

3100 SERIES – GENERAL DETAILS

G-3110	STANDARD SYMBOLS TO BE USED ON CITY IMPROVEMENT PLANS
G-3112	IMPROVEMENT PLAN COVER SHEET
G-3120	CITY CENTER & SCENIC ARTERIAL STREET CROSS SECTION
G-3122	ARTERIAL STREET CROSS SECTIONS
G-3124-1	COLLECTOR STREET CROSS SECTIONS
G-3124-2	MINOR COLLECTOR STREET WITH ON-STREET PARKING
G-3124-3	COMMERCIAL / INDUSTRIAL COLLECTOR AND LOCAL STREET CROSS SECTIONS
G-3124-4	SPECIAL USE MAJOR AND MINOR COLLECTOR STREET CROSS SECTIONS
G-3126	LOCAL STREET CROSS SECTIONS
G-3128	PRIVATE STREET CROSS SECTIONS
G-3130	STANDARD UTILITY LOCATIONS – CITY CENTER & SCENIC ARTERIAL
G-3132	STANDARD UTILITY LOCATIONS – ARTERIAL
G-3134	STANDARD UTILITY LOCATIONS – COLLECTOR
G-3136	STANDARD UTILITY LOCATIONS – LOCAL
G-3142	FIRE LANE SIGN INSTALLATION
G-3144	HANDICAP ACCESSIBLE PARKING SIGN
G-3150	PARKING LOT DIMENSIONS
G-3160	REFUSE CONTAINERS DESIGN CRITERIA FOR 2 YD. & 3 YD.
G-3161	REFUSE CONTAINERS DESIGN CRITERIA FOR 20 YD. & 40 YD.
G-3162-1	REFUSE ENCLOSURE
G-3162-2	REFUSE ENCLOSURE W/ GREASE CONTAINMENT AREA
G-3164-1	DOUBLE REFUSE ENCLOSURE
G-3164-2	DOUBLE REFUSE ENCLOSURE W/ GREASE CONTAINMENT AREA
G-3170	BARRICADING ON SUBDIVISION STREETS
G-3171-1	MASONRY RETAINING WALL – SHEET 1 OF 2
G-3171-2	MASONRY RETAINING WALL – SHEET 2 OF 2

3200 SERIES – STREET DETAILS

G-3204	INTERSECTION & STREETS TYPICAL CROSS-SLOPES & CROWN RUN-OFF
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3200 SERIES – STREET DETAILS (CONTINUED)

G-3206	TYPICAL CUT, FILL, OR ADJACENT SLOPE ROADWAY CROSS-SECTION
G-3208-1	TYPICAL 4-LANE AT 4-LANE TEE INTERSECTION WITH MEDIAN LAYOUT, SIGNING, & STRIPING
G-3208-2	TYPICAL COLLECTOR AT COLLECTOR TEE INTERSECTION WITH CENTERLINE LAYOUT, SIGNING, & STRIPING
G-3208-3	TYPICAL ARTERIAL & COLLECTOR RIGHT TURN & RAISED MEDIAN LEFT TURN LAYOUT, SIGNING, & STRIPING
G-3208-4	4-LANE AT 4-LANE DUAL LEFT INTERIM T-INTERSECTION LAYOUT, SIGNING, & STRIPING
G-3208-5	TYPICAL STREET INTERSECTION SIGNAGE
G-3208-6	TYPICAL BIKEWAY SIGNAGE AND PAVEMENT MARKINGS
G-3209-1	SAMPLE STREET NAME SIGN
G-3209-2	SAMPLE ADVANCED STREET NAME SIGN
G-3209-3	STREET SIGN POST
G-3209-4	(12”) STREET SIGN SEPARATOR BRACKET
G-3209-5	(12”) STREET SIGN POST CAP
G-3210-1	TYPICAL PULLBOX AND CONDUIT LAYOUT
G-3210-2	DRY UTILITY CLEAR ZONE LOCATION
G-3211	TYPICAL MEDIAN LEFT TURN BAY AND NOSES
G-3212	TYPICAL HYDRANT MARKER LOCATION
G-3214	PAVEMENT WIDTH TRANSITION LAYOUT, SIGNING, & STRIPING
G-3215	TYPICAL COLLECTOR TO ARTERIAL INTERSECTION
G-3216	MINIMUM PAVEMENT SECTION THICKNESS
G-3218	3’ ROLL CURB
G-3219	ARROW AND "ONLY" PAVEMENT MARKING FOR LEFT TURN LANES
G-3226	8’ VALLEY GUTTER
G-3228	LOCAL STREET SIGHT VISIBILITY
G-3230	TYPICAL DRIVEWAY & RIGHT TURN BAY STANDARD
G-3232	INTERSECTION SIGHT VISIBILITY TRIANGLES
G-3236	TYPICAL DRIVEWAY DETAILS
G-3242-1	TYPICAL BUS BAY DETAIL
G-3242-2	TYPICAL BUS SHELTER ACCESSORY PAD
G-3244-1	FIRE DEPARTMENT PERMANENT ACCESS ROADWAY TYPICAL CROSS-SECTION
G-3244-2	FIRE DEPARTMENT ALTERNATIVE ACCESS ROADWAY TYPICAL CROSS-SECTION

3200 SERIES – STREET DETAILS (CONTINUED)

- G-3244-3 FIRE DEPARTMENT TEMPORARY ACCESS ROADWAY
TYPICAL CROSS-SECTION
- G-3246-1 FIRE DEPARTMENT ACCESS ROADWAYS & CUL-DE-SAC
/ MODIFIED CUL-DE-SAC TURNAROUNDS
- G-3246-2 FIRE DEPARTMENT ACCESS HAMMERHEAD / MODIFIED
HAMMERHEAD TURNAROUNDS
- G-3250-1 ROADWAY POLE AND LUMINAIRE SPECIFICATIONS
- G-3250-10 STANDARD POLE CABLE ATTACHMENTS
- G-3250-11 STANDARD POLE GROUNDING AND WIRING DETAIL
- G-3250-12 STANDARD APS J-BOX DETAIL
- G-3250-2 STANDARD DARK BRONZE SQUARE POLES (1 OF 2)
- G-3250-3 STANDARD DARK BRONZE SQUARE POLES (2 OF 2)
- G-3250-4 STANDARD GRAY ROUND ROADWAY POLES (1 OF 2)
- G-3250-5 STANDARD GRAY ROUND ROADWAY POLES (2 OF 2)
- G-3250-6 STANDARD DUAL MAST ARM ROUND ROADWAY POLES
- G-3250-7 STANDARD DARK BRONZE SQUARE POLES
- G-3250-8 STANDARD GRAY ROUND ROADWAY POLES
- G-3250-9 SPECIAL GRAY ROUND ROADWAY POLES
- G-3255-1 STREET LIGHTING – ARTERIAL STREET STAGGERED
WITHOUT MEDIAN
- G-3255-2 STREET LIGHTING – ARTERIAL INTERSECTIONS
- G-3255-3 STREET LIGHTING – COLLECTOR STREET SPACING
- G-3255-4 STREET LIGHTING – LOCAL / LOCAL ROUNDABOUT
- G-3255-5 STREET LIGHTING – ELBOW INTERSECTIONS
- G-3263 STREET LIGHT PULL BOX & CONNECTION DETAILS
- G-3291-1 STREAMLINE STEEL POLE STREET LIGHT DETAIL
- G-3291-2 STREAMLINE STEEL POLE STREET LIGHT DETAIL
- G-3292-1 ARCHITECTURAL STREET LIGHT DETAIL
- G-3292-2 ARCHITECTURAL STREET LIGHT DETAIL
- G-3293 INTERCONNECT CONDUIT TRENCHING DETAIL
- G-3294-1 INTERCONNECT CONDUIT SPLICE BOX DETAIL
- G-3294-2 INTERCONNECT CONDUIT SPLICE BOX DETAIL – SHEET 2
- G-3294-3 INTERCONNECT CONDUIT SPICE BOX DETAILS – SHEET 3
- G-3295 POLYMER NUMBER 7 PULL BOX DETAIL
- G-3296-1 MODULAR POLE 'F' – 20' MAST ARM
- G-3296-10 MODULAR POLE 'J' – 40' MAST ARM
- G-3296-11 MODULAR POLE 'Q' – 45' MAST ARM
- G-3296-12 MODULAR POLE 'J' – 45' MAST ARM
- G-3296-13 MODULAR POLE 'Q' – 50' MAST ARM

3200 SERIES – STREET DETAILS (CONTINUED)

- G-3296-14 MODULAR POLE 'J' – 50' MAST ARM
- G-3296-15 MODULAR POLE 'A-1'
- G-3296-16 MODULAR POLE 'A-2'
- G-3296-17 MODULAR POLE MAST ARM CONNECTION
- G-3296-18 MODULAR SIGNAL 'ADD-ON' STRUCTURES
- G-3296-19 MODULAR SIGNAL MAST ARM SIGN MOUNTING DETAILS
- G-3296-2 MODULAR POLE 'E' – 20' MAST ARM
- G-3296-20 TRAFFIC SIGNAL FOUNDATION DETAIL TYPE 'A'
FOUNDATION (SHEET 1 OF 2)
- G-3296-21 TRAFFIC SIGNAL FOUNDATION DETAIL TYPE 'A'
FOUNDATION (SHEET 2 OF 2)
- G-3296-22 TRAFFIC SIGNAL FOUNDATION DETAIL FOR MODULAR 20'
– 40' MAST ARM STRUCTURES (SHEET 1 OF 2)
- G-3296-23 TRAFFIC SIGNAL FOUNDATION DETAIL FOR MODULAR 20'
– 40' MAST ARM STRUCTURES (SHEET 2 OF 2)
- G-3296-24 TRAFFIC SIGNAL FOUNDATION DETAIL FOR MODULAR 45'
MAST ARM STRUCTURES (SHEET 1 OF 2)
- G-3296-25 TRAFFIC SIGNAL FOUNDATION DETAIL FOR MODULAR 45'
MAST ARM STRUCTURES (SHEET 2 OF 2)
- G-3296-26 TRAFFIC SIGNAL FOUNDATION DETAIL FOR MODULAR 50'
MAST ARM STRUCTURES (SHEET 1 OF 2)
- G-3296-27 TRAFFIC SIGNAL FOUNDATION DETAIL FOR MODULAR 50'
MAST ARM STRUCTURES (SHEET 2 OF 2)
- G-3296-28 PEDESTRIAN POST FOR MODULAR STRUCTURES
- G-3296-29 MODULAR TRAFFIC SIGNAL WIRING DETAIL
- G-3296-3 MODUAR POLE 'Q' – 25' MAST ARM
- G-3296-4 MODULAR POLE 'J' – 25' MAST ARM
- G-3296-5 MODULAR POLE 'Q' – 30' MAST ARM
- G-3296-6 MODULAR POLE 'J' – 30' MAST ARM
- G-3296-7 MODULAR POLE 'Q' – 35' MAST ARM
- G-3296-8 MODULAR POLE 'J' – 35' MAST ARM
- G-3296-9 MODULAR POLE 'Q' – 40' MAST ARM
- G-3297-1 TRAFFIC SIGNAL STYLE
- G-3297-2 TRAFFIC SIGNAL STYLE

3300 SERIES – WATER DETAILS

- G-3300 DRY UTILITY TO WET UTILITY MINIMUM SEPARATION
REQUIREMENTS

<u>3300 SERIES – WATER DETAILS (CONTINUED)</u>			<u>3300 SERIES – WATER DETAILS (CONTINUED)</u>		
G-3301	VERTICAL REALIGNMENT OF WATER & RECLAIMED WATER MAINS		G-3365	TYPICAL WELL SITE WITH ONSITE TREATMENT	
G-3305	ELECTRONIC BALL MARKER PLACEMENT		G-3366	WALL ELEVATION FOR WELL SITE OR PUMP STATION	
G-3307	BUTTERFLY VALVE OPERATOR MANHOLE		G-3367-1	TYPICAL WELL CASING	
G-3310	WATER SERVICE CONNECTIONS		G-3367-2	TURBINE PUMP INSTALLATION DETAIL	
G-3313-1	4" & 6" WATER METER VAULTS		G-3367-3	SUBMERSIBLE PUMP INSTALLATION DETAIL	
G-3313-2	8" WATER METER VAULT		G-3368	120" OD AIR CHAMBER	
G-3313-3	4", 6", & 8" WATER METERS		G-3369	96" OD AIR CHAMBER	
G-3316	CHLORINE INJECTIONS ASSEMBLY FOR UNDERGROUND WATERLINES		G-3370	WATER QUALITY SAMPLING STATION	
G-3321	DEBRIS CAP INSTALLATION		G-3390-1	16' SLIDING GATE & HINGED DOOR	
G-3323	PRESSURE REDUCING VALVE		G-3390-2	16' SLIDING GATE	
G-3324-1	PRESSURE REDUCING VALVE VAULT		<u>3400 SERIES – SEWER DETAILS</u>		
G-3324-2	PROPOSED PRV VAULT LID DETAIL		G-3429	ELECTRONIC MARKER BALL PLACEMENT – SEWER	
G-3325	RECLAIMED WATER VALVE BOX AND LID		G-3430	TYPICAL SEWER SERVICE FOR SEWER MAINS > 10' – 15' DEEP	
G-3328	2" AIR/VACUUM RELEASE VALVE		G-3430-2	DEEP SEWER SERVICE CONNECTION – 15' DEEP OR GREATER	
G-3330	FIRE HYDRANT INSTALLATION		G-3440	FORCE MAIN CLEANOUTS	
G-3332	HYDRANT SAFETY POSTS		G-3441	SEWAGE AIR RELEASE VALVE	
G-3334	TEMPORARY WATER SUPPLY HYDRANT METER ASSEMBLY		G-3442	FORCE MAIN – MANHOLE DISCHARGE	
G-3336	FIRE HYDRANT BYPASS ASSEMBLY (FOR LINES > 16")		G-3450-1	MONITORING/SAMPLING VAULT	
G-3338	FIRE DEPARTMENT CONNECTION		G-3450-2	MONITORING/SAMPLING VAULT	
G-3350	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY INSTALLATION – 3" AND LARGER		<u>3500 SERIES – DRAINAGE DETAILS</u>		
G-3351	REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY INSTALLATION – 2.5" AND UNDER		G-3510	STORM DRAIN INLET MARKER	
G-3352	DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY INSTALLATION – 3" TO 10"		G-3511	STORM DRAIN INLET MARKER ON HEADWALL	
G-3353	DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY INSTALLATION – 2.5" AND UNDER		G-3520	CUT-OFF WALL	
G-3356	TEMPORARY JUMPER CONNECTION		G-3531-2	BARRIER SPECIFICATIONS SCHEDULE	
G-3357	METAL ENCLOSURE FOR ABOVE GROUND UTILITIES		G-3531-1	STORM SEWER OUTFALL ACCESS BARRIER	
G-3358	SAFETY POST LOCATION FOR BACKFLOW PREVENTION ASSEMBLIES		G-3535-4	STORM DRAIN INLET MARKER ON CATCH BASIN SCUPPER	
G-3360	FILL PIPE DETAILS FOR PORTABLE TANKS WITH AIR GAP SEPARATION		G-3535-3	CATCH BASING TYPE "M" TOP MODIFICATION IN LANDSCAPE PARKWAY	
G-3361	BACKFLOW PREVENTION METHOD FOR PORTABLE TANKS WITH NO AIR GAP SEPARATION		G-3535-2	CATCH BASIN TYPE 'M' – NOTES & DETAILS	
G-3362	PROPOSED TANK LADDER AND HATCH POSITION DETAIL		G-3535-1	CATCH BASIN TYPE 'M'	
G-3363	PROPOSED TANK HATCH DETAIL		G-3540-1	HDPE STORM DRAIN PIPE DETAILS (PIPE DIAMETER UP TO 48 INCHES)	
G-3364	TYPICAL WELL SITE		G-3540-2	POLYPROPYLENE TRENCH INSTALLATION	
			G-3540-3	POLYPROPYLENE TRENCH INSTALLATION FOR NON-TRAFFIC APPLICATION	
DETAIL NO. G-INDEX-3	CITY OF GOODYEAR STANDARD DETAIL	APPROVED:08/17	INDEX (PAGE 3 OF 4)		
			DETAIL NO. G-INDEX-3		

<u>3500 SERIES – DRAINAGE DETAILS (CONTINUED)</u> G-3560-2 DRYWELL PRE-TREATMENT CHAMBER G-3560-1 STANDARD DRYWELL G-3570 MINIMUM FINISH FLOOR TO DRAINAGE FACILITY ELEVATION RELATIONSHIPS G-3580 SINGLE RESIDENTIAL LOT SWPPP DETAIL <u>3600 SERIES – LANDSCAPE & PARKS DETAILS</u> G-3604 LANDSCAPE DETAILS G-3610-1 TREE PLANTING AND STAKING G-3610-10 CACTI/ACCENT PLANTING G-3610-11 VINE PLANTING G-3610-12 OCOTILLO PLANTING G-3610-13 SAGUARO PLANTING G-3610-14 BOULDER G-3610-15 DECOMPOSED GRANITE G-3610-16 STABILIZED DECOMPOSED GRANITE G-3610-17 CONCRETE HEADER G-3610-2 SINGLE-TRUNK TREE PLANTING ON SLOPE G-3610-3 TREE PLANTING IN TURF G-3610-4 DATE PALM TREE PLANTING G-3610-5 FAN PALM TREE PLANTING G-3610-6 ROOT BARRIER G-3610-7 SHRUB/GROUNDWATER PLANTING G-3610-8 SHRUB/GROUNDCOVER PLANTING ON SLOPE G-3610-9 TYPICAL PLANT SPACING AND CLEAR ZONES FOR MEDIAN LANDSCAPING G-3618 IRRIGATION WIRE SLEEVING CHART G-3620-1 REDUCED PRESSURE ASSEMBLY G-3620-10 QUICK COUPLER G-3620-11 PVC SLEEVE G-3620-12 TYPICAL TRENCHING G-3620-13 THRUST BLOCK G-3620-14 FLUSH CAP ASSEMBLY G-3620-15 EMMITTER MANIFOLD G-3620-16 EMISSION POINT – SHRUB AND GROUNDCOVER G-3620-17 EMISSION POINT – TREE G-3620-18 POP UP SPRAY HEAD WITH SWING JOINT G-3620-2 CALSENSE CONTROLLER (MODEL CS2000/PEDESTAL) G-3620-3 CALSENSE CONTROLLER (MODEL CS3000/PEDESTAL)			<u>3600 SERIES – LANDSCAPE & PARK DETAILS (CONTINUED)</u> G-3620-4 SOLAR CONTROLLER G-3620-5 ELECTRIC VALVE – DRIP WITH BALL VALVE G-3620-6 ELECTRIC VALVE – TURF WITH BALL VALVE G-3620-7 MASTER VALVE AND FLOW SENSOR G-3620-8 ISOLATION VALVE – 2.0” OR SMALLER G-3620-9 ISOLATION VALVE – 2.5” OR LARGER	
DETAIL NO. G-INDEX-4	CITY OF GOODYEAR STANDARD DETAIL	APPROVED:08/17	INDEX (PAGE 4 OF 4)	DETAIL NO. G-INDEX-4

 Existing Improvements
(Light & Dashed Linetype)

 Right of Way Line

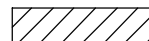
 Property Line

 Center or Monument Line

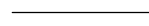
 Easement Line

 Barricade

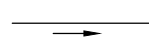
 Traffic Sign & Delineator

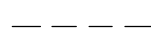
 Pavement Sawcut

 Vertical Curb & Gutter

 Roll Curb & Gutter

 Single Vertical Curb

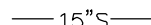
 Concrete Valley Gutter
(w/Direction of Flow)

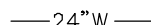
 Edge of Proposed Pavement
w/Thickened Edge

 Survey Monument (Brass Cap,
Stone, Etc. in Hand Hole)

 Survey Monument
(Brass Cap on Surface)

 Survey Monument
(Rebar or Pipe)

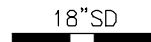
 15"S Sewer Line & Size

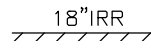
 24"W Water Line & Size

 Water or Gas Valve

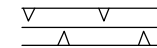
 Tapping Sleeve & Valve

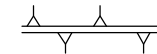
 Fire Hydrant

 18"SD Storm Drain & Size

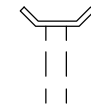
 18"IRR Irrigation Line & Size

 Concrete Lined Ditch

 Dirt Ditch

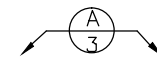
 Irrigation Berm

 Top of Bank
Toe of Slope

 Headwall

 Irrigation Standpipe

 Irrigation (Alfalfa) Valve

 Section No.
Sheet No.

NOTES:

1. PLANS SHALL BE OF A QUALITY TO ALLOW MICROFILMING. (i.e. LINE WEIGHT AND LETTER SIZE SHALL BE EASILY READ WHEN REDUCED BY 50%)
2. EXISTING IMPROVEMENTS INCLUDE BUT ARE NOT LIMITED TO CURB & GUTTER, SIDEWALK, AND DRIVEWAYS.
3. ALL PROPOSED CONSTRUCTION NOTES SHALL BE BOXED.

ACCURATE FIELD DATA BLOCK

BLUE STAKE BLOCK
(ALL SHEETS)

CITY OF GOODYEAR GENERAL
NOTES FOR CONSTRUCTION

ZONING

UTILITY CONFLICT CERTIFICATION

MARICOPA COUNTY
DEPARTMENT OF
ENVIRONMENTAL SERVICES
APPROVAL (AS REQUIRED)

BENCHMARK
(NAVD 88)

XYZ SUBDIVISION

IMPROVEMENT PLANS
DESCRIPTION, SECTION,
TOWNSHIP, & RANGE
GOODYEAR, ARIZONA

VICINITY MAP

SHEET INDEX

OTHER SIGNATURE BLOCKS AND
NOTES, AS REQUIRED – (RID,
LIBERTY, ADOT, MCDOT, ETC.)

QUANTITIES

CITY OF GOODYEAR	LIBERTY	PROPERTY OWNER

(MATCHES PERMIT)

ADD AS-BUILT
CERTIFICATION BLOCK

OWNER/DEVELOPER
NAME, ADDRESS
TELEPHONE NUMBER

ARCHITECT
NAME, ADDRESS
TELEPHONE NUMBER

ENGINEERING COMPANY
NAME, ADDRESS
TELEPHONE NUMBER

XYZ SUBDIVISION
IMPROVEMENT PLANS

CITY OF GOODYEAR			
REVIEW AND RECOMMENDED APPROVAL BY:			
FIRE DEPT		GRADING & DRAINAGE	
LANDSCAPING		WATER & SEWER	
TRAFFIC SIGNAL		PAVING	
STREET LIGHTS		SIGNING & STRIPING	
APPROVED BY:			
PLANS EXAMINER		DATE	

SEAL &
SIGNATURE

SHEET NO.
SHT _ OF _

HTE# xx-xxxx

DETAIL NO.
G-3112

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:08/17

IMPROVEMENT PLAN COVER SHEET

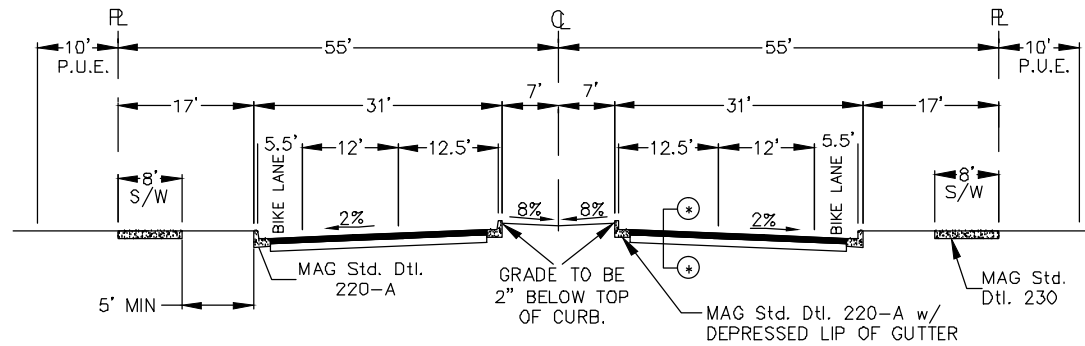
DETAIL NO.
G-3112



1. LANDSCAPE EASEMENTS AND PUBLIC UTILITY EASEMENTS ARE CONSIDERED INCLUSIVE IN THE CITY CENTER ARTERIAL ROW. NO ADDITIONAL EASEMENT IS TYPICALLY REQUIRED. LANDSCAPE SETBACKS SHALL MEET THE CITY STANDARD FOR ARTERIAL ROADWAYS.
2. BIKE LANES ARE TYPICALLY NOT REQUIRED ON CITY CENTER ARTERIAL ROADWAYS, HOWEVER THE CITY ENGINEERING DEPARTMENT RESERVES THE RIGHT TO REQUIRE ADDITIONAL PAVEMENT, SIGNAGE, AND STRIPING FOR BIKE LANES AS NEEDED.
3. WALLS IN EXCESS OF 3' IN HEIGHT (6' FOR RESIDENTIAL SUBDIVISIONS) AND BUILDINGS SHALL NOT BE PERMITTED WITHIN THE LANDSCAPE SETBACKS ON SCENIC ARTERIAL ROADWAYS.
4. DIMENSIONS IN PARENTHESES REFLECT ULTIMATE PAVING DIMENSIONS.
5. PAVING DIMENSIONS ARE MEASURED TO THE BACK OF CURB.
6. STRIPING DIMENSIONS ARE MEASURED TO THE FACE OF CURB.



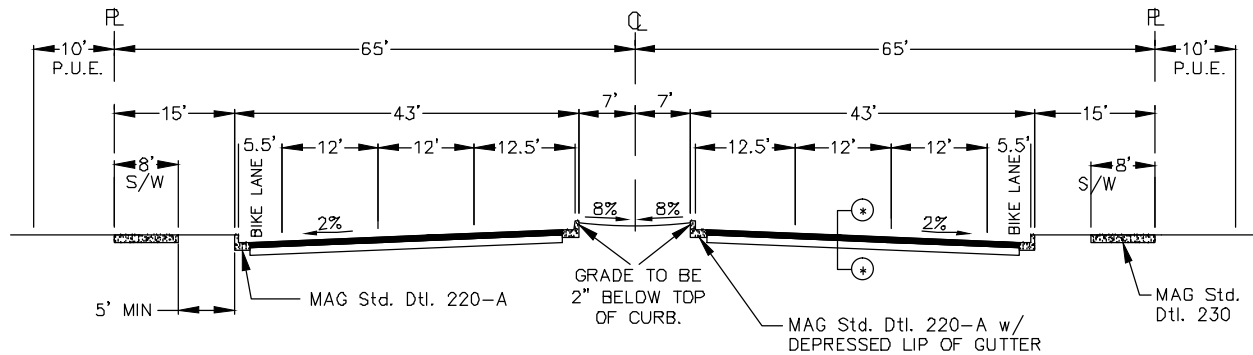
DETAIL NO.
G-3120



NOTES:

1. PAVING DIMENSIONS ARE MEASURED TO THE BACK OF CURB.
2. STRIPING DIMENSIONS ARE MEASURED TO THE FACE OF CURB.

MINOR ARTERIAL STREET



MAJOR ARTERIAL STREET

* SEE CITY Std. Dtl. G-3216 FOR PAVEMENT STRUCTURAL SECTION

DETAIL NO.
G-3122

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:08/17

ARTERIAL STREET CROSS SECTIONS

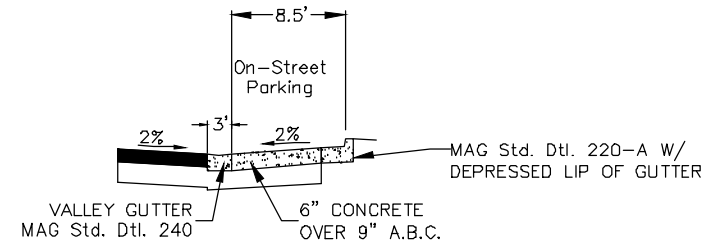
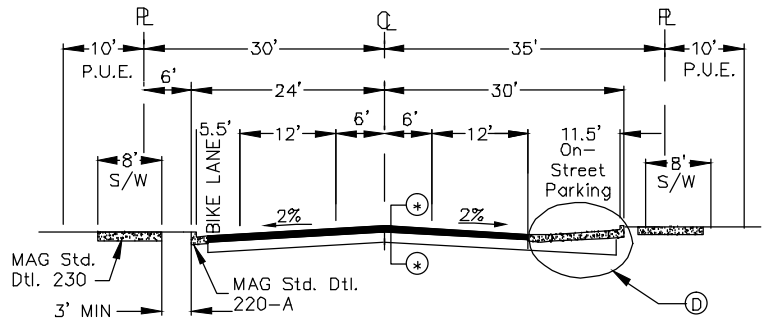
DETAIL NO.
G-3122



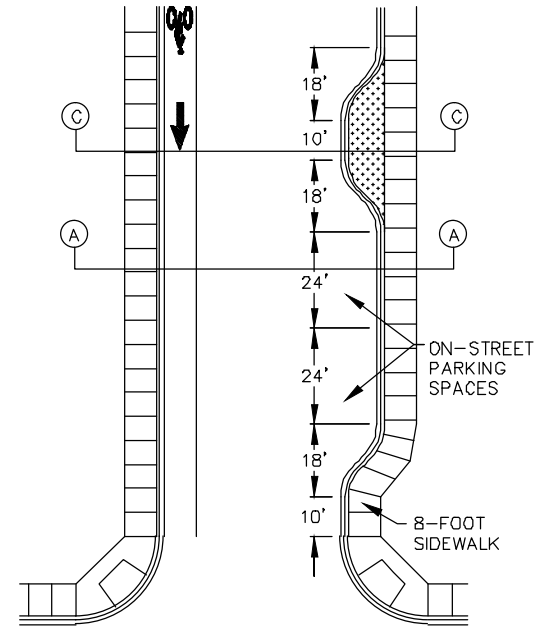
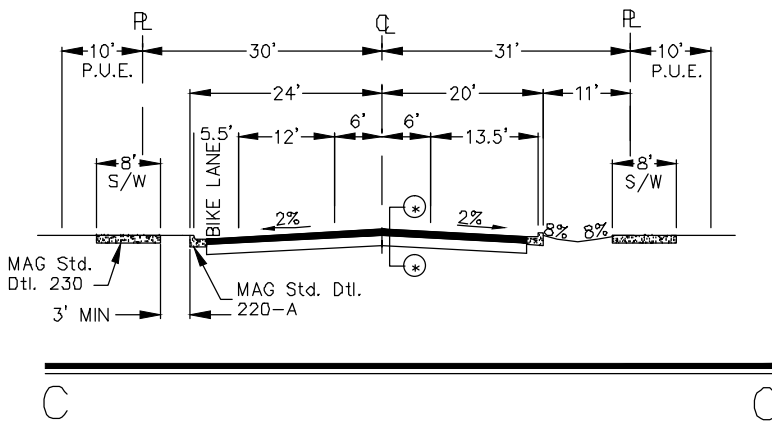
1. PAVING DIMENSIONS ARE MEASURED TO THE BACK OF CURB.
2. STRIPING DIMENSIONS ARE MEASURED TO THE FACE OF CURB.



DETAIL NO.
G-3124-1



DETAIL D

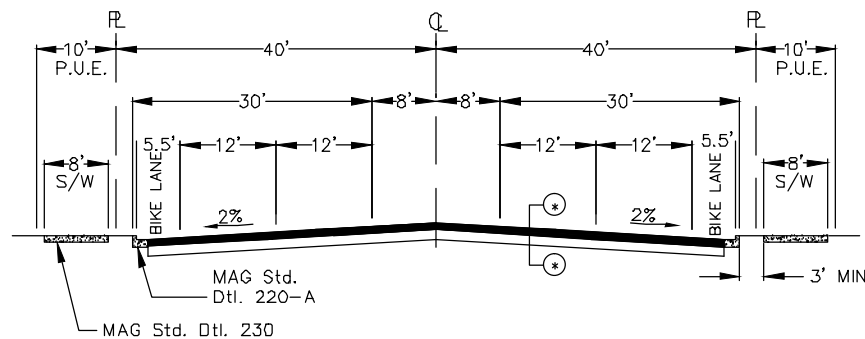


MINOR COLLECTOR WITH ON-STREET PARKING

NOTES:

1. SIDEWALKS MAY BE EITHER ATTACHED OR DETACHED TO THE CURB. DETACHED SIDEWALKS SHALL BE A MINIMUM 3' FROM THE BACK OF CURB AND A MINIMUM 5' FOR LANDSCAPING.
2. PAVING DIMENSIONS ARE MEASURED TO THE BACK OF CURB.
3. STRIPING DIMENSIONS ARE MEASURED TO THE FACE OF CURB.

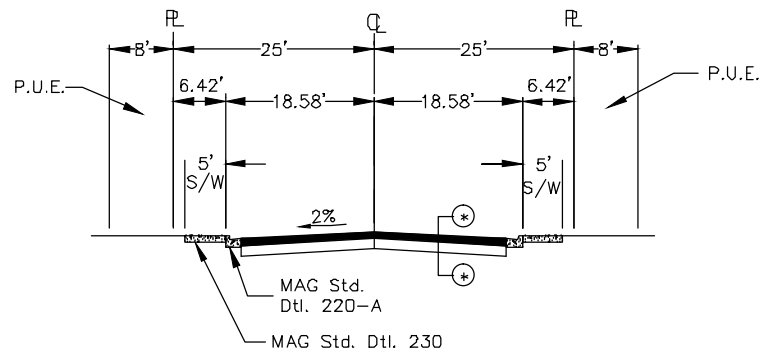
* SEE CITY Std. Dtl. G-3216 FOR PAVEMENT STRUCTURAL SECTION



COMMERCIAL / INDUSTRIAL COLLECTOR STREET

NOTES:

1. ON COLLECTOR USE 5' SIDEWALK IN INDUSTRIAL AREAS ONLY.
2. PAVING DIMENSIONS ARE MEASURED TO THE BACK OF CURB.
3. STRIPING DIMENSIONS ARE MEASURED TO THE FACE OF CURB.



COMMERCIAL / INDUSTRIAL LOCAL STREET

* SEE CITY Std. Dtl. G-3216 FOR PAVEMENT STRUCTURAL SECTION

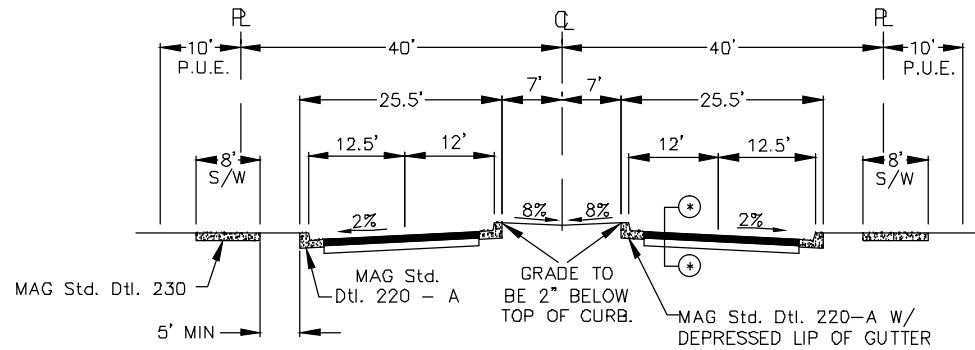
DETAIL NO.
G-3124-3

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:08/17

COMMERCIAL / INDUSTRIAL COLLECTOR AND LOCAL STREET CROSS SECTIONS

DETAIL NO.
G-3124-3



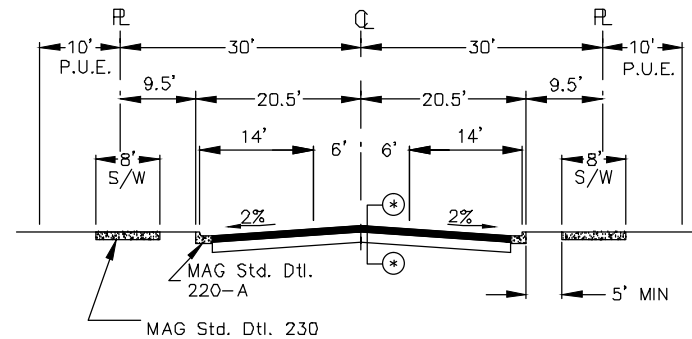
SPECIAL USE MAJOR COLLECTOR STREET

THIS DETAIL IS NOT TO BE USED
AS THE CITY STANDARD FOR
COLLECTOR ROADS. (See Note 1)

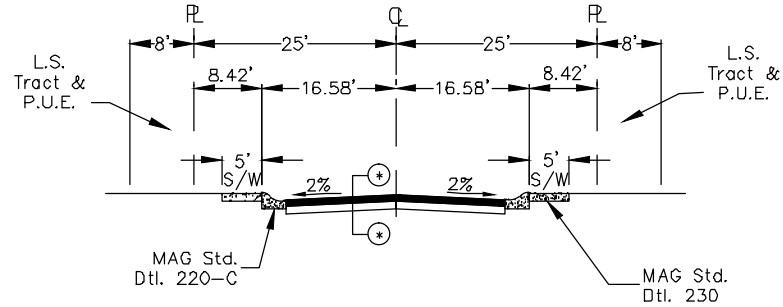
NOTES:

1. CITY STD. DTL. G-3124-1 SHALL BE USED AS THE TYPICAL CROSS-SECTIONS FOR COLLECTOR ROADS.
2. THIS DETAIL SHALL ONLY BE USED AT LOCATIONS WHERE THE CITY DESIRES TO MATCH AN EXISTING STREET CROSS-SECTION.
3. APPROVAL FROM THE CITY ENGINEER SHALL BE OBTAINED PRIOR TO USING THIS DETAIL.
4. PAVING DIMENSIONS ARE MEASURED TO THE BACK OF CURB.
5. STRIPING DIMENSIONS ARE MEASURED TO THE FACE OF CURB.

* SEE CITY Std. Dtl. G-3216 FOR PAVEMENT STRUCTURAL SECTION

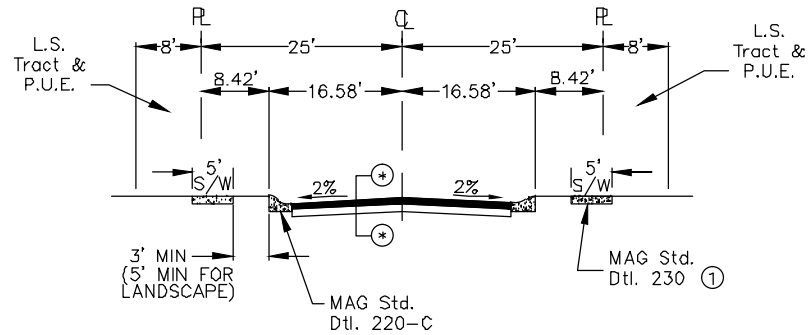


SPECIAL USE MINOR COLLECTOR STREET



NOTES:

1. THE DETACHED 5' SIDEWALK MAY ENCROACH UP TO 1.5' INTO THE P.U.E.
2. PAVING DIMENSIONS ARE MEASURED TO THE BACK OF CURB.



LOCAL STREET
WITH DETACHED SIDEWALK

* SEE CITY Std. Dtl. G-3216 FOR PAVEMENT STRUCTURAL SECTION

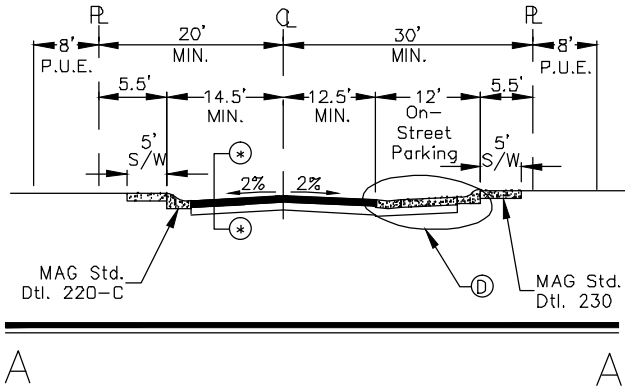
DETAIL NO.
G-3126

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:12/12

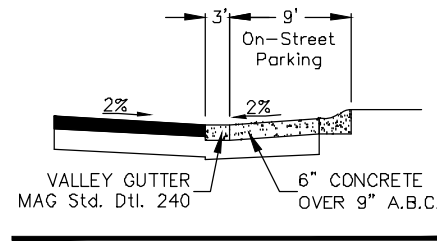
LOCAL STREET CROSS SECTIONS

DETAIL NO.
G-3126

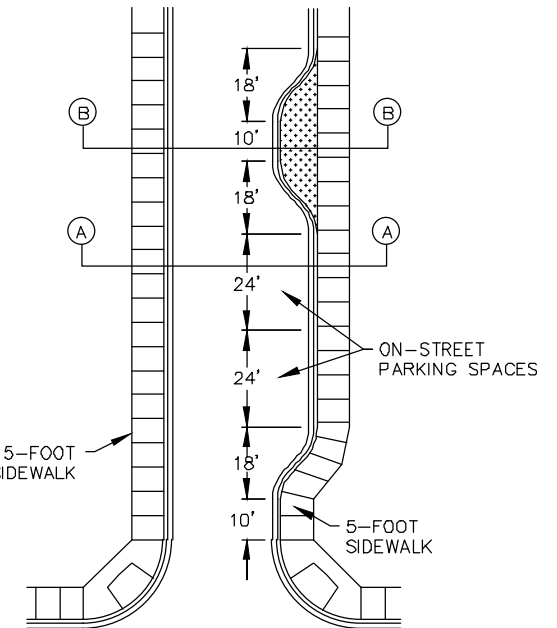
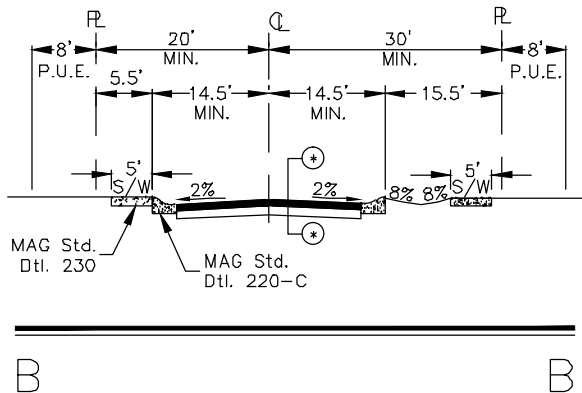


NOTES:

1. DETACHED SIDEWALK NOT PERMITTED ADJACENT TO ON-STREET PARKING.
2. PAVING DIMENSIONS ARE MEASURED TO THE BACK OF CURB.



DETAIL D



PRIVATE STREET WITH
ON-STREET PARKING

* SEE CITY Std. Dtl. G-3216 FOR PAVEMENT STRUCTURAL SECTION

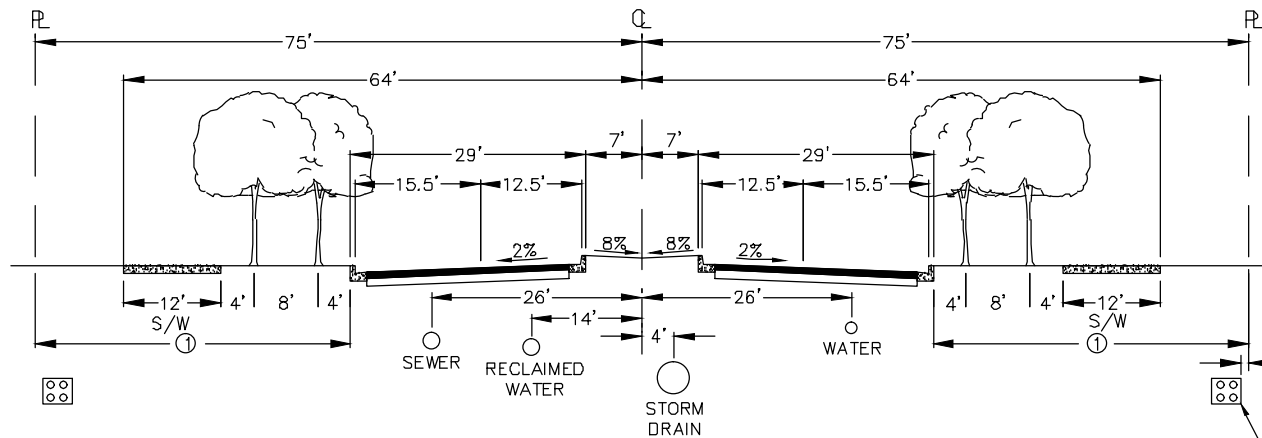
DETAIL NO.
G-3128

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:12/12

PRIVATE STREET CROSS SECTIONS

DETAIL NO.
G-3128



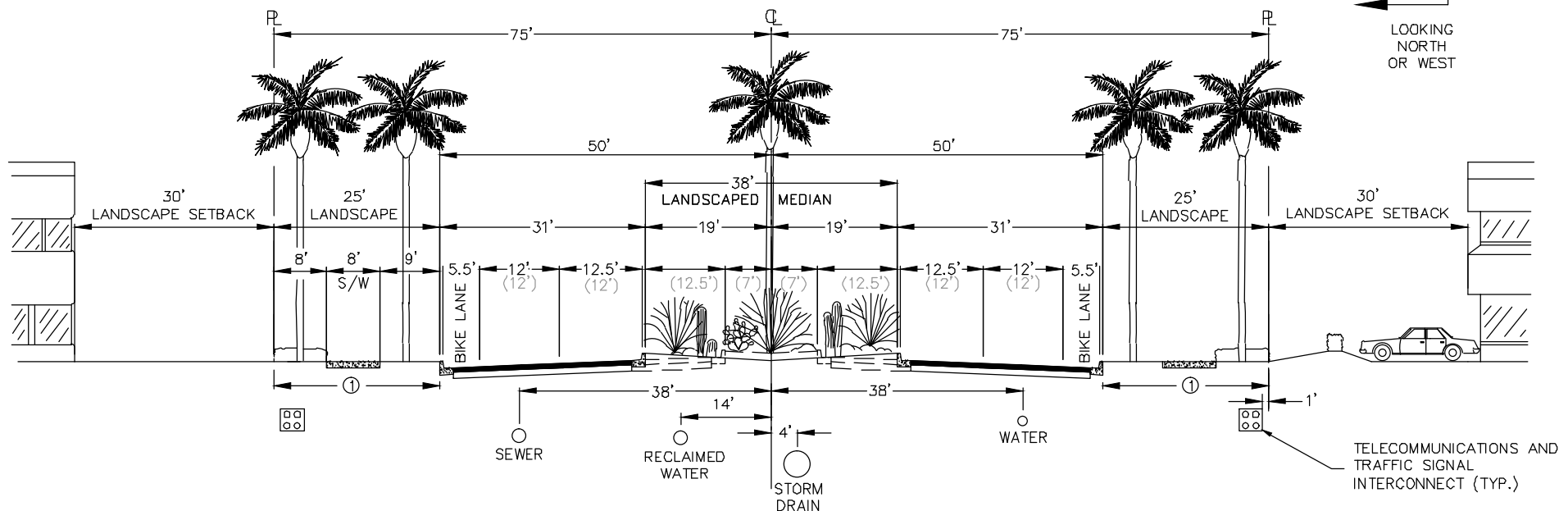
CITY CENTER ARTERIAL STREET

NOTES:

1. TELECOMMUNICATIONS AND TRAFFIC SIGNAL INTERCONNECT CONDUIT SHALL BE INSTALLED BEHIND THE BACK OF CURB AT A DISTANCE OF 1' FROM THE RIGHT OF WAY LINE.
2. PAVEMENT CUTS OF PUBLIC STREETS ARE NOT PERMITTED. FACILITIES SHALL BE BORED UNDER PAVEMENT AND CURB.
3. ALTERNATIVE FACILITY LOCATIONS AND REQUESTS TO CUT STREET PAVEMENT REQUIRE THE APPROVAL OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENTS. SUPPORTING JUSTIFICATION IS REQUIRED FOR ALL REQUESTS.
4. WHERE STREET LIGHTS ARE LOCATED WITHIN THE MEDIAN, A MINIMUM 18" CLEAR SHALL BE MAINTAINED FROM THE STREET LIGHT FOUNDATION TO THE OUTSIDE EDGE OF A STORM DRAIN LINE OR OTHER CITY UTILITY LINE.
5. IRRIGATION MAINS AND LATERALS SHALL BE INSTALLED IN THE PERMANENT AREA OF THE LANDSCAPED MEDIAN.

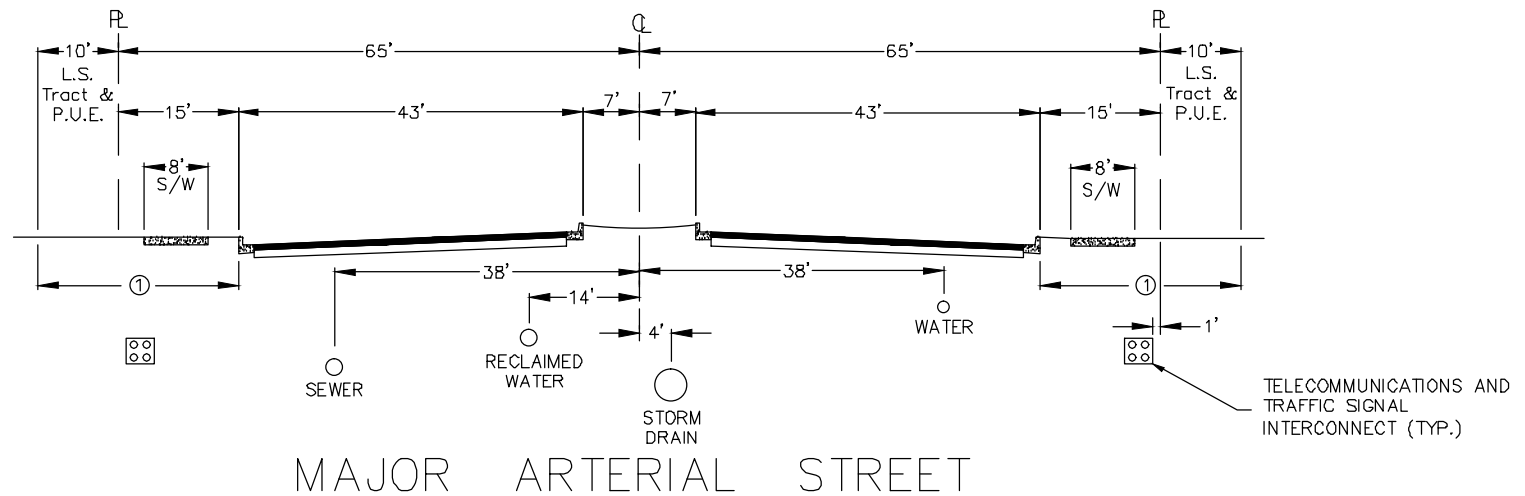
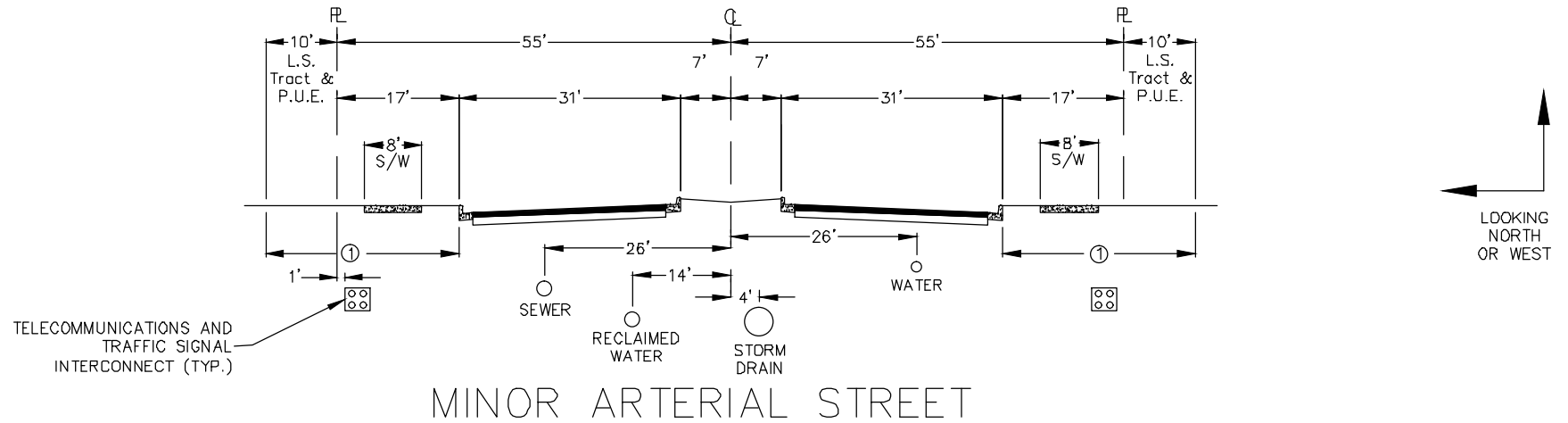
TELECOMMUNICATIONS AND TRAFFIC SIGNAL INTERCONNECT (TYP.)

LOOKING NORTH OR WEST



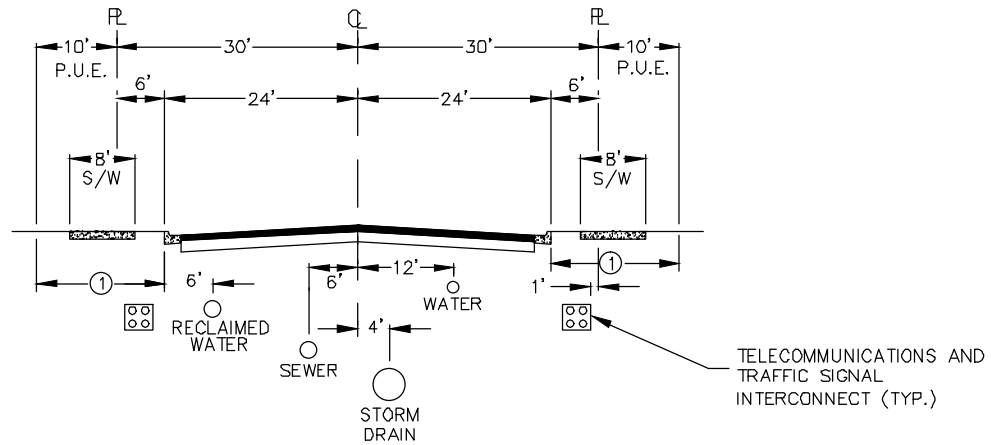
SCENIC ARTERIAL STREET

TELECOMMUNICATIONS AND TRAFFIC SIGNAL INTERCONNECT (TYP.)

