	20	20	20	22	20	20	20	20	20	20	20
CLASS A NATIVE SOIL - 4' BURY	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
CLASS B NATIVE SOIL - 2' BURY	20	20	20	20	20	20	20	20	29	24	21	20	20	20	20	20
CLASS B NATIVE SOIL - 4' BURY	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20

**DUCTILE IRON PIPE**

SOIL CONDITION & DEPTH OF PIPE	11 1/4° BEND				22 1/2° BEND				45° BEND				90° BEND			
	12"	10"	8"	6"	12"	10"	8"	6"	12"	10"	8"	6"	12"	10"	8"	6"
CLASS A NATIVE SOIL - 2' BURY	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
CLASS A NATIVE SOIL - 4' BURY	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
CLASS B NATIVE SOIL - 2' BURY	18	18	18	18	18	18	18	18	24	21	18	18	18	18	18	18
CLASS B NATIVE SOIL - 4' BURY	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18

- NOTES:
- ALL RESTRAINING DEVICES SHALL BE INSTALLED ACCORDING TO THESE REQUIREMENTS OR MANUFACTURER SPECIFICATIONS, WHICHEVER IS MOST CONSERVATIVE.
  - FOR TRANSITIONS BETWEEN PVC AND DUCTILE IRON PIPE USE THE PVC TABLE.
  - MECHANICAL RESTRAINTS FOR PIPE LARGER THAN 12" IN DIAMETER MUST BE DESIGNED BY A LICENSED ENGINEER.
  - ALL RESTRAINTS ON VERTICAL BENDS MUST BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER.
  - MECHANICAL RESTRAINTS MAY ONLY BE USED ON PVC OR DUCTILE IRON PIPE.



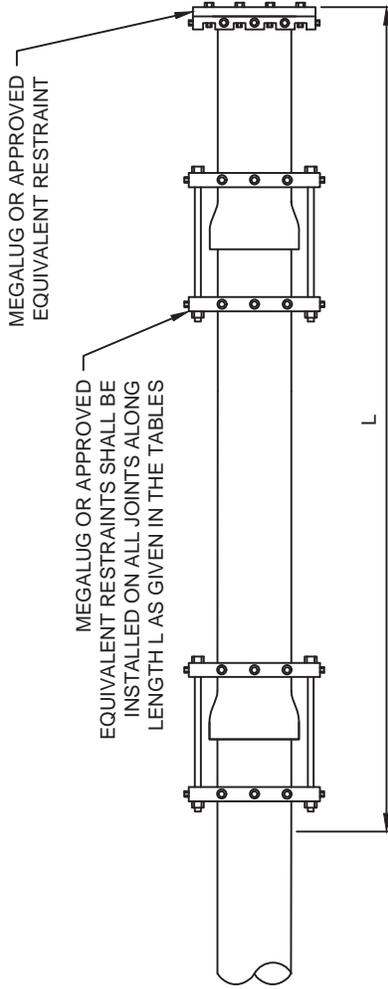
SPANISH FORK CITY  
 40 SOUTH MAIN STREET  
 SPANISH FORK, UT 84660  
 (801) 804-4550

**STANDARD DRAWING**

MECHANICAL RESTRAINING DEVICES FOR PRESSURE PIPE BENDS

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	7



**PVC PIPE**

MECHANICAL RESTRAINT SPECIFICATION "L" IN FEET FOR DEAD ENDS ON SPECIFIED DIAMETERS				
SOIL CONDITION & DEPTH OF PIPE	12"	10"	8"	6"
CLASS A NATIVE SOIL - 2' BURY	180	153	128	98
CLASS A NATIVE SOIL - 4' BURY	113	95	79	60
CLASS B NATIVE SOIL - 2' BURY	231	197	166	127
CLASS B NATIVE SOIL - 4' BURY	123	104	87	66

**DUCTILE IRON PIPE**

MECHANICAL RESTRAINT SPECIFICATION "L" IN FEET FOR DEAD ENDS ON SPECIFIED DIAMETERS				
SOIL CONDITION & DEPTH OF PIPE	12"	10"	8"	6"
CLASS A NATIVE SOIL - 2' BURY	110	94	79	60
CLASS A NATIVE SOIL - 4' BURY	72	51	42	32
CLASS B NATIVE SOIL - 2' BURY	143	123	103	80
CLASS B NATIVE SOIL - 4' BURY	79	67	56	42

- CLASS A SOILS**  
 GW: WELL GRADED GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES  
 SW: WELL GRADED SANDS AND GRAVELLY SANDS, LITTLE OR NO FINES  
 GC: CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES  
 SC: CLAYEY SANDS, SAND-CLAY MIXTURES
- CLASS B SOILS**  
 GP: POORLY GRADED GRAVELS AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES  
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  - FOR DEAD ENDS WITH BOTH PVC AND DUCTILE IRON PIPE USE THE PVC TABLE.
  - MECHANICAL RESTRAINTS FOR PIPE LARGER THAN 12" IN DIAMETER MUST BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER.
  - MECHANICAL RESTRAINTS MAY ONLY BE USED ON PVC OR DUCTILE IRON PIPE.



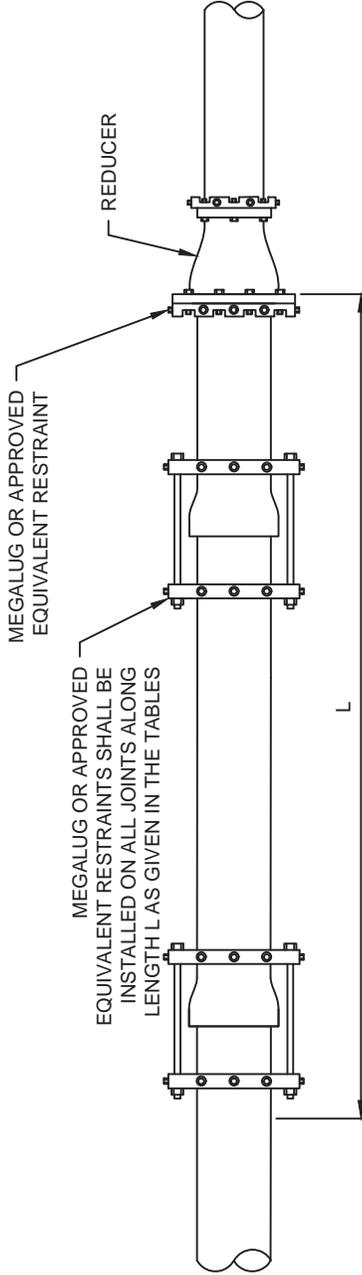
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**STANDARD DRAWING**

MECHANICAL RESTRAINING DEVICES FOR PRESSURE PIPE DEAD ENDS

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	8



PVC PIPE

MECHANICAL RESTRAINT SPECIFICATION "L" IN FEET FOR REDUCERS ON SPECIFIED DIAMETERS										
SOIL CONDITION & DEPTH OF PIPE	12"-4"	12"-6"	12"-8"	12"-10"	10"-4"	10"-6"	10"-8"	8"-4"	8"-6"	6"-4"
CLASS A NATIVE SOIL - 2' BURY	138	130	95	88	124	94	51	92	33	51
CLASS A NATIVE SOIL - 4' BURY	98	82	60	55	77	58	32	57	18	31
CLASS B NATIVE SOIL - 2' BURY	200	168	122	113	160	121	66	119	43	66
CLASS B NATIVE SOIL - 4' BURY	107	89	65	60	85	64	35	62	36	34

DUCTILE IRON PIPE

MECHANICAL RESTRAINT SPECIFICATION "L" IN FEET FOR REDUCERS ON SPECIFIED DIAMETERS										
SOIL CONDITION & DEPTH OF PIPE	12"-4"	12"-6"	12"-8"	12"-10"	10"-4"	10"-6"	10"-8"	8"-4"	8"-6"	6"-4"
CLASS A NATIVE SOIL - 2' BURY	95	80	58	54	76	57	31	57	33	31
CLASS A NATIVE SOIL - 4' BURY	52	44	32	30	41	31	18	30	18	18
CLASS B NATIVE SOIL - 2' BURY	124	104	76	70	100	75	41	74	43	41
CLASS B NATIVE SOIL - 4' BURY	68	57	42	39	54	41	22	40	23	22

CLASS A SOILS

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2. FOR DEAD ENDS WITH BOTH PVC AND DUCTILE IRON PIPE USE THE PVC TABLE.
3. MECHANICAL RESTRAINTS FOR PIPE LARGER THAN 12" IN DIAMETER MUST BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER.
4. MECHANICAL RESTRAINTS MAY ONLY BE USED ON PVC OR DUCTILE IRON PIPE.



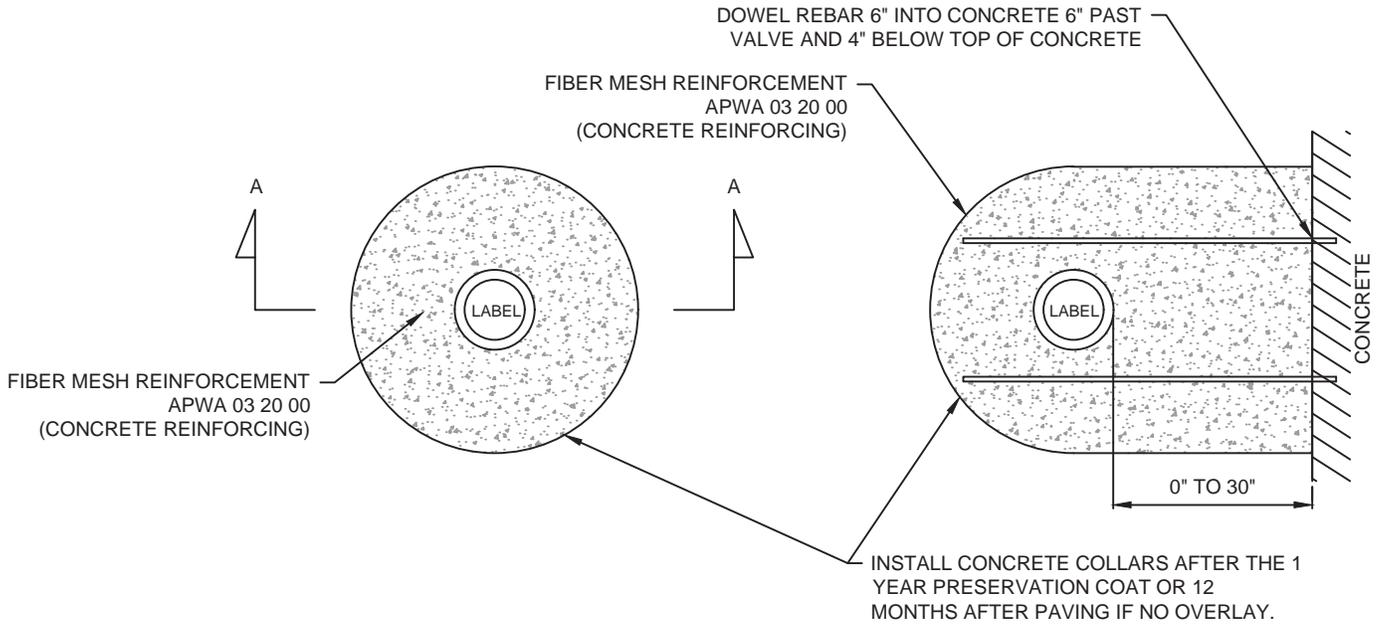
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STANDARD DRAWING

MECHANICAL RESTRAINING DEVICES FOR PRESSURE PIPE REDUCERS

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

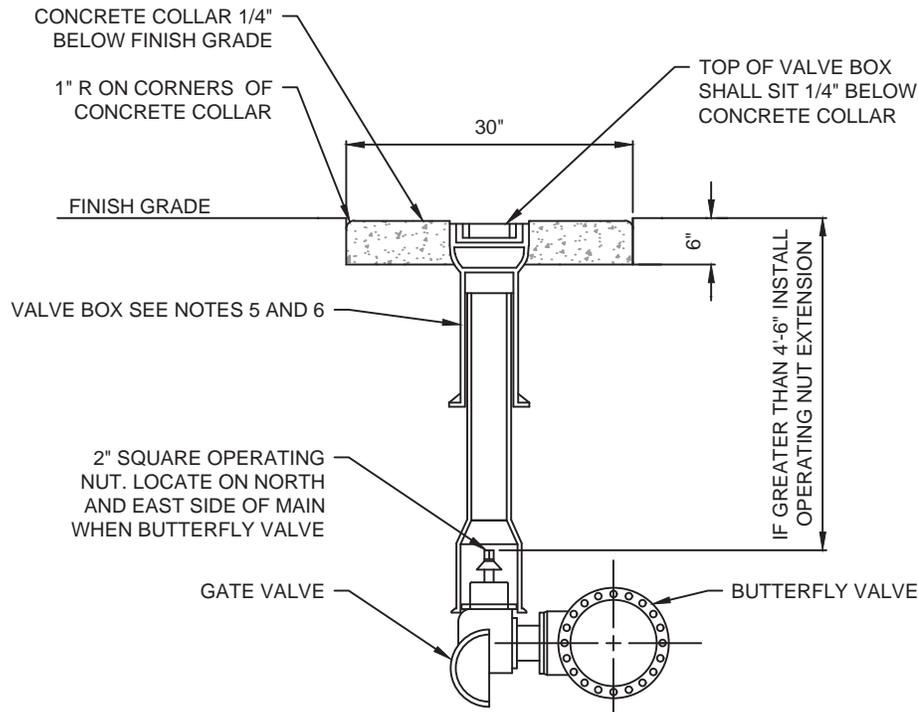
SCALE:	NONE
STANDARD	9



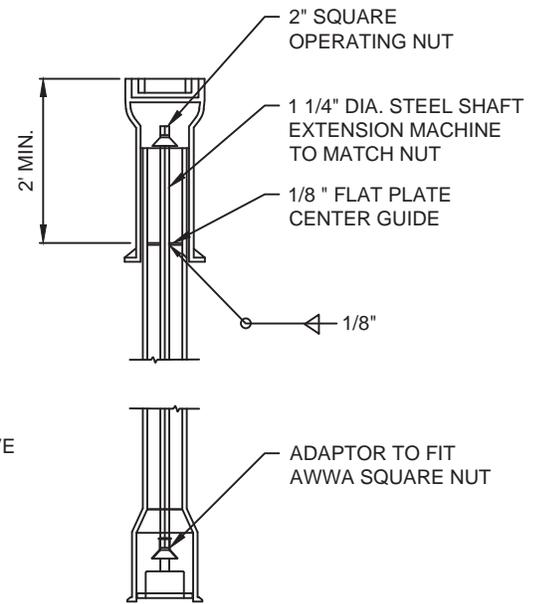
INSTALL CONCRETE COLLARS AFTER THE 1 YEAR PRESERVATION COAT OR 12 MONTHS AFTER PAVING IF NO OVERLAY.

VALVE BOX WITHIN 30" OF CONCRETE

PLAN



SECTION A--A



OPERATING NUT EXTENSION

**NOTES:**

1. MECHANICAL RESTRAINTS SHALL BE INSTALLED ON BOTH SIDES OF EACH VALVE.
2. MECHANICALLY RESTRAIN ALL JOINTS WITHIN 10' OF VALVE. EXCEPTION: IF VALVE IS TO BE INSTALLED INTO AN EXISTING MAIN, MECHANICALLY RESTRAIN JOINTS WITHIN 5' OF VALVE.
3. VALVE RINGS AND CONCRETE COLLARS SHALL BE PROTECTED BY A COVERING DURING A SEAL COAT.
4. LABEL ON LID SHALL READ "WATER" FOR DRINKING WATER MAIN VALVES, "FIRE" FOR FIRE LINE VALVES, "IRRIGATION" FOR PRESSURIZED IRRIGATION MAIN VALVES AND "DRAIN" FOR PRESSURIZED IRRIGATION DRAIN VALVES.
5. VALVE BOXES SHALL BE 2 PIECE, CAST IRON, SCREW ADJUSTABLE SLEEVE, 5 1/4" SHAFT WITH A DROP LID.
6. VALVE BOXES ON MAINS TOO SHALLOW FOR 2 PIECE BOXES SHALL HAVE A 10" SLIPTOP, D&L M-8056 OR APPROVED EQUIVALENT. THIS SHALL BE USED FOR PRESSURIZED IRRIGATION MAINS WITH 2' TO 4' OF COVER. VALVE BOX RISERS SHALL BE USED TO BRING TO FINAL GRADE.
7. PRESSURE ZONE VALVES SHALL HAVE A TRIANGLE VALVE BOX LID.



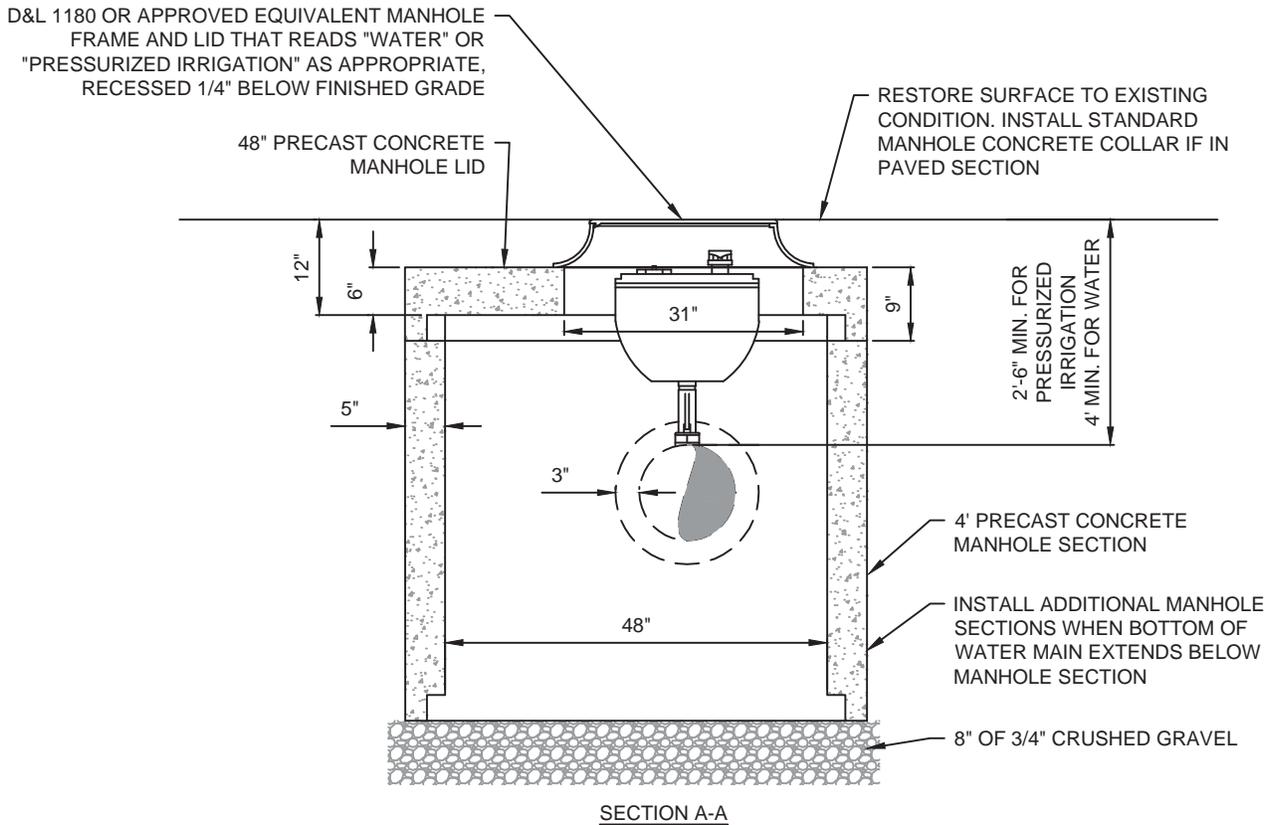
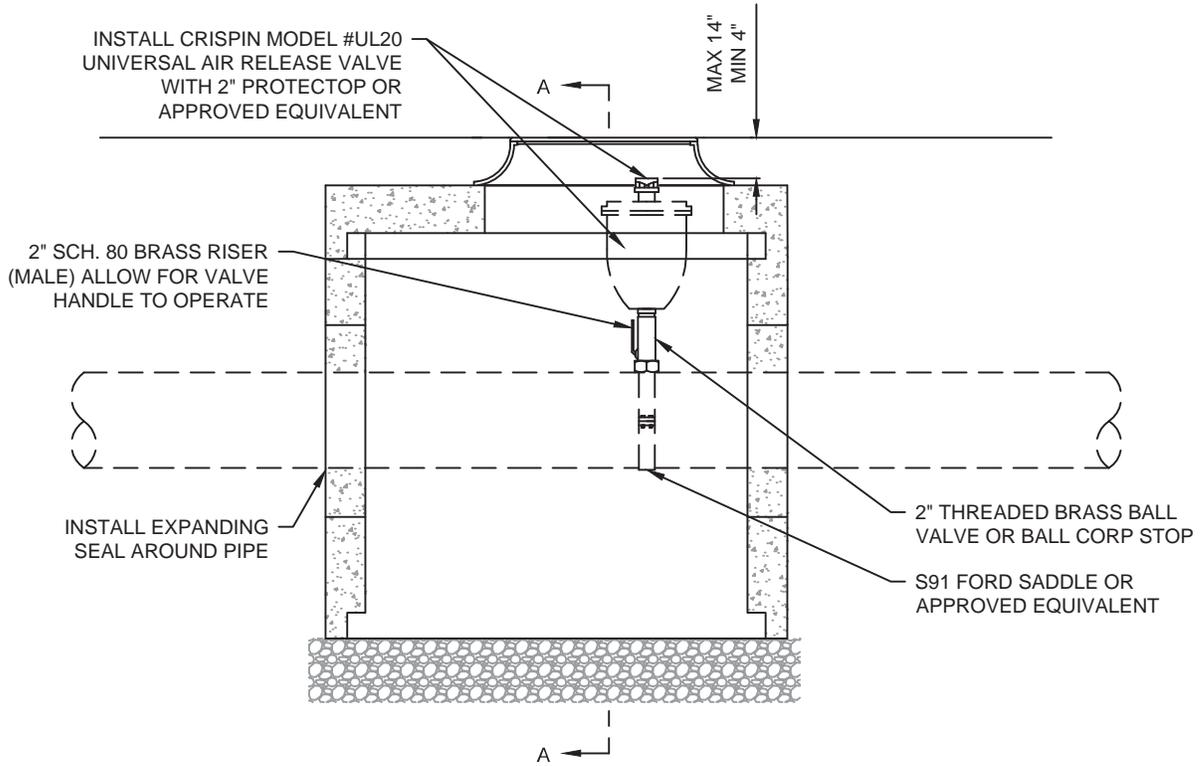
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**STANDARD DRAWING**

PRESSURE PIPE MAIN LINE VALVE

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE: NONE  
STANDARD 10



NOTES:

1. UNDER WET CONDITIONS INSTALL A DRAIN ABOVE THE WATER TABLE AND BELOW THE VALVE.
2. IF POSSIBLE MOVE VALVE OUT OF LINE OF ACCESS.
3. ALL CULINARY AIR RELEASE SHALL BE ACCORDING TO APWA PLAN NO. 575 AND APPROVED BY THE CITY ENGINEER.



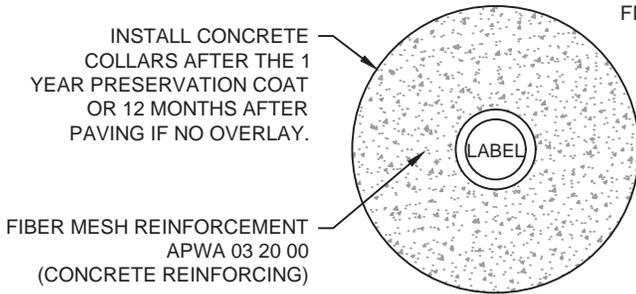
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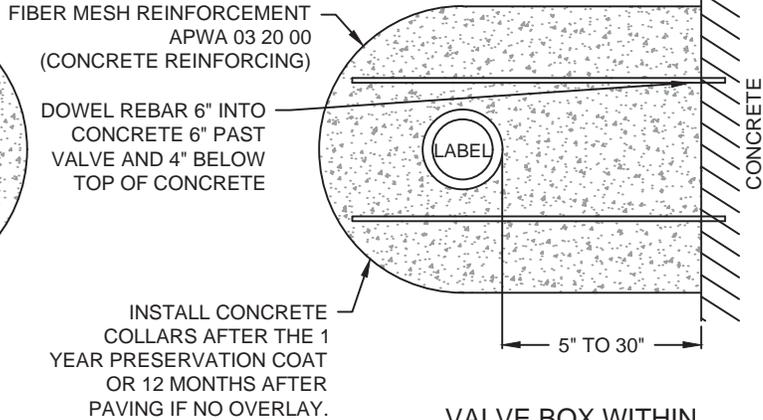
PRESSURIZED IRRIGATION COMBINATION AIR VACUUM & RELEASE VALVE

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

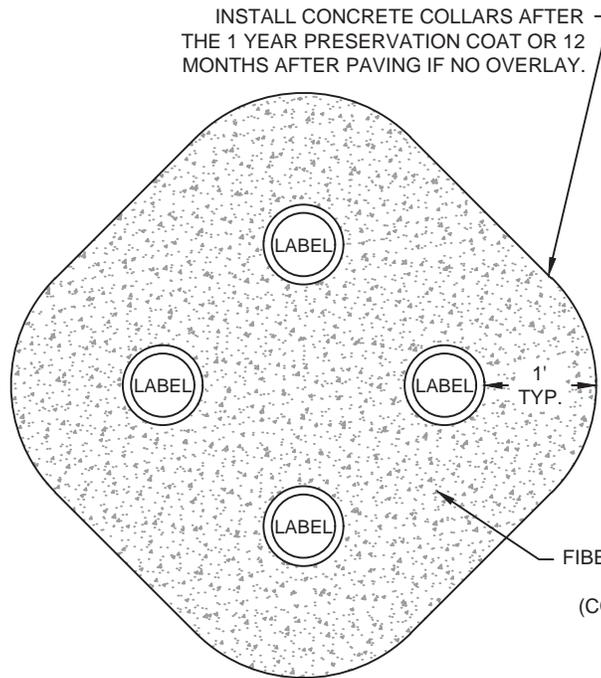
SCALE:  
NONE  
STANDARD  
11



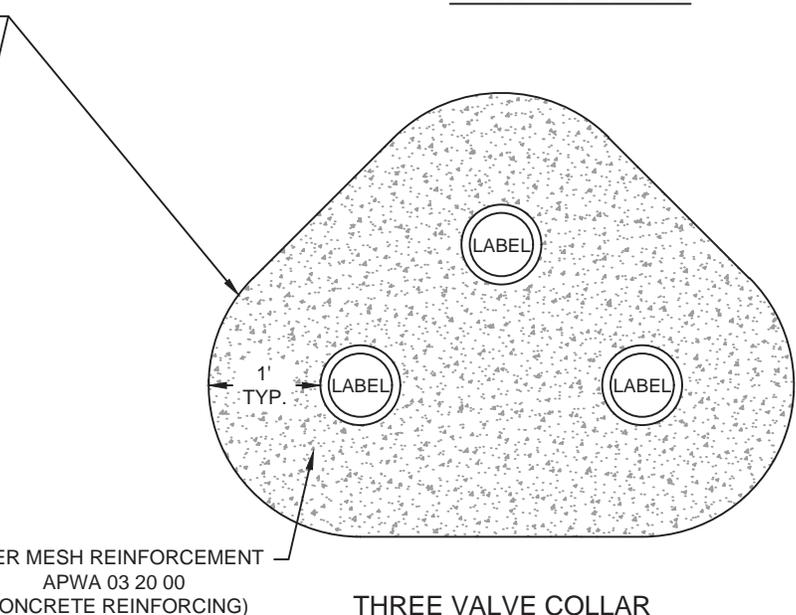
**SINGLE VALVE COLLAR**



**VALVE BOX WITHIN 30" OF CONCRETE**



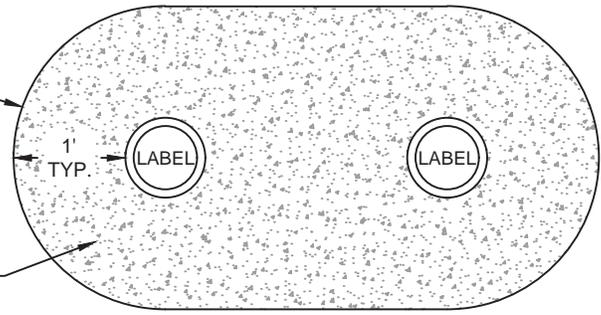
**FOUR VALVE COLLAR**



**THREE VALVE COLLAR**

INSTALL CONCRETE COLLARS AFTER THE 1 YEAR PRESERVATION COAT OR 12 MONTHS AFTER PAVING IF NO OVERLAY.

FIBER MESH REINFORCEMENT APWA 03 20 00 (CONCRETE REINFORCING)



**TWO VALVE COLLAR**

**NOTES:**

1. VALVE RINGS AND CONCRETE COLLARS SHALL BE PROTECTED BY A COVERING DURING A SEAL COAT.
2. LABEL ON LID SHALL READ "WATER" FOR DRINKING WATER MAIN VALVES, "FIRE" FOR FIRE LINE VALVES, "IRRIGATION" FOR PRESSURIZED IRRIGATION MAIN VALVES AND "DRAIN" FOR PRESSURIZED IRRIGATION DRAIN VALVES.
3. VALVE BOXES SHALL BE 2 PIECE, CAST IRON, SCREW ADJUSTABLE SLEEVE, 5 1/4" SHAFT WITH A DROP LID.
4. VALVE BOXES ON MAINS TOO SHALLOW FOR 2 PIECE BOXES SHALL HAVE A 10" SLIPTOP, D&L M-8056 OR APPROVED EQUIVALENT. THIS SHALL BE USED FOR PRESSURIZED IRRIGATION MAINS WITH 2' TO 4' OF COVER. VALVE BOX RISERS SHALL BE USED TO BRING TO FINAL GRADE.
5. PRESSURE ZONE AND FIRE HYDRANT VALVES SHALL HAVE A TRIANGLE VALVE BOX LID.



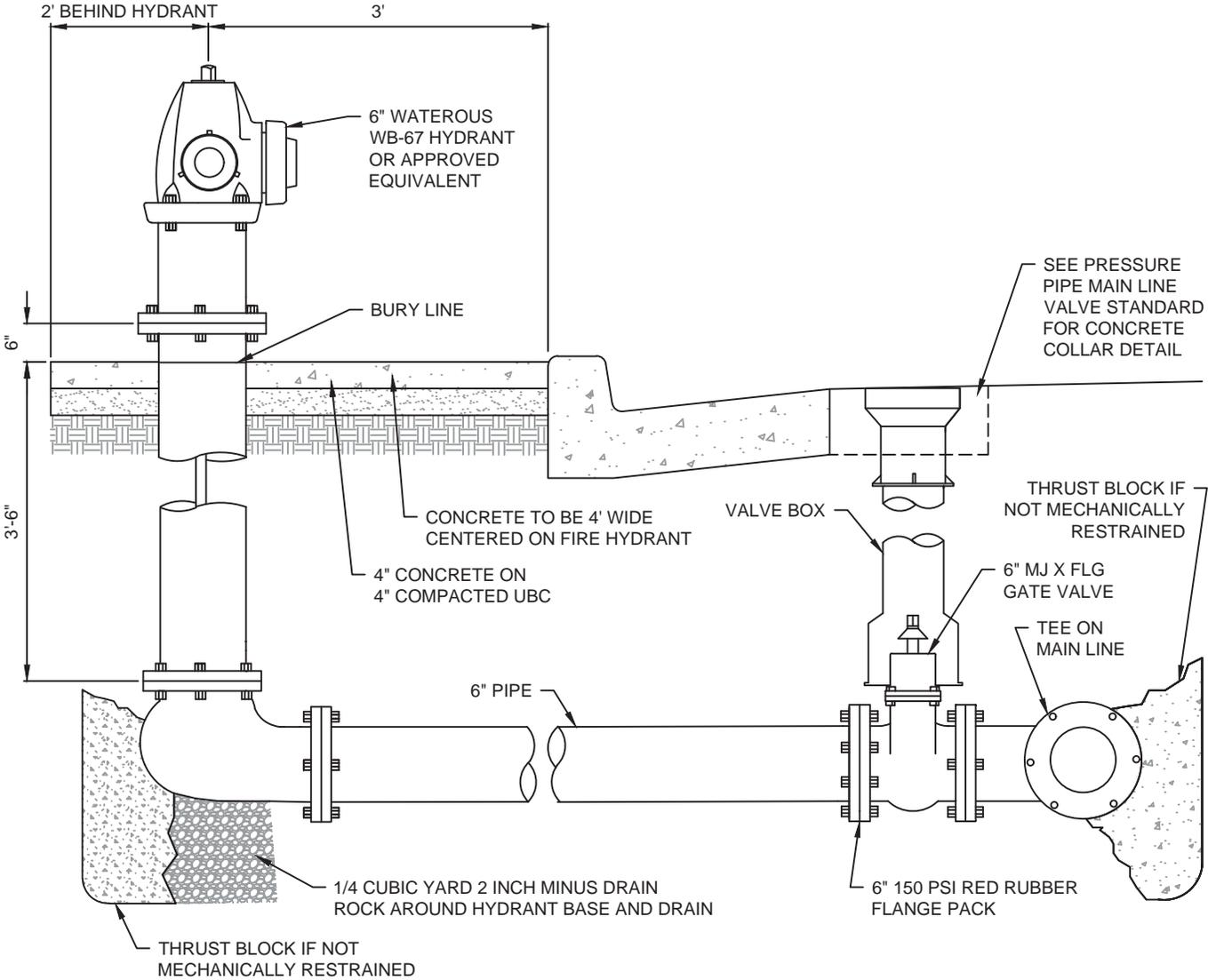
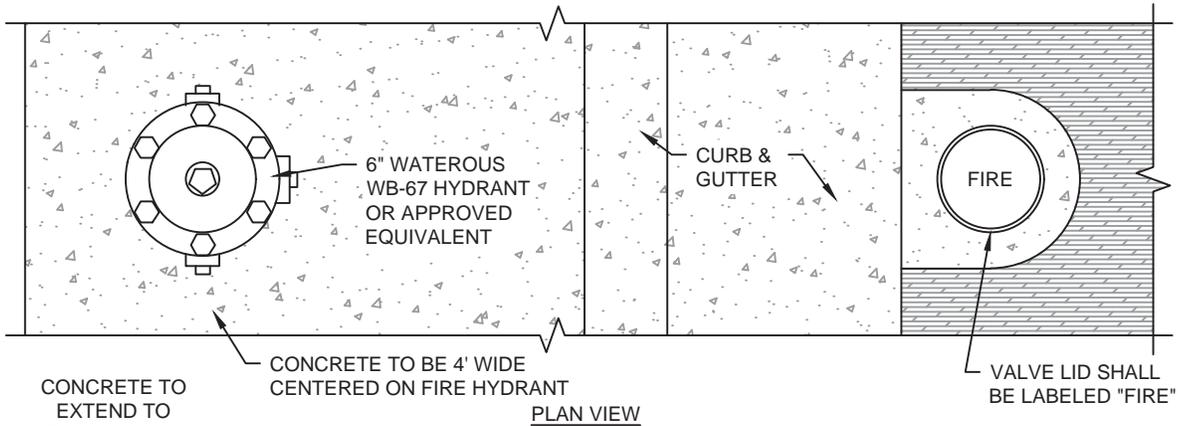
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40 SOUTH MAIN STREET  
SPANISH FORK, UT 84660  
(801) 804-4550

**STANDARD DRAWING**

VALVE COLLARS

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	12



NOTES:

1. FIRE HYDRANTS SHALL BE PAINTED RED.
2. ALL BOLTS SHALL BE FREE FROM CONCRETE AND FULLY ACCESSIBLE.
3. IF THERE IS NOT A PLANTER STRIP, THE CENTER OF THE HYDRANT SHALL BE LOCATED 24" BEHIND THE SIDEWALK WITH A 4' BY 4' CONCRETE PAD CENTERED ON THE HYDRANT.
4. THERE SHALL BE NO OBSTACLES INCLUDING BUT NOT LIMITED TO POLES, UTILITY BOXES, TREES, FENCES, OR WALLS WITHIN 3' OF HYDRANT.
5. RISERS MAY ONLY BE USED WHEN AUTHORIZED BY THE CITY ENGINEER OR HIS/HER DESIGNEE.



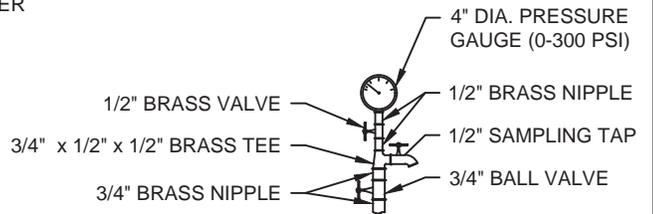
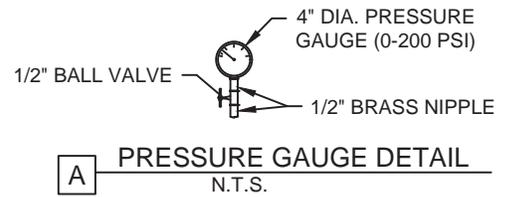
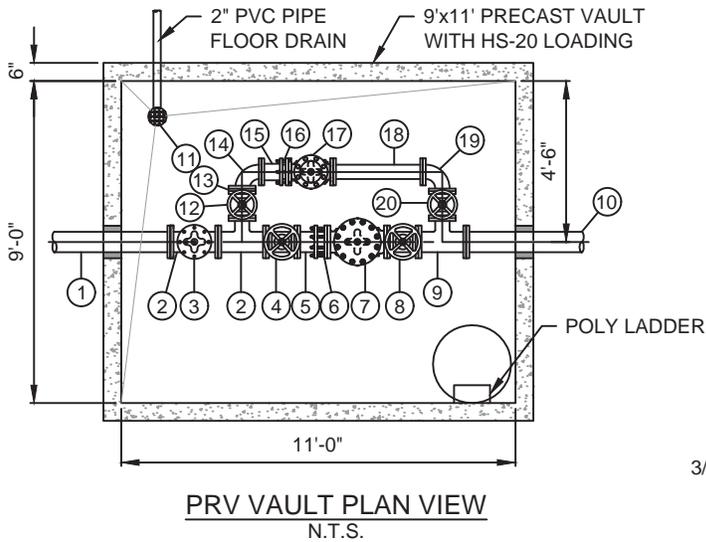
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STANDARD DRAWING

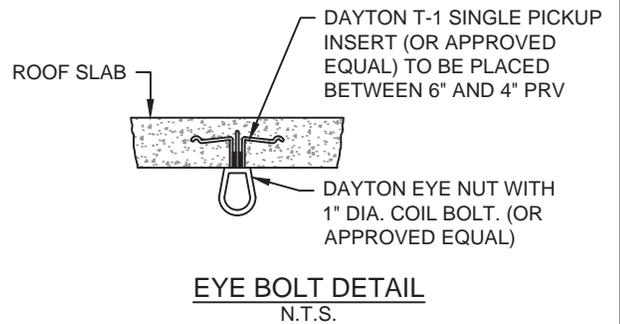
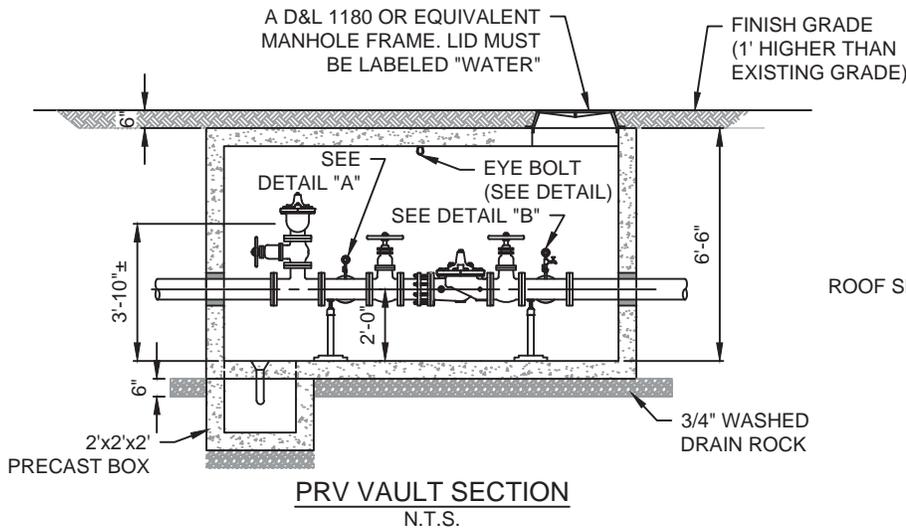
FIRE HYDRANT

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	13



NOTE: ALL PIPING AND VALVES FOR  
DETAIL B SHALL BE RATED FOR 300 PSI.



**VALVE & FITTING SCHEDULE**

NO.	DESCRIPTION	SIZE	JOINT
1	DIP NIPPLE	6"	FLG x PE (125#)
2	REDUCING TEE	6" x 4"	FLG (125#)
3	PRESSURE RELIEF VALVE (CLA-VAL 50-01)	4"	FLG (ANSI 150#)
4	GATE VALVE	6"	FLG (150#)
5	DIP NIPPLE	6"	FLG x PE (125#)
6	FLANGE COUPLING ADAPTER	6"	FLG (250#)
7	PRESSURE REDUCING VALVE (CLA-VAL 90-01)	6"	FLG (ANSI 300#)
8	GATE VALVE (RESILIENT SEAT)	6"	FLG (250#)
9	REDUCING TEE	6" x 4"	FLG (250#)
10	DIP NIPPLE	6"	FLG x PE (250#)
11	FLOOR DRAIN (ZURN Z-960)	6" x 2"	MJ
12	GATE VALVE (RESILIENT SEAT)	4"	FLG (150#)
13	SPACER - LENGTH AS REQUIRED	4"	N/A
14	90° ELBOW	4"	FLG (125#)
15	DIP NIPPLE	4"	FLG x PE (125#)
16	FLANGE COUPLING ADAPTER	4"	FLG (250#)
17	PRESSURE REDUCING VALVE (CLA-VAL 690-01)	4"	FLG (ANSI 300#)
18	SPOOL	4"	PE x FLG (250#)
19	90° ELBOW	4"	FLG (250#)
20	GATE VALVE (RESILIENT SEAT)	4"	FLG (250#)
21	GATE VALVE (RESILIENT SEAT)	4"	FLG (150#)
22	PIPE SUPPORT (STANDON MODEL S92 - 4 REQUIRED)		SIZE FOR PIPE

**NOTES:**

1. RESTRAIN ALL JOINTS.
2. SLOPE FLOOR TO DRAIN
3. CLA-VALS TO HAVE SS TRIM
4. HOLES FOR ELECTRICAL TO BE DETERMINED ON SITE PER SPANISH FORK CITY.



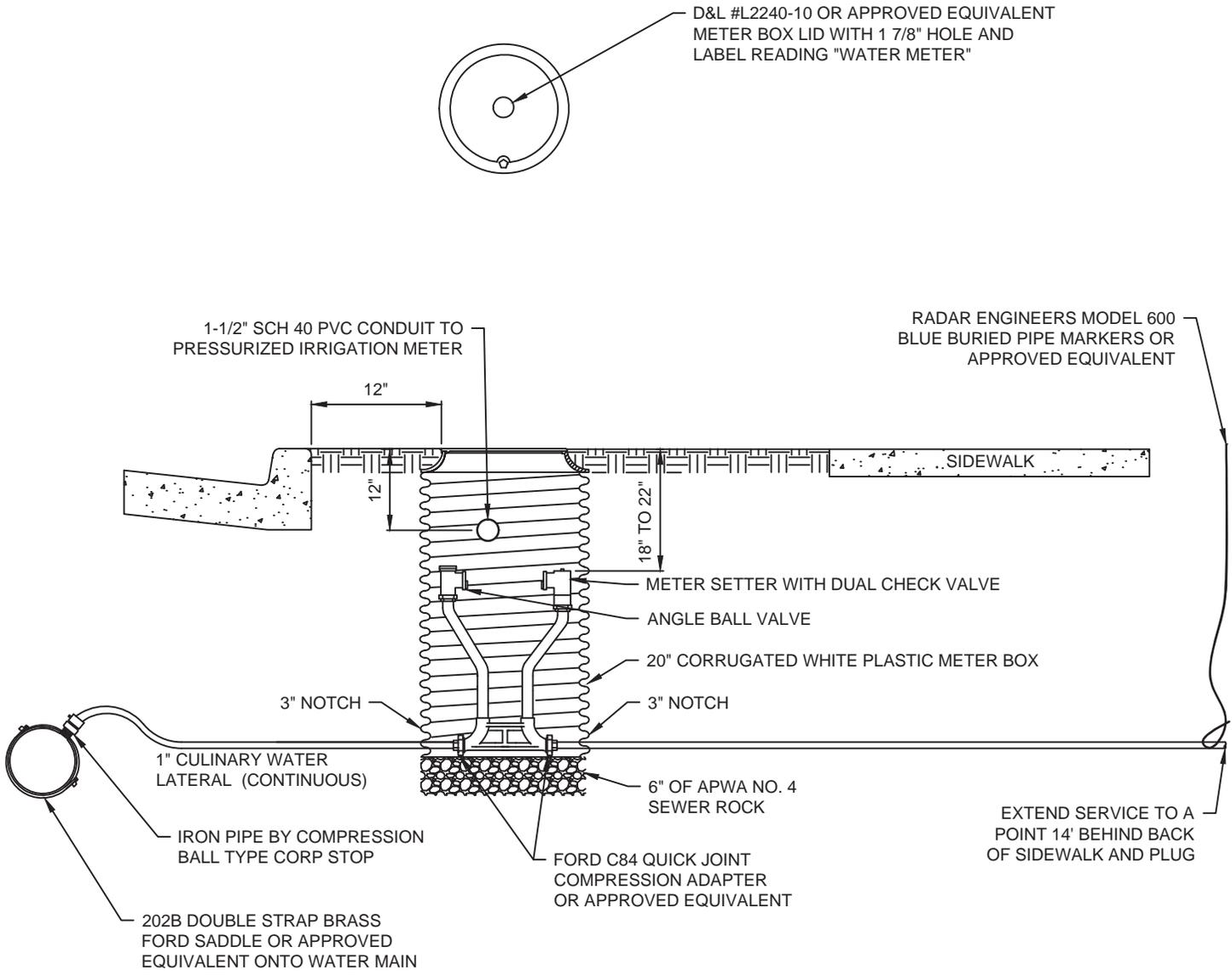
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**STANDARD DRAWING**

PRV DETAIL

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
14



**NOTES:**

1. CULINARY WATER LATERAL SHALL BE 1" CONTINUOUS TYPE K COPPER OR SDR-9 CTS 200 PSI BLUE POLYPROPYLENE PIPE.
2. STAINLESS STEEL LINER INSERTS SHALL BE REQUIRED INSIDE POLYPROPYLENE PIPE AT COMPRESSION FITTINGS.
3. ALL FITTINGS SHALL BE COMPATIBLE WITH SERVICE SIZE.
4. FOR PLANTER STRIPS LESS THAN 6' WIDE PLACE METER BOX IN CENTER OF PLANTER. WHERE THERE IS NO PLANTER, PLACE CENTER OF METER BOX 20" BEHIND SIDEWALK.
5. EXTEND 18 GAUGE WIRE 3' INTO METER BOX AND TAPE ENDS. BURY CONDUIT 12" BELOW GRADE.
6. WATER METERS LOCATED WITHIN THE DRIVEWAY SHALL HAVE A 48" PRECAST MANHOLE SECTION WITH D&L 1180 OR APPROVED EQUIVALENT MANHOLE FRAME AND LID THAT READS "WATER"



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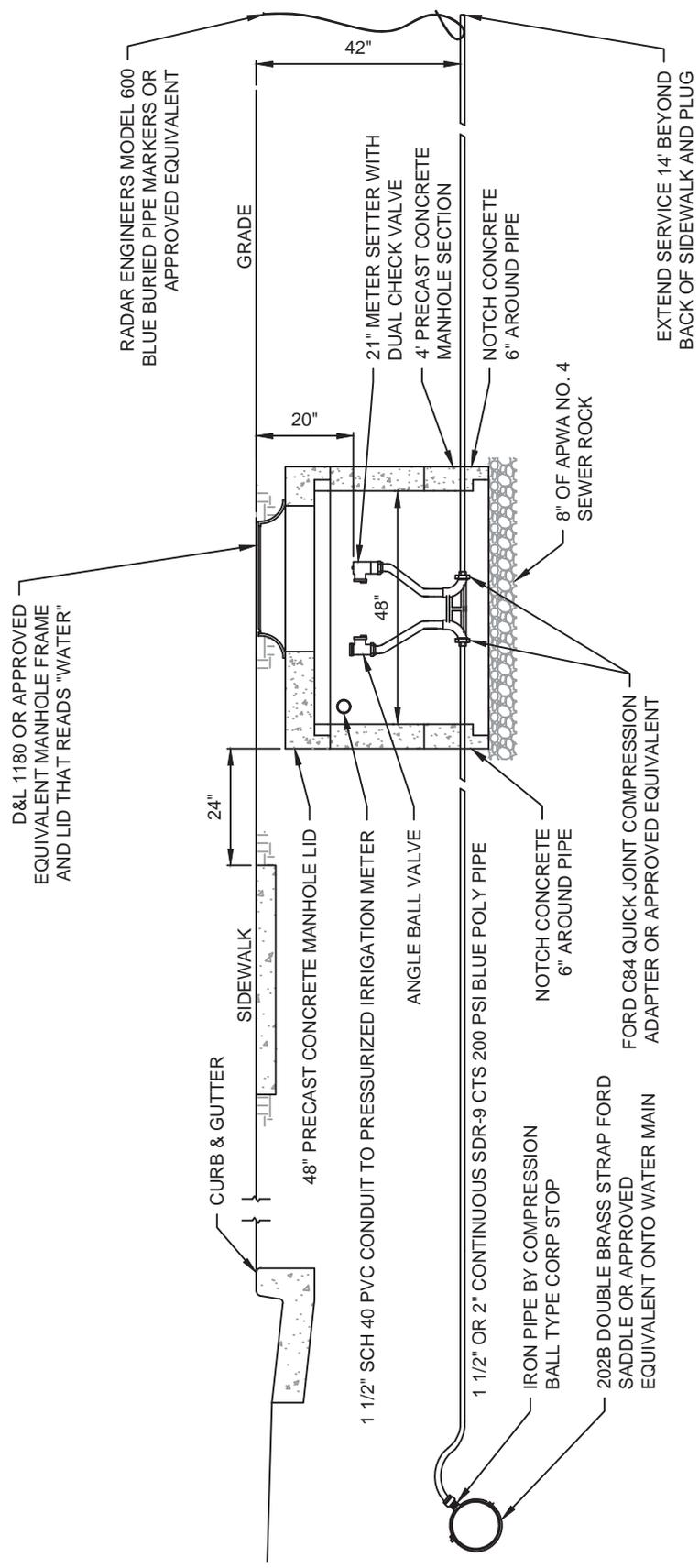
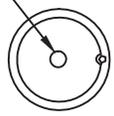
**STANDARD DRAWING**

1" WATER SERVICE

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	15

METER BOX LID WITH 1 7/8" HOLE AND LABEL READING WATER METER



- NOTES:
1. BURY CONDUIT 18" BELOW GRADE.
  2. CONTRACTOR SHALL INSTALL 1 1/2" AND 2" METERS (METER TO BE PROVIDED BY SPANISH FORK CITY).
  3. TYPE OF METER TO BE USED SHALL BE DETERMINED BY THE CITY.