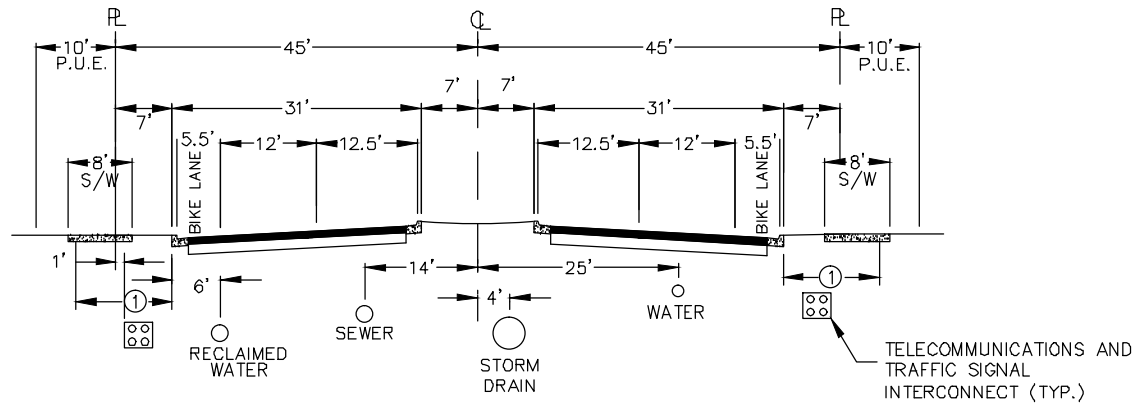


NOTES:

1. TELECOMMUNICATIONS AND TRAFFIC SIGNAL INTERCONNECT CONDUIT SHALL BE INSTALLED BEHIND THE BACK OF CURB AT A DISTANCE OF 1' FROM THE RIGHT OF WAY LINE.
2. PAVEMENT CUTS OF PUBLIC STREETS ARE NOT PERMITTED. FACILITIES SHALL BE BORED UNDER PAVEMENT AND CURB.
3. ALTERNATIVE FACILITY LOCATIONS AND REQUESTS TO CUT STREET PAVEMENT REQUIRE THE APPROVAL OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENTS. SUPPORTING JUSTIFICATION IS REQUIRED FOR ALL REQUESTS.
4. WHERE STREET LIGHTS ARE LOCATED WITHIN THE MEDIAN, A MINIMUM 18" CLEAR SHALL BE MAINTAINED FROM THE STREET LIGHT FOUNDATION TO THE OUTSIDE EDGE OF A STORM DRAIN LINE OR OTHER CITY UTILITY LINE.



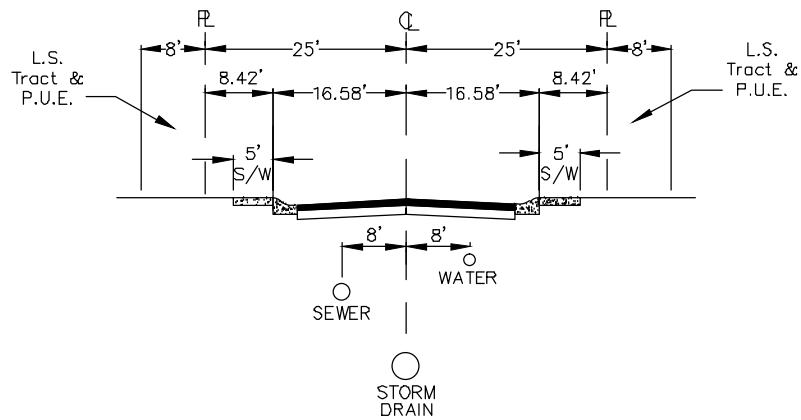
MINOR COLLECTOR ROAD



MAJOR COLLECTOR ROAD

NOTES:

1. TELECOMMUNICATIONS AND TRAFFIC SIGNAL INTERCONNECT CONDUIT SHALL BE INSTALLED BEHIND THE BACK OF CURB AT A DISTANCE OF 1' FROM THE RIGHT OF WAY LINE.
2. PAVEMENT CUTS OF PUBLIC STREETS ARE NOT PERMITTED. FACILITIES SHALL BE BORED UNDER PAVEMENT AND CURB.
3. ALTERNATIVE FACILITY LOCATIONS AND REQUESTS TO CUT STREET PAVEMENT REQUIRE THE APPROVAL OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENTS. SUPPORTING JUSTIFICATION IS REQUIRED FOR ALL REQUESTS.
4. WHERE STREET LIGHTS ARE LOCATED WITHIN THE MEDIAN, A MINIMUM 18" CLEAR SHALL BE MAINTAINED FROM THE STREET LIGHT FOUNDATION TO THE OUTSIDE EDGE OF A STORM DRAIN LINE OR OTHER CITY UTILITY LINE. THE STREET LIGHT POLE SHALL BE LOCATED NO CLOSER THAN 18" TO THE NEAREST BACK OF CURB.



LOCAL STREET

NOTES:

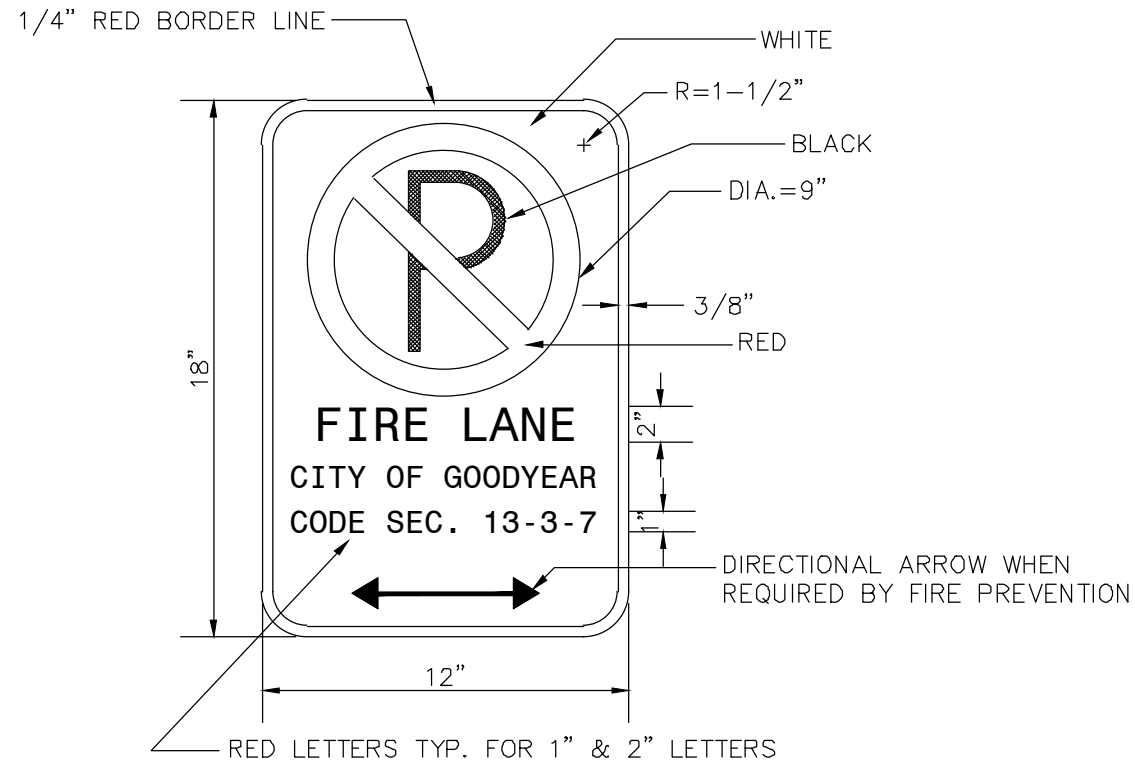
- PAVEMENT CUTS OF PUBLIC STREETS ARE NOT PERMITTED. FACILITIES SHALL BE BORED UNDER PAVEMENT AND CURB.
- ALTERNATIVE FACILITY LOCATIONS AND REQUESTS TO CUT STREET PAVEMENT REQUIRE THE APPROVAL OF THE PUBLIC WORKS AND ENGINEERING DEPARTMENTS. SUPPORTING JUSTIFICATION IS REQUIRED FOR ALL REQUESTS.

1. FIRE LANE SIGNS SHALL BE INSTALLED AS REQUIRED BY THE CITY FIRE DEPARTMENT.

A. SIGNS SHALL BE 12" WIDE AND 18" LONG BY .063" THICK. THEY SHALL HAVE A REFLECTORIZED SURFACE USING SCOTCHLITE MATERIAL OR EQUAL.

B. THEY SHALL BE MOUNTED ON STURDY METAL POSTS WITH THE BOTTOM OF THE SIGN NO LESS THAN 5' AND NO GREATER THAN 7' ABOVE GRADE.

C. THE SIGN SHALL READ AS FOLLOWS:

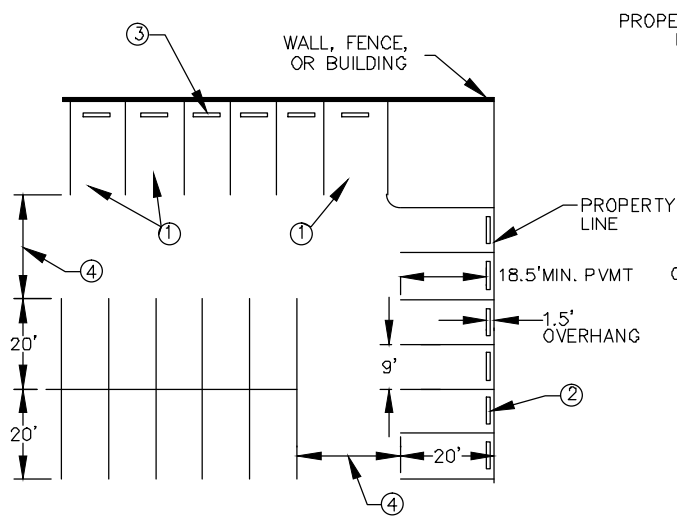


2. SIGNS SHALL BE PROVIDED AND MAINTAINED BY PROPERTY OWNER/OCCUPANT.

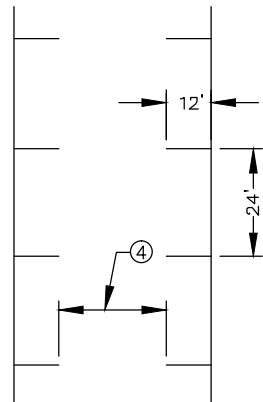


NOTES:

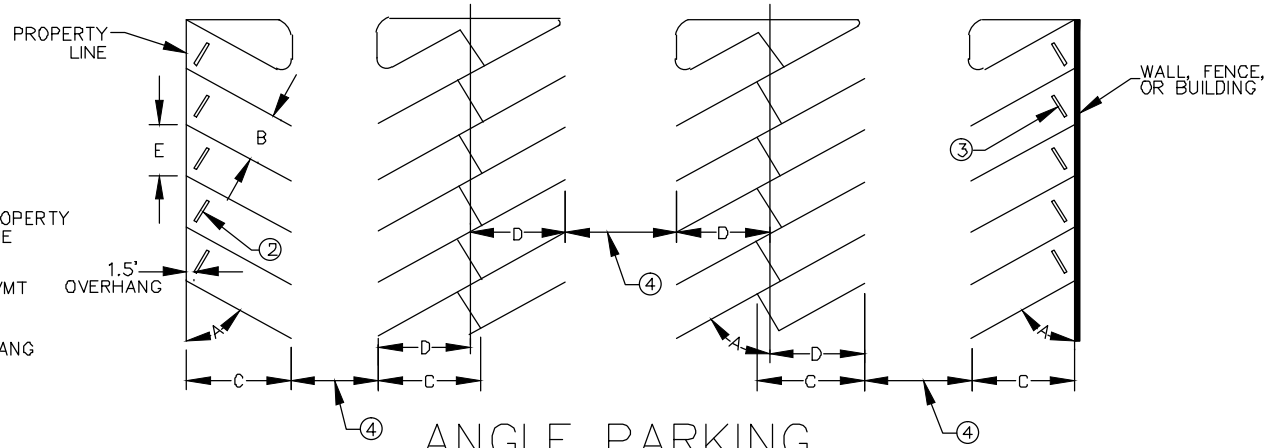
1. THE SIGN PLATE SHALL HAVE MINIMUM DIMENSIONS OF 12" X 24", A THICKNESS OF 0.08", AND BE CONSTRUCTED FROM VIP DIAMOND SHEETING.
2. THE SIGN FACE SHALL HAVE A WHITE REFLECTIVE BACKGROUND WITH A BLUE LEGEND. SEE THE CITY APPROVED MATERIALS LIST FOR SPECIFIC MATERIAL REQUIREMENTS.
3. ALL ACCESSIBLE PARKING SPACES SHALL BE IDENTIFIED BY A SIGN ON A CITY APPROVED STATIONARY POST OR APPROVED WALL LOCATION. THESE SIGNS SHALL NOT BE OBSCURED FROM VIEW.
4. THE BOTTOM OF THE SIGN SHALL BE LOCATED NOT LESS THAN 5' NOR MORE THAN 6' ABOVE THE GRADE (PARKING LOT SURFACE) AND SHALL BE VISIBLE DIRECTLY IN FRONT OF THE PARKING SPACE.
5. ACCESSIBLE PARKING SPACES SHALL BE DESIGNATED AS RESERVED FOR PHYSICALLY DISABLED BY A SIGN SHOWING THE INTERNATIONAL WHEELCHAIR SYMBOL.
6. THE SIGN SHALL AT A MINIMUM HAVE THE FOLLOWING ITEMS "RESERVED PARKING" NOTICE, INTERNATIONAL WHEELCHAIR SYMBOL, "CITY OF GOODYEAR" NAME, AND "CITY CODE 13-3-6".



90° PARKING



PARALLEL PARKING



ANGLE PARKING

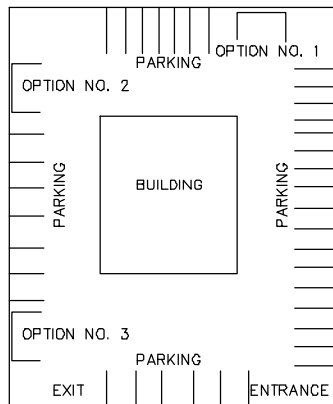
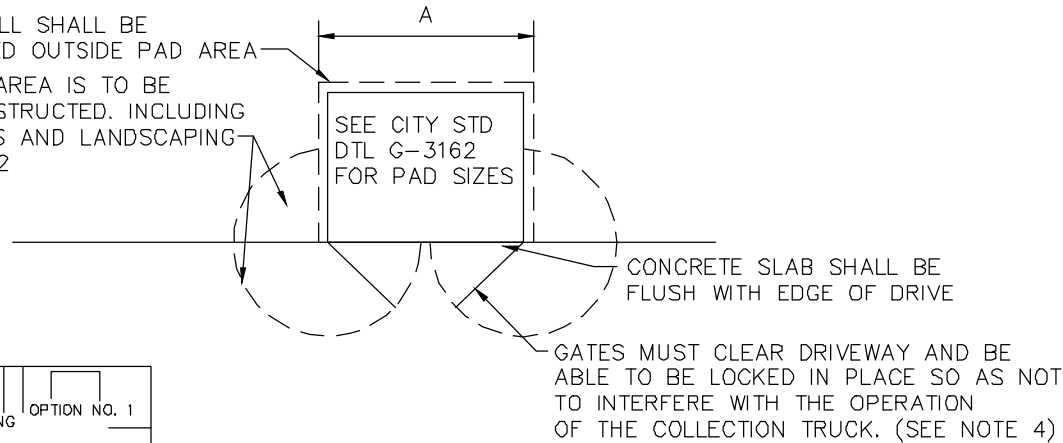
TABLE A

A	B	C	D	E
PARKING ANGLE	STALL WIDTH	STALL DEPTH	PARKING DEPTH	CURB LENGTH
30°	9'	18.0'	14.1'	18.0'
45°	9'	20.5'	17.3'	12.7'
60°	9'	22.0'	19.8'	10.4'

NOTES:

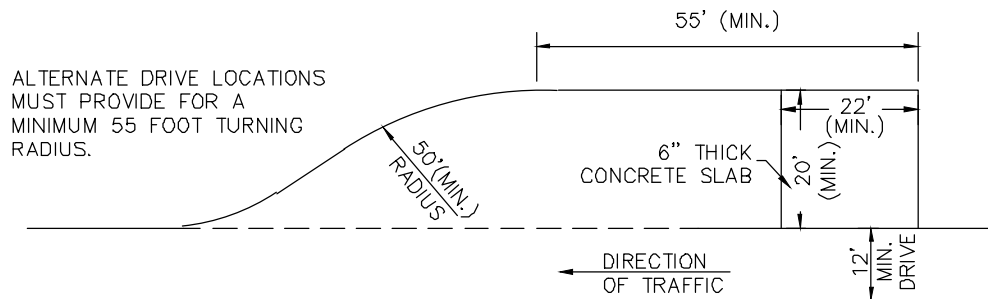
- HANDICAP STALLS ARE REQUIRED IN ALL PARKING LOTS. THIS DETAIL DOES NOT ADDRESS HANDICAP PARKING STALL DIMENSIONS. REFER TO THE APPLICABLE BUILDING CODE OR ADA REQUIREMENT FOR SPECIFIC INFORMATION ON HANDICAP STALL REQUIREMENTS.
- WHERE NO WALL OR BUILDING EXISTS, A 6" HIGH CURB OR BUMPER GUARD IS REQUIRED SO THAT NO PART OF THE VEHICLE EXTENDS OVER OR BEYOND THE PROPERTY LINE. A MAG Std 220-A CONCRETE CURB IS REQUIRED BETWEEN AREAS OF VEHICULAR ACTIVITY AND CITY RIGHT-OF-WAY.
- WHERE PARKING ABUTS A PERIMETER WALL/FENCE OR BUILDING, A 6" HIGH BUMPER GUARD IS RECOMMENDED TO PREVENT VEHICLE OR STRUCTURE DAMAGE.
- DRIVE AISLES DESIGNED FOR 2-WAY TRAFFIC FLOW SHALL HAVE A MINIMUM WIDTH OF 23'; DRIVE AISLES DESIGNED FOR 1-WAY TRAFFIC SHALL HAVE A MINIMUM WIDTH OF 12'; DRIVE AISLES TO BE USED FOR FIRE DEPARTMENT ACCESS SHALL HAVE A MINIMUM WIDTH OF 20', HOWEVER ADDITIONAL DRIVE AISLE WIDTH MAY BE REQUIRED AS DIRECTED BY THE FIRE DEPARTMENT.

6' WALL SHALL BE
PLACED OUTSIDE PAD AREA
THIS AREA IS TO BE
UNOBSTRUCTED, INCLUDING
CURBS AND LANDSCAPING
 $R=A/2$



NOTES:

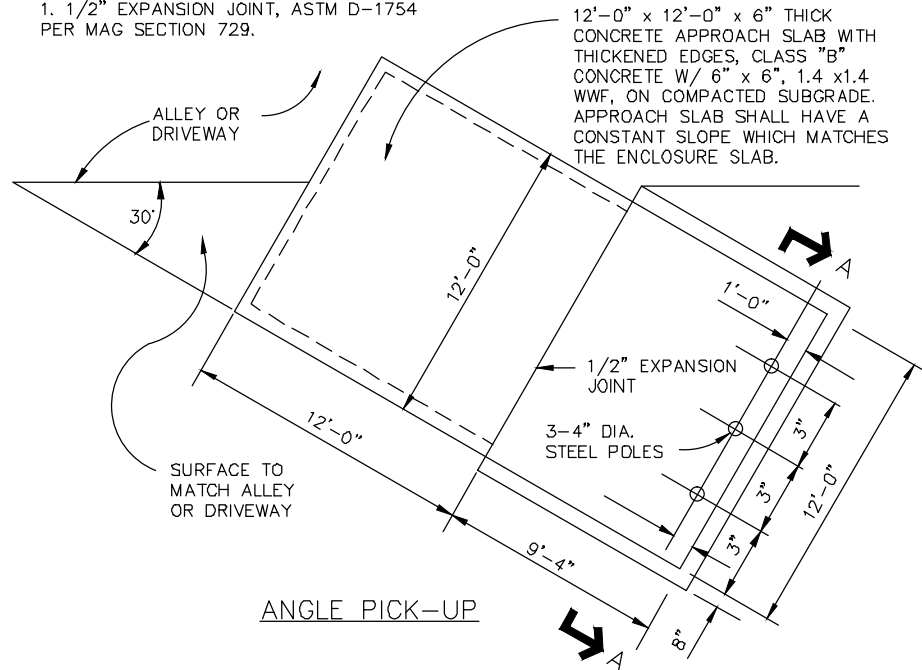
1. FRONT-END LOADED CONTAINERS WILL BE PLACED THROUGHOUT THE CITY AND AT ALL NEW COMMERCIAL BUSINESSES.
2. ENCLOSURES IN INDUSTRIAL AREAS SHALL BE PLACED IN THE BACK OF THE LOT IN LINE WITH THE DRIVE THRU SO THE DRIVER CAN HAVE A DIRECT APPROACH TO THE REFUSE BIN, SERVICE IT, AND EXIT THE FACILITY.
3. THE ENCLOSURE SHOULD NOT BE PLACED AT THE END OF A DEAD END STREET UNLESS THERE IS A TURN AROUND WITH A RADIUS OF FIFTY FIVE (55) FEET.
4. THE ENCLOSURE SHALL BE FREE OF ANY OVERHEAD OBSTRUCTION WHICH MAY INTERFERE IN THE SERVICING OF THE CONTAINER.
5. ENCLOSURES SHALL NOT LIMIT THE VISIBILITY OF ONCOMING TRAFFIC FOR PEDESTRIANS OR VEHICLES.
6. GATES ARE REQUIRED ON REFUSE AND RECYCLE ENCLOSURES.
7. ENCLOSURES SHALL NOT BE LOCATED WITHIN ANY APPLICABLE BUILDING SETBACK.



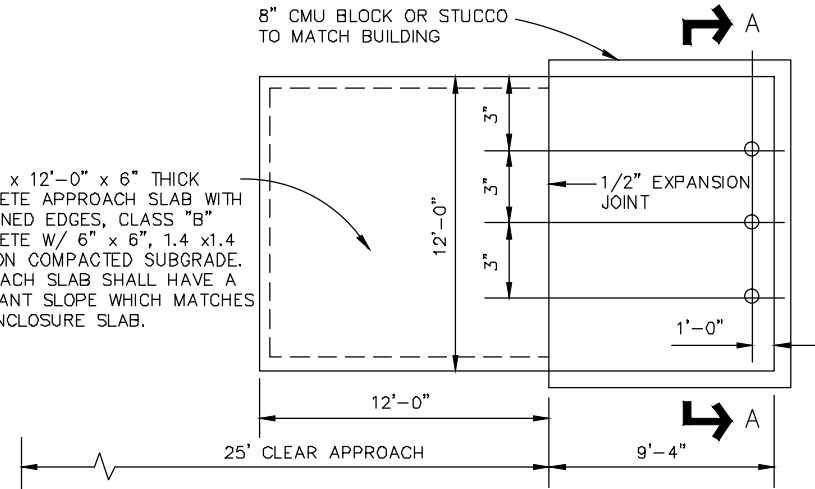
NOTES:

1. MULTIPLE REFUSE CONTAINERS SHALL BE PLACED ON THE RIGHT SIDE OF THE DRIVE IN RELATION TO THE TRAFFIC FLOW SO COLLECTION TRUCKS MAY BE ROUTED THROUGH THE SITE IN ONE DIRECTION.
2. REFUSE CONTAINERS USED FOR CONSTRUCTION PURPOSES DO NOT REQUIRE A CONCRETE PAD.
3. GATES ARE REQUIRED ON REFUSE AND RECYCLE ENCLOSURES FOR ALL COMMERCIAL, INDUSTRIAL, AND MULTI-FAMILY DEVELOPMENTS.

NOTE:
1. 1/2" EXPANSION JOINT, ASTM D-1754
PER MAG SECTION 729.

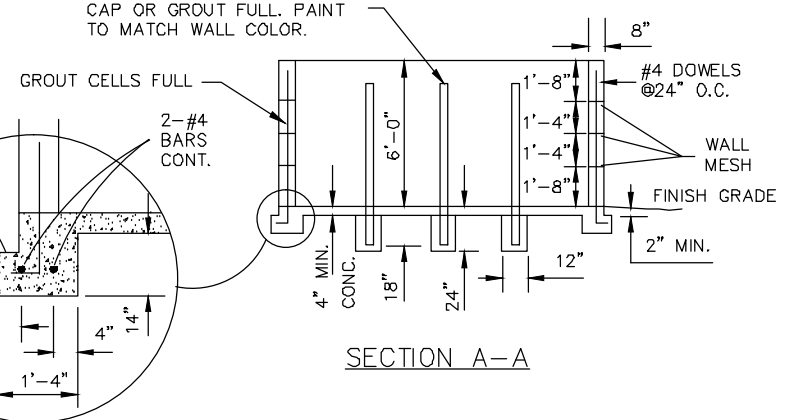


8" CMU BLOCK OR STUCCO TO MATCH BUILDING

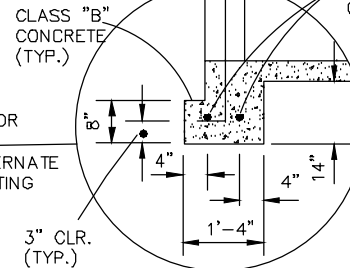
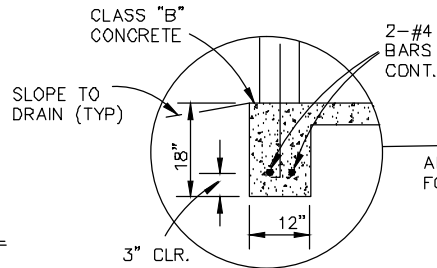
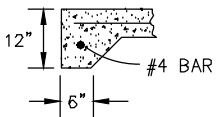


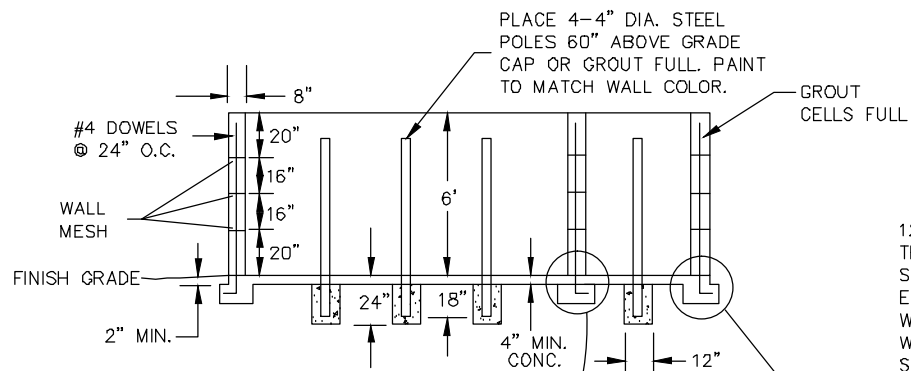
THICKENED EDGE DETAIL

PLACE 3-4" DIA. STEEL POLES 60" ABOVE GRADE CAP OR GROUT FULL. PAINT TO MATCH WALL COLOR.

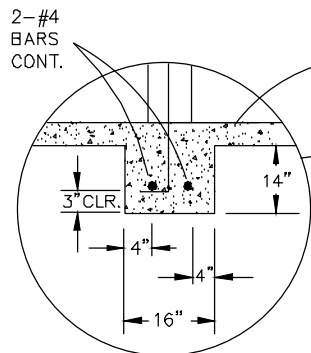


APPROACH SLAB THICKENED EDGE DETAIL

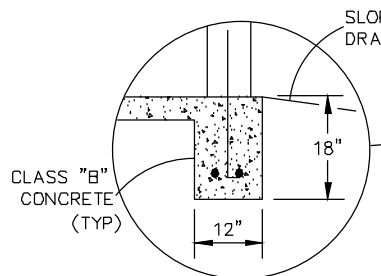




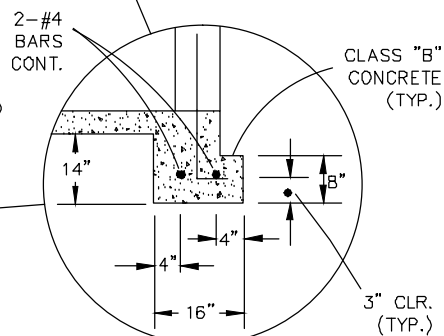
SECTION A-A



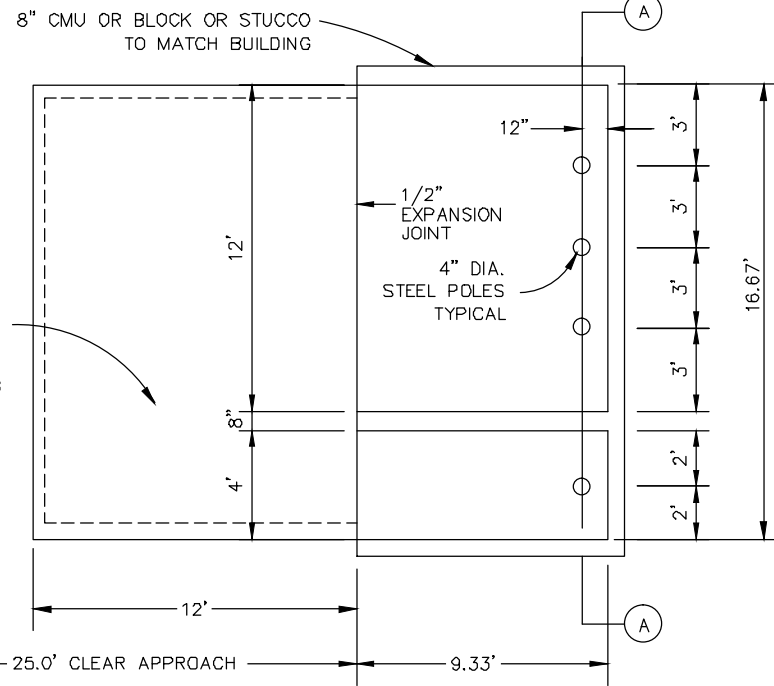
INNER FOOTING



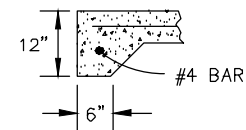
ALTERNATE FOOTING



OUTER FOOTING



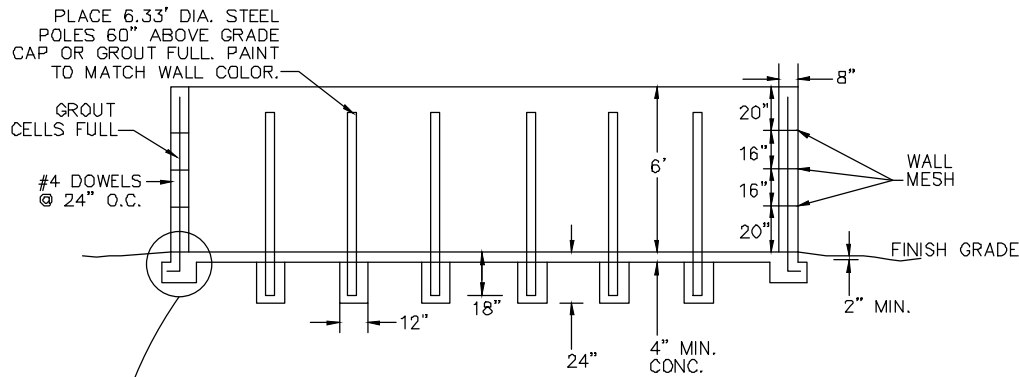
PLAN



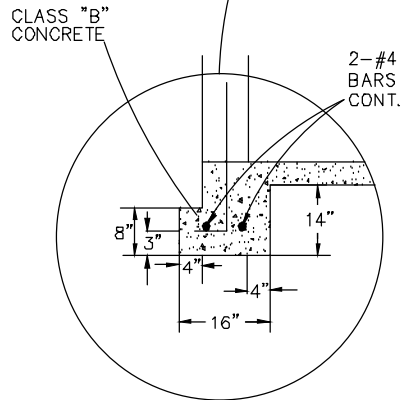
APPROACH SLAB THICKENED EDGE DETAIL

NOTES

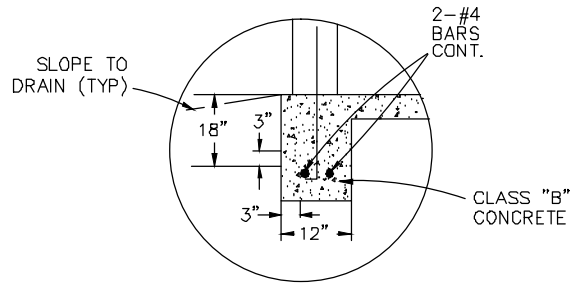
1. DOUBLE ENCLOSURE FOR ANGLE PICK-UP
2. 1/2" EXPANSION JOINT, ASTM D-1751 PER MAG SECTION 729.



SECTION A-A



FOOTING



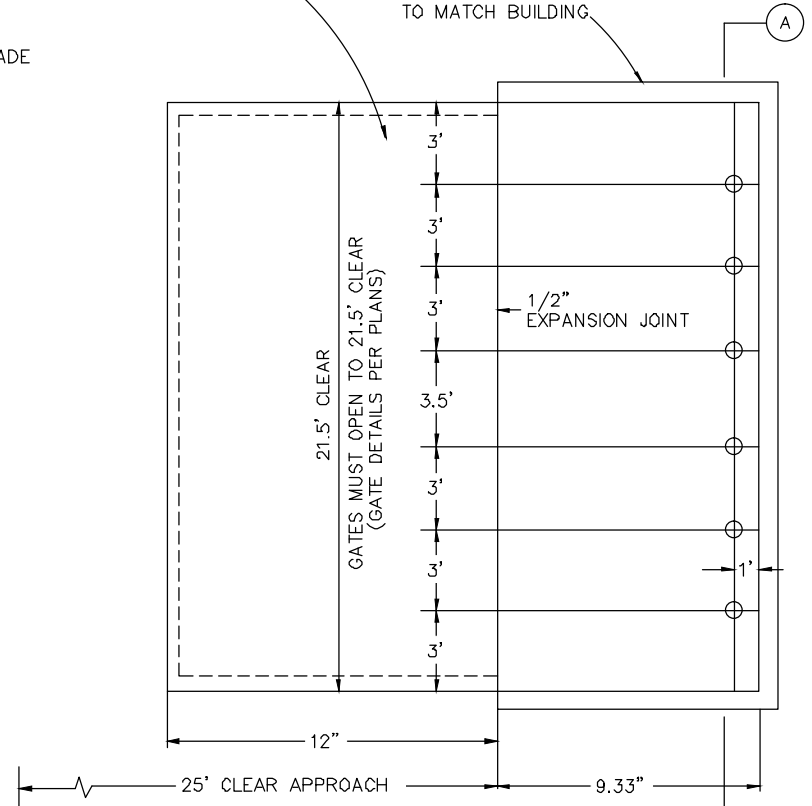
ALTERNATE FOOTING



APPROACH SLAB THICKENED EDGE DETAIL

12' x 21.5' x 6" THICK CONCRETE APPROACH SLAB WITH THICKENED EDGES, CLASS "B" CONC. W/ 6" x 6", 1.4 x 1.4 WWF, ON COMPACTED SUBGRADE. APPROACH SLAB SHALL HAVE A CONSTANT SLOPE WHICH MATCHES THE ENCLOSURES SLAB.

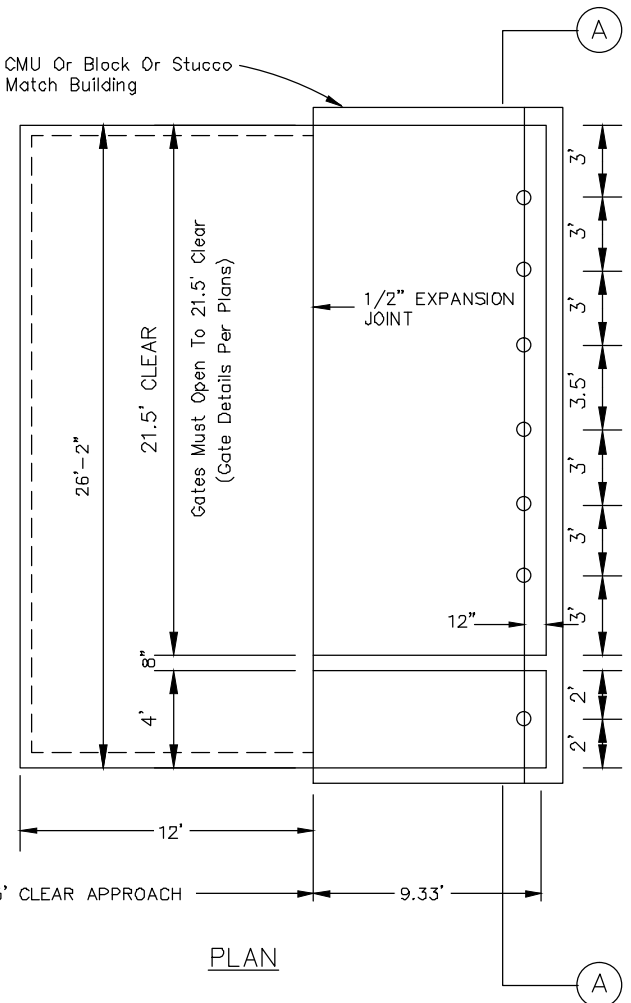
8" CMU OR BLOCK OR STUCCO TO MATCH BUILDING



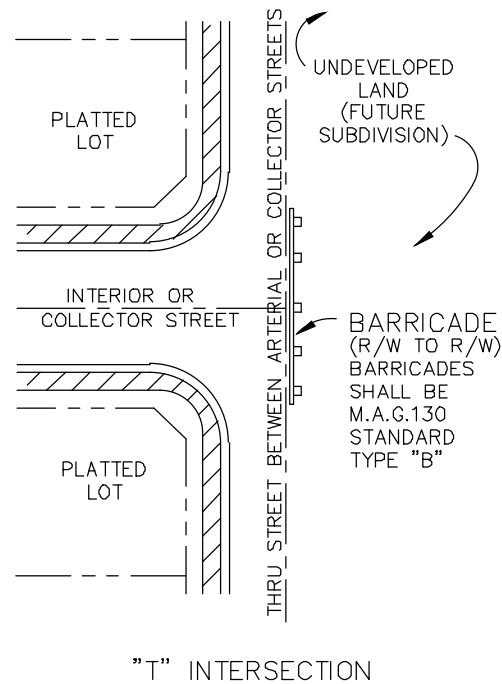
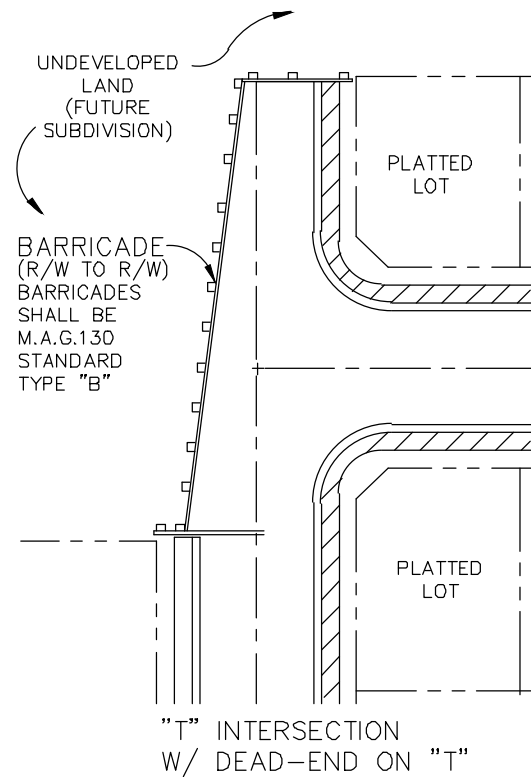
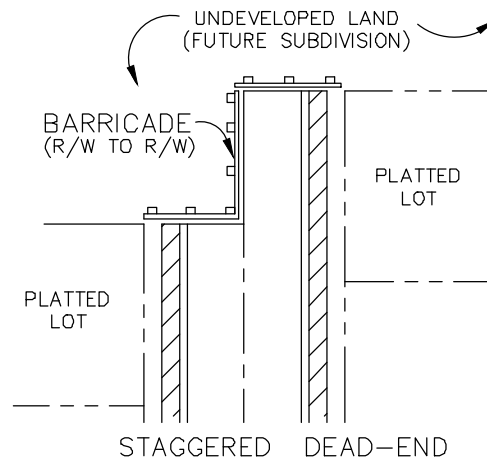
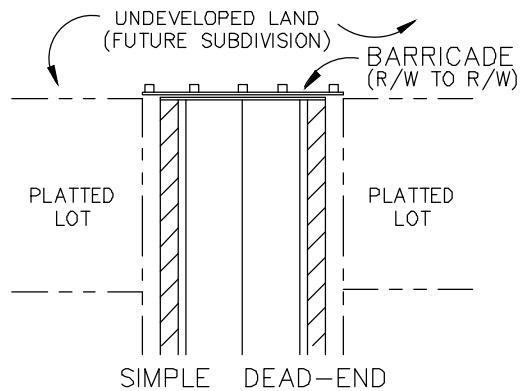
PLAN VIEW

NOTES:

1. 1/2" EXPANSION JOINT, ASTM D-1751 PER MAG SECTION 729.

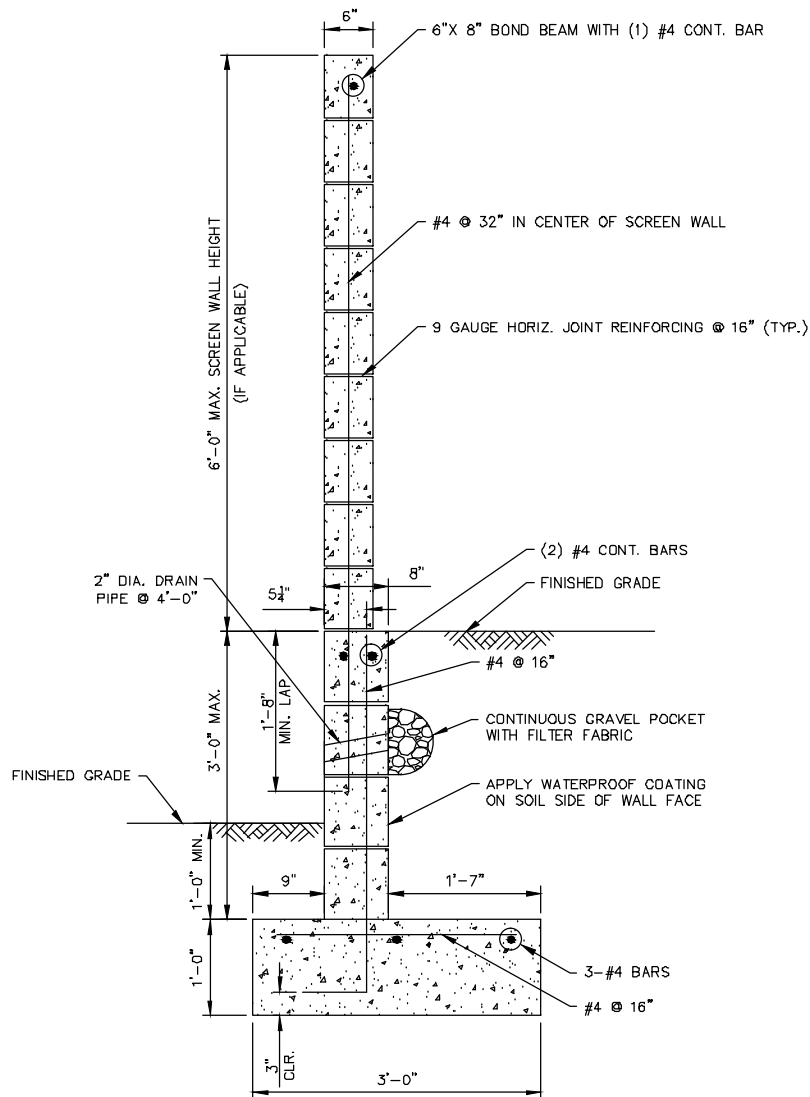


1. 1/2" Expansion Joint, ASTM D-1751 Per MAG Section 729.
2. Concrete Approach Slab Shall Be 12' x 26.17' x 6" Thick With Thickened Edges Class "B" Conc. w/ 6" x 6", 1.4 x 1.4 WWF, On Compacted Subgrade. Approach Slab Shall Have A Constant Slope Which Matches The Enclosure Slab.



NOTES:

1. BARRICADES SHALL BE INSTALLED PER MAG STD DTL 130 USING THE OM4-2 WARNING SIGN. WARNING SIGN SHALL BE INSTALLED BY CONTRACTOR.



RETAINING WALL SECTION

DESIGN ASSUMPTIONS

MAX SOIL BEARING PRESSURE IS 1,500 psf.
EQUIVALENT FLUID PRESSURE IS 40 psf/ft.
IF SITE CONDITIONS DO NOT MEET THIS CRITERIA, CONTACT THE CITY OF GOODYEAR.

WIND PRESSURE OF 18.0 psf APPLIED TO SCREEN WALL.

RETAINING WALLS DESIGNED WITH LEVEL BACKFILL.

RETAINING WALL NOT DESIGNED FOR ANY SURCHARGE LOAD FROM ADJACENT FOOTING OR SURCHARGE LOAD OVER HEEL.

WALL NOTES

ALL BLOCK CELLS THAT RETAIN SOIL SHALL BE FILLED WITH CONCRETE OR GROUT.

ALL REINFORCING STEEL SHALL HAVE 2 INCH CLEAR COVER UNLESS NOTED OTHERWISE.

COMPACT BACKFILL A MINIMUM OF 95 PERCENT OF ASTM D698 MAXIMUM DRY DENSITY.

ALL REBAR LAP SPLICES SHALL BE A MINIMUM OF 40 BAR DIAMETERS.

MASONRY: $f'_m = 1,500$ psi, ASTM C90, MEDIUM OR NORMAL WEIGHT, RUNNING BOND, SLUMP BLOCK.

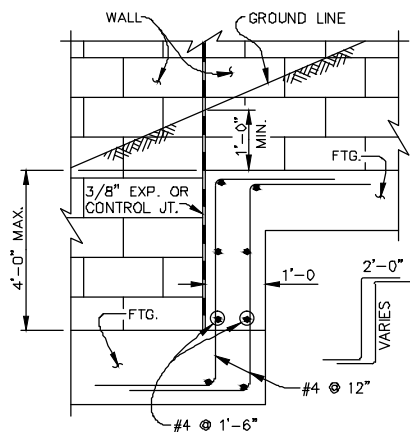
MORTAR: ASTM C270, TYPE S, CUBE STRENGTH 1,800 psi, ASTM C91 CEMENT.

GROUT: ASTM C476, TYPE COARSE, CUBE STRENGTH 2,000 psi.

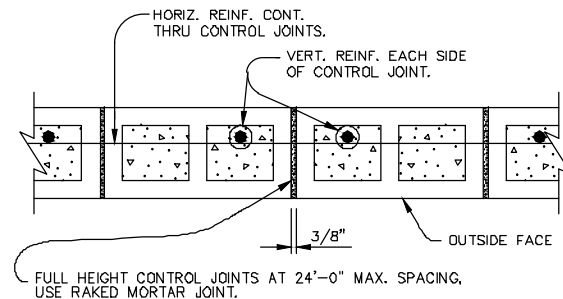
REINFORCING STEEL: ASTM A615, GRADE 60.

JOINT REINFORCING: 9 GAUGE LADDER OR TRUSS TYPE, STANDARD WEIGHT, $f_y = 33,000$ psi, ASTM A62 WIRE.

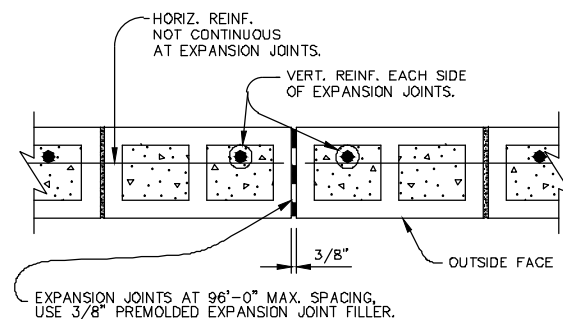
CONCRETE: $f'_c = 2,500$ psi.



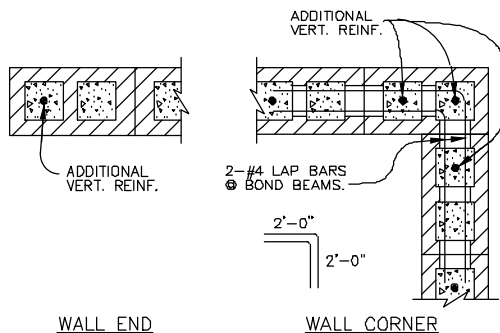
FOOTING STEP DETAIL



CONTROL JOINT DETAIL



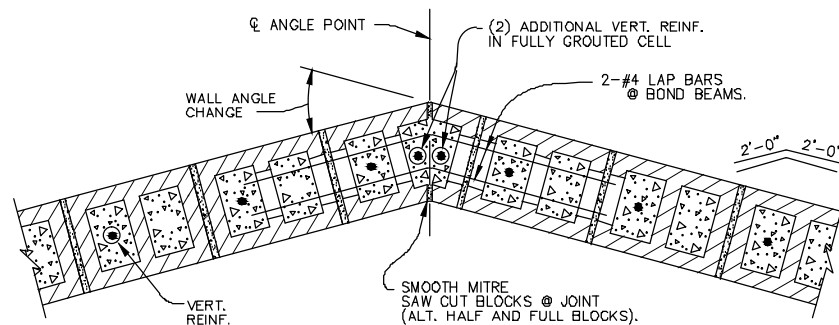
EXPANSION JOINT DETAIL



WALL END

WALL CORNER

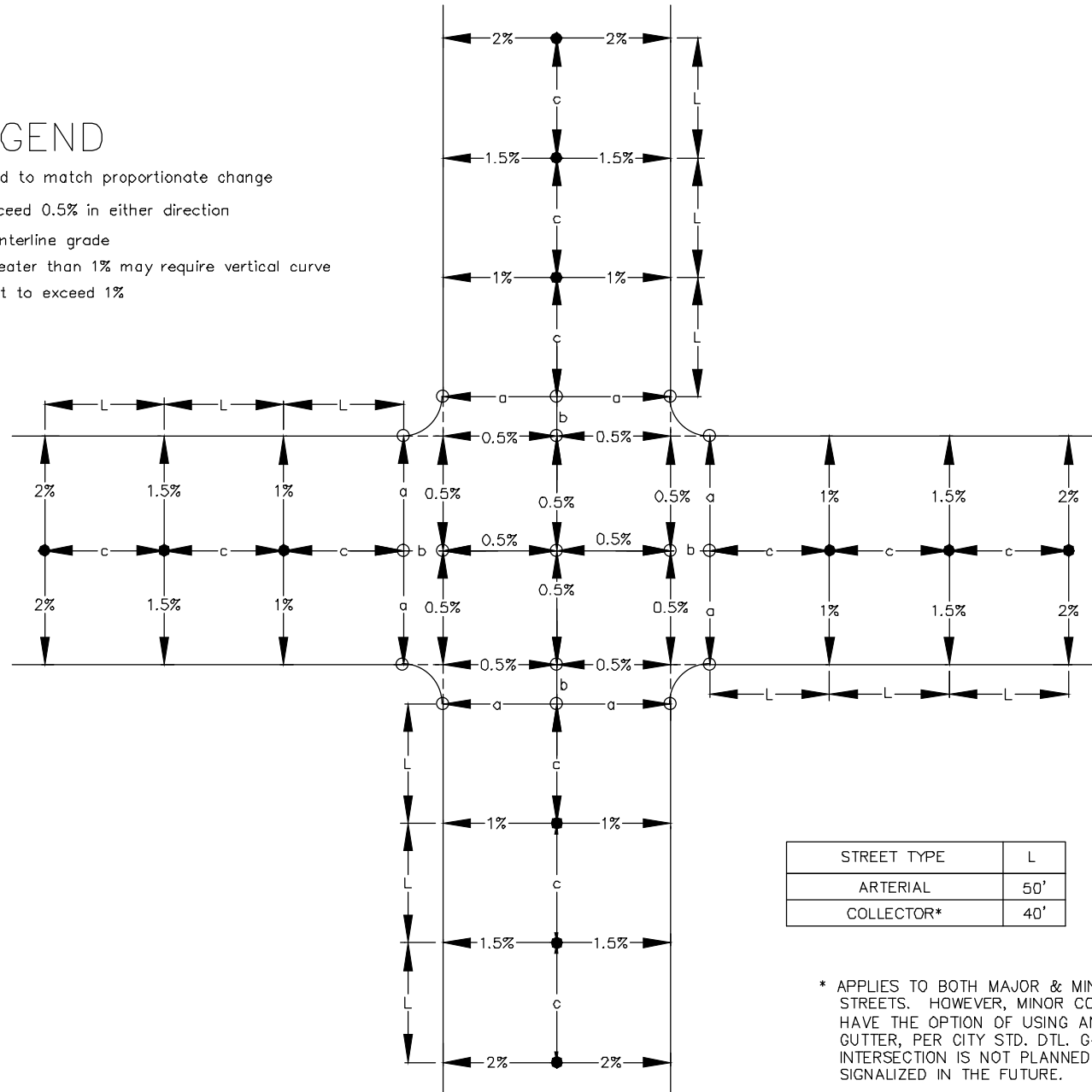
WALL DETAILS AT CORNER AND ENDS



SECTION AT WALL ANGLE POINT

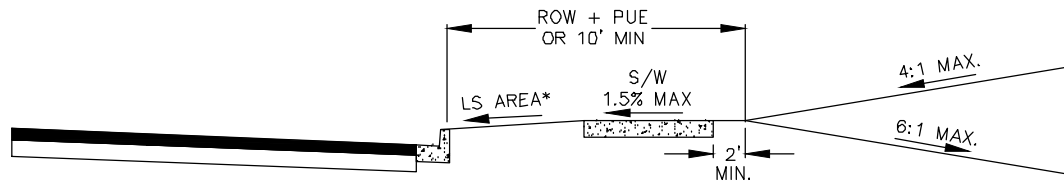
LEGEND

- ← = (a) As required to match proportionate change
- ↔ = (b) Not to exceed 0.5% in either direction
- = (c) Normal centerline grade
- = Grade break greater than 1% may require vertical curve
- = Grade break not to exceed 1%

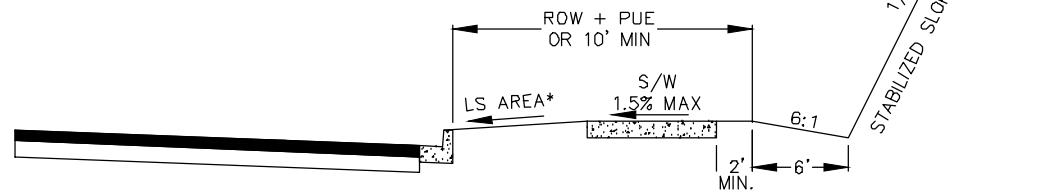


STREET TYPE	L
ARTERIAL	50'
COLLECTOR*	40'

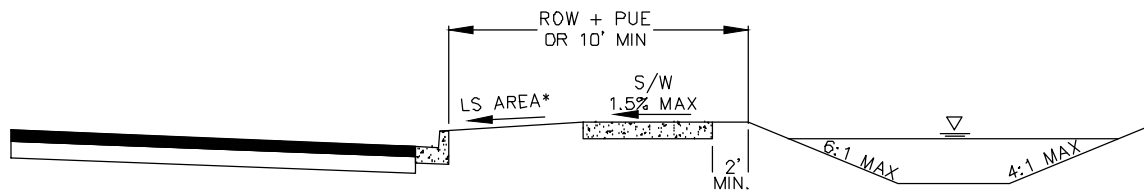
* APPLIES TO BOTH MAJOR & MINOR COLLECTOR STREETS. HOWEVER, MINOR COLLECTOR STREETS HAVE THE OPTION OF USING AN 8' WIDE VALLEY GUTTER, PER CITY STD. DTL. G-3226, IF THE INTERSECTION IS NOT PLANNED TO BE TRAFFIC SIGNALIZED IN THE FUTURE.