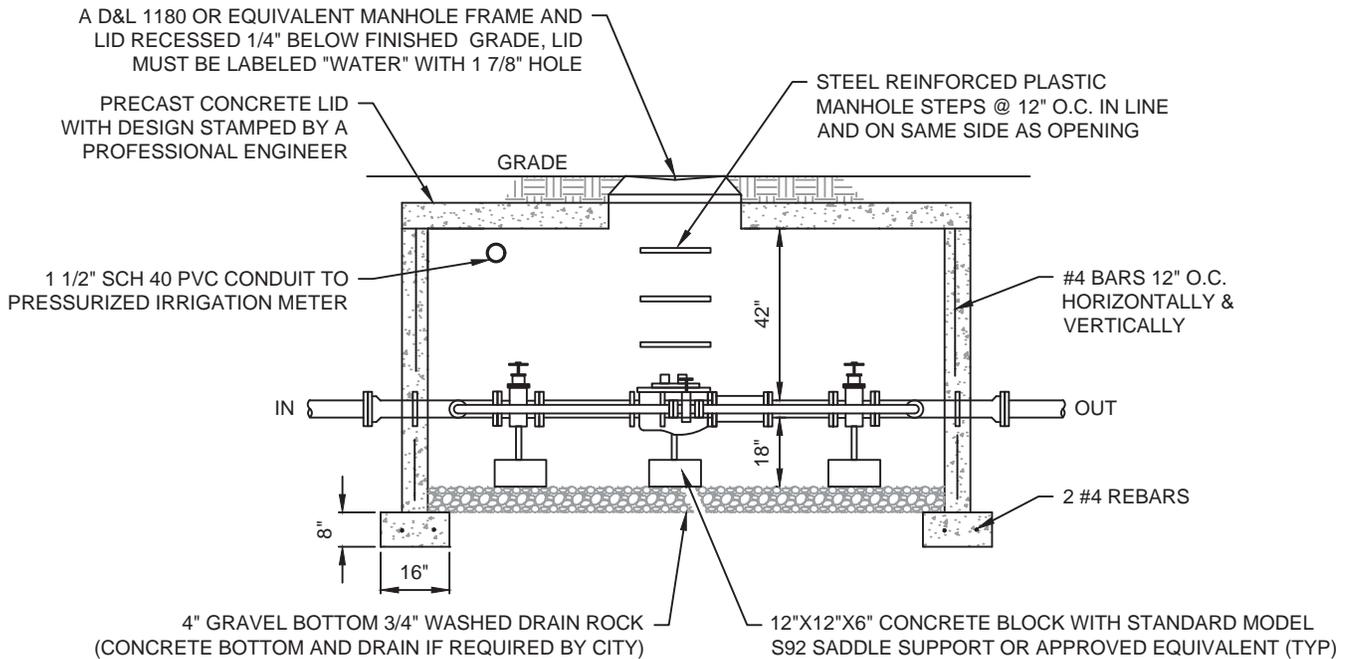
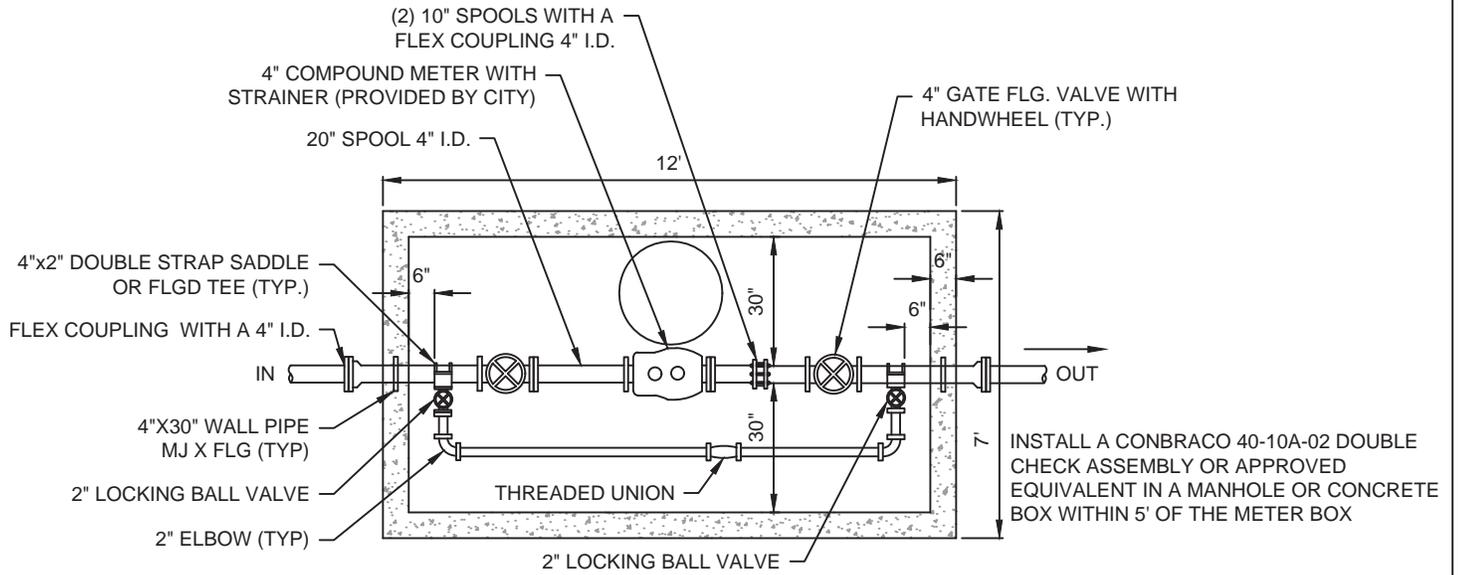
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STANDARD DRAWING

2" WATER SERVICE

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	16



**NOTES:**

1. ALL 4" PIPE AND FITTINGS SHALL BE DUCTILE IRON.
2. ALL 2" PIPE AND FITTINGS SHALL BE BRASS OR COPPER WITH A STAINLESS STEEL HANDLE.
3. ALL REBAR SHALL HAVE 30" OVERLAPS.
4. PORTLAND CEMENT CONCRETE MAY ONLY BE POURED ON UNDISTURBED SOIL, 3/4" CRUSHED GRAVEL, OR COMPACTED UNTREATED ROAD BASE.
5. LARGER WATER SERVICES SHALL BE INDIVIDUALLY DESIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER.
6. METER BOXES SHALL BE PLACED IN LANDSCAPE AREAS.
7. BURY CONDUIT 18" BELOW GRADE.



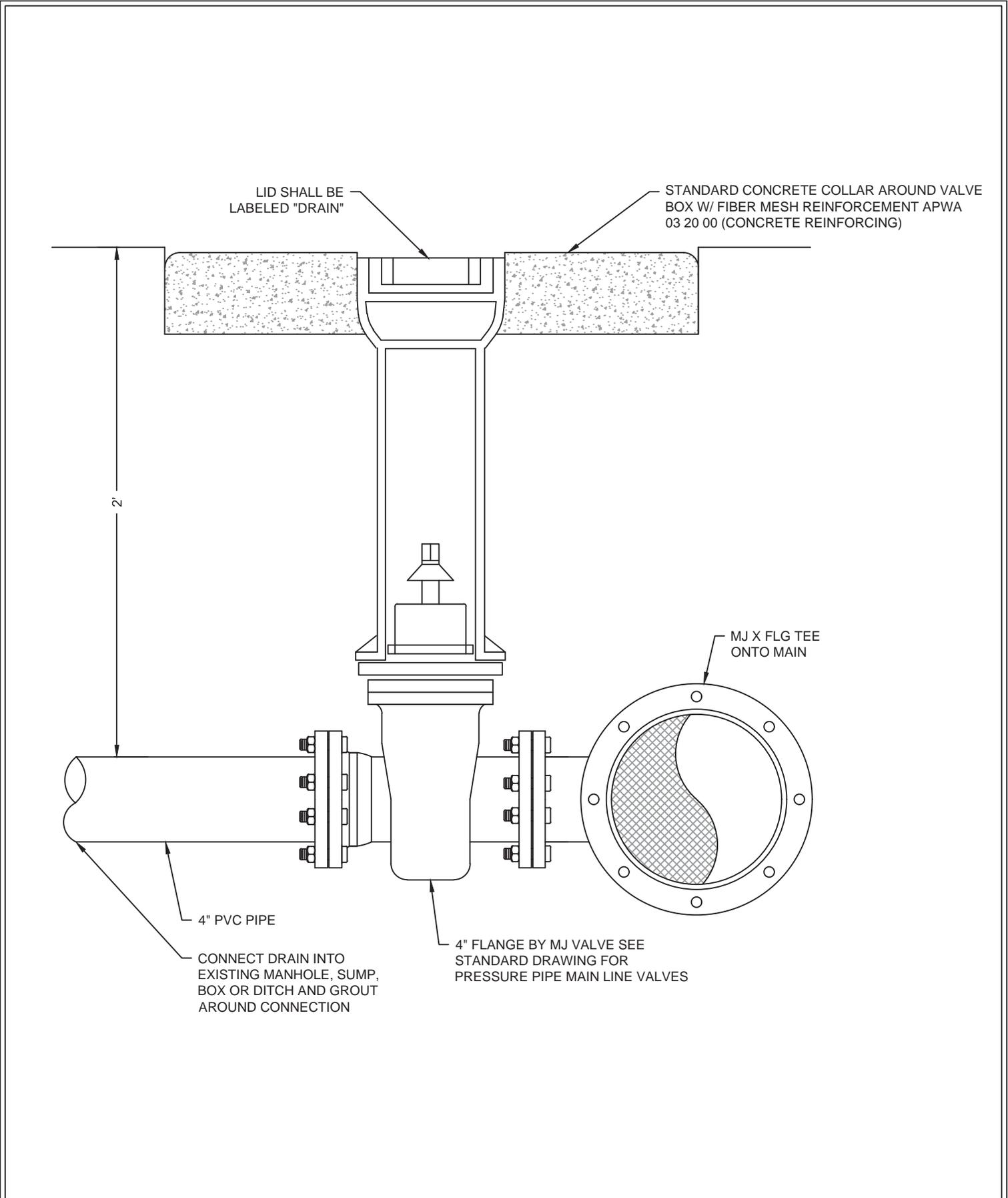
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**STANDARD DRAWING**

4" WATER SERVICE

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	17



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STANDARD DRAWING

PRESSURIZED IRRIGATION DRAIN

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

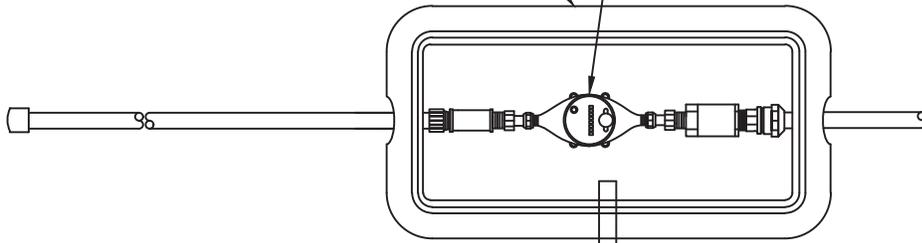
SCALE:	NONE
STANDARD	18

CARSON-BROOKS 1220-12 IRRIGATION BOX WITH CARSON BROOKS 1220-4 BOLT-DOWN COVER, OR APPROVED EQUIVALENT, WITH ONE 1220-6X EXTENSIONS.

METER SHALL BE PROVIDED BY THE CITY AND INSTALLED BY THE CONTRACTOR

IRRIGATION

LID  
PLAN VIEW



1-1/2" SCH 40 PVC CONDUIT TO WATER METER

GRADE

PLUG 12" OUT OF METER BOX

1" SCH40 PVC MALE ADAPTER

18" BOX

MUELLER 1" H-10284 STOP AND WASTE OR APPROVED EQUIVALENT

1" X CLOSE BRASS NIPPLE

1" SCH 40 PVC

1"X1"X1/2" THD BRASS TEE WITH A KING MODEL 24181 1/2" MALE PIPE THREAD DRAIN AT A 30° ANGLE FROM STRAIGHT DOWN OR APPROVED EQUIVALENT

FORD 1" C84-44 MALE ADAPTER OR APPROVED EQUIVALENT

6" OF APWA NO. 4 SEWER ROCK

FORD C38-24-2.5 B 1" X 2 1/2" STRAIGHT METER COUPLING BY MALE IRON PIPE THREAD OR APPROVED EQUIVALENT

2" S/40 PVC SLIP CAP

6"

SIDEWALK

6"

1' MIN.

GROUND LEVEL

1'

ROAD SURFACE

EXTEND PRESSURIZED IRRIGATION SERVICE 1' BEHIND SIDEWALK

A 4" CLASS 200 PVC SOLVENT WELD PIPE OR APPROVED EQUIVALENT EXTEND 1' BEYOND EACH SIDE OF SIDEWALK

18" TO BOTTOM OF BOX

CONNECT 202B BRASS DOUBLE STRAP FORD SADDLE OR APPROVED EQUIVALENT ONTO PRESSURIZED IRRIGATION MAIN

2' MIN.

NOTES:

- STANDARD SERVICE SIZE SHALL BE 1" CONTINUOUS SDR-9 CTS 200 PSI PURPLE POLYPROPYLENE PIPE.
- STAINLESS STEEL LINER INSERTS WILL BE REQUIRED INSIDE OF TUBING AT COMPRESSION FITTINGS.
- ALL FITTINGS SHALL BE COMPATIBLE WITH SERVICE SIZE.
- SERVICE LATERAL SHALL SLOPE TOWARDS PRESSURIZED IRRIGATION MAIN.
- SPRINKLER SLEEVE SHALL NOT BE IN LINE WITH ANY UTILITY BOXES.
- 1-1/2" POLY CONDUIT SHALL BE BURIED 12" BELOW GRADE.
- FOR TRAFFIC AREAS, USE A CDR SYSTEMS CORP 16X21X18 FIBERGLASS REINFORCED POLYMER CONCRETE BOX WITH "IRRIGATION" MARKED ON THE LID.



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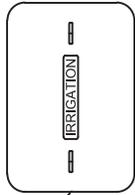
STANDARD DRAWING

1" PRESSURIZED IRRIGATION SERVICE BOX AND LATERAL

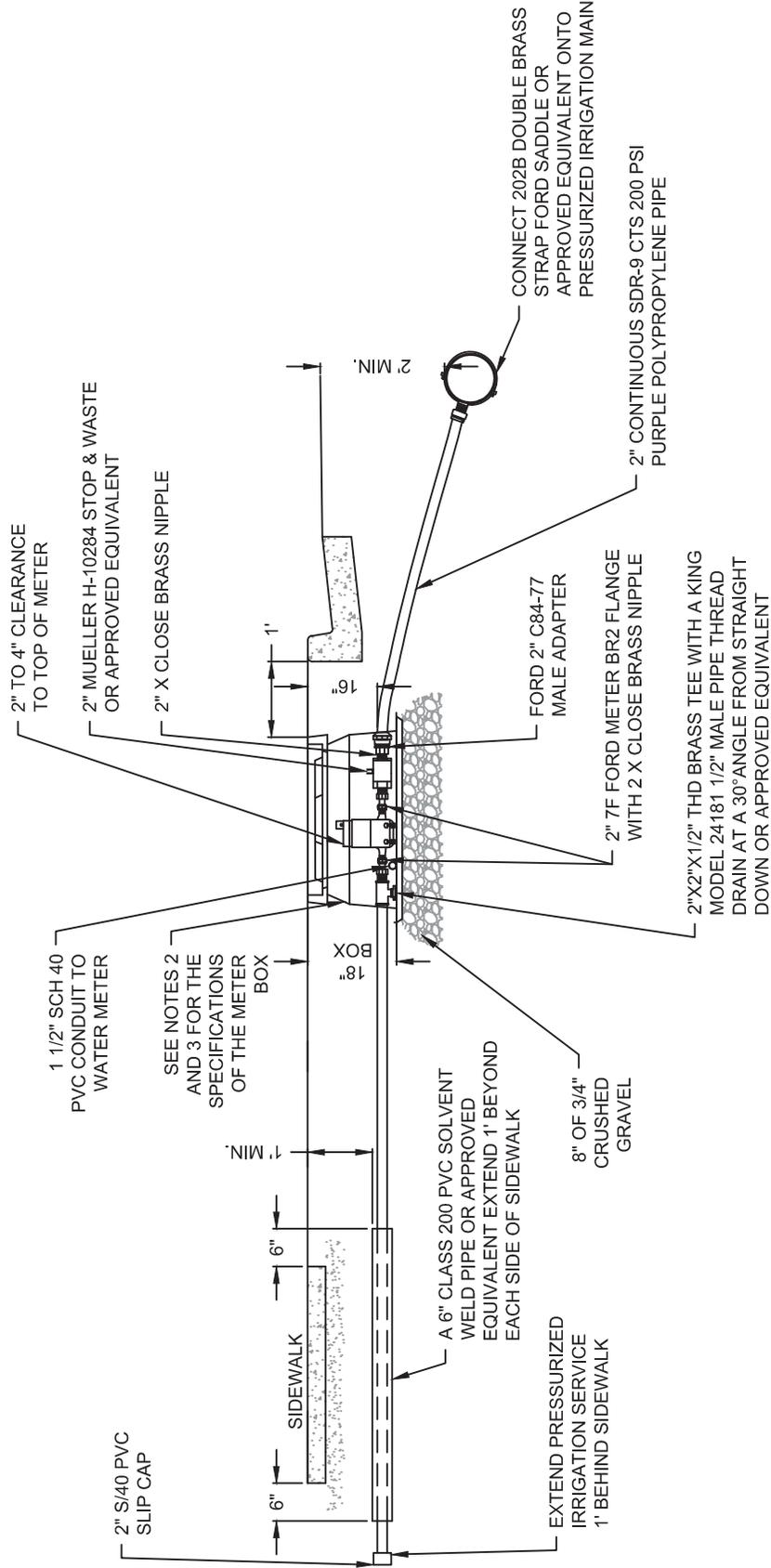
DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
19

SEE NOTES 2 FOR THE SPECIFICATIONS OF THE LID



LID  
PLAN VIEW



**NOTES:**

1. ADJUST ALL APPURTENANCES TO AN EQUIVALENT 1 1/2" SIZE FOR 1 1/2" SERVICES.
2. METER BOX SHALL BE A CARSON BROOKS 24X36 1730-18 BOX OR APPROVED EQUIVALENT. WITH A 1730-3B LID OR APPROVED EQUIVALENT.
3. STAINLESS STEEL LINER INSERTS SHALL BE REQUIRED INSIDE POLYPROPYLENE PIPE AT COMPRESSION FITTINGS.
4. 1-1/2" POLY CONDUIT TO WATER METER SHALL BE BURIED 12" BELOW GRADE.
5. SPRINKLER SLEEVE SHALL NOT BE IN LINE WITH ANY UTILITY BOXES.
6. ANY INFIELD RELOCATION OF PI METER BOX IS TO BE APPROVED BY THE CITY ENGINEER.



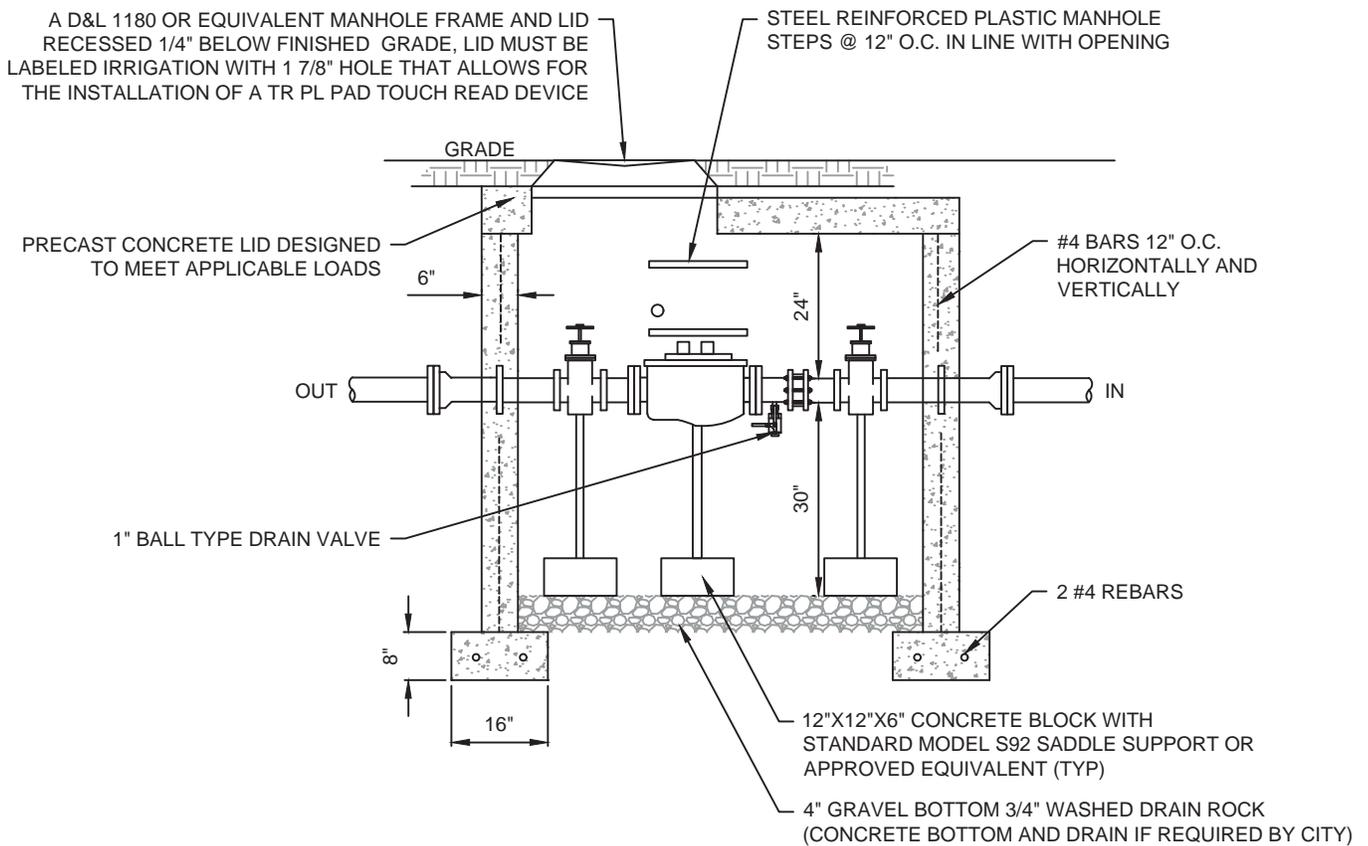
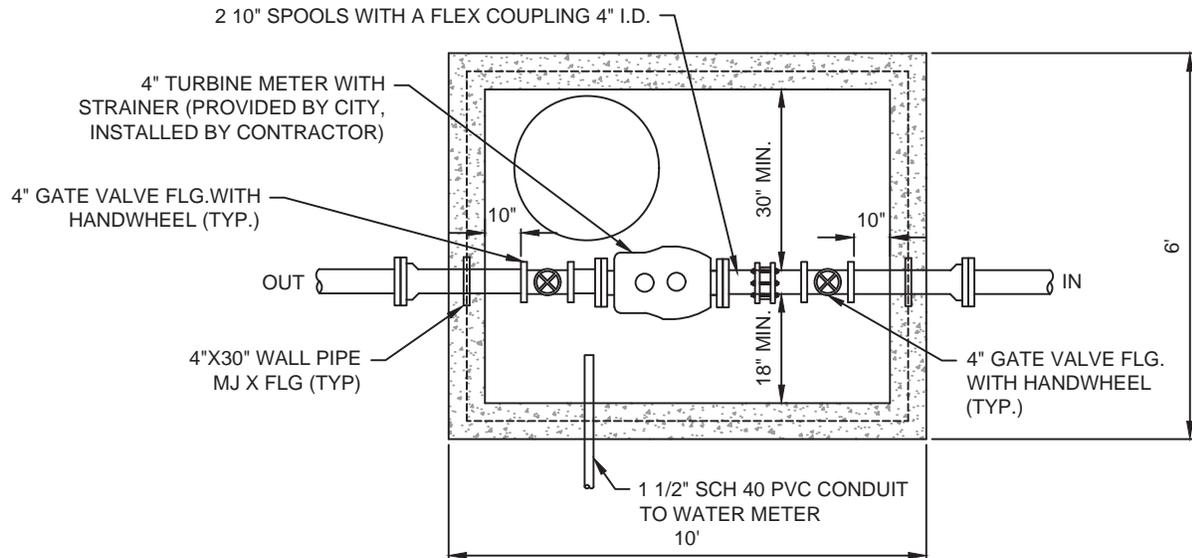
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STANDARD DRAWING

2" PRESSURIZED IRRIGATION SERVICE

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	20



NOTES:

1. ALL 4" PIPE AND FITTINGS SHALL BE DUCTILE IRON.
2. ALL 1" PIPE AND FITTINGS SHALL BE BRASS OR COPPER WITH STAINLESS STEEL HANDLE.
3. ALL REBAR SHALL HAVE 30" OVERLAPS.
4. PORTLAND CEMENT CONCRETE MAY ONLY BE POURED ON UNDISTURBED SOIL, 3/4" CRUSHED GRAVEL, OR COMPACTED UNTREATED BASE COURSE.
5. METER BOXES SHALL BE PLACED IN LANDSCAPE AREAS.



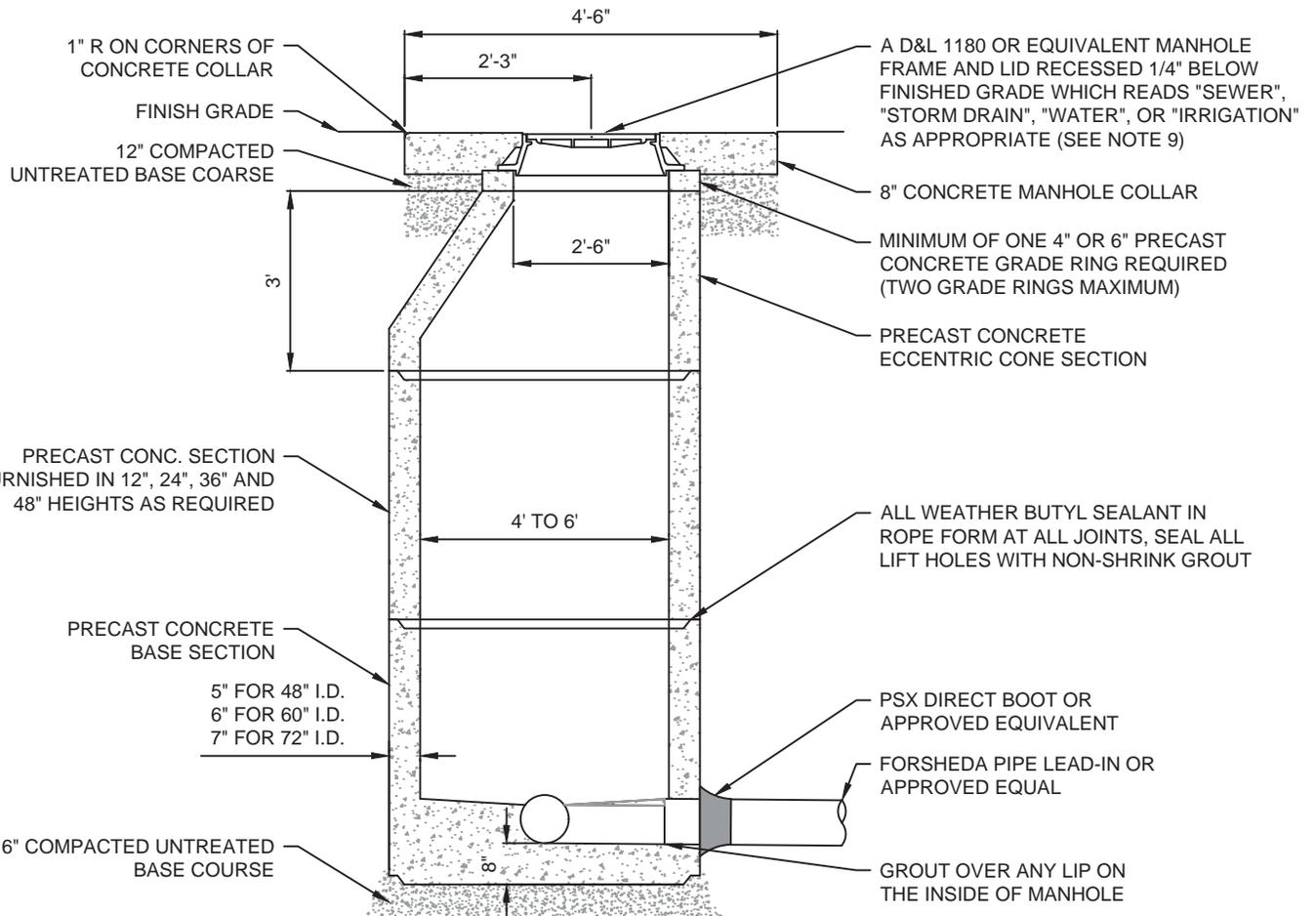
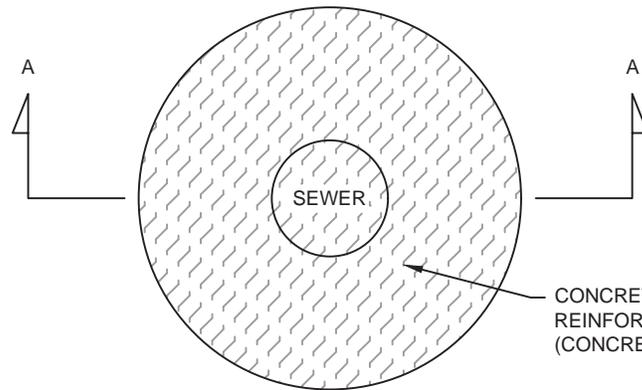
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STANDARD DRAWING

4" PRESSURIZED IRRIGATION SERVICE

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
21



NOTES:

1. USE 4' I.D. MANHOLES FOR MAIN LINES LESS THEN 18" IN DIAMETER; 5' I.D. MANHOLES FOR MAIN LINES 18" TO 30" IN DIAMETER, AND 6' I.D. FOR MAIN LINES GREATER THAN 30" IN DIAMETER.
2. FLAT LIDS MAY BE USED IN LIEU OF ECCENTRIC CONES WHERE NECESSARY. FLAT LIDS SHALL BE OF ECCENTRIC DESIGN AND MEET H20 LIVE LOADING. NO FLAT RING AND COVERS WILL BE ALLOWED UNLESS APPROVED BY CITY ENGINEER OR HIS/HER DESIGNEE.
3. MANHOLE RIMS PLACED IN FIELDS SHALL HAVE SOLID LIDS AND BE BURIED 2 FEET DEEP.
4. MANHOLE RIMS OUT OF STREETS SHALL BE PLACED 4 INCHES ABOVE GRADE.
5. CONCRETE COLLAR AND RIM SHALL BE INSTALLED 1/4" BELOW PAVEMENT SURFACE AFTER THE 1 YEAR PRESERVATION COAT.
6. MANHOLE COLLARS AND RINGS SHALL BE PROTECTED BY A COVERING DURING A SEAL COAT.
7. STORM MANHOLES MAY HAVE FLAT BOTTOMS IN THE BASES.
8. CONCRETE COLLAR SHALL BE PLACED AFTER THE 1 YEAR PRESERVATION COAT WHEN APPLICABLE.
9. IN PAVED AREAS WITH A SLOPE GREATER THAN 5% USE AN EJIW 3624 TWIST BASE OR APPROVED EQUIVALENT.
10. ALL STORM DRAIN MANHOLES CONNECTED TO STORM DRAIN INLETS SHALL HAVE A FLAT BOTTOM WITH 18" MIN. FROM FLOW LINE TO BOTTOM OF BOX.
11. ALL STORM DRAIN MANHOLES NOT CONNECTED TO AN INLET BOX SHALL HAVE A TROUGH.



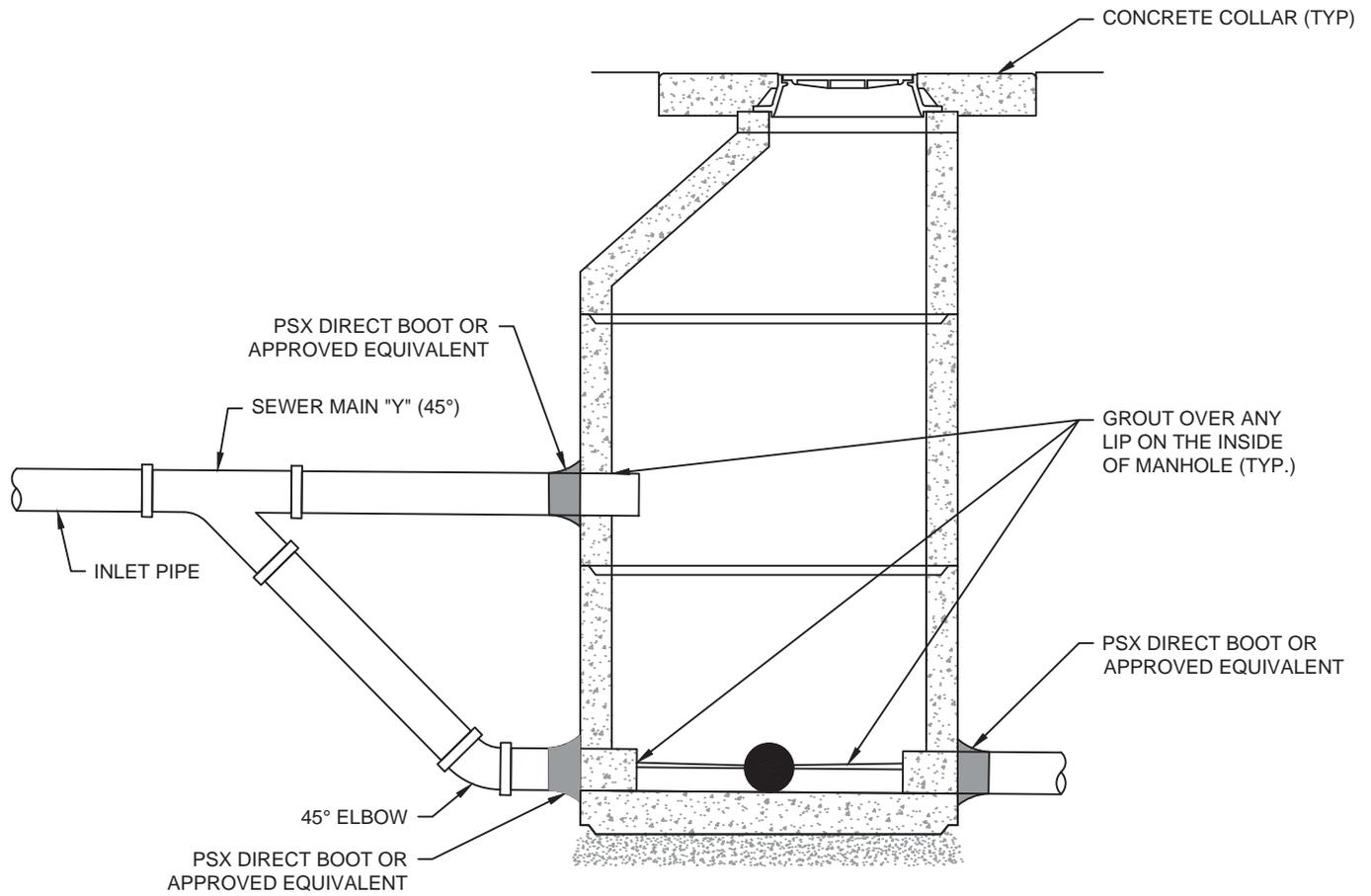
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STANDARD DRAWING

MANHOLE

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	22



NOTES:

1. MANHOLE MUST MEET ALL THE REQUIREMENTS FOR A STANDARD MANHOLE IN ADDITION TO THE DROP MANHOLE REQUIREMENTS.



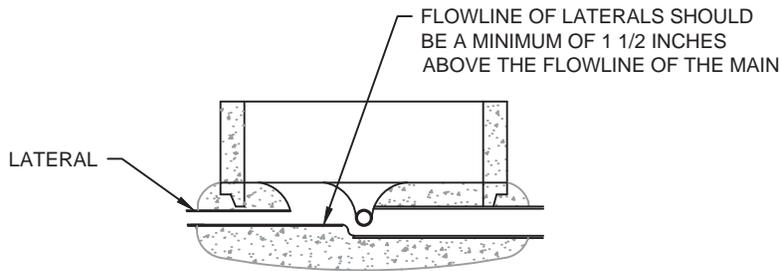
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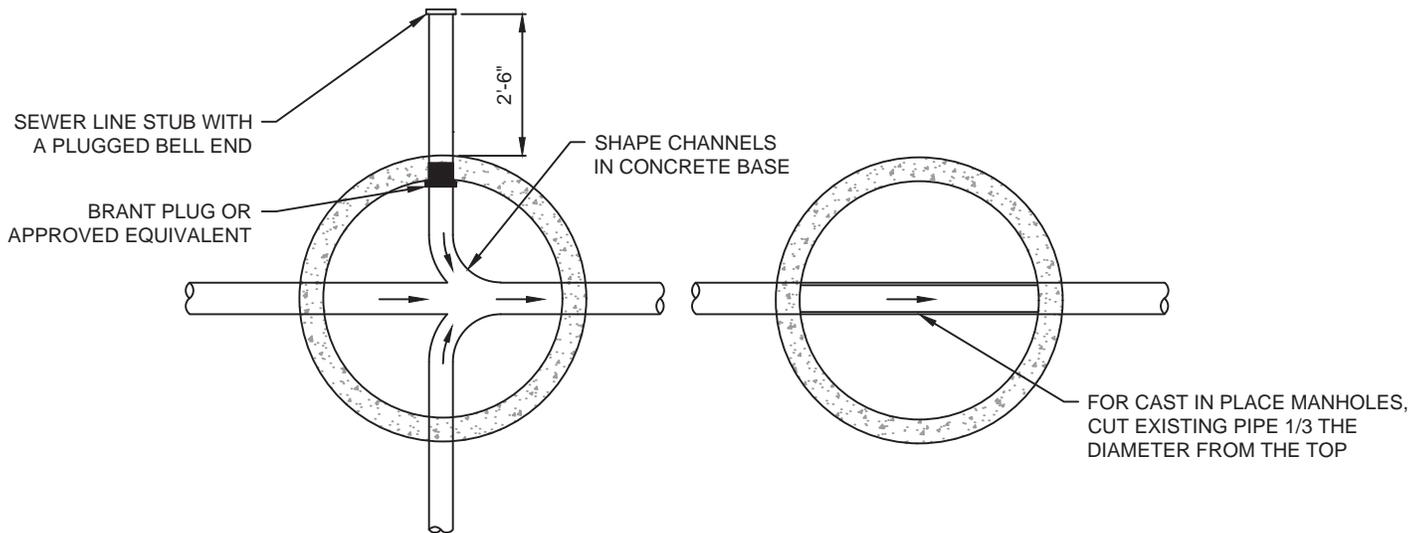
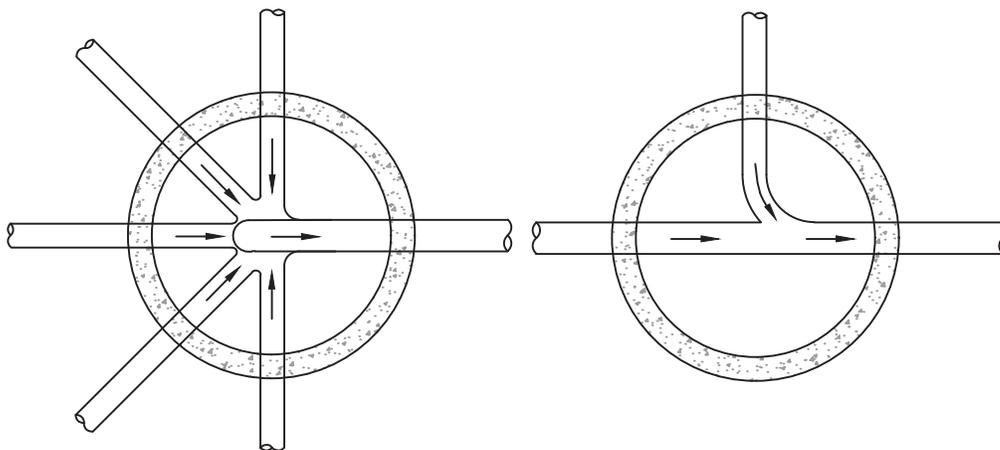
DROP MANHOLE CROSS SECTION

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	23



LATERAL SECTION



PLAN VIEWS

NOTES:

1. THERE SHALL BE 1/10 FOOT FALL THROUGH ALL MANHOLES.
2. MANHOLES INSTALLED OVER EXISTING SEWERS SHALL BE CAST IN PLACE OVER A SECTION OF EXISTING PIPE WITH THE TOP OF PIPE CUT OFF.



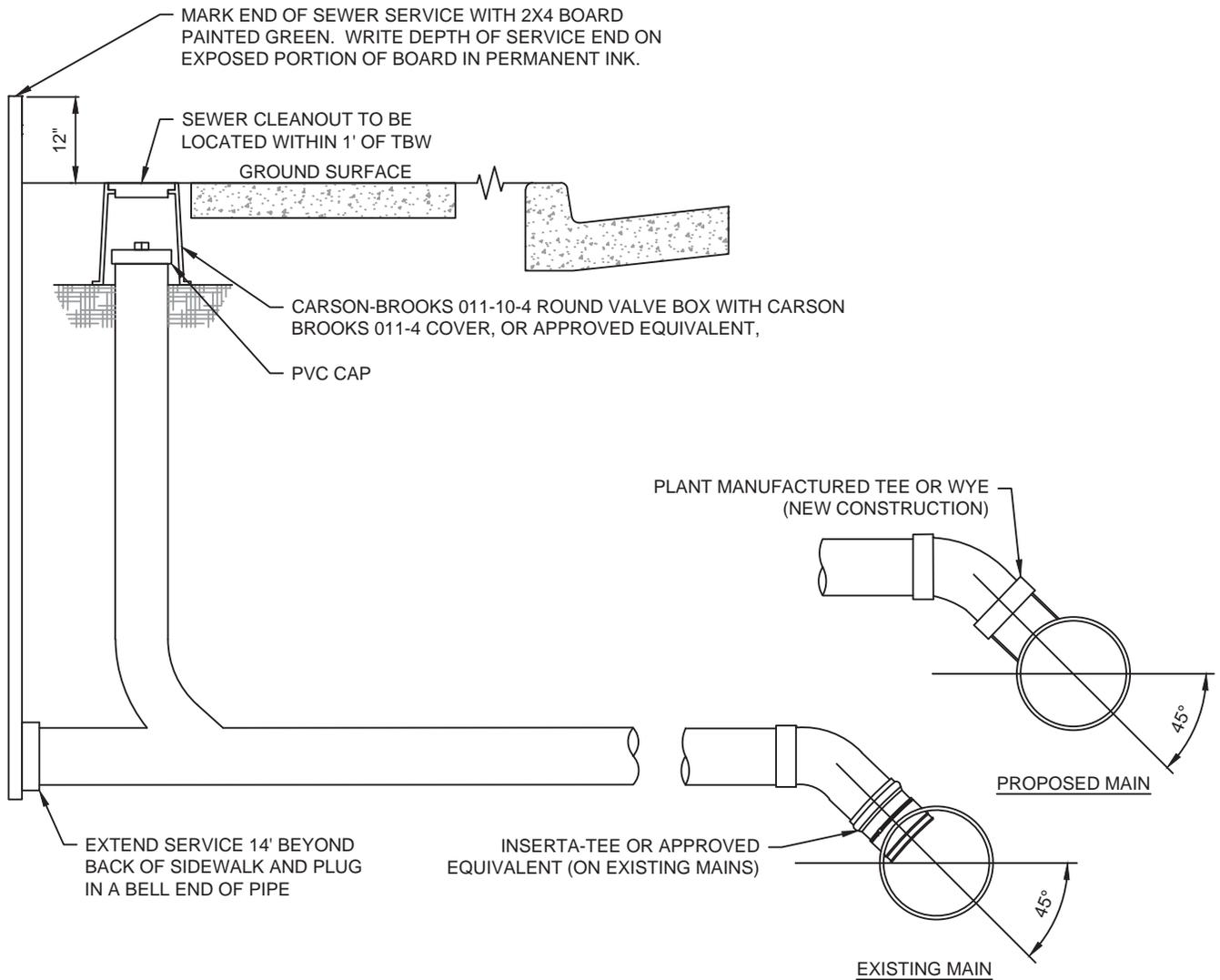
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STANDARD DRAWING

SEWER MANHOLE FLOWS

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	24



NOTES:

1. THE MINIMUM SLOPE IS 2% FOR A 4" LATERAL AND 1% FOR A 6" LATERAL.
2. SEWER LATERALS SHALL HAVE A MINIMUM OF 42" OF COVER FROM FINISH GRADE AT PROPERTY LINE AND 36" AT PLUG.
3. INSERTA-TEE MAY ONLY BE USED WHEN APPROVED BY CITY ENGINEER.



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STANDARD DRAWING

SEWER SERVICE

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	25

## SIZING MANHOLES MULTIPLE HOLES AT THE SAME ELEVATION

**FORMULA:**

$M \times \text{ANGLE} = Y$

M = CIRCUMFERENCE/360 DEGREES (SEE TABLE TO RIGHT)  
Y = ARC DISTANCE BETWEEN THE CENTER LINE OF PIPES

$A = Y - ([\text{PIPE \#1 ARC SIZE}] / 2) - ([\text{PIPE \#2 ARC SIZE}] / 2)$

A = DISTANCE BETWEEN OPENINGS

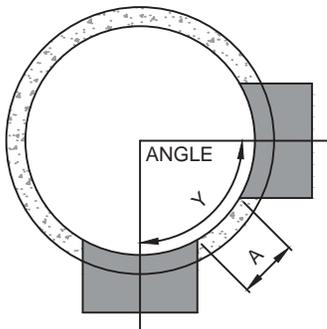
SUGGESTED "A" DISTANCE IS 6" OR GREATER FOR 48" THROUGH 72" DIAMETER MANHOLES.  
FOR GREATER THAN 72" DIAMETER MANHOLES SUGGESTED "A" IS 8" OR GREATER.

**MANHOLE  
DIAMETER**

**M  
IN/DEG**

48 IN.	0.419
60 IN.	0.524
72 IN.	0.628
84 IN.	0.733
96 IN.	0.838

PIPE DIAM. (IN.)	PIPE OD (IN.)*	CORE HOLE (IN.)					
			48" DIAM.	60" DIAM.	72" DIAM.	84" DIAM.	96" DIAM.
12	16.5	20.5	21.2	20.9	20.8	20.7	20.7
15	19.8	23.8	24.8	24.4	24.2	24.1	24.0
18	23.0	27.0	28.7	28.0	27.7	27.5	27.4
21	27.0	31.0	33.7	32.6	32.0	31.8	31.6
24	30.0	34.0	37.8	36.1	35.4	35.0	34.8
27	35.0	39.0		42.5	41.2	40.6	40.2
30	38.3	42.3		46.9	45.2	44.3	43.8
36	45.9	49.9			55.1	53.4	52.5
42	52.2	56.2			64.5	61.6	60.1
48	59.4	63.4			77.6	71.9	69.3
54	65.0	69.0				81.0	77.0
60	72.0	76.0					87.7



\* PIPE OD IS FOR "B" WALL PIPE. OTHER PIPE OD'S CAN NOT USE THIS TABLE.  
THE TABLE ASSUMES THAT FOR PIPE SIZES UP TO 30" IN DIAMETER A "BOOT" WILL BE INSTALLED

**NOTES:**

1. THESE DIMENSIONS ARE FURNISHED FOR INFORMATION ONLY. ALL DIMENSIONS SHOWN ARE SHEET SPECIFIC. USE OF THESE DIMENSIONS OR EXAMPLE CALCULATIONS MUST BE CHECKED BY THE USER'S ENGINEER ENSURING ADEQUACY FOR THE INTENDED USE.
2. REVISIONS OR ADDITIONS TO THE ABOVE MAY BE ISSUED PERIODICALLY AND IT SHALL BE THE RESPONSIBILITY OF THE RECEIVER OF THESE FILES TO KEEP THEM CURRENT WITH ANY UPDATES.



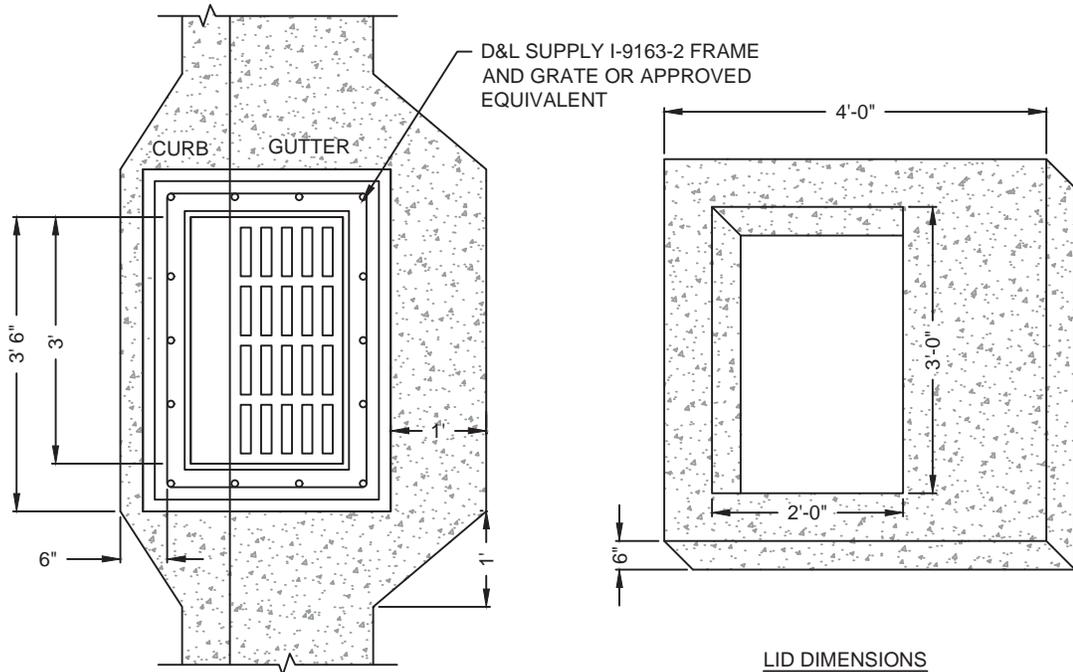
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
SPANISH FORK, UT 84660  
(801) 804-4550

### STANDARD DRAWING

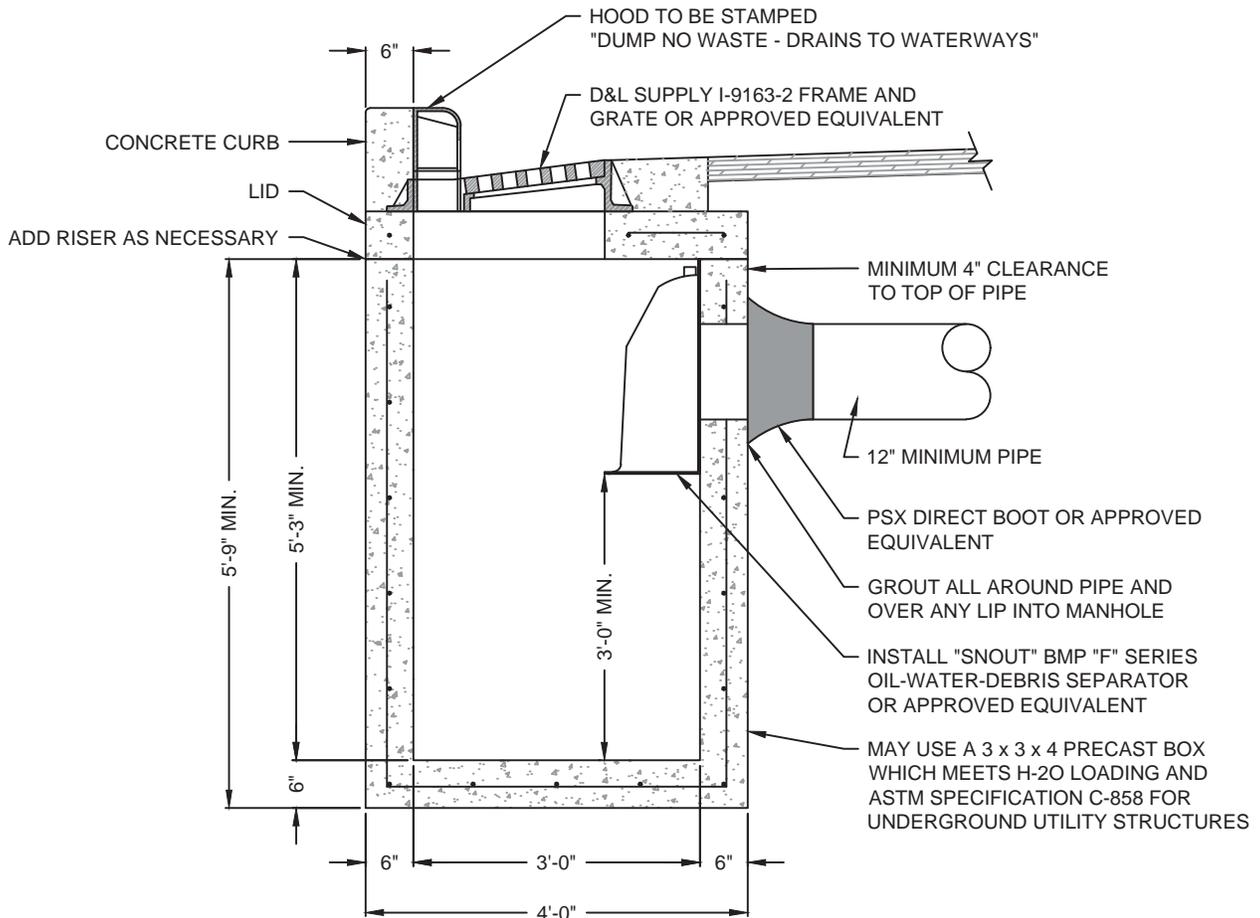
MANHOLE SIZING

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	26



LID DIMENSIONS



- NOTES:
1. ALL STORM TRANSMISSION LINES SHALL RUN THROUGH STORM MANHOLES.
  2. BOX SHALL BE SIZED ACCORDING TO TABLE ON STANDARD #32.
  3. UNLESS OTHERWISE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER, #4 REBAR WILL BE SPACED AT MINIMUM OF 12" O.C. IN ALL DIRECTIONS IN CONCRETE, ALL REBAR SHALL OVERLAP A MINIMUM OF 14".



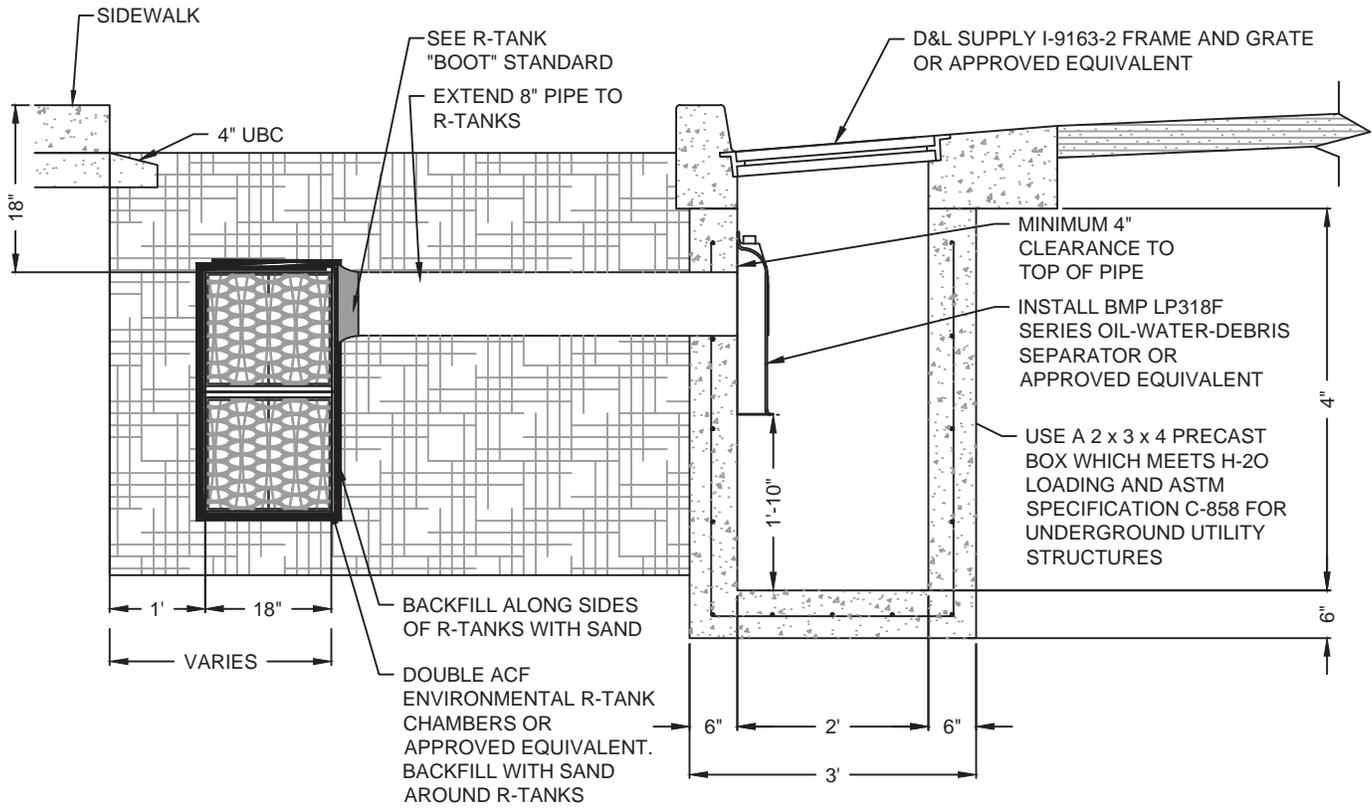
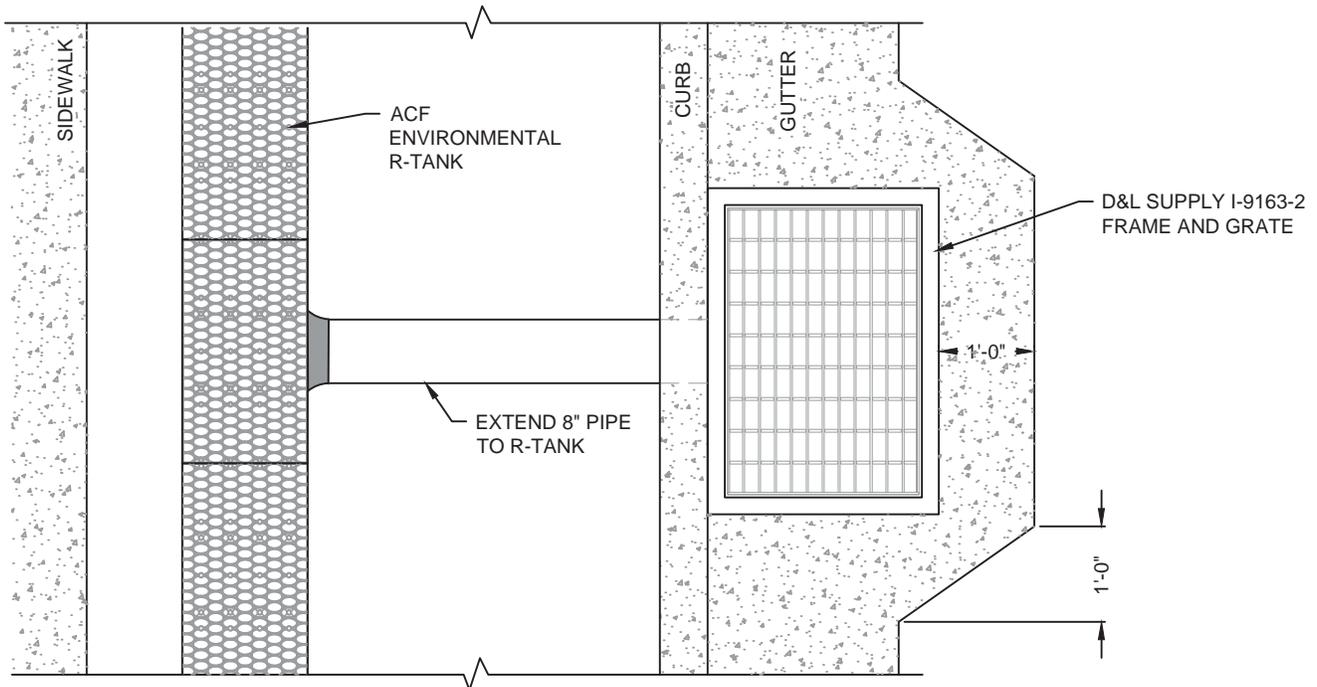
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STANDARD DRAWING

STORM WATER INLET BOX

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	27



**NOTES:**

1. DETAILED ENGINEERING SHALL BE SUBMITTED TO THE CITY FOR APPROVAL ON ALL CAST IN PLACE BOXES.
2. "SNOUT" OIL-WATER-DEBRIS SEPARATOR SHALL BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS.
3. ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNEE.



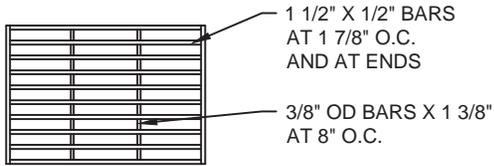
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**STANDARD DRAWING**

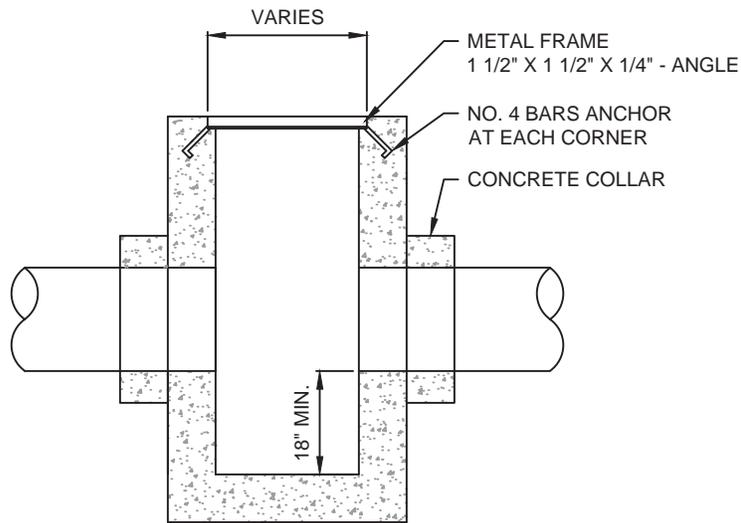
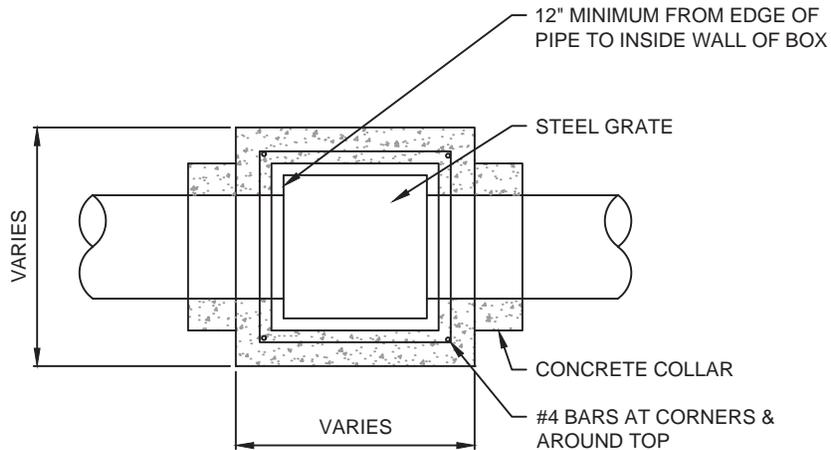
LOW IMPACT DEVELOPMENT (LID) RESIDENTIAL STREET INLET BOX

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	28



**STEEL GRATE**



**STANDARD CLEANOUT BOX**

**NOTES:**

1. GRATE SHALL BE BICYCLE SAFE AND TRAFFIC RATED.
2. BOX SHALL BE SIZED ACCORDING TO TABLE ON STANDARD #29.



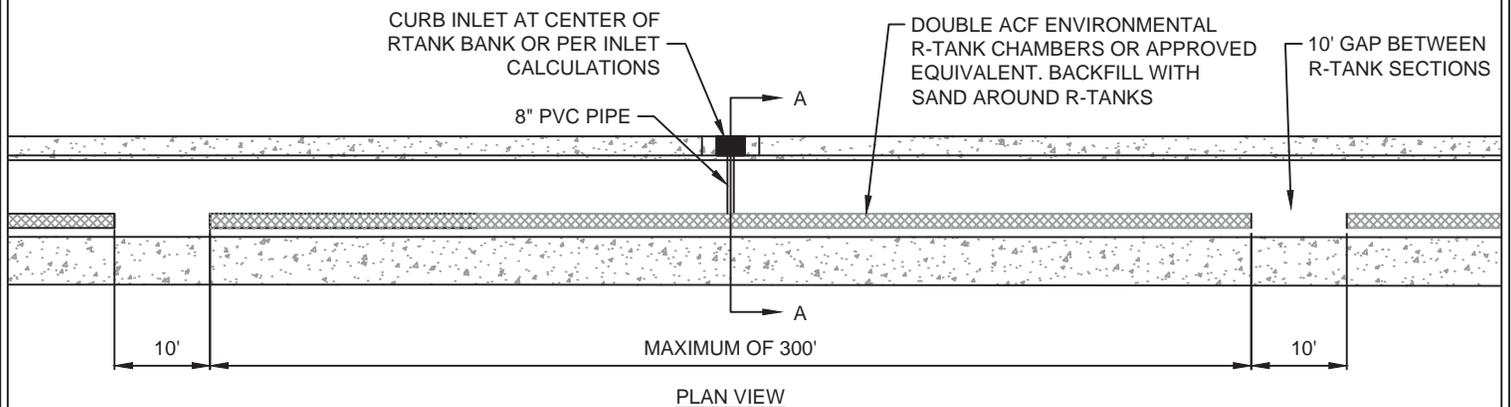
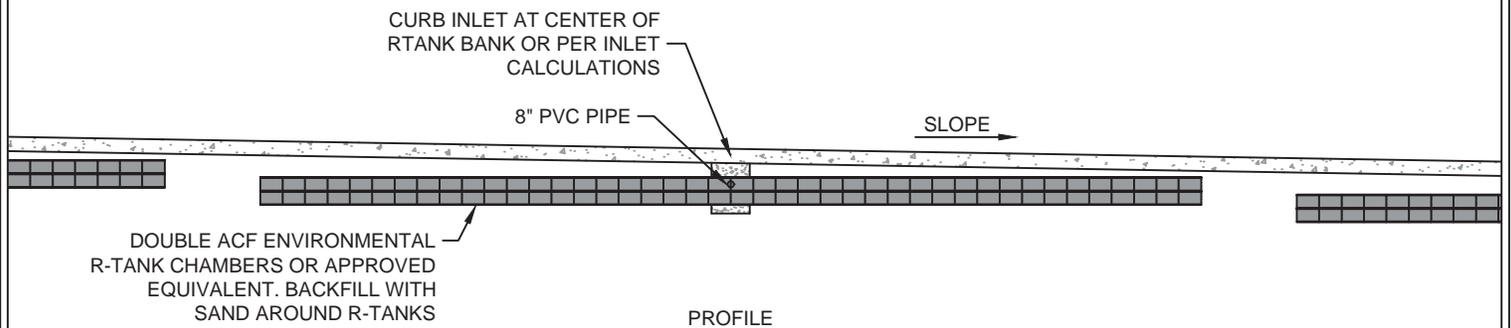
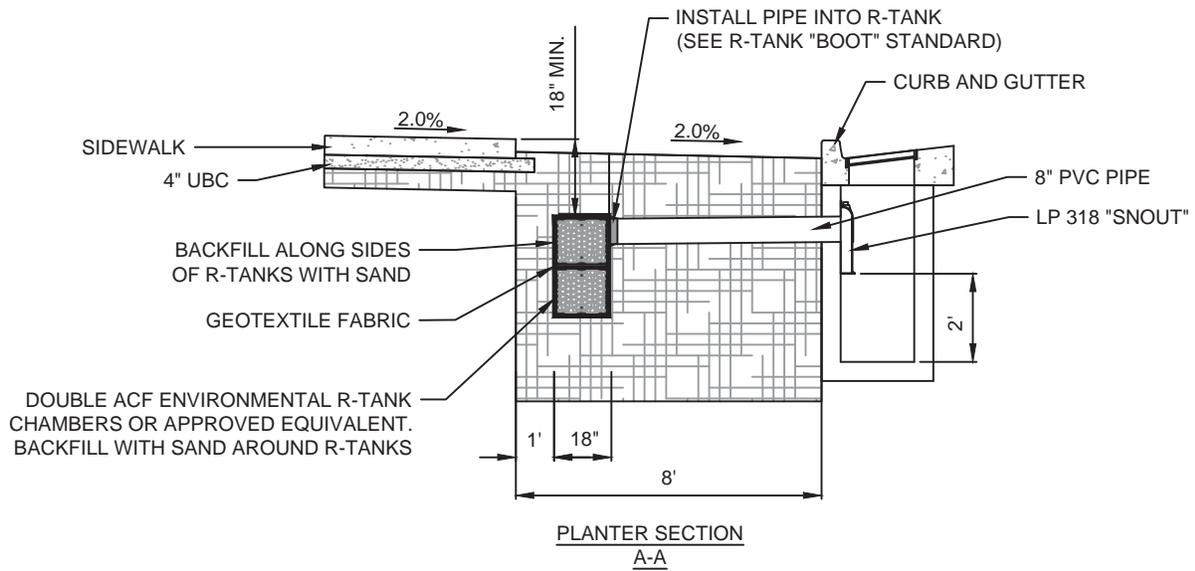
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**STANDARD DRAWING**

CLEANOUT BOX

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	29



**NOTES:**

1. THE TOP OF ALL R-TANK CHAMBERS ALONG A CONTINUOUS SECTION OF CHAMBERS SHALL BE DESIGNED TO BE A MINIMUM OF 3" BELOW THE GUTTER FLOWLINE AT THE INLET.
2. ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNEE.



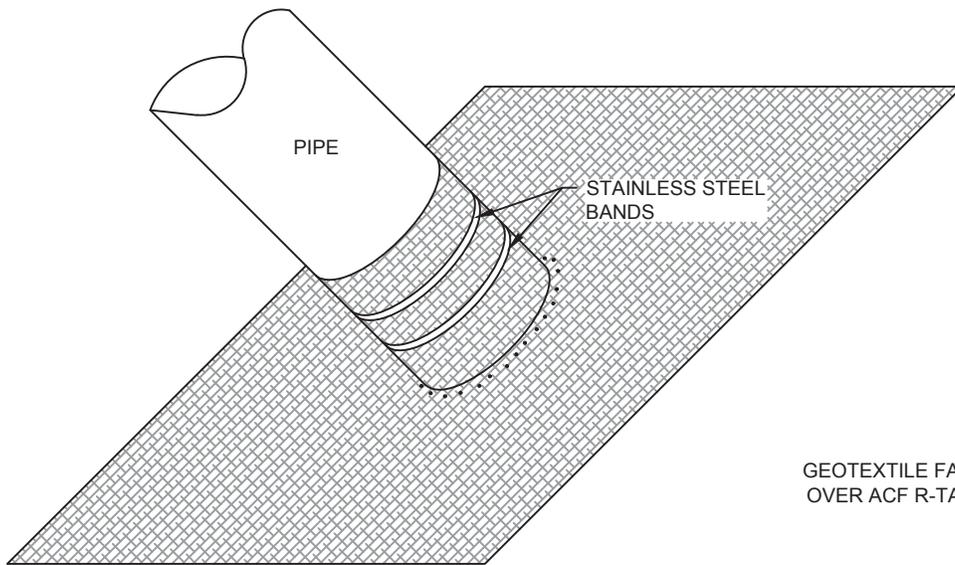
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**STANDARD DRAWING**

LOW IMPACT DEVELOPMENT (LID) FOR RESIDENTIAL STREETS

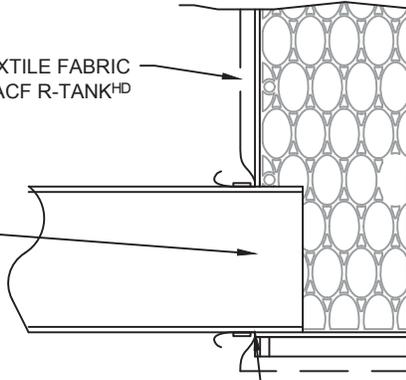
DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	30



GEOTEXTILE FABRIC OVER ACF R-TANK<sup>HD</sup>

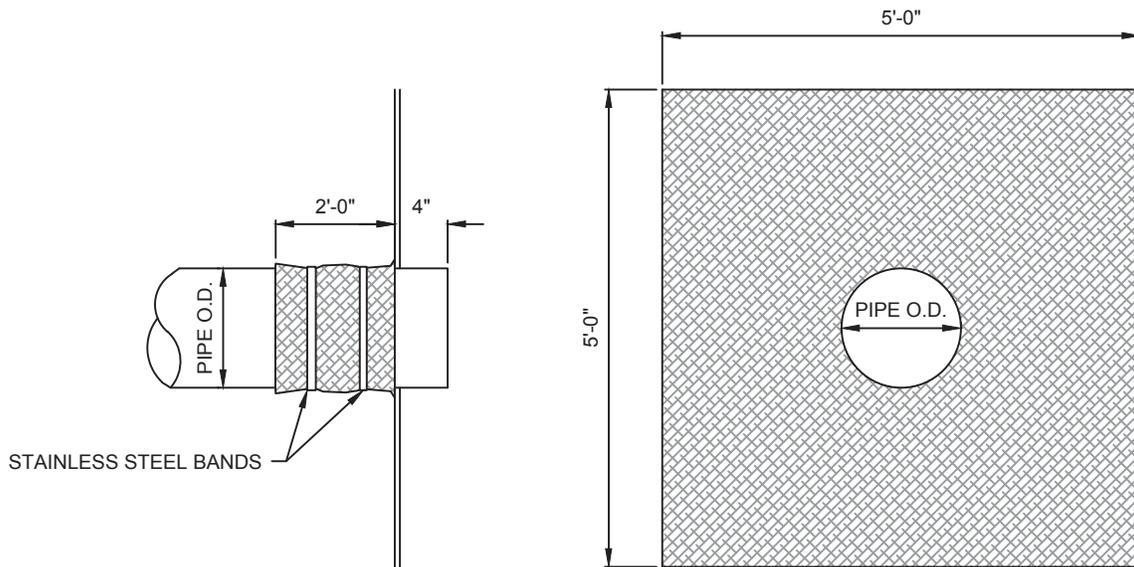
NOTE: CUT FABRIC AND WRAP AROUND PIPE SO THAT PIPE EXTENDS INTO ACF R-TANK<sup>HD</sup> PIPE EFFLUENT SHALL NOT PASS THROUGH FABRIC



CUT SIDE OF R-TANK AND INSTALL PIPE INTO R-TANK A MINIMUM OF 4 INCHES

- 12 OZ/SY NONWOVEN GEOTEXTILE
- FABRIC COLLAR TO FIT OUTSIDE DIAMETER OF INLET/OUTLET PIPE

SECTION



SIDE VIEW

FRONT VIEW



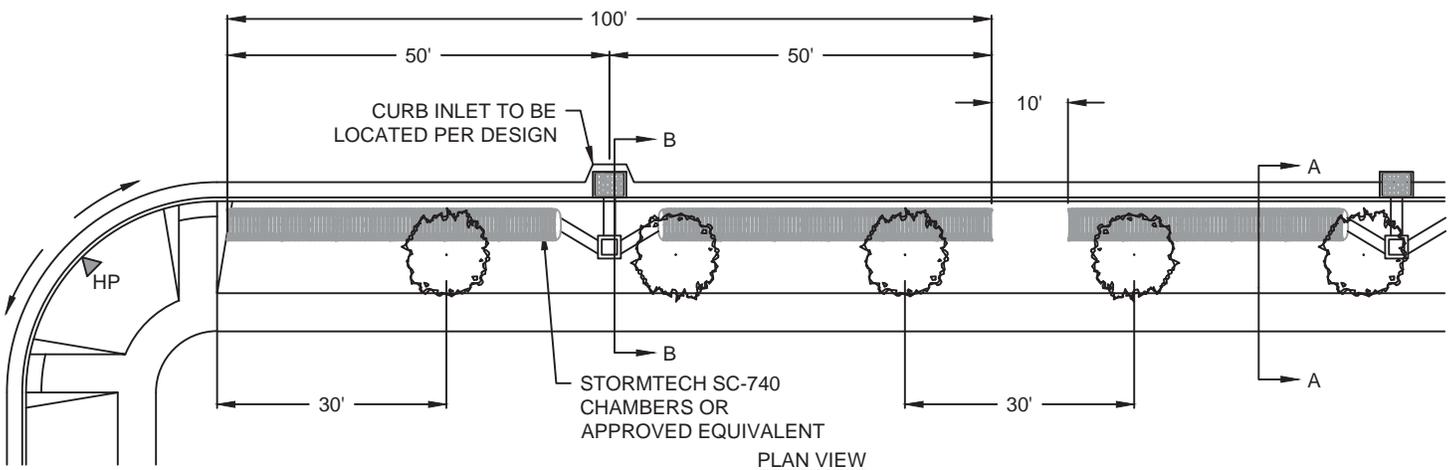
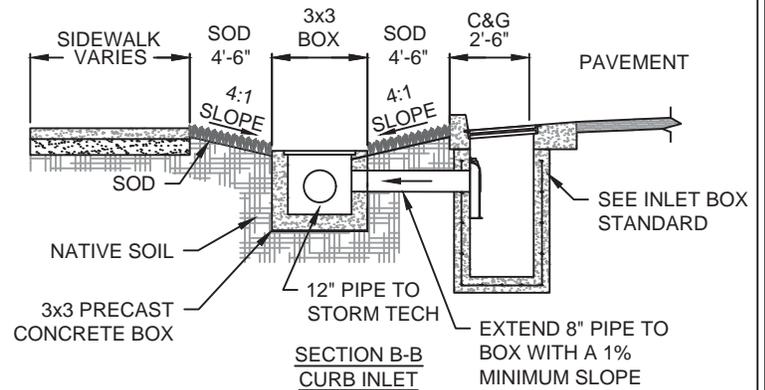
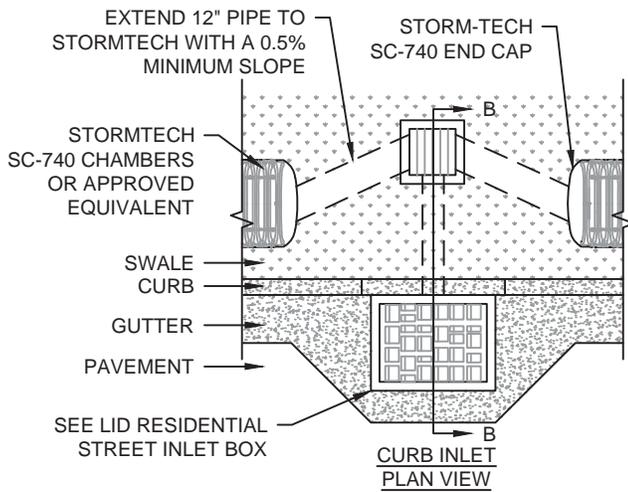
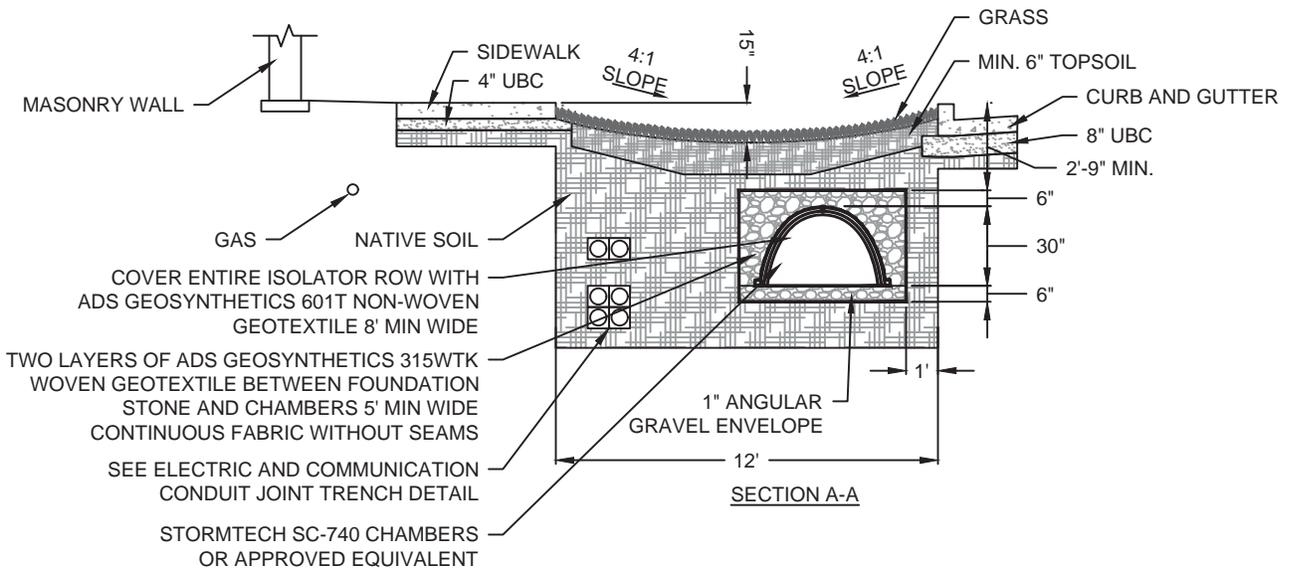
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STANDARD DRAWING

R-TANK PIPE BOOT

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE: NONE  
STANDARD 31



NOTES:

1. ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNEE.



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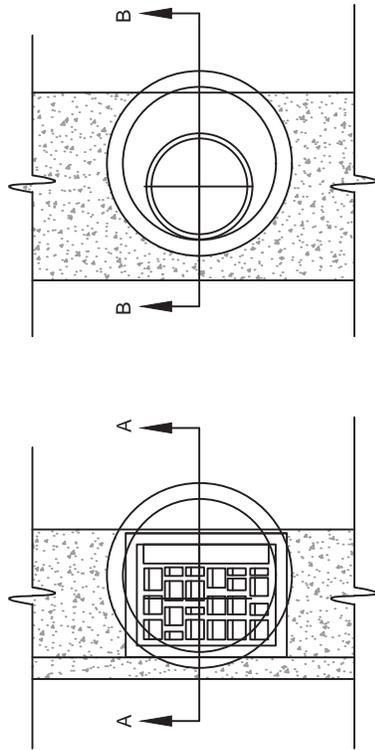
STANDARD DRAWING

LOW IMPACT DEVELOPMENT (LID) COLLECTOR / ARTERIAL / COMMERCIAL STREET GRASS SWALE INLET

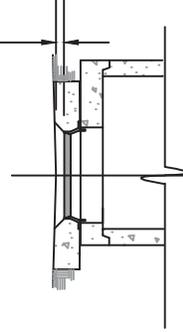
DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE: NONE  
STANDARD 32

CROSS GUTTER INSTALLATIONS REQUIRE HEAVY DUTY GRATED LID & RING (D & L C-2670 OR EQUIVALENT); CURB-FACED INLET GRATE INSTALLATIONS REQUIRE HEAVY DUTY GRATED LID & RING (D & L I-3517 OR EQUIVALENT).

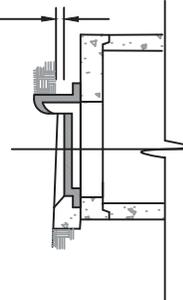


SET TOP OF MANHOLE 1" BELOW FLOWLINE OF CROSS GUTTER.

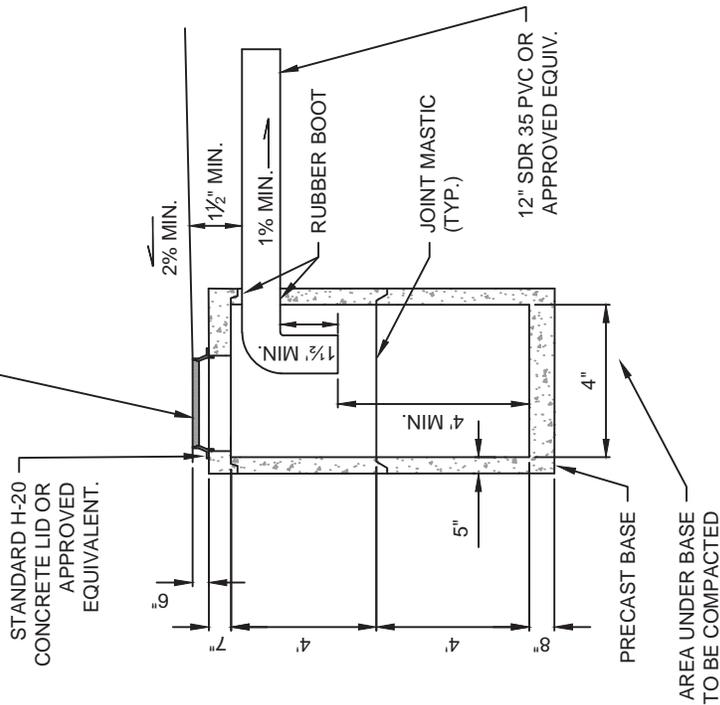


CROSS GUTTER  
SECTION B-B

SET TOP OF MANHOLE 1" BELOW FLOWLINE OF GUTTER.



CURB & GUTTER  
SECTION A-A



PRE-TREATMENT CATCH BASIN  
CROSS-SECTION

NOTES:

1. MANHOLE BASE AND ALL SECTIONS SHALL BE PRECAST TO CONFORM TO ASTM C478.
2. THE PRE-TREATMENT MANHOLE SHALL BE CONSTRUCTED TO ENSURE WATER TIGHTNESS
3. THE SUMP LID SHALL NOT BE LOCATED IN THE SIDEWALK SECTION
4. ANY APPROVED EQUIVALENTS REQUIRE CITY ENGINEER'S WRITTEN APPROVAL



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STANDARD DRAWING

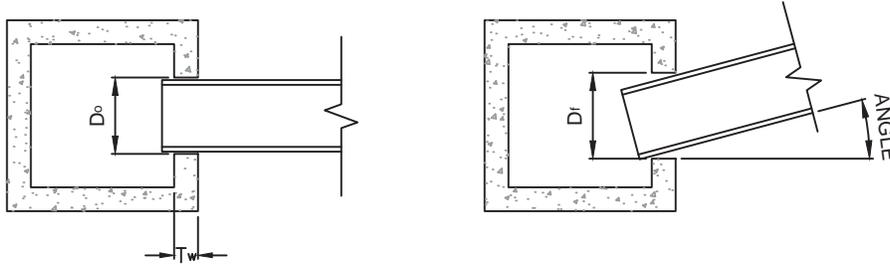
DROP INLET

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	33



## CLEANOUT AND INLET SIZING GUIDELINES



**Do** : THE ORIGINAL DIAMETER OF THE INLET OR THE OUTER DIAMETER (OD) OF THE PIPE IF THE PIPE IS PURPENDICULAR TO THE INLET BOX.

**Df** : THE FINAL ADJUSTED SIZE OF THE INLET WHEN THE PIPE IS SKEWED.

**Tw** : THE THICKNESS OF THE WALL (6" FOR THE TABLE BELOW).

**ANGLE**: THE ANGLE AT WHICH THE PIPE IS SKEWED.

**FORMULA:**

$$D_f = (OD \times 1/\cos(\text{ANGLE})) + (\tan(\text{ANGLE}) \times T_w)$$

CONCRETE PIPE OUTER DIAMETERS BASED ON 6" CLEANOUT WALL THICKNESS AND PIPE ANGLE AT CLEANOUT							
ANGLE OF PIPE ENTERING BOX	0°	5°	10°	15°	20°	30°	45°
INSIDE DIAMETER (ID)	OUTSIDE BARREL DIAMETER (OD)						
12.0"	16.5"	17.1"	17.8"	18.7"	19.7"	22.5"	29.3"
15.0"	19.8"	20.4"	21.1"	22.1"	23.2"	26.3"	33.9"
18.0"	23.0"	23.6"	24.4"	25.4"	26.7"	30.0"	38.5"
21.0"	27.0"	27.6"	28.5"	29.6"	30.9"	34.6"	44.2"
24.0"	30.0"	30.6"	31.5"	32.7"	34.1"	38.1"	48.4"
27.0"	35.0"	35.7"	36.6"	37.8"	39.4"	43.9"	55.5"
30.0"	38.3"	38.9"	39.9"	41.2"	42.9"	47.6"	60.1"
36.0"	45.9"	46.6"	47.6"	49.1"	51.0"	56.4"	
42.0"	52.2"	53.0"	54.1"	55.7"	57.8"	63.8"	
48.0"	59.4"	60.2"	61.4"	63.1"			
54.0"							
60.0"							
66.0"							
72.0"							
84.0"							
90.0"							
96.0"							

**NOTES:**

1. TABLE IS BASED ON A 6" WALL THICKNESS AND PIPE ANGLE AT CLEANOUT.
2. SHADED AREAS BELOW THE DARK LINE INDICATE PIPE SIZES AND ANGLES THAT WILL NOT FIT WITHIN A STANDARD 6' WALL BOX. SPECIAL BOX SIZES ARE NECESSARY FOR THESE CONDITIONS.
3. USE OF THIS TABLE (INCLUDING DESIGN & DIMENSIONS) SHOULD BE ANALYZED AND CHECKED BY THE USER'S ENGINEER TO ENSURE ADEQUACY FOR THE INTENDED USE.
4. ALL BOXES SHALL HAVE A MINIMUM OF 6" OF SURROUNDING CONCRETE BOX COVERAGE.



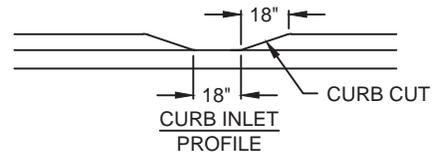
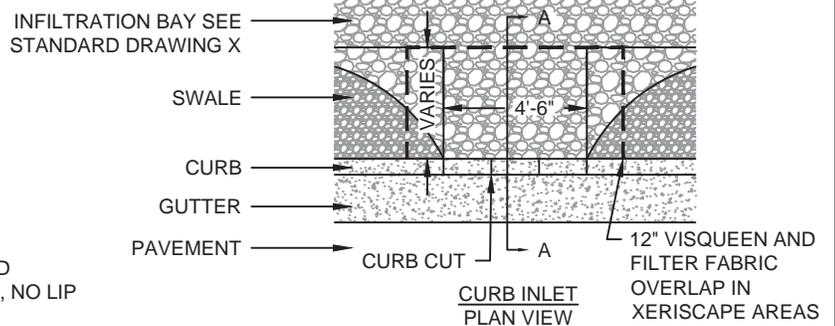
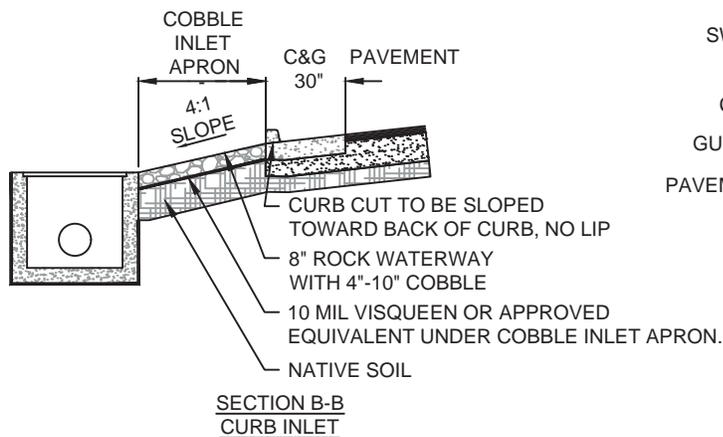
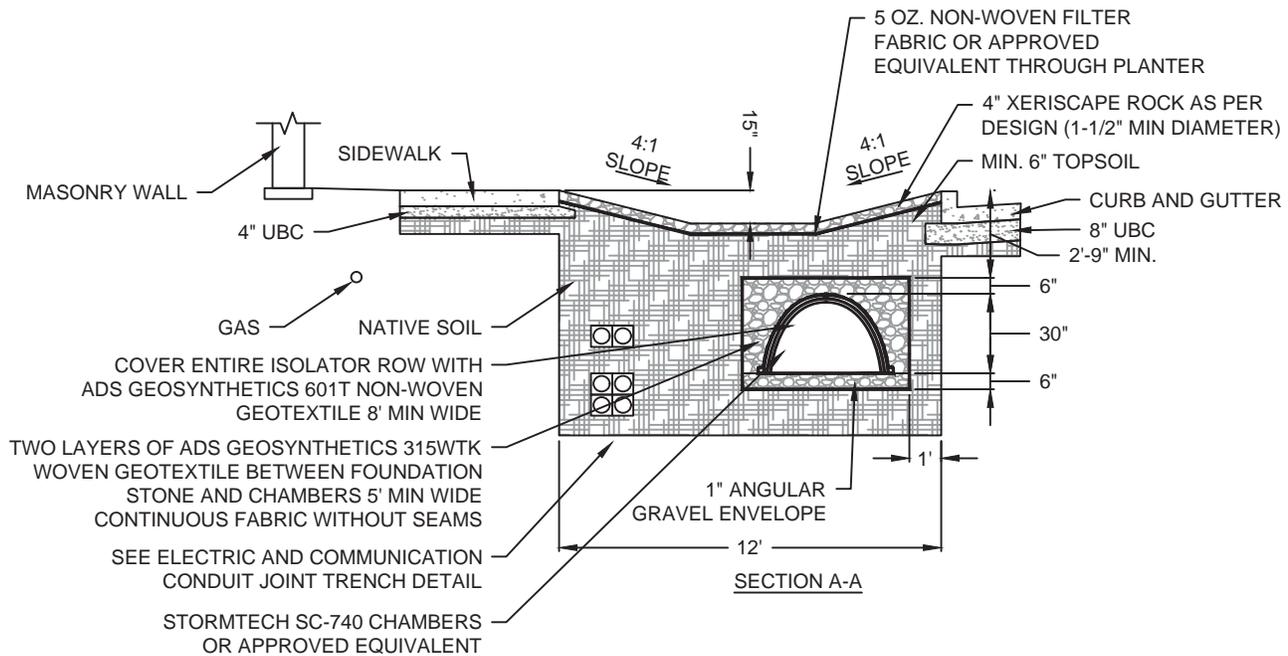
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### STANDARD DRAWING

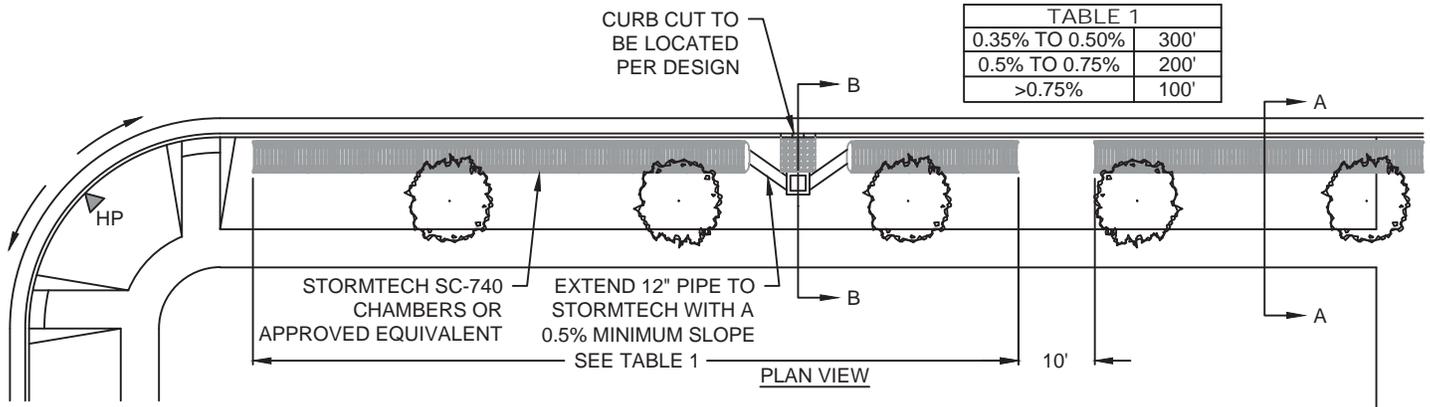
BOX SIZING

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	35



0.35% TO 0.50%	300'
0.5% TO 0.75%	200'
>0.75%	100'



NOTES:

1. COBBLE INLET APRON TO BE A MINIMUM OF 8" THICK.
2. FILTER FABRIC TO BE PLACED UNDER COBBLE INFILTRATION BAY. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF APWA 31 05 19 (GEOTEXTILES).
3. ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNEE.