ROADWAY WITH ADJACENT CUT / FILL SLOPE

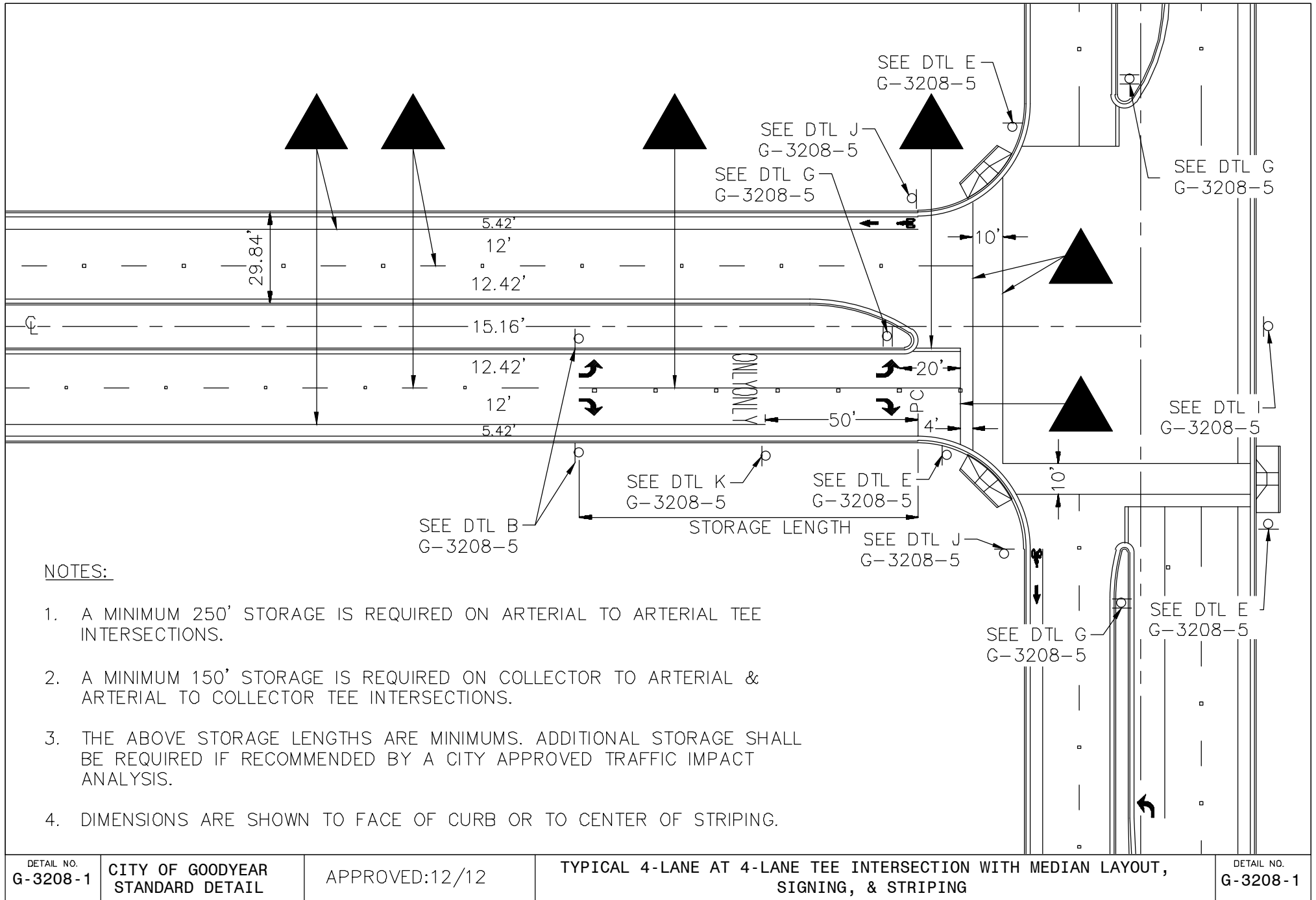


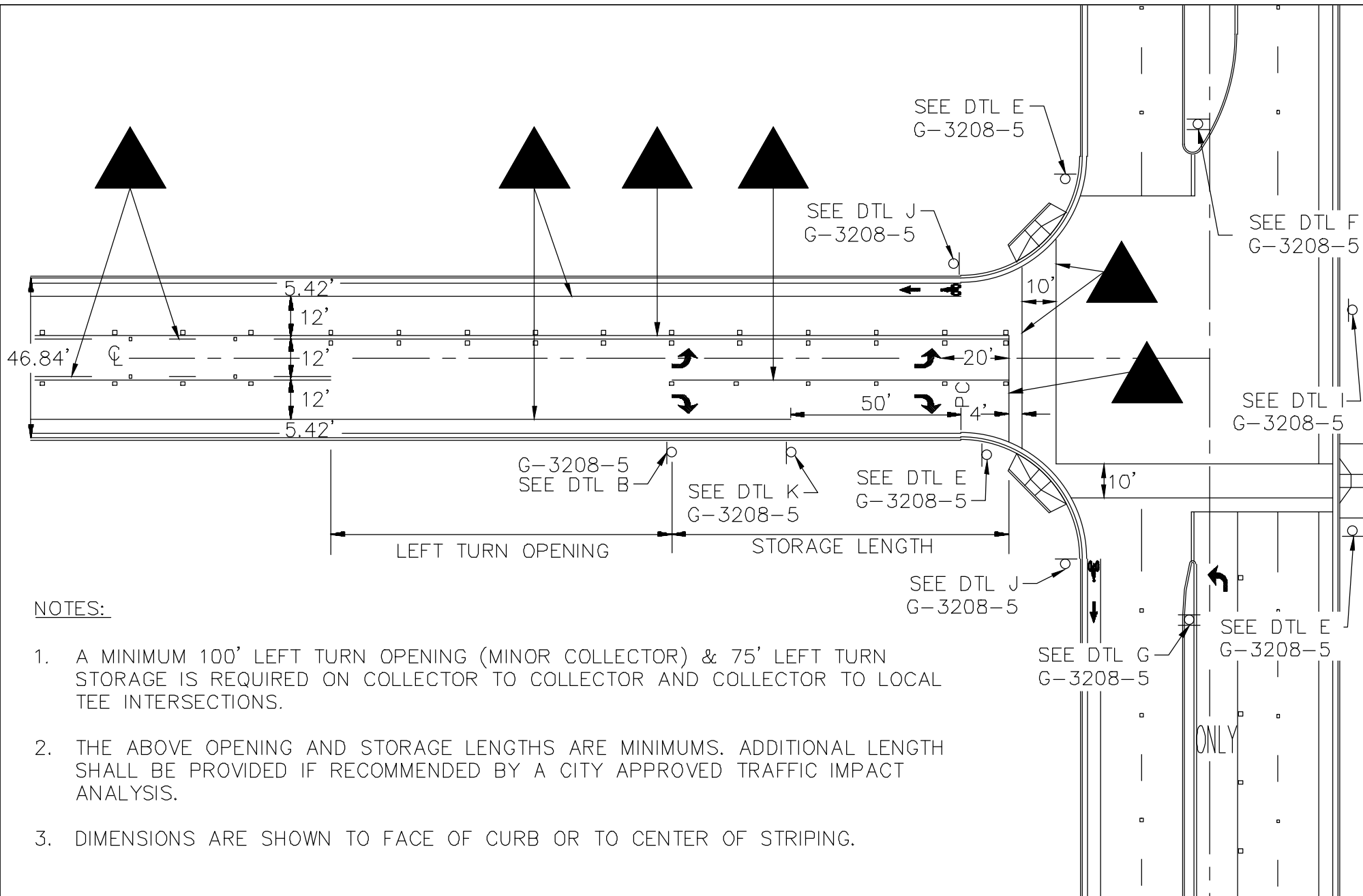
ROADWAY WITH ADJACENT MOUNTAINOUS SLOPE



ROADWAY WITH ADJACENT RETENTION BASIN

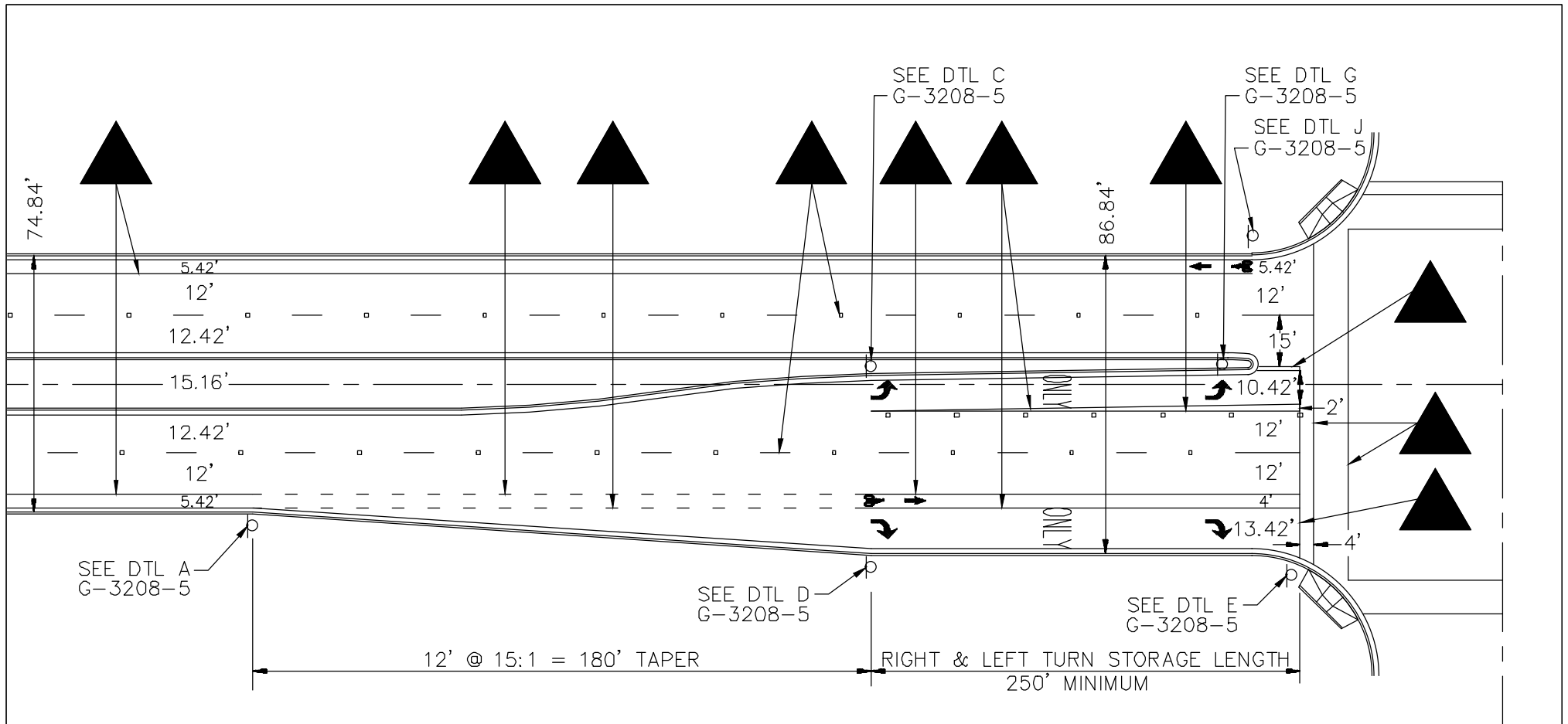
* LANDSCAPE AREAS SHALL HAVE A MAXIMUM 6:1 SLOPE IN THE ROW AND 10:1 SLOPE IN THE PUE.





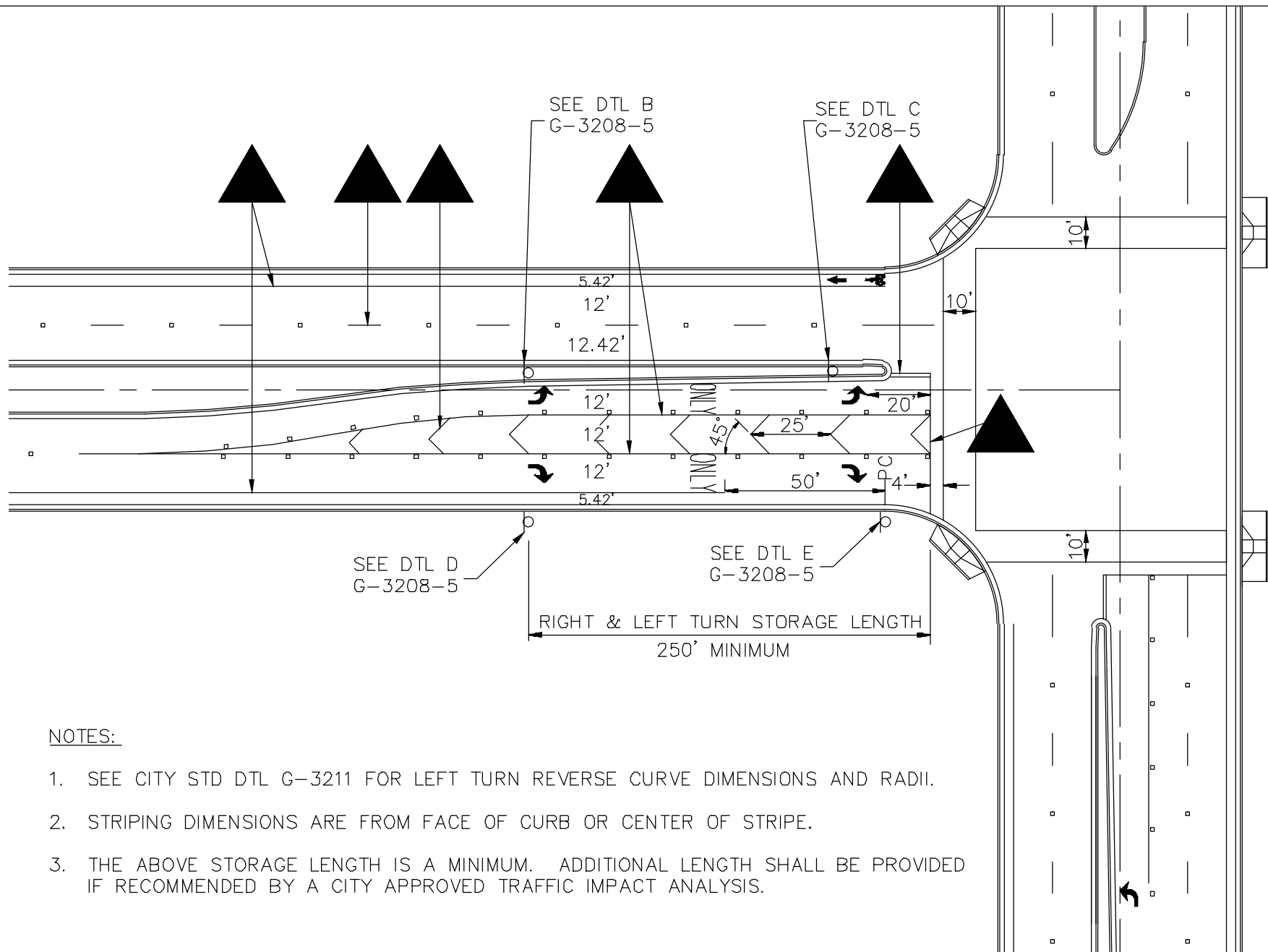
NOTES:

1. A MINIMUM 100' LEFT TURN OPENING (MINOR COLLECTOR) & 75' LEFT TURN STORAGE IS REQUIRED ON COLLECTOR TO COLLECTOR AND COLLECTOR TO LOCAL TEE INTERSECTIONS.
2. THE ABOVE OPENING AND STORAGE LENGTHS ARE MINIMUMS. ADDITIONAL LENGTH SHALL BE PROVIDED IF RECOMMENDED BY A CITY APPROVED TRAFFIC IMPACT ANALYSIS.
3. DIMENSIONS ARE SHOWN TO FACE OF CURB OR TO CENTER OF STRIPING.



NOTES:

- SEE CITY STD DTL G-3211 FOR LEFT TURN REVERSE CURVE DIMENSIONS AND RADII.
- DIMENSIONS ARE SHOWN TO FACE OF CURB OR TO CENTER OF STRIPING.
- THE ABOVE STORAGE AND TAPER LENGTHS ARE MINIMUMS. ADDITIONAL LENGTHS SHALL BE PROVIDED IF RECOMMENDED BY A CITY APPROVED TRAFFIC IMPACT ANALYSIS.



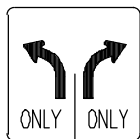
NOTES:

1. SEE CITY STD DTL G-3211 FOR LEFT TURN REVERSE CURVE DIMENSIONS AND RADII.
2. STRIPING DIMENSIONS ARE FROM FACE OF CURB OR CENTER OF STRIPE.
3. THE ABOVE STORAGE LENGTH IS A MINIMUM. ADDITIONAL LENGTH SHALL BE PROVIDED IF RECOMMENDED BY A CITY APPROVED TRAFFIC IMPACT ANALYSIS.



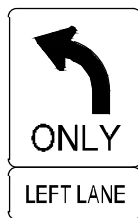
R4-4
(30"X36")

DETAIL A



R3-8LR
(30"X30")

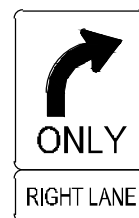
DETAIL B



R3-5L
(30"X36")

R3-5B
(30"X12")

DETAIL C



R3-5R
(30"X36")

R3-5F
(30"X12")

DETAIL D



R1-1
(36"X36")

DETAIL E



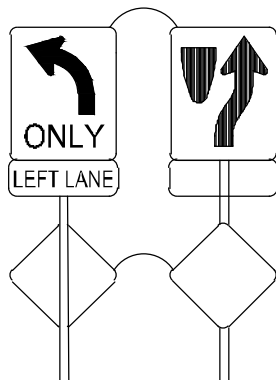
R4-7
(24"X30")

OM1-3
(18"X18")

DETAIL F

R3-5L
(24"X30")

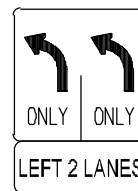
R3-5B
(30"X12")



R4-7
(24"X30")

OM1-3
(18"X18")

DETAIL G

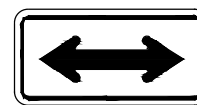


R3-8LL
(30"X30")

R3-5DL*
(30"X12")

DETAIL H

*SPECIALTY SIGN



W1-7
(36"X18")

DETAIL I



R7-9a
(12"X18")

DETAIL J



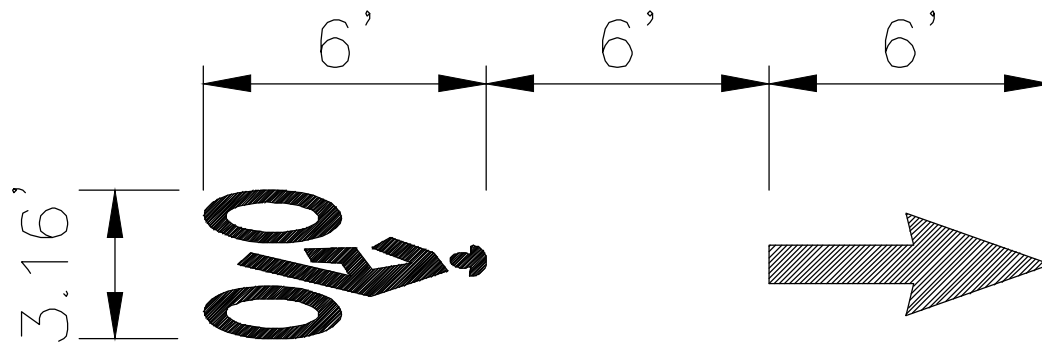
R3-17
(30"X24")

R3-17b
(30"X12")

DETAIL K

NOTES:

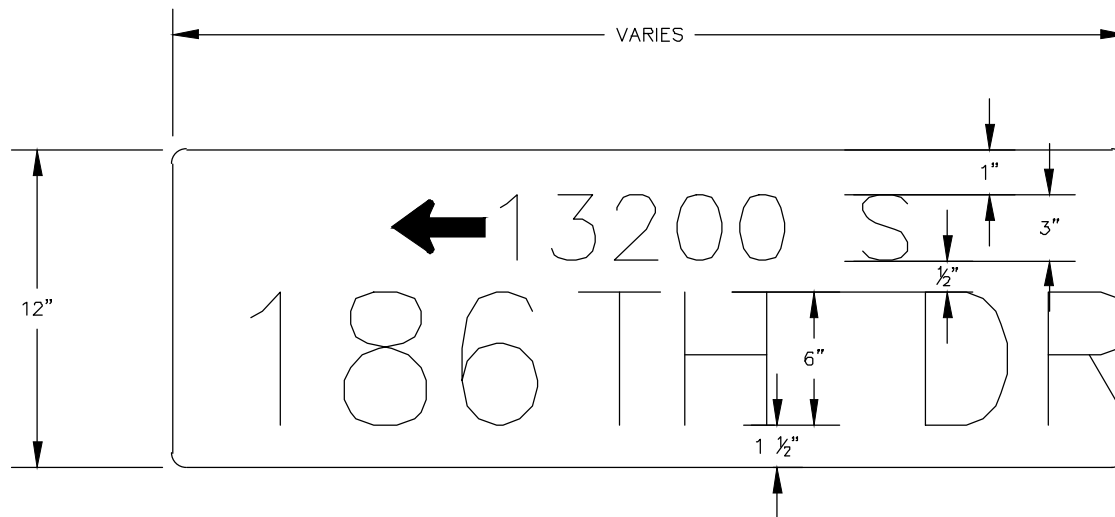
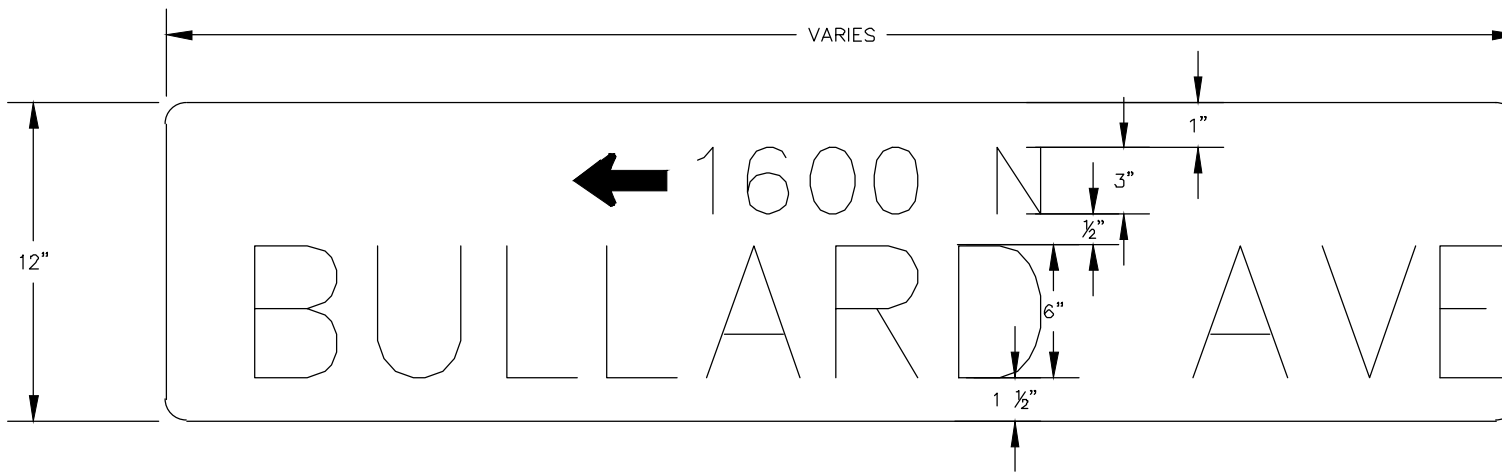
1. DETAIL J TO BE USED AT THE BEGINNING OF A BIKE LANE, AT THE FAR SIDE OF AN ARTERIAL OR COLLECTOR INTERSECTION, AND AT A SPACING OF 1320' ALONG CONTINUOUS LENGTHS OF BIKE LANE NOT INTERSECTED BY AN ARTERIAL OR COLLECTOR ROAD.



BIKE LANE PAVEMENT MARKING

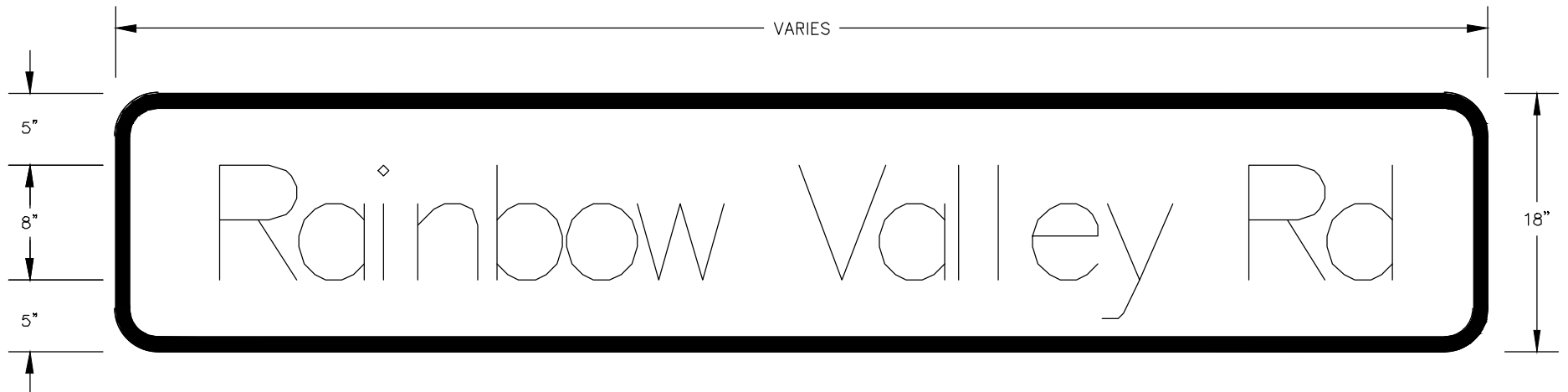
NOTES:

1. BICYCLE PAVEMENT MARKINGS SHALL ONLY BE PLACED ON ARTERIAL AND COLLECTOR ROAD BIKE LANES.
2. PAVEMENT MARKING LOCATIONS AND STYLES SHALL MEET THE REQUIREMENTS OF MUTCD, THE CITY ENGINEERING DESIGN STANDARDS AND POLICIES MANUAL, AND THIS DRAWING.
3. BICYCLE PAVEMENT MARKINGS SHALL BE PLACED AT THE BEGINNING OF AN ARTERIAL OR COLLECTOR BIKE LANE, ON THE BIKE LANE ON THE FAR SIDE OF ARTERIAL OR COLLECTOR INTERSECTION, AT A SPACING OF 1320' ALONG CONTINUOUS LENGTHS OF BIKE LANE, AND IN LOCATIONS DESIGNATED BY THE CITY ENGINEER.
4. DISTANCES BETWEEN THE ARROW AND BICYCLE PAVEMENT MARKINGS SHALL BE NO GREATER THAN 20' AND NO LESS THAN 6'.
5. PAVEMENT MARKING MATERIAL SHALL BE 60 MIL THERMOPLASTIC.



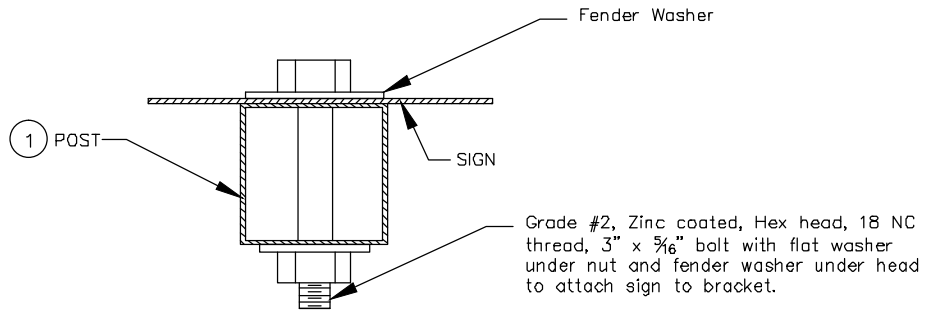
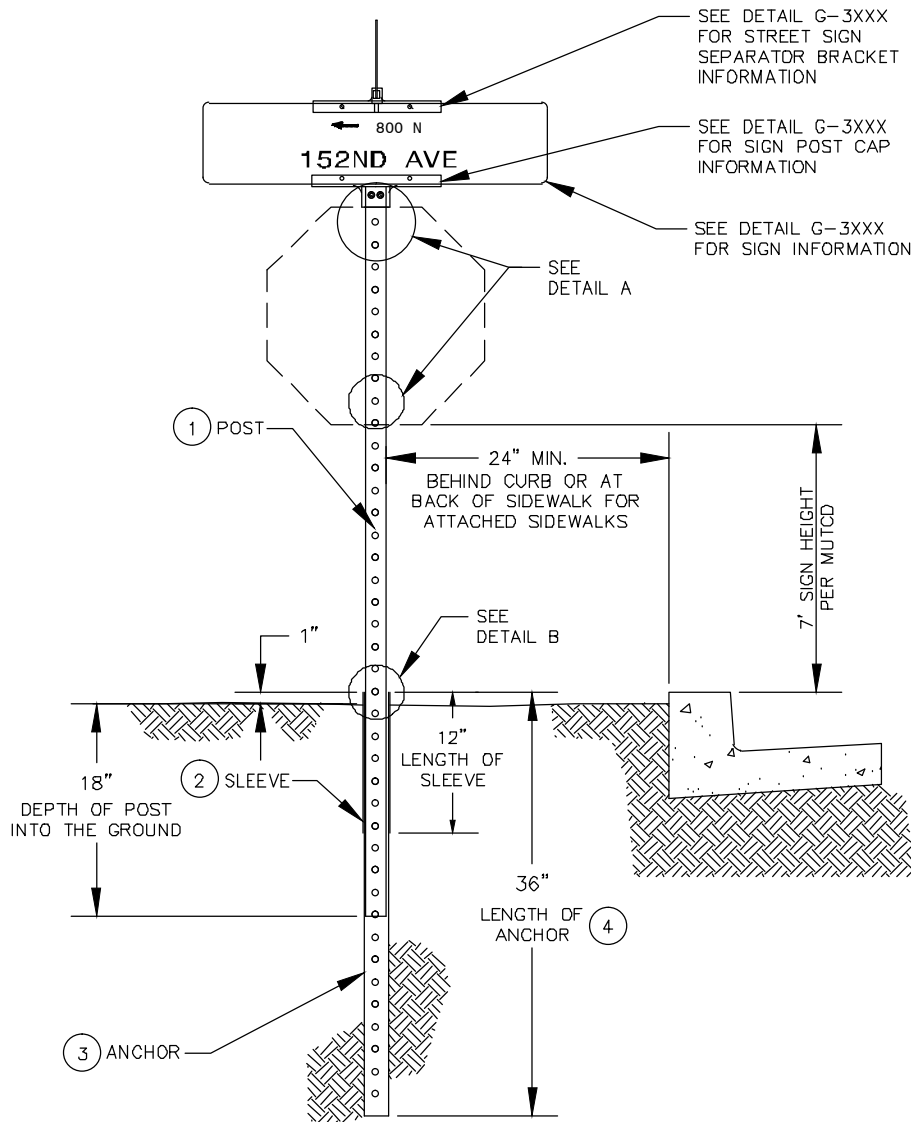
NOTES:

1. Highway Series "C" Lettering (Standard Highway Signs as Published by FHWA).
2. All Street Names Shall Be Formatted With 6 Inch White Upper-Case Letters. All Block Numbers And Directions Shall be Formatted With 3 Inch White Upper-Case Letters.
3. All City Signs Shall Use A Green Background. See Signing and Striping Notes For Sheeting Information.
4. See Current Version Of Standard Highway Signs Manual For Standard Arrow Details.

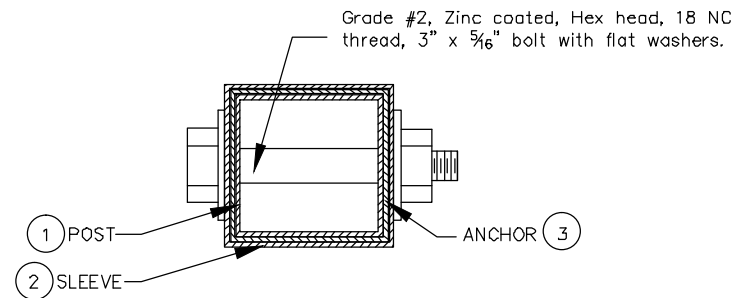


NOTES:

1. Highway Series "C" Lettering (Standard Highway Signs as Published by FHWA).
2. All Street Names Shall Be Formatted With 8 Inch White Upper-Case and Lower-Case Letters.
3. All City Signs Shall Use A Green Background. See Signing and Striping Notes For Sheeting Information.
4. All Signs Wider Than 36 Inches Shall Use Two Sign Posts.



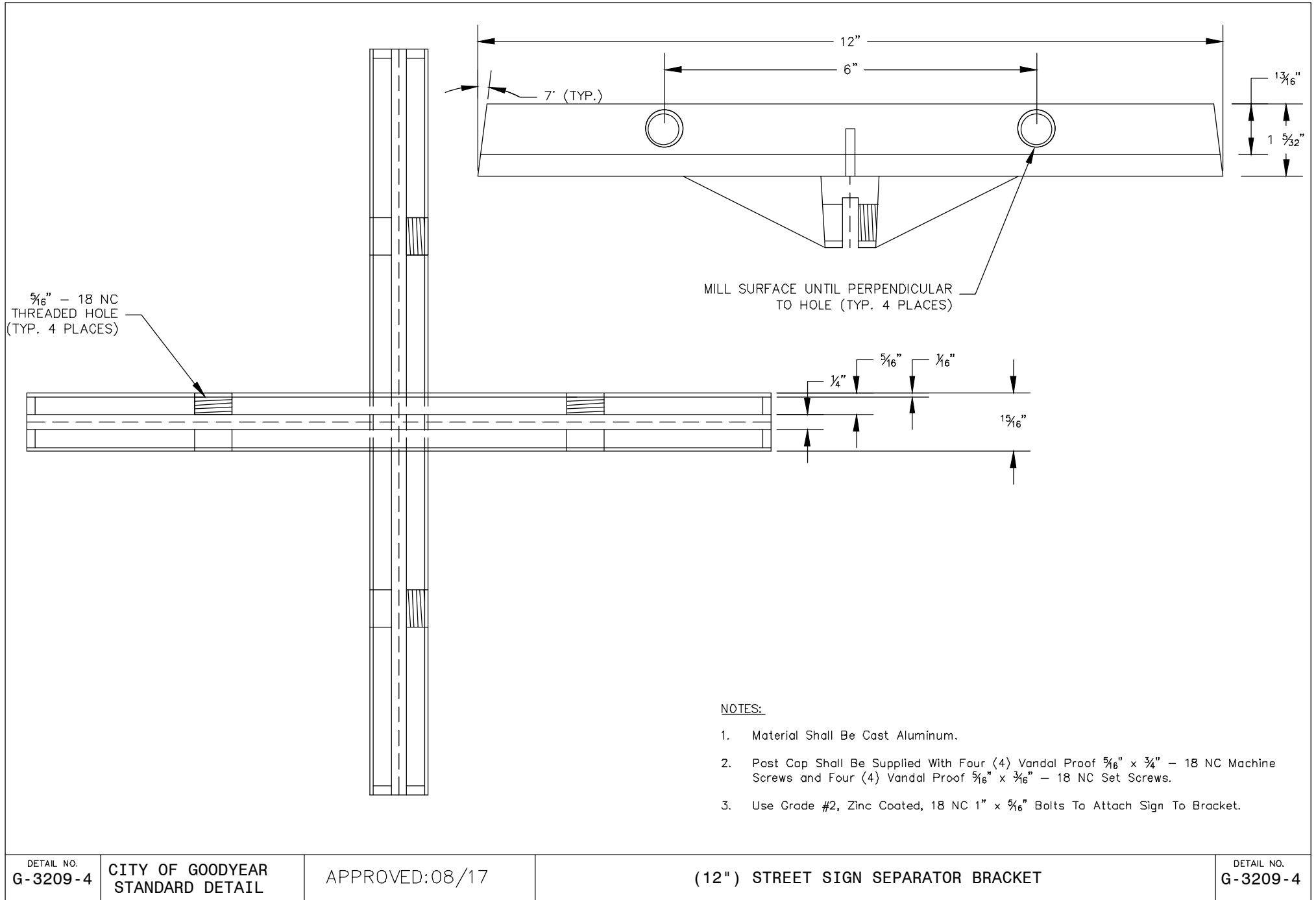
DETAIL A
SIGN MOUNTING

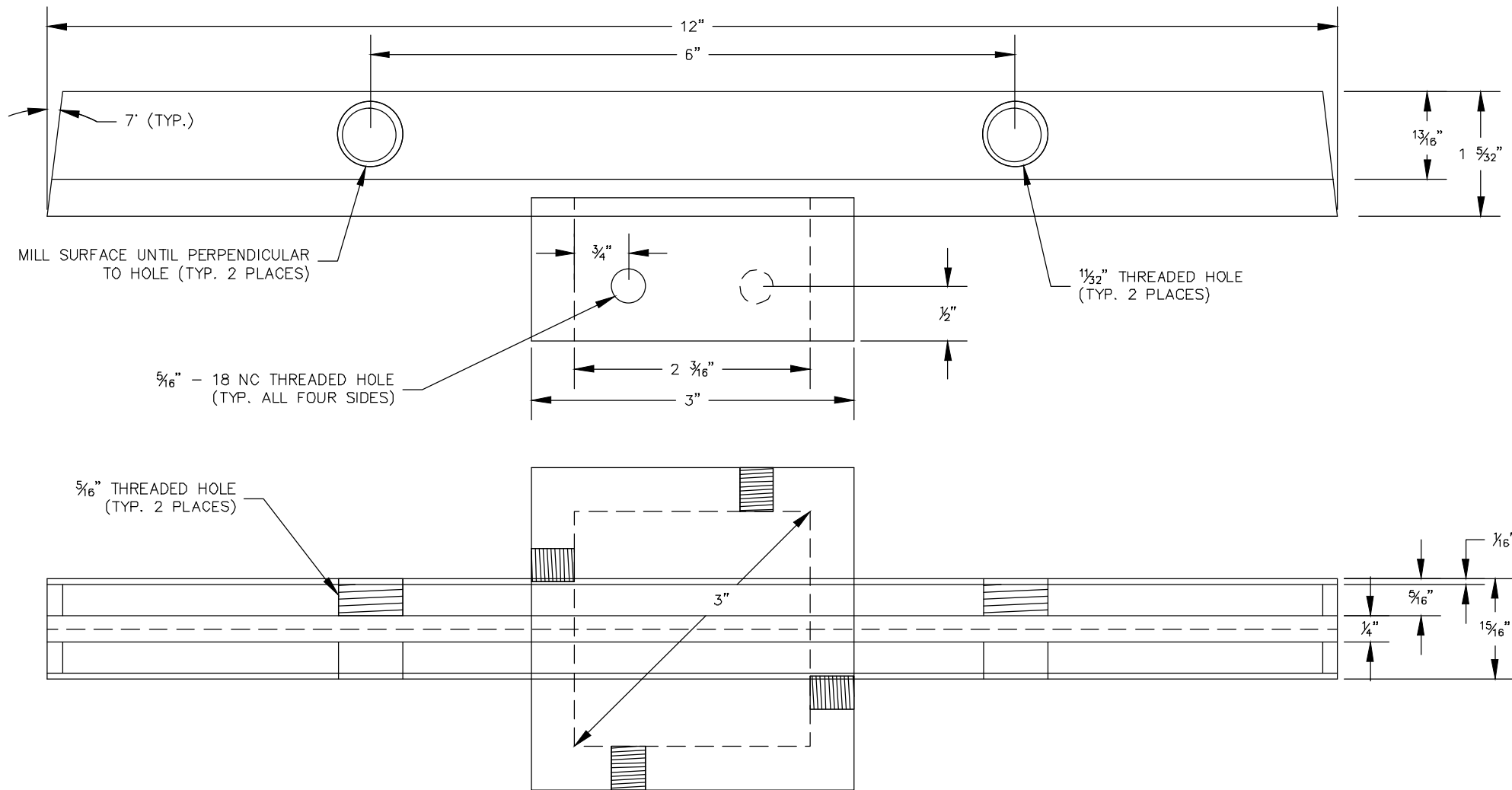


DETAIL B
ANCHOR ASSEMBLY

NOTES:

1. POST – 2" x 2", Square Perforated Galvanized Steel Tubing With $\frac{7}{16}$ " Diameter Perforations On 1" Centers, 0.105" Thick.
2. SLEEVE – 2 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x 12", Square Perforated Galvanized Steel Tubing With $\frac{7}{16}$ " Diameter Perforations On 1" Centers, 0.105" Thick.
3. ANCHOR – 2 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ " x 36", Square Perforated Galvanized Steel Tubing With $\frac{7}{16}$ " Diameter Perforations On 1" Centers, 0.105" Thick.
4. Below Top of Curb or Edge of Pavement If Not Curbed.
5. All Signs (Except Street Name Signs) With A Dimension Over 36" Shall Use A Minimum Of Two Sign Posts.





NOTES:

1. Material Shall Be Cast Aluminum.
2. Post Cap Shall Be Supplied With Two (2) Vandal Proof $\frac{5}{16}$ " x $\frac{3}{4}$ " - 18 NC Machine Screws and Two (2) Vandal Proof $\frac{5}{16}$ " x $\frac{3}{16}$ " - 18 NC Set Screws.
3. Use Grade #2, Zinc Coated, 18 NC 1 $\frac{1}{2}$ " x $\frac{5}{16}$ " Bolts To Attach Sign Cap To Post.
4. Use Grade #2, Zinc Coated, 18 NC 1" x $\frac{5}{16}$ " Bolts To Attach Sign To Bracket.

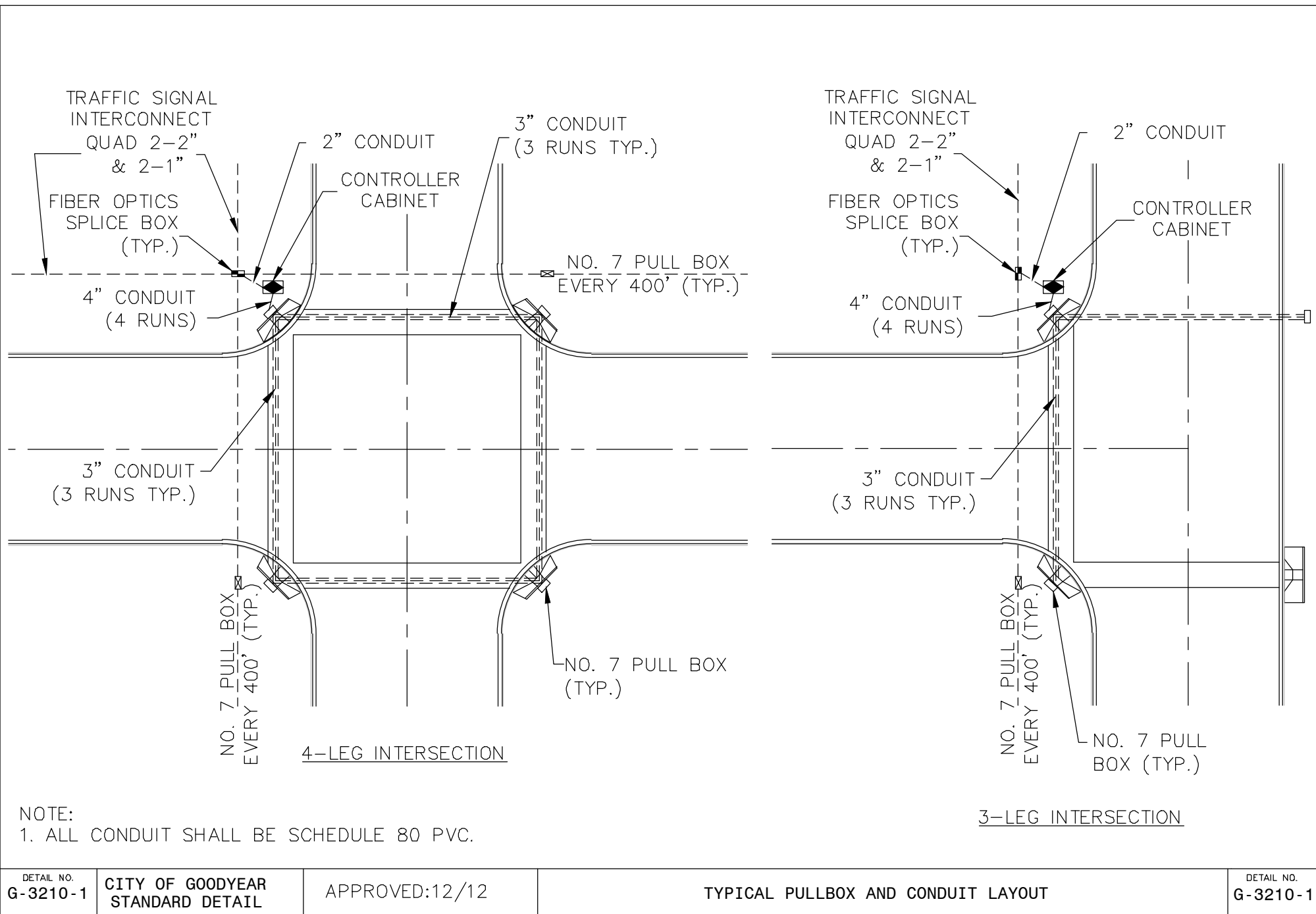
DETAIL NO.
G-3209-5

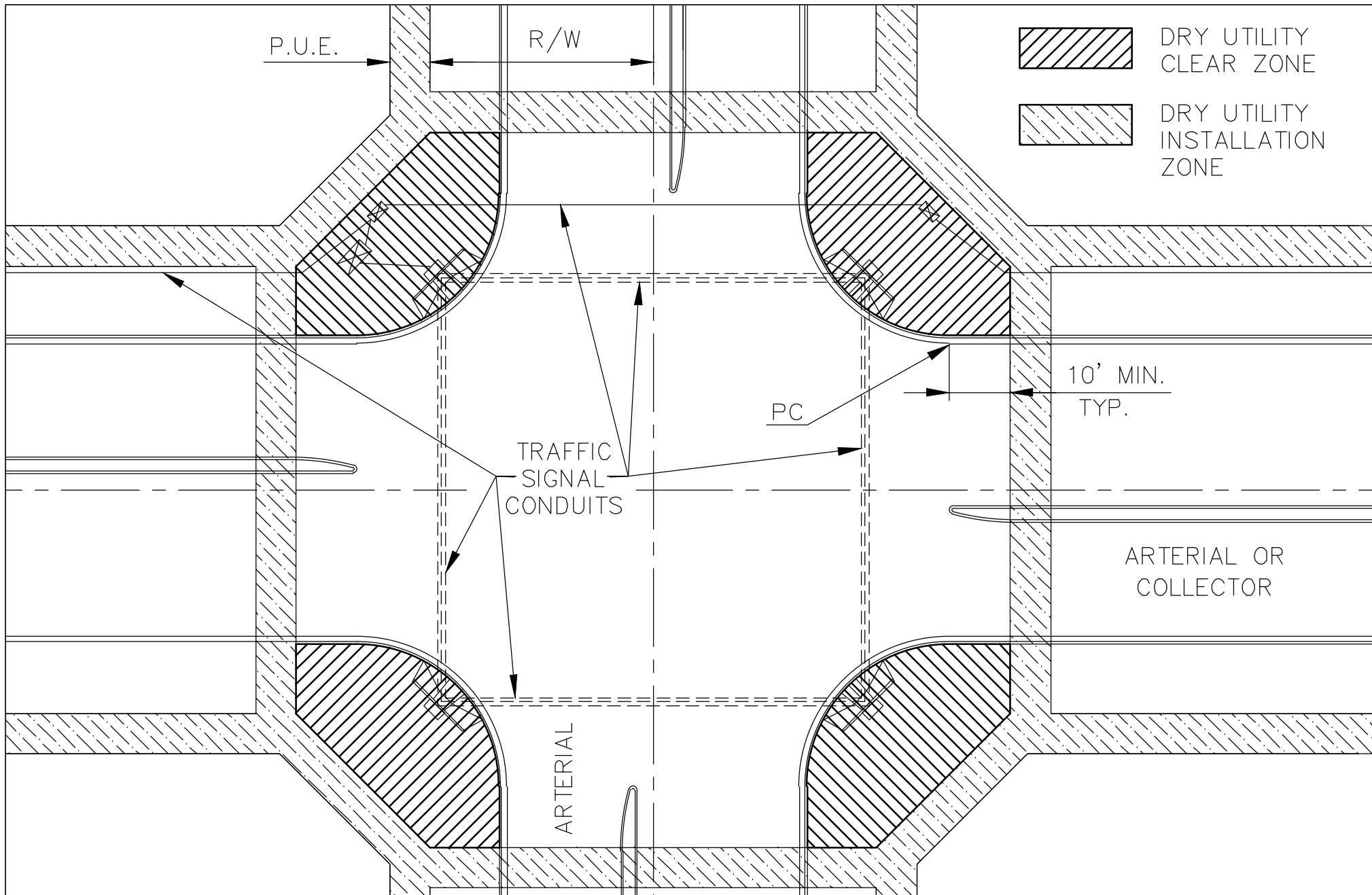
CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:08/17

(12") STREET SIGN POST CAP

DETAIL NO.
G-3209-5





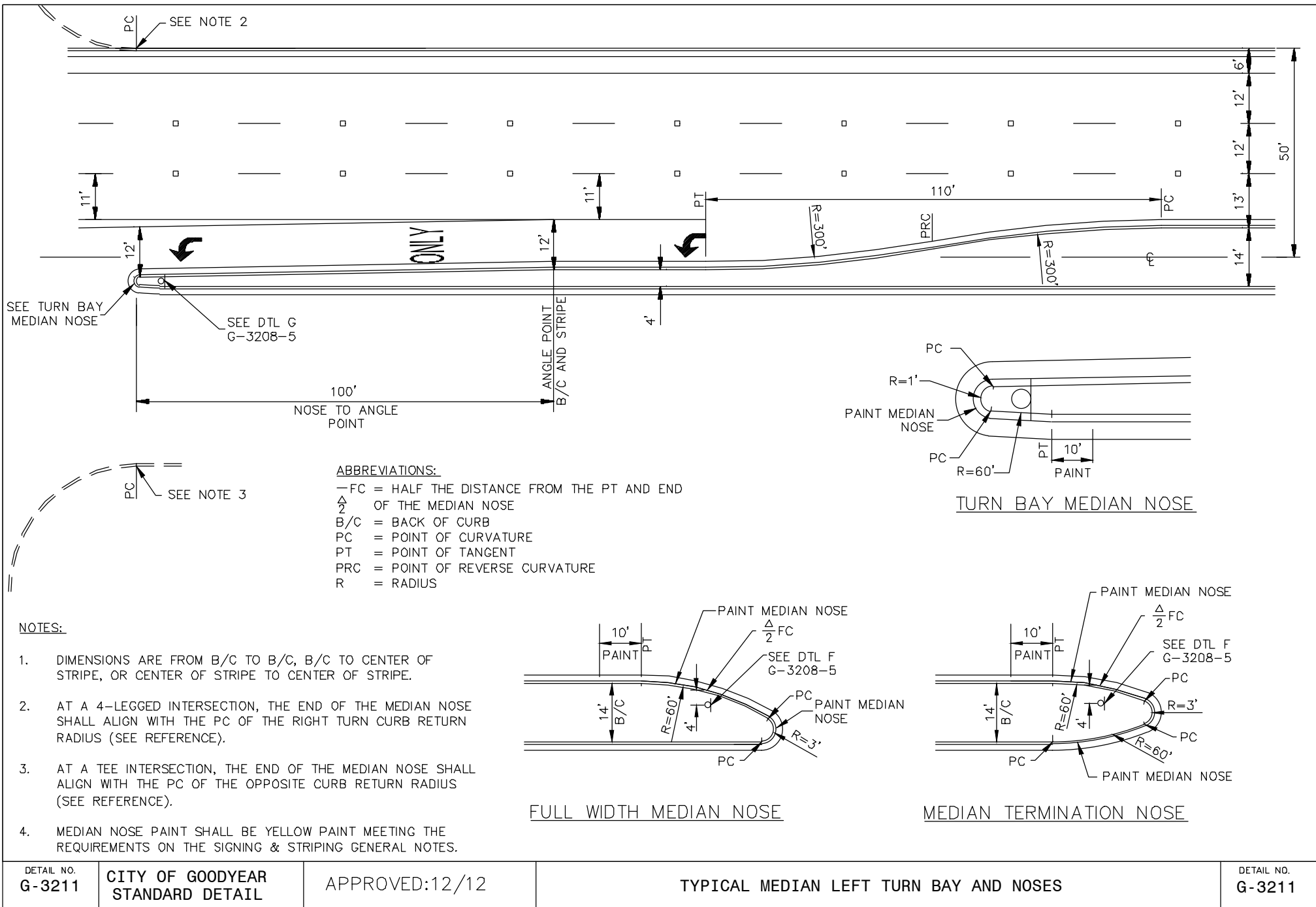


Figure 1
TWO LANE STREET

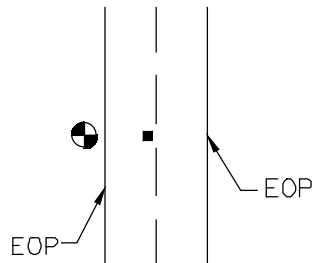


Figure 2
MULTI-LANE STREET

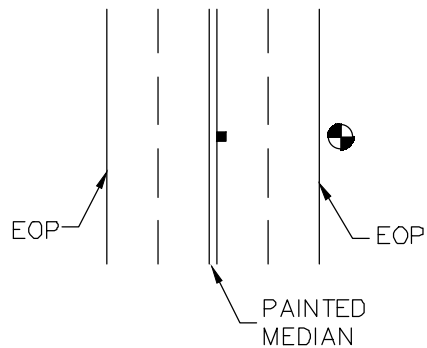


Figure 3
TWO LANE STREET
AT INTERSECTION

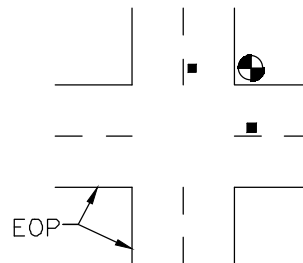


Figure 4
FOUR LANE STREET WITH
TURN LANE AT INTERSECTION

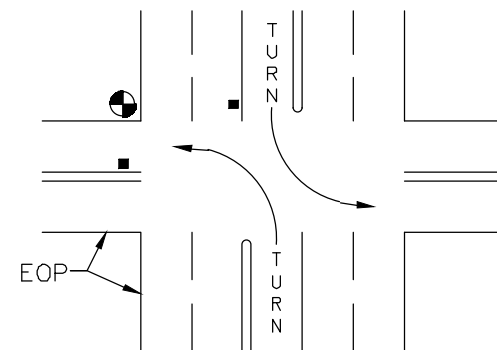


Figure 5
MULTI-LANE STREET WITH
TURN LANE

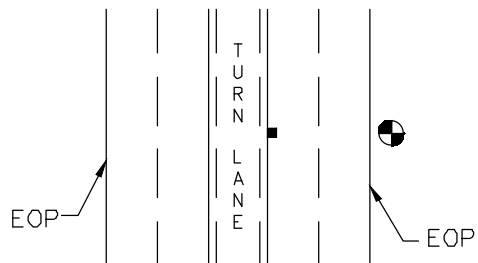
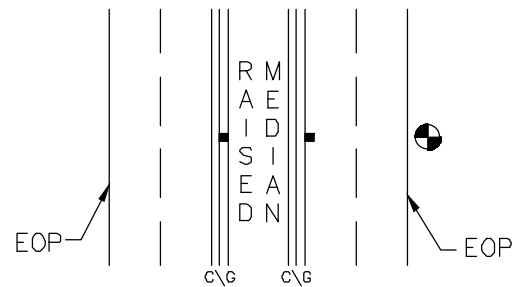
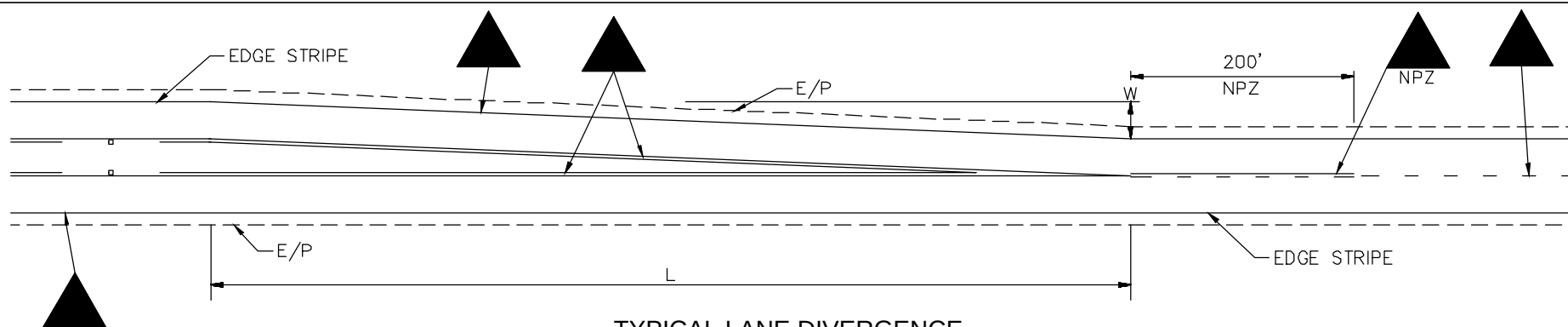
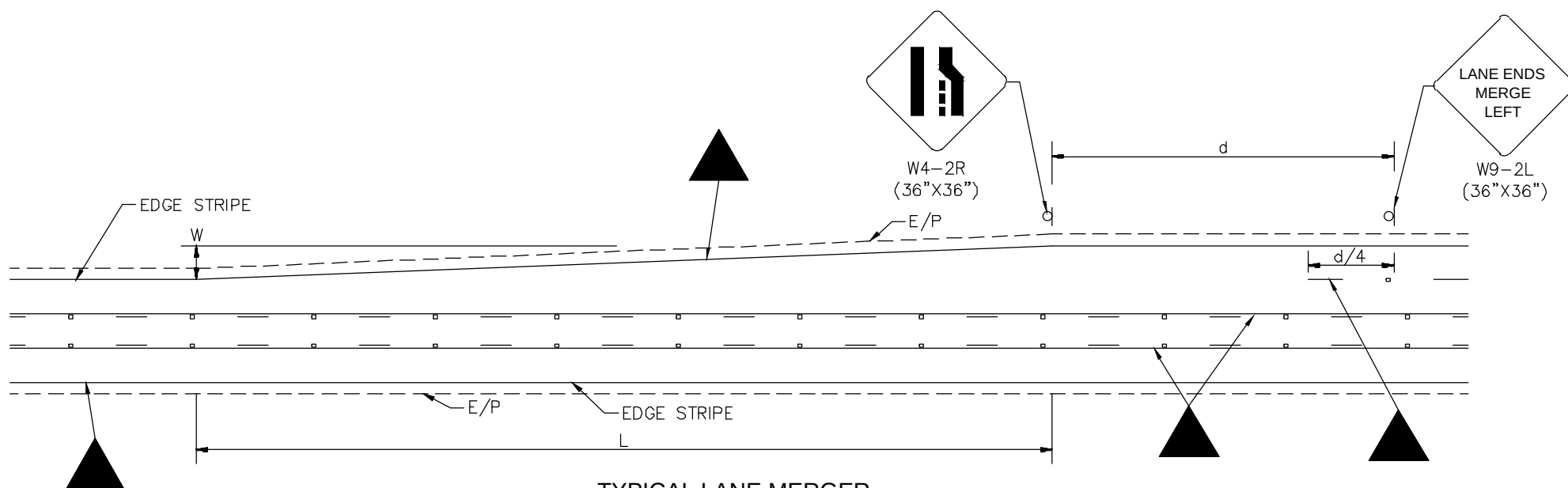