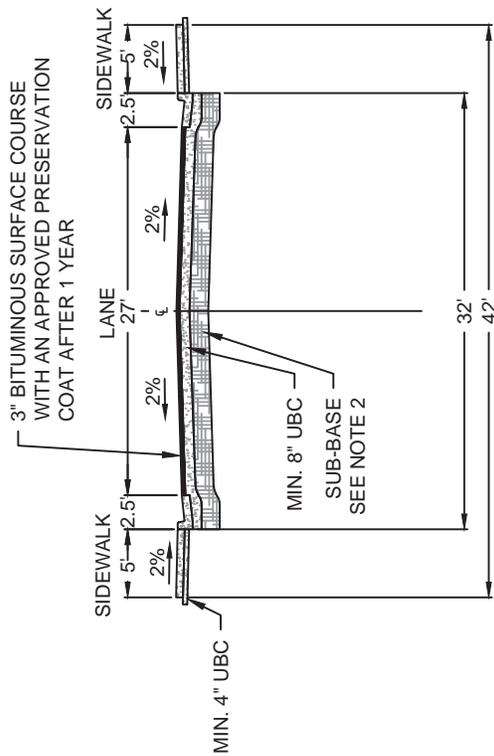
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STANDARD DRAWING

LOW IMPACT DEVELOPMENT (LID) COLLECTOR / ARTERIAL / COMMERCIAL STREET XERISCAPE SWALE

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE: NONE  
STANDARD 36



MULTI FAMILY SUB-LOCAL STREET - 42' ROW

NOTES:

- SEE STANDARD DRAWINGS FOR SIDEWALKS.
- SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT.
- MINIMUM OF 8" UNTREATED BASE COURSE UNDER STREET PAVEMENT AND CURB & GUTTER UNLESS MORE REQUIRED BY SOILS REPORT
- SUB-LOCAL STREET ONLY APPROVED FOR STREETS THAT ARE LESS THAN 1200 FT. IN LENGTH AND LESS THAN 300 ANTICIPATED ADT.
- SUB-LOCAL STREET MAY NOT INTERSECT WITH ANOTHER SUB-LOCAL STREET.
- SUB-LOCAL STREET MAY ONLY BE USED SUBJECT TO THE APPROVAL OF THE CITY ENGINEER OR HIS/HER DESIGNEE.
- SUB-LOCAL STREETS SHALL HAVE APWA PLAN 221 FLARE DRIVEWAY APPROACHES WITH 20 FEET SETBACKS FROM THE BACK OF SIDEWALK OR TBC IF NO SIDEWALK.
- PARKING IS RESTRICTED ON AT LEAST ONE SIDE OF THE SUB-LOCAL STREET.
- ALL LOCAL TO LOCAL TBC RADIUS TO BE 25'.
- ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNEE.



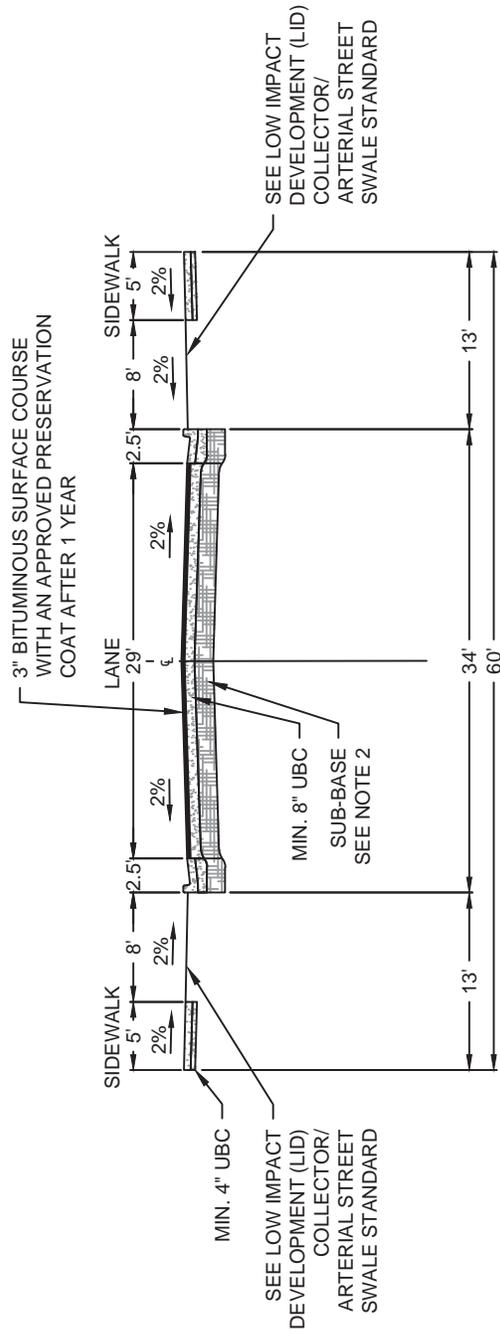
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STANDARD DRAWING

MULTI FAMILY SUB-LOCAL STREET

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	37



RESIDENTIAL LOCAL STREET - 60' ROW

- NOTES:
- SEE STANDARD DRAWINGS FOR SIDEWALKS.
  - SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT.
  - MINIMUM OF 8" UNTREATED BASE COURSE UNDER STREET PAVEMENT AND CURB & GUTTER UNLESS MORE REQUIRED BY SOILS REPORT.
  - ALL LOCAL TO LOCAL TBC RADIUS TO BE 25'.
  - ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNEE.



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## STANDARD DRAWING

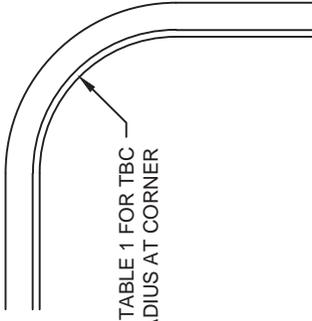
RESIDENTIAL LOCAL STREET

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	38

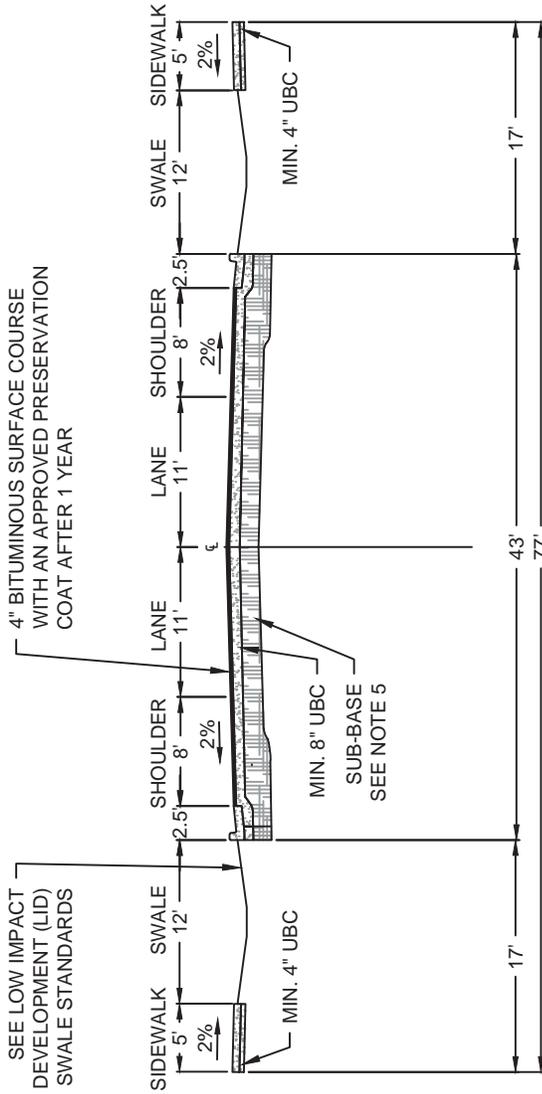
INTERSECTING ROAD

COMMERCIAL LOCAL



SEE TABLE 1 FOR TBC RADIUS AT CORNER

TABLE 1	
COMMERCIAL LOCAL STREET INTERSECTION RADIUS	
INTERSECTING ROAD	TBC RADIUS
MAJOR ARTERIAL	30'
MINOR ARTERIAL	30'
MAJOR COLLECTOR	30'
MINOR COLLECTOR	30'
COMMERCIAL LOCAL	25'
RESIDENTIAL LOCAL	25'



COMMERCIAL LOCAL STREET - 77' ROW

- NOTES:
1. COMMERCIAL AND RESIDENTIAL ACCESS SHALL BE APPROVED BY THE CITY ENGINEER OR HIS/HER DESIGNEE.
  2. SEE STANDARD DRAWING FOR SIDEWALKS.
  3. SPRINKLER SYSTEMS SHALL BE INSTALLED ACCORDING TO CITY STANDARDS.
  4. SWALE MAY BE GRASS OR XERISCAPE, AS APPROVED BY THE CITY ENGINEER. SEE STANDARD DRAWINGS FOR LID SWALE STANDARDS.
  5. SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT.
  6. MINIMUM OF 8" UNTREATED BASE COURSE UNDER STREET PAVEMENT AND CURB & GUTTER.
  7. ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNEE.



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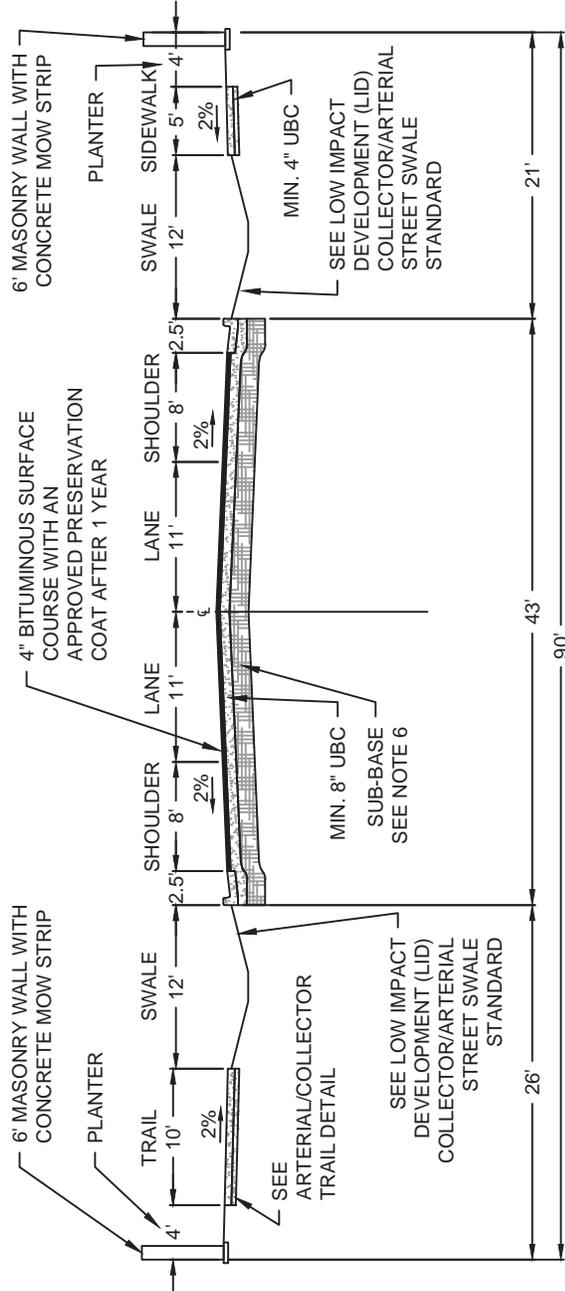
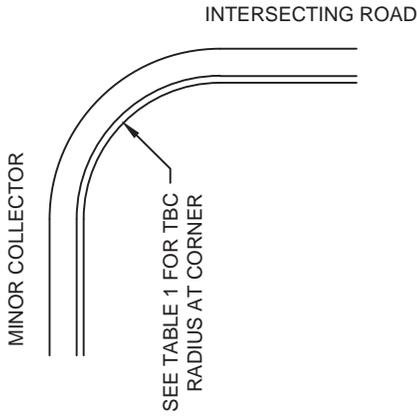
COMMERCIAL LOCAL 2 LANE STREET

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	39

TABLE 1

MINOR COLLECTOR STREET INTERSECTION RADIUS	TBC RADIUS
MAJOR ARTERIAL	35'
MINOR ARTERIAL	30'
MAJOR COLLECTOR	30'
MINOR COLLECTOR	30'
COMMERCIAL LOCAL	30'
RESIDENTIAL LOCAL	25'



MINOR COLLECTOR 2 LANE STREET - 90' ROW

**NOTES:**

1. CITY ENGINEER MAY WAIVE THE REQUIREMENT FOR A MASONRY WALL.
2. SEE STANDARD DRAWINGS FOR TRAILS AND SIDEWALKS.
3. TRAIL MAY BE INSTALLED ON EITHER SIDE OF STREET AS APPROVED BY THE CITY ENGINEER. SIDEWALK SHALL BE INSTALLED ON THE OPPOSITE SIDE.
4. PLANTERS, BEHIND SIDEWALK OR TRAIL, SHALL HAVE SHRUBS WITH BARK MULCH OR XERISCAPE AS APPROVED BY THE CITY. SPRINKLER SYSTEMS SHALL BE INSTALLED ACCORDING TO CITY STANDARDS.
5. SWALE MAY BE GRASS OR XERISCAPE, AS APPROVED BY THE CITY ENGINEER. SEE STANDARD DRAWINGS FOR LID SWALES.
6. SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT.
7. MINIMUM OF 8" UNTREATED BASE COURSE UNDER STREET PAVEMENT AND CURB & GUTTER.
8. ALL UTILITY BOXES AND EQUIPMENT SHALL BE LOCATED ON THE STREET SIDE OF MASONRY WALL.
9. ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNER.



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STANDARD DRAWING

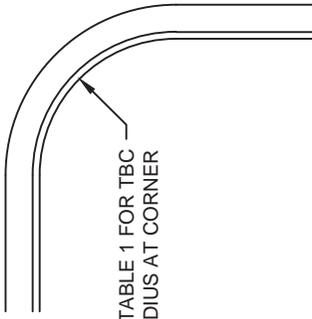
MINOR COLLECTOR 2 LANE STREET

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	40

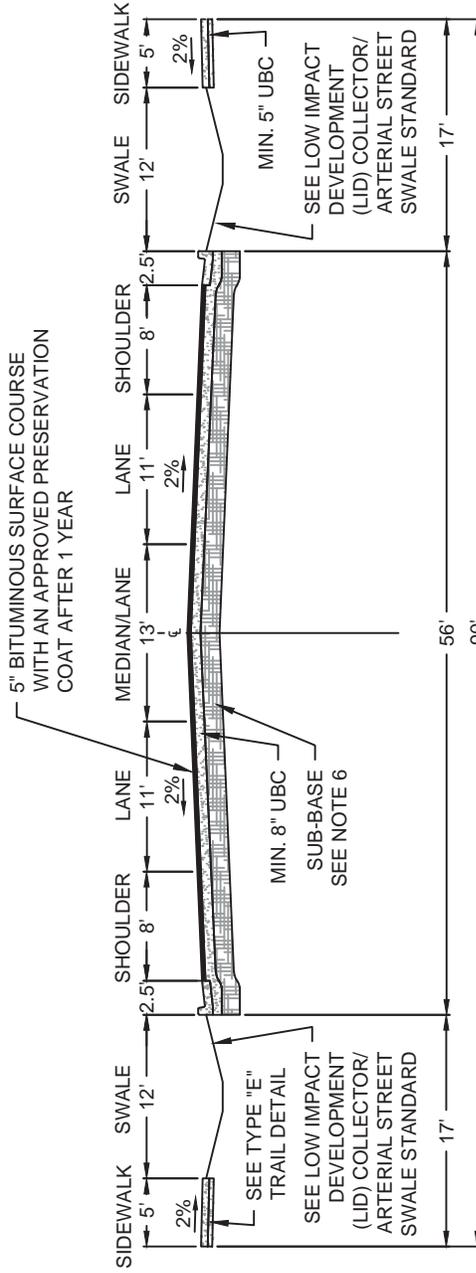
COMMERCIAL COLLECTOR

INTERSECTING ROAD



SEE TABLE 1 FOR TBC RADIUS AT CORNER

TABLE 1	
COMMERCIAL COLLECTOR STREET INTERSECTION RADIUS	TBC RADIUS
MAJOR ARTERIAL	35'
MINOR ARTERIAL	30'
MAJOR COLLECTOR	30'
MINOR COLLECTOR	30'
COMMERCIAL LOCAL	30'
RESIDENTIAL LOCAL	25'



COMMERCIAL COLLECTOR 3 LANE STREET - 90' ROW

NOTES:

1. SEE STANDARD DRAWINGS FOR TRAILS AND SIDEWALKS.
2. TRAIL MAY BE INSTALLED ON EITHER SIDE OF STREET AS APPROVED BY THE CITY ENGINEER. SIDEWALK SHALL BE INSTALLED ON THE OPPOSITE SIDE.
3. SWALE MAY BE GRASS OR XERISCAPE, AS APPROVED BY THE CITY ENGINEER. SEE STANDARD DRAWINGS FOR LID SWALES.
4. SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT.
5. MINIMUM OF 8" UNTREATED BASE COURSE UNDER STREET PAVEMENT AND CURB & GUTTER.
6. 8' LANDSCAPED MEDIAN MAY BE REQUIRED FOR SECTIONS THAT ARE LONGER THAN 500' BETWEEN INTERSECTIONS.
7. ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNER.



SPANISH FORK CITY  
40 SOUTH MAIN STREET  
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STANDARD DRAWING

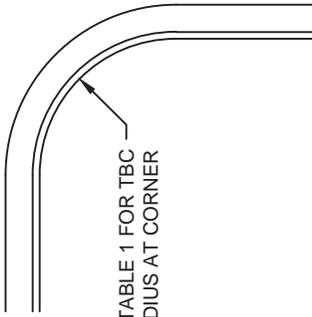
COMMERCIAL COLLECTOR 3 LANE STREET

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
41

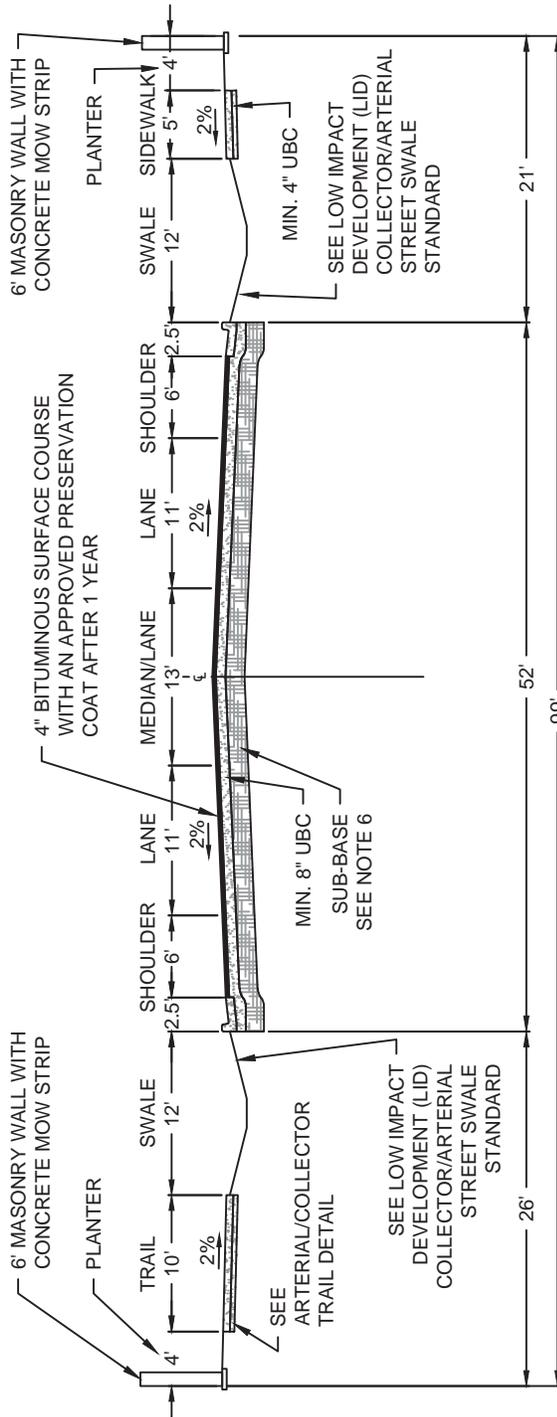
INTERSECTING ROAD

MAJOR COLLECTOR



SEE TABLE 1 FOR TBC RADIUS AT CORNER

TABLE 1	
MAJOR COLLECTOR STREET INTERSECTION RADIUS	TBC RADIUS
MAJOR ARTERIAL	35'
MINOR ARTERIAL	30'
MAJOR COLLECTOR	30'
MINOR COLLECTOR	30'
COMMERCIAL LOCAL	30'
RESIDENTIAL LOCAL	25'



MAJOR COLLECTOR 3 LANE STREET - 99' ROW

NOTES:

- CITY ENGINEER MAY WAIVE THE REQUIREMENT FOR A MASONRY WALL.
- SEE STANDARD DRAWINGS FOR TRAILS AND SIDEWALKS.
- TRAIL MAY BE INSTALLED ON EITHER SIDE OF STREET AS APPROVED BY THE CITY ENGINEER. SIDEWALK SHALL BE INSTALLED ON THE OPPOSITE SIDE. PLANTERS, BEHIND SIDEWALK OR TRAILS, SHALL HAVE SHRUBS WITH BARK MULCH OR XERISCAPE AS APPROVED BY THE CITY. SPRINKLER SYSTEMS SHALL BE INSTALLED ACCORDING TO CITY STANDARDS.
- SWALE MAY BE GRASS OR XERISCAPE, AS APPROVED BY THE CITY ENGINEER. SEE STANDARD DRAWINGS FOR LID SWALES.
- SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT.
- MINIMUM OF 8" UNTREATED BASE COURSE UNDER STREET PAVEMENT AND CURB & GUTTER.
- ALL UTILITY BOXES AND EQUIPMENT SHALL BE LOCATED ON THE STREET SIDE OF MASONRY WALL.
- 8' LANDSCAPED MEDIAN MAY BE REQUIRED FOR SECTIONS THAT ARE LONGER THAN 500' BETWEEN INTERSECTIONS.
- ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNER.



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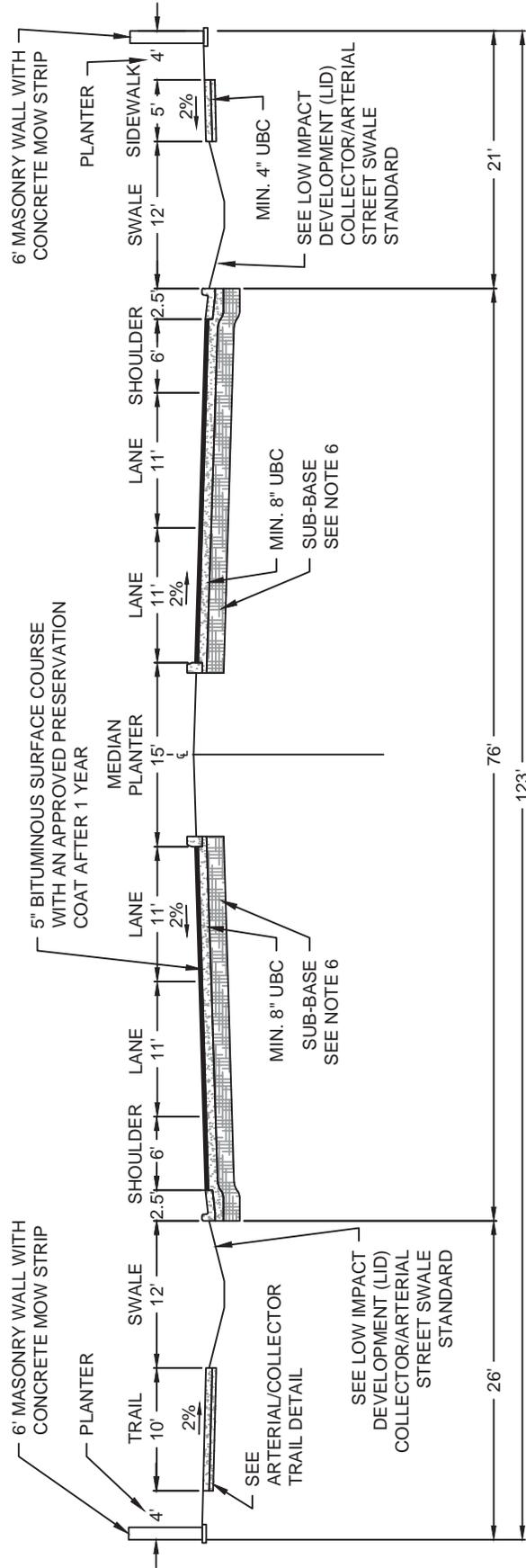
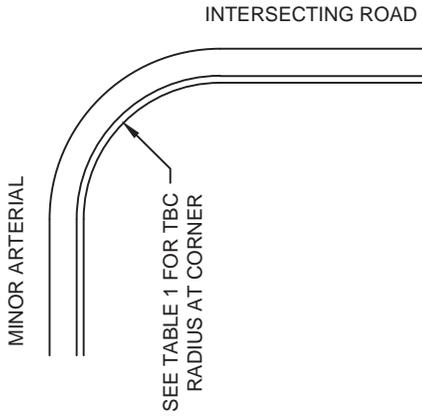
STANDARD DRAWING

MAJOR COLLECTOR 3 LANE STREET

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	42

MINOR ARTERIAL STREET INTERSECTION RADIUS	TBC RADIUS
MAJOR ARTERIAL	35'
MINOR ARTERIAL	35'
MAJOR COLLECTOR	30'
MINOR COLLECTOR	30'
COMMERCIAL LOCAL	30'
RESIDENTIAL LOCAL	25'



MINOR ARTERIAL 5 LANE STREET - 123' ROW

NOTES:

- CITY ENGINEER MAY WAIVE THE REQUIREMENT FOR A MASONRY WALL. SEE STANDARD DRAWINGS FOR TRAILS AND SIDEWALKS.
- TRAIL MAY BE INSTALLED ON EITHER SIDE OF STREET AS APPROVED BY THE CITY ENGINEER. SIDEWALK SHALL BE INSTALLED ON THE OPPOSITE SIDE. PLANTERS, BEHIND SIDEWALK OR TRAIL, SHALL HAVE SHRUBS WITH BARK MULCH OR XERISCAPE AS APPROVED BY THE CITY. SPRINKLER SYSTEMS SHALL BE INSTALLED ACCORDING TO CITY STANDARDS.
- SWALE MAY BE GRASS OR XERISCAPE, AS APPROVED BY THE CITY ENGINEER. SEE STANDARD DRAWINGS FOR LID SWALES.
- SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT.
- MINIMUM OF 8" UNTREATED BASE COURSE UNDER STREET PAVEMENT AND CURB & GUTTER.
- ALL UTILITY BOXES AND EQUIPMENT SHALL BE LOCATED ON THE STREET SIDE OF MASONRY WALL.
- ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNER.



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STANDARD DRAWING

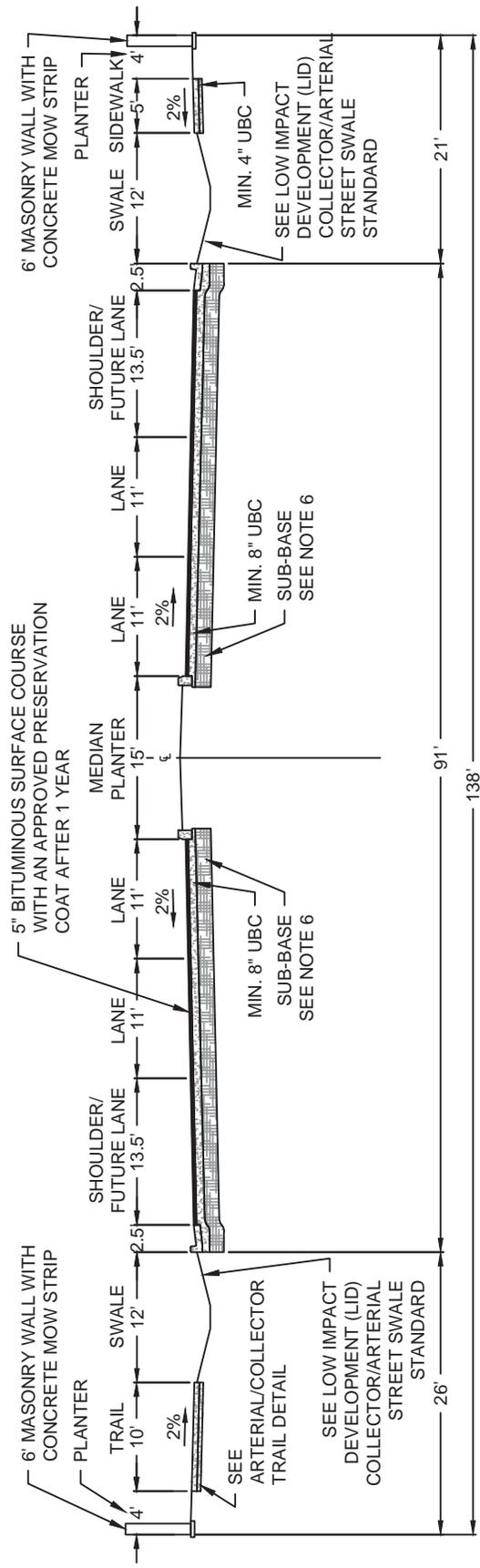
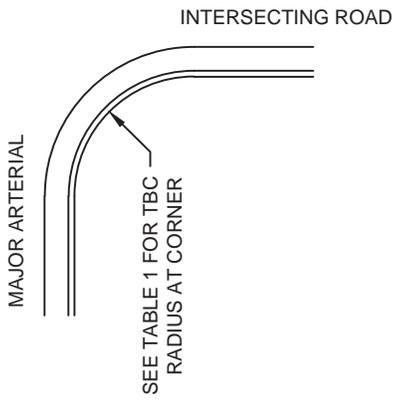
MINOR ARTERIAL 5 LANE STREET

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	43

TABLE 1

MAJOR ARTERIAL STREET INTERSECTION RADIUS	TBC RADIUS
MAJOR ARTERIAL	35'
MINOR ARTERIAL	35'
MAJOR COLLECTOR	35'
MINOR COLLECTOR	35'
COMMERCIAL LOCAL	30'
RESIDENTIAL LOCAL	25'



MAJOR ARTERIAL 7 LANE STREET - 138' ROW

**NOTES:**

1. CITY ENGINEER MAY WAIVE THE REQUIREMENT FOR A MASONRY WALL.
2. SEE STANDARD DRAWINGS FOR TRAILS AND SIDEWALKS.
3. TRAIL MAY BE INSTALLED ON EITHER SIDE OF STREET AS APPROVED BY THE CITY ENGINEER. SIDEWALK SHALL BE INSTALLED ON THE OPPOSITE SIDE.
4. PLANTERS, BEHIND SIDEWALK OR TRAILS, SHALL HAVE SHRUBS WITH BARK MULCH OR XERISCAPE AS APPROVED BY THE CITY. SPRINKLER SYSTEMS SHALL BE INSTALLED ACCORDING TO CITY STANDARDS.
5. SWALE MAY BE GRASS OR XERISCAPE, AS APPROVED BY THE CITY ENGINEER. SEE STANDARD DRAWINGS FOR LID SWALES.
6. SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT.
7. MINIMUM OF 8" UNTREATED BASE COURSE UNDER STREET PAVEMENT AND CURB & GUTTER.
8. ALL UTILITY BOXES AND EQUIPMENT SHALL BE LOCATED ON THE STREET SIDE OF MASONRY WALL.
9. ALL PLANTER AREAS BETWEEN THE CURB AND SIDEWALK SHALL BE LANDSCAPED WITH PERVIOUS MATERIALS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER OR DESIGNER.



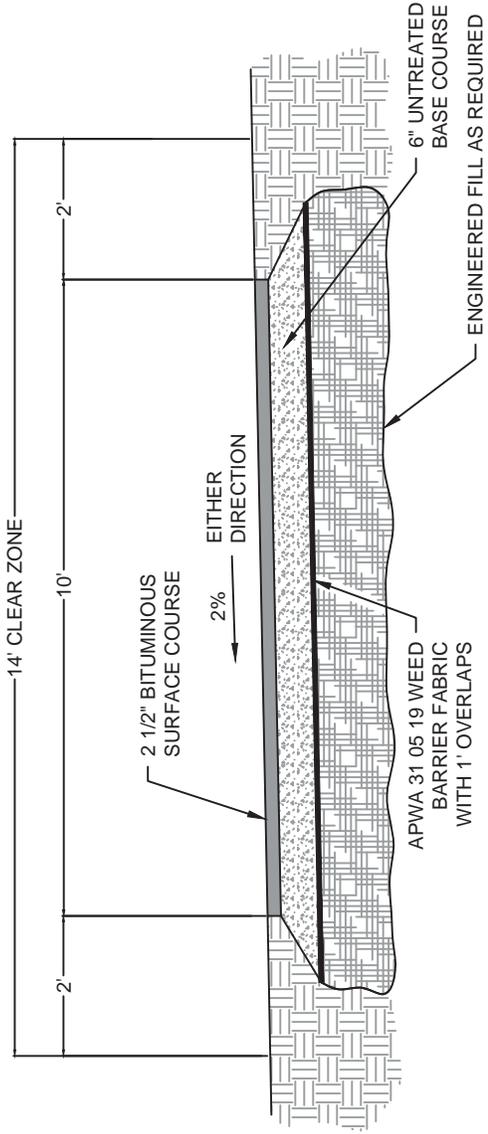
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STANDARD DRAWING

MAJOR ARTERIAL 7 LANE STREET

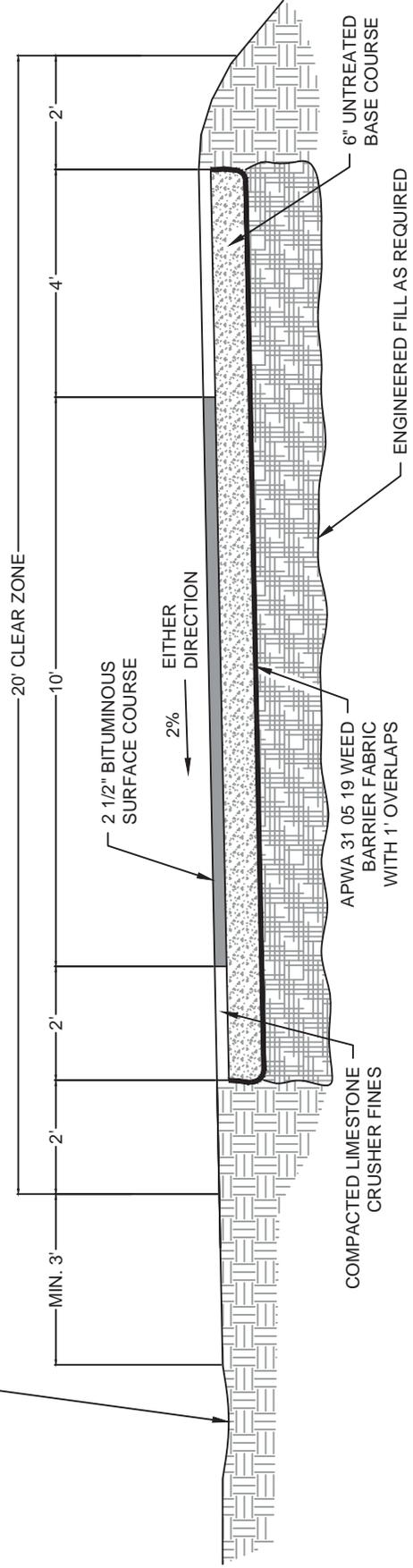
DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	44



TYPE "A" TRAIL

MEANDERING SINGLE TRACK, MULTI-USE TRAIL FOR EQUESTRIAN USE, MOUNTAIN BIKING AND HIKING



TYPE "B" TRAIL

- NOTES:
1. ALL TREES, SHRUBS AND OTHER VEGETATION SHALL BE REMOVED FROM THE CLEAR ZONE.
  2. CITY SHALL INSPECT EACH BASE COURSE OR FABRIC LAYER BEFORE COVERING.
  3. ALL WEEDS SHALL BE SPRAYED AND KILLED WITH ROUNDUP OR AN APPROVED EQUIVALENT ONE WEEK BEFORE ANY WORK MAY BE PERFORMED, AND WITHIN 3 WEEKS OF THE PLACEMENT OF UNTREATED BASE COURSE.
  4. TRAIL LANES SHALL BE DELINEATED BY A CENTER, SINGLE, DASHED, YELLOW LINE.

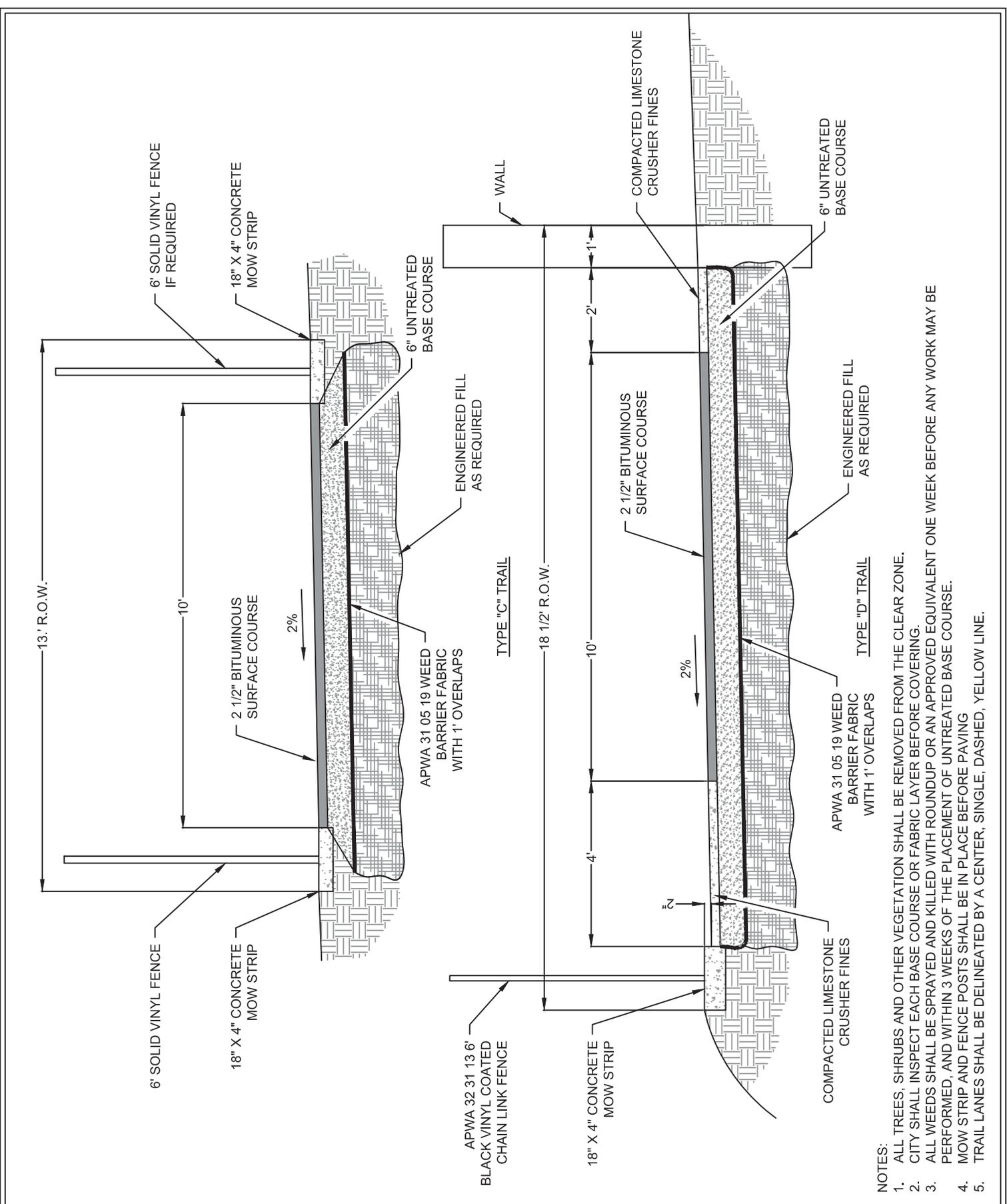


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STANDARD DRAWING  
 TYPE A & B  
 TRAIL SECTIONS

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	45



- NOTES:
1. ALL TREES, SHRUBS AND OTHER VEGETATION SHALL BE REMOVED FROM THE CLEAR ZONE.
  2. CITY SHALL INSPECT EACH BASE COURSE OR FABRIC LAYER BEFORE COVERING.
  3. ALL WEEDS SHALL BE SPRAYED AND KILLED WITH ROUNDUP OR AN APPROVED EQUIVALENT ONE WEEK BEFORE ANY WORK MAY BE PERFORMED, AND WITHIN 3 WEEKS OF THE PLACEMENT OF UNTREATED BASE COURSE.
  4. MOW STRIP AND FENCE POSTS SHALL BE IN PLACE BEFORE PAVING
  5. TRAIL LANES SHALL BE DELINEATED BY A CENTER, SINGLE, DASHED, YELLOW LINE.

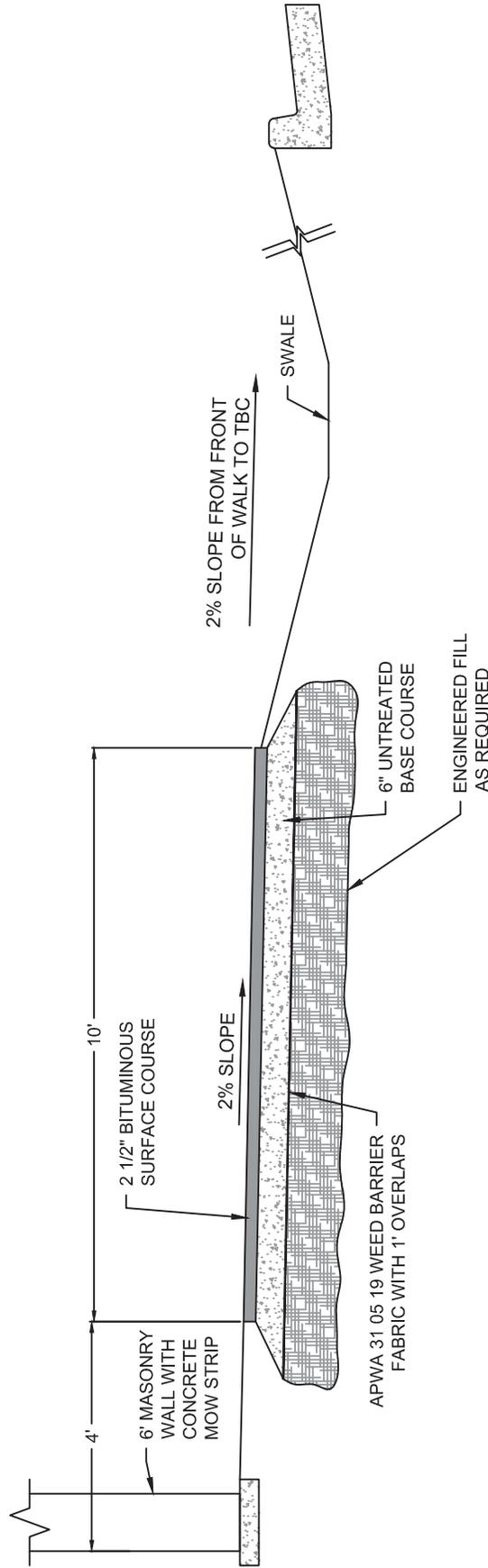


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STANDARD DRAWING

TYPE C & D TRAIL SECTIONS

DRAWN:	JLR	SCALE: NONE
DESIGN:	CJP	
CHECK:	CMT	STANDARD 46
DATE:	6/22/16	



TYPE "E" TRAIL

**NOTES:**

1. ALL TREES, SHRUBS AND OTHER VEGETATION SHALL BE REMOVED FROM THE CLEAR ZONE.
2. CITY SHALL INSPECT EACH BASE COURSE OR FABRIC LAYER BEFORE COVERING.
3. ALL WEEDS SHALL BE SPRAYED AND KILLED WITH ROUNDUP OR AN APPROVED EQUIVALENT ONE WEEK BEFORE ANY WORK MAY BE PERFORMED, AND WITHIN 3 WEEKS OF THE PLACEMENT OF UNTREATED BASE COURSE.
4. TRAIL LANES SHALL BE DELINEATED BY A CENTER, SINGLE, DASHED, YELLOW LINE.



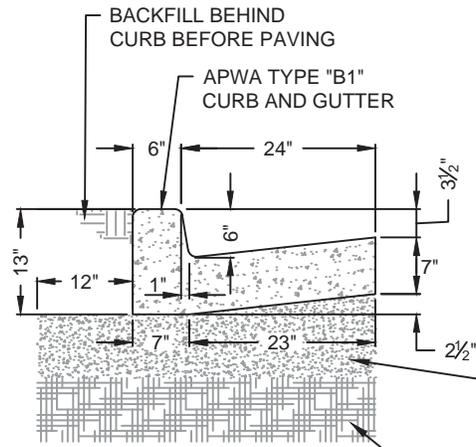
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
SPANISH FORK, UT 84660  
(801) 804-4550

STANDARD DRAWING

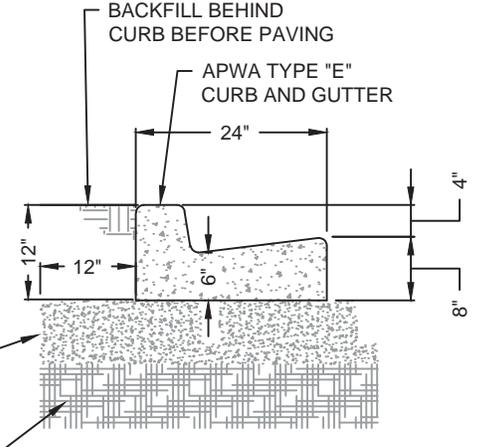
ARTERIAL / COLLECTOR  
TRAIL SECTIONS

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

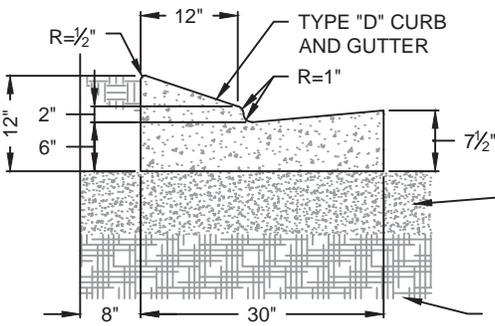
SCALE:	NONE
STANDARD	47



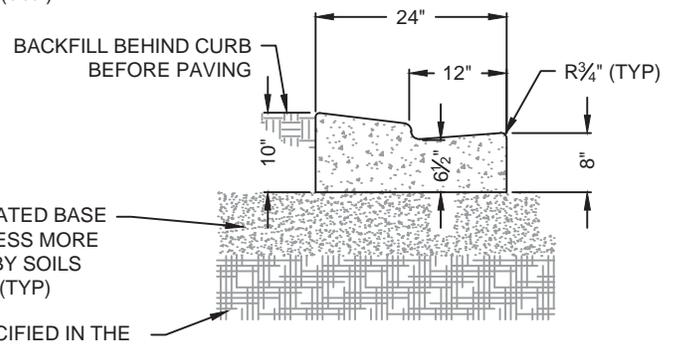
30" CATCH CURB AND GUTTER



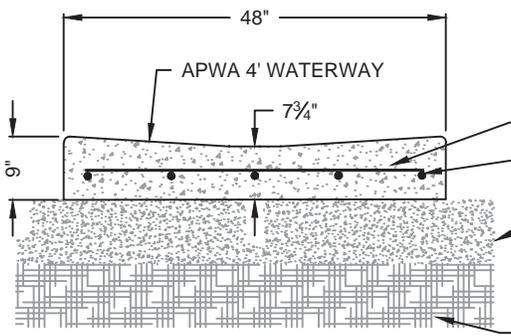
24" CATCH CURB AND GUTTER



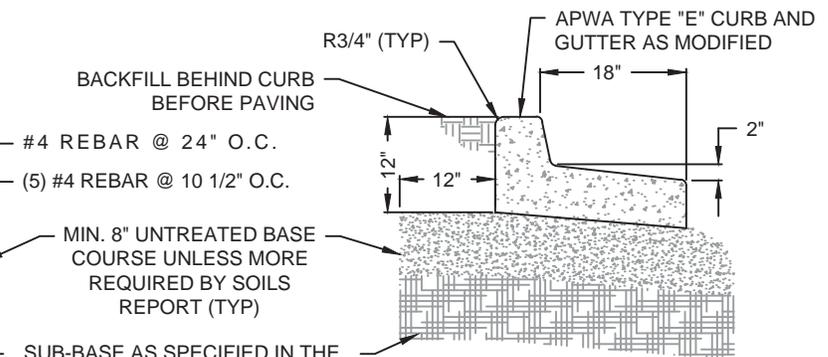
30" DRIVE THROUGH GUTTER  
SEE NOTE 9



24" DRIVE THROUGH GUTTER  
SEE NOTE 9



CROSS GUTTER



FLOW AWAY CURB AND GUTTER

MIN. 8" UNTREATED BASE COURSE UNLESS MORE REQUIRED BY SOILS REPORT (TYP)  
SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT (TYP)

MIN. 8" UNTREATED BASE COURSE UNLESS MORE REQUIRED BY SOILS REPORT (TYP)  
SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT (TYP)

MIN. 8" UNTREATED BASE COURSE UNLESS MORE REQUIRED BY SOILS REPORT (TYP)  
SUB-BASE AS SPECIFIED IN THE CONSTRUCTION STANDARDS AND SOILS REPORT (TYP)

NOTES:

1. SUB-BASE UNDER ALL CURBS AND GUTTERS SHALL MATCH WHAT IS IN THE ROAD WITH A MINIMUM OF 8" OF COMPACTED UNTREATED BASE COURSE.
2. IF CONCRETE IS TO BE POURED NEXT TO A CURB #4 REBAR SHALL BE DOWELED 3" INTO CURB AND 4" INTO SIDEWALK. REBAR SHALL BE INSTALLED A MINIMUM OF 2" FROM TOP OF SIDEWALK AND CURB 24" O.C.
3. SIDEWALKS SHALL HAVE CONSTRUCTION JOINTS EVERY 5'.
4. TOP FRONT OF SIDEWALK SHALL BE PLACED AT THE SAME GRADE AS TOP BACK OF CURB.
5. TACK SHALL BE APPLIED TO LIP OF CURB AND EXTEND 1" ONTO GRAVEL ROAD BASE.
6. PAVERS, FABRIC, SAND MATERIAL AND INSTALLATION SHALL MEET THE SPECIFICATIONS AND REQUIREMENTS OF APWA 32 14 13 (PRECAST CONCRETE UNIT PAVING) AND 32 14 16 (BRICK UNIT PAVING).
7. ESTABLISH PAVEMENT PATTERN TO ASSURE ALL CUT EDGE PAVERS SHALL BE HALF PAVERS OR LARGER.
8. ALL PAVERS SHALL MATCH THE ORIGINAL COLOR OF THE DARK RED CONCRETE PAVERS ON MAIN STREET
9. MODIFIED CURB & GUTTER IS ONLY TO BE USED IN THE RESIDENTIAL SUB LOCAL ROAD - 42' RIGHT OF WAY UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.



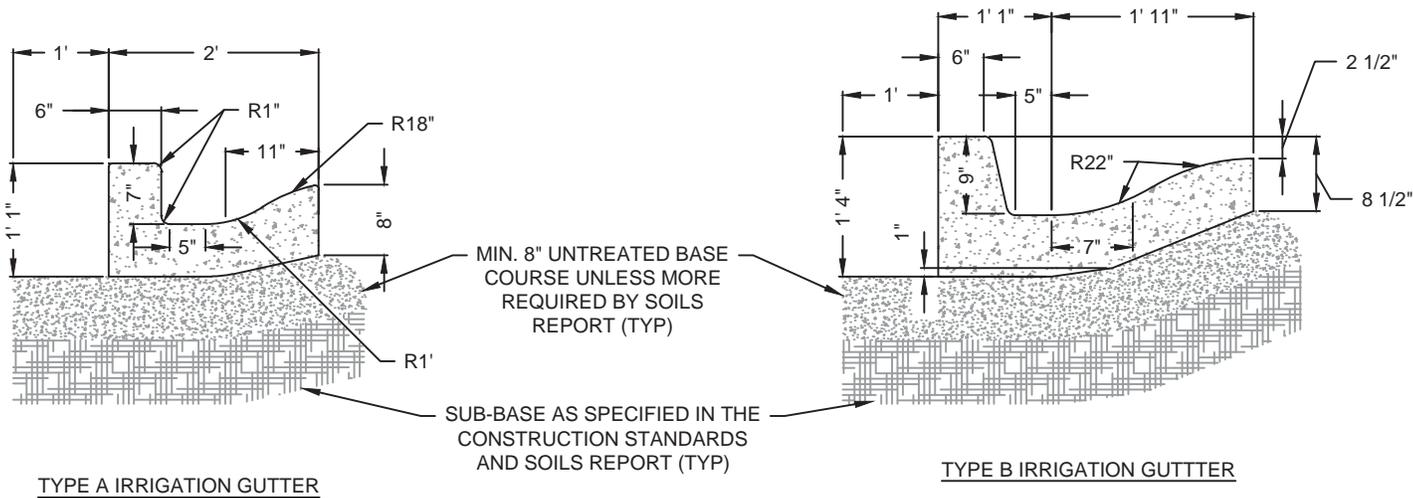
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
SPANISH FORK, UT 84660  
(801) 804-4550

STANDARD DRAWING

CURB & GUTTERS

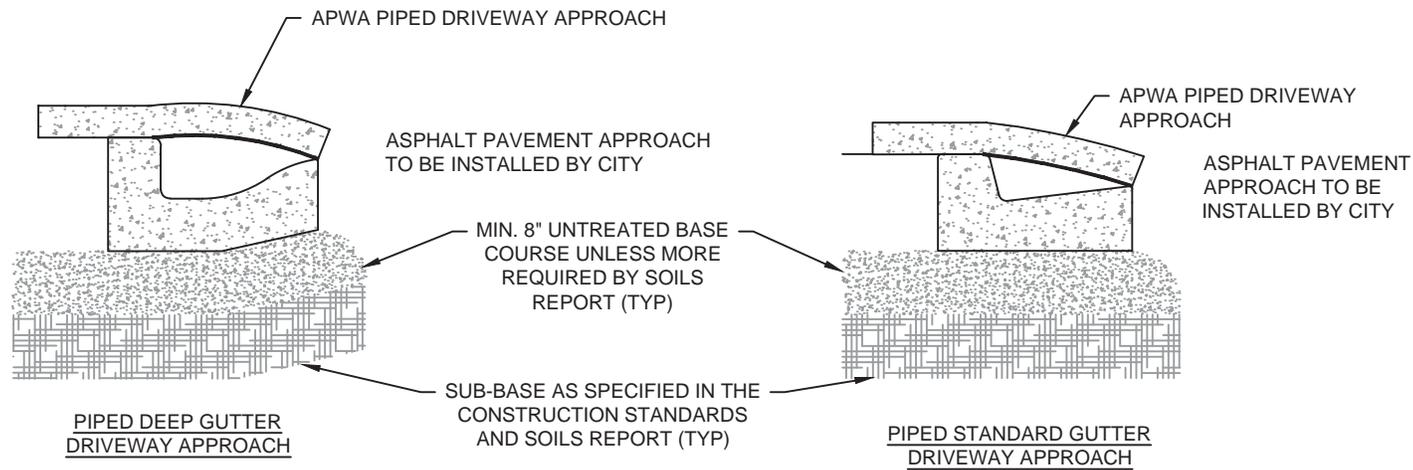
DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
48



TYPE A IRRIGATION GUTTER

TYPE B IRRIGATION GUTTER



PIPED DEEP GUTTER DRIVEWAY APPROACH

PIPED STANDARD GUTTER DRIVEWAY APPROACH

NOTES:

1. SUB-BASE UNDER ALL CURBS AND GUTTERS SHALL MATCH WHAT IS IN THE ROAD WITH A MINIMUM OF 8" OF COMPACTED UNTREATED BASE COURSE.
2. IF CONCRETE IS TO BE POURED NEXT TO A CURB #4 REBAR SHALL BE DOWELED 3" INTO CURB AND 4" INTO SIDEWALK. REBAR SHALL BE INSTALLED A MINIMUM OF 2" FROM TOP OF THE SIDEWALK AND CURB 24" O.C.
3. TACK SHALL BE APPLIED TO LIP OF CURB AND EXTEND 1' ONTO GRAVEL ROAD BASE.
4. STEEL DRIVE APPROACH MAY ONLY BE USED WHEN AUTHORIZED BY THE CITY ENGINEER



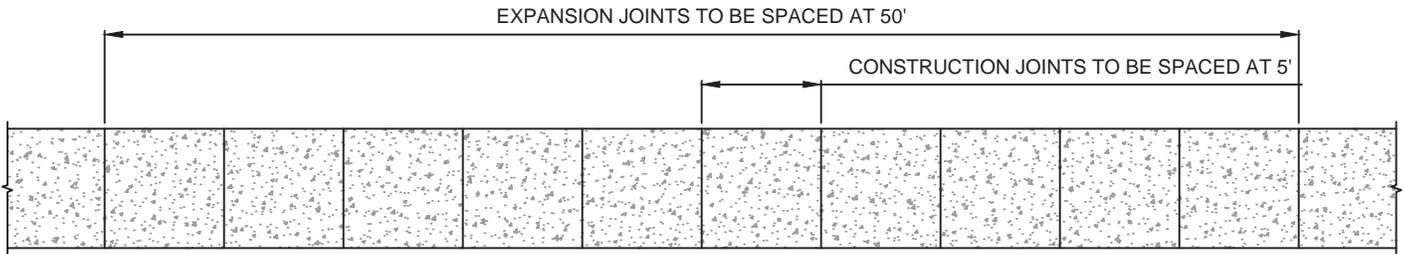
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
SPANISH FORK, UT 84660  
(801) 804-4550

STANDARD DRAWING

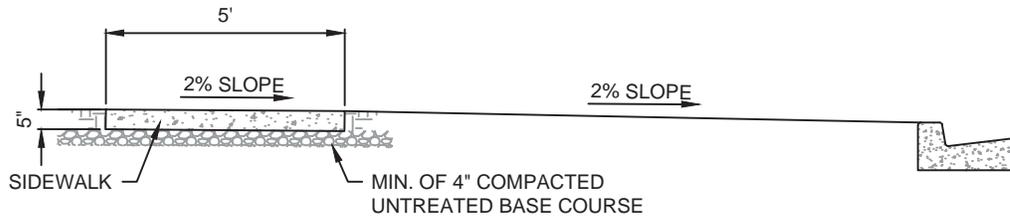
DEEP GUTTERS

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

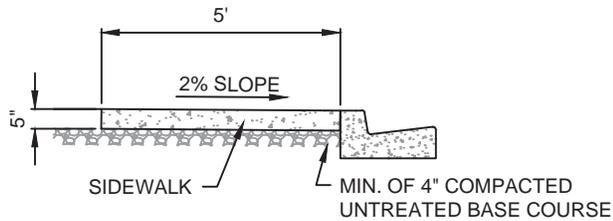
SCALE:  
NONE  
STANDARD  
49



PLAN VIEW



SIDEWALK CROSS-SECTION WITH PLANTER  
SEE APWA PLAN NUMBER 231 CONCRETE SIDEWALK



SIDEWALK CROSS-SECTION WITHOUT PLANTER  
SEE APWA PLAN NUMBER 231 CONCRETE SIDEWALK

NOTES:

1. IF CONCRETE IS TO BE POURED NEXT TO A CURB #4 REBAR SHALL BE DOWELED 3" INTO CURB AND 4" INTO SIDEWALK. REBAR SHALL BE DOWELED A MINIMUM OF 2" FROM TOP OF SIDEWALK AND CURB 24" O.C.
2. SIDEWALKS SHALL HAVE CONSTRUCTION JOINTS EVERY 5'.
3. SIDEWALK SHALL HAVE EXPANSION JOINTS EVERY 50'
4. TOP FRONT OF SIDEWALK SHALL BE PLACED AT 2% GRADE ABOVE TOP BACK OF CURB.



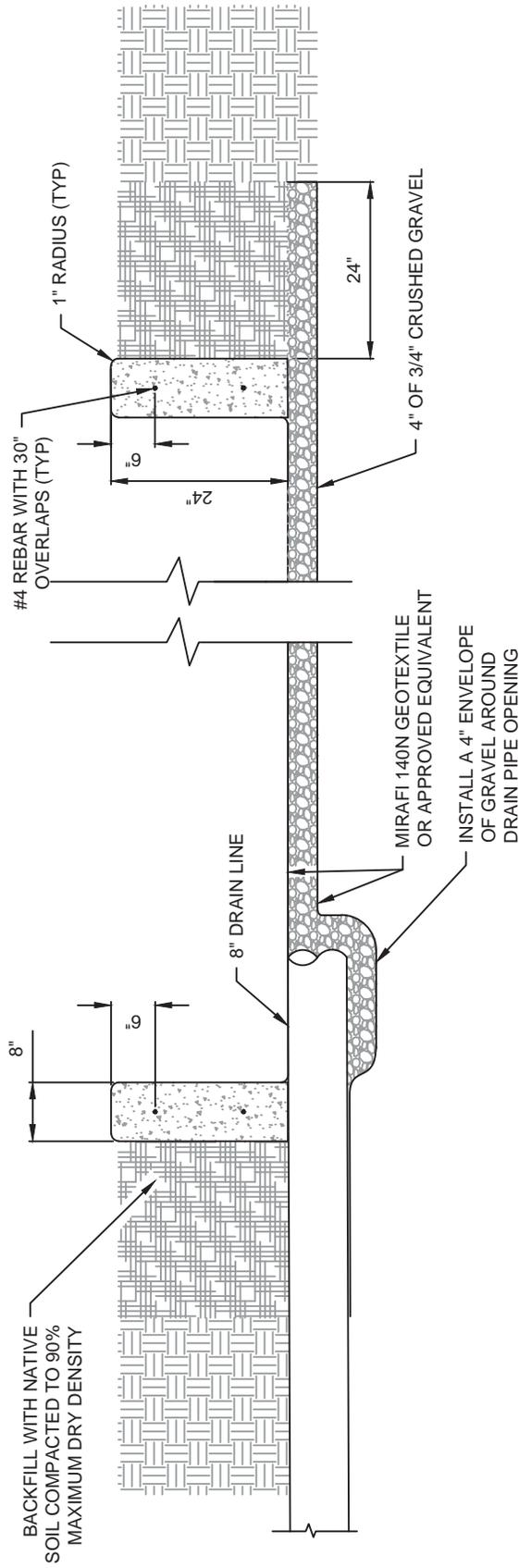
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
SPANISH FORK, UT 84660  
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STANDARD DRAWING

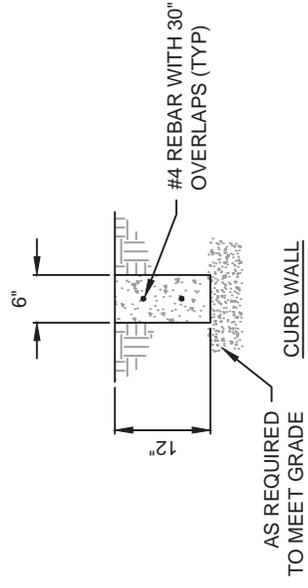
SIDEWALK

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

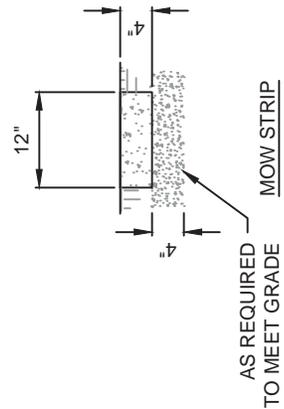
SCALE:	NONE
STANDARD	50



PLAYGROUND CURB WALL



AS REQUIRED TO MEET GRADE



AS REQUIRED TO MEET GRADE

- NOTES:
- ENGINEERED BASE UNDER ALL CURBS AND GUTTERS SHALL MATCH WHAT IS IN THE ROAD WITH A MINIMUM OF 8" OF COMPACTED UNTREATED BASE COURSE. MOW STRIPS, SIDEWALKS, AND CURB WALLS SHALL HAVE A MINIMUM OF 4" OF COMPACTED UNTREATED BASE COURSE UNLESS NEXT TO A PAVED AREA.
  - IF CONCRETE IS TO BE POURED NEXT TO A CURB #4 REBAR SHALL BE DOWELED 3" INTO CURB AND 4" INTO SIDEWALK. REBAR SHALL BE INSTALLED A MINIMUM OF 2" FROM TOP OF THE SIDEWALK AND CURB 24" O.C.
  - SIDEWALKS, MOW STRIPS, AND CURB WALLS SHALL HAVE CONSTRUCTION JOINTS EVERY 8' OR AT EACH FENCE POST.
  - THERE SHALL BE A 2% GRADE FROM THE CURB TO SIDEWALK ACROSS PLANTERS.



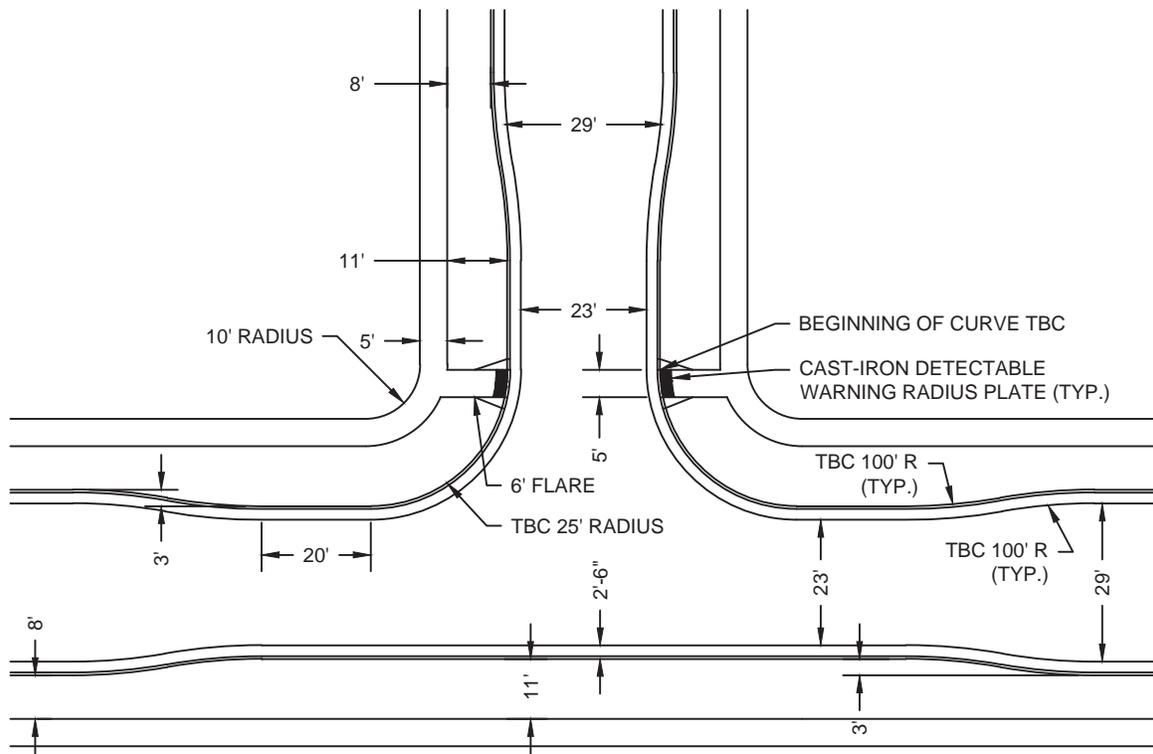
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STANDARD DRAWING

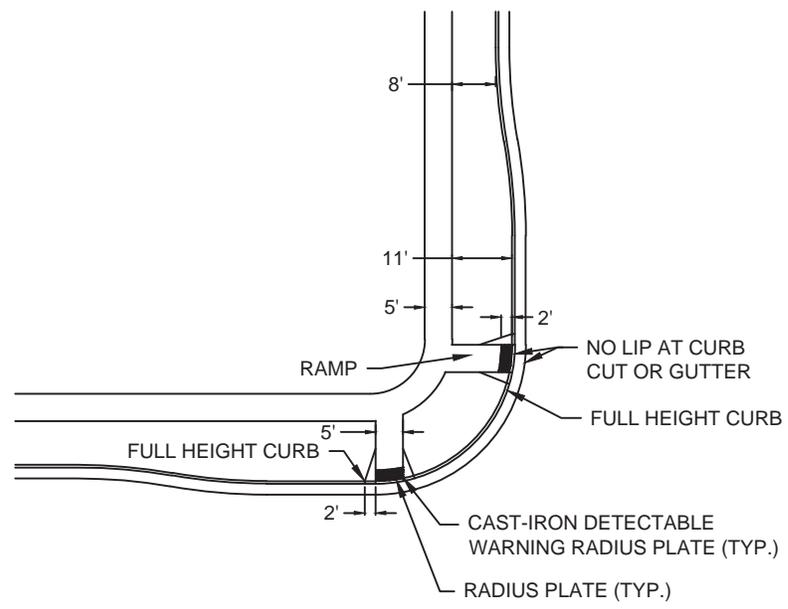
MOW STRIP AND CURB WALLS

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	51



LOCAL-TO-LOCAL TEE INTERSECTION



CORNER DETAIL

NOTES:

1. RAMPS SHALL HAVE A 1:12 MAXIMUM SLOPE, WITH A MAXIMUM 2% CROSS SLOPE. ALL OTHER SIDEWALK SHALL HAVE A 1:48 MAXIMUM CROSS SLOPE.
2. CONTRACTOR SHALL INSTALL CAST-IRON DETECTABLE WARNING RADIUS PLATES. PLATES SHALL BE AN EAST JORDAN IRON WORKS OR APPROVED EQUIVALENT. DETECTABLE WARNING PLATES SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9", A HEIGHT OF NOMINAL 0.2" AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35".
3. LOCATE DETECTABLE WARNING SURFACE SO THE CORNERS NEAREST THE STREET ARE WITHIN 1" OF THE BACK OF CURB.
4. CONCRETE SHALL BE 5" THICK THROUGHOUT RAMP.
5. RAMP THAT IS TO BE POURED NEXT TO A CURB, SHALL HAVE #4 REBAR SHALL BE DOWELED 6" INTO CURB AND 12" INTO RAMP. REBAR SHALL BE INSTALLED A MINIMUM OF 2" FROM TOP OF CURB 24" O.C.
6. CURB FLARE SHALL HAVE A 1:4 MAXIMUM SLOPE. MODIFICATIONS TO THIS STANDARD MUST BE APPROVED BY THE CITY.
7. REDUCED WIDTH INTERSECTION TO BE USED WITH LOCAL TO LOCAL ROADS. NOT TO BE USED WITH COLLECTOR/ ARTERIAL ROADS.

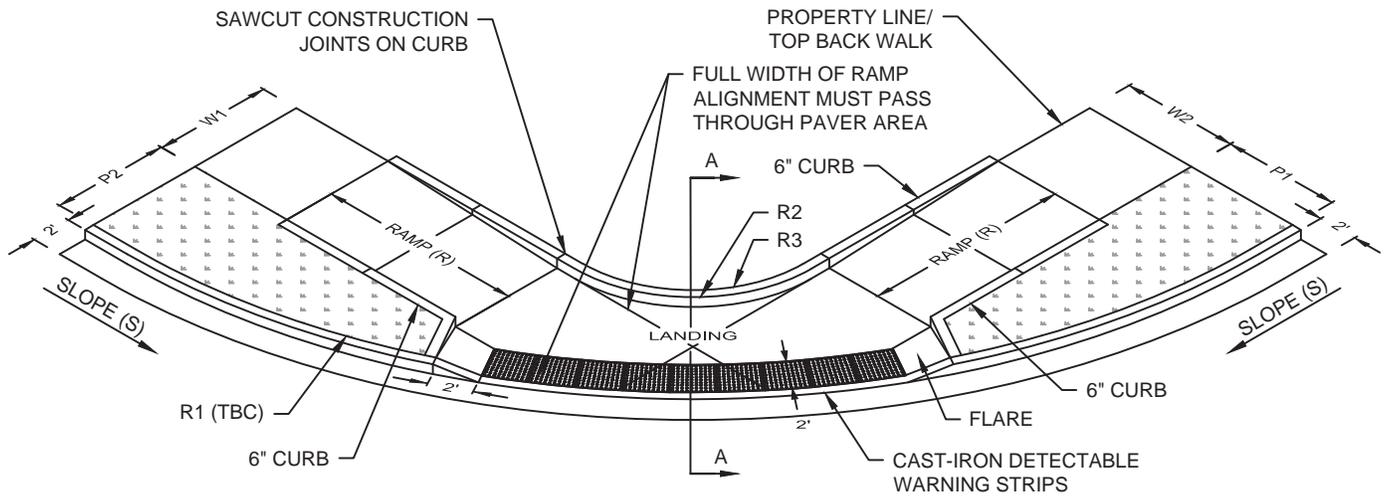


SPANISH FORK CITY  
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STANDARD DRAWING  
 REDUCED WIDTH INTERSECTION (LOCAL TO LOCAL)

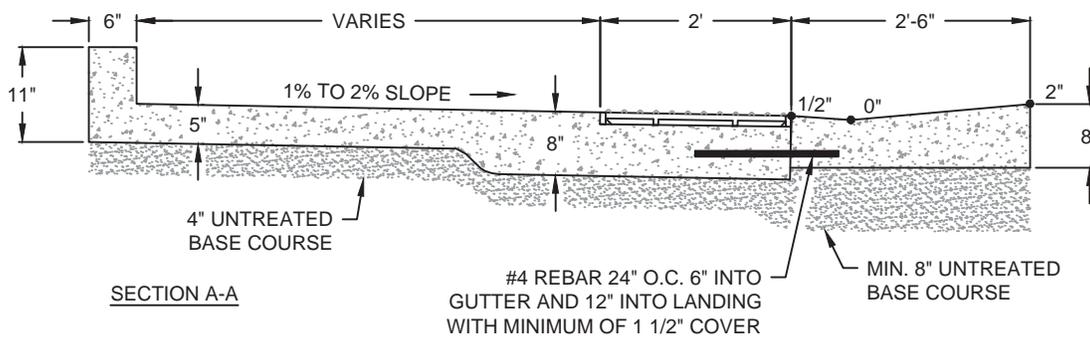
DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	52



SLOPE OF CURB AND GUTTER TO LANDING (S)	RAMP LENGTH (R)	CURB WALL
-0.45% OR MORE	5'	NO
-0.45% TO -2.0%	10'	YES
-2% OR LESS	15'	YES

STREET TBC RADIUS (R1)				35' RADIUS		30' RADIUS		25' RADIUS	
SIDEWALK WIDTH (W1)	PLANTER WIDTH (P1)	SIDEWALK WIDTH (W2)	PLANTER WIDTH (P2)	PROPERTY LINE RADIUS (R2)	TOP BACK CURB RADIUS (R3)	PROPERTY LINE RADIUS (R2)	TOP BACK CURB RADIUS (R3)	PROPERTY LINE RADIUS (R2)	TOP BACK CURB RADIUS (R3)
5'	12'	5'	12'	2'6"	2'	2'6"	2'	2'6"	2'
5'	12'	5'	8'	2'6"	5'	2'6"	2'	2'6"	2'
5'	8'	5'	8'	5'6"	12'	2'6"	2'	2'6"	2'



**NOTES:**

- CONTRACTOR SHALL INSTALL PAVERS ACCORDING TO THE STANDARDS FOR CAST-IRON DETECTABLE WARNING PLATES AND MATCH PATTERN IN THIS DRAWING. RADIAL PLATES SHALL BE A EAST JORDAN IRON WORKS OR APPROVED EQUIVALENT AND SHALL BE ACCORDING TO THE CORRECT TBC RADIUS.
- THE MAXIMUM SLOPE OF A STREET WITHIN 25' OF THE BEGINNING OF RADIUS IS 5.5%.
- THE SLOPE OF THE FLOWLINE OF GUTTER THROUGH A PEDESTRIAN RAMP SHALL BE 2.0% OR LESS OR APPROVED BY CITY ENGINEER.
- CURB AND GUTTER SLOPE (S) AND RAMP LENGTHS (R) SHALL BE CLEARLY LABELED AND DRAWN ON ALL PLANS, SEE TABLE FOR (R2) AND (R3).
- RAMPS SHALL NOT EXCEED A 1:12 SLOPE.
- STANDARD PEDESTRIAN RAMPS HAVE BEEN DESIGNED FOR NEW CONSTRUCTION. REPLACEMENT OF EXISTING PEDESTRIAN RAMPS SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER AND APPROVED BY THE CITY ENGINEER OR HIS/HER DESIGNEE.



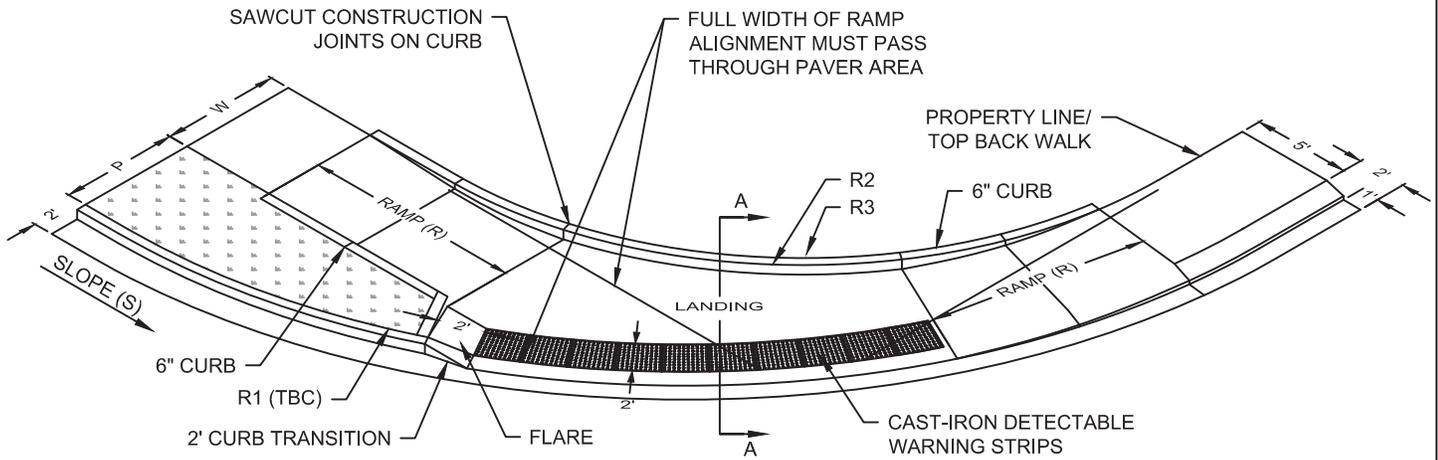
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
SPANISH FORK, UT 84660  
(801) 804-4550

**STANDARD DRAWING**

PEDESTRIAN RAMP SIDEWALKS WITH PLANTERS

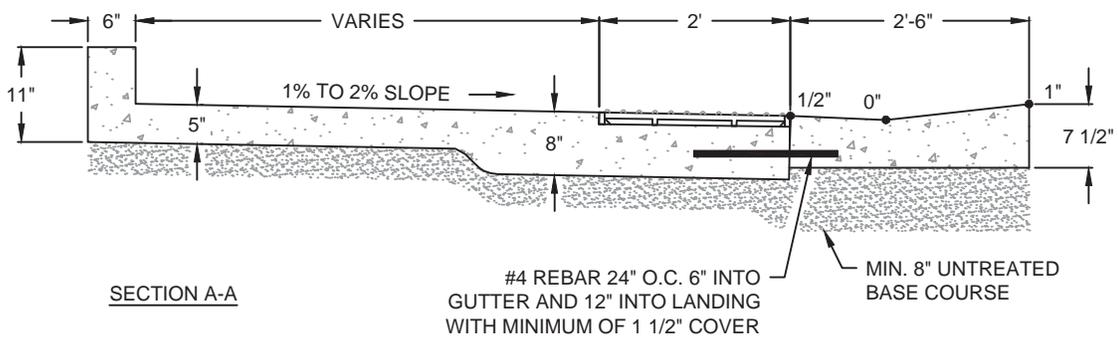
DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
53



SLOPE OF CURB AND GUTTER TO LANDING (S)	RAMP LENGTH (R)	CURB WALL
-0.45% OR MORE	5'	NO
-0.45% TO -2.0%	10'	YES
-2% OR LESS	15'	YES

STREET TBC RADIUS (R1)		35' RADIUS		30' RADIUS		25' RADIUS	
SIDEWALK WIDTH (W)	PLANTER WIDTH (P)	PROPERTY LINE RADIUS (R2)	TOP BACK CURB RADIUS (R3)	PROPERTY LINE RADIUS (R2)	TOP BACK CURB RADIUS (R3)	PROPERTY LINE RADIUS (R2)	TOP BACK CURB RADIUS (R3)
10' TRAIL	12'	12'6"	12'	8'6"	8'	4'	4'
5'	12'	16'6"	20'16'	12'6"	12'	7'	10'
5'	12'	22'6"	22'	18'6"	18'	12'	15'



**NOTES:**

- CONTRACTOR SHALL INSTALL PAVERS ACCORDING TO THE STANDARDS FOR CAST-IRON DETECTABLE WARNING PLATES AND MATCH PATTERN IN THIS DRAWING. RADIAL PLATES SHALL BE A EAST JORDAN IRON WORKS OR APPROVED EQUIVALENT AND SHALL BE ACCORDING TO THE CORRECT TBC RADIUS.
- THE MAXIMUM SLOPE OF A STREET WITHIN 25' OF THE BEGINNING OF RADIUS IS 5.5%.
- THE SLOPE OF THE FLOWLINE OF GUTTER THROUGH A PEDESTRIAN RAMP SHALL BE 2.0% OR LESS OR APPROVED BY CITY ENGINEER.
- CURB AND GUTTER SLOPE (S) AND RAMP LENGTHS (R) SHALL BE CLEARLY LABELED AND DRAWN ON ALL PLANS, SEE TABLE FOR (R2) AND (R3).
- RAMPS SHALL NOT EXCEED A 1:12 SLOPE.
- STANDARD PEDESTRIAN RAMPS HAVE BEEN DESIGNED FOR NEW CONSTRUCTION. REPLACEMENT OF EXISTING PEDESTRIAN RAMPS SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER AND APPROVED BY THE CITY ENGINEER OR HIS/HER DESIGNEE.



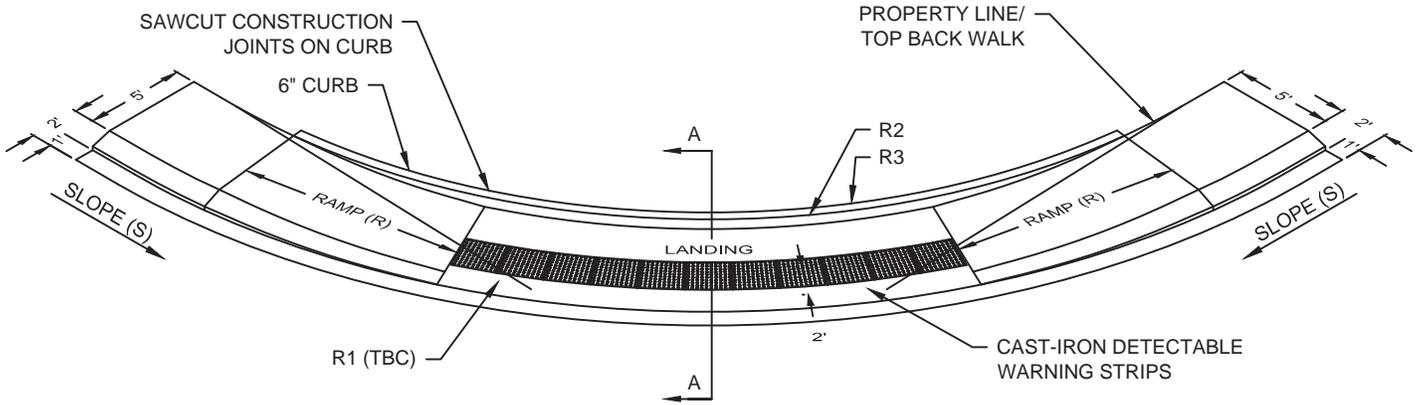
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
SPANISH FORK, UT 84660  
(801) 804-4550

**STANDARD DRAWING**

CORNER PEDESTRIAN RAMP FOR COMBINATION SIDEWALKS CONVERTING TO SIDEWALKS WITH PLANTERS

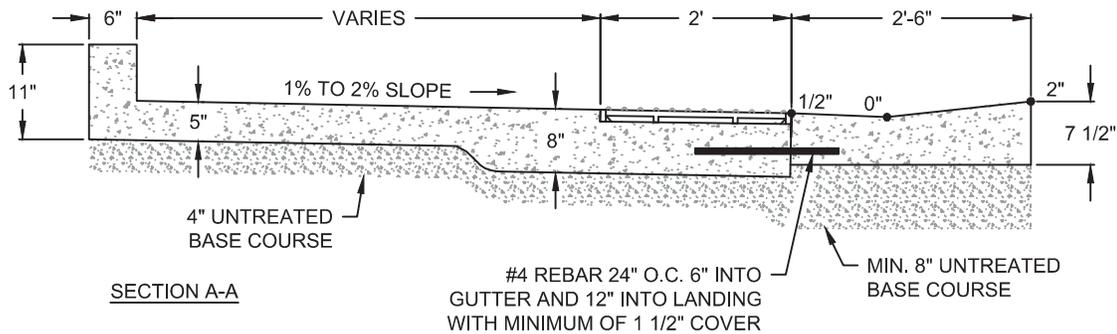
DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE: NONE  
STANDARD 54



SLOPE OF CURB AND GUTTER TO LANDING (S)	RAMP LENGTH (R)	CURB WALL
-0.45% OR MORE	5'	NO
-0.45% TO -2.0%	10'	YES
-2% OR LESS	15'	YES

STREET TBC RADIUS (R1)	35'		30'		25'	
	SIDEWALK WIDTH (W)	PROPERTY LINE RADIUS (R2)	TOP BACK CURB RADIUS (R3)	PROPERTY LINE RADIUS (R2)	TOP BACK CURB RADIUS (R3)	PROPERTY LINE RADIUS (R2)
5'	30'6"	30'	25'6"	25'	20'5"	20'



**NOTES:**

- CONTRACTOR SHALL INSTALL PAVERS ACCORDING TO THE STANDARDS FOR CAST-IRON DETECTABLE WARNING PLATES AND MATCH PATTERN IN THIS DRAWING. RADIAL PLATES SHALL BE A EAST JORDAN IRON WORKS OR APPROVED EQUIVALENT AND SHALL BE ACCORDING TO THE CORRECT TBC RADIUS.
- THE MAXIMUM SLOPE OF A STREET WITHIN 25' OF THE BEGINNING OF RADIUS IS 5.5%.
- THE SLOPE OF THE FLOWLINE OF GUTTER THROUGH A PEDESTRIAN RAMP SHALL BE 2.0% OR LESS OR APPROVED BY CITY ENGINEER.
- CURB AND GUTTER SLOPE (S) AND RAMP LENGTHS (R) SHALL BE CLEARLY LABELED AND DRAWN ON ALL PLANS, SEE TABLE FOR (R2) AND (R3).
- RAMPS SHALL NOT EXCEED A 1:12 SLOPE.
- STANDARD PEDESTRIAN RAMPS HAVE BEEN DESIGNED FOR NEW CONSTRUCTION. REPLACEMENT OF EXISTING PEDESTRIAN RAMPS SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER AND APPROVED BY THE CITY ENGINEER OR HIS/HER DESIGNEE.



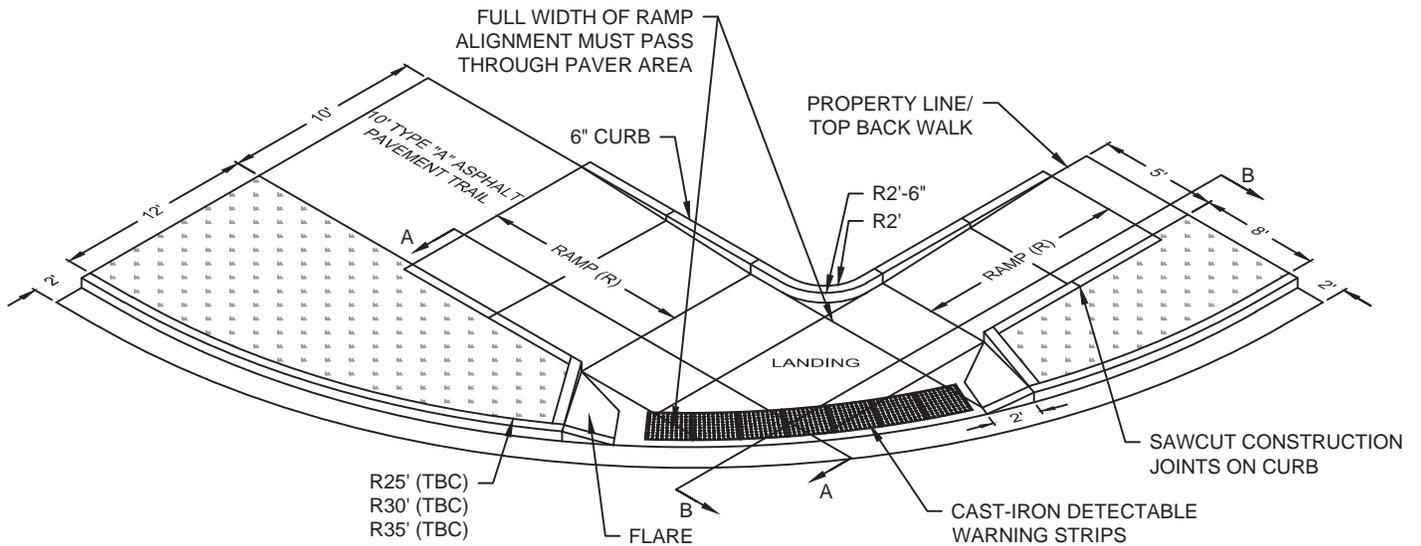
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
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**STANDARD DRAWING**

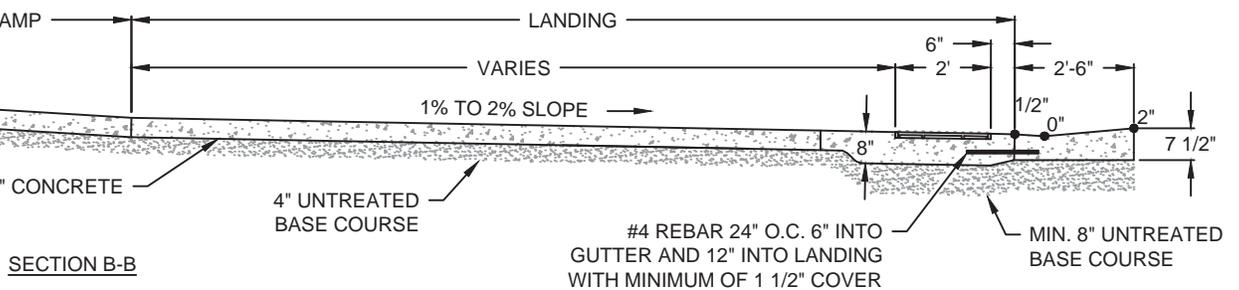
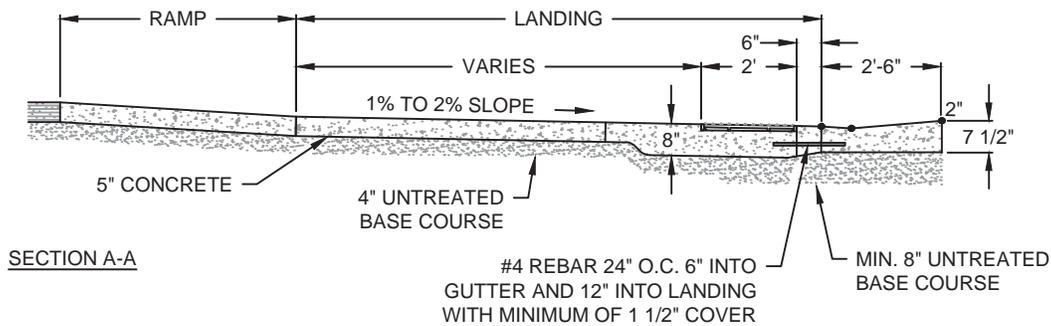
CORNER PEDESTRIAN RAMP COMBINATION SIDEWALKS

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
55



SLOPE OF CURB AND GUTTER TO LANDING (S)	RAMP LENGTH (R)	CURB WALL
-0.45% OR MORE	5'	NO
-0.45% TO -2.0%	10'	YES
-2% OR LESS	15'	YES



**NOTES:**

1. CONTRACTOR SHALL INSTALL PAVERS ACCORDING TO THE STANDARDS FOR CAST-IRON DETECTABLE WARNING PLATES AND MATCH PATTERN IN THIS DRAWING. RADIAL PLATES SHALL BE A EAST JORDAN IRON WORKS OR APPROVED EQUIVALENT AND SHALL BE ACCORDING TO THE CORRECT TBC RADIUS.
2. THE MAXIMUM SLOPE OF A STREET WITHIN 25' OF THE BEGINNING OF RADIUS IS 5.5%.
3. THE SLOPE OF THE FLOWLINE OF GUTTER THROUGH A PEDESTRIAN RAMP SHALL BE 2.0% OR LESS OR APPROVED BY CITY ENGINEER.
4. CURB AND GUTTER SLOPE (S) AND RAMP LENGTHS (R) SHALL BE CLEARLY LABELED AND DRAWN ON ALL PLANS, SEE TABLE FOR (R2) AND (R3).
5. RAMPS SHALL NOT EXCEED A 1:12 SLOPE.
6. STANDARD PEDESTRIAN RAMPS HAVE BEEN DESIGNED FOR NEW CONSTRUCTION. REPLACEMENT OF EXISTING PEDESTRIAN RAMPS SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER AND APPROVED BY THE CITY ENGINEER OR HIS/HER DESIGNEE.
7. POUR CONCRETE PEDESTRIAN RAMP BEFORE PAVING TRAIL.



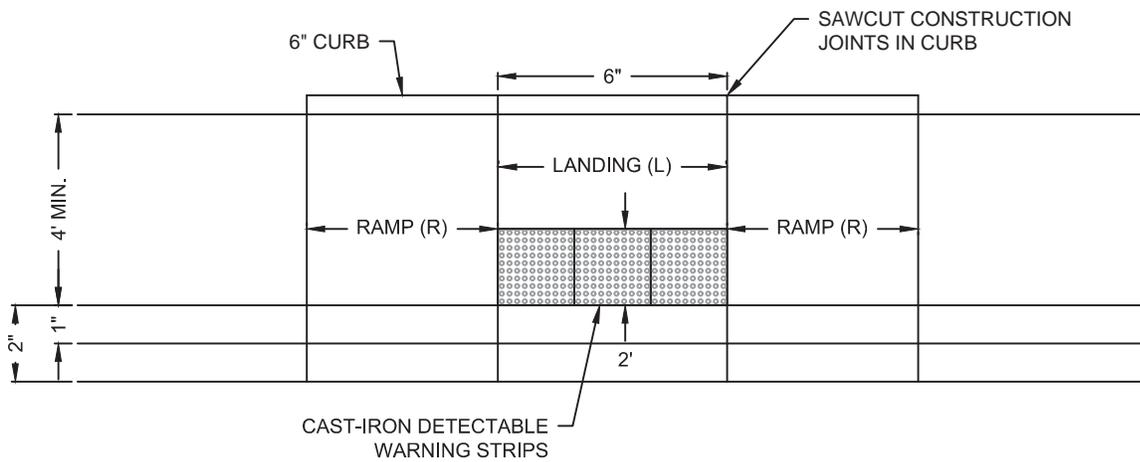
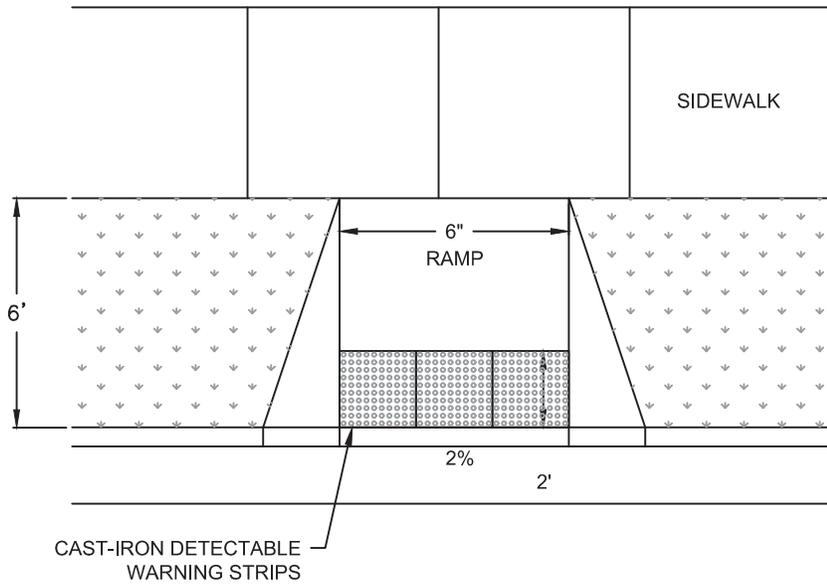
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
SPANISH FORK, UT 84660  
(801) 804-4550

**STANDARD DRAWING**

CORNER PEDESTRIAN RAMP FOR SIDEWALKS CONNECTING TO TRAILS

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
56



NOTES:

1. RAMPS SHALL HAVE A 1:12 MAXIMUM SLOPE, WITH A MAXIMUM 2% CROSS SLOPE. ALL OTHER SIDEWALK AND LANDING SHALL HAVE A 1:48 MAXIMUM SLOPE.
2. CONTRACTOR SHALL INSTALL PAVERS ACCORDING TO THE STANDARDS FOR CAST-IRON DETECTABLE WARNING PLATES AND MATCH PATTERN IN THIS DRAWING. RADIAL PLATES SHALL BE A EAST JORDAN IRON WORKS OR APPROVED EQUIVALENT AND SHALL BE ACCORDING TO THE CORRECT TBC RADIUS.
3. CONCRETE SHALL BE 7 INCHES THICK THROUGHOUT RAMP.
4. IF CONCRETE IS TO BE POURED NEXT TO A CURB, #4 REBAR SHALL BE DOWELED 6" INTO CURB AND 12" INTO SIDEWALK. REBAR SHALL BE INSTALLED A MINIMUM OF 1 1/2" FROM TOP OF THE SIDEWALK AND CURB 24" O.C.
5. MODIFICATIONS TO THIS STANDARD MUST BE APPROVED BY THE CITY.
6. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 IN, A HEIGHT OF NOMINAL 0.2 IN AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 IN.