Figure 6
MULTI-LANE STREET
WITH RAISED MEDIAN





TYPICAL LANE DIVERGENCE



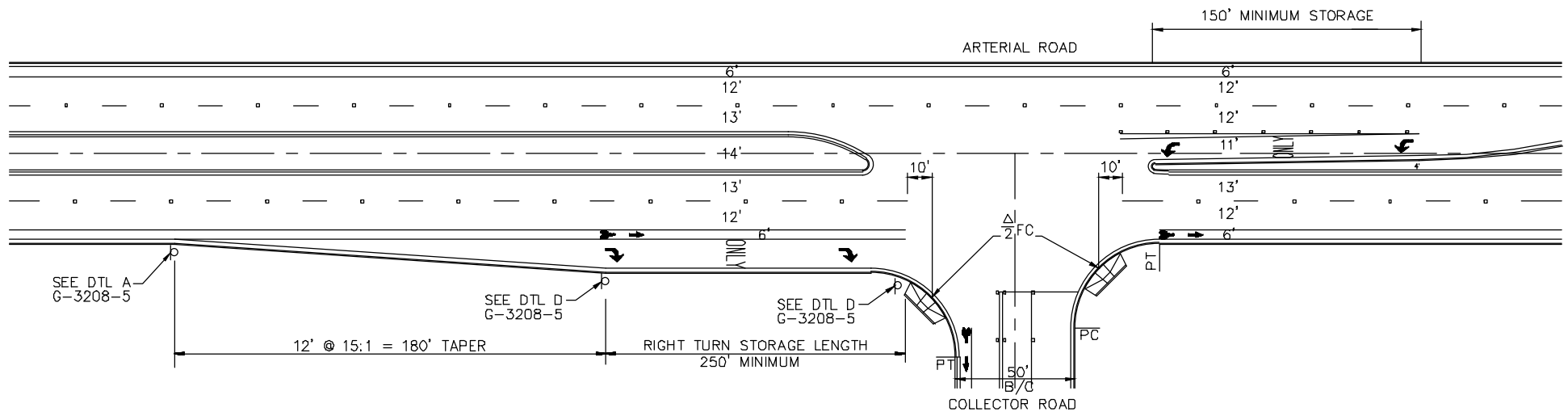
TYPICAL LANE MERGER

L = LENGTH
 S = POSTED SPEED + 5MPH
 W = OFFSET
 d = ADVANCE WARNING DISTANCE PER MUTCD LATEST EDITION
 NPZ = NO PASSING ZONE

FOR S = 45 OR GREATER:
 L = WS

FOR S = 40 OR LESS:

$$L = \frac{WS^2}{60}$$



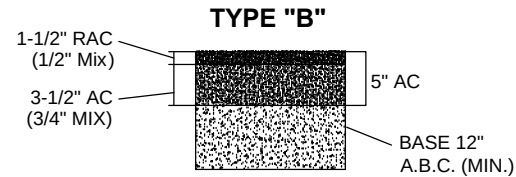
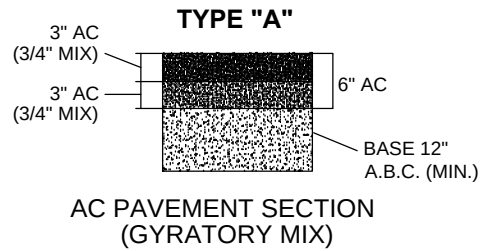
NOTES:

1. ALL DIMENSIONS ARE FROM B/C OR CENTER OF STRIP.
2. THE ABOVE STORAGE LENGTH IS A MINIMUM. ADDITIONAL LENGTH SHALL BE PROVIDED IF RECOMMENDED BY A CITY APPROVED TRAFFIC IMPACT ANALYSIS.

ABBREVIATIONS:

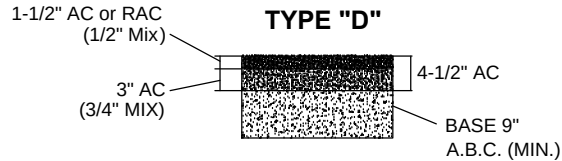
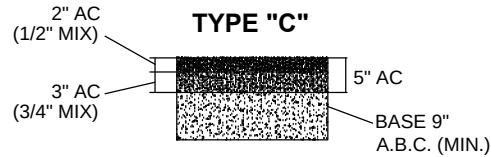
$\Delta/2$ FC = HALFWAY POINT BETWEEN CURVE PC & PT
 B/C = BACK OF CURB
 PC = POINT OF CURVE
 PT = POINT OF TANGENT

ARTERIAL STREETS



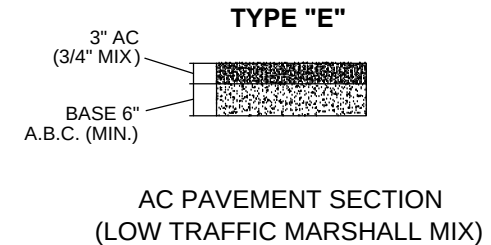
(RAC IS FOR USE ON ARTERIAL ROADS LOCATED
WITHIN A SPECIFIED DISTANCE OF A RESIDENTIAL
DEVELOPMENT, PER CHAPTER 4 OF THE EDS&PM)

COLLECTOR STREETS (RESIDENTIAL & INDUSTRIAL)



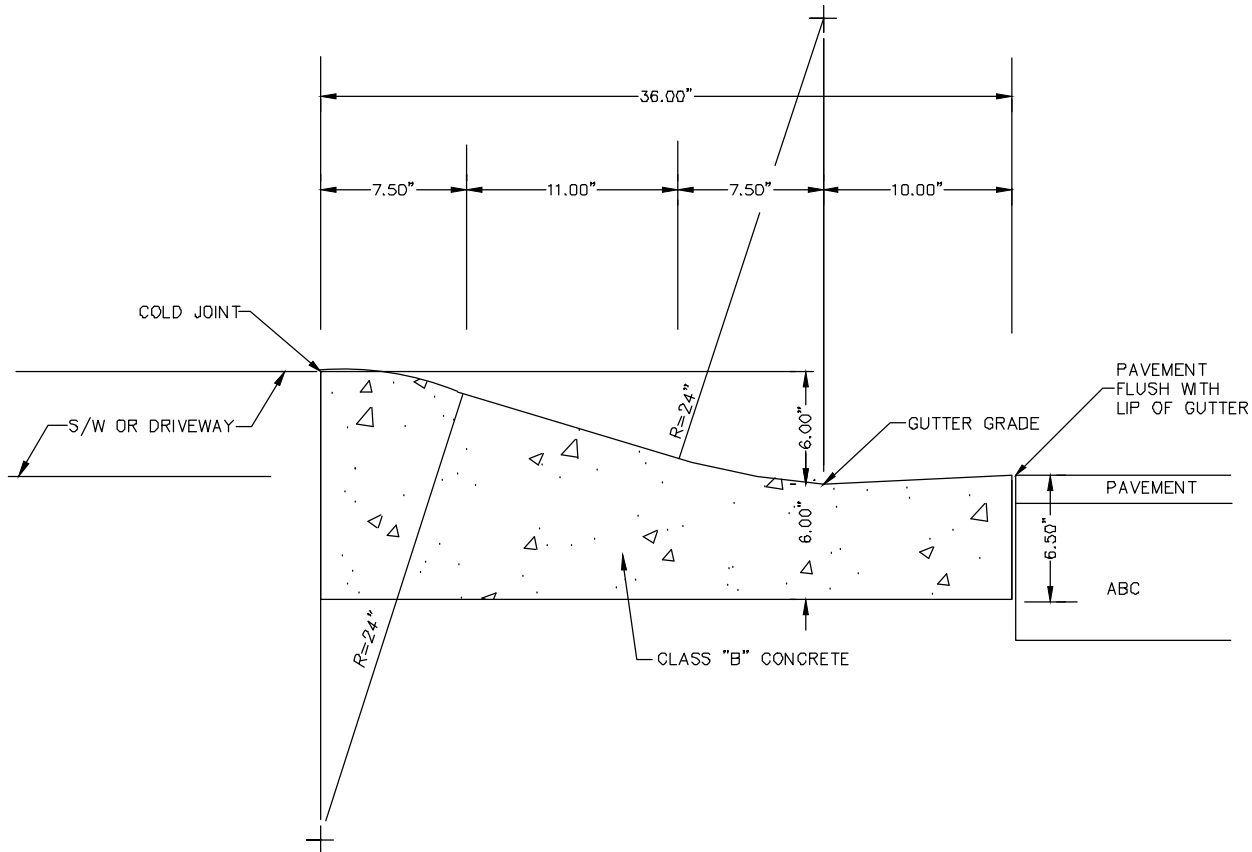
(RAC IS FOR USE ON MAJOR COLLECTOR ROADS LOCATED
WITHIN A SPECIFIED DISTANCE OF A RESIDENTIAL
DEVELOPMENT, PER CHAPTER 4 OF THE EDS&PM)

LOCAL STREETS (RESIDENTIAL & INDUSTRIAL)



NOTES:

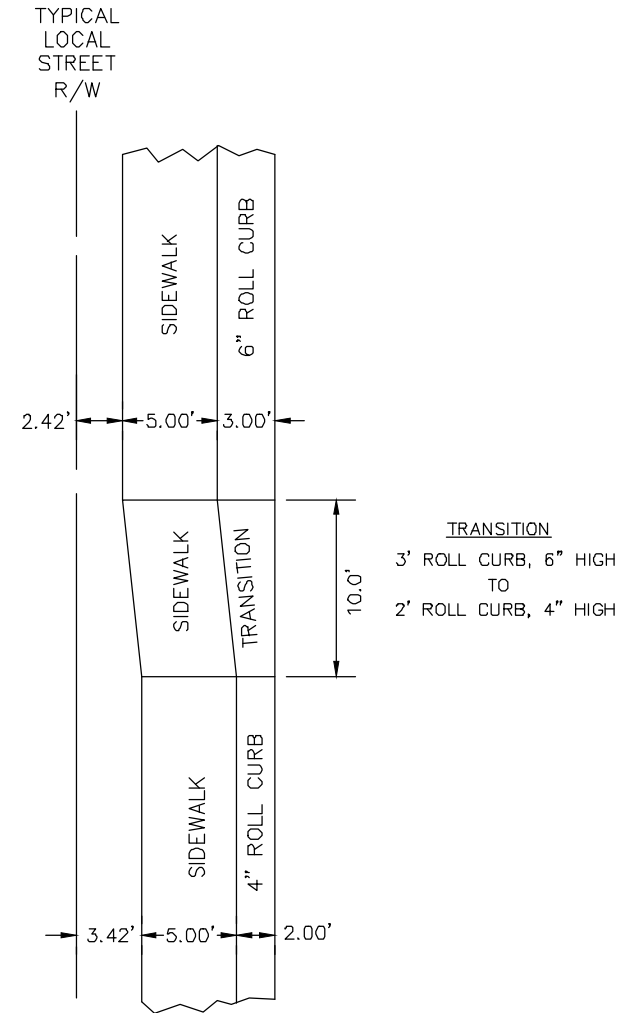
1. THE AC PAVEMENT SECTIONS IDENTIFIED HEREIN ARE MINIMUM THICKNESS. PAVEMENT STRUCTURAL DESIGN SHALL BE PERFORMED IN ACCORDANCE WITH MCDOT REQUIREMENTS WHEN ESTIMATED ARTERIAL TRAFFIC VOLUMES EXCEED 10 MILLION ESALS OVER 20 YEARS AND DESIGN OF OTHER CITY ROADWAYS SHALL BE PERFORMED ON A CASE-BY-CASE BASIS. A PAVEMENT CROSS-SECTION GREATER THAN THE MINIMUMS SHOWN HERE SHALL BE REQUIRED IF SO DETERMINED BY THE DESIGNING ENGINEER.
2. ALL MATERIALS SHALL AT A MINIMUM MEET MAG STANDARD SPECIFICATIONS AND THE CITY'S SPECIFICATIONS AS IDENTIFIED IN THE ENGINEERING DESIGN STANDARDS AND POLICY MANUAL AND APPROVED MATERIALS LIST.
3. APPROVED MIX DESIGNS ARE AVAILABLE ON THE ENGINEERING WEBSITE.
4. RAC MIXES SHALL USE ONLY CRUMB TIRE RUBBER PER MAG METHOD B.



3' ROLL CURB 6" HIGH

NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO MAG STANDARD SPECIFICATIONS, SECTIONS 340, 505, AND 725 BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING SHALL BE A MAXIMUM OF 10 FEET.
3. EXPANSION JOINTS SHALL BE CONSTRUCTED AS PER MAG STANDARD SPECIFICATIONS SECTION 340.
4. MAY BE USED ON PRIVATE OR PUBLIC LOCAL ROADS UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEERING DEPARTMENT.



PLAN VIEW

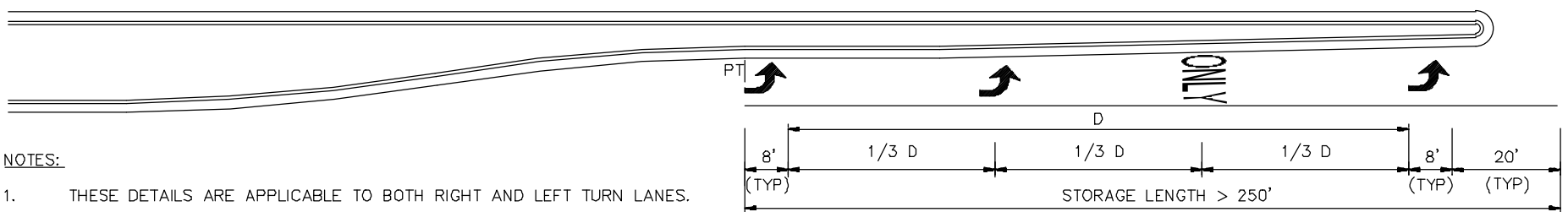
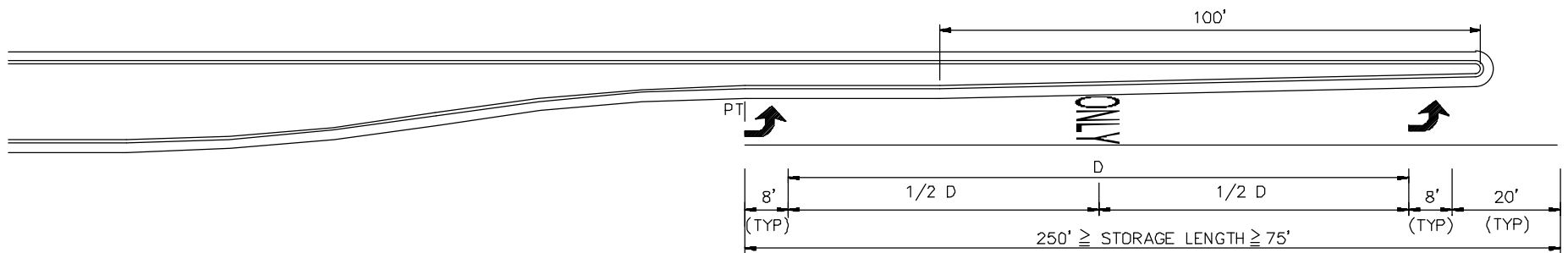
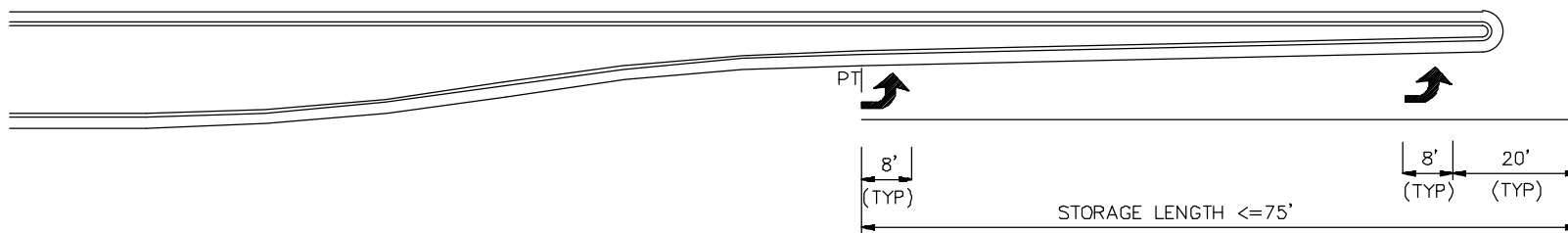
DETAIL NO.
G-3218

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:12/12

3' ROLL CURB

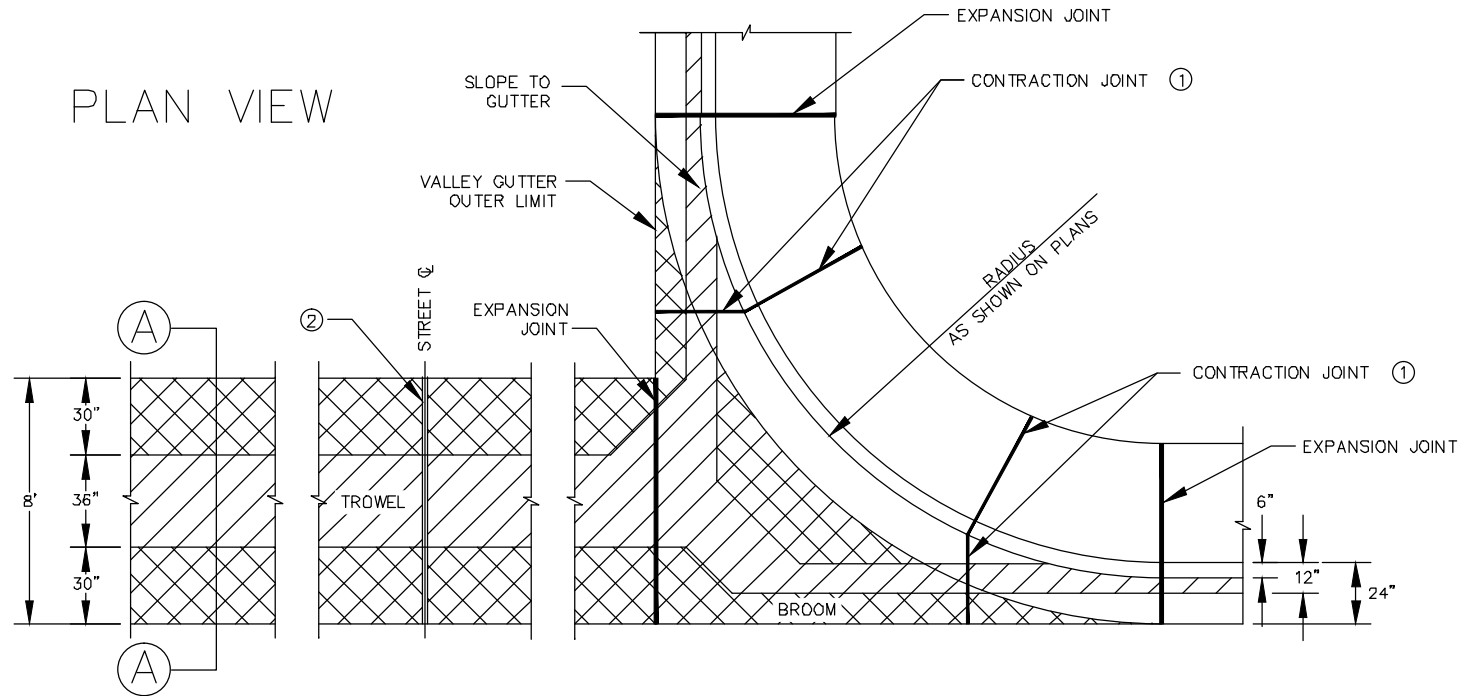
DETAIL NO.
G-3218



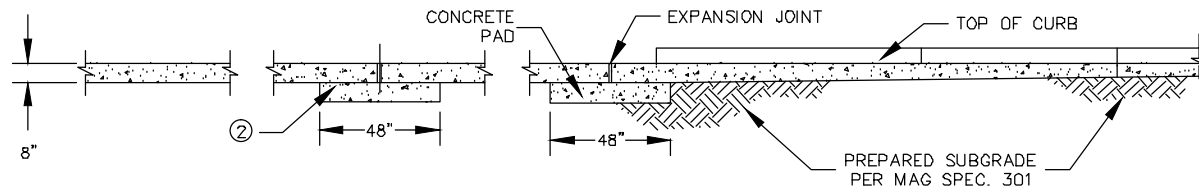
NOTES:

1. THESE DETAILS ARE APPLICABLE TO BOTH RIGHT AND LEFT TURN LANES.
2. DUAL LEFTS AND RIGHTS SHALL MAINTAIN THE SAME SPACING FOR EACH LANE.
3. ALL ARROW AND "ONLY" PAVEMENT MARKINGS SHALL BE HOT SPRAYED THERMOPLASTIC.
4. PLACEMENT OF THE ARROW CLOSEST TO THE INTERSECTION IS MEASURED FROM THE STOP BAR OR 10' OFFSET OF A REFERENCE LINE FROM MIDPOINT OF CURB RETURN TO MIDPOINT OF CURB RETURN FOR THE INTERSECTION LEG.

PLAN VIEW

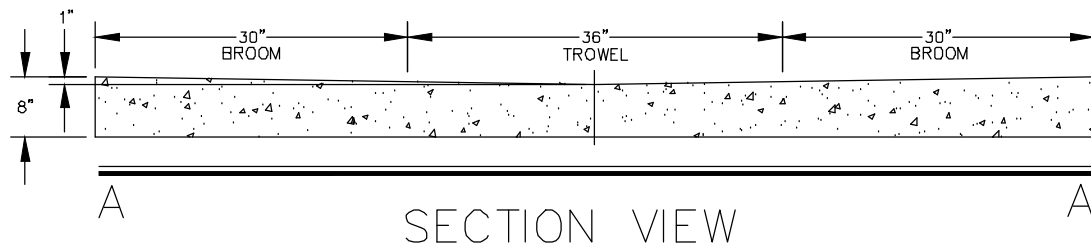


PROFILE VIEW



NOTES

1. CONTRACTION JOINTS SHALL BE LOCATED AT APPROXIMATELY 1/3 DISTANCE FROM EXPANSION JOINTS (MATCH TO JOINT IN SIDEWALK).
2. A SEPARATE CONCRETE PAD IS REQUIRED WHEN THE VALLEY GUTTER IS POURED HALF AT A TIME.
3. EXPANSION JOINTS SHALL BE CONSTRUCTED AS PER MAG STD. SPEC. 340.
4. EITHER CONSTRUCTION JOINT OR CONTRACTION JOINT IS REQUIRED AT CENTERLINE OF STREET.
5. ALL CONCRETE TO BE CLASS 'A' UNLESS OTHERWISE APPROVED (PER MAG STD. SECT. 725).



SECTION VIEW

DETAIL NO.
G-3226

CITY OF GOODYEAR
STANDARD DETAIL

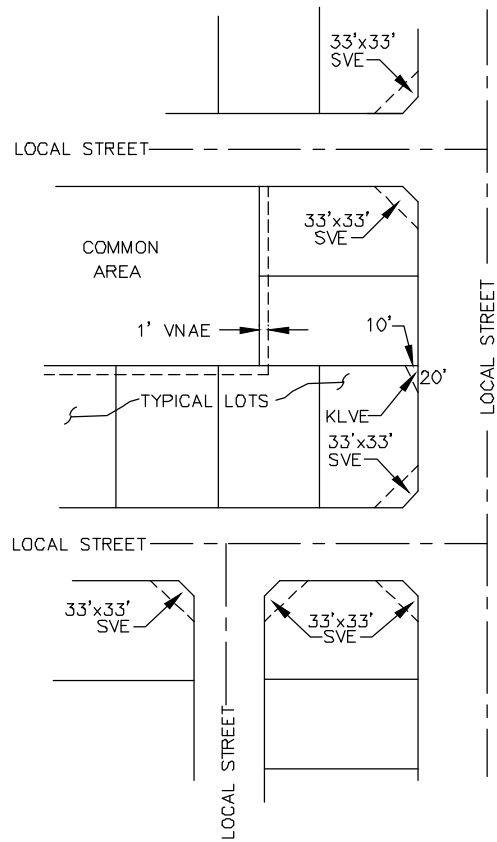
APPROVED:12/12

8' VALLEY GUTTER

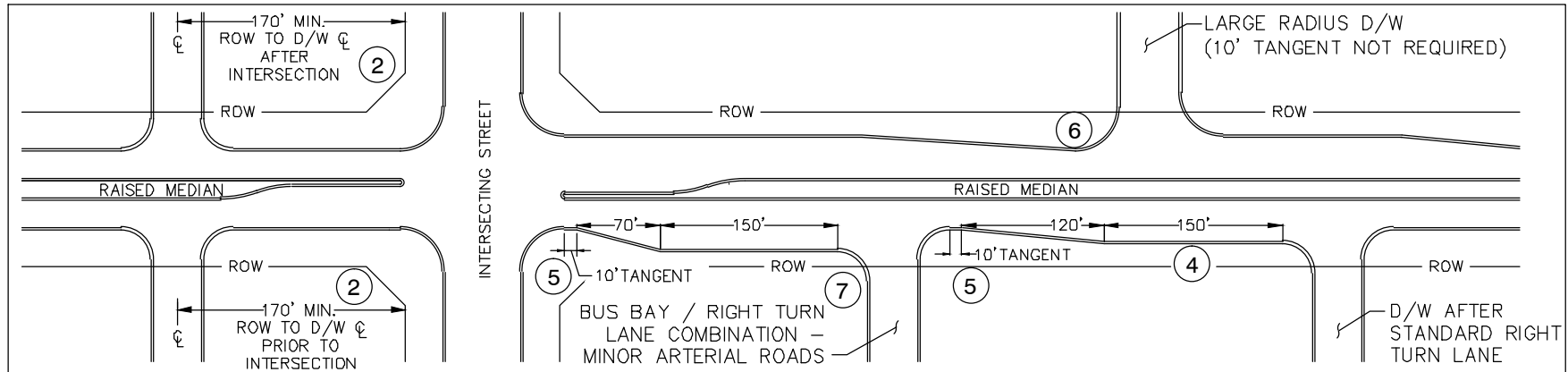
DETAIL NO.
G-3226

NOTES:

- 1. SIGHT VISIBILITY EASEMENTS (SVE): WITHIN THESE AREAS, NO OBSTRUCTION IN EXCESS OF 3' IN HEIGHT WILL BE PERMITTED. TREES PRUNED TO A HEIGHT OF 7' MAY BE PERMITTED SO LONG AS TRUNKS ARE NO LARGER THAN 8" IN DIAMETER AND AN UNOBSTRUCTED VISION OF AUTOMOBILES IS MAINTAINED.
- 2. MAXIMUM HEIGHT OF A FENCE WITHIN A VISIBILITY EASEMENT SHALL BE 3'. WHERE PERMISSIBLE, REAR OR SIDE YARDS MAY HAVE A MAXIMUM HEIGHT OF 6'.
- 3. KEY LOT VISIBILITY EASEMENTS (KLVE): A 10' BY 20' VISIBILITY EASEMENT SHALL BE PROVIDED ON KEY LOTS. EASEMENT RESTRICTIONS ARE THE SAME AS IN ITEM 1 ABOVE.
- 4. VEHICLE NO ACCESS EASEMENT (VNAE): A 1' VNAE SHALL BE PROVIDED ALONG THE INSIDE PORTION OF ALL LOTS THAT SHARE A COMMON PROPERTY LINE WITH ANY PUBLIC OR PRIVATE COMMON AREA.

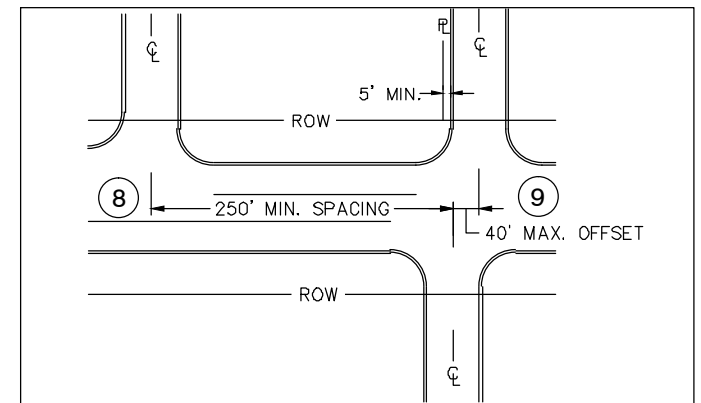
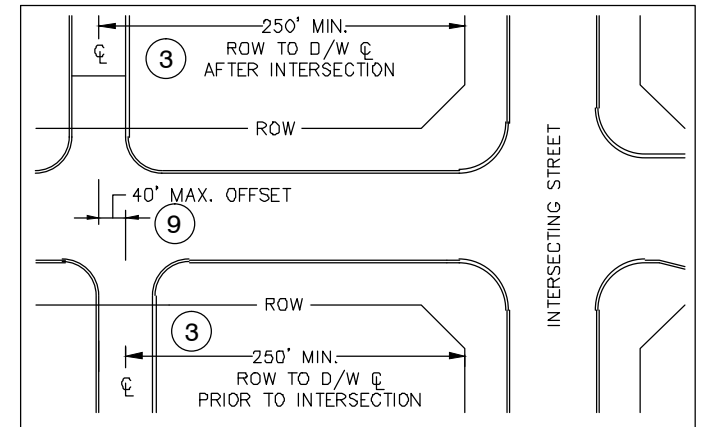


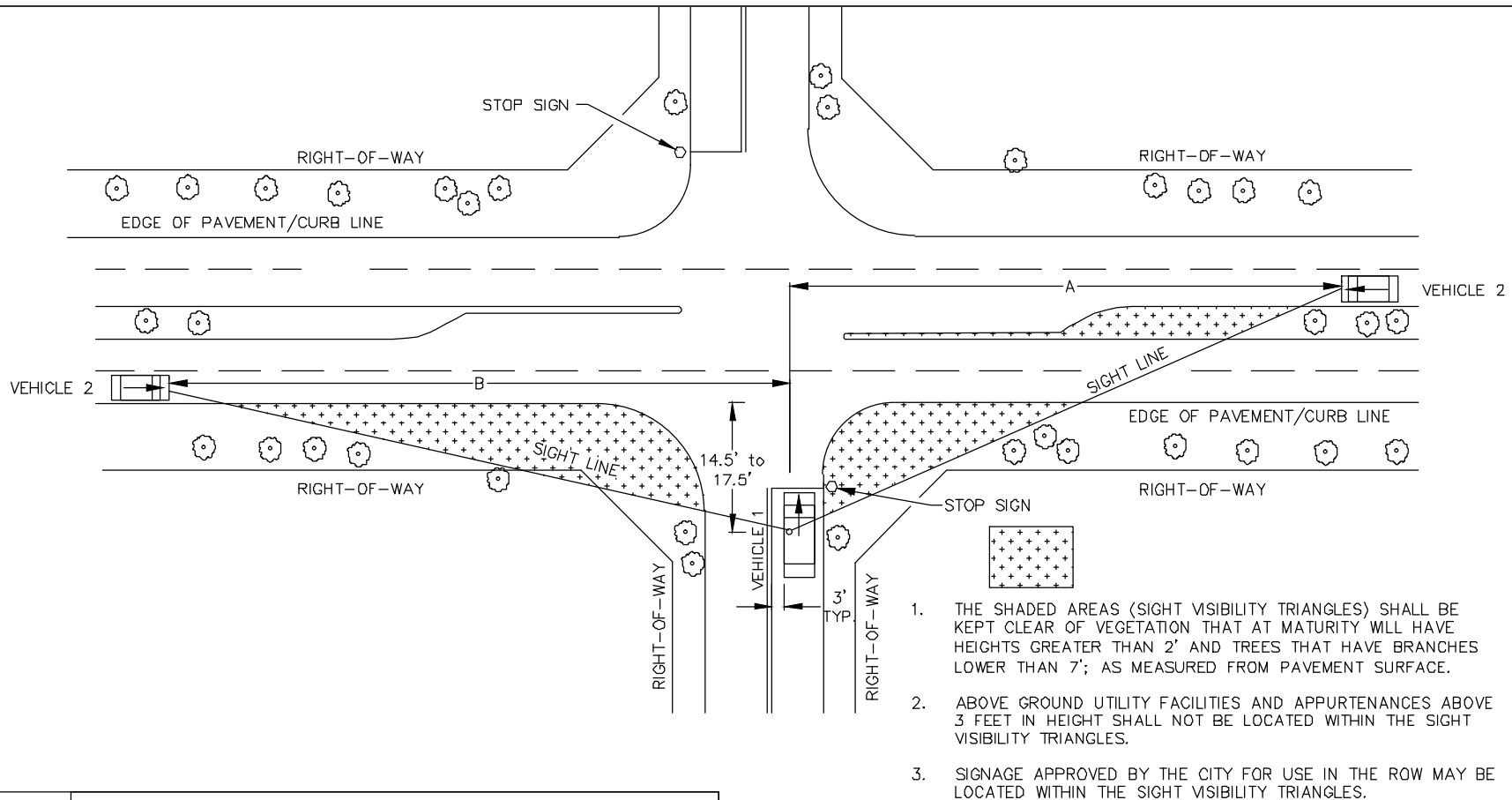
PLAN VIEW



NOTES:

1. AS AN OVERALL GUIDING PRINCIPLE, DRIVEWAYS (D/W) SHALL NOT BE LOCATED WITHIN THE TAPER OR STORAGE AREA OF A RIGHT TURN LANE.
2. FOR ROADS WITH RAISED MEDIANS, THE FIRST D/W LOCATED PRIOR TO OR AFTER AN INTERSECTION SHALL BE LOCATED A MIN. 170' FROM THE NEAREST INTERSECTING RIGHT-OF-WAY LINE, AS MEASURED TO THE D/W CENTERLINE.
3. FOR COLLECTOR, ARTERIAL, OR PARKWAY ROADS WITHOUT RAISED MEDIANS, THE FIRST COMMERCIAL/INDUSTRIAL D/W LOCATED PRIOR TO OR AFTER AN INTERSECTION SHALL BE LOCATED A MIN. 250' FROM THE NEAREST INTERSECTING RIGHT-OF-WAY LINE, AS MEASURED TO THE D/W CENTERLINE.
4. THE MIN. RIGHT TURN LANE TAPER LENGTH ON ARTERIAL AND PARKWAY ROADS SHALL BE 120'. THE MIN. STORAGE LENGTH SHALL BE 150'.
5. A MIN. 10' TANGENT LENGTH IS REQUIRED AFTER A CURB RETURN PC AND PRIOR TO BEGINNING A BUS BAY OR RIGHT TURN LANE TAPER.
6. WHEN A D/W CURB RETURN RADIUS IS 35' OR GREATER, THE 10' TANGENT LENGTH BETWEEN CURB RETURN PC AND START OF THE TAPER MAY BE OMITTED.
7. ONLY RIGHT TURN LANES ON MINOR ARTERIAL D/W MAY BE COMBINED WITH A BUS BAY. THE MIN. TAPER LENGTH SHALL BE 70' AND THE MIN. STORAGE LENGTH SHALL BE 150'.
8. A MIN. 250' SHALL BE PROVIDED BETWEEN COMMERCIAL/INDUSTRIAL D/W LOCATED ON OPPOSITE SIDES OF ROADS WITHOUT RAISED MEDIANS.
9. COMMERCIAL/INDUSTRIAL D/W LOCATED ON OPPOSITE SIDES OF A ROAD WITHOUT A MEDIAN MAY HAVE UP TO A MAX. 40' OFFSET.





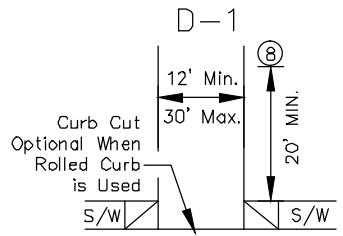
DESIGN SPEED (85th PERCENTILE) OF INTERSECTING ROADWAY	SIGHT DISTANCE FOR PASSENGER VEHICLE 1 TO TURN LEFT OR RIGHT				
	A				B
	1-LANE	2-LANE	3-LANE/2-LANE & MEDIAN	3-LANE & MEDIAN	
25 MPH	280'	295'			240'
30 MPH	335'	355'			290'
35 MPH	390'	415'	440'	465'	335'
40 MPH	445'	475'	500'	530'	385'
45 MPH	500'	530'	565'	600'	430'
50 MPH	555'	590'	625'	665'	480'
55 MPH	610'	650'	690'	730'	530'
60 MPH		710'	750'	795'	575'
65 MPH		765'	815'	860'	625'

NOTES:

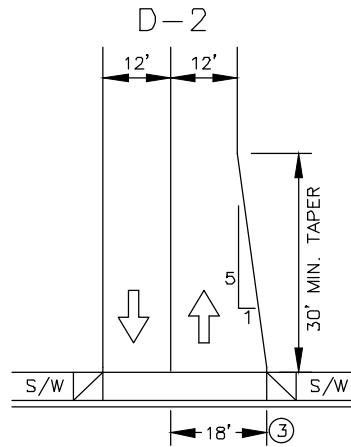
- TO ESTABLISH THE LINE OF SIGHT, VEHICLE 1 SHOULD BE POSITIONED SO THAT THE DRIVERS EYE IS 14.5 TO 17.5' BACK FROM THE EDGE OF PAVEMENT/ FACE OF CURB AND 3.5' ABOVE THE PAVEMENT. DRIVER IS ASSUMED TO BE 3.0' RIGHT OF CENTER LINE IN LANE.
- APPROACH VEHICLE (VEHICLE 2) IS POSITIONED IN THE CENTER OF ITS LANE AND ASSUMED TO BE 4.25' ABOVE THE PAVEMENT.
- DRAWING DEPICTS TYPICAL PASSENGER CAR SITUATION WITHOUT GRADES. ADJUSTMENTS FOR GRADES SHALL BE MADE PER AASHTO.
- EASEMENTS TO BE SHOWN AND DIMENSIONED ON FINAL PLAT.

A = SIGHT DISTANCE TO RIGHT FOR VEHICLE 1

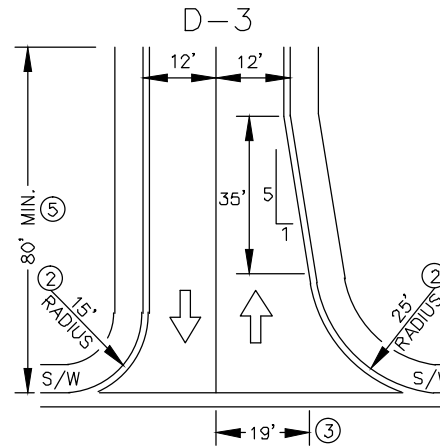
B = SIGHT DISTANCE TO LEFT FOR VEHICLE 1



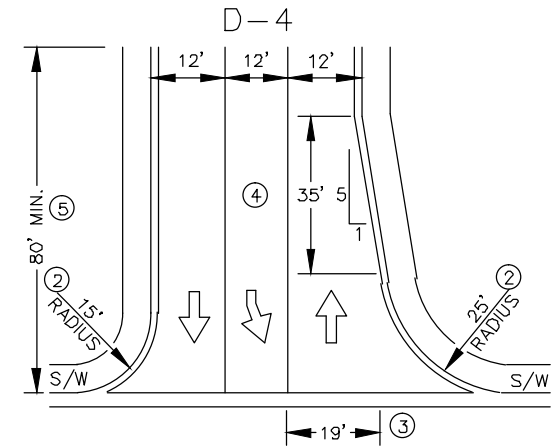
SINGLE FAMILY
(SEE MAG DTL 250-1&2)



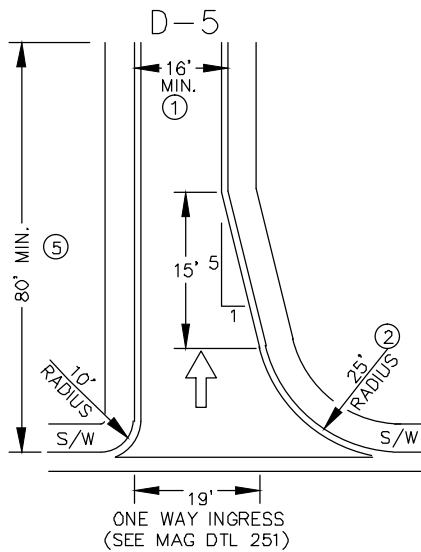
TWO WAY (LOW VOLUME)
(SEE MAG DTL 250-1&2)



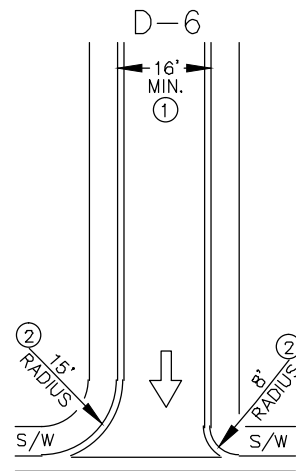
TWO WAY (HIGH VOLUME)
(SEE MAG DTL 251)



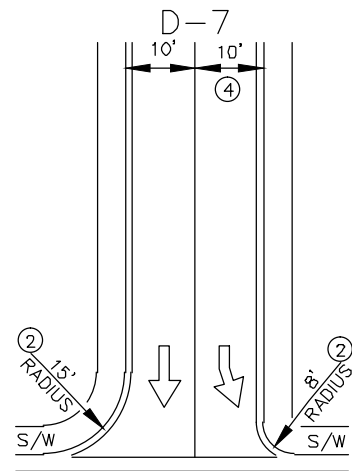
TWO WAY WITH TWO EGRESS LANES
(SEE MAG DTL 251)



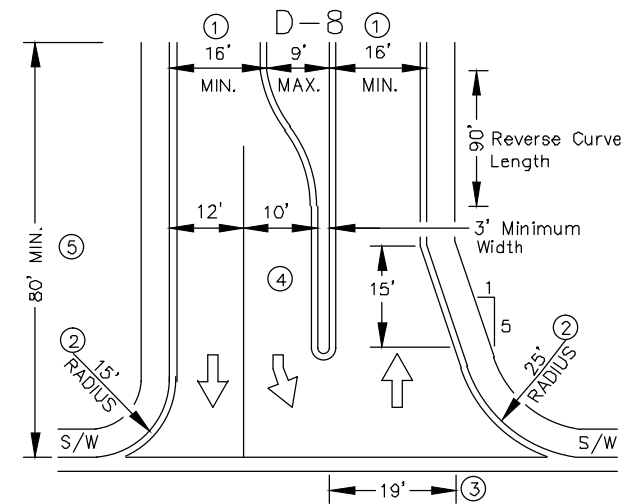
ONE WAY INGRESS
(SEE MAG DTL 251)



ONE WAY EGRESS
(SEE MAG DTL 251)



ONE WAY WITH TWO EGRESS LANES
(SEE MAG DTL 251)

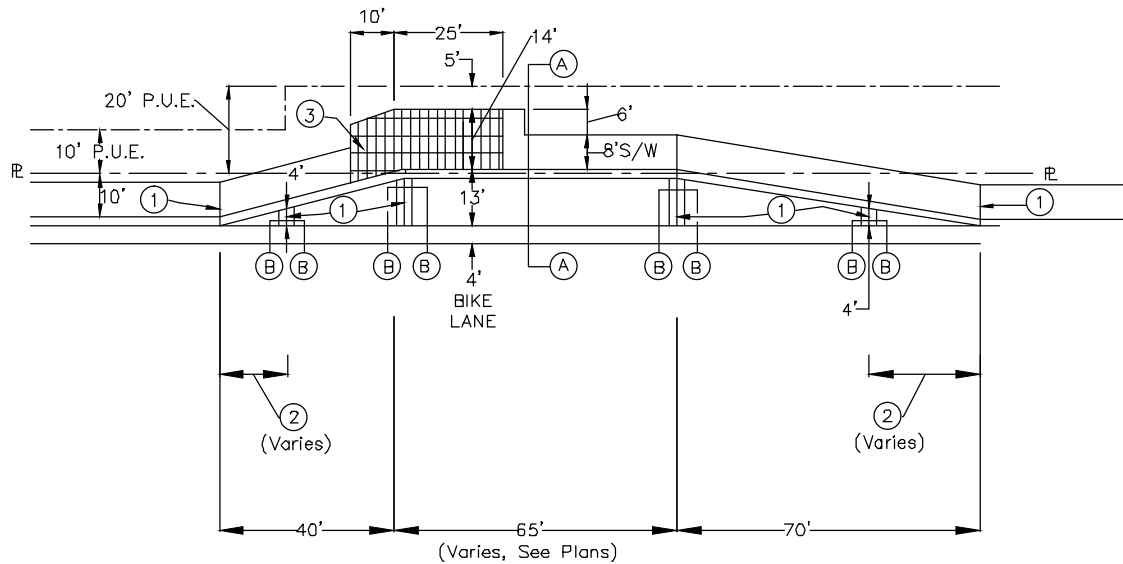


TWO WAY WITH TWO LANE EGRESS AND RAISED MEDIAN
(SEE MAG DTL 251)

NOTES

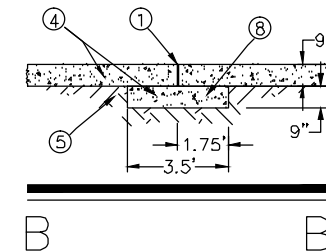
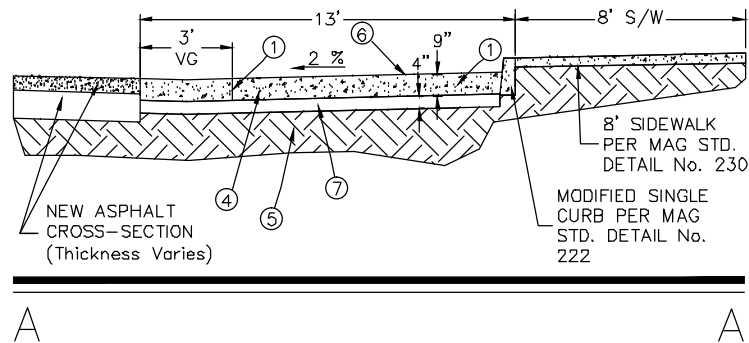
- IF DRIVE IS ALSO FOR FIRE EQUIPMENT ACCESS THEN THE MINIMUM WIDTH SHALL BE 20 FEET.
- A 35' RADIUS CURB RETURN WILL BE REQUIRED AT DRIVEWAYS THAT HAVE FREQUENT LARGE TRUCK TRAFFIC OR AS REQUIRED BY THE CITY ENGINEERING DEPARTMENT.
- WHEN THE INGRESS LANE IS GREATER THAN 19', A PAINTED OR RAISED MEDIAN IS REQUIRED.
- A MINIMUM LEFT TURN STORAGE LENGTH OF 75' SHALL BE PROVIDED.
- INTERSECTING DRIVE AISLES, D/W, OR PARKING STALLS SHALL NOT BE NEARER THAN 80'.
- D-1&2 WIDTHS ARE TO EDGE OF PAVEMENT. D-3 TO D-8 WIDTHS ARE TO BACK OF CURB

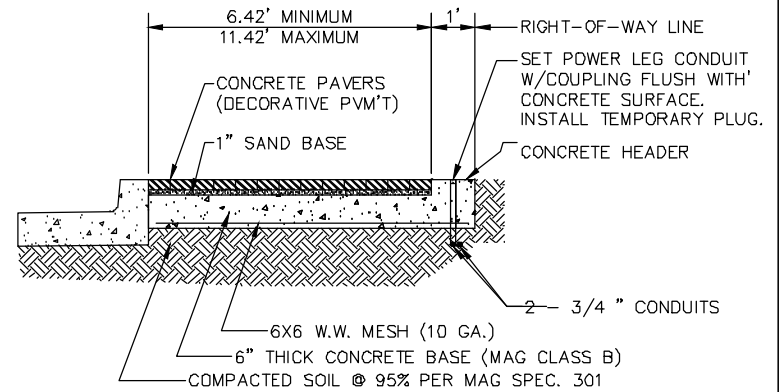
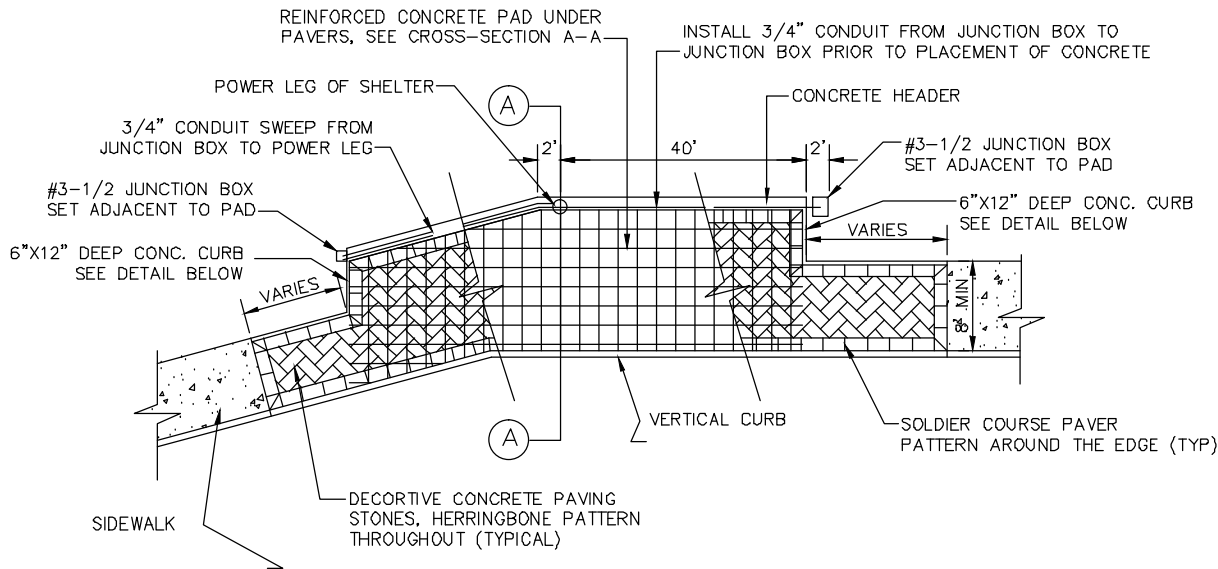
- INGRESS TAPER DIMENSIONS ARE SHOWN FOR D/W WITHOUT DECELERATION LANES.
- A MIN. 20' SHALL BE MAINTAINED BETWEEN THE BACK OF SIDEWALK (APPLIES TO ATTACHED & DETACHED WALKS) AND THE NEAREST STRUCTURE DIRECTLY IN FRONT OF THE D/W.
- RESIDENTIAL D/W WINGS SHALL NOT ENCROACH INTO THE P.C. OF THE STREET CURB RETURN.
- SINGLE FAMILY DRIVEWAYS SHALL BE LOCATED ONLY ON LOCAL RESIDENTIAL ROADWAYS.
- D/W WINGS OR PC'S SHALL BEGIN A MIN. 5' FROM NEAREST SIDE PROPERTY LINE EXTENDED.
- DIMENSIONS PROVIDED ON THIS DETAIL OVERRIDE WHAT IS SHOWN ON REFERENCED MAG DETAILS. ALL OTHER INFORMATION APPLIES.