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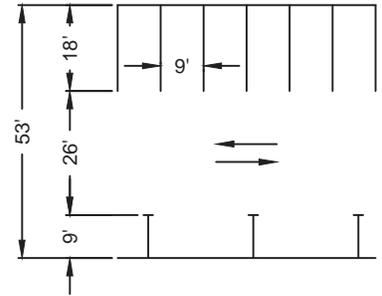
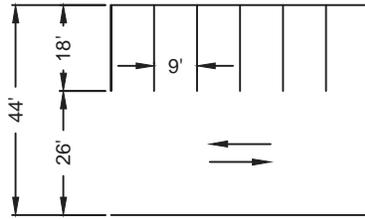
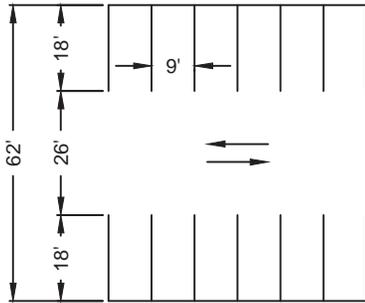
STANDARD DRAWING

MID BLOCK PEDESTRIAN RAMP DESIGN GUIDELINES

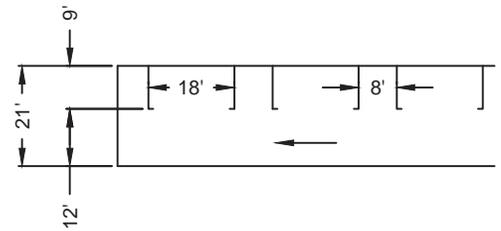
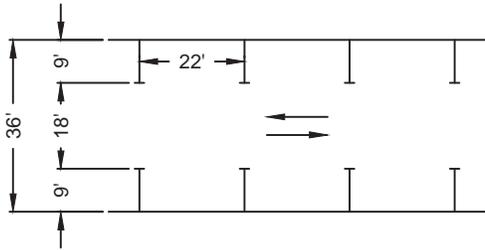
DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
57

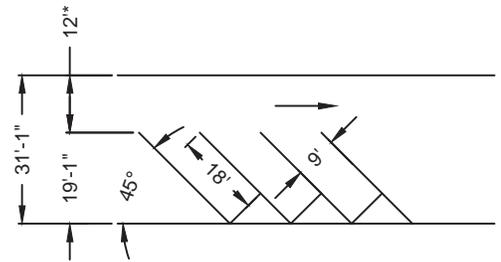
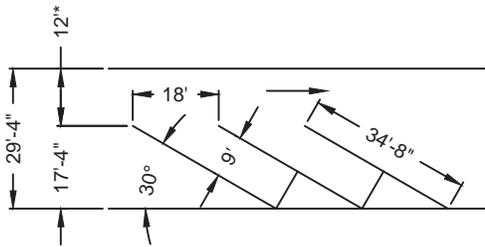




RIGHT ANGLE PARKING



PARALLEL PARKING

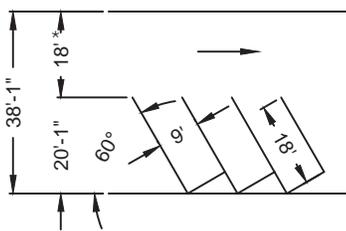


30 DEGREE ANGLE PARKING

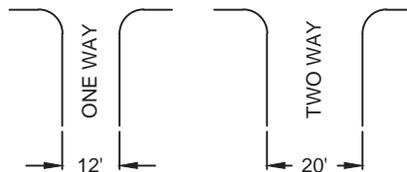
\*MUST HAVE 20' TRAVEL LANE FOR 2 WAY TRAFFIC\*

45 DEGREE ANGLE PARKING

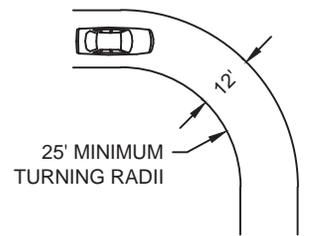
\*MUST HAVE 22' TRAVEL LANE FOR 2 WAY TRAFFIC\*



60 DEGREE ANGLE PARKING  
\*MUST HAVE 24' TRAVEL LANE FOR 2 WAY TRAFFIC\*



DRIVWAY WIDTHS



MINIMUM TURNING RADIUS



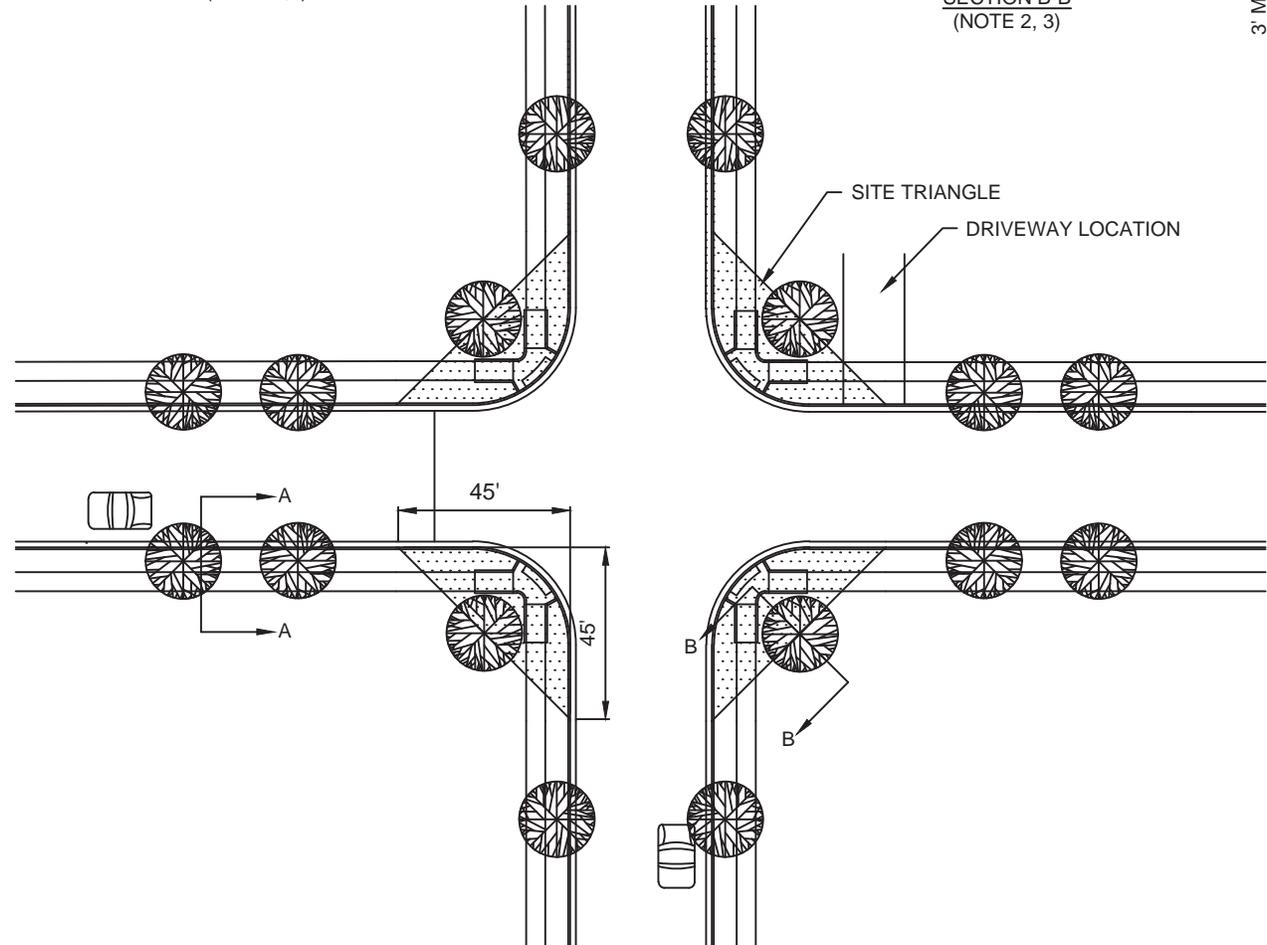
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STANDARD DRAWING

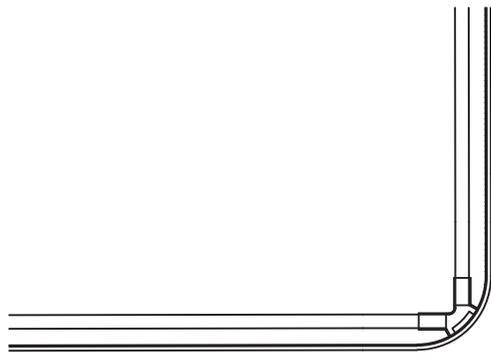
PARKING LOTS

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
59

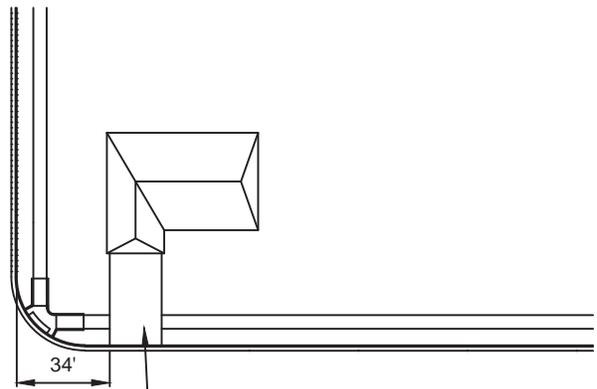


- NOTES:**
1. TREES IN PARK STRIPS MUST BE PRUNED TO A MINIMUM HEIGHT OF 14' ABOVE THE ROADWAY.
  2. RESIDENTS ON CORNER LOTS ARE REQUIRED TO HAVE AN UNOBSTRUCTED SITE TRIANGLE FOR 45' FROM THE INTERSECTION OF THE EXTENSION OF BACK OF CURB IN BOTH DIRECTIONS. NO STRUCTURES OR VEGETATION ON THIS TRIANGLE SHALL BE OVER 3' IN HEIGHT.
  3. TREES ON PRIVATE PROPERTY IN THE SITE TRIANGLE OR OVERHANGING THE SIDEWALK MUST BE PRUNED TO A MINIMUM HEIGHT OF 8' ABOVE THE SIDEWALK.
  4. TRAFFIC SIGNS AND STREET SIGNS SHALL NOT BE OBSTRUCTED BY VEGETATION FOR AT LEAST 100' FROM APPROACHING VIEW OF VEHICLE OPERATOR.
  5. TREES SHOULD NOT BE PLANTED WITHIN 10' OF A WATER METER AND FIRE HYDRANT AND WITHIN 20' OF STREET LIGHTS



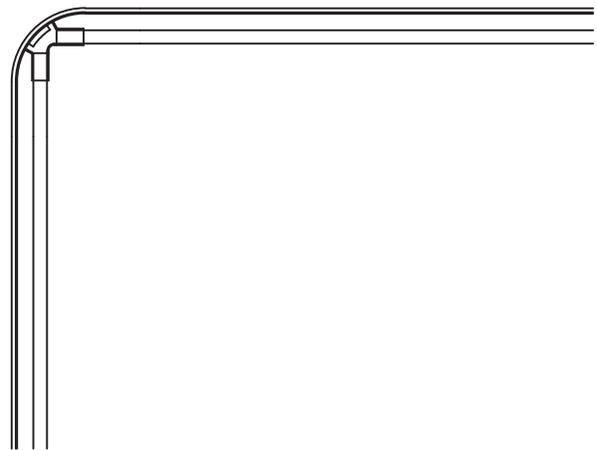
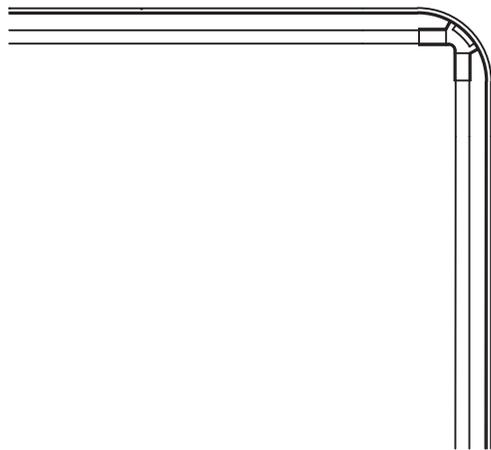
LOCAL STREET (60')

LOCAL STREET (60')



34'

DRIVEWAY



NOTES:

1. MEASUREMENTS ARE FROM THE TOP BACK OF CURB (TBC) TO THE EDGE OF DRIVEWAY FOR ACCESS.



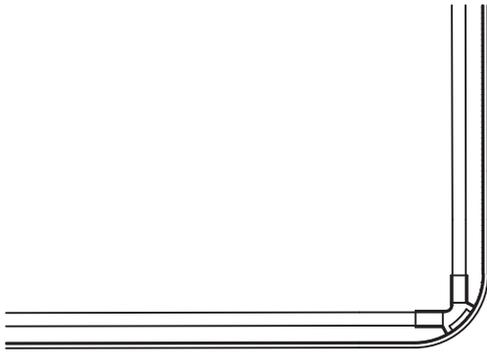
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
SPANISH FORK, UT 84660  
(801) 804-4550

STANDARD DRAWING

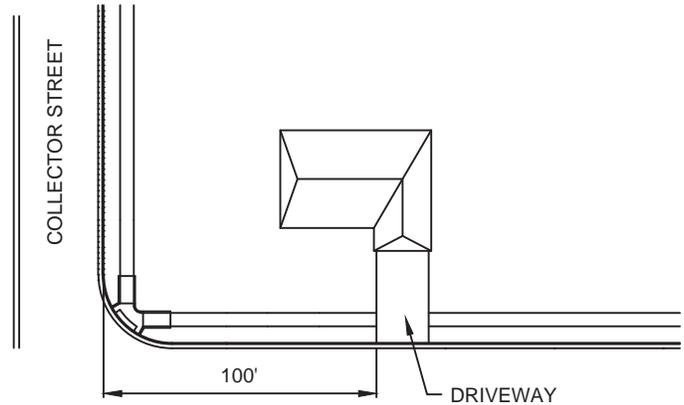
DRIVEWAY AND INTERSECTION LOCATION LOCAL / LOCAL

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	61



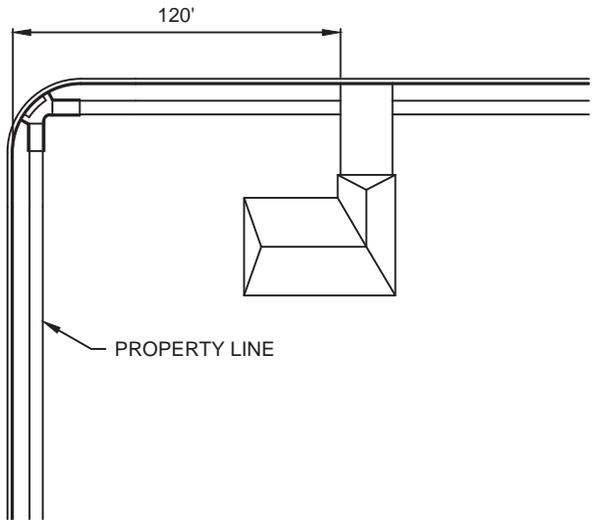
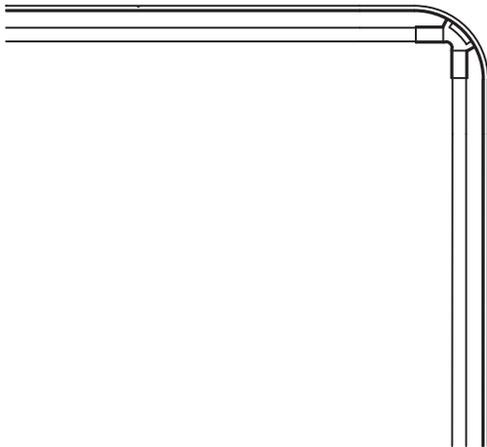
LOCAL RESIDENTIAL STREET



COLLECTOR STREET

100'

DRIVEWAY



120'

PROPERTY LINE

NOTES:

1. MEASUREMENTS ARE FROM THE TOP BACK OF CURB (TBC) TO THE EDGE OF DRIVEWAY FOR ACCESS.



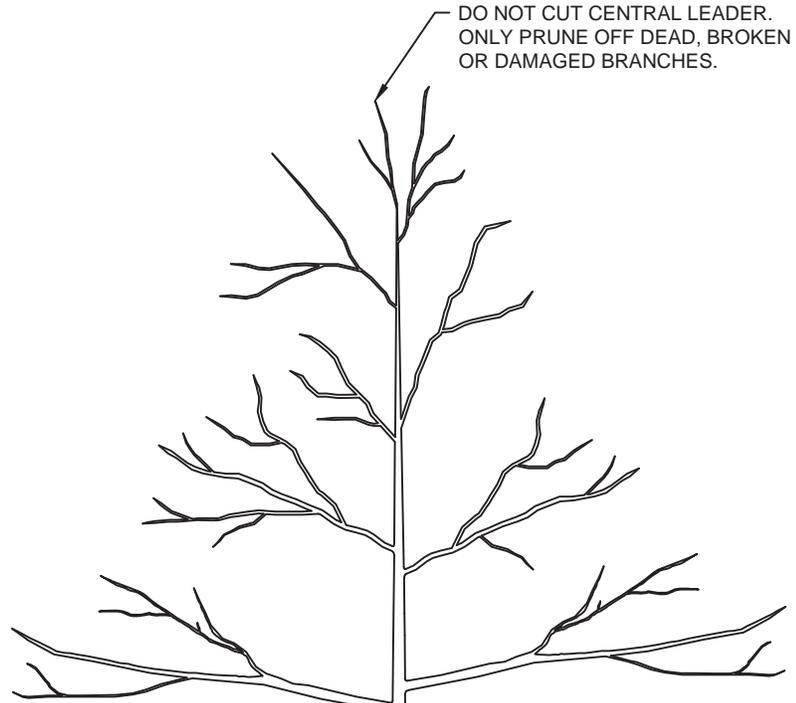
SPANISH FORK CITY  
40 SOUTH MAIN STREET  
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STANDARD DRAWING

DRIVEWAY AND INTERSECTION LOCATION LOCAL / COLLECTOR

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	62



DO NOT CUT CENTRAL LEADER.  
ONLY PRUNE OFF DEAD, BROKEN  
OR DAMAGED BRANCHES.

STAKE ONLY WHEN NECESSARY. USE  
SOFT FASTENING MATERIAL SUCH AS  
WIDE FABRIC STRAPS AROUND TREE.

PLACE ROOT-BALL AT SOIL GRADE  
AND ADD 2 TO 3 IN. OF WOOD CHIP  
MULCH. ALLOW SPACE BETWEEN  
WOOD CHIP & TRUNK

CUT AND REMOVE BURLAP AND  
BINDINGS FROM AT LEAST  
UPPER 2/3 OF ROOT-BALL

BACKFILL WITH PRE-EXISTING  
SOIL. DO NOT ADD FERTILIZER  
OR GRAVEL TO HOLE.

NOTES:

1. WOOD CHIPS SHALL BE REMOVED FROM DIRECTLY TOUCHING TRUNK.
2. DEPTH OF HOLE SHOULD BE NO DEEPER THAN THE ROOT-BALL.
3. DIAMETER OF HOLE SHOULD BE THREE TIMES THAT OF THE ROOT-BALL.



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STANDARD DRAWING

TREE

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	63

## SPANISH FORK ELECTRIC CONSTRUCTION STANDARDS & DRAWINGS

### GENERAL INFORMATION

#### PURPOSE

THE PURPOSE OF THE ELECTRICAL CONSTRUCTION DRAWINGS IS TO AID CUSTOMERS, CONTRACTORS, DEVELOPERS, ENGINEERS, IN CONSTRUCTION AND INSTALLATION OF ELECTRICAL SYSTEMS AND SERVICES TO NEW AND REMODELED STRUCTURES, AND NEW RESIDENTIAL, COMMERCIAL AND INDUSTRIAL DEVELOPMENTS. IT IS THE INTENT AND DESIRE, WITH THE AID OF THE CONSTRUCTION STANDARDS AND DRAWINGS, OF SPANISH FORK ELECTRIC TO PROVIDE SAFE, EFFICIENT, AND RELIABLE ELECTRICAL SERVICE TO ALL CUSTOMERS.

#### GENERAL GUIDELINES AND RULES

1. STANDARDS DRAWINGS 47 THROUGH 68 FOR ELECTRICAL & COMMUNICATIONS INSTALLATIONS ARE A SUPPLEMENT TO THE POLICY 39 CONSTRUCTION STANDARDS TEXT ONLY. THE DRAWINGS ARE NOT INTENDED TO BE VIEWED OR USED SOLELY WITHOUT FIRST READING AND UNDERSTANDING THE POLICY 39 CONSTRUCTION STANDARDS IN THE FRONT OF THIS BOOK.
2. REFER TO THE POLICY 39 CONSTRUCTION STANDARDS, CHAPTER 39.70 FOR ELECTRICAL INSTALLATIONS, AND CHAPTER 39.75 FOR COMMUNICATIONS INSTALLATIONS, FOR ALL APPLICATIONS.
3. CURB & GUTTER SHALL BE INSTALLED ON ANY PROJECT BEFORE THE MAIN ELECTRICAL TRENCH IS EXCAVATED. THE CURB SHOULD HAVE PROPERTY CORNERS MARKED AND PINNED IN THE CURB BY APPROVED METHODS. THE CURB WILL GIVE REFERENCE TO THE ELECTRICAL CONDUIT DEPTHS, ELECTRICAL BOX PLACEMENT AND OTHER LOCATIONS IMPORTANT FOR ELECTRICAL INSTALLATION.
4. IF THE ELECTRICAL INSTALLATION, APPLICATIONS, OR OTHER MATTERS ARE NOT COVERED IN THIS BOOK, THEN IN GENERAL, THE INSTALLATION, APPLICATION, OR MATTER IS NOT APPROVED.
5. ALL ELECTRICAL CONSTRUCTION, AND INSTALLATION SHALL CONFORM TO APPLICABLE PROVISIONS OF THE NATIONAL ELECTRICAL CODE (NEC), THE NATIONAL ELECTRICAL SAFETY CODE (NESC), OSHA, STATE, COUNTY, AND CITY ORDINANCES, STANDARDS, AND CODES.
6. ANY AND ALL WORK IN THE VICINITY OF OVERHEAD POWERLINES SHALL NOT BE ALLOWED UNLESS THE RESPONSIBLE PARTY FIRST NOTIFIES THE ELECTRIC DEPARTMENT OF THE INTENDED WORK OR ACTIVITY. NO PERSON OR THING SHALL BE BROUGHT WITHIN 10 FEET OF ANY HIGH VOLTAGE OVERHEAD POWER LINES, UNLESS THE PROPER STEPS ARE TAKEN TO INSURE THE SAFETY OF THE PUBLIC, AND POWER DEPARTMENT PERSONNEL. THE POWER DEPARTMENT RECOMMENDS A MINIMUM OF 3 BUSINESS DAYS NOTICE BE GIVEN BEFORE ANY WORK NEAR ITS OVERHEAD POWER LINES IS SCHEDULED TO BEGIN.
7. THE NATIONAL ELECTRICAL SAFETY CODE AND ELECTRIC DEPARTMENT CODE REQUIRES THAT HOMES, BUILDINGS, SIGNS, BRIDGES, ANTENNAS, ETC, HAVE SUFFICIENT HORIZONTAL AND VERTICAL CLEARANCES TO OVERHEAD POWER LINES. CONSULT WITH THE POWER DEPARTMENT FOR APPLICABLE DISTANCES AND CLEARANCES.
8. CALL BLUESTAKES BEFORE YOU DIG! UTAH LAW SECTION 54-8A-1 THROUGH 54-8A-11 REQUIRES THE BLUE STAKES ONE CALL LOCATION CENTER BE NOTIFIED AT LEAST TWO BUSINESS DAYS PRIOR TO EXCAVATION. THE EXCAVATION SHALL NOT BE STARTED UNTIL LOCATIONS HAVE BEEN MADE.
9. IN GENERAL, JOINT TRENCHING OF POWER AND COMMUNICATIONS IS ALLOWED AS LONG AS THE INSTALLATION CONFORMS TO THE CONSTRUCTION STANDARDS.
10. ALL ELECTRICAL CONDUITS SHALL BE INSTALLED A MINIMUM OF 4 FEET TO TOP OF CONDUIT FROM FINISHED GRADE. ADDITIONAL DEPTHS MAY BE REQUIRED IF HIGH VOLTAGE PRIMARY (12.47KV) CABLES ARE INSTALLED IN A JOINT TRENCH WITH LOW VOLTAGE (600V OR LESS) CABLES, AND COMMUNICATIONS CABLES. IN GENERAL, HIGH VOLTAGE PRIMARY (12.47KV) CONDUITS SHALL BE INSTALLED 1 FOOT IN DEPTH FOR EVERY 1 INCH IN CONDUIT SIZE, (example 6 inch conduit shall be 6 feet in depth), BUT IN NO CASE SHALL PRIMARY CONDUITS BE INSTALLED LESS THAN THE MINIMUM OF 4 FEET IN DEPTH, UNLESS APPROVED BY THE POWER DEPARTMENT.
11. THE ELECTRICAL DISTRIBUTION SYSTEM FOR ALL NEW CONSTRUCTION OF RESIDENTIAL, COMMERCIAL, INDUSTRIAL, DEVELOPMENTS SHALL BE INSTALLED UNDERGROUND UNLESS OTHERWISE APPROVED BY THE ELECTRIC DEPARTMENT. REMODELING, CHANGES IN USE, ADDITIONS, ALTERATIONS, AND OTHER CHANGES THAT EFFECT THE ELECTRICAL SYSTEM, MAY REQUIRE THAT THE ELECTRICAL SYSTEM BE REROUTED, OR UPGRADED UNDERGROUND, AND OR BE BROUGHT UP TO CURRENT NEC, NESC, AND CITY STANDARDS. ADDITIONAL REQUIREMENTS MAY APPLY
12. THE DEVELOPER IS TO PROVIDE THE TRENCH FOR ALL REQUIRED CONDUIT SYSTEMS, AND FOLLOWING THE INSTALLATION OF THE CONDUITS BY THE DEVELOPER, PROVIDE SAND AND BACKFILL TO MEET THE CONSTRUCTION STANDARDS. ALL TRENCHES SHALL BE COMPACTED TO 95% AND PASS THE COMPACTION TEST BEFORE THE TRENCH WILL BE ACCEPTED. ALL CONDUITS SHALL BE INSPECTED BEFORE ANY SAND OR BACKFILL IS APPLIED. TO INSURE FINAL GRADE HAS BEEN ESTABLISHED, THE CURB & GUTTER SHALL BE INSTALLED BEFORE THE ELECTRICAL TRENCH IS STARTED UNLESS OTHERWISE APPROVED BY THE ELECTRIC DEPARTMENT.
13. PRIOR TO BACKFILLING ANY CONDUITS, THE DEVELOPER SHALL SCHEDULE AND REQUEST AN INSPECTION FROM THE ELECTRIC DEPARTMENT. FOLLOWING THE INSPECTION THE ELECTRIC DEPARTMENT WILL ISSUE A "PASSED" OR "FAILED" SLIP TO PROCEED BACKFILLING OR NOT TO PROCEED.
14. STATE SPECIFIED ROAD BASE SHALL BE USED UNDER ALL ELECTRICAL BOXES, ENCLOSURES, PADS, OR VAULTS. THE ROAD BASE SHALL BE COMPACTED TO 95% MINIMUM AND PASS A COMPACTION TEST BEFORE ANY BOXES, ENCLOSURES, PADS OR VAULTS ARE SET. THE ROAD BASE SHALL BE A MINIMUM OF 1 FOOT IN DEPTH AND EXTEND A MINIMUM OF 1 FOOT PAST ALL SIDES OF THE BOXES, ENCLOSURES, PADS OR VAULTS. ADDITIONAL REQUIREMENTS MAY APPLY.
15. IN GENERAL, ALL ELECTRICAL BOXES SHALL BE PLACED A MINIMUM OF 18 INCHES FROM A PROPERTY LINE AND SET BACK 6 INCHES TO 1 FOOT BEHIND SIDEWALKS.



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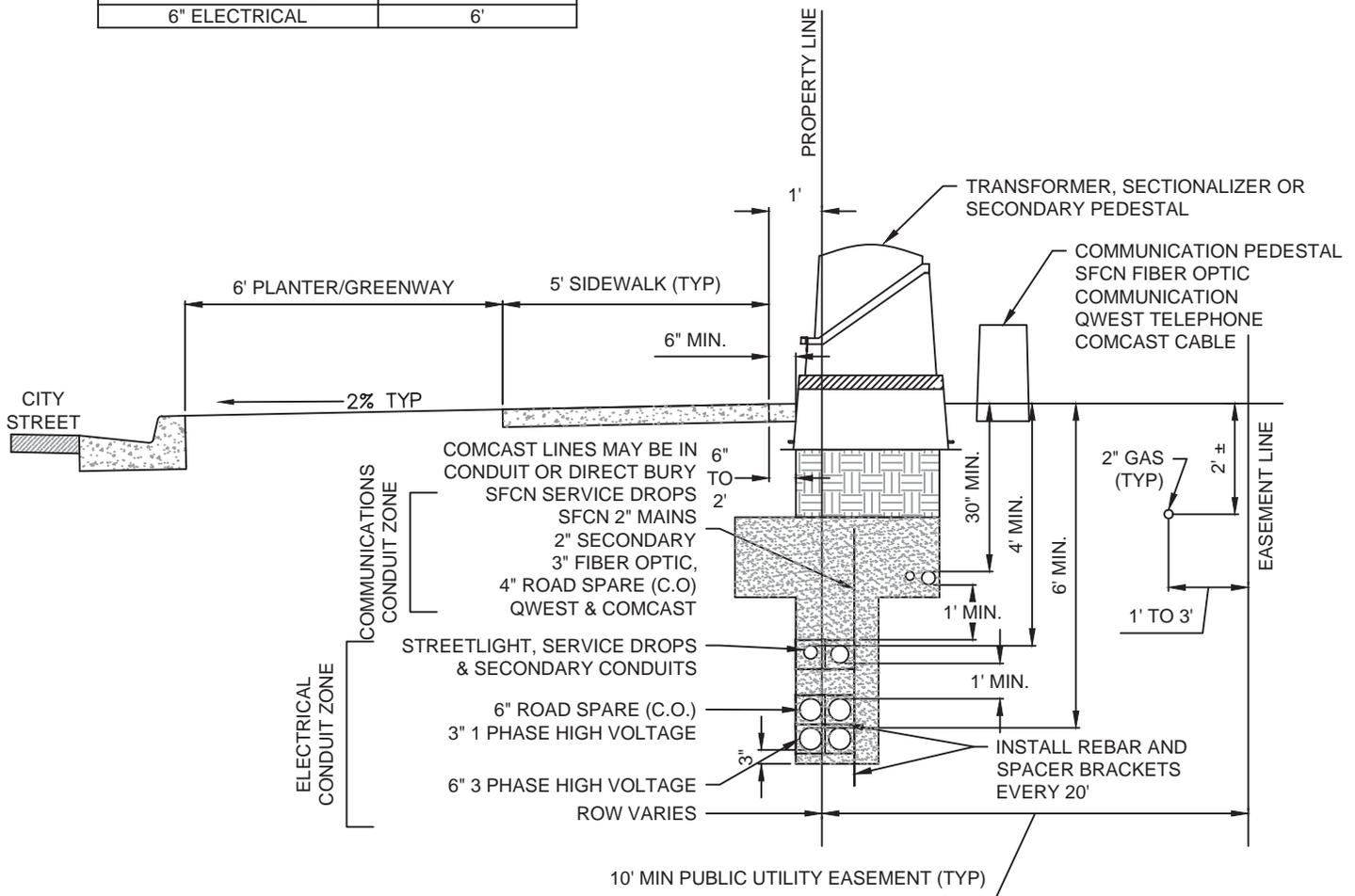
### STANDARD DRAWING

ELECTRIC AND COMMUNICATIONS  
FRONT PAGE-INFORMATION

DRAWN:	JLR	SCALE:	NONE
DESIGN:	CJP	STANDARD	64
CHECK:	CMT		
DATE:	6/22/16		

TYPE OF CONDUIT	(MIN.) DEPTH TO TOP OF CONDUIT
COMMUNICATION	30" MIN.
STREET LIGHT	4'
2" ELECTRICAL SERVICE	4'
3" AND 4" ELECTRICAL	4'
6" ELECTRICAL	6'

TYPICAL JOINT TRENCH OF HIGH VOLTAGE, LOW VOLTAGE, & COMMUNICATIONS CONDUITS



ALL POWER CONDUIT SHALL BE BURIED A MINIMUM OF 4' IN DEPTH TO TOP OF CONDUIT. IF HIGH VOLTAGE (12KV) CONDUITS & LOW VOLTAGE (600 VOLT) POWER CONDUITS ARE INSTALLED IN THE SAME TRENCH, THE HIGH VOLTAGE POWER SHALL ALWAYS BE INSTALLED BELOW LOW VOLTAGE POWER CONDUITS. IF THERE ARE MULTIPLE HIGH VOLTAGE CONDUITS (3" 1PHASE, 6" 3PHASE) IN THE SAME TRENCH, ALL HIGH VOLTAGE CONDUITS MAY BE INSTALLED AT THE DEPTH OF THE LARGEST CONDUIT (6")

NOTES:

1. COMMUNICATIONS CONDUIT ROUTING SHALL BE COORDINATED THROUGH THE SPANISH FORK ELECTRIC DEPARTMENT.
2. COMMUNICATIONS CONDUITS SHALL BE BEHIND OR TO THE SIDES OF TRANSFORMERS, SECTIONALIZERS OR JUNCTION BOX.
3. HIGH VOLTAGE PRIMARY CONDUITS SHALL ALWAYS BE BELOW SECONDARY CONDUITS.
4. REBAR SHALL BE CAPPED UNTIL BACKFILLED.
5. BACKFILL SHALL MEET THE REQUIREMENTS OF EARTHWORK AND TRENCHES AND OTHER STANDARDS IN THE CONSTRUCTION AND DEVELOPMENT STANDARDS.
6. ALL CONDUITS SHALL BE INSPECTED AT EACH "LIFT", AT THE COMPACTION LEVEL, AND FOR A FINAL INSPECTION.
7. A CAUTION TAPE SHALL BE PLACED DIRECTLY ON CONDUIT, AND A CAUTION TAPE SHALL BE PLACED 1' BELOW GRADE FOR BOTH POWER & CITY COMMUNICATIONS.



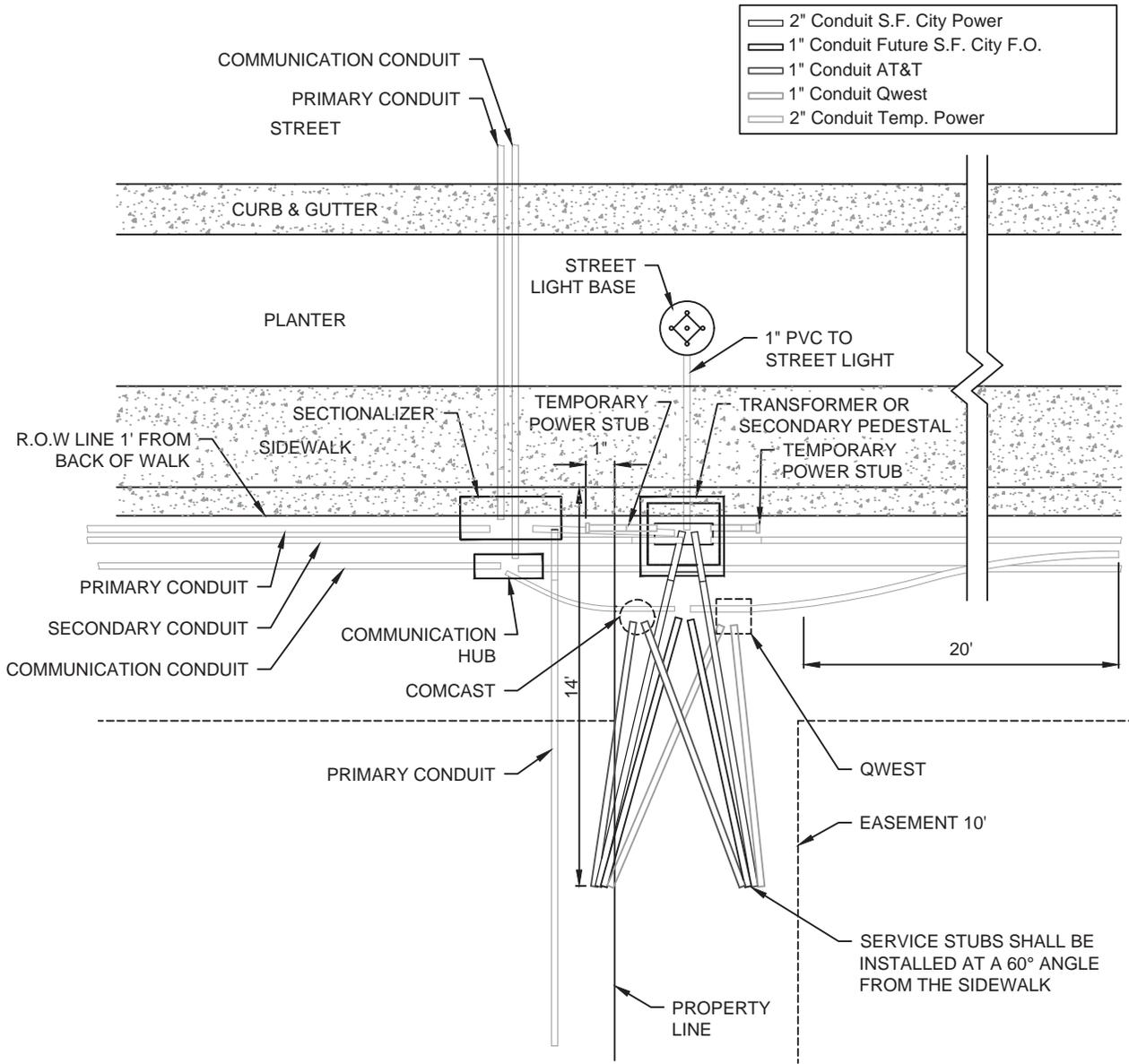
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STANDARD DRAWING

ELECTRIC AND COMMUNICATION CONDUIT JOINT TRENCH DETAIL

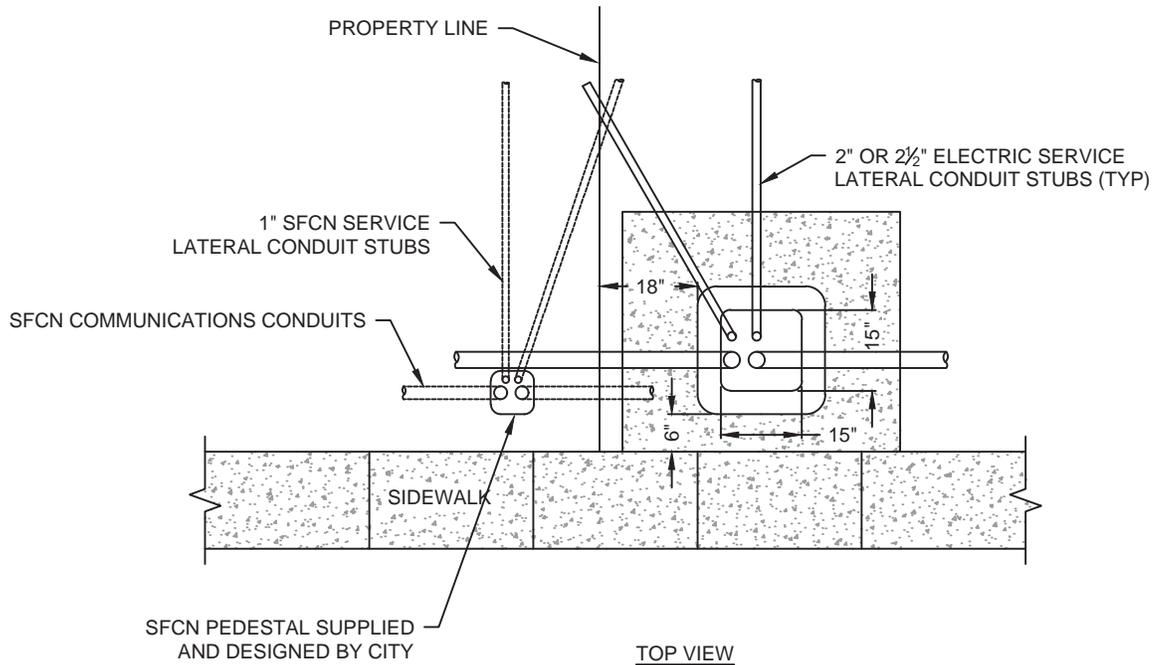
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CHECK: CMT  
DATE: 6/22/16

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STANDARD 65

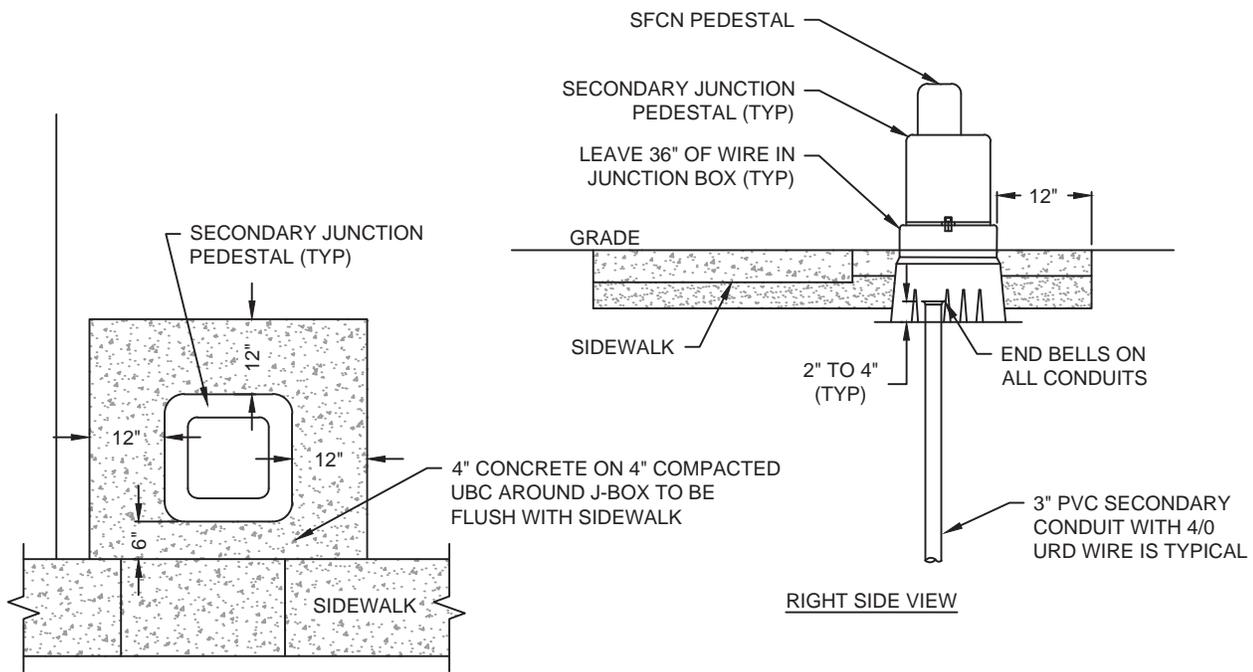


	2" Conduit S.F. City Power
	1" Conduit Future S.F. City F.O.
	1" Conduit AT&T
	1" Conduit Qwest
	2" Conduit Temp. Power

- NOTES:
1. PERMANENTLY CAP ALL ENDS OF STUBS AND MARK WITH A RADAR ENGINEERS MODEL 600 RED BURIED PIPE MARKER OR APPROVED EQUIVALENT.
  2. SERVICE STUBS SHALL BE INSTALLED WITH #12 SOLID COPPER THIN TRACER WIRE TAPED TO OUT SIDE ON BOTH ENDS. (DRILL APPROPRIATELY SIZED HOLE THROUGH END OF CAP FOR #12 WIRE)
  3. COMCAST AND QWEST COMMUNICATION PEDESTALS SHALL BE INSTALLED BY COMCAST AND QWEST.
  4. ALL CONDUIT STUBS SHALL BE INSTALLED BY DEVELOPER.



TOP VIEW



RIGHT SIDE VIEW

CONCRETE PAD DETAIL

NOTES:

1. CONDUITS ENTERING ANY JUNCTION BOX SHALL HAVE END BELLS TO PROTECT WIRE FROM DAMAGE.
2. SECONDARY WIRE SHALL BE RATED FOR 600 VOLTS AND BE THE URD TYPE. CARE SHALL BE TAKEN IN INSTALLATION AS NOT TO DAMAGE WIRE INSULATION.
3. ALL SECONDARY WIRE SHALL EXTEND A MINIMUM OF 36" & A MAXIMUM OF 48" FROM TOP OF BOX (WITHOUT THE LID).
4. SECONDARY PEDESTALS SHALL FACE TOWARDS THE STREET AND SHALL BE LEVEL.
5. ROADBASE SHALL BE USED UNDER ALL PEDESTALS. ROADBASE SHALL BE COMPACTED TO 95% OF DRY DENSITY. COMPACTION TESTS SHALL BE TAKEN PRIOR TO ANY PEDESTALS BEING SET INTO PLACE.
6. CONDUITS SHALL BE 2" TO 4" HIGHER THAN INSIDE GRADE OF PEDESTAL. (INSIDE GRADE IS THE BOTTOM OF THE PEDESTAL)
7. LOCKING MECHANISM SHALL BE 10" FROM FINISHED GRADE.
8. USE ONLY APPROVED JUNCTION PEDESTALS: PENCELL AG20HDXCL-NL & NORDIC PSP-15-15-30-MG OR APPROVED EQUIVALENT.
9. SECONDARY SERVICE LATERAL CONDUITS SHALL BE SEPARATED HORIZONTALLY IN THE TRENCH FROM COMMUNICATIONS CONDUITS.



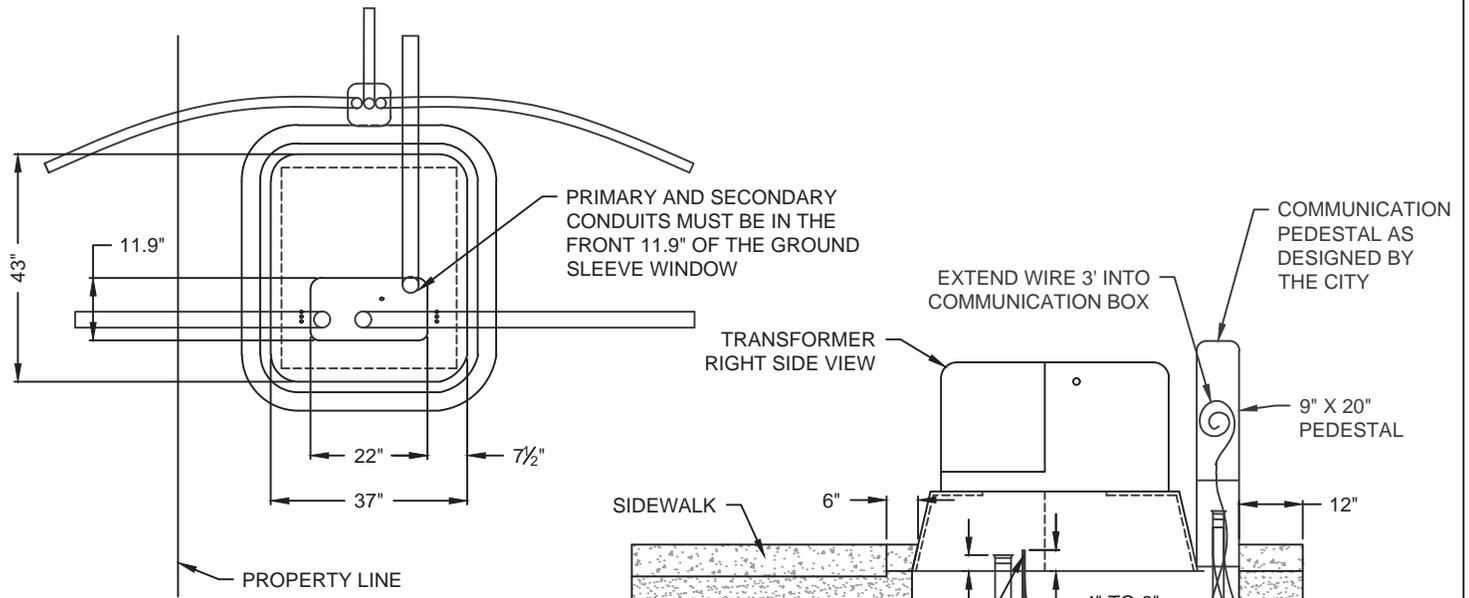
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STANDARD DRAWING

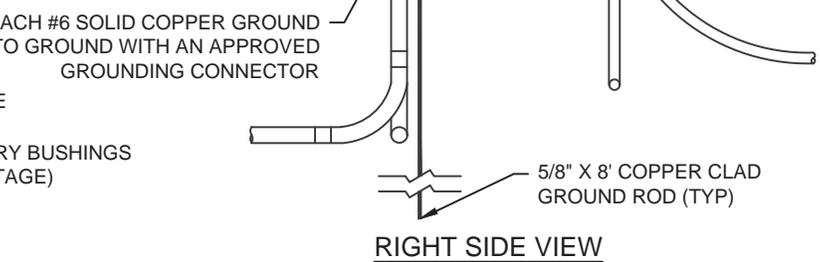
SECONDARY JUNCTION PEDESTAL

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

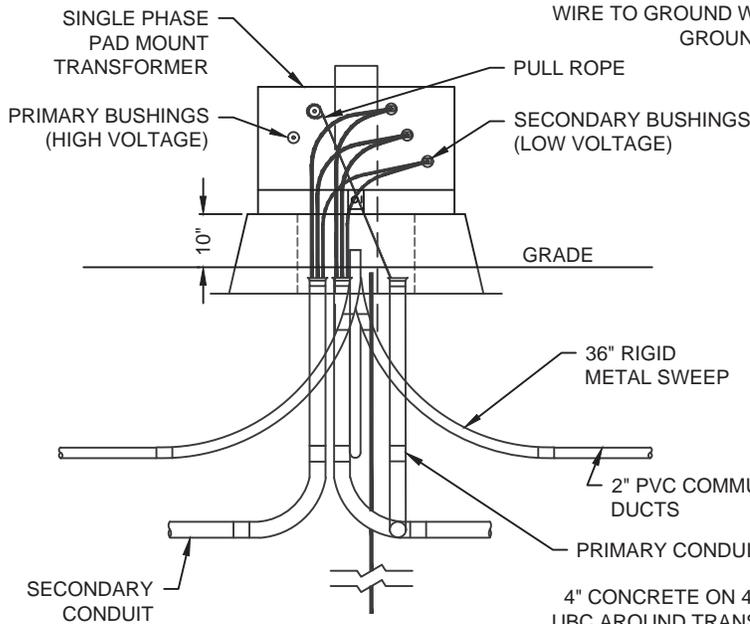
SCALE:  
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STANDARD  
67



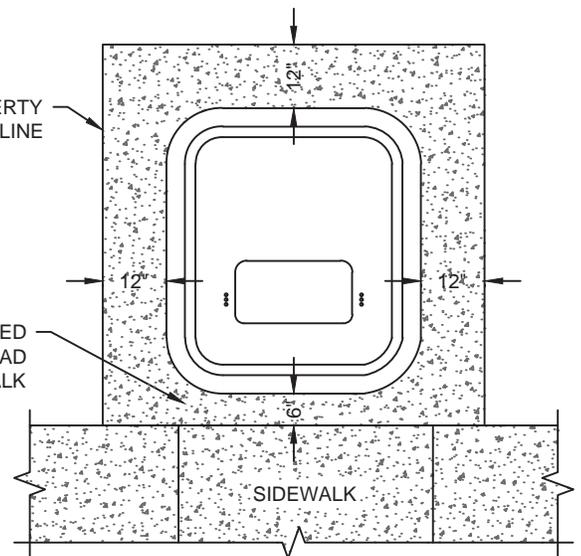
**TOP VIEW**



**RIGHT SIDE VIEW**



**FRONT VIEW**



**CONCRETE PAD DETAIL**

**NOTES:**

1. 14 GAUGE SOLID THIN COPPER WIRE SHALL BE INSTALLED THE ENTIRE LENGTH OF EACH STUBBED CONDUIT.
2. CONDUIT COMING INTO ANY TRANSFORMER MUST HAVE A PVC COUPLING, ADAPTER, OR AN INSULATING BUSHING.
3. GROUND SLEEVE FOR 167.5 KVA TRANSFORMER OR LESS SHALL BE NORDIC CBP-37-43-15AB-2 OR APPROVED EQUIVALENT.
4. GROUND LEVEL INSIDE THE GROUND SLEEVE IS THE BOTTOM OF THE GROUND SLEEVE.
5. ALL SECONDARY CABLE TO BE URD SELF-HEALING TYPE.
6. PULL ROPE MUST BE SECURELY TIED TO THE GROUND SLEEVE OR CONDUIT.



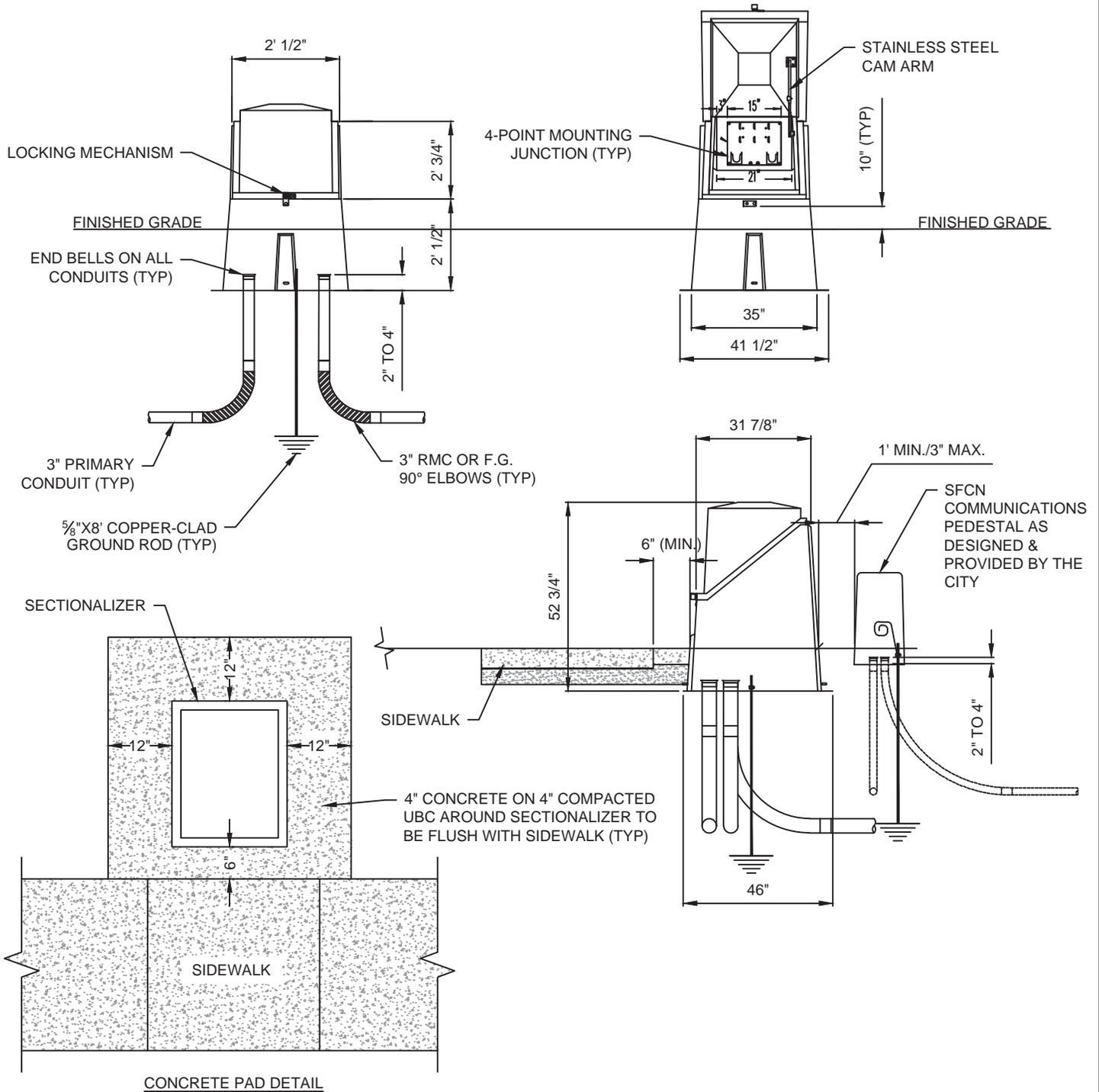
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**STANDARD DRAWING**

SINGLE PHASE PAD MOUNT TRANSFORMER

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE: NONE  
STANDARD 68



**NOTES:**

1. SECTIONALIZER CABINET UNITS FOR 200 AMP 1 PHASE ARE TO BE FABRICATED FROM FIBERGLASS COMPOSITE & MEET SPANISH FORK ELECTRIC'S SPECIFICATIONS. CONDUIT OPENINGS MUST BE WITHIN THE GROUND SLEEVE WINDOW OF THE SECTIONALIZER.
2. BLOW IN 1350 LB. MULE TAPE IN ALL CONDUITS AND TIE SECURELY TO 4 POINT MOUNTING PLATE.
3. 200 AMP 1 PHASE SECTIONALIZER P/N: NORDIC ND-150-MG-101-X-X OR AN APPROVED EQUIVALENT.
4. CONTRACTOR TO FURNISH & INSTALL 200-AMP 4-POINT MOUNTING JUNCTION PLATES & 4 POINT JUNCTIONS.
5. RIGID METAL (RMC) OR FIBERGLASS (F.G.) SHALL BE USED FOR ALL ELBOWS, OR BENDS 45 DEGREES OR GREATER.
6. SFCN COMMUNICATIONS ELBOWS SHALL BE LONG SWEEP (36") RMC OR F.G..
7. SECTIONALIZER SHALL BE SET A MINIMUM OF 6" BEHIND SIDEWALK
8. CONCRETE SHALL BE POURED IN FRONT OF THE SECTIONALIZER IN BETWEEN THE SECTIONALIZER & SIDEWALK.
9. AREA AROUND SECTIONALIZER SHALL BE BACKFILLED AND LEVELED A MINIMUM OF 12' IN ALL DIRECTIONS AROUND THE SECTIONALIZER TO PROVIDE A SAFE WORKING AREA FOR THE ELECTRIC DEPARTMENT.



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**STANDARD DRAWING**

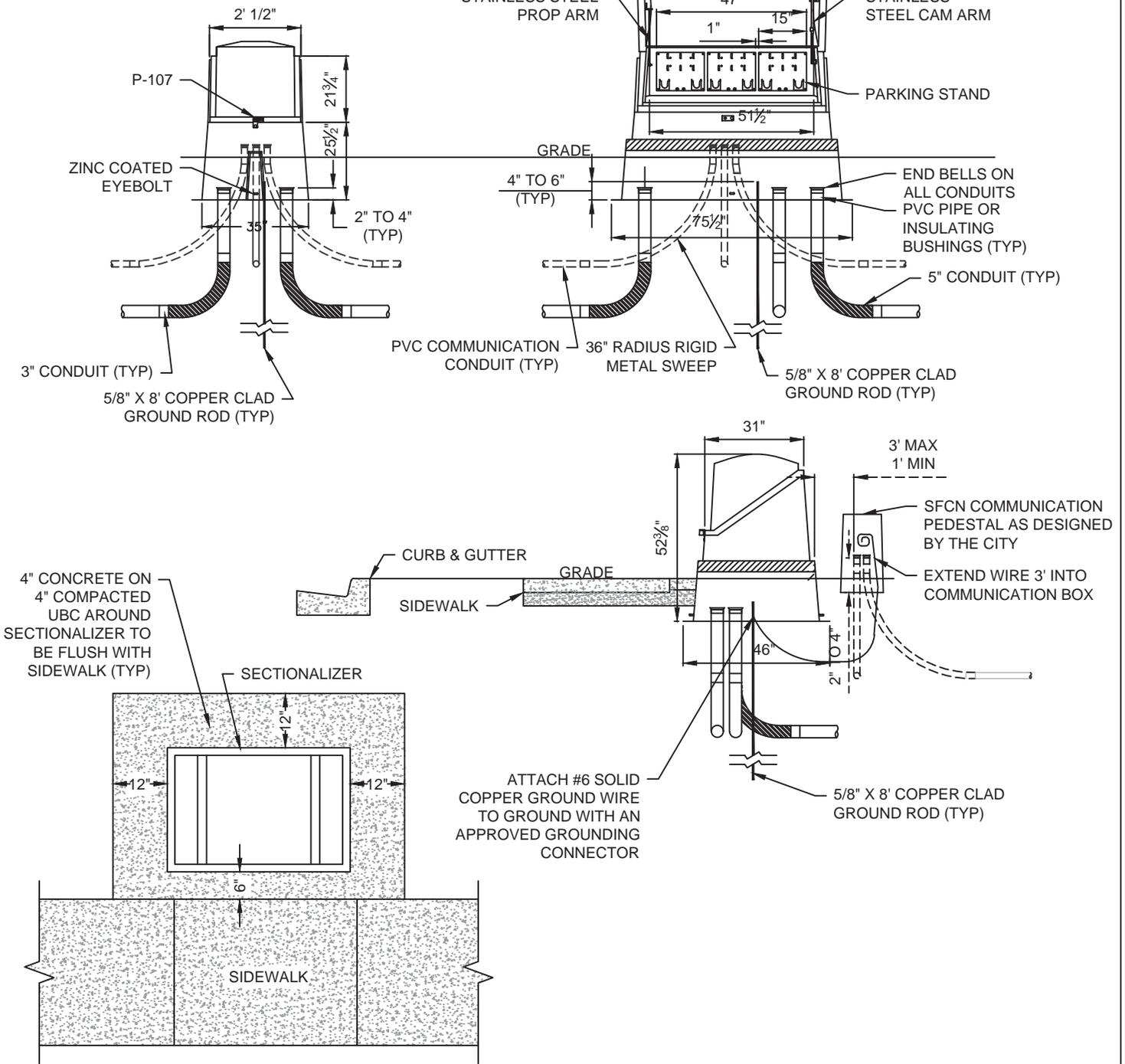
200-AMP 1 PHASE SECTIONALIZER

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
69

**1 PHASE  
FRONT VIEW**

**3 PHASE  
FRONT VIEW**



**CONCRETE PAD DETAIL**

**NOTES:**

1. SECTIONALIZER CABINET UNITS FOR 100 AMP 1 PHASE AND 3 PHASE ARE TO BE FABRICATED FROM FIBERGLASS COMPOSITE. CONDUIT OPENINGS MUST BE WITHIN THE GROUND SLEEVE WINDOW OF THE SECTIONALIZER. USE MANUFACTURER'S APPROVED GROUND SLEEVE FOR EACH SECTIONALIZER.
2. BLOW IN 1350 LB MULE TAPE IN ALL CONDUITS AND TIE SECURELY TO 4 POINT MOUNTING PLATE.
3. CONTRACTOR TO FURNISH & INSTALL 200-AMP 4-POINT MOUNTING JUNCTION AND PLATES & 4-POINT JUNCTIONS.
4. 200 AMP 1 PHASE SECTIONALIZER P/N: NORDIC ND-150-MG-101-X-X OR WESTERN POWER PRODUCTS P/N: SPM-320-47-MG-DF3
5. 200 AMP 3 PHASE SECTIONALIZER P/N: NORDIC ND-350-MG-101-X-X OR WESTERN POWER PRODUCTS P/N: SPM-540-47-MG-DF3



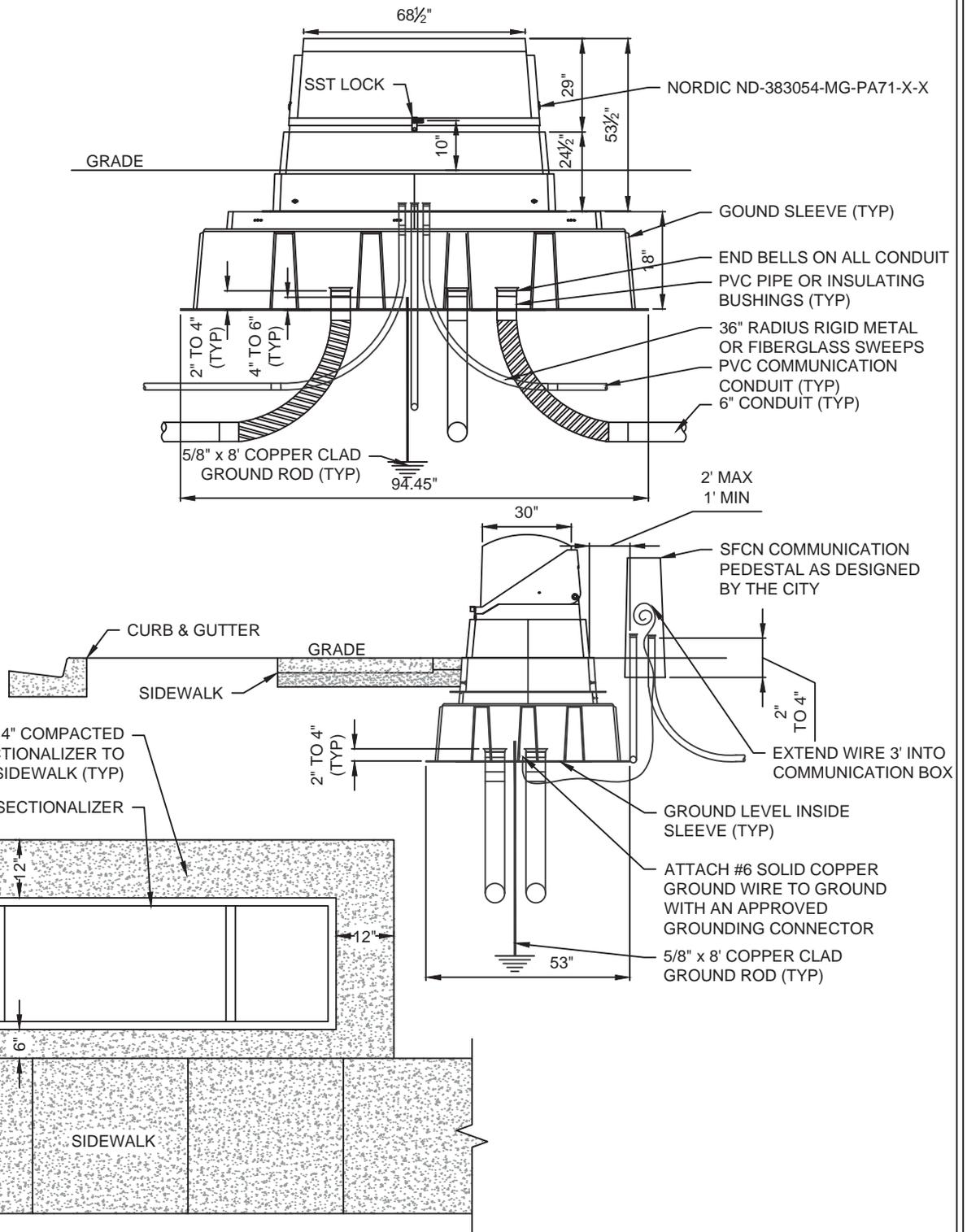
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**STANDARD DRAWING**

200-AMP 1 AND 3 PHASE FIBERGLASS SECTIONALIZER

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	70



CONCRETE PAD DETAIL

NOTES:

1. SECTIONALIZER CABINET UNITS FOR 600 AMP 3 PHASE ARE TO BE FABRICATED FROM FIBERGLASS COMPOSITE & MEET SPANISH FORK ELECTRIC'S SPECIFICATIONS. CONDUIT OPENINGS MUST BE WITHIN THE GROUND SLEEVE WINDOW OF THE SECTIONALIZER.
2. BLOW IN 1/4" POLY ROPE AND TIE SECURELY TO 4 POINT MOUNTING PLATE.
3. GROUND SLEEVE AND CAP SHALL HAVE #4 REBAR 12" ON CENTER IN ALL DIRECTIONS. USE PRE-CAST CEMENT GROUND SLEEVE AND CAP WITH DIMENTIONS AS SHOWN ABOVE.
4. CONTRACTOR TO FURNISH & INSTALL 600-AMP 4-POINT MOUNTING JUNCTION AND PLATES & 4-POINT JUNCTION



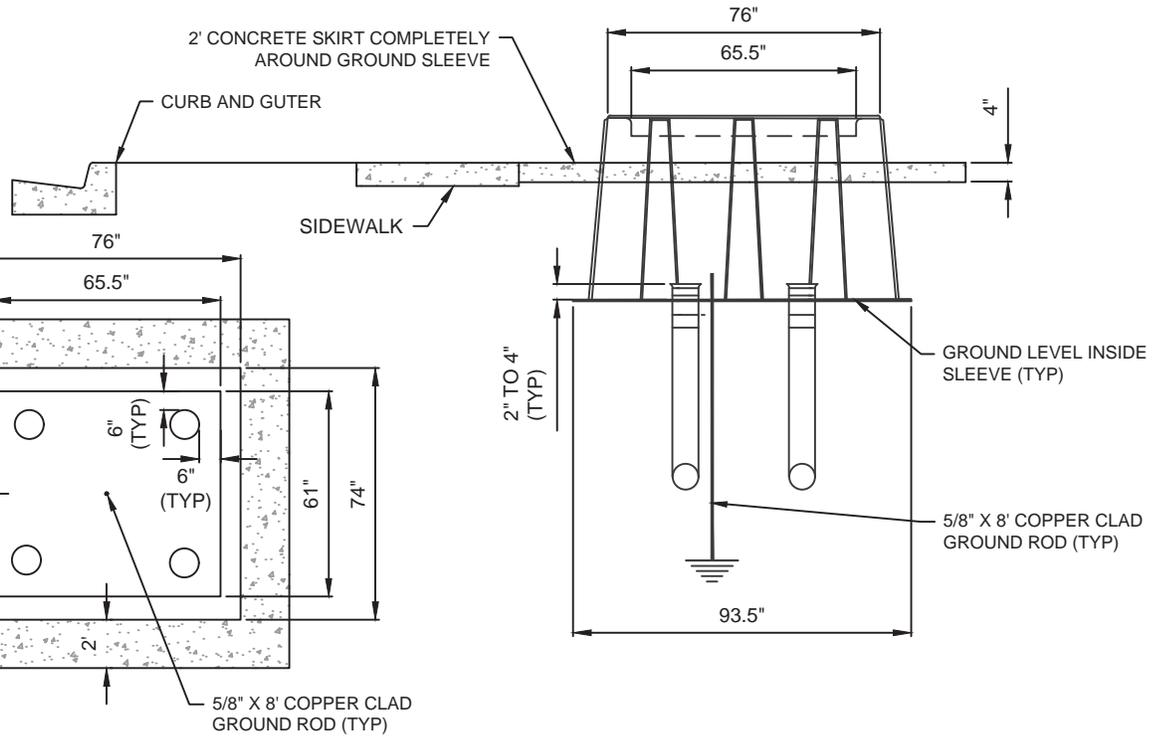
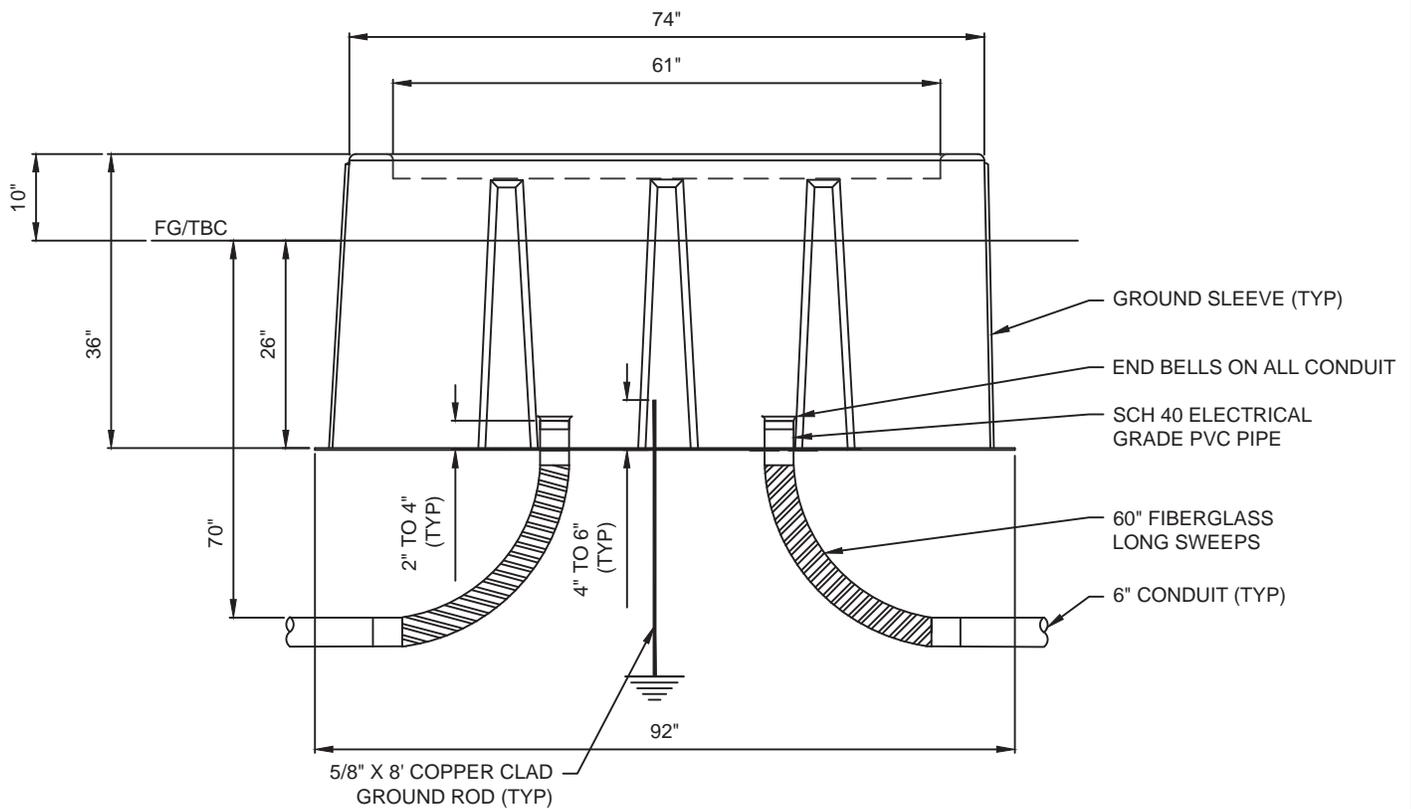
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STANDARD DRAWING

600-AMP 3 PHASE FIBERGLASS SECTIONALIZER

DRAWN: JLR  
 DESIGN: CJP  
 CHECK: CMT  
 DATE: 6/22/16

SCALE:  
 NONE  
 STANDARD  
 71



**NOTES:**

1. SWITCH GEAR GROUND SLEEVE SHALL BE PROVIDED BY SPANISH FORK ELECTRIC AND INSTALLED BY ELECTRICAL CONTRACTOR AS PER CITY SUPPLIED LAYOUT
2. 1/4" POLY ROPE SHALL BE BLOWN INTO CONDUIT AND TIED SECURELY TO GROUND ROD
3. CONDUIT LAYOUT DETAIL SHALL BE GIVEN BY SPANISH FORK ELECTRIC DURING PRE CONSTRUCTION MEETING
4. TYPICAL FOR SITE DEVELOPMENTS



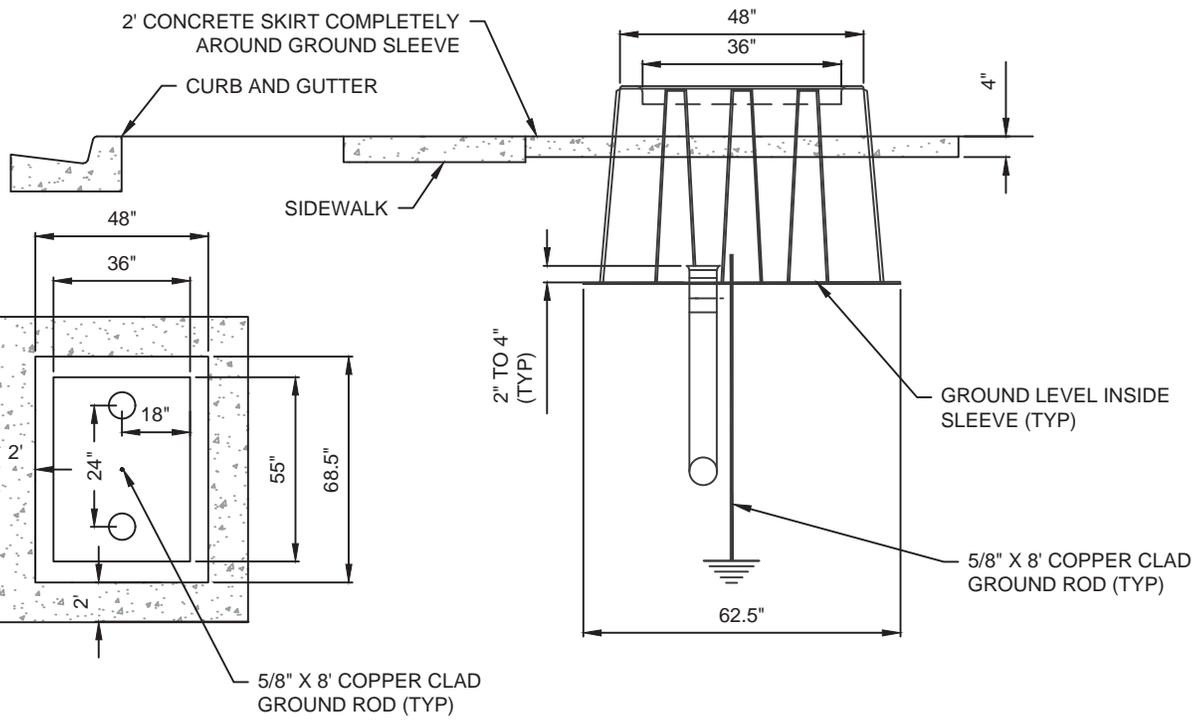
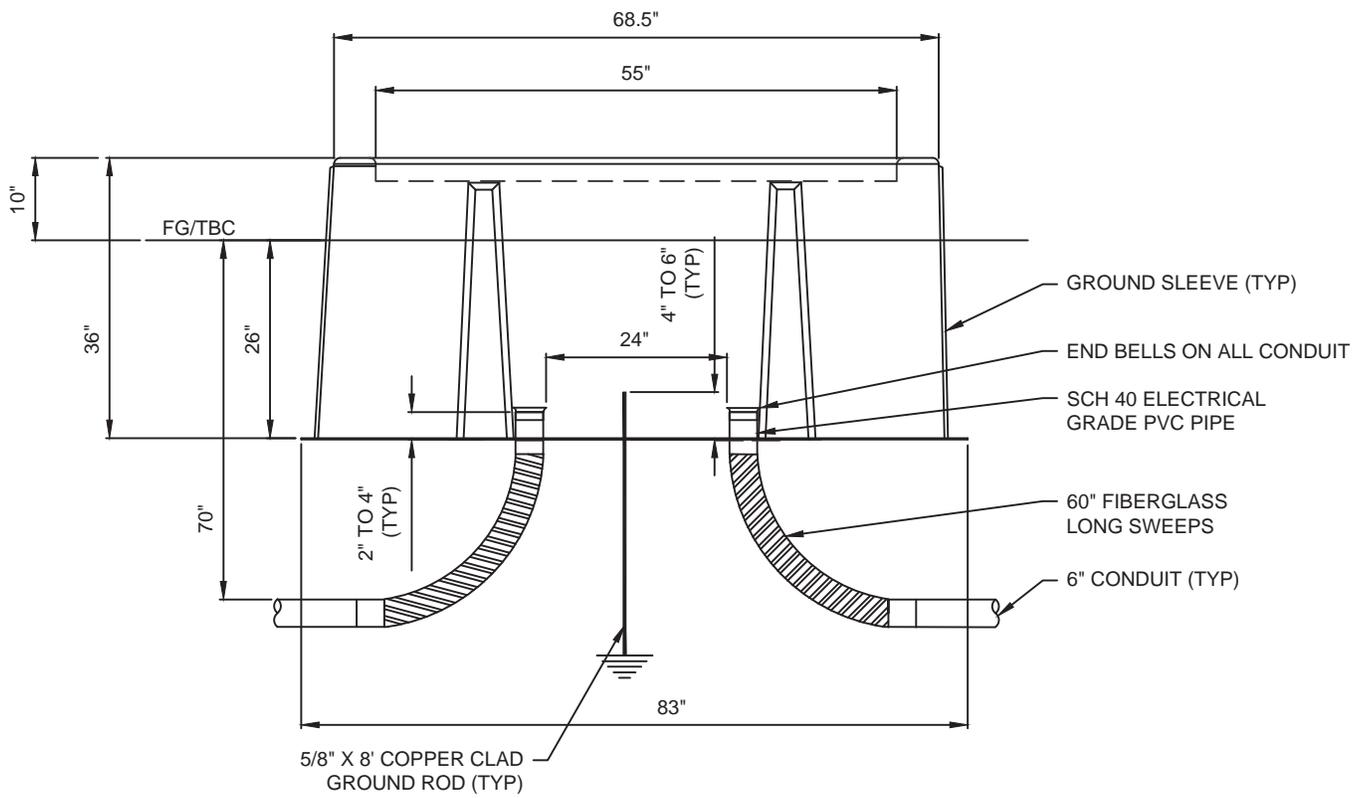
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**STANDARD DRAWING**

600 AMP PSE 9/11 SWITCHGEAR

DRAWN: TC  
 DESIGN: TC  
 CHECK: KP  
 DATE: 6/22/16

SCALE:  
 NONE  
 STANDARD  
 72



**NOTES:**

1. SWITCH GEAR GROUND SLEEVE SHALL BE PROVIDED BY SPANISH FORK ELECTRIC AND INSTALLED BY ELECTRICAL CONTRACTOR AS PER CITY SUPPLIED LAYOUT
2. 1/4" POLY ROPE SHALL BE BLOWN INTO CONDUIT AND TIED SECURELY TO GROUND ROD
3. CONDUIT LAYOUT DETAIL SHALL BE GIVEN BY SPANISH FORK ELECTRIC DURING PRE CONSTRUCTION MEETING
4. TYPICAL FOR COMMERCIAL TRANSFORMER PROTECTION FOR 750KVA AND LARGER



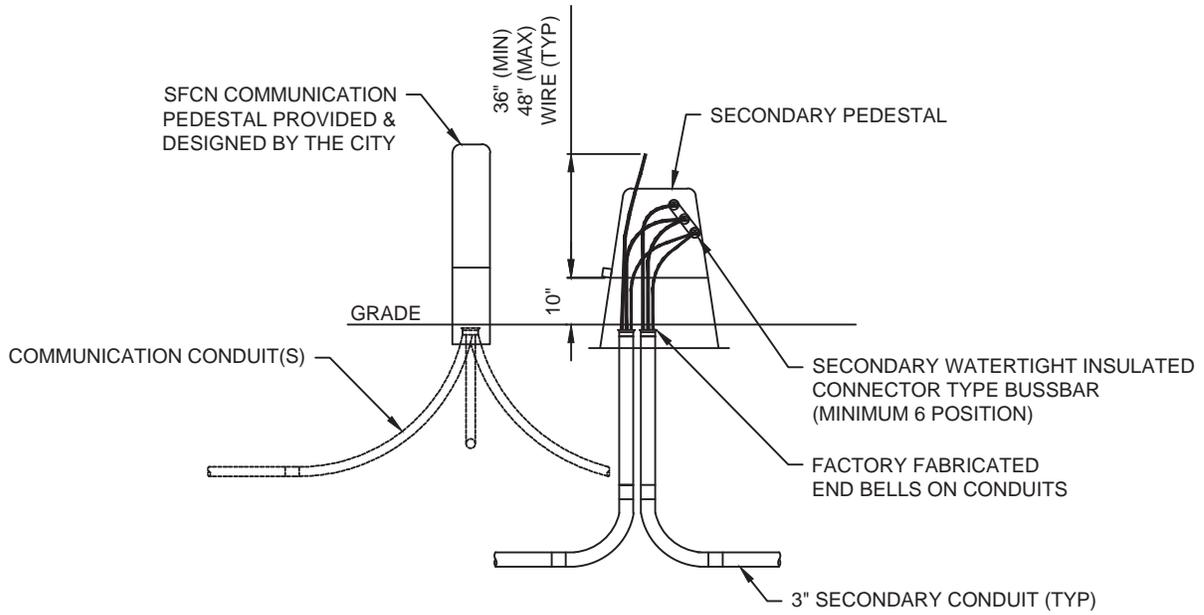
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**STANDARD DRAWING**

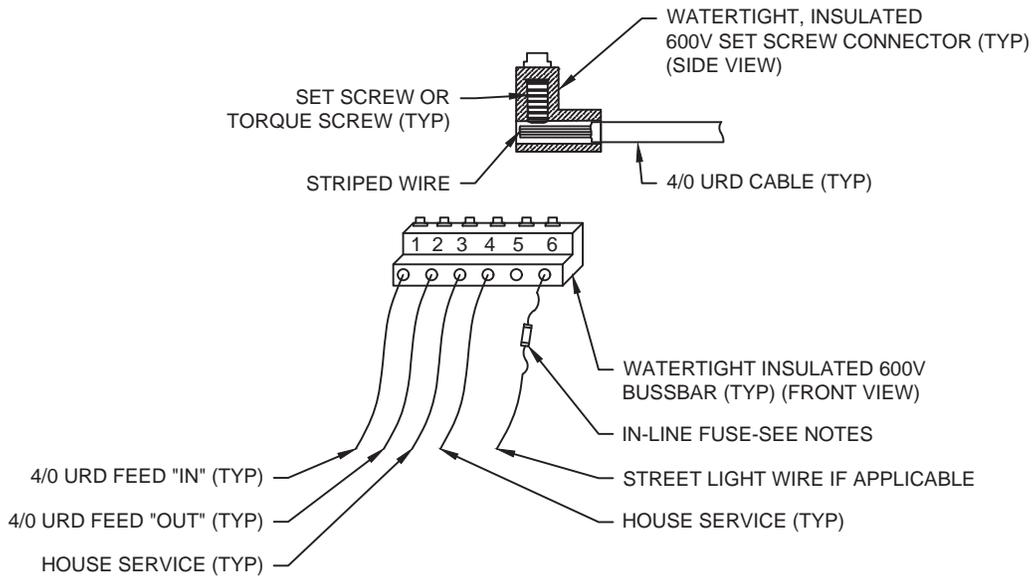
600 AMP PSE 3/5 SWITCHGEAR

DRAWN:	TC
DESIGN:	TC
CHECK:	KP
DATE:	6/22/16

SCALE:	NONE
STANDARD	73



### SECONDARY CONNECTIONS



#### NOTES:

1. INSTALL AN IN-LINE 10 AMP FUSE & FUSE HOLDER ON THE UNGROUNDED 120/240V STREET LIGHT CONDUCTOR(S) IN JUNCTION BOX.
2. CONDUIT ENTERING INTO ANY SECONDARY PEDESTAL MUST HAVE A FABRICATED BELL END.
3. SECONDARY PEDESTAL SHALL BE NORDIC PSP-15-15-30-MG OR PENCELL AG20HDXCL-NL APPROVED EQUIVALENT.
4. GROUND LEVEL INSIDE THE GROUND SLEEVE IS THE BOTTOM OF THE GROUND SLEEVE.
5. ALL SECONDARY CABLE SHALL EXTEND A MINIMUM OF 36" & A MAXIMUM OF 48" FROM TOP OF SECONDARY BOX (WITHOUT LID) AND SHALL BE THE URD TYPE CABLE.
6. ROAD BASE SHALL BE USED UNDER SECONDARY BOXES. ROAD BASE SHALL BE COMPACTED TO 95% AND BE TESTED PRIOR TO BOX BEING SET INTO PLACE.
7. ALL SERVICE STUBS SHALL EXTEND 1' PAST PROPERTY LINE.
8. SECONDARY WATERTIGHT, INSULATED SET SCREW CONNECTORS (UTILCO PED-6-350-SSP, ELASTIMOLD USB63S, RAYCHEM GPRT-350-6P-C(B6) OR EQUIVALENT) SHALL ACCEPT A MINIMUM OF SIX INDIVIDUAL WIRES, UNLESS OTHERWISE APPROVED BY ELECTRICAL DEPARTMENT.



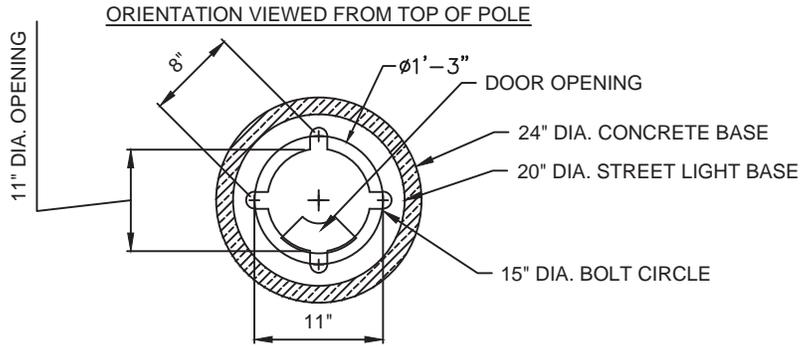
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### STANDARD DRAWING

SECONDARY PEDESTAL, WIRE & CONNECTIONS

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DESIGN: CJP  
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DATE: 6/22/16

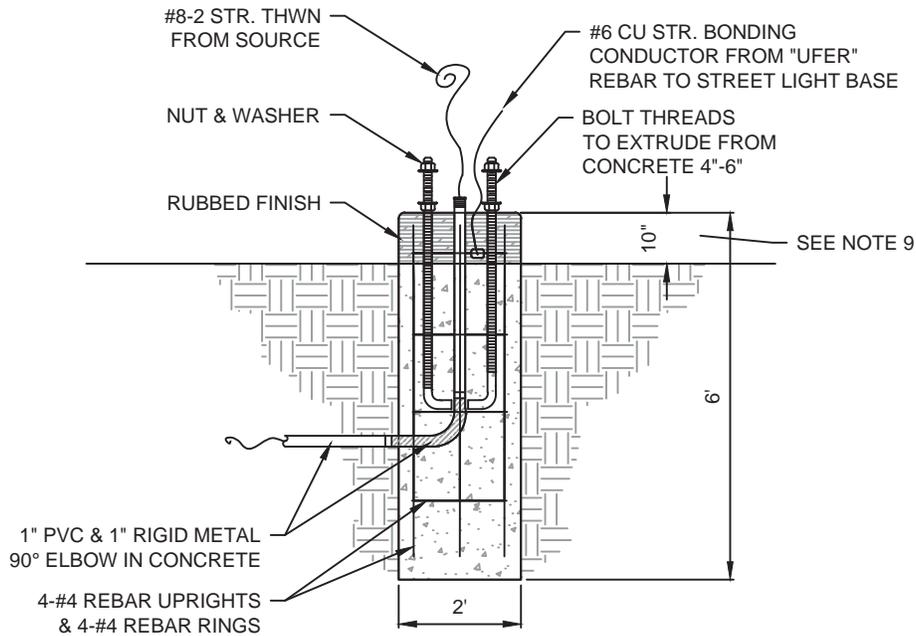
SCALE:  
NONE  
STANDARD  
74



CURB

GUTTER

STREET LIGHT BASE DETAIL



NOTES:

1. STREET LIGHT BASES SHALL BE INSPECTED PRIOR TO POURING CONCRETE.
2. STREET LIGHT BASES SHALL BE 2' IN DIAMETER AND 6' IN DEPTH WITH 10" OF BASE EXPOSED ABOVE TOP BACK OF CURB.
3. EXPOSED CONCRETE SHALL HAVE A RUBBED FINISH, WITH ALL HONEYCOMB OR CRACKS FILLED.
4. STREET LIGHT BASE SHALL BE CENTERED IN PLANTER STRIP OR 3' FROM TOP BACK OF CURB TO CENTER OF BASE IF NO PLANTER STRIP IS PRESENT.
5. SONNETUBE SHALL BE KEPT DRY AND SHALL NOT BE ALLOWED TO DEFORM IN ANY WAY.
6. CONCRETE COVER OVER REINFORCING STEEL SHALL BE 2" UNLESS OTHERWISE APPROVED.
7. USE 4-#4 REBAR UPRIGHTS & 4-#4 REBAR RINGS SPACED EVENLY AND KEPT 2" FROM SIDES, TOP AND BOTTOM OF CONCRETE.
8. GROUT GAP BETWEEN STREET LIGHT AND BASE & PROVIDE 1/2" DRAIN PIPE FOR WATER.
9. ALL STREET LIGHT BASES ALONG STATE ROADS ARE TO BE FLUSH WITH THE TBC AND CONNECTED TO THE LIGHT POLE WITH A BREAKAWAY SUPPORT.



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STANDARD DRAWING

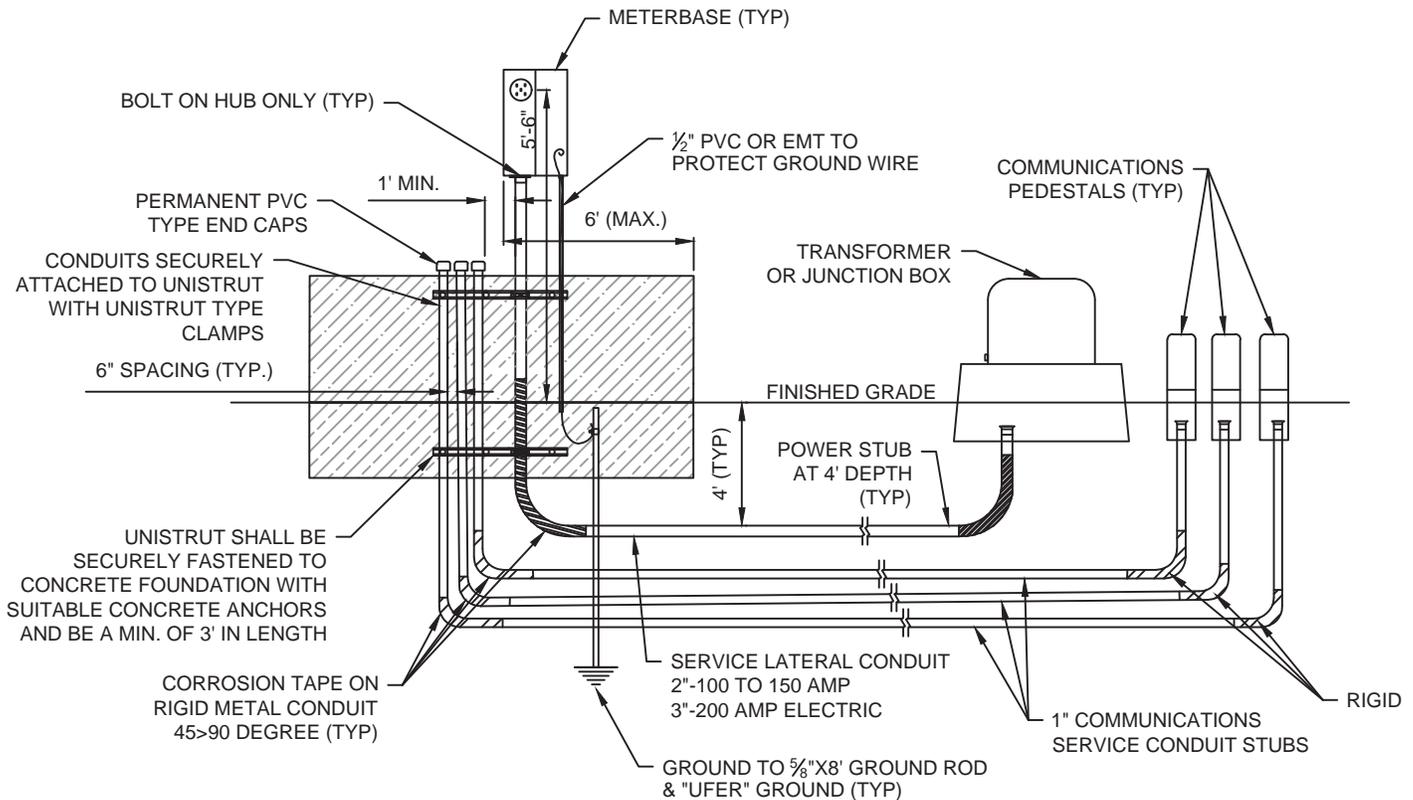
STREET LIGHT POLE BASE DETAIL

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	75

SERVICE SIZE	NEC WIRE SIZE	CONDUIT SIZE
100 AMP	#2 ALU	2"
125 AMP	1/0 ALU	2"
150 AMP	2/0 ALU	2"
200 AMP	4/0 ALU	3"
201 AMPS-400 AMPS SEE ELECTRICAL DIVISION		

SURFACE MOUNT FRONT VIEW



NOTES:

1. ALL MATERIALS TO BE SUPPLIED BY CUSTOMER EXCEPT METER.
2. ALL TEMPORARY/PERMANANT EQUIPMENT SHALL COMPLY WITH CURRENT N.E.C., N.E.S.C, AND CITY STANDARDS.
3. SPANISH FORK ELECTRICAL DIVISION WILL FURNISH AND INSTALL METER AND CONNECT SERVICE IN TRANSFORMER OR JUNCTION BOX.
4. SERVICE CONDUCTORS SHALL MEET CURRENT NATIONAL ELECTRIC CODE.
5. GROUND ROD TO BE DRIVEN A MINIMUM OF 6' IN UNDISTURBED SOIL. GROUNDING CONDUCTOR CONNECTED TO GROUND ROD SHALL BE MINIMUM OF #6 COPPER.
6. UNISTRUT TO BE OF ONE PIECE AND OF 2' IN LENGTH
7. ENOUGH WIRE SHALL BE PROVIDED TO EXTEND A MINIMUM OF 3' PAST THE TRANSFORMER OR SECONDARY PEDESTAL GROUND SLEEVE.
8. RIGID METAL CONDUITS SHALL BE TAPED WITH ANTI-CORROSION TAPE. TAPE SHALL EXTEND 6" ABOVE FINISHED GRADE.
9. ALL POWER SERVICE LATERAL CONDUITS SHALL BE 2" OR 3". TO DETERMINE SIZE FIELD VERIFY BY EXCAVATING THE SERVICE STUBS.
10. METERBASE SHALL BE LOCATED WITHIN THE FRONT 6' OF THE SIDE OF THE HOUSE. OTHER LOCATION SHALL FIRST BE APPROVED BY POWER DEPT.
11. METER SOCKET SHALL BE PLACED A MINIMUM OF 4'6" AND A MAXIMUM OF 6" TO CENTER OF SOCKET FROM FINISHED GRADE.
12. CONTACT POWER DEPT. TO SCHEDULE APPOINTMENT FOR ASSISTANCE IN PULLING IN URD WIRE INTO ENERGIZED TRANSFORMERS.
13. MAIN DISCONNECT BREAKER TO BE INSTALLED AT TIME OF INSPECTION.