NOTES:

1. 1/2" BITUMINOUS PREFORMED EXPANSION JOINT FILLER, ASTM D-1751.
2. ASPHALT TO CONCRETE BUS BAY TRANSITION (Length Varies).
3. BUS BAY ACCESSORY PAD (See City STD DTL. No. G-3242-2).
4. CONCRETE SHALL BE CLASS "A" PER MAG SPECS OR CLASS "S", $f'_c = 3000$ psi PER ADOT SPECS.
5. SUBGRADE PREPARATION TO BE PER MAG SECTION 301.
6. CONCRETE BUS BAY PAVEMENT SHALL BE BROOM FINISHED.
7. ABC TO BE PLACED PER MAG SECTION 310.
8. CONCRETE VALLEY GUTTER TO BE POURED SEPARATELY FROM CONCRETE BUS BAY PAVEMENT.
9. FROM AN INTERSECTION CURB RETURN PROVIDE A MINIMUM TANGENTIAL LENGTH OF 10' PRIOR TO THE START OF THE BUS BAY TAPER.

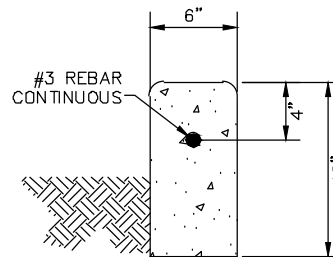




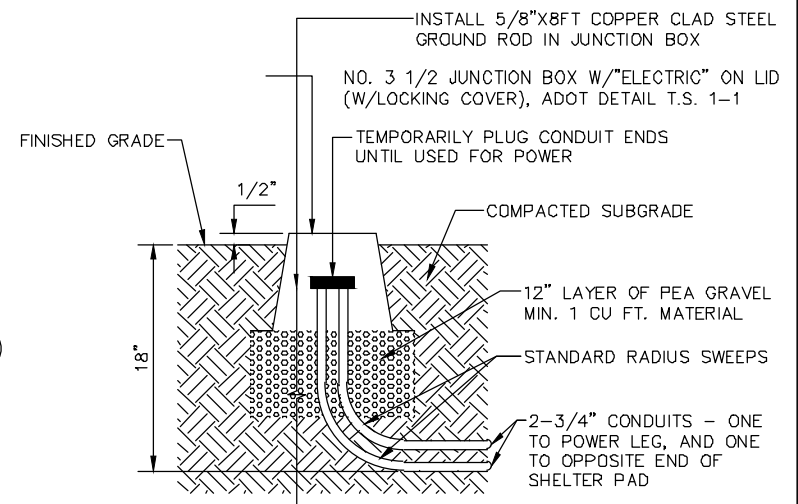
CROSS-SECTION A - A

NOTES:

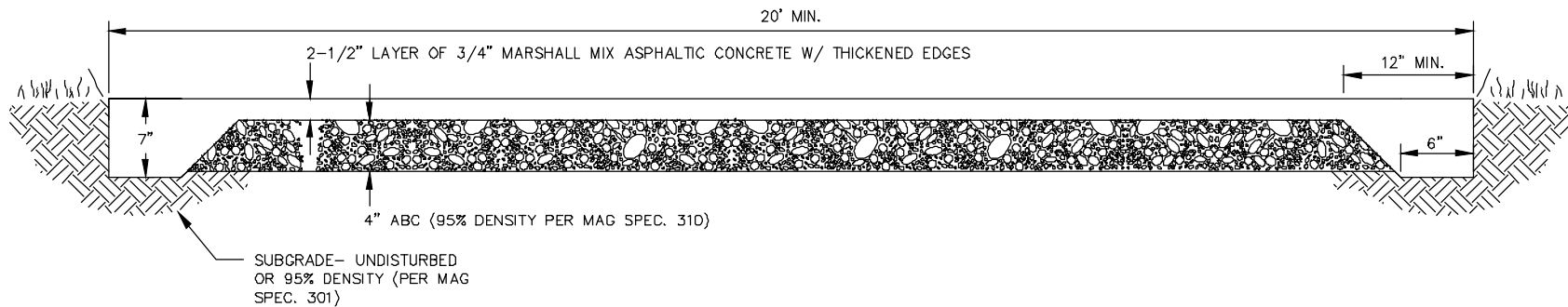
1. ALL CONDUIT SHALL BE P.V.C. SCHEDULE 40, U.L. LISTED.
2. ACTUAL PLAN LAYOUT MAY VARY. ALL DETAIL INFORMATION REMAINS THE SAME. SEE PLANS FOR SPECIFIC LOCATIONS AND DIMENSIONS OF BUS SHELTER PAD CONCRETE BASE AND DECORATIVE PAVEMENT TREATMENT.
3. ANY DECORATIVE PAVEMENT TREATMENT OUTSIDE THE AREA OF THE BUS SHELTER PAD CONCRETE BASE SHALL BE CONSTRUCTED ON A 1 INCH SAND BASE OVER 4 INCHES CEMENT-ENRICHED AGGREGATE BASE SLURRY (1 SACK TYPE II PORTLAND CEMENT PER CUBIC YARD OF AGGREGATE BASE COURSE MATERIAL) OVER 95% COMPACTED SUBGRADE SOIL (PER MAG SPEC. 301).
4. ANY SHELTER OR BUS STOP FURNITURE PLACEMENT SHALL BE LOCATED TO PROVIDE A MIN. 5 FT WIDE CLEAR SIDEWALK.
5. ALL COSTS ASSOCIATED WITH ELECTRICAL AND RELATED ITEMS SHOWN ON THESE DETAILS (CONDUITS, JUNCTION BOXES, GROUND ROD, ETC.) SHALL BE CONSIDERED INCLUDED IN THE COST OF THE PAY ITEM FOR CONCRETE BUS SHELTER PAD.
6. BUS BAY PAVEMENT, DECORATIVE PAVEMENT (INCLUDING CEMENT-ENRICHED A.B.C. SLURRY AND SANDBASE), 6"x12" D CONCRETE CURB, SINGLE CURB, CURB & GUTTER, SIDEWALKS, & DRIVEWAYS ARE SEPARATE PAY ITEMS.



CONCRETE HEADER
MAG DETAIL 222-B(MOD)



SLEEVE SWEEP &
JUNCTION BOX DETAIL

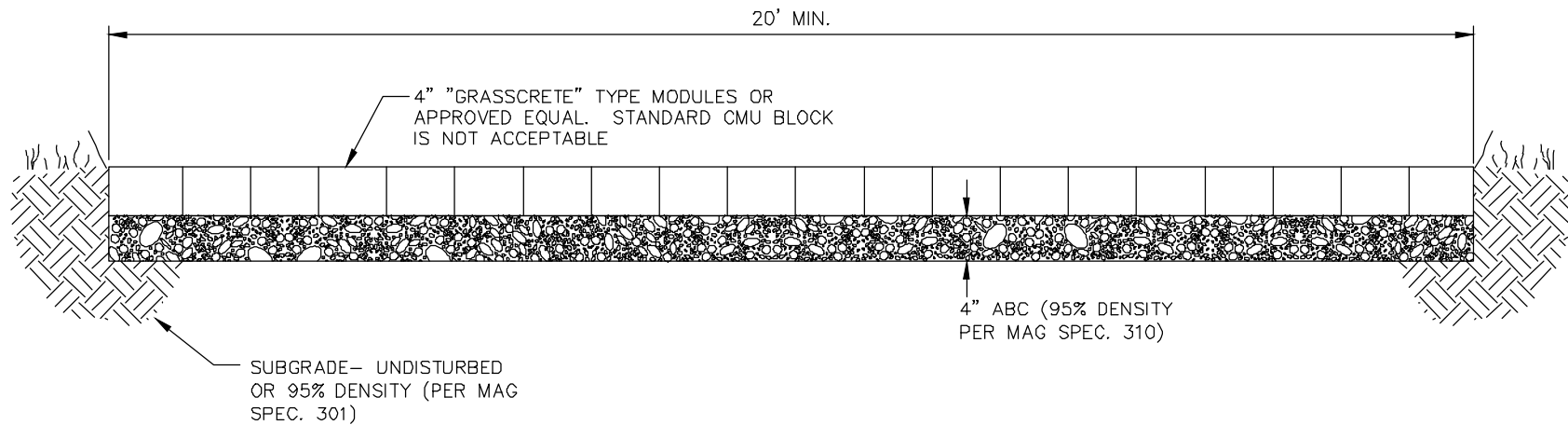


FIRE DEPARTMENT PERMANENT ACCESS ROADWAY

NOTES:

- 1 THE MAXIMUM GRADIENT OF A FIRE DEPARTMENT ACCESS ROAD SHALL NOT EXCEED 8% (8' IN 100').
- 2 WHERE BUILDINGS ARE LESS THAN 30' IN HEIGHT, A 20' UNOBSTRUCTED WIDTH SHALL BE MAINTAINED FOR THE ACCESS ROADWAY.
- 3 WHERE BUILDINGS ARE MORE THAN 30' IN HEIGHT, A 26' UNOBSTRUCTED WIDTH SHALL BE MAINTAINED FOR THE ACCESS ROADWAY.

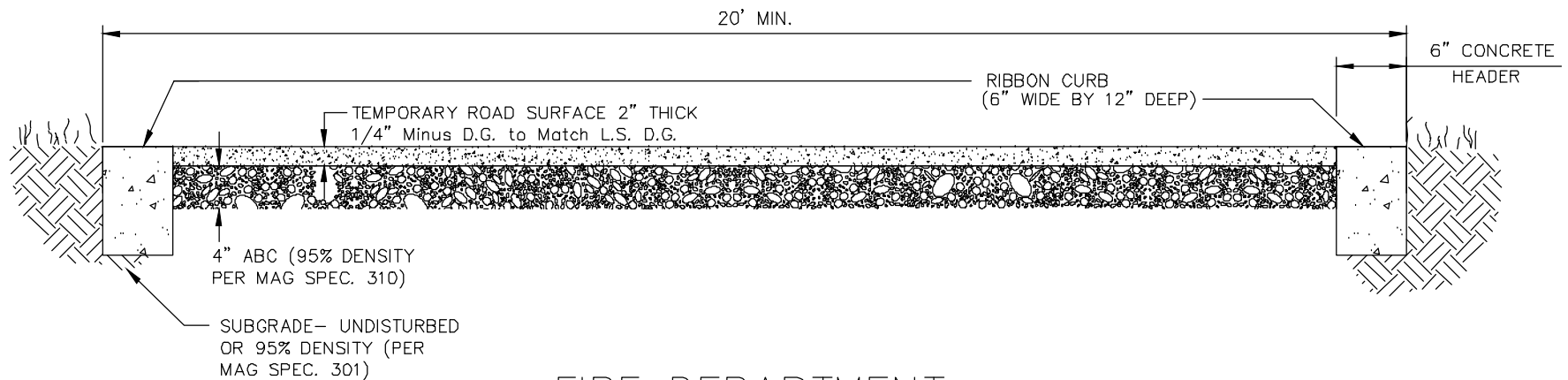
DETAIL NO. G-3244-1	CITY OF GOODYEAR STANDARD DETAIL	APPROVED:12/12	FIRE DEPARTMENT PERMANENT ACCESS ROADWAY TYPICAL CROSS-SECTION	DETAIL NO. G-3244-1
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FIRE DEPARTMENT ALTERNATIVE ACCESS ROADWAY

NOTES

1. THE MAXIMUM GRADIENT OF A FIRE DEPARTMENT ACCESS ROAD SHALL NOT EXCEED 8% (8' IN 100').
2. WHERE BUILDINGS ARE LESS THAN 30' IN HEIGHT, A 20' UNOBSTRUCTED WIDTH SHALL BE MAINTAINED FOR THE ACCESS ROADWAY.
3. WHERE BUILDINGS ARE MORE THAN 30' IN HEIGHT, A 26' UNOBSTRUCTED WIDTH SHALL BE MAINTAINED FOR THE ACCESS ROADWAY.
4. THIS IS AN ALTERNATIVE CROSS-SECTION TO THE CROSS-SECTION OF THE PERMANENT ACCESS ROADWAY.
5. CONSTRUCTION OF THIS ALTERNATIVE IS SUBJECT TO APPROVAL BY THE CITY OF GOODYEAR FIRE DEPARTMENT AND MUST ALSO INCLUDE AN ENGINEERS STAMP AND SIGNATURE.
6. DOCUMENTATION THAT THIS CROSS-SECTION WILL SUPPORT FIRE VEHICLE LOADS MUST BE STAMPED AND SIGNED BY A PROFESSIONAL CIVIL ENGINEER AND SUBMITTED TO THE CITY FIRE AND ENGINEERING STAFF FOR REVIEW.

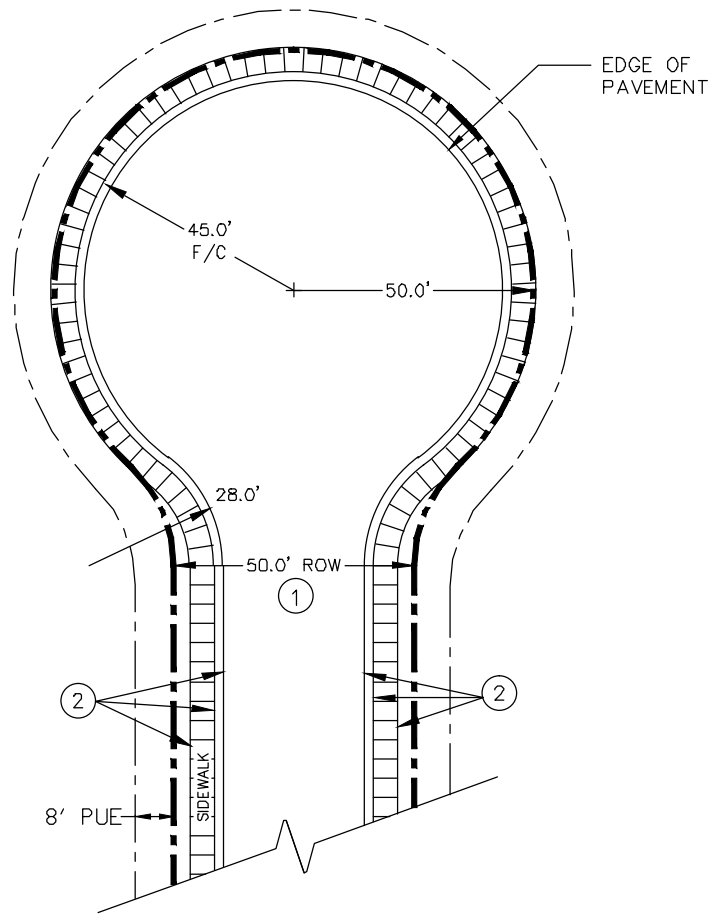


FIRE DEPARTMENT TEMPORARY ACCESS ROADWAY

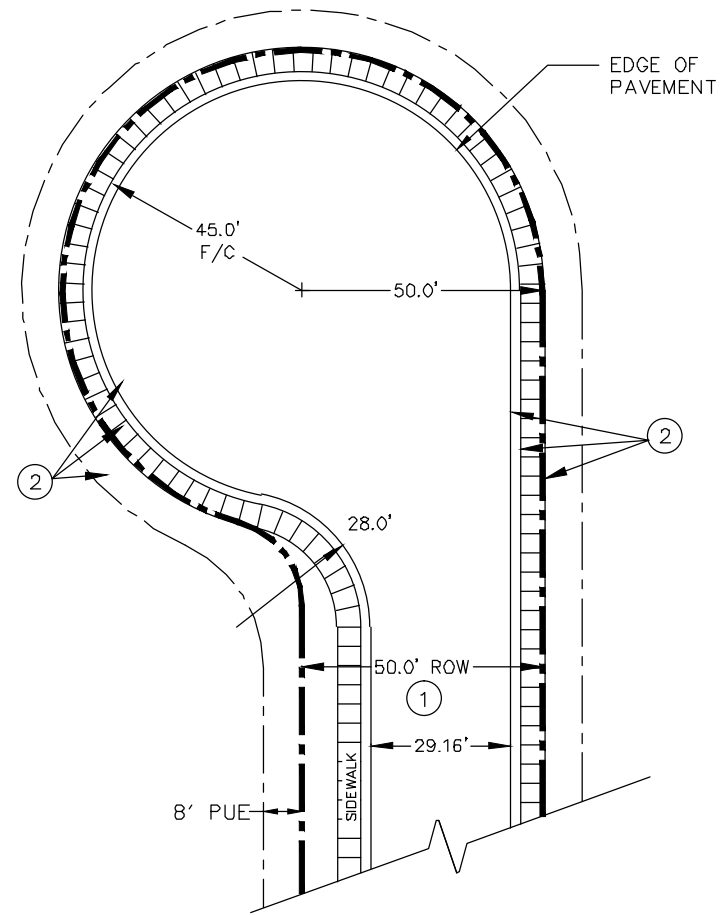
NOTES

1. ALL CONCRETE SHALL BE MAG CLASS A.
2. THE MAXIMUM GRADIENT OF A FIRE DEPARTMENT ACCESS ROAD SHALL NOT EXCEED 8% (8' IN 100').
3. WHERE BUILDINGS ARE LESS THAN 30' IN HEIGHT, A 20' UNOBSTRUCTED WIDTH SHALL BE MAINTAINED FOR THE ACCESS ROADWAY.
4. WHERE BUILDINGS ARE MORE THAN 30' IN HEIGHT, A 26' UNOBSTRUCTED WIDTH SHALL BE MAINTAINED FOR THE ACCESS ROADWAY.

DETAIL NO. G-3244-3	CITY OF GOODYEAR STANDARD DETAIL	APPROVED:12/12	FIRE DEPARTMENT TEMPORARY ACCESS ROADWAY TYPICAL CROSS-SECTION	DETAIL NO. G-3244-3
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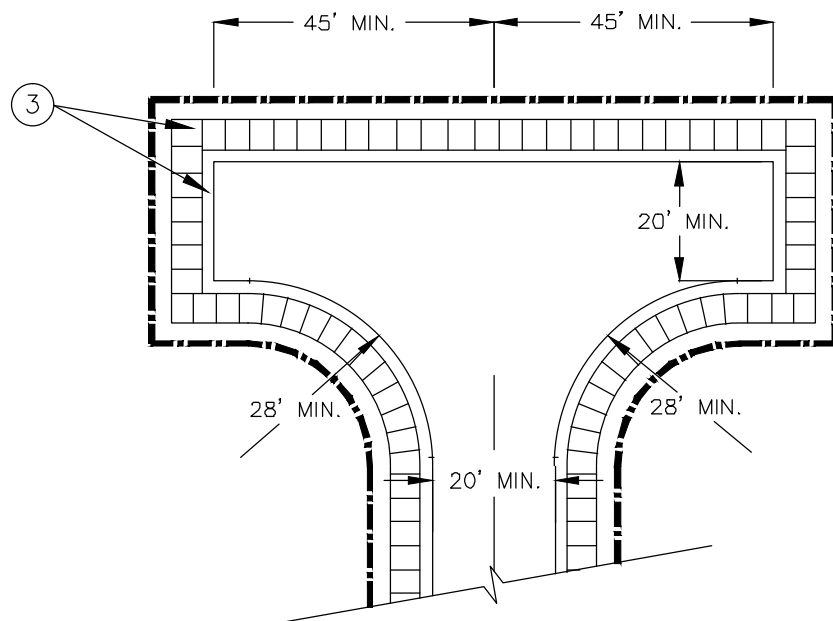
CUL-DE-SAC



MODIFIED CUL-DE-SAC

NOTES:

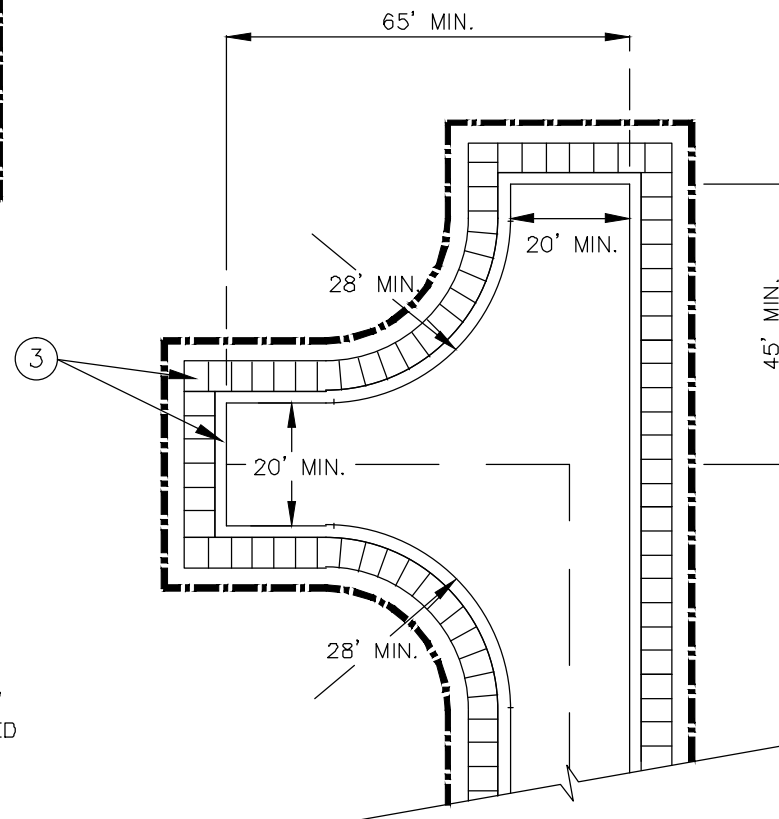
1. FIRE DEPARTMENT ACCESS ROADWAY WIDTHS SHALL MEET OR EXCEED THE WIDTHS INDICATED IN THE CITY STANDARD ROADWAY CROSS-SECTIONS. A MINIMUM 20' WIDE DRIVE SHALL BE PROVIDED FOR ALL OTHER CIRCUMSTANCES. A WIDER FIRE ACCESS ROADWAY WIDTH MAY BE REQUIRED AS DETERMINED BY CURRENT FIRE DEPARTMENT STANDARDS (TYPICALLY REQUIRED ADJACENT TO TALL BUILDINGS). WIDTHS SHOWN REFLECT THE CITY STANDARD LOCAL STREET CROSS-SECTION.
2. SIDEWALKS AND CURB & GUTTER SHALL BE INSTALLED AND A MINIMUM 8' PUE SHALL BE DEDICATED AROUND ALL PERMANENT PUBLIC AND PRIVATE STREET TURNAROUNDS AND IN OTHER CIRCUMSTANCES AS DETERMINED BY THE CITY ENGINEERING DEPARTMENT.
3. ROLL OR VERTICAL CURBING MAY BE USED ALONG FIRE DEPARTMENT ACCESS ROADWAYS. HOWEVER, A MINIMUM PAVED WIDTH OF 24' (B/C TO B/C) SHALL BE MAINTAINED.
4. DETACHED OR ATTACHED SIDEWALKS MAY BE USED.



HAMMERHEAD

NOTES:

1. THE HAMMERHEAD TURNAROUND SHALL NOT BE CONSTRUCTED WITHIN A PUBLIC OR PRIVATE ROADWAY.
2. THE WIDTH OF EACH LEG IN THE HAMMERHEAD SHALL BE A MINIMUM 20' WIDE. LEG WIDTHS GREATER THAN 20' MAY BE REQUIRED AS DETERMINED BY THE CITY'S FIRE CODE (TYPICALLY REQUIRED ADJACENT TO TALL BUILDINGS).
3. WHEN DETERMINED NECESSARY BY THE CITY ENGINEERING DEPARTMENT, SIDEWALKS AND CURB & GUTTER SHALL BE INSTALLED AROUND PERMANENT HAMMERHEAD IMPROVEMENTS.
4. ROLL OR VERTICAL CURBING MAY BE USED. HOWEVER, A MINIMUM PAVED WIDTH OF 24' (B/C TO B/C) SHALL BE MAINTAINED.
5. DETACHED OR ATTACHED SIDEWALKS MAY BE USED.



MODIFIED HAMMERHEAD

GRAY ROADWAY LED STREETLIGHT POLE AND LUMINAIRE SPECIFICATIONS

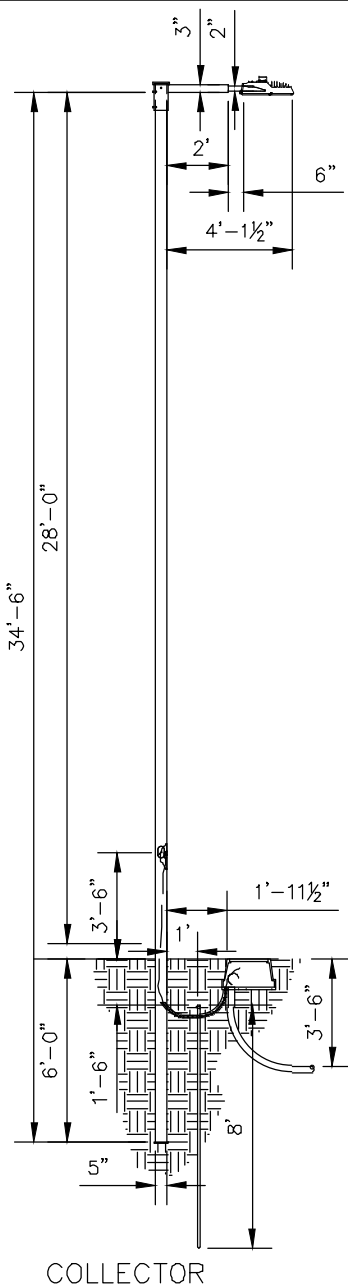
ITEM NUMBER	TYPE OF STREET	QUANTITY	MOUNTING HEIGHT	POLE LENGTH	MAST ARM	APPROVED POLE & ARM MANUFACTURERS	LUMEN	TYPE	WATTAGE	VOLTAGE	LUMINAIRE STYLE	APPROVED LUMINAIRE MANUFACTURERS
①	LOCAL	0	25'-11"	30'-6"	6'	CEM-TEC MS-1936 VALMONT CB09158 SOUTHWEST FABRICATION, LLC 306RDB	5,100	LED	60 W	120/208/240/277 AS POWER CO. REQUIRES	COBRAHEAD	GENERAL ELECTRIC ERS10A3B1740A GRAY R
②	COLLECTOR	0	32'-11"	38'-6"	6'	CEM-TEC MS-1944 VALMONT CB09159 SOUTHWEST FABRICATION, LLC 386RDB	8,200	LED	95 W	120/208/240/277 AS POWER CO. REQUIRES	COBRAHEAD	GENERAL ELECTRIC ERS10C3C1740A GRAY R
③	ARTERIAL	0	34'-3"	38'-6"	6'	CEM-TEC MS-1944 VALMONT CB09159 SOUTHWEST FABRICATION, LLC 386RDB	10,000	LED	113 W	120/208/240/277 AS POWER CO. REQUIRES	COBRAHEAD	GENERAL ELECTRIC ERS20D3E1740A GRAY R

ALL CATALOG NUMBERS SHALL BE CONFIRMED WITH POWER COMPANY PRIOR TO ORDERING

DARK BRONZE LED STREETLIGHT POLE AND LUMINAIRE SPECIFICATIONS

ITEM NUMBER	TYPE OF STREET	QUANTITY	MOUNTING HEIGHT	POLE LENGTH	MAST ARM	APPROVED POLE & ARM MANUFACTURERS	LUMEN	TYPE	WATTAGE	VOLTAGE	LUMINAIRE STYLE	APPROVED LUMINAIRE MANUFACTURERS
①	LOCAL	0	25'-11"	30'-6"	2'	CEM-TEC MS-1936 VALMONT CB09158 SOUTHWEST FABRICATION, LLC 306RDB	5,100	LED	60 W	120/208/240/277 AS POWER CO. REQUIRES	DKBZ LED	GENERAL ELECTRIC ERS10A3B1740A DKBZ R
②	COLLECTOR	0	32'-11"	38'-6"	2'	CEM-TEC MS-1944 VALMONT CB09159 SOUTHWEST FABRICATION, LLC 386RDB	8,200	LED	95 W	120/208/240/277 AS POWER CO. REQUIRES	DKBZ LED	GENERAL ELECTRIC ERS10C3C1740A DKBZ R
③	ARTERIAL	0	34'-3"	38'-6"	2'	CEM-TEC MS-1944 VALMONT CB09159 SOUTHWEST FABRICATION, LLC 386RDB	10,000	LED	113 W	120/208/240/277 AS POWER CO. REQUIRES	DKBZ LED	GENERAL ELECTRIC ERS20D3E1740A DKBZ R

ALL CATALOG NUMBERS SHALL BE CONFIRMED WITH POWER COMPANY PRIOR TO ORDERING



CONSTRUCTION NOTES:

- ADJUST PHOTO EYE TO FACE NORTH
- A GROUND ROD IS PROVIDED WITH THE JUNCTION BOX. WHERE A GROUND ROD CANNOT BE DRIVEN ALTERNATE GROUND SHALL BE USED. SEE 2449 THRU 2460 FOR APPROVED ALTERNATES.
- THE 40'-6" SELF-SUPPORTING STEEL POLE AND ONE OF THE 38'-0", HAVE TWO, MANUFACTURED INSTALLED SIMPLEX FITINGS 180 APART FOR DOUBLE ARMS, SEE CHART.
- APN 33701054 IS A POLE BAND ADAPTOR WITH A SIMPLEX FITTING. ADAPTOR IS REQUIRED FOR THE SECOND ARM IN DOUBLE ARM APPLICATIONS ON EXISTING PLES IN THE FIELD WITHOUT TWO SIMPLEX FITTINGS. SEE 8198 FOR AVAILABLE SIZES.
- POLES THAT HAVE MORE THAN ONE LUMINAIRE REQUIRE A SEPARATE CIRCUIT WITH FUSING FROM THE J-BOX TO EACH LUMINAIRE.

ENGINEERING NOTES:

- THE LIGHT CODE PROVIDES TWO SAME WATTAGE LUMINAIRES WHEN DOUBLE ARM ARE SPECIFIED.
- SEE SPEC 8130 - 8131 FOR IN-LINE FUSE FOR UNDERGROUND FEEDS.
- SEE 8100 THRU 8107 FOR OVERHEAD ATTACHMENTS.

LIGHT CODE	COLOR	APN	TYPE	WATTS	MULTIVOLT	INITIAL LUMENS	PHOTOMETRIC CURVE
RL50	DARK BRONZE	00128251	LED	45	120/208/240/277	DRIVER 4,100	454669
RL52		00126804		60	120/208/240/277	DRIVER 5,100	454659
RL53		00126805		95	120/208/240/277	DRIVER 8,200	454677
RL54		00126806		113	120/208/240/277	DRIVER 10,000	454688
RL56		00128365		257	120/208/240/277	DRIVER 19,200	454942

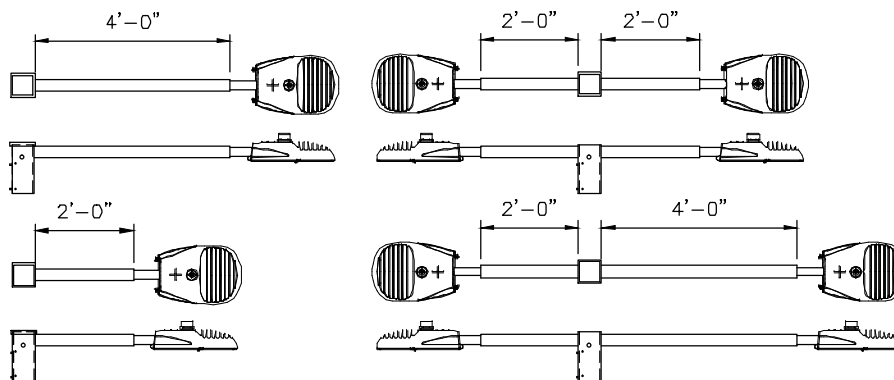
POLE TYPE	POLE CODE	POLE LENGTH	BURY DEPTH	POLE ABOVE GROUND	POLE BUTT DIAMETER		WEIGHT	LUMINAIRE HEIGHT ABOVE GROUND ON ARM		
					STEP	TAPER		20" X 6'	3' X 8'	8' X 8'
LOCAL	1944.30	30' - 6"	5' - 6"	25' - 0"	5-9/16"	7-5/16"	460	25' - 11"	27' - 3"	-
COLLECTOR	1944.38	38' - 6"	6' - 6"	32' - 0"	6-5/8"	9-3/4"	640	32' - 11"	34' - 3"	39' - 3"
ARTERIAL	1944.38X	38' - 6"	6' - 6"	32' - 0"	6-5/8"	9-3/4"	640	32' - 11"	34' - 3"	39' - 3"

**FOR NON-STANDARD POLES, CONTACT THE STREET TRANSPORTATION STREETLIGHTING SECTION FOR INFORMATION.

1944. _ _

19 = 19' - 0" POLE
SNG SIMPLEX
30 = 30' - 6" POLE
SNG SIMPLEX
38 = 38' - 6" POLE
SNG SIMPLEX
38X = 38' - 6" POLE
DBL SIMPLEX
** SEE SPEC. NOTE

BRONZE SQUARE POLE LUMINAIRES



DARK BRONZE LUMINAIRE DESCRIPTIONS

APN# 128251
45W LED RWDB - PEDESTRIAN
ERS10A3B1540A DKBZ R

APN# 126804
60W LED RWDB - LOCAL
ERS10A3B1740A DKBZ R

APN# 126805
95W LED RWDB - COLLECTOR
ERS10CEC1740A DKBZ R

APN# 126806
113W LED RWDB - MAJOR
ERS20D3E1740A DKBZ R

APN# 128365
257W LED RWDB - SPECIAL MAJOR
ERS20G3C1140A DKBZ R

ELECTRICAL REQUIREMENTS FOR NEW POLE INSTALLATION

1. JUNCTION BOXES SHALL MEET UTILITY COMPANY STANDARDS.
2. CONDUIT, CONDUCTORS, AND FUSE HOLDERS SHALL BE LISTED AND LABELED FOR USE IN A WET LOCATION WHEN USED IN A JUNCTION BOX. NEC300.5(B), 310.8(C)
3. IN-LINE FUSE HOLDER USED IN HAND HOLE OR SERVICE DROP SHALL BE CONSIDERED AS DISCONNECTING MEANS. FUSE HOLDERS TO BE RATED AT 22,000 AIC MINIMUM. NEC 240.40
4. ELECTRICAL CONNECTIONS-CONDUCTORS OF DISSIMILAR METALS SHALL NOT BE INTERMIXED IN A TERMINAL OR SPLICING CONNECTOR WHERE PHYSICAL CONTACT OCCURS BETWEEN DISSIMILAR CONDUCTORS, (COPPER, ALUMINUM) UNLESS THE DEVICE IS IDENTIFIED FOR THE PURPOSE AND CONDITIONS OF USE. NEC 110.14
5. ELECTRICAL CONNECTIONS OR SPLICES IN AN UNDERGROUND INSTALLATION SHALL BE APPROVED FOR WET LOCATIONS. (NEC 300.5)
6. NON-CURRENT CARRYING CONDUCTIVE MATERIALS ENCLOSING ELECTRICAL CONDUCTORS OR EQUIPMENT, OR FORMING PART OF SUCH EQUIPMENT, SHALL BE CONNECTED TO EARTH IN A MANNER THAT WILL LIMIT THE VOLTAGE IMPOSED BY LIGHTNING OR UNINTENTIONAL VOLTAGE DUE TO SHORT CIRCUITS AND LIMIT THE VOLTAGE TO GROUND ON THESE MATERIALS. NEC 250.4(B) (GROUND RODS)
7. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED FROM THE GROUND LUG IN THE HAND-HOLE TO THE LUMINAIRE WITH THE CURRENT CARRYING CONDUCTORS. NEC 410.30(B)(3).
8. CONNECTION TO THE GROUND ROD AND THE GROUNDING ELECTRODE SHALL BE LISTED AND LABELED FOR USE. NEC 250.8
9. CONNECT #6 BARE COPPER WIRE FROM THE GROUND ROD ADJACENT TO THE POLE OR IN JUNCTION BOX TO THE GROUND LUG IN THE POLE.

CONSTRUCTION NOTES:

1. ADJUST PHOTO EYE TO FACE NORTH
2. A GROUND ROD IS PROVIDED WITH THE JUNCTION BOX. WHERE A GROUND ROD CANNOT BE DRIVEN ALTERNATE GROUND SHALL BE USED. SEE 2449THRU 2460 FOR APPROVED ALTERNATES.
3. THE 40'-6" SELF-SUPPORTING STEEL POLE AND ONE OF THE 38'-0" HAVE TWO, MANUFACTURED INSTALLED SIMPLEX FITTINGS 180 APART FOR DOUBLE ARMS,SEE CHART.
4. APN 33701054 IS A POLE BAND ADAPTOR WITH A SIMPLEX FITTING. ADAPTOR IS REQUIRED FOR THE SECOND ARM IN DOUBLE ARM APPLICATIONS ON EXISTING POLES IN THE FIELD WITHOUT TWO SIMPLEX FITTINGS. SEE 8198 FOR AVAILABLE SIZES.
5. POLES THAT HAVE MORE THAN ONE LUMINAIRE REQUIRE A SEPARATE CIRCUIT WITH FUSING FROM THE J-BOX TO EACH LUMINAIRE.

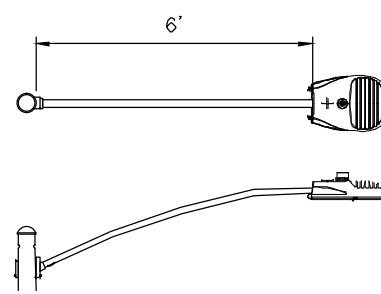
ENGINEERING NOTES:

- A. THE LIGHT CODE PROVIDES TWO SAME WATTAGE LUMINAIRES WHEN DOUBLE ARM ARE SPECIFIED.
- B. SEE SPEC 8130 - 8131 FOR IN-LINE FUSE FOR UNDERGROUND FEEDS.
- C. SEE 8100 THRU 8107 FOR OVERHEAD ATTACHMENTS.

20 YEAR PHOTOCELL REQUIREMENTS

APN# 00073241 CONTROL PHOTO MULTI BR-20 CONTROL, PHOTO-ELECTRIC, BROWN, 20YEAR FAIL OFF, 120/208/240/277 MULTI-VOLT, SILICON, SOLID STATE, 2.40 TO 3.60 FC ON 1.2 TO 2.4 FC OFF, 60 HERTZ, 320 JOULE MOV, INVERSE ON/OFF RATIO .6:1 +/- .1, FAIL OFF, THREE PIN NEMA TWISTLOCK, 20 YEAR LIFE, 8483-SIDE SELC, MODEL #8483F2TMABR

GE Evolve II Dark Bronze Shoebox LED Fixtures					
WATT	LUMEN	DESCRIPTION		APN	MODEL#
45W	4,100	SCALABLE ROADWAY GE LED GRAY Pedestrian LUMINAIRE 45WATT, 4000K, 4,100 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, DARK BRONZE, MULTIVOLT 120/208/240/277 DRIVER, IES NARROW ASYMMETRIC MEDIUM, ANSI C136.41 7 PIN TWISTLOCK PHOTO CONTROL RECEPTACLE, CSA OR UL CERTIFIED, ANSI C136.15 WATTAGE LABEL.		128251	ERS10A3B1540A DKBZ R
60W	5,100	SCALABLE ROADWAY GE LED GRAY Local Street LUMINAIRE 60WATT, 4000K, 5,100 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, DARK BRONZE, MULTIVOLT 120/208/240/277 DRIVER, IES NARROW ASYMMETRIC MEDIUM, ANSI C136.41 7 PIN TWISTLOCK PHOTO CONTROL RECEPTACLE, CSA OR UL CERTIFIED, ANSI C136.15 WATTAGE LABEL.		126804	ERS10A3B1740A DKBZ R
95W	8,200	SCALABLE ROADWAY GE LED GRAY Collector Street LUMINAIRE 95WATT, 4000K, 8,200 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, DARK BRONZE, MULTIVOLT 120/208/240/277 DRIVER, IES NARROW ASYMMETRIC MEDIUM, ANSI C136.41 7 PIN TWISTLOCK PHOTO CONTROL RECEPTACLE, CSA OR UL CERTIFIED, ANSI C136.15 WATTAGE LABEL.		126805	ERS10C3C1740A DKBZ R
113W	10,000	SCALABLE ROADWAY GE LED GRAY Major Roadway LUMINAIRE 113WATT, 4000K, 10,000 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, DARK BRONZE, MULTIVOLT 120/208/240/277 DRIVER, IES NARROW ASYMMETRIC MEDIUM, ANSI C136.41 7 PIN TWISTLOCK PHOTO CONTROL RECEPTACLE, CSA OR UL CERTIFIED, ANSI C136.15 WATTAGE LABEL.		126806	ERS20D3E1740A DKBZ R
257W	19,200	SCALABLE ROADWAY GE LED GRAY Special Major Roadway LUMINAIRE 257WATT, 4000K, 19,200 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, DARK BRONZE, MULTIVOLT 120/208/240/277 DRIVER, IES NARROW ASYMMETRIC MEDIUM, ANSI C136.41 7 PIN TWISTLOCK PHOTO CONTROL RECEPTACLE, CSA OR UL CERTIFIED, ANSI C136.15 WATTAGE LABEL.		128365	ERS20G3C1140A DKBZ R



ELECTRICAL REQUIREMENTS FOR NEW POLE INSTALLATION

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CONSTRUCTION NOTES:

1. ADJUST PHOTO EYE TO FACE NORTH
2. A GROUND ROD IS PROVIDED WITH THE JUNCTION BOX. WHERE A GROUND ROD CANNOT BE DRIVEN ALTERNATE GROUND SHALL BE USED. SEE 2449THRU 2460 FOR APPROVED ALTERNATES.
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5. POLES THAT HAVE MORE THAN ONE LUMINAIRE REQUIRE A SEPARATE CIRCUIT WITH FUSING FROM THE J-BOX TO EACH LUMINAIRE.

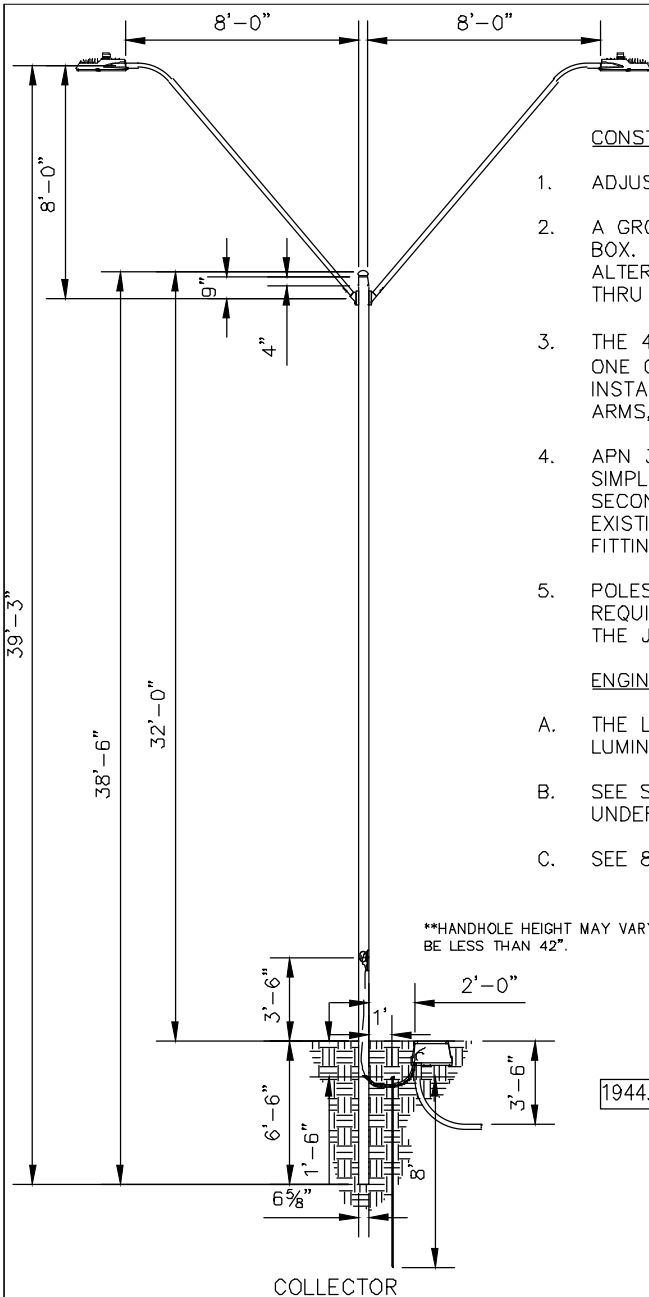
ENGINEERING NOTES:

- A. THE LIGHT CODE PROVIDES TWO SAME WATTAGE LUMINAIRES WHEN DOUBLE ARM ARE SPECIFIED.
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APN# 00073241 CONTROL PHOTO MULTI BR-20 CONTROL, PHOTO-ELECTRIC, BROWN, 20YEAR FAIL OFF, 120/208/240/277 MULTI-VOLT, SILICON, SOLID STATE, 2.40 TO 3.60 FC ON 1.2 TO 2.4 FC OFF, 60 HERTZ, 320 JOULE MOV, INVERSE ON/OFF RATIO .6:1 +/- .1, FAIL OFF, THREE PIN NEMA TWISTLOCK, 20 YEAR LIFE, 8483-SIDE SELC, MODEL #8483F2TMABR

GE Evolve II Gray Cobra LED Fixtures				
WATT	LUMEN	DESCRIPTION	APN	MODEL#
45W	4,100	SCALABLE ROADWAY GE LED GRAY Pedestrian LUMINAIRE 45WATT, 4000K, 4,100 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, GRAY, MULTIVOLT 120/208/240/277 DRIVER, IES NARROW ASYMMETRIC MEDIUM, ANSI C136.41 7 PIN TWISTLOCK PHOTO CONTROL RECEPTACLE, CSA OR UL CERTIFIED, ANSI C136.15 WATTAGE LABEL.	128329	ERS10A3B1540A GRAY R
60W	5,100	SCALABLE ROADWAY GE LED GRAY Local Street LUMINAIRE 60WATT, 4000K, 5,100 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, GRAY, MULTIVOLT 120/208/240/277 DRIVER, IES NARROW ASYMMETRIC MEDIUM, ANSI C136.41 7 PIN TWISTLOCK PHOTO CONTROL RECEPTACLE, CSA OR UL CERTIFIED, ANSI C136.15 WATTAGE LABEL.	128330	ERS10A3B1740A GRAY R
95W	8,200	SCALABLE ROADWAY GE LED GRAY Collector Street LUMINAIRE 95WATT, 4000K, 8,200 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, GRAY, MULTIVOLT 120/208/240/277 DRIVER, IES NARROW ASYMMETRIC MEDIUM, ANSI C136.41 7 PIN TWISTLOCK PHOTO CONTROL RECEPTACLE, CSA OR UL CERTIFIED, ANSI C136.15 WATTAGE LABEL.	128331	ERS10C3C1740A GRAY R
113W	10,000	SCALABLE ROADWAY GE LED GRAY Major Roadway LUMINAIRE 113WATT, 4000K, 10,000 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, GRAY, MULTIVOLT 120/208/240/277 DRIVER, IES NARROW ASYMMETRIC MEDIUM, ANSI C136.41 7 PIN TWISTLOCK PHOTO CONTROL RECEPTACLE, CSA OR UL CERTIFIED, ANSI C136.15 WATTAGE LABEL.	128332	ERS20D3E1740A GRAY R
257W	19,200	SCALABLE ROADWAY GE LED GRAY Special Major Roadway LUMINAIRE 257WATT, 4000K, 19,200 LUMEN, ROADWAY, LED, TERMINAL BOARD, 10KV SURGE PROTECTION, 90 DEGREE CUTOFF, GRAY, MULTIVOLT 120/208/240/277 DRIVER, IES NARROW ASYMMETRIC MEDIUM, ANSI C136.41 7 PIN TWISTLOCK PHOTO CONTROL RECEPTACLE, CSA OR UL CERTIFIED, ANSI C136.15 WATTAGE LABEL.	128364	ERS20G3C1140A GRAY R



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**HANDHOLE HEIGHT MAY VARY, NOT TO BE LESS THAN 42".

1944. _ _

19 = 19' - 0" POLE
SNG SIMPLEX
30 = 30' - 6" POLE
SNG SIMPLEX
38 = 38' - 6" POLE
SNG SIMPLEX
38X = 38' - 6" POLE
DBL SIMPLEX
** SEE SPEC. NOTE

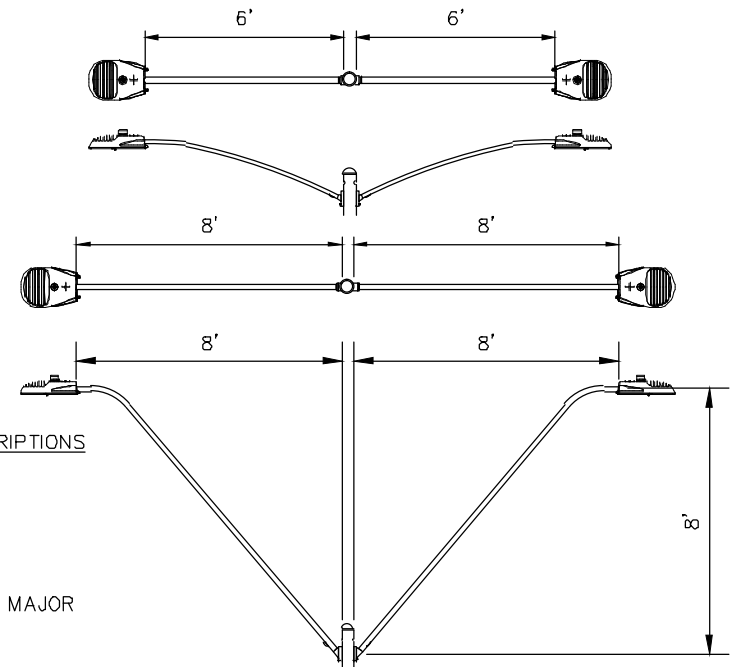
COLLECTOR

LIGHT CODE	COLOR	APN	TYPE	WATTS	MULTIVOLT	INITIAL LUMENS	PHOTOMETRIC CURVE
CL60		00128329		45	120/208/240/277 DRIVER	4,100	454669
CL61		00128330		60	120/208/240/277 DRIVER	5,100	454659
CL62	GRAY	00128331	LED	95	120/208/240/277 DRIVER	8,200	454677
CL63		00128332		113	120/208/240/277 DRIVER	10,000	454688
CL64		00128364		257	120/208/240/277 DRIVER	19,200	454942

POLE TYPE	POLE CODE	POLE LENGTH	BURY DEPTH	POLE ABOVE GROUND	POLE BUTT DIAMETER		WEIGHT	LUMINAIRE HEIGHT ABOVE GROUND ON ARM		
					STEP	TAPER		20" X 6"	3' X 8"	8' X 8"
LOCAL	1944.30	30' - 6"	5' - 6"	25' - 0"	5-9/16"	7-5/16"	460	25' - 11"	27' - 3"	-
COLLECTOR	1944.38	38' - 6"	6' - 6"	32' - 0"	6-5/8"	9-3/4"	640	32' - 11"	34' - 3"	39' - 3"
ARTERIAL	1944.38X	38' - 6"	6' - 6"	32' - 0"	6-5/8"	9-3/4"	640	32' - 11"	34' - 3"	39' - 3"

**FOR NON-STANDARD POLES, CONTACT THE STREET TRANSPORTATION STREETLIGHTING SECTION FOR INFORMATION.

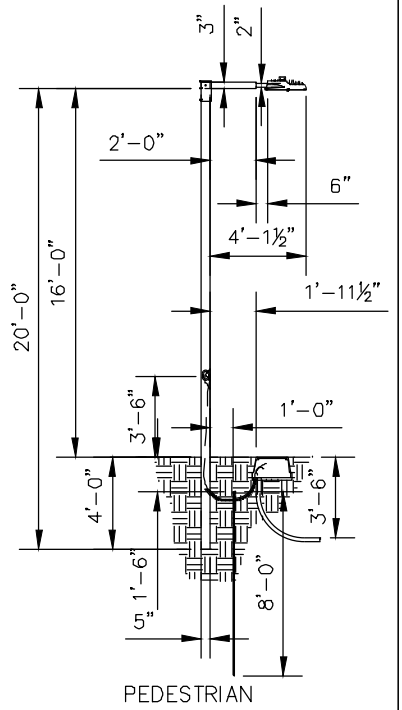
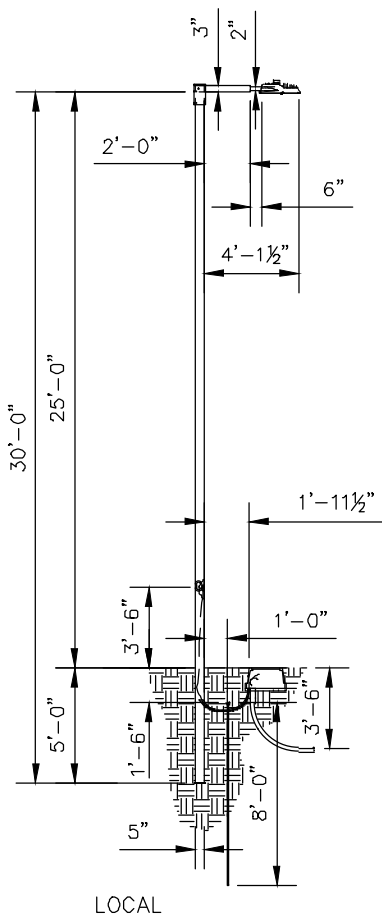
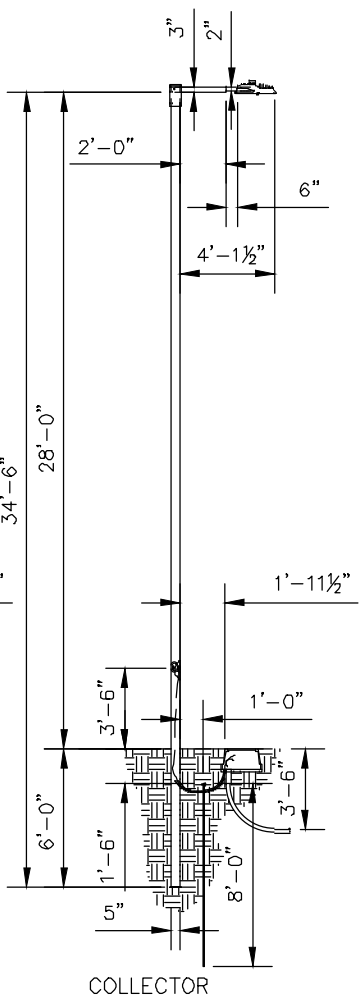
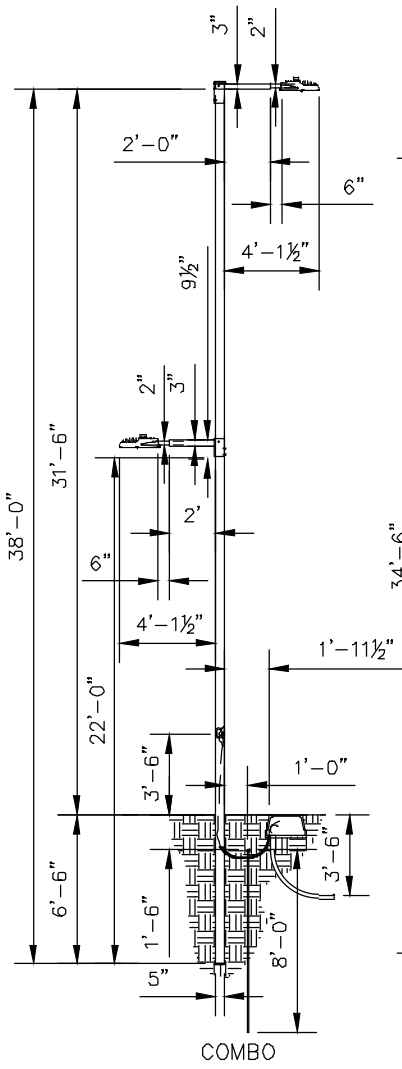
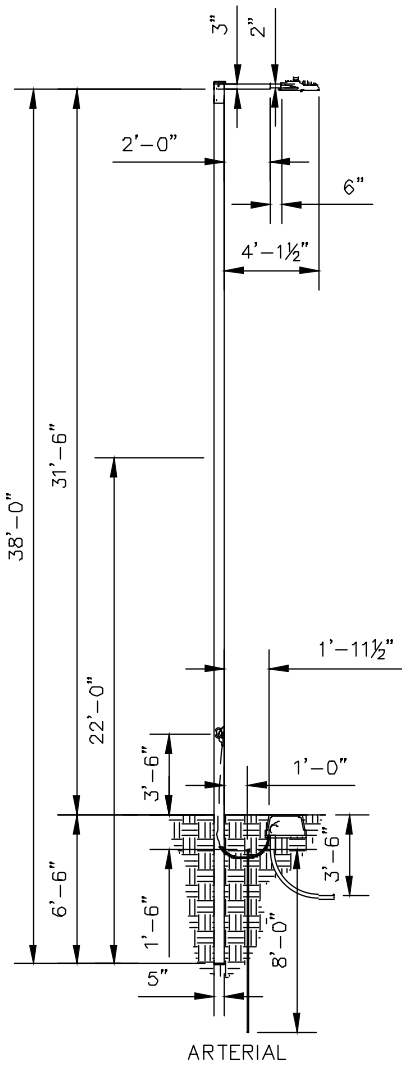
DUAL MAST ARM POLE LUMINAIRES

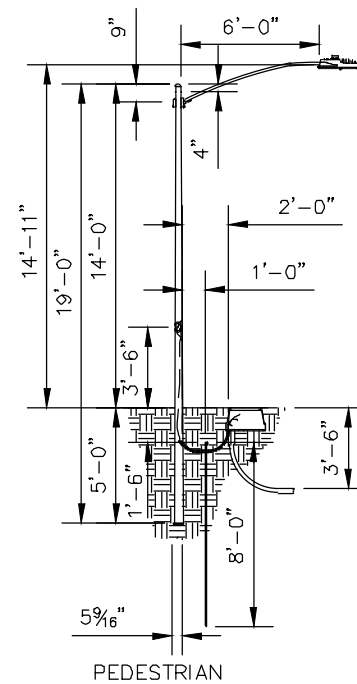
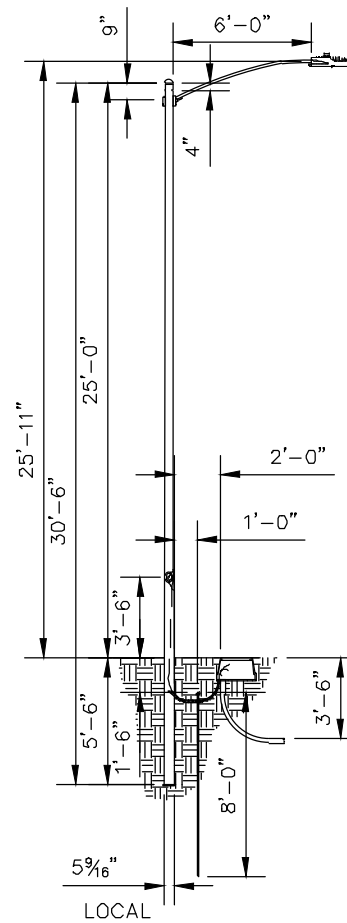
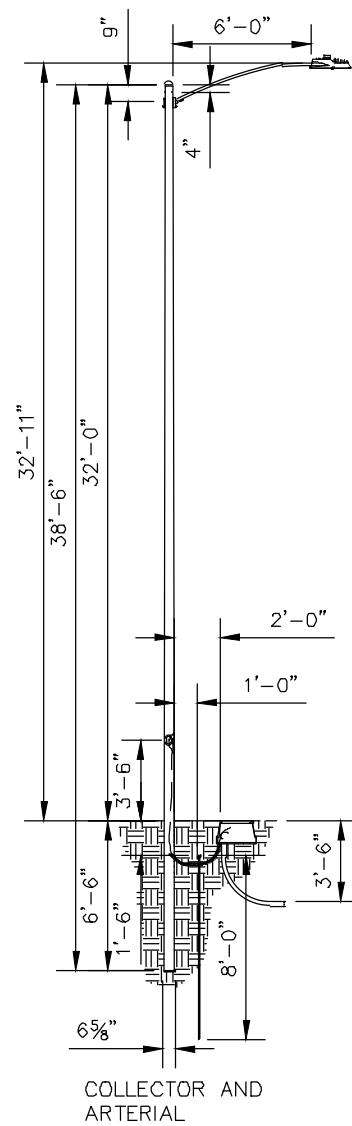


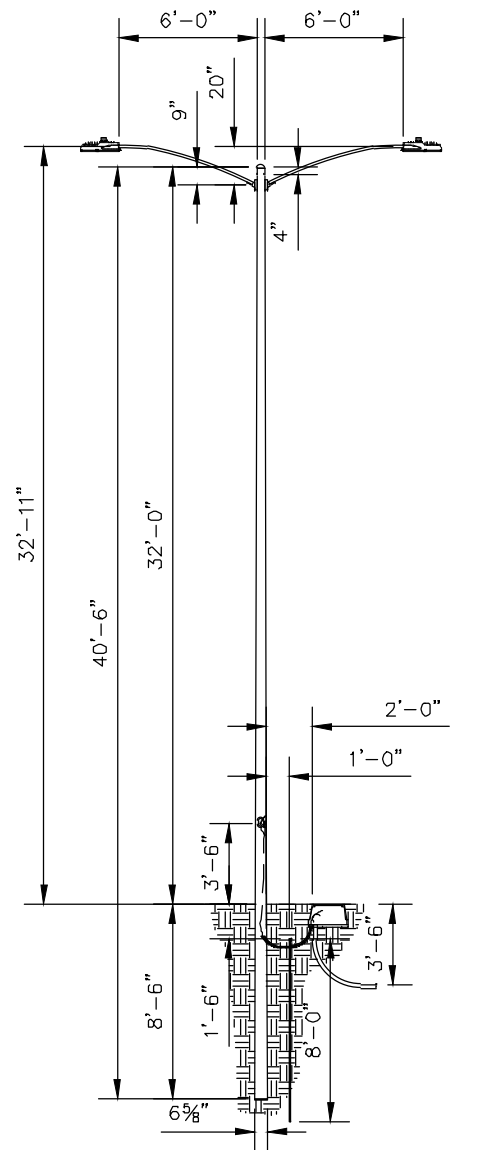
GRAY ROADWAY LUMINAIRE DESCRIPTIONS

APN# 128332
113W LED RWGR - MAJOR
ERS20D3E1740A GRAY R

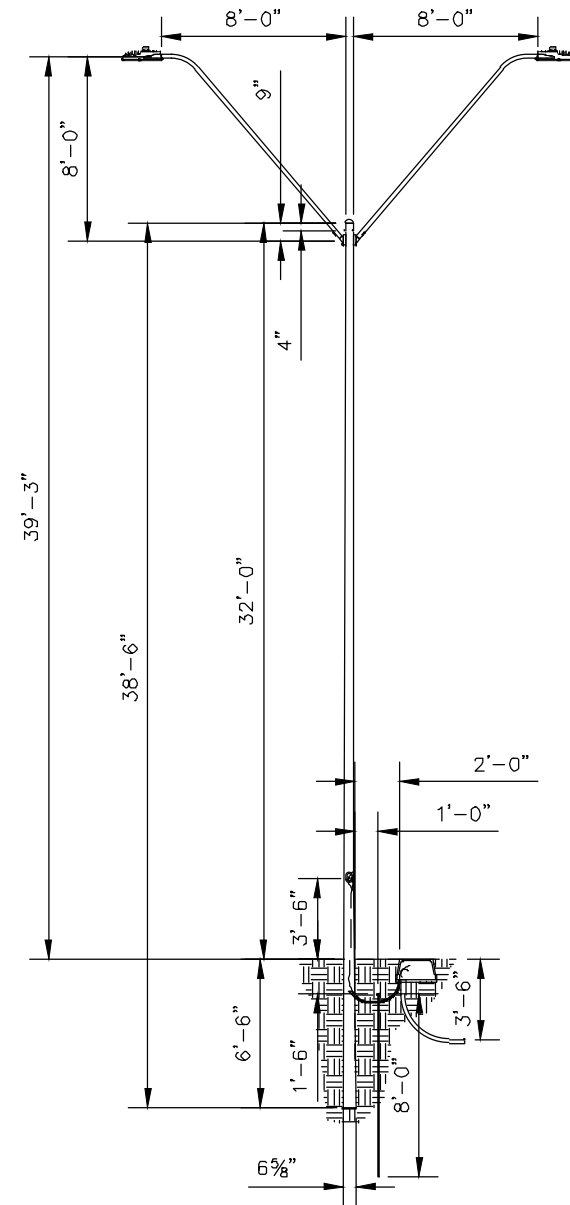
APN# 128364
257W LED RWGR - SPECIAL MAJOR
ERS20G3C1140A GRAY R

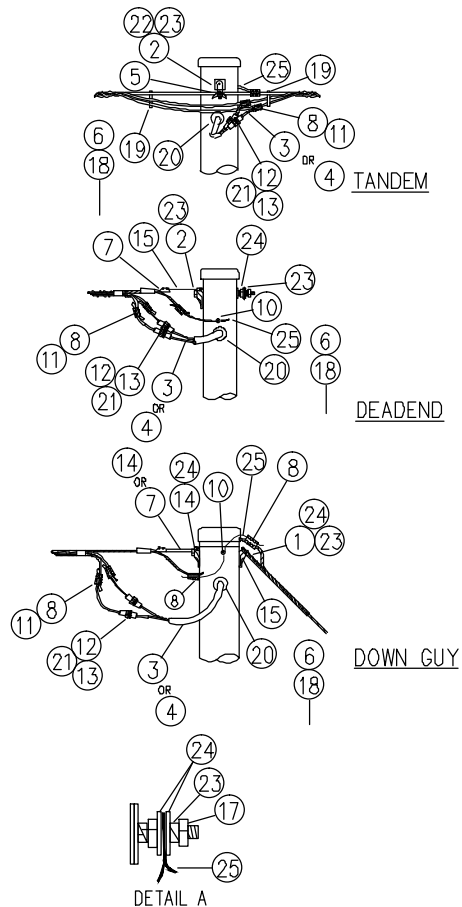






**HANDHOLE HEIGHT MAY VARY,
NOT TO BE LESS THAN 42".





NOTES:

1. STEEL POLES AND ALL MAST ARMS MUST BE GROUNDED.
2. OVERHEAD ATTACHMENTS MUST BE GROUNDED TO THE STREET LIGHT POLE. A $\frac{1}{16}$ " HOLE HAS BEEN ADDED 6" BELOW TOP OF STREET LIGHT POLE TO INSTALL A GROUNDING INSERT APN 00055552. TOOL TO INSTALL RIVNUT IS APH 00053279. SEE STANDARD 2408. WHERE RIVNUTS ARE NOT AVAILABLE GROUND PER DETAIL A.
3. ALL OVERHEAD FED STREET LIGHT POLES SHALL HAVE A GROUND ROD INSTALLED AND A #6 GROUND WIRE BONDED TO THE GROUNDING LUG AT THE BACK OF THE HAND HOLE.
4. THESE CODES PROVIDE THE #14 CU FOR THE MAST ARMS, HARDWARE FOR ATTACHING TANGENT OR DEADEND SECONDARY, AND THE CONNECTORS.

8100. _ _ _ TWO WIRE 120V, 277V
TANGENT

8101. _ _ _ THREE WIRE 208V, 240V
TANGENT

IF APPLICABLE:
DE = DUSK-TO-DAWN
WIRE CODE

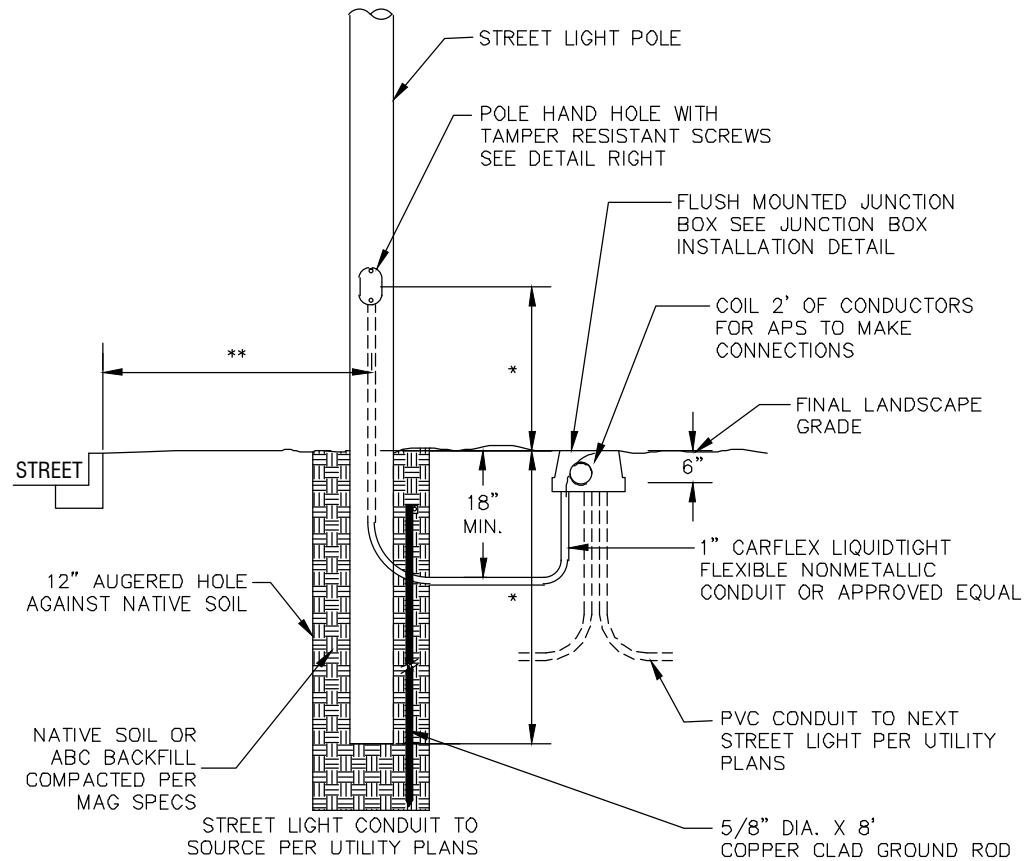
8102. _ _ _ TWO WIRE 120V, 277V
DEADEND

8103. _ _ _ THREE WIRE 208V, 240V

8106. _ _ _ TWO WIRE 120V, 277V
DEADEND WITH GUY HOOK

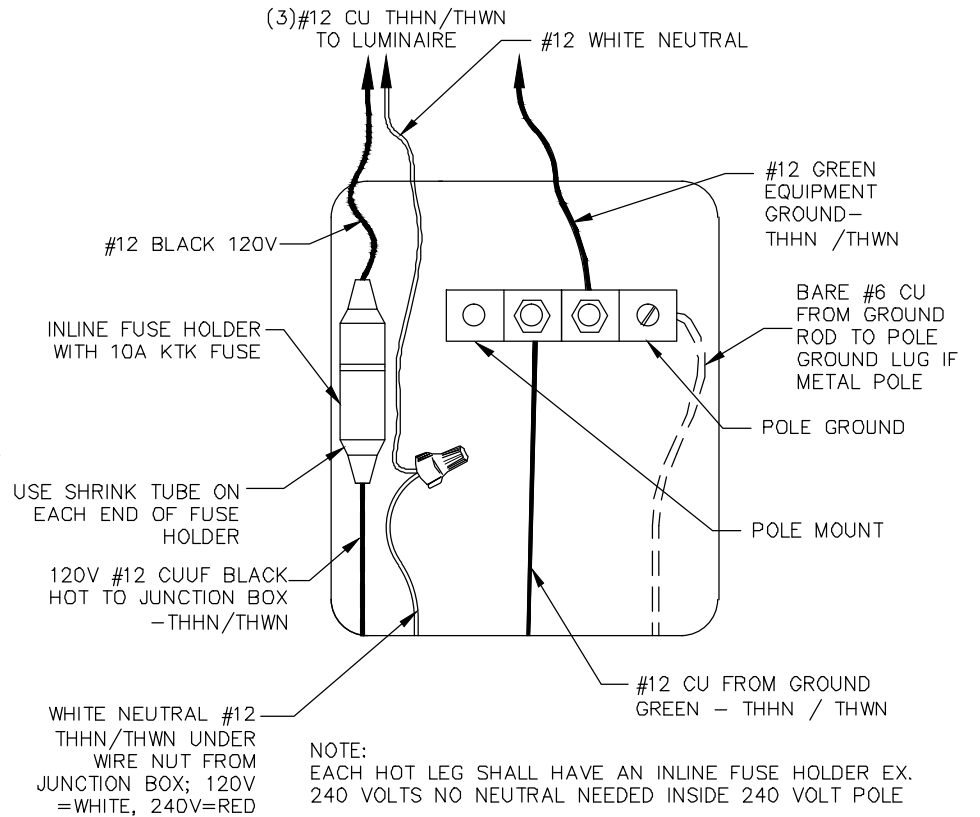
8107. _ _ _ THREE WIRE 208V, 240V
DEADEND WITH GUY HOOK

CODE	8100	8101	8102	8103	8106	8107	DETAIL A	MATERIAL LIST	
ITEM	QTY	QTY	QTY	QTY	QTY	QTY	QTY	DESCRIPTION	APN
1	-	-	-	-	1	1	-	BOLT GALV MACH 5/8" X 10"	33001549
2	1	1	1	1	-	-	-	BOLT GALV MACH 5/8" X 8"	33001547
3	10	-	10	-	10	-	-	CABLE 2/C #14CU UF	31102132
4	-	10	-	10	-	10	-	CABLE 3/C #14CU UF	31102135
5	1	1	-	-	-	-	-	CLAMP ANGLE .162 TO .60	33002502
6	1	1	1	1	1	1	-	CLAMP GROUND ROD 5/8"	33002580
7	-	-	1	1	-	-	-	CLAMP WEDGE FELX 4-2AL	33002772
8	2	3	2	3	4	2	-	CONN AL PG - SEE 2250	
9	-	-	-	-	1	1	-	CONN CU "C" - SEE 2255	
10	1	1	1	1	1	1	-	CONN POST 1/2"S SS #6-1/0	00095704
11	1	2	1	2	1	2	-	COVER D DIE INSULATING	33003192
12	1	2	1	2	1	2	-	FUSE CARTRIDGE 15A	72602410
13	1	2	1	2	1	2	-	FUSEHOLDER IN-LINE 600V	00097502
14	-	-	-	-	1	1	-	GRIP DE PREF - SEE2135	
15	-	-	1	1	2	2	-	HOOK GUY - MED DUTY 5/8"	33003831
16	1	1	1	1	1	1	-	NUT INSERT RIVNUT	00055552
17	-	-	-	-	-	1	-	NUT SQ GALV 5/8"	33004176
18	1	1	1	1	1	1	-	ROD COPPERCLAD GRD 5/8" X 8"	33004805
19	2	2	-	-	-	-	-	SPACER MULTIPLEX CABLE	33006510
20	1	1	1	1	1	1	-	STOPPER BUG AND DUST	33806955
21	1	1	1	1	1	1	-	TUBING SHRINKABLE 1/4"	71606200
22	2	2	2	2	-	-	-	WASHER GALV CU 3X3X1/4"	33007128
23	1	1	1	1	1	1	1	WASHER GALV DBL COIL 5/8"	33007154
24	-	-	-	-	-	2	-	WASHER GALV RD 5/8"	33007185
25	2	2	2	2	2	2	-	WIRE BARE #6 SOLID CU	33007580



* SEE POLE DETAILS FOR DIMENSION

** SEE PLANS FOR POLE SETBACK

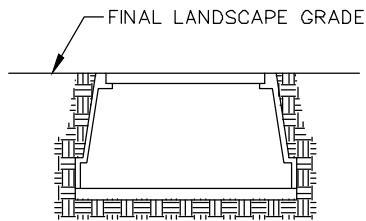


DESCRIPTION

15" X 21" X 12" JUNCTION BOX WITH 3/8" CAPTIVE PENTA HEAD BOLTS

WORD "ELECTRIC" ON COVER

BOX TO BE POLYMER CONCRETE MATERIAL WITH POLYMER CONCRETE BOLT DOWN (NON-CONDUCTIVE COVER).



FLUSH MOUNTED—BOLT ON COMPOSOLITE LID

SRP APPROVED SUPPLIERS

STRONGWELL

ARMORCAST PRODUCTS

CDR SYSTEMS

CARSON & ASSOCIATES

PART NUMBER

PC1118B513 BOX
PC1118C504-17/UH0390AA
COVER WITH ELECTRIC

A6001429A

PA40-1015-12

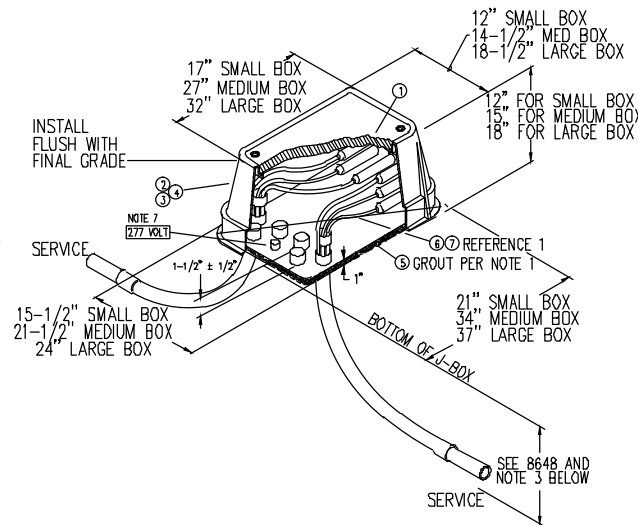
HLW111B-12 BOX
HLW111B-PO LID

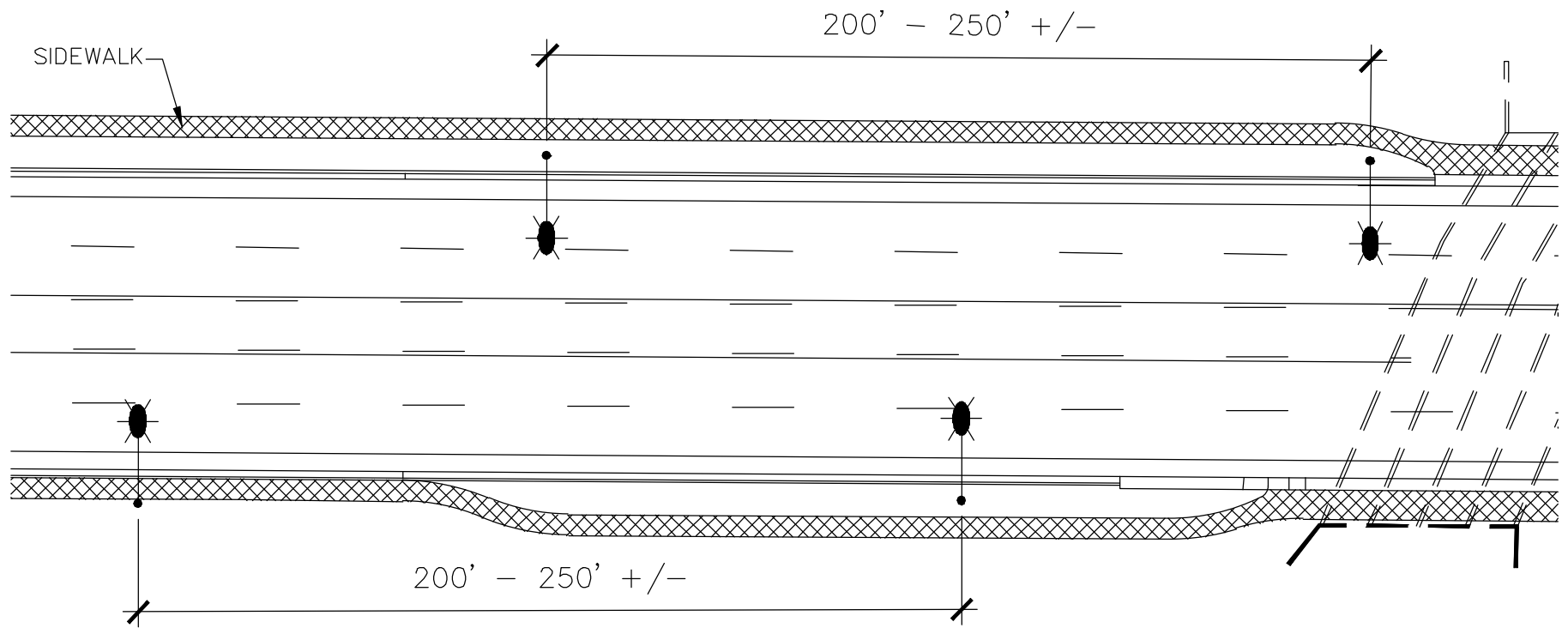
CODE	JUNCTION BARS
A	THREE-POSITION MOLDS
B	FIVE-POSITION MOLDS
C	EIGHT-POSITION MOLDS
D	TWO-POSITION GEL PACKS
N	NO CONNECTORS

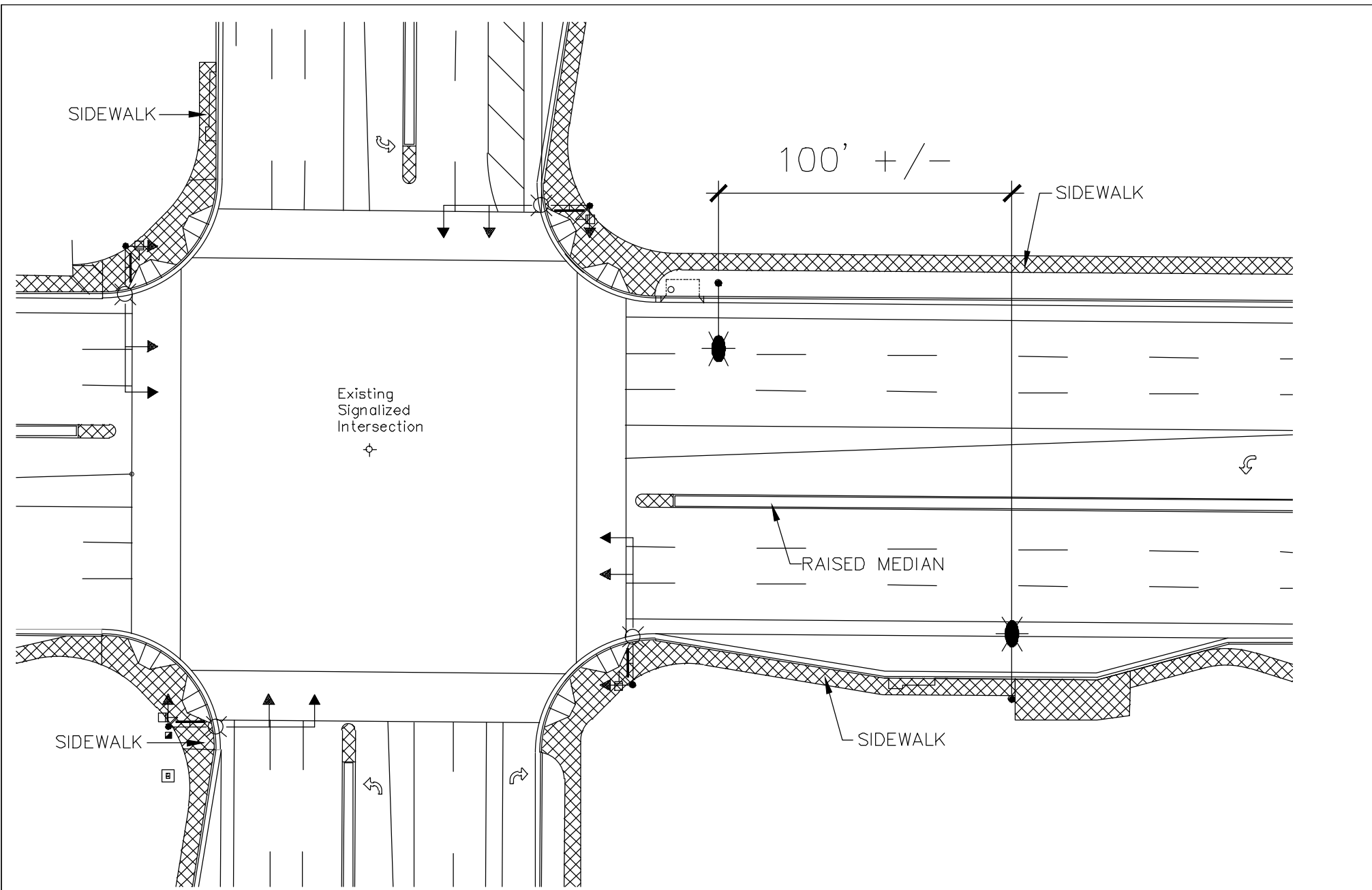
8655. _ _ _ _ _	SEE NOTE 10 AND 11 SMALL BOX
8656. _ _ _ _ _	SEE NOTE 10 AND 12 MEDIUM BOX
8657. _ _ _ _ _	SEE NOTE 13 LARGE BOX
	IF APPLICABLE G= APS GROUT PROVIDED
	IF APPLICABLE L = LIGHTS D = DUSK-TO-DAWN
	SECONDARY WIRE CODES JUNCTION BARS

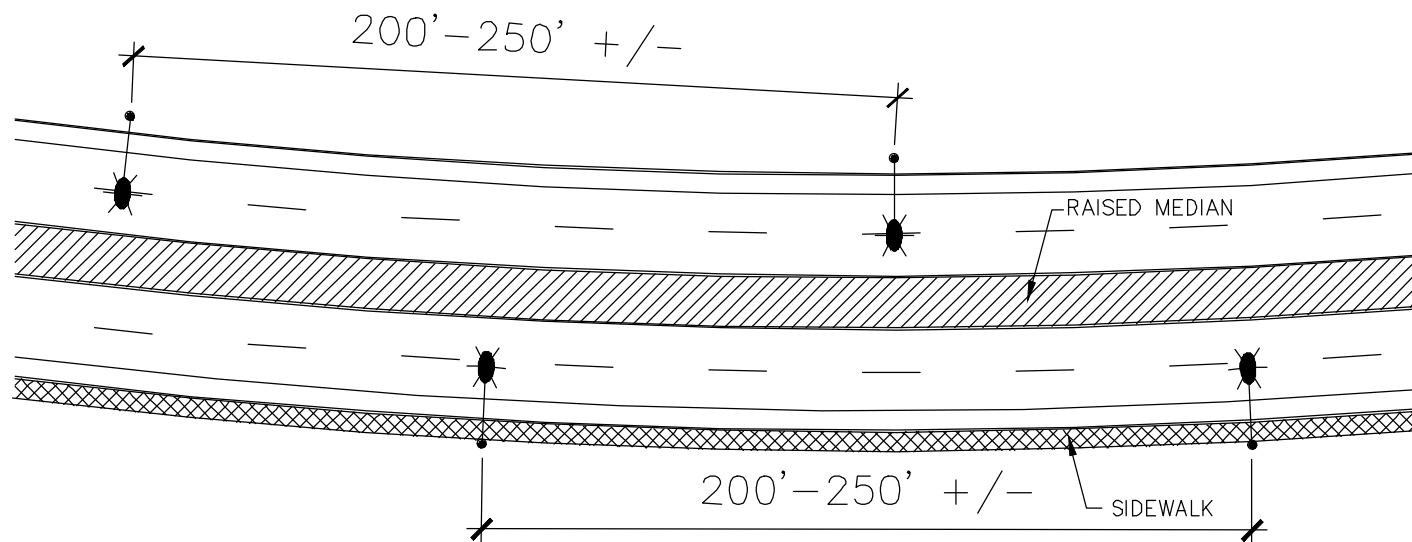
NOTES:

1. CONCRETE GROUT SHALL BE PREMIX, APN 71301280 OR EQUIVALENT.
2. PENTA-HEAD BOLTS SHALL BE INSTALLED PRIOR TO ENERGIZING NEW UNDERGROUND SYSTEMS. LOST OR MISPLACED PENTA-HEAD BOLTS SHALL BE REPLACED WITH APN 71402608.
3. BRINGING ALL CABLE/CONDUITS AND GROUND ROD INTO THE SAME END OF THE BOX TO ENABLE CABLES TO BE RAISED AND LOWERED EASILY. CONDUIT SWEEPS SHALL BE POSITIONED AND ALIGNED SO THAT WHEN TWO AND FOUR POSITION JUNCTION BARS ARE SPECIFIED, THE ST. LT., SECONDARY AND SERVICE CONDUITS SHALL BE INSTALLED AS SHOWN IN DETAIL "A". WHEN SIX POSITION JUNCTION BARS ARE SPECIFIED, THE ST. LT., SECONDARY AND SERVICE CONDUITS SHALL BE INSTALLED AS SHOWN IN DETAIL "B".
4. COMPACTION BENEATH AND AROUND JUNCTION BOX SHALL BE A MINIMUM OF 85 PERCENT.
5. REPLACEMENT LID FOR MEDIUM PLASTIC JUNCTION BOX IS 33100981. PENTAHEAD BOLTS AND EMS MARKER MUST BE REUSED FROM OLD LID.
6. ADDITIONAL TRENCH DEPTH IS USUALLY REQUIRED AT ALL EQUIPMENT LOCATIONS. SEE 8648 FOR THE MINIMUM TRENCH DEPTHS AND THE DEGREE OF SLOPE ALLOWED AS THE TRENCH DEPTH CHANGES.
7. ON 277 VOLT STREET LIGHT CIRCUITS, INSTALL "277 VOLT" RED MICARTA TAG (APN 00080796) PROVIDED BY SPEC 8129.
8. TORQUE BOLTS TO 5 FT - LBS (60 IN - LBS).

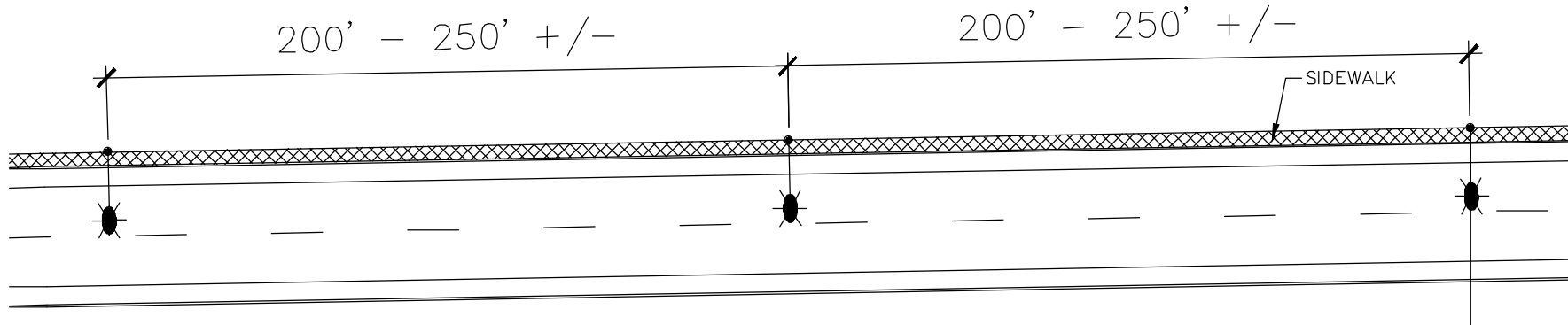




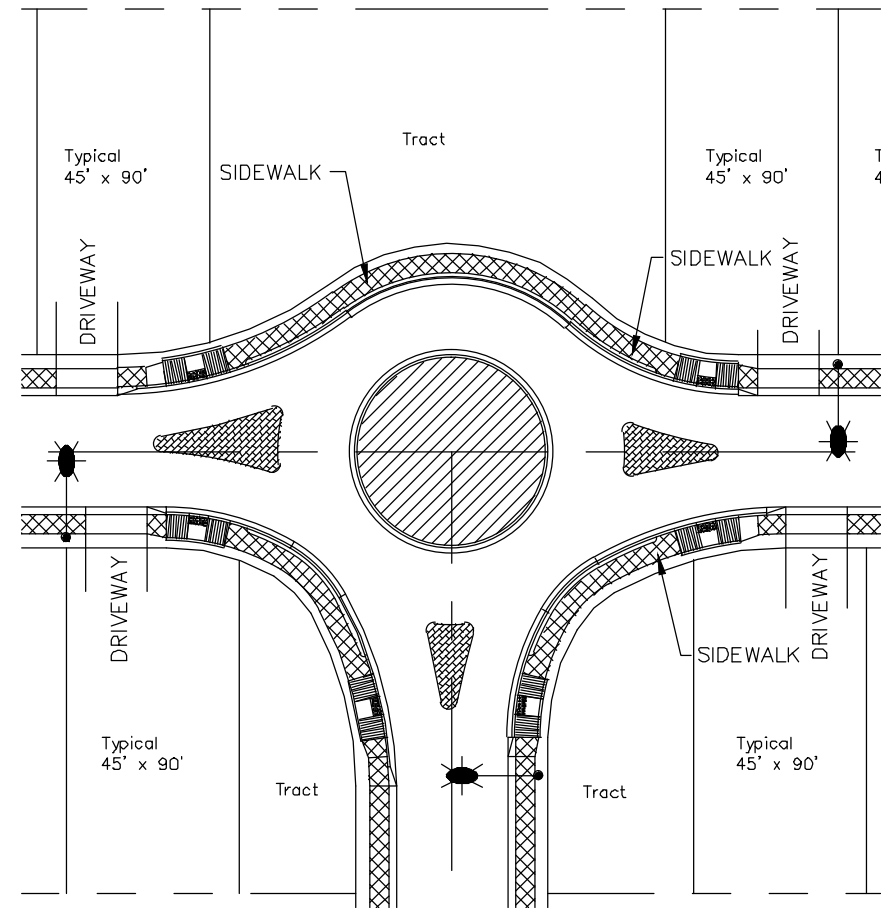
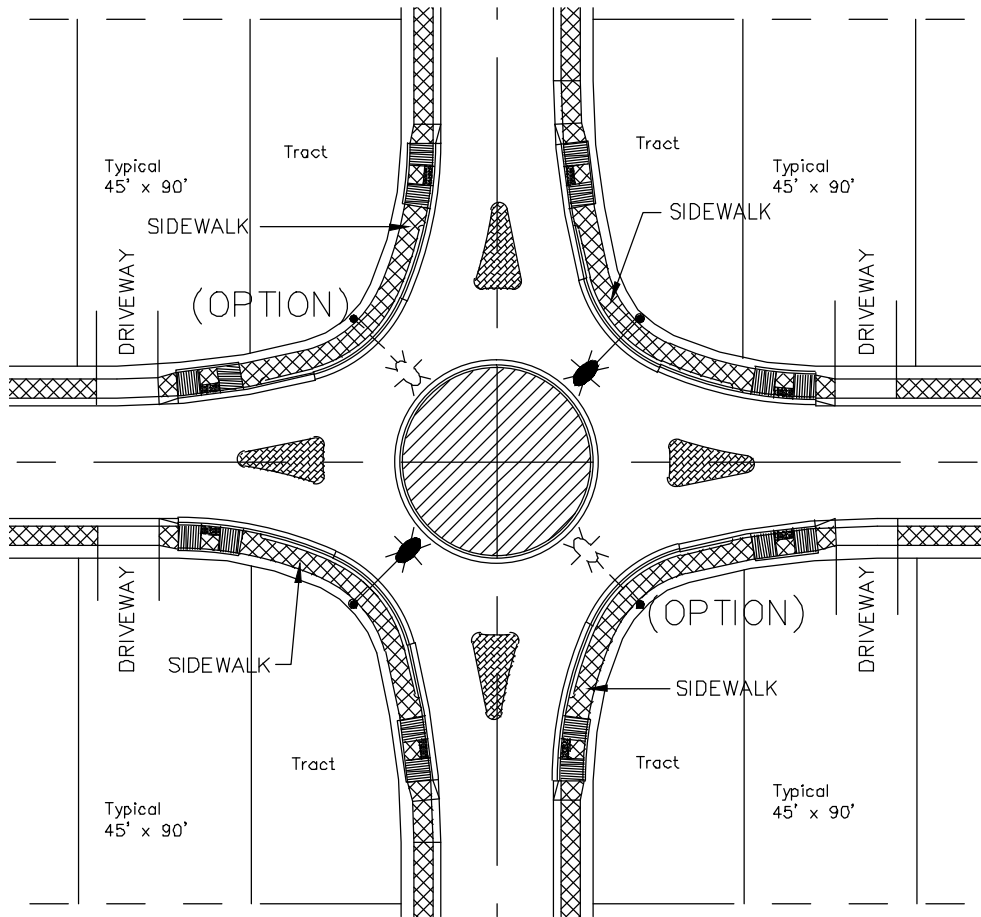


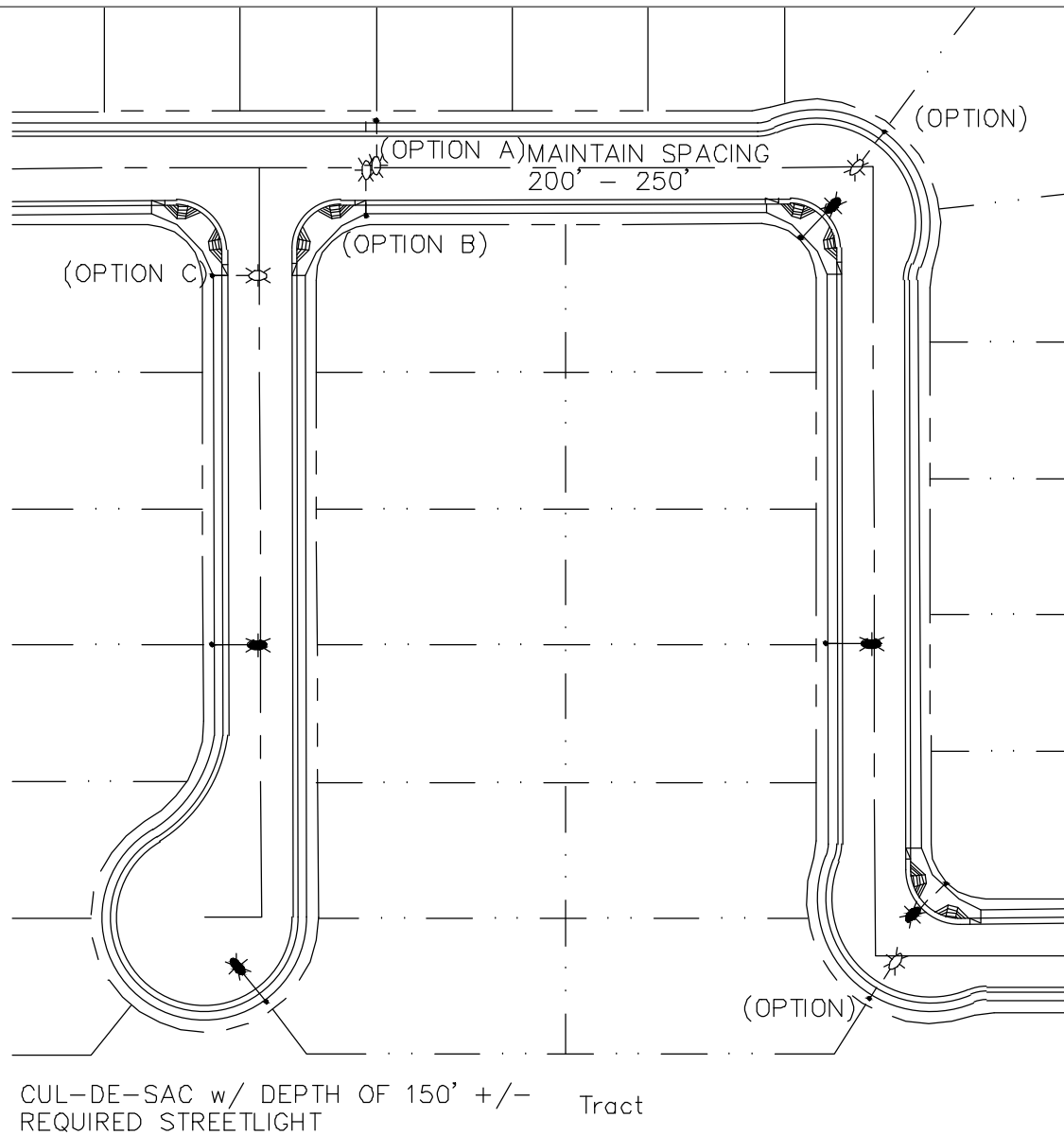


STAGGERED

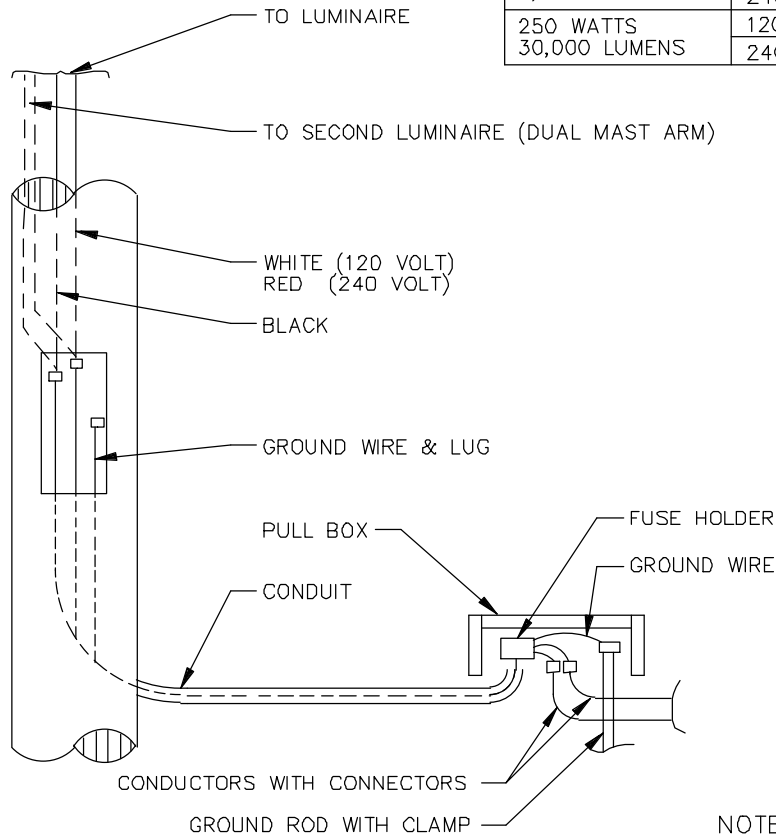


SINGLE SIDE

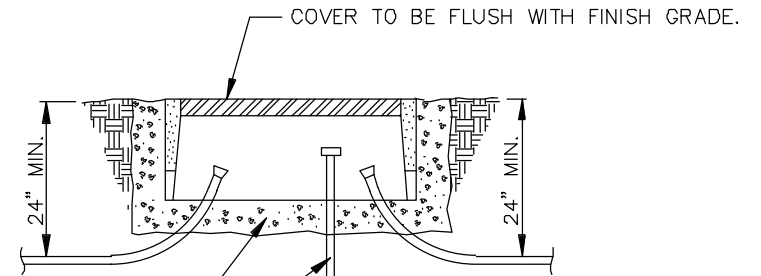




LAMP	VOLTAGE	FUSE SIZE
100 WATTS 9,500 LUMENS	120 Volts	8 Amps
	240 Volts	5 Amps
250 WATTS 30,000 LUMENS	120 Volts	10 Amps
	240 Volts	5 Amps



CONNECTION DETAIL



BACKFILL WITH MINIMUM OF 8 INCHES OF
GRAVEL OR ABC TYPE MATERIAL

GROUND ROD (8' MIN. LENGTH)

PULL BOX DETAIL

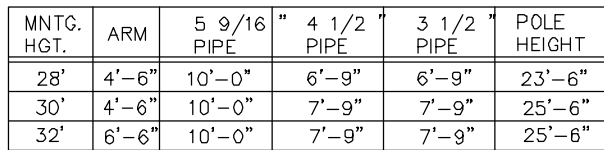
BOLT DOWN CONCRETE COVER MARKED
"STREET LIGHTING"

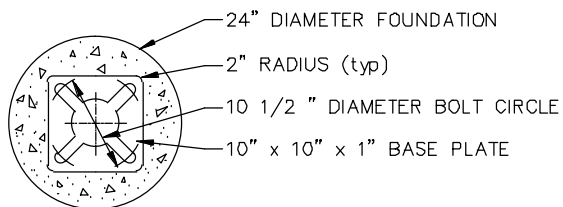


COVER DETAIL

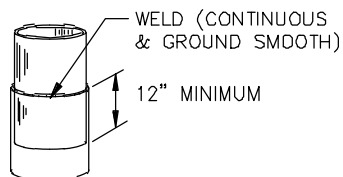
NOTES:

1. ALL PULL BOXES SHALL BE A.D.O.T.
TYPE 3-1/2, OR APPROVED EQUAL.
2. ALL PULL BOXES SHALL BE PROVIDED
BY ARIZONA PUBLIC SERVICES.

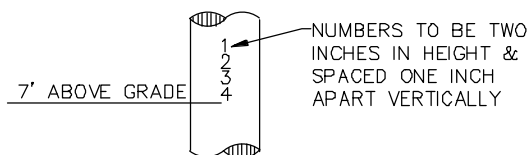




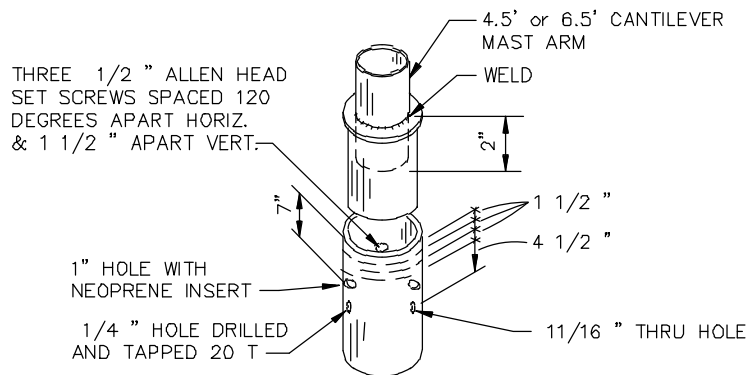
BASE PLATE SECTION



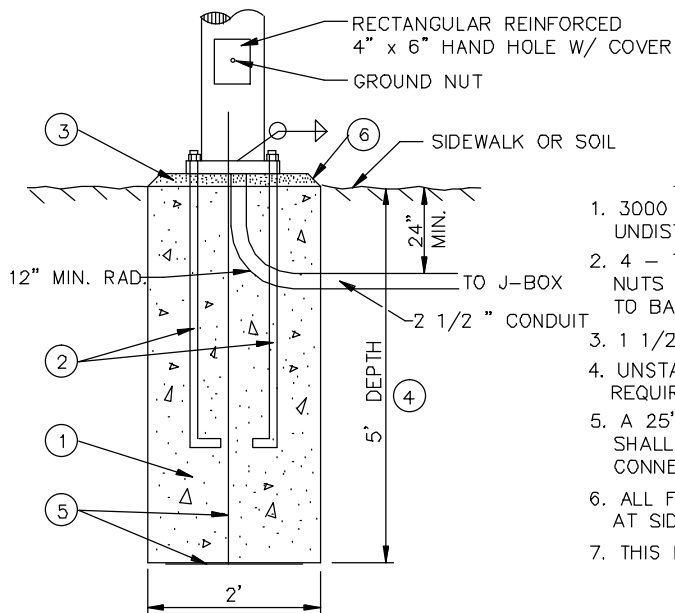
POLE JOINTS



POLE NUMBER LOCATIONS



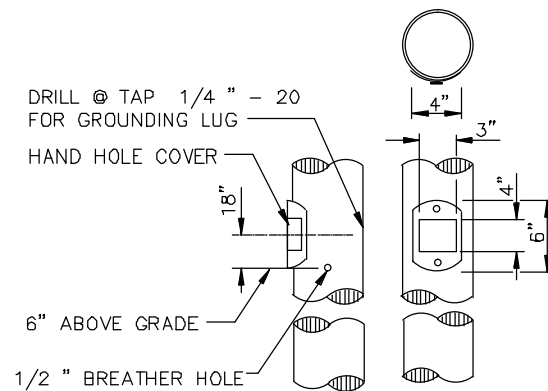
MAST ARM CONNECTION



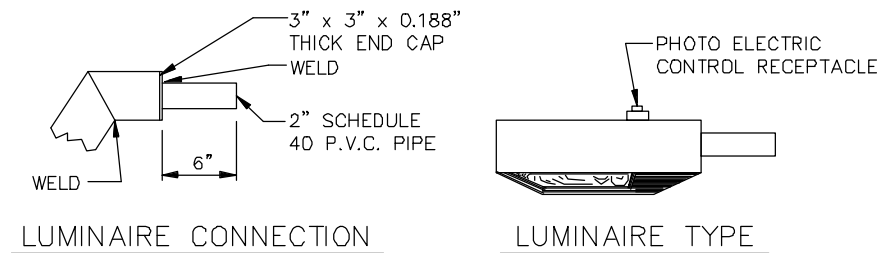
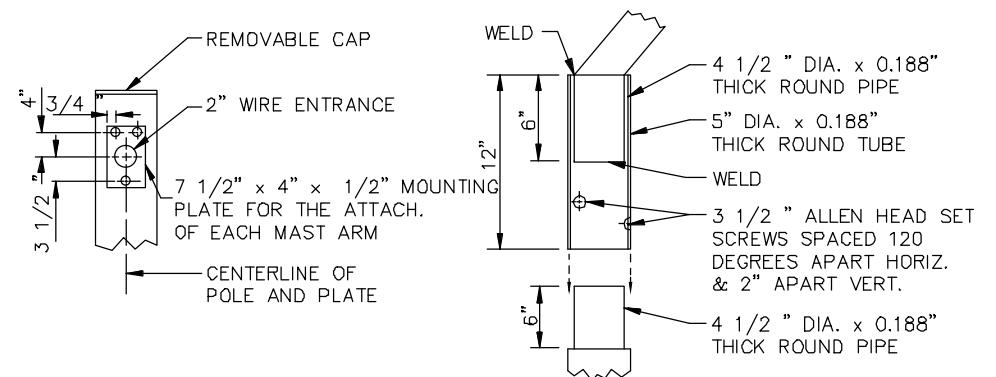
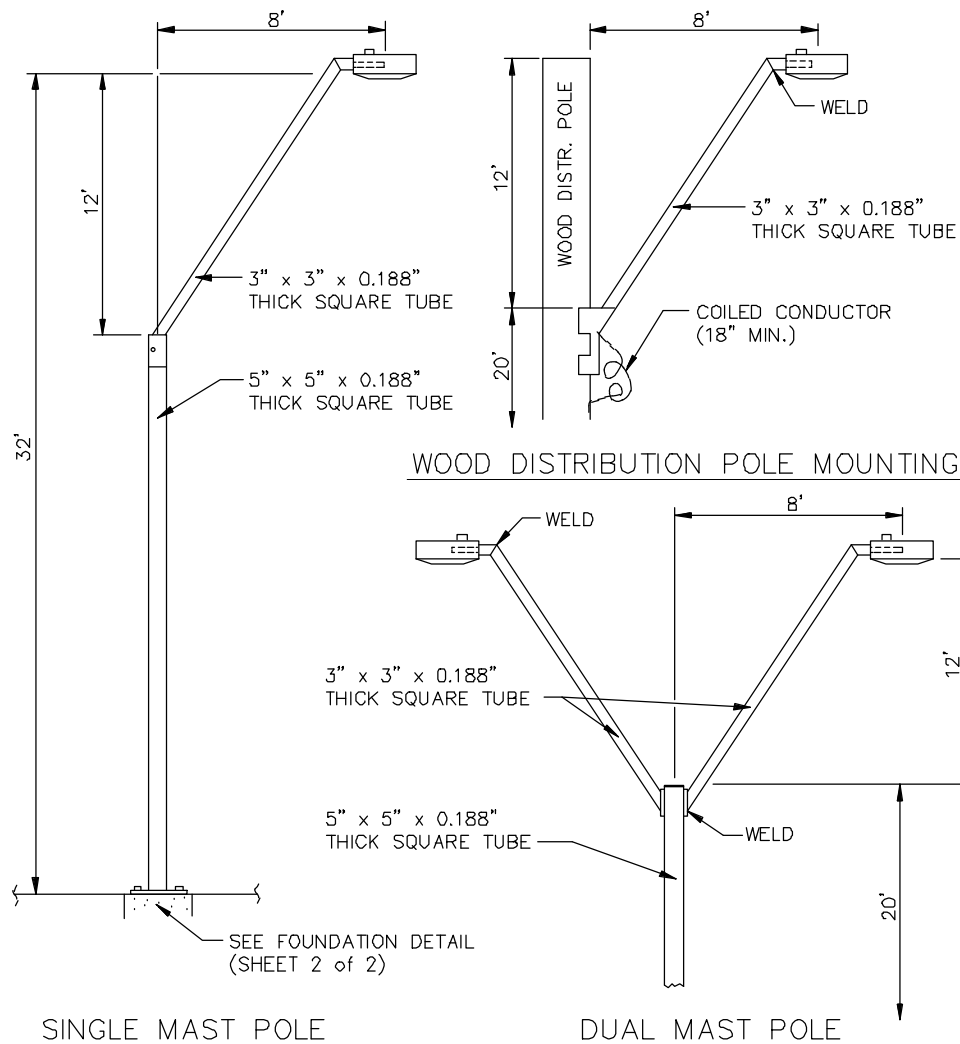
FOUNDATION SECTION

FOUNDATION NOTES

1. 3000 P.S.I. CLASS A CONCRETE PLACED NEXT TO UNDISTURBED EARTH.
2. 4 - 7/8" x 36" GALVANIZED ANCHOR BOLTS WITH LEVELING NUTS & WASHERS. TACK WELD NUTS TO WASHERS AND WASHERS TO BASE PLATE AFTER TIGHTENING. (2 1/2" PROJECTION)
3. 1 1/2" THICK EMBECO GROUT #636 OR APPROVED EQUAL.
4. UNSTABLE SOILS, AND/OR POLE HEIGHTS OVER 40', SHALL REQUIRE SPECIAL ENGINEERING.
5. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED. IT SHALL BE CONNECTED TO POLE GROUNDING SCREW IN THE BASE OF THE POLE.
6. ALL FINISHED POLE FOUNDATIONS SHALL BE CHAMFERED, AND AT SIDEWALK GRADE UNLESS OTHERWISE NOTED.
7. THIS FOUNDATION MAY ALSO BE USED FOR DUAL MAST ARM POLES.