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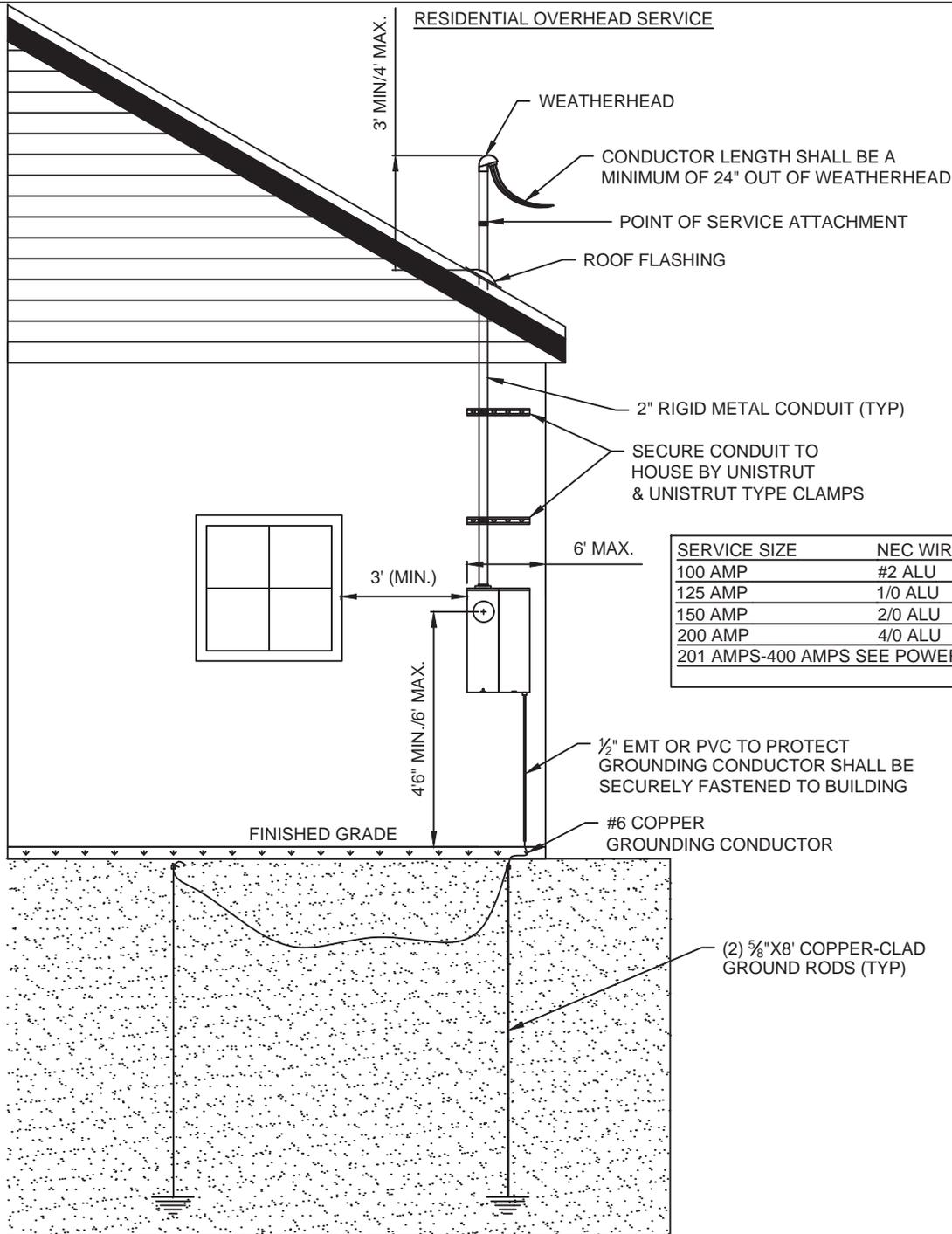
STANDARD DRAWING

RESIDENTIAL UNDERGROUND SERVICE 200 AMPS OR LESS

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
76

RESIDENTIAL OVERHEAD SERVICE



SERVICE SIZE	NEC WIRE SIZE	CONDUIT SIZE*
100 AMP	#2 ALU	2"
125 AMP	1/0 ALU	2"
150 AMP	2/0 ALU	2"
200 AMP	4/0 ALU	2"
201 AMPS-400 AMPS SEE POWER DEPT.		

NOTES:

1. ALL METERBASE SERVICE LOCATIONS MUST FIRST BE APPROVED BY ELECTRIC DEPARTMENT.
2. IN GENERAL ALL METERBASES SHALL BE LOCATED ON THE FRONT 6' OF THE SIDE OF THE HOUSE.
3. METER HEIGHT SHALL BE A MINIMUM OF 4'6" AND A MAXIMUM OF 6' TO CENTER OF METER SOCKET.
4. METERBASE SHALL BE KEPT A MINIMUM OF 3' FROM DOORS, WINDOWS, STAIRS, GAS METERS.
5. ALL BONDING AND GROUNDING SHALL MEET CURRENT NEC AND SPANISH FORK ELECTRIC DEPARTMENT REQUIREMENTS. FOR EXISTING HOMES (2) GROUND RODS SHALL BE REQUIRED IN ADDITION TO ANY OTHER NEC GROUNDING REQUIREMENTS.
6. ALL SERVICE CONDUCTOR SIZES AND TYPES SHALL MEET CURRENT NEC.
7. IN GENERAL ONLY CONTINUOUS LENGTHS OF CONDUIT SHALL BE USED. NO JOINTS OR COUPLERS ARE PERMITTED IN SERVICE CONDUITS UNLESS OTHERWISE APPROVED.



SPANISH FORK CITY  
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 (801) 804-4550

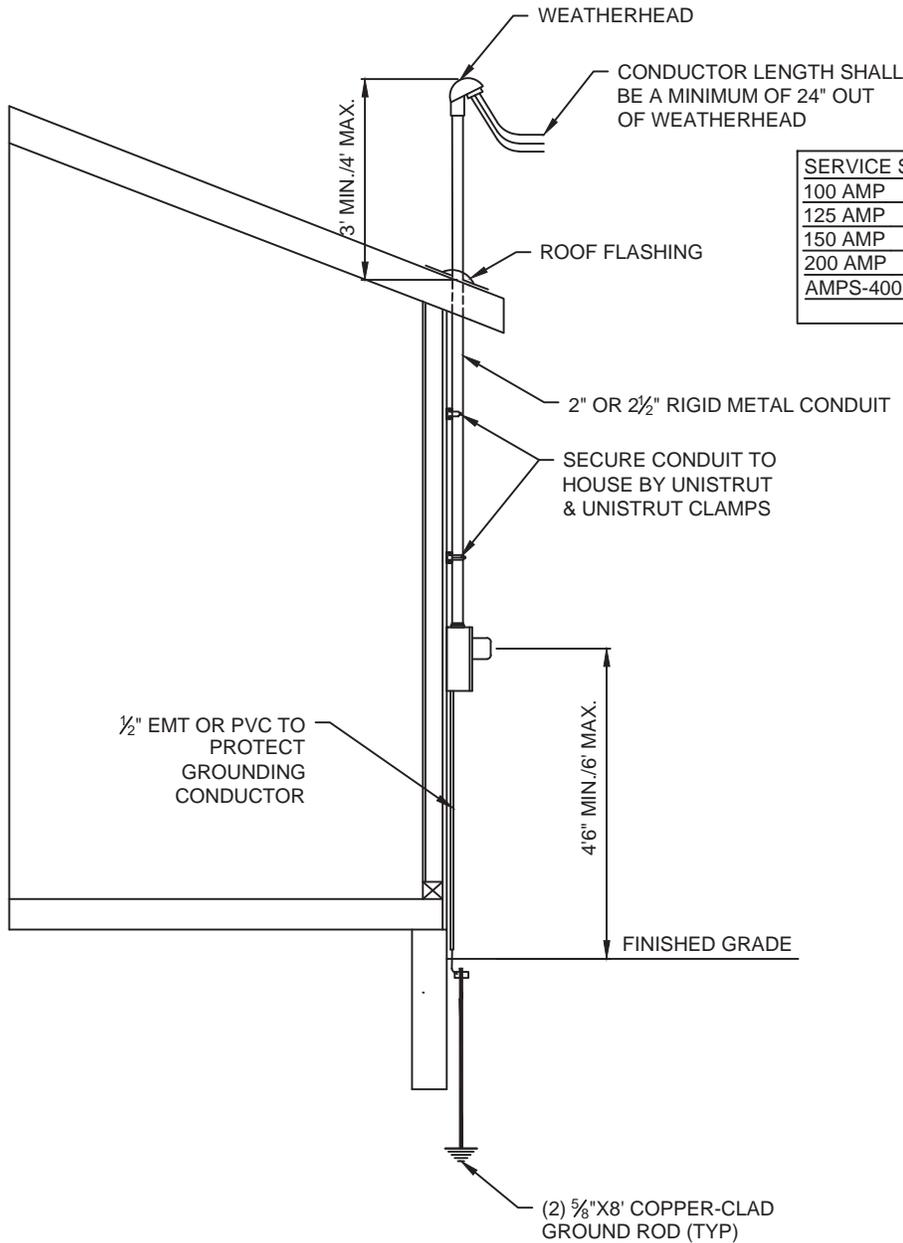
STANDARD DRAWING

RESIDENTIAL OVERHEAD SERVICE 200 AMPS OR LESS

DRAWN: JLR  
 DESIGN: CJP  
 CHECK: CMT  
 DATE: 6/22/16

SCALE:  
 NONE  
 STANDARD  
 77

**RESIDENTIAL SERVICE 200 AMPS OR LESS  
SIDE VIEW**



SERVICE SIZE	NEC WIRE SIZE	CONDUIT SIZE*
100 AMP	#2 ALU	2"
125 AMP	1/0 ALU	2"
150 AMP	2/0 ALU	2"
200 AMP	4/0 ALU	2" 201
AMPS-400 AMPS SEE POWER DEPT.		

**NOTES:**

1. ALL METERBASE SERVICE LOCATIONS MUST FIRST BE APPROVED BY ELECRTC DEPARTMENT.
2. IN GENERAL ALL METERBASES SHALL BE LOCATED ON THE FRONT 6' OF THE SIDE OF THE HOUSE.
3. METER HEIGHT SHALL BE A MINIMUM OF 4'6" AND A MAXIMUM OF 6' TO CENTER OF METER SOCKET.
4. METERBASE SHALL BE KEPT A MINIMUM OF 3' FROM DOORS, WINDOWS, STAIRS, GAS METERS.
5. ALL BONDING AND GROUNDING SHALL MEET CURRENT NEC AND SPANISH FORK ELECTRIC DEPARTMENT REQUIREMENTS. FOR EXISTING HOMES 2 GROUND RODS SHALL BE REQUIRED IN ADDITION TO ANY OTHER NEC REQUIREMENTS.
6. ALL SERVICE CONDUCTOR SIZES AND TYPES SHALL MEET CURRENT NEC.
7. IN GENERAL ONLY CONTINUOUS LENGTHS OF CONDUIT SHALL BE USED. NO JOINTS OR COUPLERS ARE PERMITTED IN SERVICE CONDUITS.
8. UNISTRUT & UNISTRUT TYPE CLAMPS SECURELY FASTENED TO THE BUILDING SHALL BE USED TO SUPPORT THE MAST.
9. OVERHEAD SERVICE DROPS SHALL MEET NEC, NESC, & CITY STANDARDS FOR CLEARANCES OVER DRIVEWAYS, ROADS, ROOFS, ETC.



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**STANDARD DRAWING**

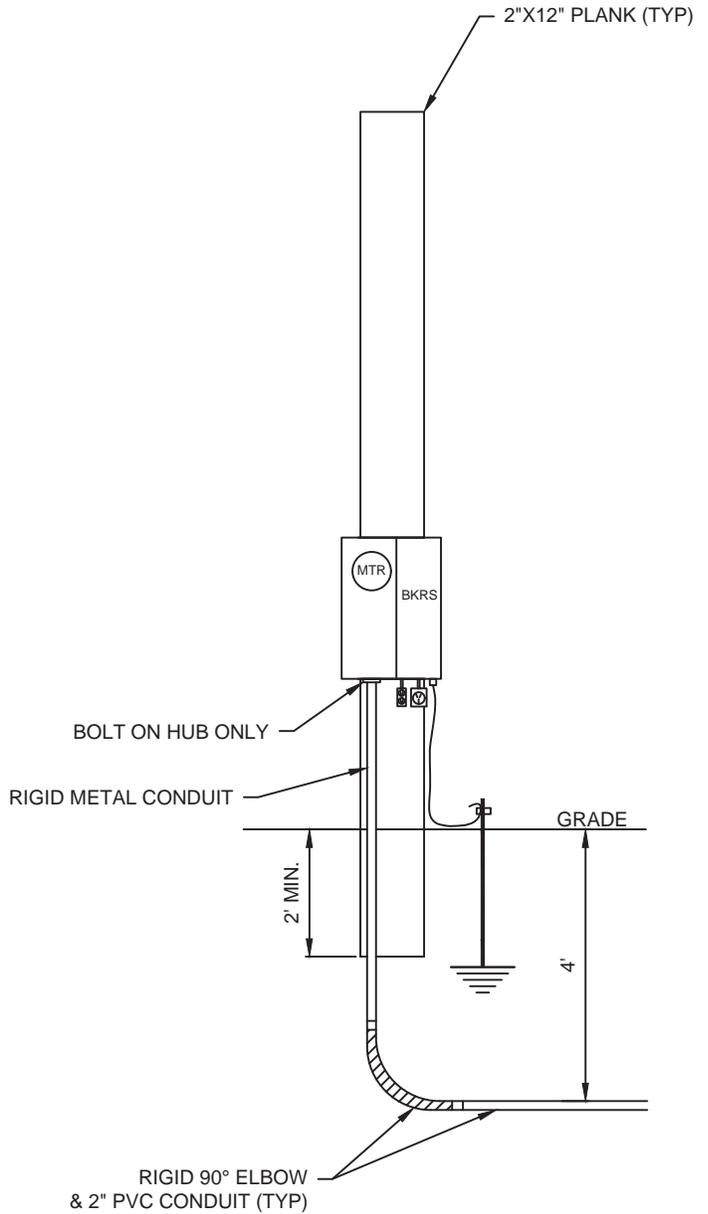
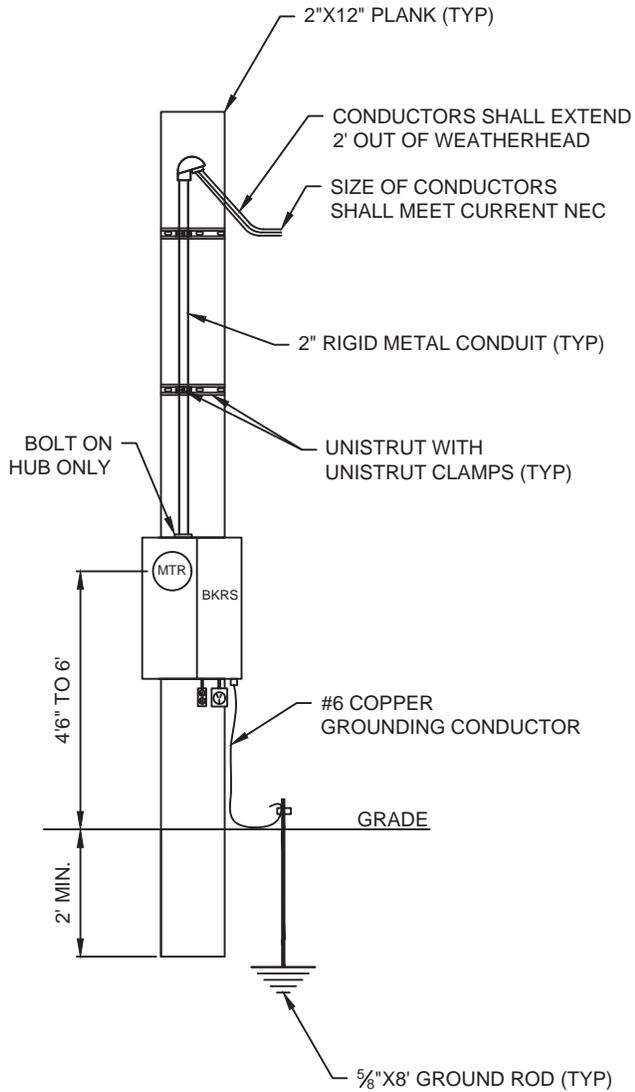
RESIDENTIAL OVERHEAD SERVICE SIDE VIEW

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	78

OVERHEAD TEMPORARY POWER

UNDERGROUND TEMPORARY POWER



NOTES:

1. ALL MATERIALS TO BE SUPPLIED BY CUSTOMER EXCEPT METER.
2. ALL TEMPORARY EQUIPMENT SHALL COMPLY WITH CURRENT N.E.C. TEMPORARY POWER ARTICLES..
3. TEMPORARY SERVICES MAY NOT BE PLACED ON CITY POLES UNLESS OTHERWISE APPROVED.
4. TEMPORARY POWER POLES TO BE 2\"X12\" PLANKS OR 6\"X6\" POST AND BE BURIED A MINIMUM OF 2' IN DEPTH.
5. SPANISH FORK ELECTRIC DIVISION WILL FURNISH AND INSTALL METER AND CONNECT SERVICE LOOP.
6. SERVICE CONDUCTORS WILL BE #4 C.U. OR LARGER.
7. GROUND ROD TO BE DRIVEN A MINIMUM OF 6' IN UNDISTURBED SOIL.
8. ENOUGH SERVICE CABLE AND SUPPORTS SHALL BE PROVIDED TO COMPLETE DRIP LOOP AND CONNECTIONS AT POLE.
9. ALL TEMPORARY POWER POLES SHALL BE PLACED WITHIN 10' OF SERVICE POWER POLE. CONTACT ELECTRIC DEPT. WITH ANY QUESTIONS.
10. ALL LOCATIONS FOR TEMPORARIES SHALL BE FIRST APPROVED BY ELECTRIC DEPARTMENT.



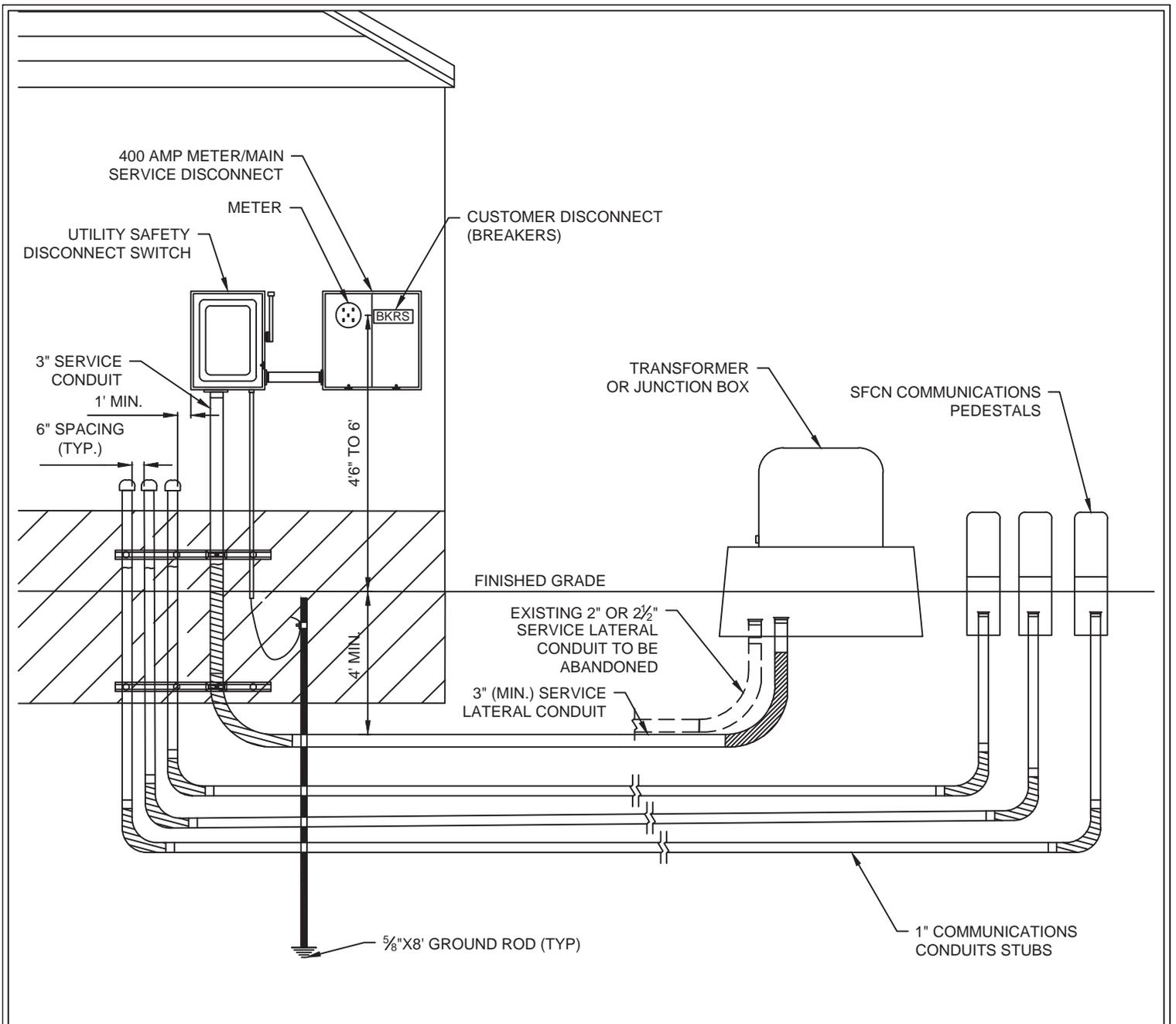
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STANDARD DRAWING

TEMPORARY SERVICE FOR OVERHEAD & UNDERGROUND LINES

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	79



**NOTES:**

1. ALL MATERIALS TO BE SUPPLIED BY CUSTOMER EXCEPT METER.
2. 400 AMP SERVICES REQUIRE SPECIAL CARE IN DESIGN & CONSTRUCTION. REQUIREMENTS MAY INCLUDE, BUT ARE NOT LIMITED TO, INSTALLING LARGER TRANSFORMERS, JUNCTION BOXES, CONDUITS, & WIRING TO SERVE THE END CUSTOMER. CONTACT THE ELECTRIC DEPARTMENT FOR APPROVAL OF SERVICE.
3. A 400 AMP NON-FUSED UTILITY DISCONNECT SWITCH SHALL BE INSTALLED AHEAD OF THE 400 AMP METER/MAIN SERVICE DISCONNECT. THE UTILITY DISCONNECT SWITCH SHALL HAVE A SHORT-CIRCUIT CURRENT RATING EQUAL TO OR GREATER THAN THE AVAILABLE SHORT-CIRCUIT CURRENT RATING OF THE SERVICE DISCONNECTING MEANS.
4. A MINIMUM 3" DIAMETER CONDUIT IS REQUIRED FOR 400 AMP SERVICES. EXISTING SERVICE LATERAL CONDUIT MAY NOT BE LARGE ENOUGH FOR A 400 AMP SERVICE. NEW SERVICE CONDUIT MAY NEED TO BE INSTALLED TO EXISTING TRANSFORMER OR JUNCTION BOX. CONTACT ELECTRIC DEPARTMENT FOR REQUIREMENTS.
5. SERVICE CONDUCTORS SHALL MEET CURRENT NATIONAL ELECTRIC CODE.
6. BONDING & GROUNDING SHALL MEET CURRENT NEC & ELECTRIC DEPARTMENT REQUIREMENTS. A 5/8"X8' GROUND ROD SHALL BE INSTALLED FOR ALL SERVICES IN ADDITION TO OTHER NED CODE REQUIREMENTS.
7. ADDRESS MUST BE POSTED ON PROPERTY DURING ALL PHASES OF CONSTRUCTION.
8. ENOUGH WIRE SHALL BE PROVIDED TO EXTEND A MINIMUM OF 3' PAST THE TRANSFORMER OR SECONDARY PEDESTAL GROUND SLEEVE.
9. ALL RIGID METAL CONDUITS SHALL BE TAPED WITH ANTI-CORROSION TAPE. TAPE SHALL EXTEND 6" ABOVE FINISHED GRADE.
10. METERBASE/DISCONNECT SHALL BE LOCATED ON THE FRONT 6' OF THE SIDE OF THE HOUSE.
11. METER HEIGHT SHALL BE NO LESS THAN 4'6" AND NO HIGHER THAN 6' TO CENTER OF SOCKET FROM FINISHED GRADE.



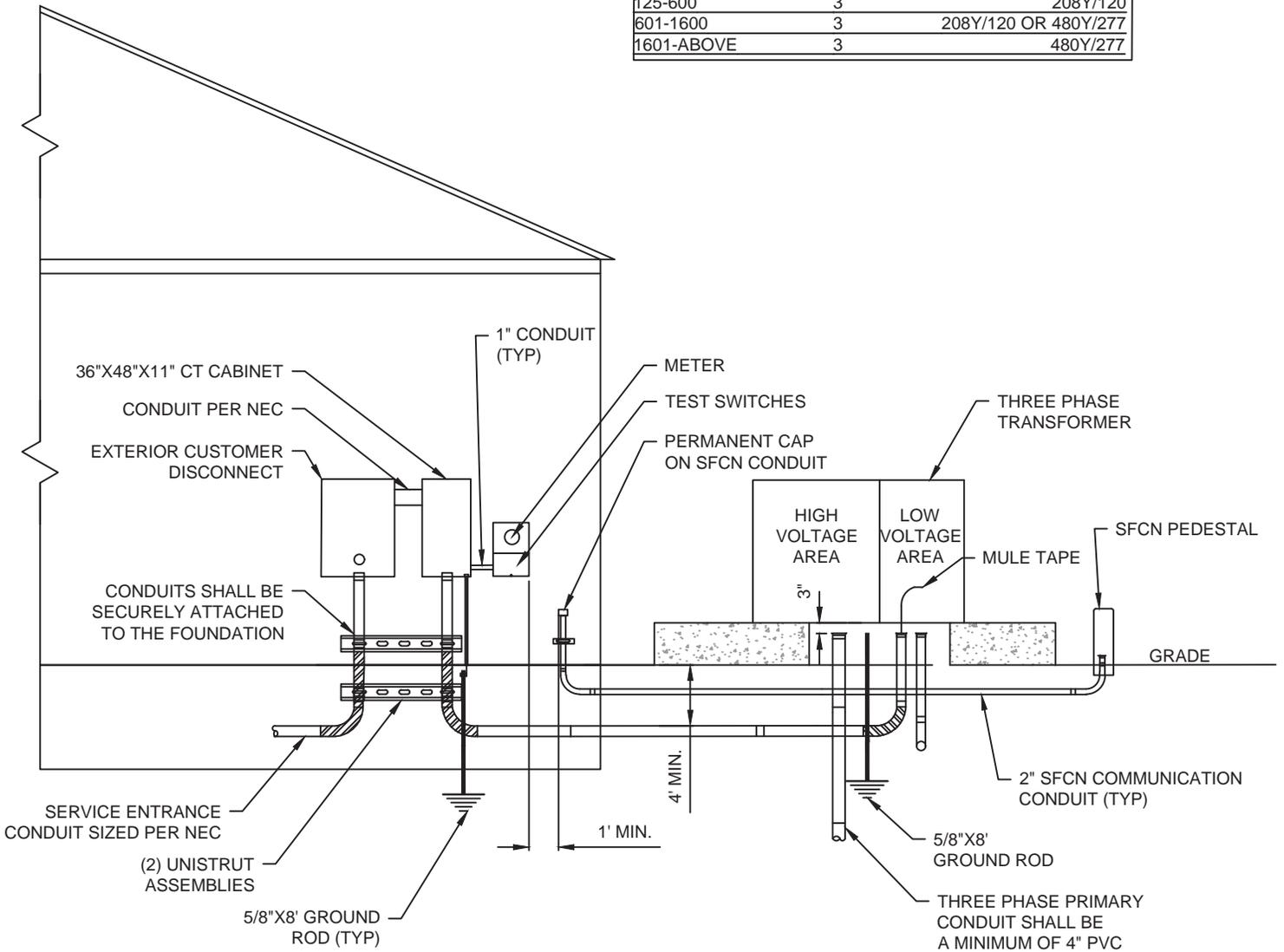
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**STANDARD DRAWING**

RESIDENTIAL UNDERGROUND SERVICE 400 AMPS

DRAWN:	JLR	SCALE: NONE
DESIGN:	CJP	
CHECK:	CMT	STANDARD 80
DATE:	6/22/16	

AMPS	PHASE	VOLTAGE
125-200	1	240/120
125-600	3	208Y/120
601-1600	3	208Y/120 OR 480Y/277
1601-ABOVE	3	480Y/277



NOTES:

1. ALL SERVICE LOCATIONS, MATERIALS, EQUIPMENT SHALL BE APPROVED BY ELECTRIC DEPARTMENT.
2. 36" MINIMUM CLEARANCES (SIDES AND ABOVE) FROM DOORS, WINDOWS, STAIRS, GAS METERS SHALL BE OBSERVED. ADDITIONAL CLEARANCES MAY BE REQUIRED.
3. 8' MINIMUM CLEARANCE SHALL BE REQUIRED IN FRONT OF SERVICES, METERS. ADDITIONAL CLEARANCES MAY BE REQUIRED.
4. CITY WILL FURNISH METERBASE & TEST SWITCH FOR CONTRACTOR TO INSTALL. (SEE ELECTRIC DEPT.)
5. GROUNDING & BONDING OF CABINETS, CONDUITS, & OTHER EQUIPMENT SHALL MEET NEC.
6. SERVICES 200 AMPS OR LESS SHALL USE A LINK BYPASS METERBASE.
7. SERVICES SIZED 800 AMPS OR LESS MAY USE STAND ALONE TYPE CT CABINETS. FOR SERVICES LARGER THAN 800 AMPS CONTACT THE ELECTRIC DEPARTMENT.
8. SERVICES 800 AMPS OF LESS USE CT CABINET MILBANK P/N: CT364811-HC & MOUNTING RACK P/N: K4798 OR AN APPROVED EQUIVALENT.
9. SERVICE CONDUITS SHALL BE A MINIMUM OF 4' IN DEPTH, AND MEET CITY STANDARDS.
10. ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL SERVICE CONDUCTORS, & SHALL MAKE CONNECTIONS IN THE SECONDARY SIDE OF THE TRANSFORMER.
11. CUSTOMER SHALL OWN & MAINTAIN SERVICE CONDUCTORS FROM TRANSFORMER TO THE CUSTOMER SERVICE DISCONNECT.



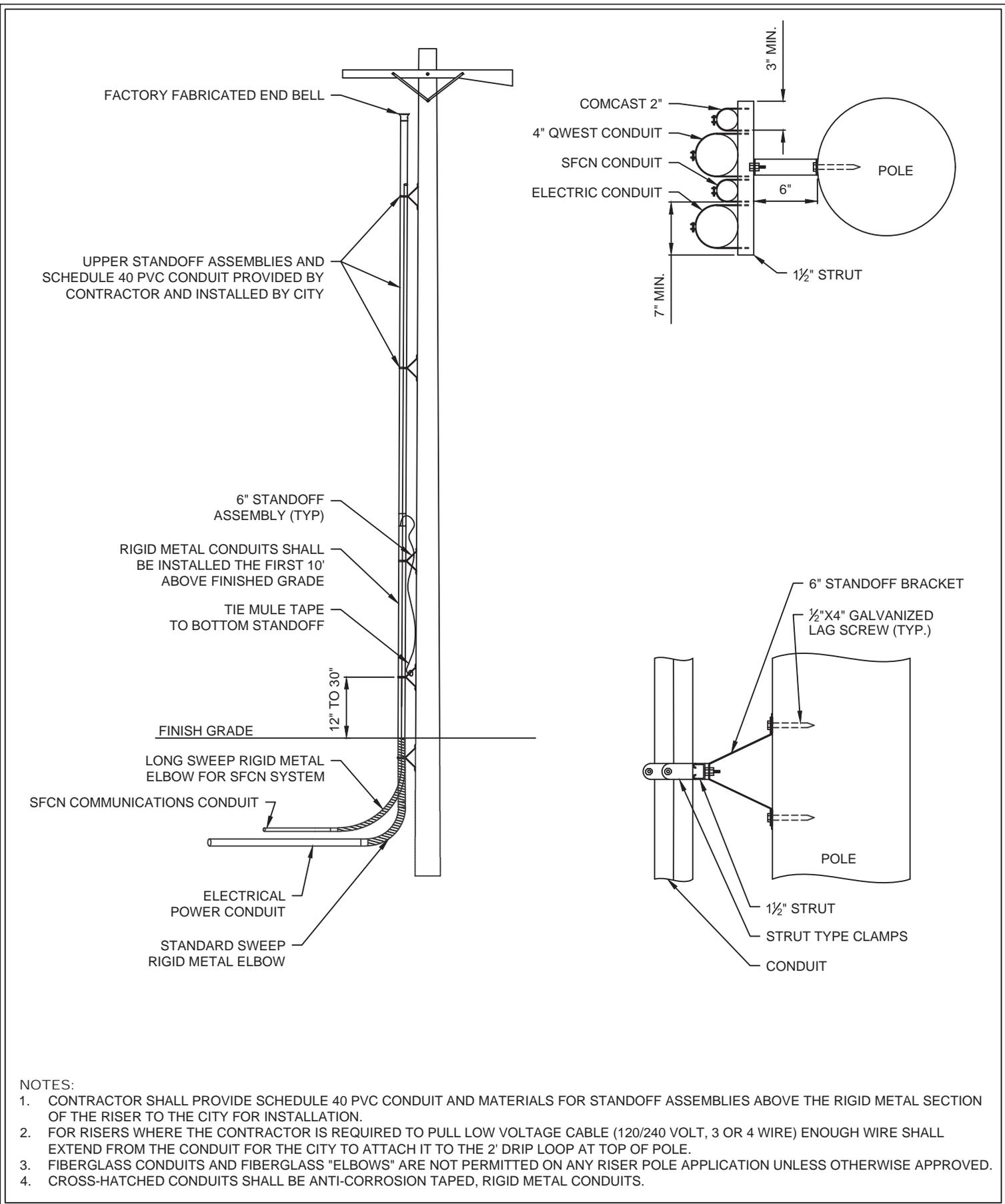
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STANDARD DRAWING

3 PHASE UNDERGROUND SERVICE 201-800 AMPS

DRAWN: JLR  
DESIGN: CJP  
CHECK: CMT  
DATE: 6/22/16

SCALE:  
NONE  
STANDARD  
81



**NOTES:**

1. CONTRACTOR SHALL PROVIDE SCHEDULE 40 PVC CONDUIT AND MATERIALS FOR STANDOFF ASSEMBLIES ABOVE THE RIGID METAL SECTION OF THE RISER TO THE CITY FOR INSTALLATION.
2. FOR RISERS WHERE THE CONTRACTOR IS REQUIRED TO PULL LOW VOLTAGE CABLE (120/240 VOLT, 3 OR 4 WIRE) ENOUGH WIRE SHALL EXTEND FROM THE CONDUIT FOR THE CITY TO ATTACH IT TO THE 2' DRIP LOOP AT TOP OF POLE.
3. FIBERGLASS CONDUITS AND FIBERGLASS "ELBOWS" ARE NOT PERMITTED ON ANY RISER POLE APPLICATION UNLESS OTHERWISE APPROVED.
4. CROSS-HATCHED CONDUITS SHALL BE ANTI-CORROSION TAPED, RIGID METAL CONDUITS.



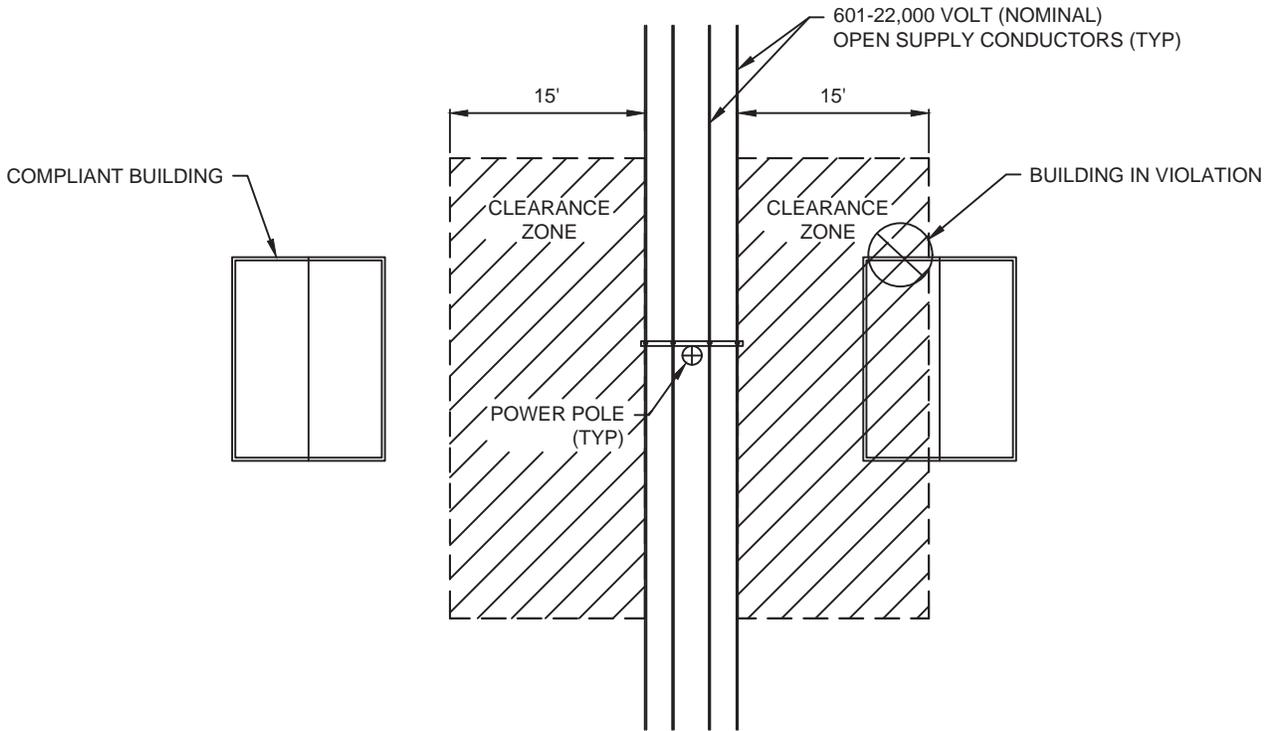
SPANISH FORK CITY  
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**STANDARD DRAWING**

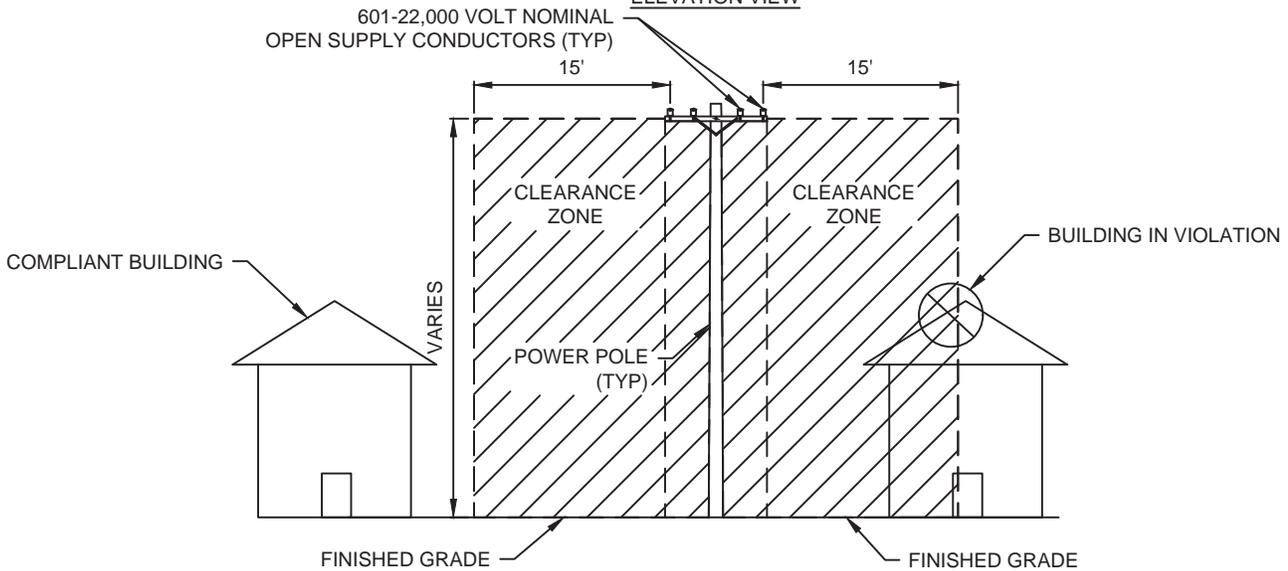
TYPICAL RISER POLE

DRAWN:	JLR	SCALE: NONE
DESIGN:	CJP	
CHECK:	CMT	STANDARD 82
DATE:	6/22/16	

PLAN VIEW



ELEVATION VIEW



NOTES:

1. NO BUILDING OR STRUCTURE SHALL BE PLACED, OR CONSTRUCTED IN THE POWER LINE CLEARANCE ZONE.
2. CLEARANCES GIVEN ARE TYPICAL AND APPLY TO OPEN SUPPLY PRIMARY CIRCUITS OPERATING AT OVER 600 VOLTS UP TO 22,000 VOLTS, AND MAY NOT APPLY TO ALL CASES OR CIRCUMSTANCES.
3. CLEARANCES DO NOT APPLY TO SECONDARY INSULATED SERVICE CIRCUITS OPERATING AT 600 VOLTS OR LESS.
4. TYPICAL CLEARANCES INCLUDE THE COMPLETE VERTICAL & HORIZONTAL SPACE AROUND POWERLINES FROM THE OUTSIDE CONDUCTOR TO ANY BUILDING, SIGN, OR STRUCTURE.
5. TYPICAL CLEARANCES FOR 12KV PRIMARY OVERHEAD DISTRIBUTION CIRCUITS ARE 15' FROM THE OUTSIDE CONDUCTOR IN ANY DIRECTION FROM ANY BUILDING, SIGN, OR STRUCTURE
6. TYPICAL CLEARANCES FOR 46KV PRIMARY OVERHEAD TRANSMISSION CIRCUITS ARE 30' FROM THE OUTSIDE CONDUCTOR IN ANY DIRECTION FROM ANY BUILDING, SIGN, OR STRUCTURE.
7. SPECIAL APPLICATIONS, HIGHER VOLTAGES, RAILROAD TRACKS, SWIMMING POOLS, AND OPEN WATER MAY RESULT IN ADDITIONAL CLEARANCES AND SHALL BE APPROVED BY ELECTRIC DEPARTMENT.



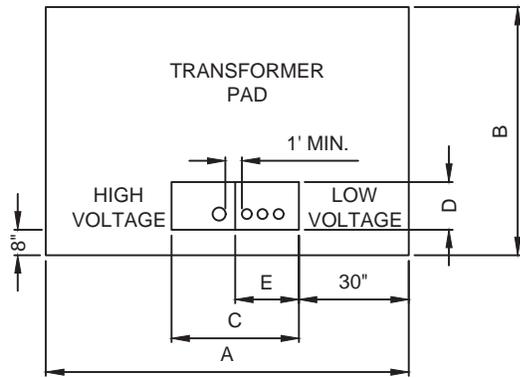
SPANISH FORK CITY  
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STANDARD DRAWING

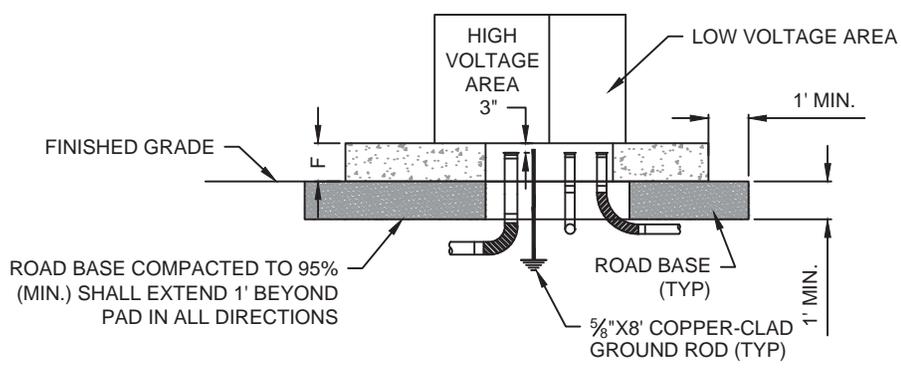
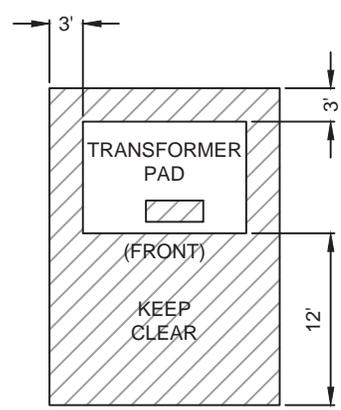
OVERHEAD POWERLINE CLEARANCES OVER 600 VOLTS TO 22,000 VOLTS

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	6/22/16

SCALE:	NONE
STANDARD	83



**GENERAL TRANSFORMER CLEARANCES**



**TRANSFORMER PAD DIMENSION CHART**

TRANSFORMER KVA RATING	DIMENSIONS					
	A	B	C	D	E	F
75-500 KVA	114"	78"	40"	15"	20"	9"
750-1500 KVA	118"	105"	52"	16"	30"	11"
2000 KVA	CONTACT POWER DEPT.					

**NOTES:**

- SITE PREPARATION & INSPECTIONS.** AFTER EXCAVATION, ALL EXCAVATED AREA 1' PAST PAD SHALL BE BACK FILLED WITH ROAD BASE AND MUST BE COMPACTED TO 95%. THE GROUND MUST BE LEVEL AN ADDITIONAL 12' PAST THE EDGE OF THE PAD ON ALL SIDES AND THEN TAPER OFF. ALL PADS SHALL BE INSPECTED PRIOR TO POURING CONCRETE, AND THE GROUND SHALL HAVE A COMPACTION TEST DONE PRIOR TO THE FORM BEING CONSTRUCTED.
- CONCRETE.** CONCRETE SHALL BE TYPE E61A. STEEL REINFORCEMENT SHALL BE #4 BARS PLACED AT 12" CENTERS THROUGHOUT THE PAD. THE PAD MUST BE POURED AT LEAST SEVEN FULL DAYS PRIOR TO SETTING THE TRANSFORMER. THE FINISHED SURFACE MUST BE COMPLETELY FLAT AND LEVEL. CONCRETE SHALL BE TESTED BY THE CITY OR THE CITY'S ENGINEERING FIRM PRIOR TO POURING CONCRETE. CONCRETE SHALL CONFORM TO CITY STANDARDS.
- FABRICATION.** THE PAD SHALL BE CONSTRUCTED ON THE SITE ACCORDING TO THE SPECIFICATIONS.
- CONDUIT WINDOW LAYOUT.** LOW VOLTAGE CONDUITS SHALL BE FORMED AS TIGHTLY AS POSSIBLE AGAINST THE RIGHT SIDE OF THE OPENING AND SHALL IN NO CASE EXTEND FURTHER THAN 20" FROM THE RIGHT SIDE OF THE CONDUIT WINDOW ON THE SMALL PAD OR 30" ON THE LARGE PADS. NO MORE THAN EIGHT CONDUITS WILL BE USED ON THE LOW VOLTAGE SIDE. ON 2000 KVA PADS, NO MORE THAN 12 SECONDARY CONDUITS WILL BE USED. DO NOT PUT ANY CONCRETE IN OR UNDER THE CONDUIT WINDOW. USE SOIL TO SEPARATE CONDUITS. ALL CONDUITS ENTERING THE PAD SHALL BE SCHEDULE 40 P.V.C. WITH RIGID METAL 90° ELBOWS OR FIBERGLASS.
- GROUNDING.** A 5/8" X 8' GROUND ROD SHALL BE USED ON THE SMALL PAD AND A 3/4" X 10' ROD ON THE LARGE PADS. THE GROUND ROD SHALL BE INSTALLED ON THE PRIMARY SIDE OF TRANSFORMER.
- CLEARANCES.** THE FRONT OF THE PAD SHOULD ALWAYS FACE AWAY FROM ADJACENT STRUCTURES AND BE FREE OF OBSTRUCTIONS. AT LEAST THREE FEET MUST SEPARATE THE EDGES OF THE PAD FROM ANY ADJACENT STRUCTURE. THE EDGES OF THE PAD MUST BE AT LEAST TEN FEET FROM ANY COMBUSTIBLE STRUCTURE. IF AN ADJACENT STRUCTURE HAS ANY OVERHANG OR EAVE WITHIN 27 VERTICAL FEET OF THE TOP OF THE PAD, CLEARANCE MUST BE MEASURED FROM THE OUTSIDE OF THE OVERHANG. THE PAD MUST NOT BE PLACED IN AN AREA TEN FEET IN LINE WITH OR THREE FEET TO EITHER SIDE OF ANY WINDOW IN AN ADJACENT STRUCTURE.
- CLEARANCE FOR A DOOR** MUST BE TWENTY FEET IN LINE WITH IT AND TEN FEET ON EITHER SIDE. PADS MUST NOT BE PLACED WITHIN FIFTEEN FEET OF ANY VALVE OR WITHIN TWENTY FEET OF ANY PUMPING OR STORAGE FACILITY CONTAINING FLAMMABLE MATERIAL. NO WALLS, FENCES, OR ANY OTHER OBSTRUCTIONS WILL BE PLACED WITHIN THREE FEET OF THE SIDES OR BACK OF THE PAD, OR WITHIN TWELVE FEET OF THE FRONT OF THE PAD. THE AREA SURROUNDING THE PAD MUST HAVE TWELVE FEET OF CLEAR, LEVEL WORKING AREA FOR MAINTENANCE OF THE TRANSFORMER. THE PAD MAY NOT BE PLACED IN LINE WITH AN AIR INTAKE WITHIN 32 VERTICAL FEET OF THE SURFACE OF THE PAD. ALSO, IT MUST NOT BE PLACED WITHIN 12 FEET VERTICALLY OF A DOOR OR WINDOW.
- BARRIERS.** IF THE TRANSFORMER PAD IS TO BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC, (PARKING LOTS, DRIVEWAYS, ETC.) CONTACT SPANISH FORK CITY ELECTRICAL FOR PROTECTIVE BARRIER REQUIREMENTS.
- METERING.** IN GENERAL, THE METERING SHALL BE PLACED ON BUILDINGS OR STRUCTURES.
- CONNECTIONS.** ALL SECONDARY (LOW VOLTAGE) CABLES & SECONDARY CONNECTIONS ARE THE CONTRACTOR'S RESPONSIBILITY. SPANISH FORK ELECTRICAL WILL INSTALL & TERMINATE PRIMARY CABLES & CONNECTIONS ONLY.
- ANCHORING.** CONTRACTOR TO ANCHOR TRANSFORMER TO PAD WITH MINIMUM OF TWO ANCHOR POINTS.



SPANISH FORK CITY  
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**STANDARD DRAWING**

3 PHASE TRANSFORMER & CONCRETE PAD

DRAWN:	JLR
DESIGN:	CJP
CHECK:	CMT
DATE:	3/10/15

SCALE:	NONE
STANDARD	84