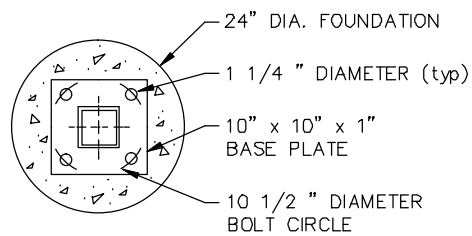


PENETRATIONS

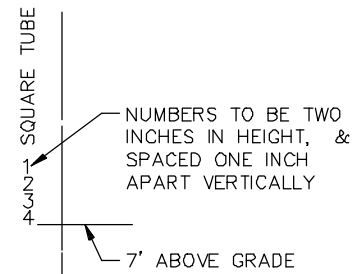


SPECIFICATION FEATURES:

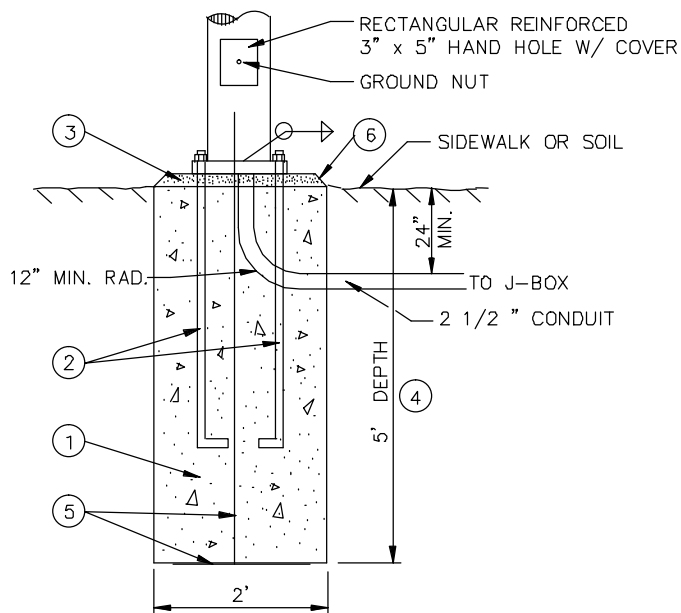
- 1) HEAVY GAUGE FORMED ALUMINUM HOUSING.
- 2) SEPARATE SWING DOWN OPTICAL AND BALLAST DOOR ACCESS.
- 3) ALGLAS FINISH ON REFLECTOR.
- 4) HEAT AND IMPACT RESISTANT TEMPERED FLAT GLASS LENS.
- 5) DECORATIVE MOUNTING ARM STANDARD.
- 6) MOGUI BASE SOCKET.
- 7) MULTITAP BALLAST-120/208/240/277.



BASE PLATE SECTION



POLE NUMBER LOCATIONS



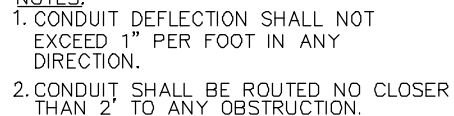
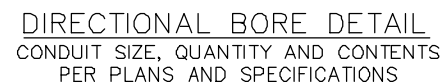
FOUNDATION SECTION

GENERAL NOTES

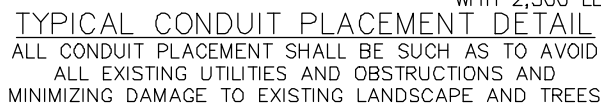
1. POLES ARE TO BE DESIGNED PER A.A.S.H.T.O. - 80 SPECIFICATIONS.
2. ALL TUBING IS TO BE A.S.T.M. A500 GRADE B (46,000 P.S.I. MIN. YIELD).
3. ACCEPTED POLE MANUFACTURER:
CEM-TEC CORPORATION OR APPROVED EQUAL.
4. ACCEPTED LUMINAIRE MANUFACTURER:
AMERICAN ELECTRIC SERIES 153/154 OR G.E. DECASHIELD III,
OR APPROVED EQUAL.
5. FOR PAINT SPECIFICATIONS SEE STREET LIGHTING SPECIFICATION.

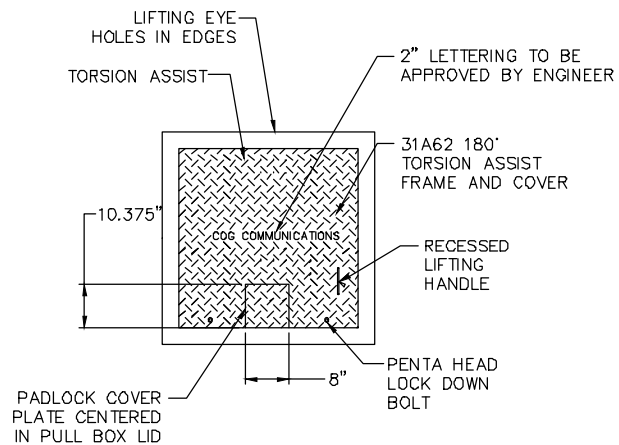
FOUNDATION NOTES

1. 3000 P.S.I. CLASS A CONCRETE PLACED NEXT TO UNDISTURBED EARTH.
2. 4 - 7/8 " x 36" GALVANIZED ANCHOR BOLTS WITH LEVELING NUTS & WASHERS. TACK WELD NUTS TO WASHERS AND WASHERS TO BASE PLATE AFTER TIGHTENING. (2 1/2 " PROJECTION)
3. 1 1/2 " THICK EMBECO GROUT #636 OR APPROVED EQUAL.
4. UNSTABLE SOILS, AND/OR POLE HEIGHTS OVER 40', SHALL REQUIRE SPECIAL ENGINEERING.
5. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED. IT SHALL BE CONNECTED TO POLE GROUNDING SCREW IN THE BASE OF THE POLE.
6. ALL FINISHED POLE FOUNDATIONS SHALL BE CHAMFERED, AND AT SIDEWALK GRADE UNLESS OTHERWISE NOTED.
7. THIS FOUNDATION MAY ALSO BE USED FOR DUAL MAST ARM POLES.

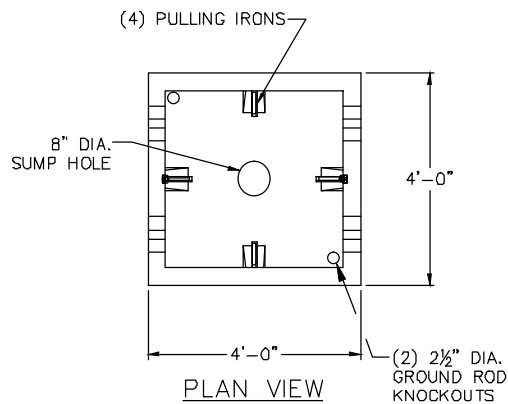


TYPICAL ROUTING OF CONDUIT AROUND AN OBSTRUCTION

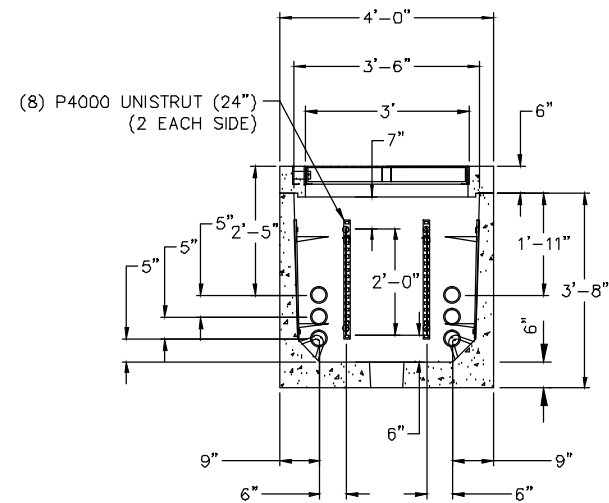




PLAN VIEW WITH COVER

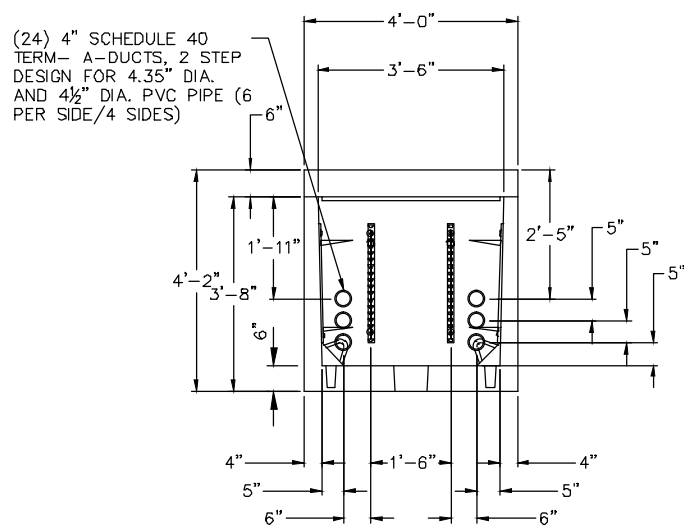


PLAN VIEW



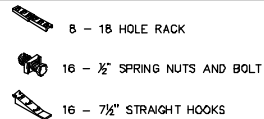
SECTION VIEW

NOTE:
SEE SHEET G-3294-2 FOR GENERAL NOTES,
STRUCTURAL NOTES AND RACKING PACKAGE DETAIL.

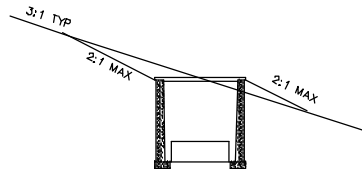


END VIEW

RACKING PACKAGE DETAIL



PLAN SYMBOL



INSTALLATION IN SLOPED AREAS

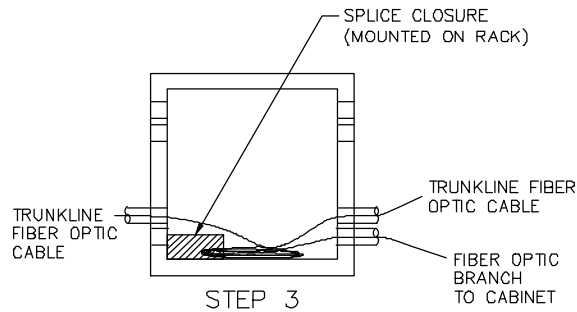
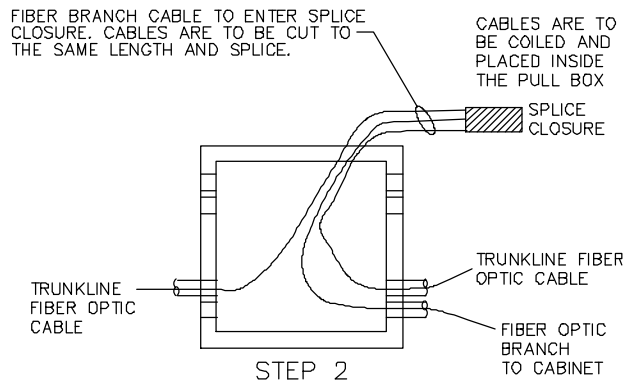
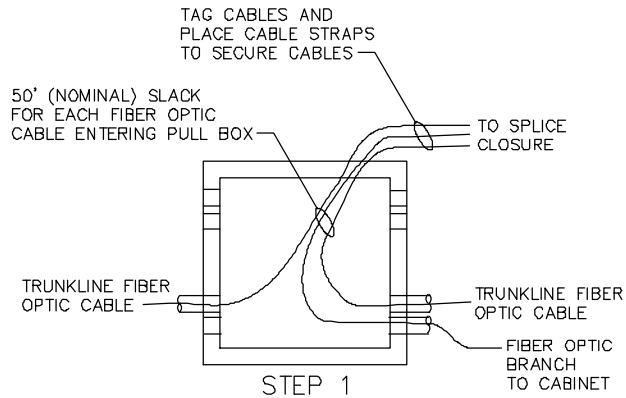
GENERAL NOTES:

1. BACKFILL WITH DESIGNATED SIZE NO. 57 AGGREGATE BELOW PULL BOX. BACKFILL AROUND SIDES OF PULL BOX WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACT.
2. CONDUIT FROM THE TYPICAL TRENCH SECTION SHALL NOT DEFLECT BY MORE THAN 1"/12" FROM THE ALIGNMENT PRECEDING OR FOLLOWING THE PULL BOX.
3. TOP OF CONDUITS SHALL BE LOCATED AT 25" BELOW EXISTING GROUND. CONDUITS AT PULL BOXES SHALL DEFLECT NO MORE THAN 1"/12" TO ENTER PULL BOX. CONDUITS SHALL BE FLUSH WITH INSIDE OF PULL BOX.
4. LONGITUDINAL AND LATERAL CONDUITS ENTER AND EXIT SAME WALL. LATERAL CONDUITS AS REQUIRED.
5. ALL NEW PULL BOXES SHALL BE FURNISHED WITH RACKS AND HOOKS INSTALLED.
6. PLUG EACH UNUSED CONDUIT END WITH APPROVED, WATERPROOF DUCT PLUG.
7. "COG COMMUNICATIONS" SHALL BE THE TITLE EMBOSSED ON THE LID.
8. PULL BOX HEIGHT SHALL BE FINISHED GRADE TO MATCH EXISTING GRADE/SLOPE.
9. LID SHALL OPEN 180 DEGREES WITH A TORSION BAR LIFT ASSIST.
10. LID SHALL BE DIAMOND PLATE AND HAVE GALVANIZED FINISH.
11. BOX SHALL BE ORIENTED SO THAT LID OPENS AWAY FROM ANY ROADWAY LANE.
12. COVER HARDWARE SHALL BE CADMIUM PLATED.
13. RECESSED PADLOCK SHALL BE LOCATED IN THE CENTER OF THE OPENING SIDE OF THE COVER.
14. PULLING IRONS SHALL BE LOCATED AS SHOWN IN PLAN VIEW, NO DEVIATIONS ACCEPTED.
15. PULLING IRONS SHALL BE 3/4" ϕ COLD ROLLED GALVANIZED STEEL.
16. WEIGHT COVER = 1075#, VAULT 3250# - 4250#, TOTAL 4325# - 5325#.
17. GROUT OR SEAL SHALL BE USED AROUND CONDUITS PENETRATING THE PULL BOX.
18. ALL JOINTS SHALL BE SEALED USING CONSEAL CS-101 BUTYL RUBBER ROPE.
19. ONE - 5/8" X 8' COPPER-CLAD GROUND ROD(10 MILS MINIMUM) SHALL BE INSTALLED INTO ONE OF THE GROUND ROD KNOCK-OUTS IN THE BOTTOM OF THE PULL BOX.

STRUCTURAL NOTES:

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH f'_c = 4500 PSI
2. REBAR ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: ACI-318-99 BUILDING CODE AND ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE LOADING STRUCTURES"
5. LOADS: HS20 WHEEL LOADING IN OFF-STREET LOCATIONS WHERE NOTE SUBJECTED TO HIGH DENSITY TRAFFIC
80 PSF LATERAL LIVE LOAD SURCHARGE - UP TO 8'-0" DEPTH SOIL:
40 PCF LATERAL SOIL PRESSURE ABOVE WATER TABLE
80 PCF LATERAL SOIL PRESSURE BELOW WATER TABLE
120 PCF SOIL DENSITY
6. SOIL COVER: 0' TO 5' (MAX.)
7. WATER TABLE: 5'-0" BELOW GRADE

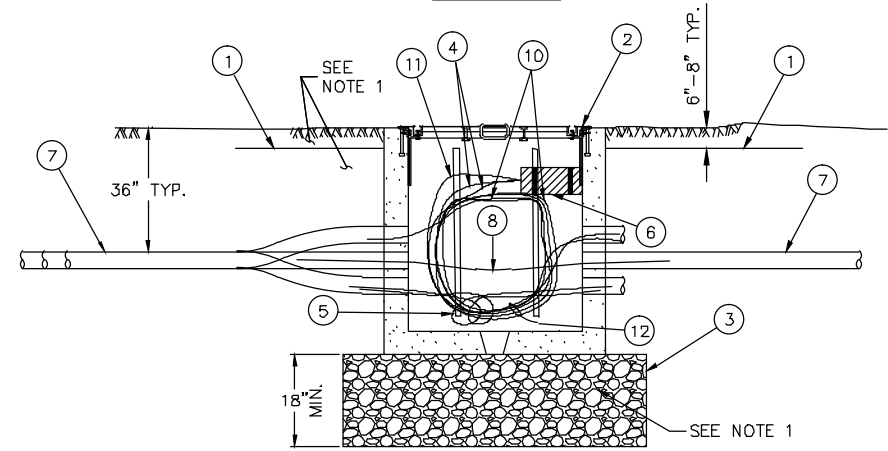
FIBER OPTIC SPLICE PROCEDURE



NOTES:

1. LOCATOR WIRES TO BE ATTACHED TO EACH OTHER.
2. PROVIDE 50 FEET OF EACH COILED FIBER OPTIC CABLE PER EACH ENTRY (100 FEET TOTAL) AND 10 FEET OF SLACK ON ANY CONDUCTORS.
3. ALL POWER AND COMMUNICATION CABLES SHALL BE TAGGED WITH CABLE IDENTIFICATION.
4. FIBER SLACK MOUNTED TO RACK OFF OF GROUND.

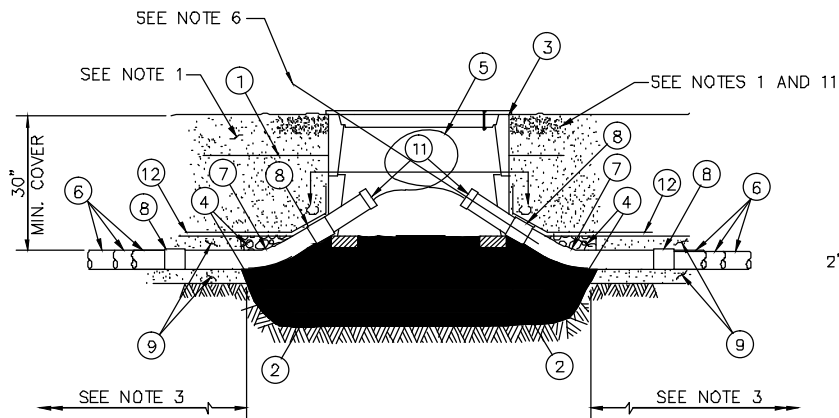
CONDUIT PLACEMENT AND COILING DETAIL SIDE VIEW



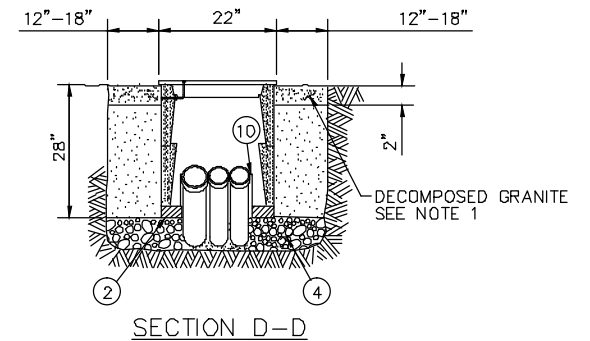
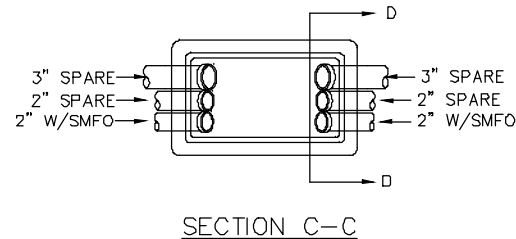
NOTES:

1. BACKFILL WITH DESIGNATED SIZE NO. 57 AGGREGATE BELOW PULL BOX. BACKFILL AROUND SIDES OF PULL BOX WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACT.
2. NUMBERS IN CIRCLES REFER TO ITEMS IN MATERIAL LIST.

MATERIAL LIST	
ITEM	DESCRIPTION
1	WARNING TAPE (AS REQUIRED)
2	NO. 9 PULL BOX
3	CLASS "B" CONC. AGG. DESIGNATED SIZE NO. 57
4	SINGLE MODE FIBER OPTIC CABLE (SMFO)
5	#8 GREEN BOND (AS REQUIRED)
6	FIBER OPTIC SPLICE CLOSURE
7	CONDUIT PER PLANS
8	2500 LB DETECTABLE MULE TAPE
9	RACK & HOOK (EACH WALL TYP)
10	SINGLE MODE FIBER OPTIC BRANCH CABLE (AS REQUIRED)
11	100' NOMINAL SLACK (50' ENTRY/50' EXIT)

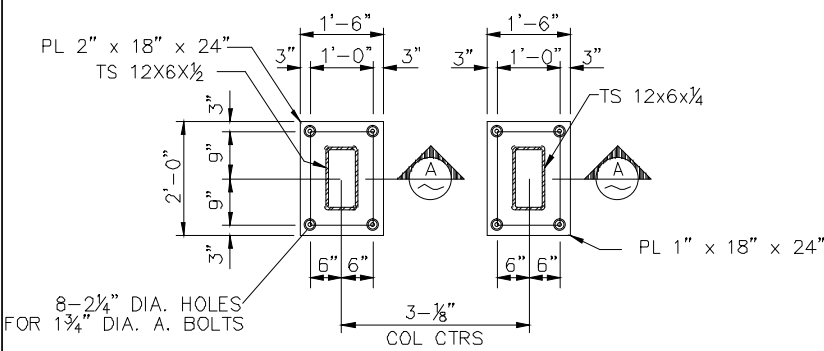
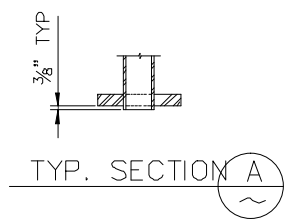
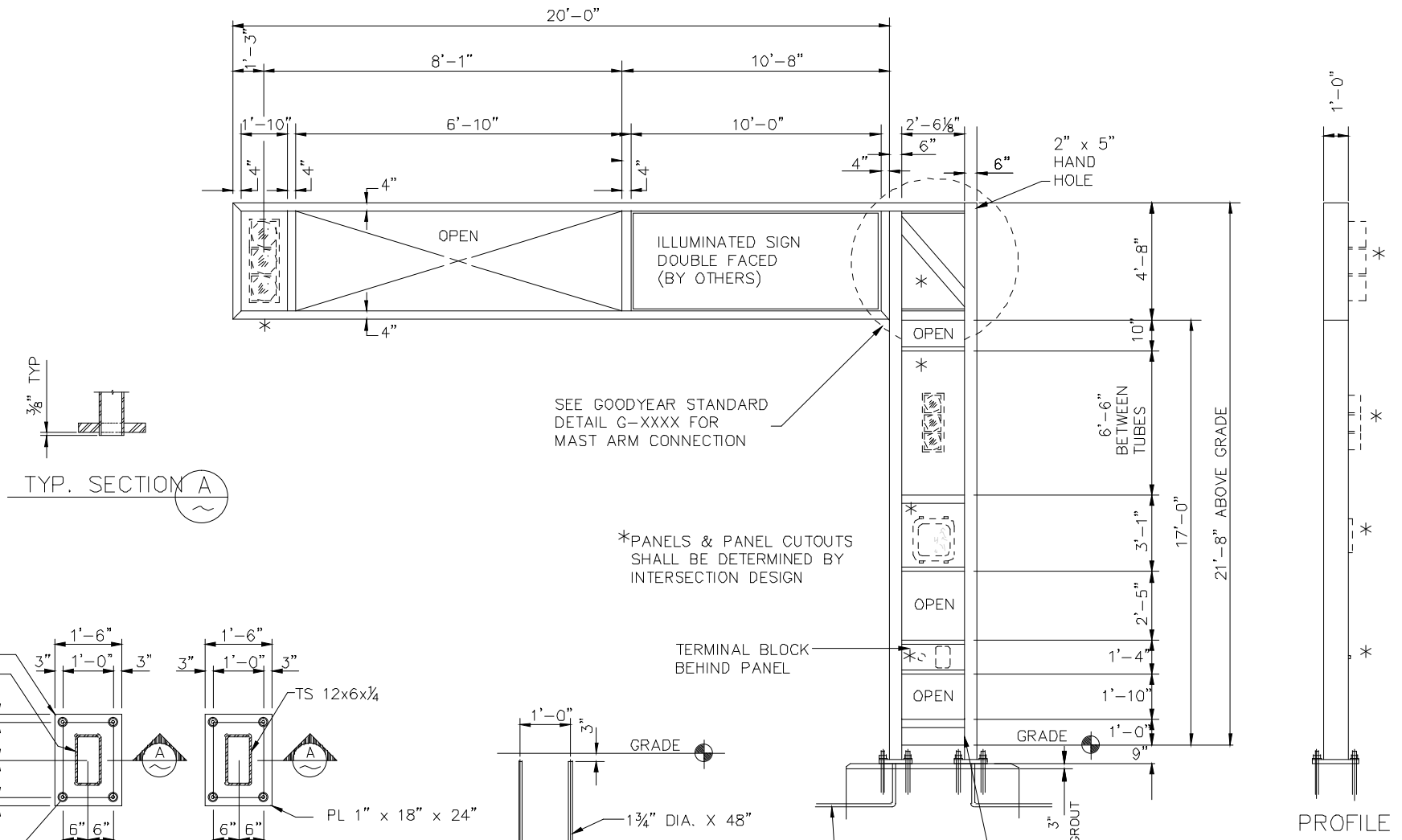


DETAIL D1
INSTALLATION FOR NO. 7 PULL BOX WITH EXTENSION
W/ CONDUITS SWEEPING INTO PULL BOX
 N.T.S.

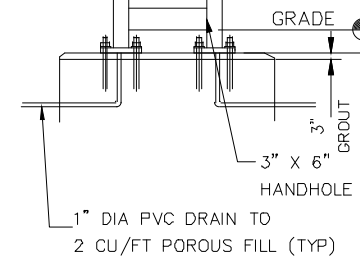
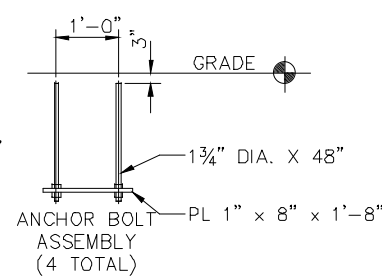


MATERIAL LIST	
ITEM	DESCRIPTION
①	WARNING TAPE
②	CONCRETE MASONRY BLOCK 2" X 4" X 8"
③	NO. 7 PULL BOX WITH EXTENSION WITH EXCEPTIONS AS DRAWN
④	CLASS 'B' CONCRETE AGGREGATE DESIGNATED SIZE NO. 57
⑤	SINGLE MODE FIBER OPTIC (SMFO) CABLE
⑥	2-2" AND 1-3" DIA SCH. 40 PVC OR HDPE CONDUITS — SEE NOTE 13
⑦	30 DEGREE SCH. 40 PVC ELBOW, WITH 15" RADIUS
⑧	SCH. 40 PVC-TO-PVC COUPLING
⑨	SELECT EXCAVATED BACKFILL
⑩	KNOCK OUT 6" X 12" —SEE NOTE 12
⑪	BELL END FOR PVC-SEE NOTE 9
⑫	30# FELT PAPER

- BACKFILL WITH SELECT EXCAVATED MATERIAL AND THOROUGHLY COMPACT TO WITHIN 2" OF ORIGINAL GRADE.
- THIS PULL BOX IS DESIGNED FOR NON-TRAFFIC AREAS. COMPOSITE COVERS SHALL BE USED.
- CONDUIT FROM THE TYPICAL TRENCH SECTION SHALL NOT DEFLECT BY MORE THAN 1 IN./FT. FROM THE ALIGNMENT PRECEDING OR FOLLOWING THE PULL BOX.
- CONDUITS SHALL ENTER PULL BOX AS SHOWN.
- LATERAL CONDUITS AS REQUIRED.
- CONDUIT CENTERLINE SHALL BE ALIGNED TO TOP EDGE OF PULL BOX TO FACILITATE CABLE PULLING.
- ALL COMMUNICATIONS CABLE SHALL BE TAGGED WITH CABLE IDENTIFICATION.
- "CITY OF GOODYEAR FIBER OPTIC" SHALL BE EMBOSSED ON THE LID.
- PVC USED TO EXTEND INTO PULL BOX.
- USE FELT PAPER TO BLOCK OPENING BETWEEN CONDUITS AND PREVENT BACKFILL MATERIAL FROM ENTERING PULL BOX.
- EXISTING PULL BOX CONFIGURATIONS MAY VARY. LOCATIONS WHERE NO. 7 PULL BOXES ARE BEING REPLACED SHALL BE INSTALLED AS SHOWN ON THIS SHEET UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- EXISTING CONDUIT ENTERING A PULL BOX MAY NOT BE CORRECTLY ALIGNED TO FACILITATE PULLING CABLES THROUGH THE PULL BOX BY USE OF A PULLING SHOE. THE FORCE ACCOUNT ITEM FOR CONDUIT RECONDITIONING DOES NOT COVER REALIGNMENT OF CONDUIT.
- REFER TO CONDUIT AND CABLE SCHEDULE FOR SIZE OF CONDUITS.



ANCHOR BOLT SETTING PLAN

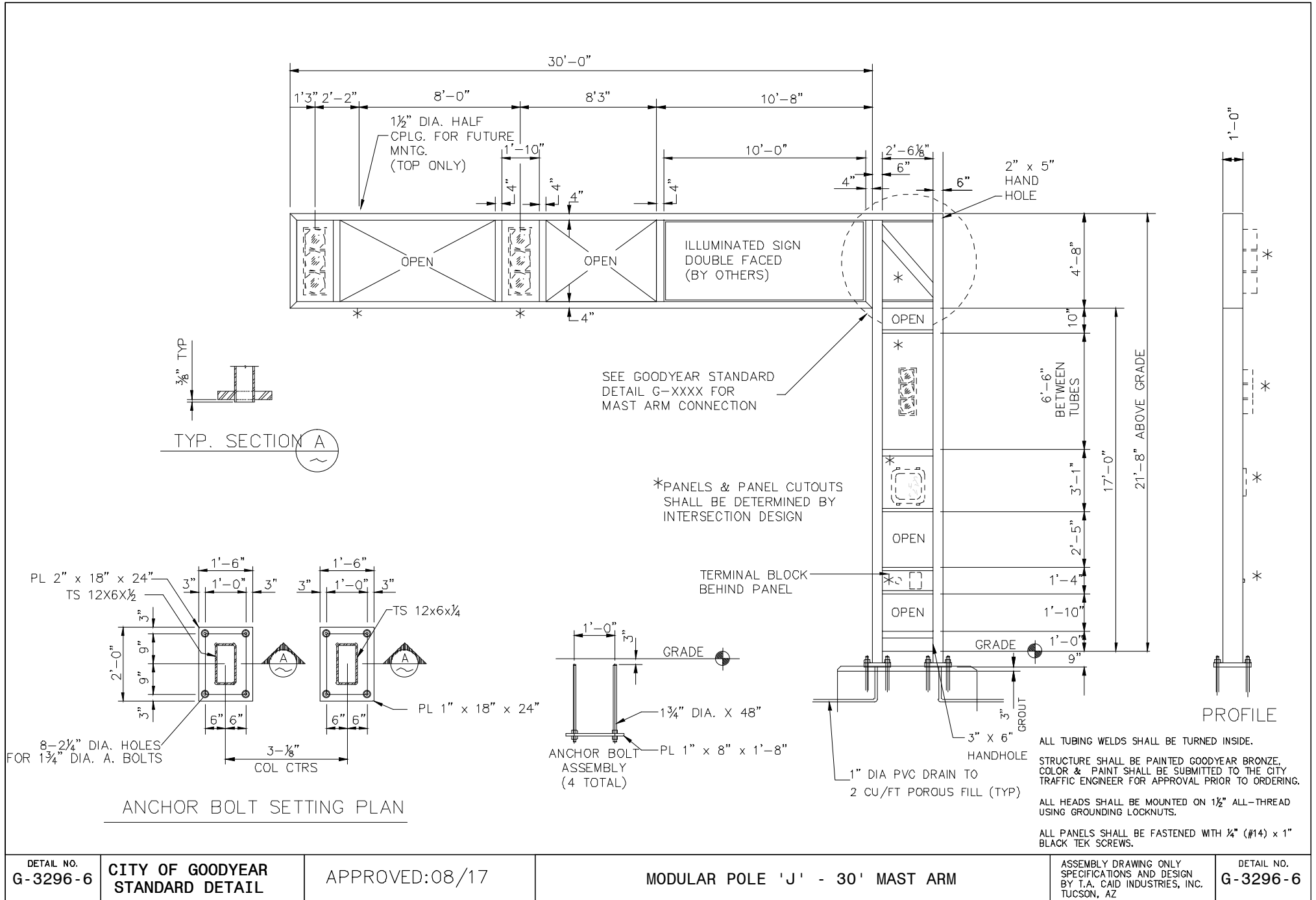


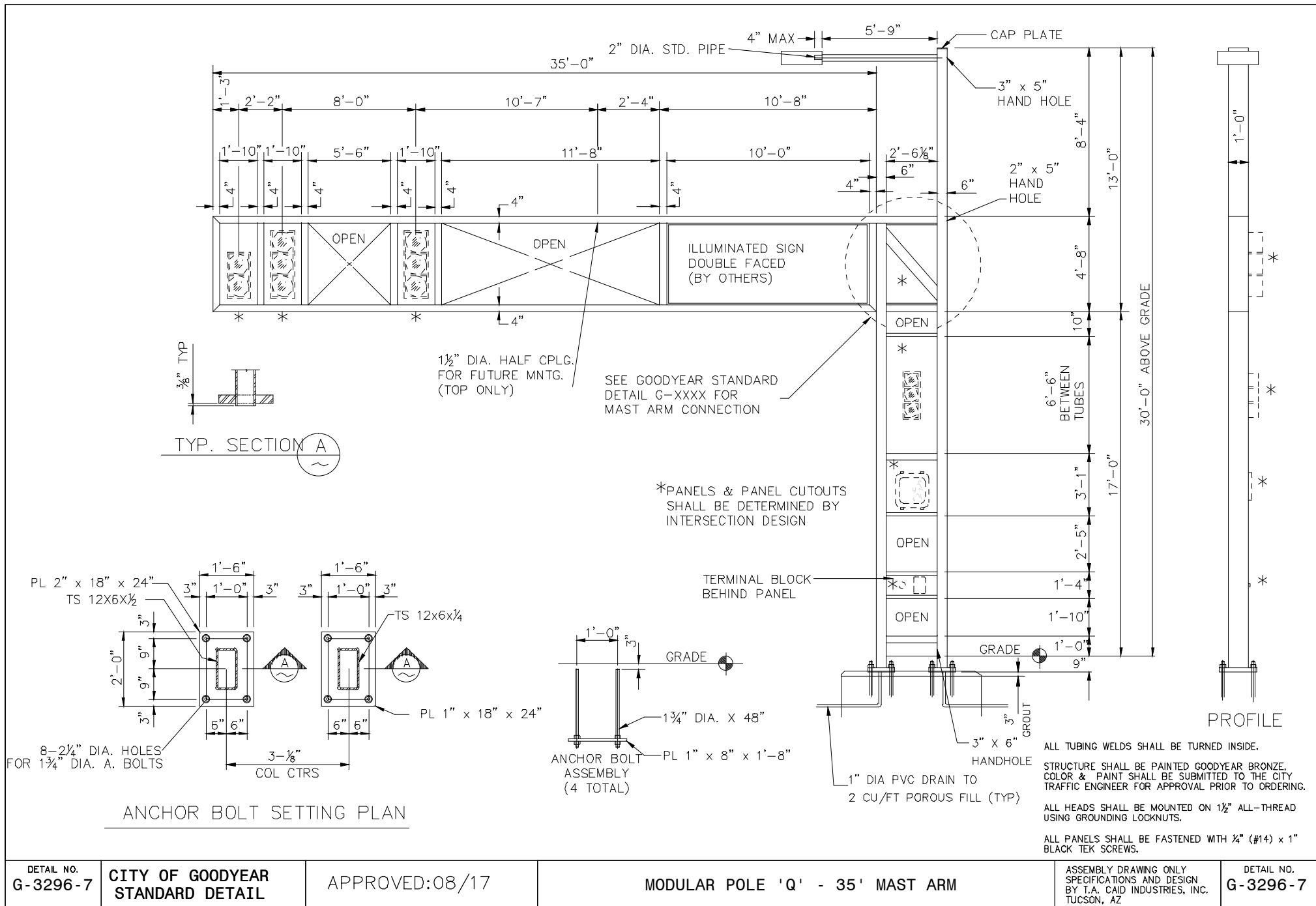
ALL TUBING WELDS SHALL BE TURNED INSIDE.

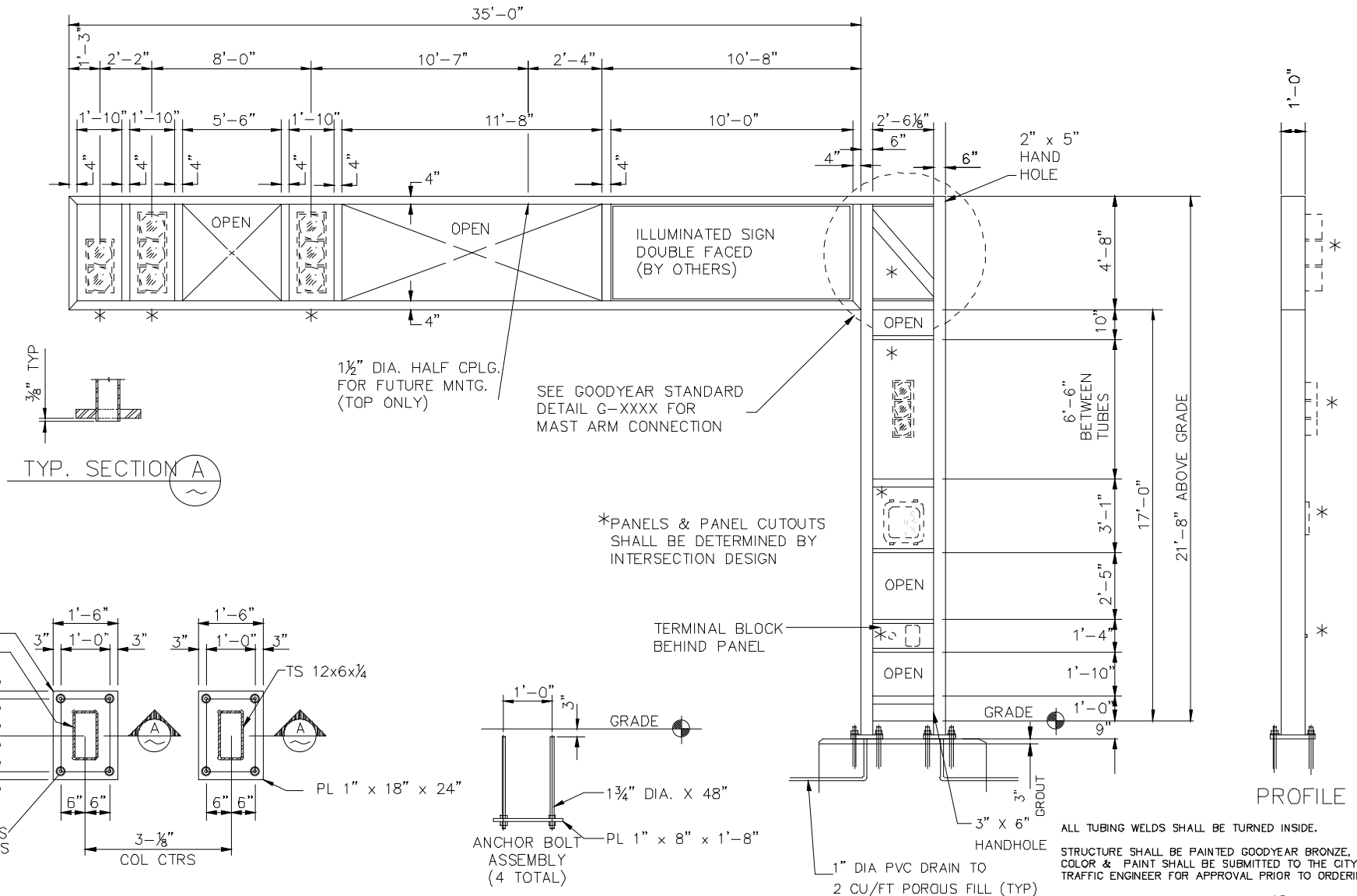
STRUCTURE SHALL BE PAINTED GOODYEAR BRONZE, COLOR & PAINT SHALL BE SUBMITTED TO THE CITY TRAFFIC ENGINEER FOR APPROVAL PRIOR TO ORDERING.

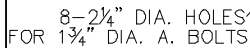
ALL HEADS SHALL BE MOUNTED ON 1 1/2" ALL-THREAD USING GROUNDING LOCKNUTS.

ALL PANELS SHALL BE FASTENED WITH 1/4" (#14) x 1" BLACK TEK SCREWS.

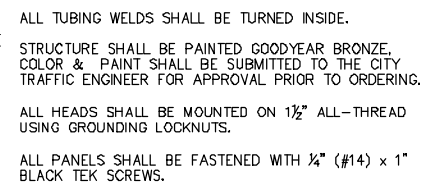




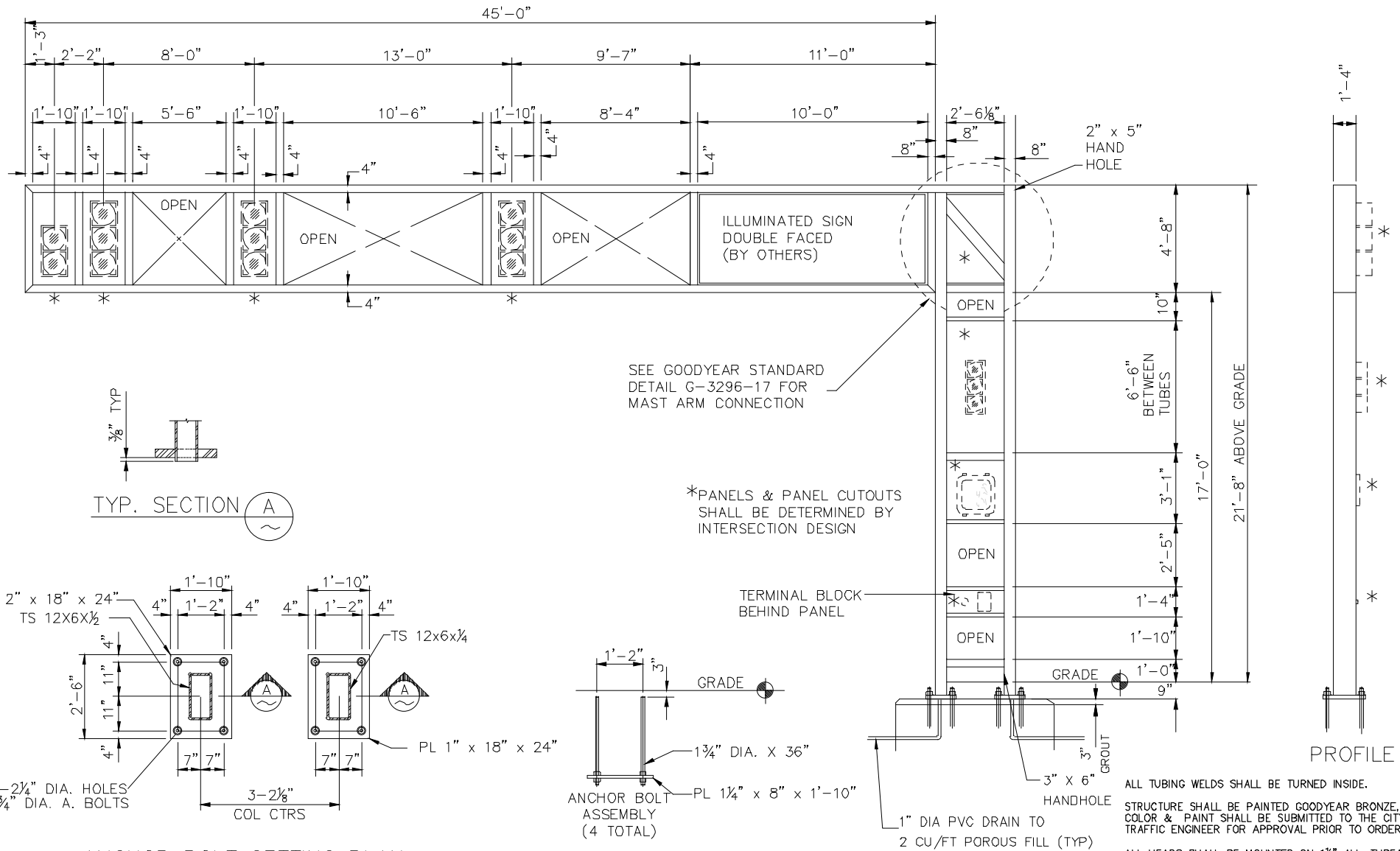




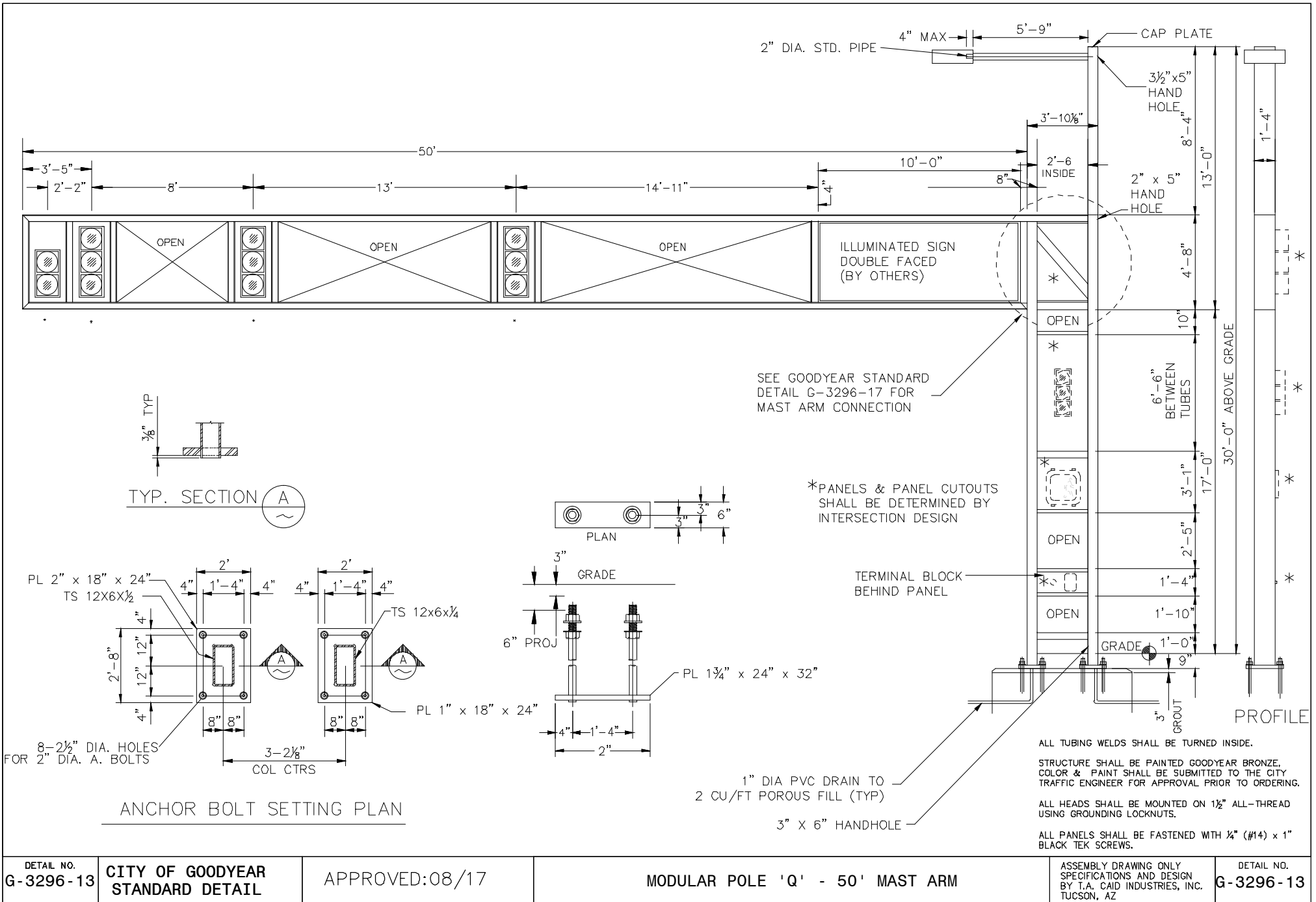
DETAIL NO. G-3296-9	CITY OF GOODYEAR STANDARD DETAIL	APPROVED:08/17	MODULAR POLE 'Q' - 40' MAST ARM	ASSEMBLY DRAWING ONLY SPECIFICATIONS AND DESIGN BY T.A. CAID INDUSTRIES, INC. TUCSON, AZ	DETAIL NO. G-3296-9
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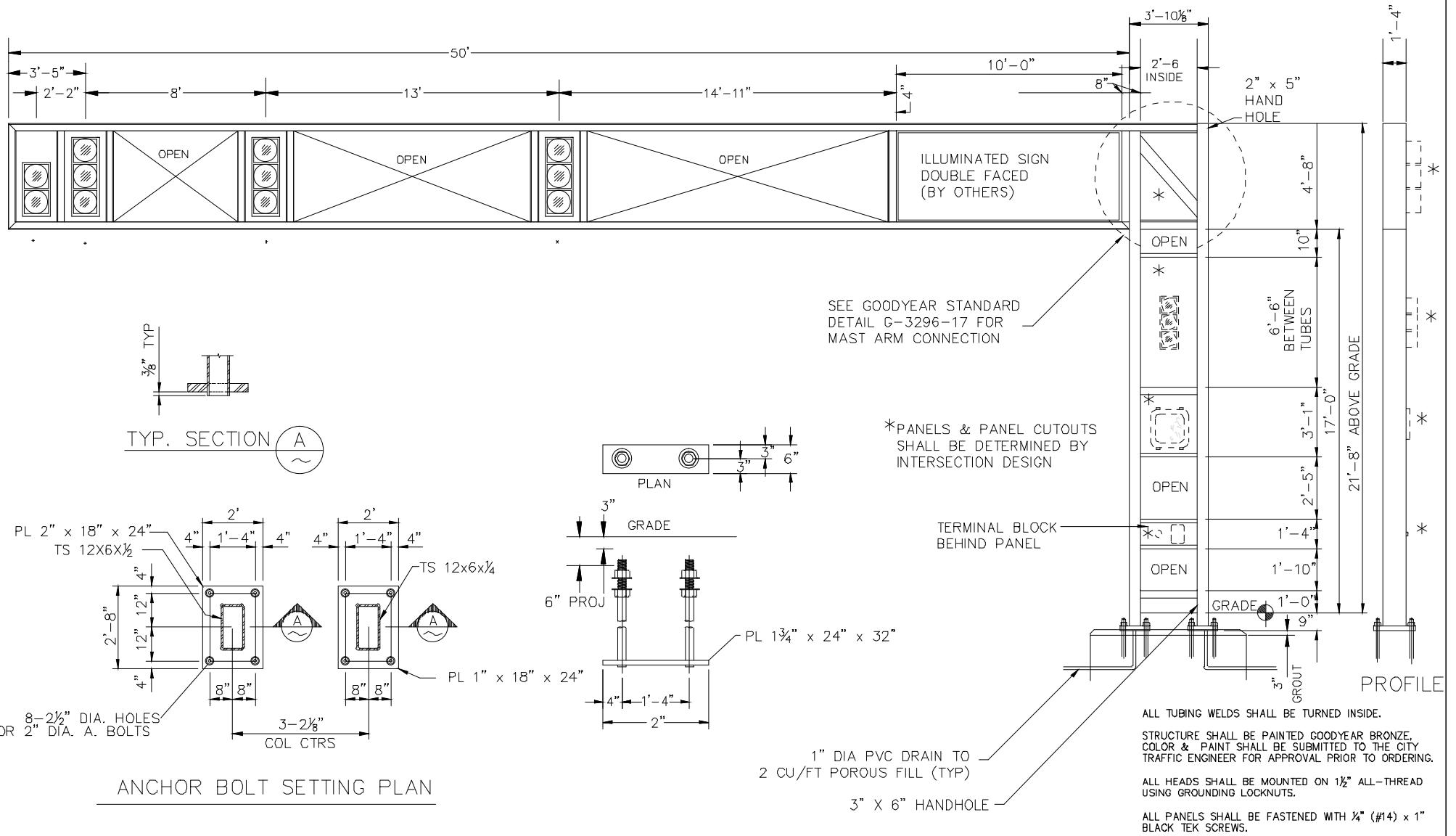


DETAIL NO.	G-3296-10
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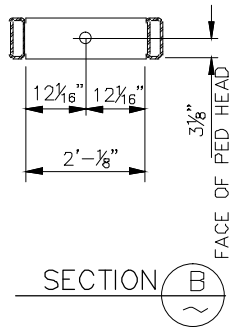
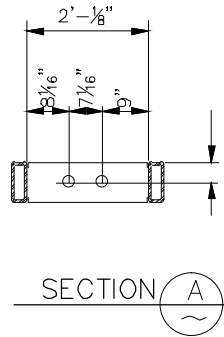


DETAIL NO. G-3296-12	CITY OF GOODYEAR STANDARD DETAIL	APPROVED:08/17	MODULAR POLE 'J' - 45' MAST ARM	ASSEMBLY DRAWING ONLY SPECIFICATIONS AND DESIGN BY T.A. CAID INDUSTRIES, INC. TUCSON, AZ	DETAIL NO. G-3296-12
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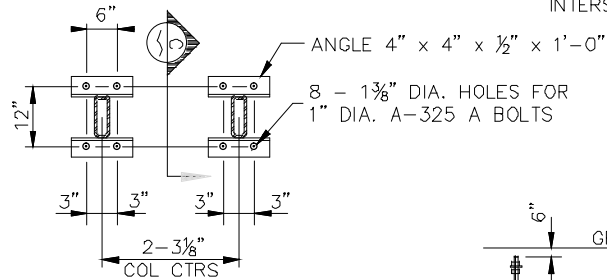




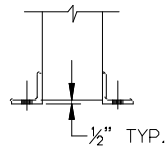
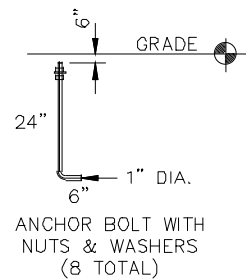
DETAIL NO. G-3296-14	CITY OF GOODYEAR STANDARD DETAIL	APPROVED:08/17	MODULAR POLE 'J' - 50' MAST ARM	ASSEMBLY DRAWING ONLY SPECIFICATIONS AND DESIGN BY T.A. CAID INDUSTRIES, INC. TUCSON, AZ	DETAIL NO. G-3296-14
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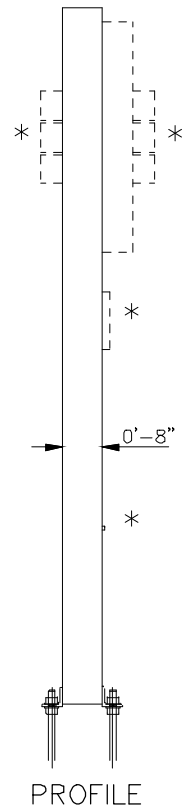
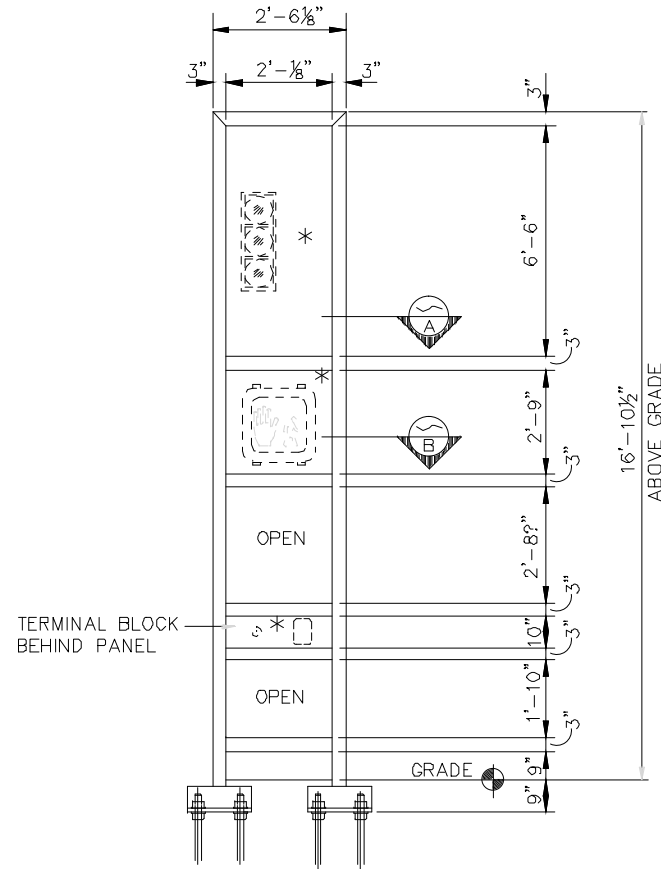
* PANELS & PANEL CUTOUTS
SHALL BE DETERMINED BY
INTERSECTION DESIGN



ANCHOR BOLT SETTING PLAN



TYP. SECTION C



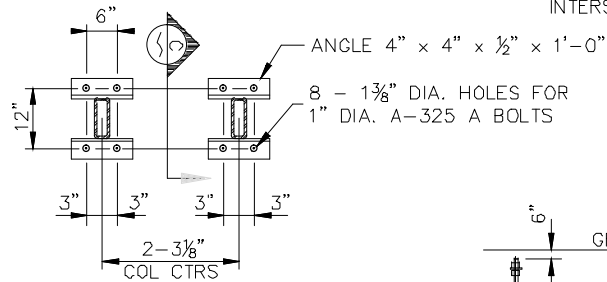
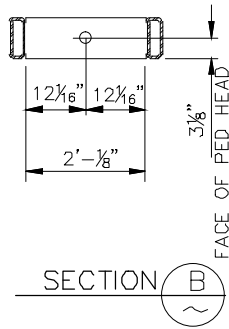
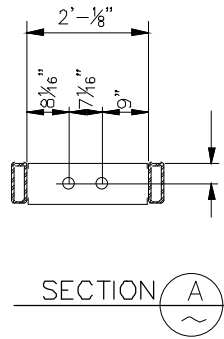
ALL TUBING WELDS SHALL BE TURNED INSIDE.

STRUCTURE SHALL BE PAINTED GOODYEAR BRONZE,
COLOR & PAINT SHALL BE SUBMITTED TO THE CITY
TRAFFIC ENGINEER FOR APPROVAL PRIOR TO ORDERING.

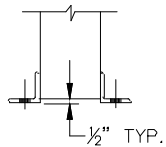
ALL HEADS SHALL BE MOUNTED ON 1 1/2" ALL-THREAD
USING GROUNDING LOCKNUTS.

ALL PANELS SHALL BE FASTENED WITH 1/4" (#14) x 1"
BLACK TEK SCREWS.

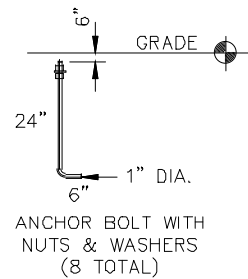
DETAIL NO. G-3296-15	CITY OF GOODYEAR STANDARD DETAIL	APPROVED:08/17	MODULAR POLE 'A-1'	ASSEMBLY DRAWING ONLY SPECIFICATIONS AND DESIGN BY T.A. CAID INDUSTRIES, INC. TUCSON, AZ	DETAIL NO. G-3296-15
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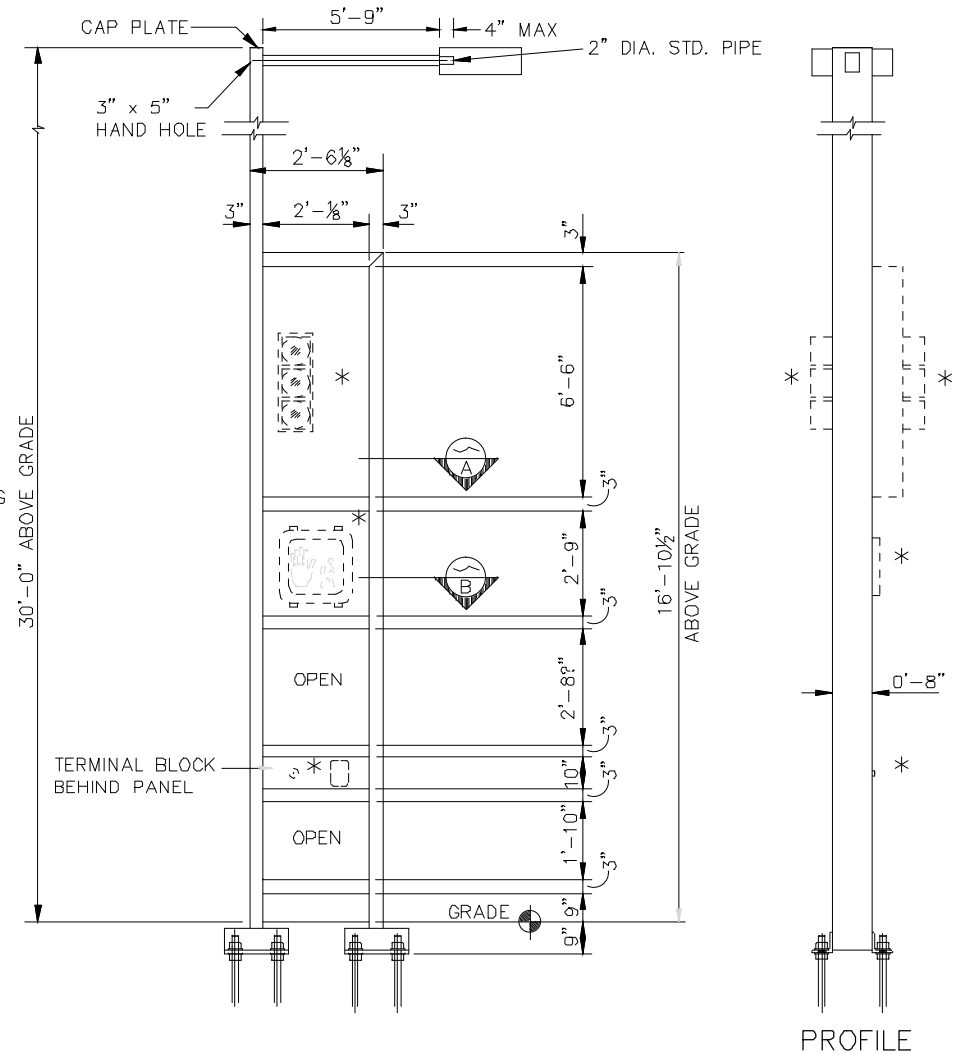
ANCHOR BOLT SETTING PLAN



TYP. SECTION C



*PANELS & PANEL CUTOUTS SHALL BE DETERMINED BY INTERSECTION DESIGN

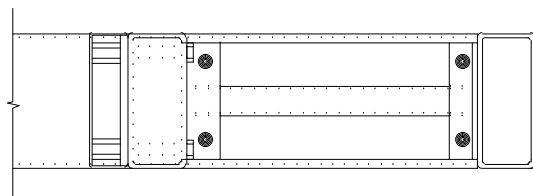


ALL TUBING WELDS SHALL BE TURNED INSIDE.

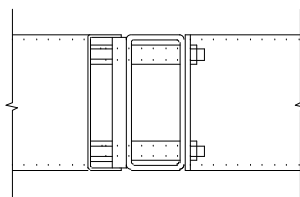
STRUCTURE SHALL BE PAINTED GOODYEAR BRONZE, COLOR & PAINT SHALL BE SUBMITTED TO THE CITY TRAFFIC ENGINEER FOR APPROVAL PRIOR TO ORDERING.

ALL HEADS SHALL BE MOUNTED ON 1 1/2" ALL-THREAD USING GROUNDING LOCKNUTS.

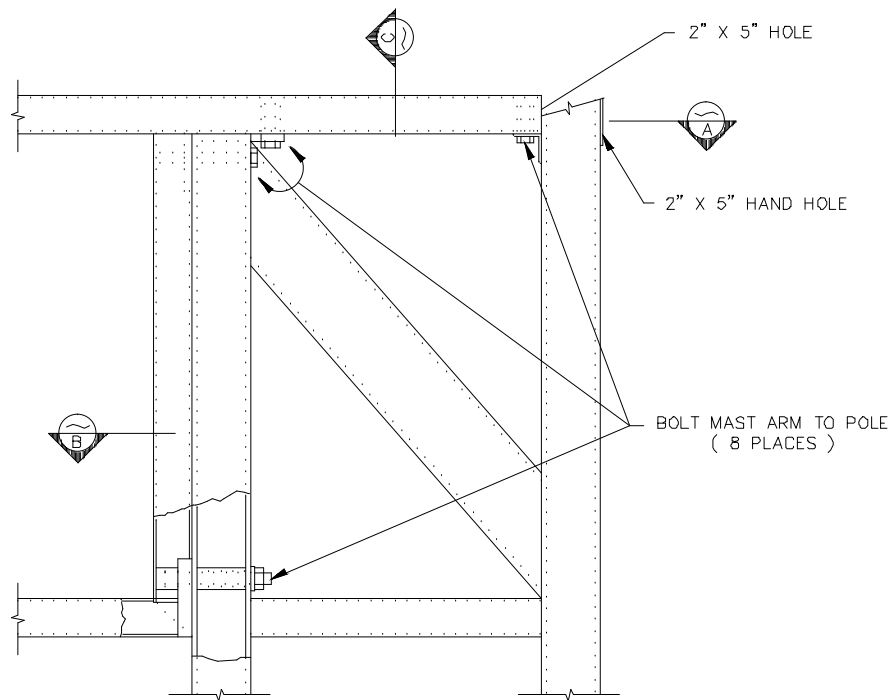
ALL PANELS SHALL BE FASTENED WITH 1/4" (#14) x 1" BLACK TEK SCREWS.



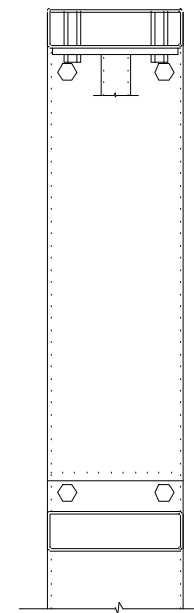
SECTION A



SECTION B



MAST ARM CONNECTION DETAIL



SECTION C

ALL TUBING WELDS SHALL BE TURNED INSIDE.

STRUCTURE SHALL BE PAINTED GOODYEAR BRONZE, COLOR & PAINT SHALL BE SUBMITTED TO THE CITY TRAFFIC ENGINEER FOR APPROVAL PRIOR TO ORDERING.

ASSEMBLY DRAWING ONLY
SPECIFICATIONS AND DESIGN
BY T.A. CAID INDUSTRIES, INC.
TUCSON, AZ

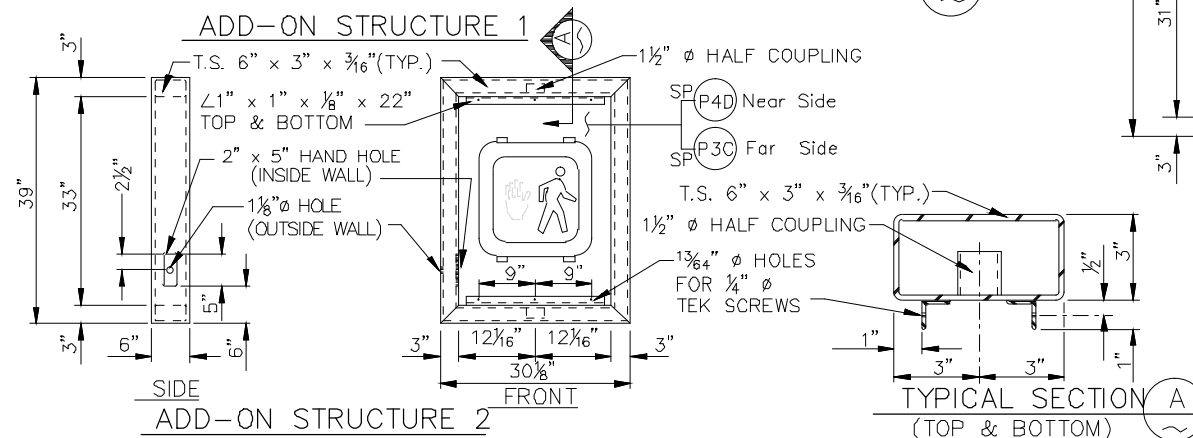
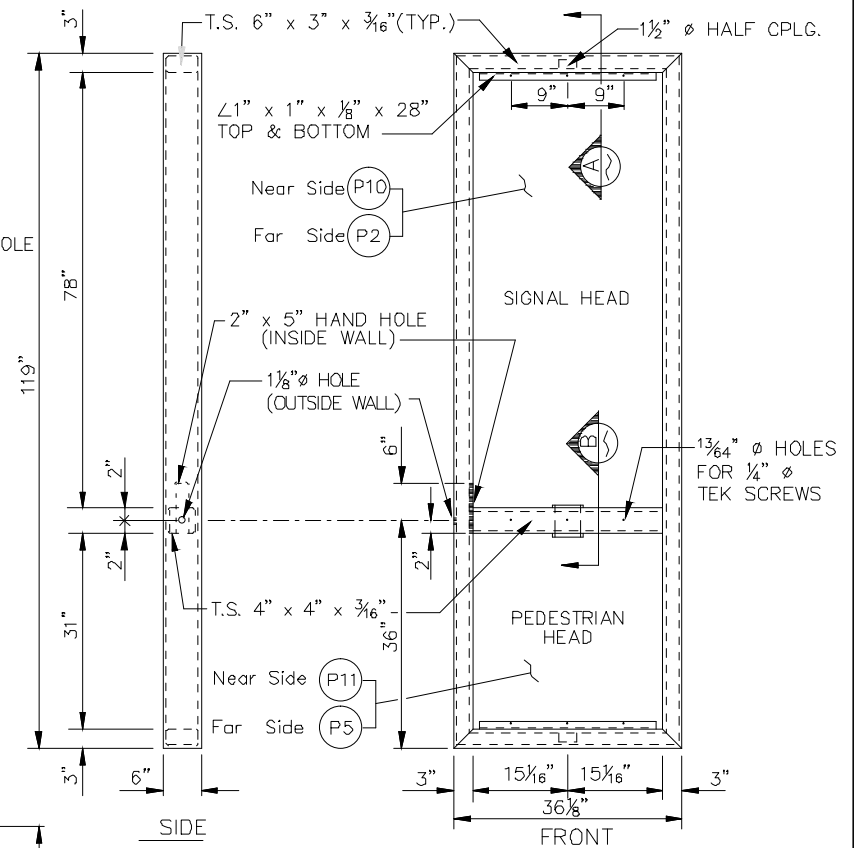
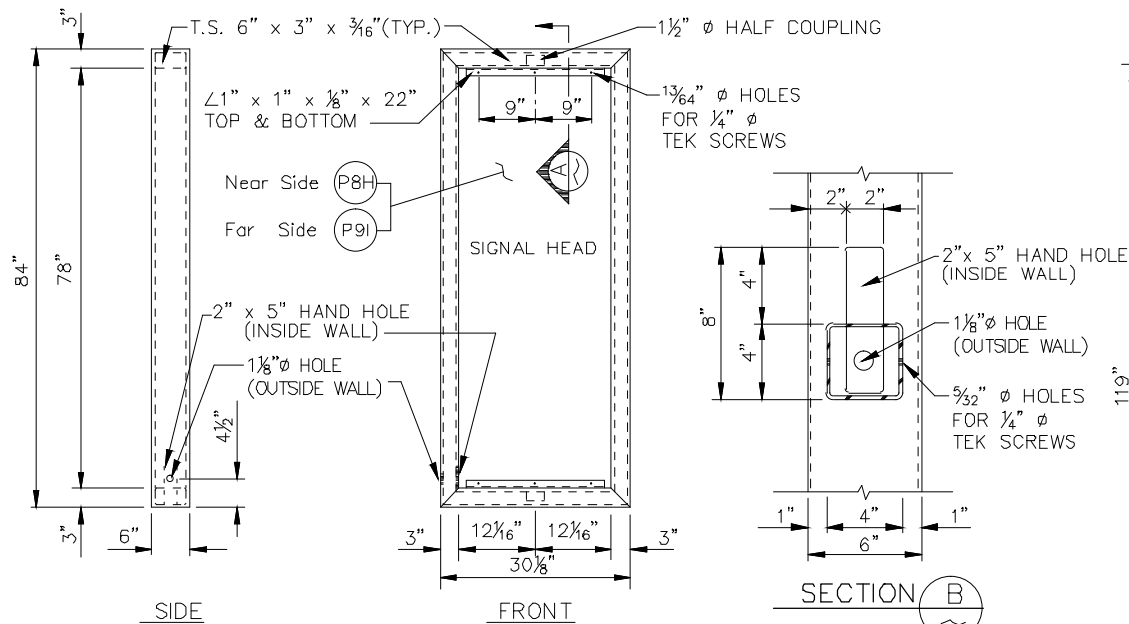
DETAIL NO.
G-3296-17

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:08/17

MODULAR POLE MAST ARM CONNECTION

DETAIL NO.
G-3296-17



ALL ADD-ON STRUCTURES SHALL BE ATTACHED TO THE MAIN STRUCTURE WITH A 3/8" CONTINUOUS WELDS ALONG THE ENTIRE HEIGHT OF THE ADD-ON STRUCTURE, FRONT AND BACK.

WELDING SHALL BE PERFORMED BY A CERTIFIED WELDER. NO WELDING SHALL BE PERFORMED UNTIL CERTIFICATION HAS BEEN APPROVED BY THE CITY ENGINEERING INSPECTOR.

WELDS SHALL BE GROUND SMOOTH AND PAINTED UPON COMPLETION.

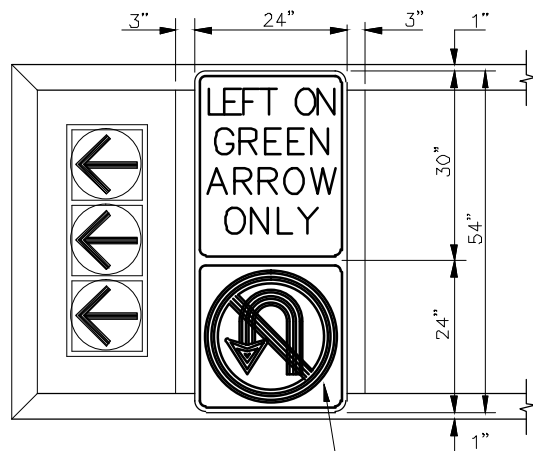
ALL ADD-ON STRUCTURE LOCATIONS SHALL BE APPROVED BY THE CITY ENGINEERING INSPECTOR PRIOR TO WELDING.

ALL TUBING WELDS SHALL BE TURNED INSIDE.

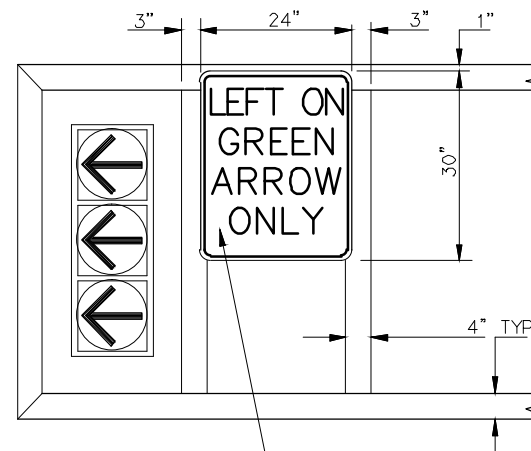
STRUCTURE SHALL BE PAINTED GOODYEAR BRONZE, COLOR & PAINT SHALL BE SUBMITTED TO THE CITY TRAFFIC ENGINEER FOR APPROVAL PRIOR TO ORDERING.

ALL HEADS SHALL BE MOUNTED ON 1 1/2" ALL-THREAD USING GROUNDING LOCKNUTS.

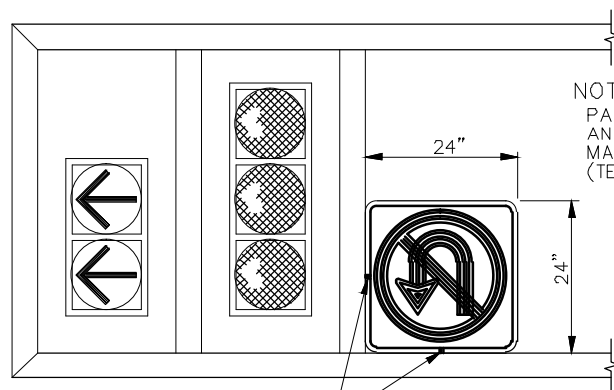
ALL PANELS SHALL BE FASTENED WITH 1/4" (#14) x 1" BLACK TEK SCREWS.



MOUNT DUAL SIGN ON SINGLE UNIT, CENTER OVER BLANK PANEL ON SIGNAL MAST ARM

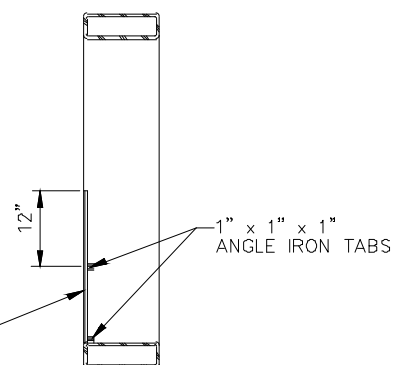


MOUNT SINGLE SIGN, CENTER OVER BLANK PANEL ON SIGNAL MAST ARM



NOTE:
PAINT BACK SIDES OF SIGN
AND ANGLE IRON TO MATCH
MAST ARM COLOR.
(TEMPE BRONZE)

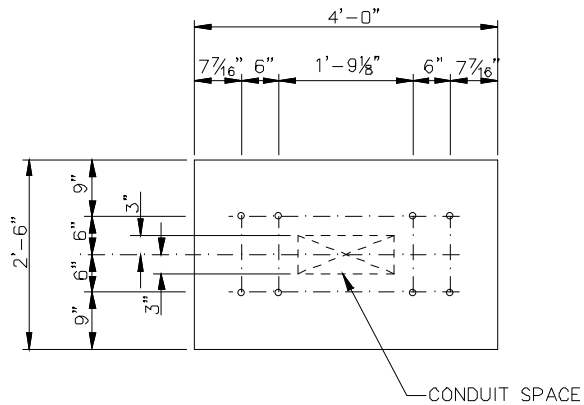
1" x 1" x 1" ANGLE IRON TABS WELDED TO MAST
ARM FOR SIGN MOUNTING. (SIGN FACE TO BE
FLUSH WITH APPROACH SIDE OF MAST ARM)



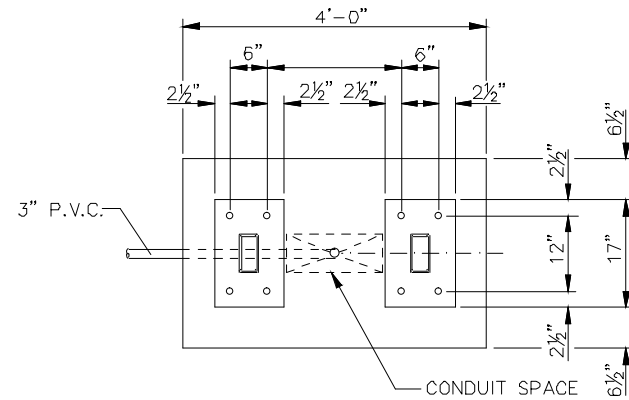
R10-5z



R3-4



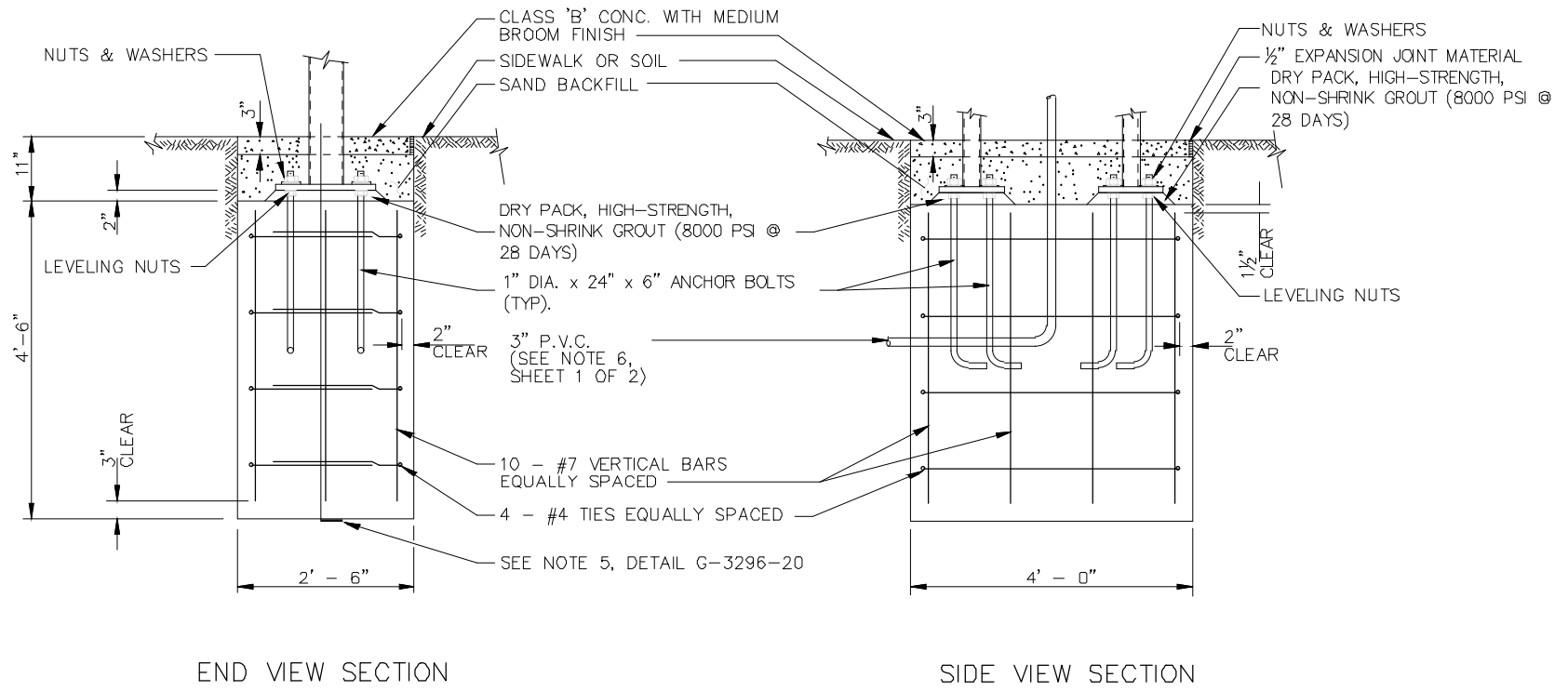
ANCHOR BOLT LAYOUT PLAN

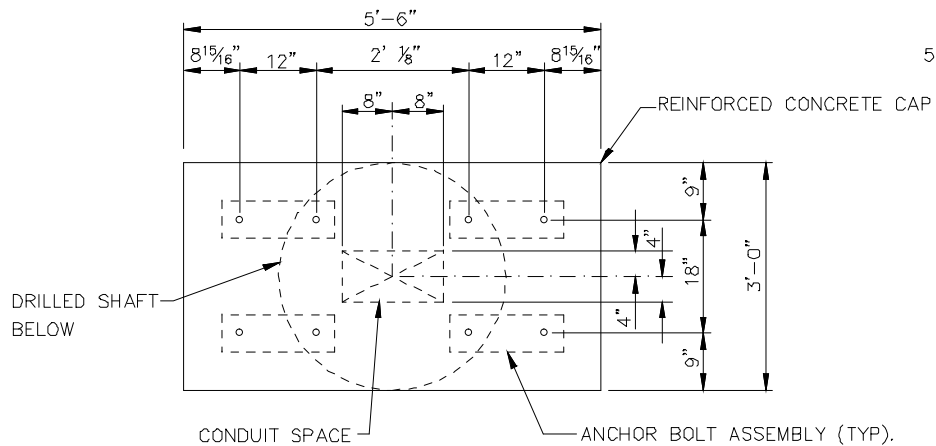


BASE PLATE LAYOUT PLAN

GENERAL NOTES

1. CONCRETE 4000 P.S.I. @ 28 DAYS
2. REBAR GRADE 60
3. ANCHOR BOLTS A-36 FULLY GALVANIZED
4. EXISTING SOIL CONDITIONS TO BE DETERMINED PRIOR TO FINAL FOUNDATION DESIGN.
5. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED.
6. ADDITIONAL 2" P.V.C. CONDUIT MAY BE REQUIRED FOR LOOPS, SEE SIGNAL PLAN.



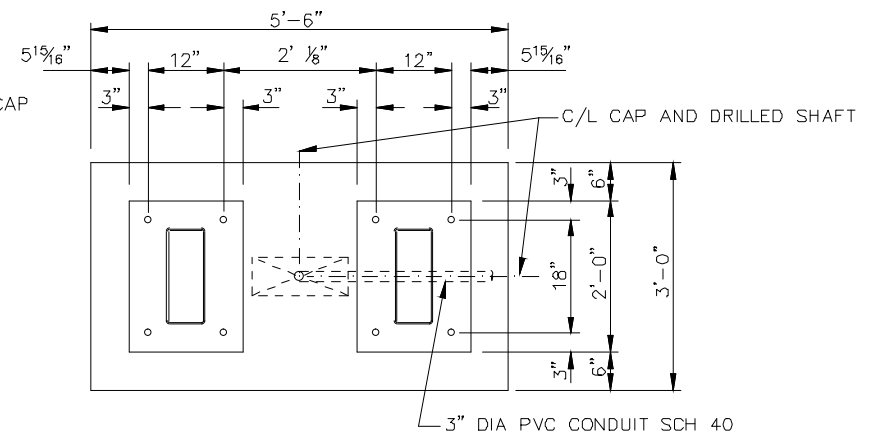


ANCHOR BOLT LAYOUT PLAN

N.T.S.

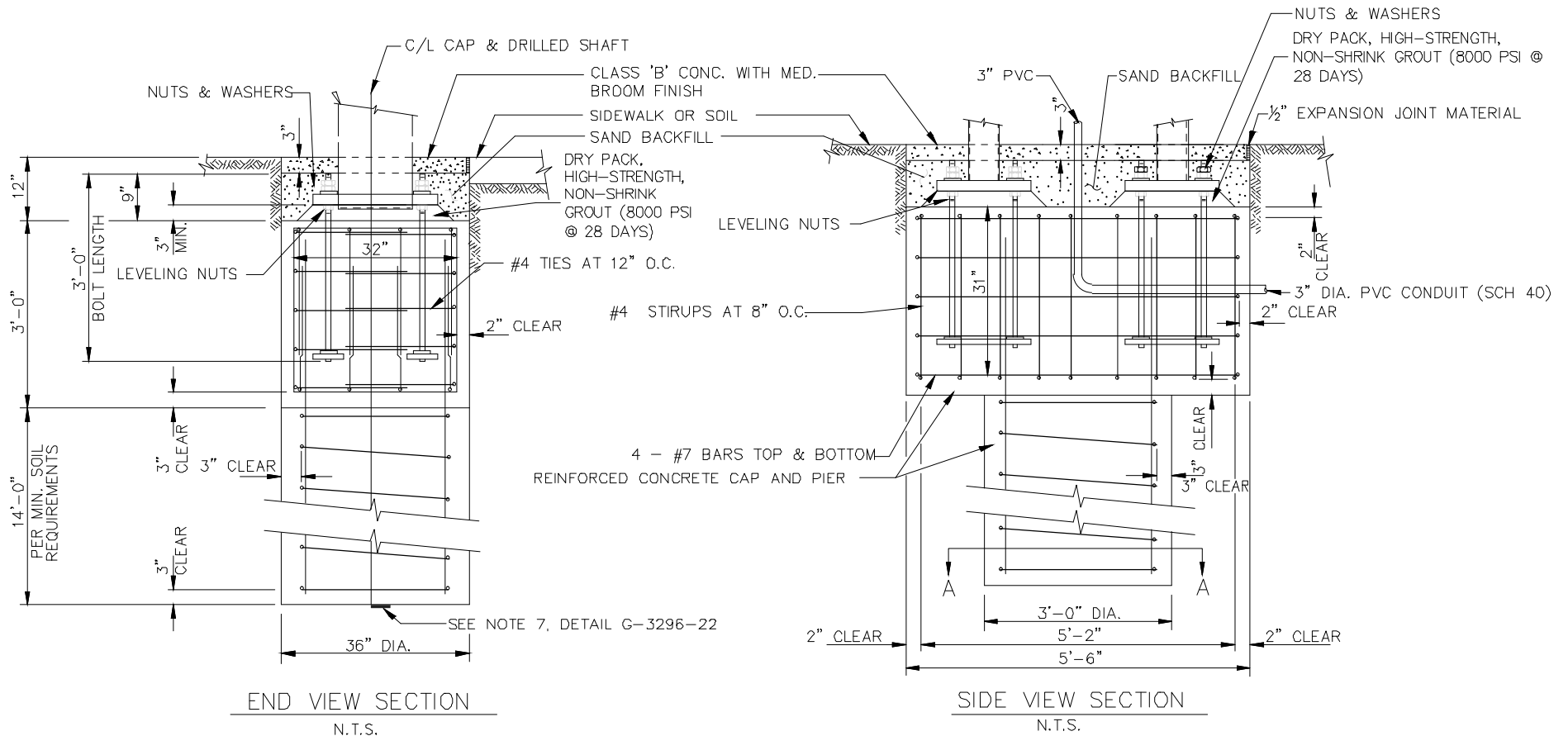
GENERAL NOTES

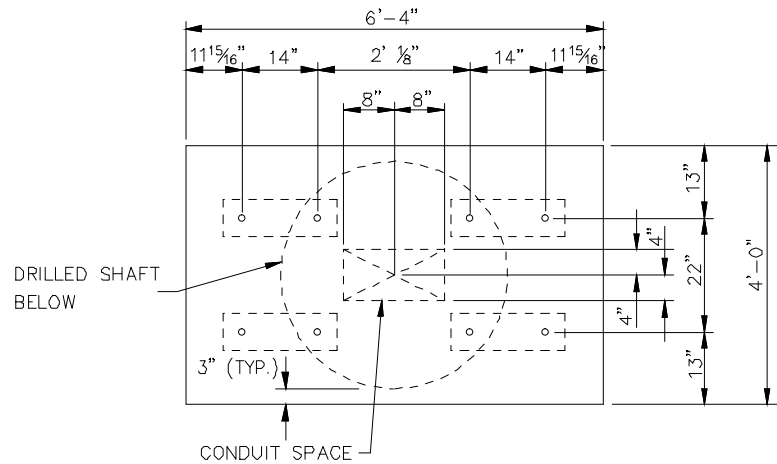
1. MINIMUM SOIL REQUIREMENTS:
THIS FOUNDATION DESIGN IS BASED ON SOILS ABLE TO DEVELOP THE FOLLOWING VALUES FOR CONCRETE FILLED DRILLED IN PLACE PIERS, SKIN FRICTION AT 500 LBS/SQ. FT., LATERAL BEARING PRESSURE = 200 LBS/ SQ. FT. PER FOOT OF DEPTH.
2. EXISTING SOIL CONDITIONS TO BE DETERMINED PRIOR TO FINAL FOUNDATION DESIGN.
3. CONCRETE 4000 P.S.I. @ 28 DAYS.
4. REBAR - ASTM 615 GRADE 60.
5. EMBEDDED PLATES - ASTM A-36.
6. ANCHOR BOLTS - A-36 FULLY GALVANIZED (ASTM 123)
7. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED.



BASE PLATE LAYOUT PLAN

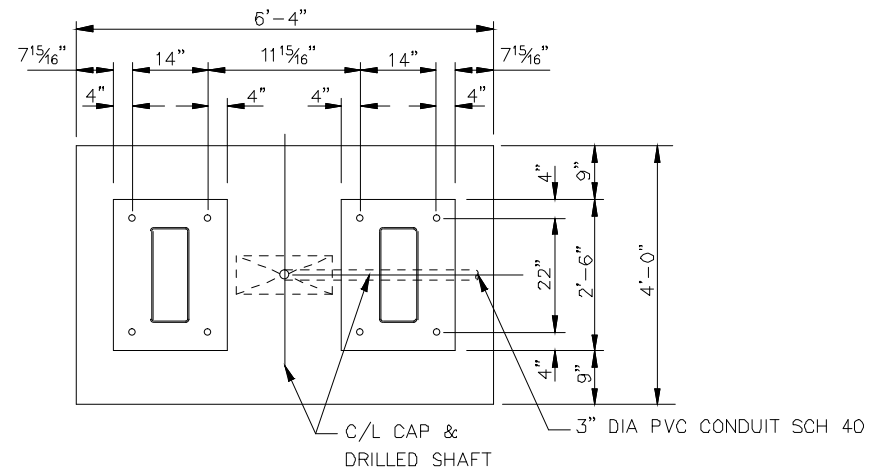
N.T.S.





ANCHOR BOLT LAYOUT PLAN

N.T.S.



BASE PLATE LAYOUT PLAN

N.T.S.

GENERAL NOTES

1. MINIMUM SOIL REQUIREMENTS:
THIS FOUNDATION DESIGN IS BASED ON SOILS ABLE TO DEVELOP THE FOLLOWING VALUES FOR CONCRETE FILLED DRILLED IN PLACE PIERS.
SKIN FRICTION AT 500 LBS/SQ. FT., LATERAL BEARING PRESSURE = 200 LBS/SQ. FT. PER FOOT OF DEPTH.
2. EXISTING SOIL CONDITIONS TO BE DETERMINED PRIOR TO FINAL FOUNDATION DESIGN.
3. CONCRETE 4000 P.S.I. AT 28 DAYS.
4. REBAR ASTM-A615 GRADE 60.
5. EMBEDDED PLATES ASTM A-36.
6. ANCHOR BOLTS - A-36 FULLY GALVANIZED (ASTM 123)
7. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED.

MAST ARM SEE
NOTE 8, DETAIL G-XXXX

NUTS & WASHERS

CLASS 'B' CONC. WITH MED.
BROOM FINISH
SIDEWALK OR SOIL
SAND BACKFILL

DRY PACK,
HIGH-STRENGTH,
NON-SHRINK
GROUT (8000 PSI
@ 28 DAYS)

LEVELING
NUTS

#4 TIES @ 12" O.C.

#4 STIRRUPS
@ 8" O.C.

4 - #7 BARS
TOP & BOTTOM
REINFORCED CONCRETE
CAP AND PIER

3" PVC

SAND BACKFILL

NUTS & WASHERS
DRY PACK, HIGH-STRENGTH,
NON-SHRINK GROUT (8000 PSI @
28 DAYS)
1/2" EXPANSION JOINT MATERIAL

3" DIA. PVC (SCH 40)

5" CLEAR

SIDE VIEW SECTION

N.T.S.

END VIEW SECTION

N.T.S.

14 - #7 VERTICAL BARS (TYP.)

3/8" SMOOTH SPIRAL TIE
WITH 8" PITCH

SECTION A - A

N.T.S.

DETAIL NO.
G-3296-25

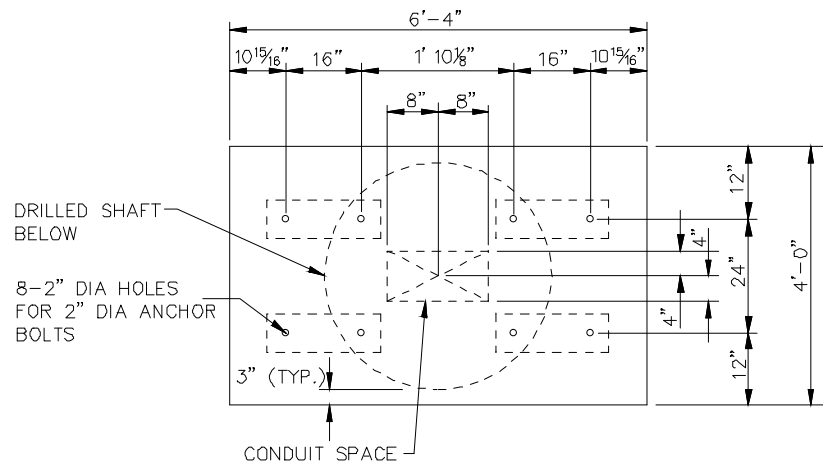
CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:08/17

TRAFFIC SIGNAL FOUNDATION DETAIL FOR MODULAR 45'
MAST ARM STRUCTURES (SHEET 2 OF 2)

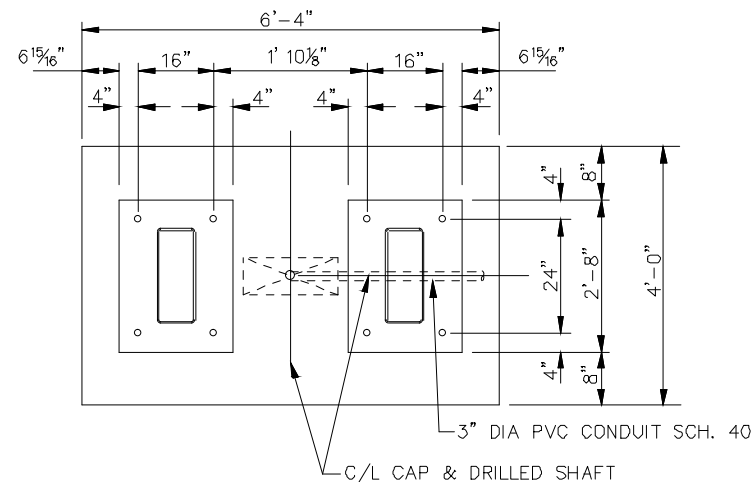
ASSEMBLY DRAWING ONLY
SPECIFICATIONS AND DESIGN
BY T.A. CAID INDUSTRIES, INC.
TUCSON, AZ

DETAIL NO.
G-3296-25



ANCHOR BOLT LAYOUT PLAN

N.T.S.

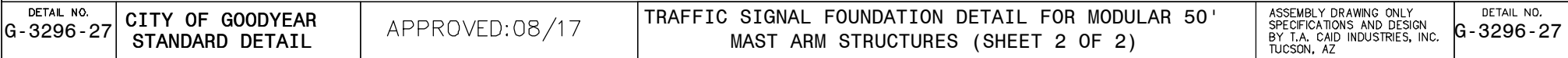


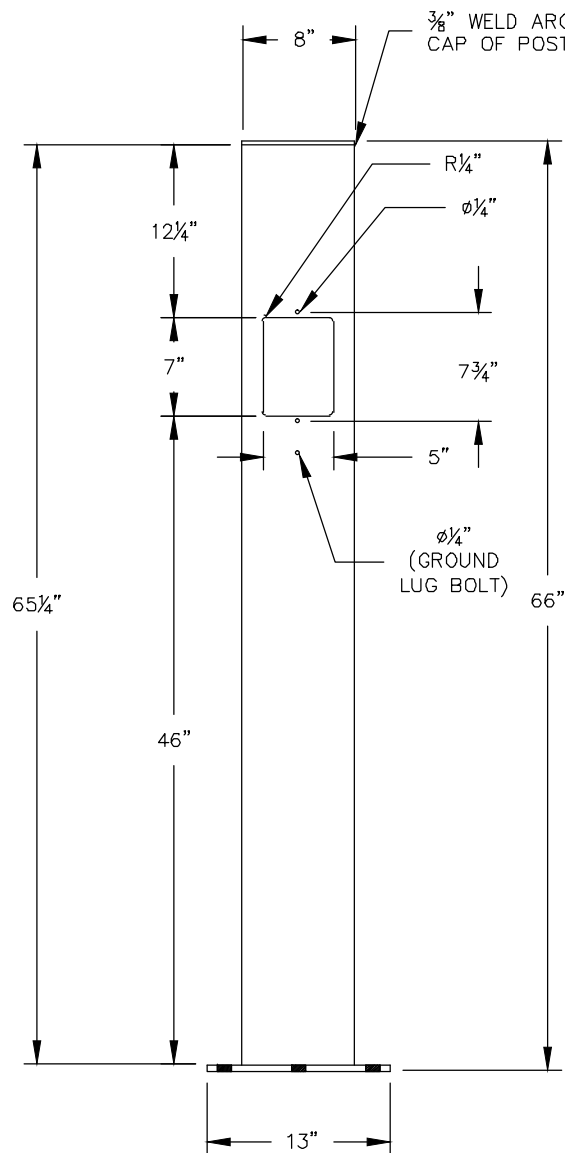
BASE PLATE LAYOUT PLAN

N.T.S.

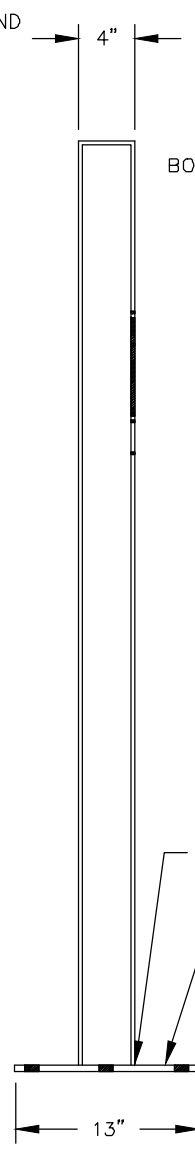
GENERAL NOTES

1. MINIMUM SOIL REQUIREMENTS:
THIS FOUNDATION DESIGN IS BASED ON SOILS ABLE TO DEVELOP THE FOLLOWING VALUES FOR CONCRETE FILLED DRILLED IN PLACE PIERS.
SKIN FRICTION AT 500 LBS/SQ. FT., LATERAL BEARING PRESSURE = 200 LBS/SQ. FT. PER FOOT OF DEPTH.
2. EXISTING SOIL CONDITIONS TO BE DETERMINED PRIOR TO FINAL FOUNDATION DESIGN.
3. CONCRETE 4000 P.S.I. AT 28 DAYS.
4. REBAR - ASTM 615 GRADE 60.
5. EMBEDDED PLATES - ASTM A-36.
6. ANCHOR BOLTS - A-36 FULLY GALVANIZED (ASTM 123)
7. A 25' COIL OF NO. 4 STRANDED A.W.G. BARE COPPER CONDUCTOR SHALL BE INSTALLED BEFORE THE CONCRETE IS POURED.

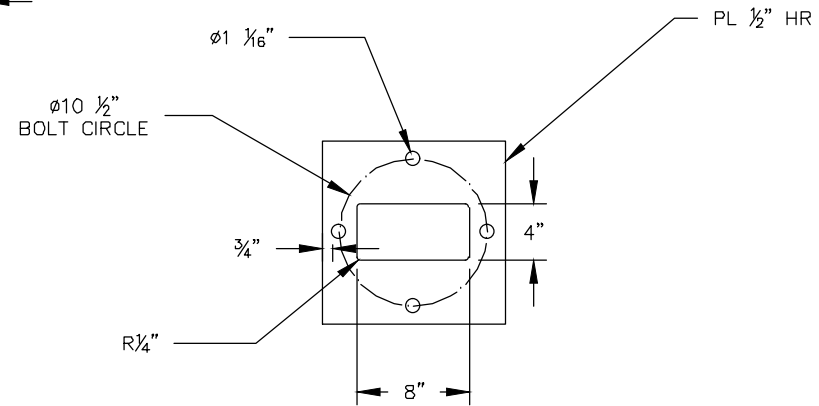




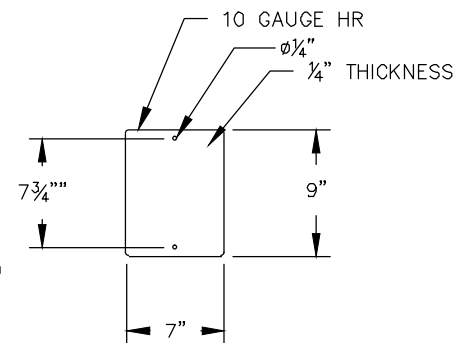
FRONT VIEW



SIDE VIEW



BASE PLATE DETAIL



HANDHOLE COVER DETAIL

ALL PEDESTRIAN POSTS SHALL USE A 2' DIAMETER x 3' DEEP CONCRETE FOUNDATION WITH 10 1/2" BOLT CIRCLE AND 1 1/2" PVC SCH. 40 CONDUIT.

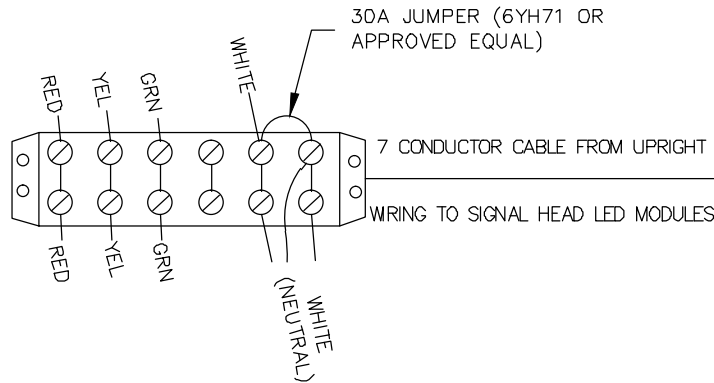
ALL TUBING WELDS SHALL BE TURNED INSIDE.

STRUCTURE SHALL BE PAINTED GOODYEAR BRONZE, COLOR & PAINT SHALL BE SUBMITTED TO THE CITY TRAFFIC ENGINEER FOR APPROVAL PRIOR TO ORDERING.

TRAFFIC SIGNAL WIRING SCHEDULE

Phase/Corner	UPRIGHT	A-POLE	A3-POLE	Add On/Leading	Ped Post
1	R/Bk, O/Bk, G/Bk	R/Bk, O/Bk, G/Bk	R/Bk, O/Bk, G/Bk	Bk/R, O/R, BI/R	
2	R, O, G	R, O, G	R, O, G	R/W, Bk/W, G/W	
3	R/Bk, O/Bk, G/Bk	R/Bk, O/Bk, G/Bk	R/Bk, O/Bk, G/Bk	Bk/R, O/R, BI/R	
4	R, O, G	R, O, G	R, O, G	R/W, Bk/W, G/W	
5	R/Bk, O/Bk, G/Bk	R/Bk, O/Bk, G/Bk	R/Bk, O/Bk, G/Bk	Bk/R, O/R, BI/R	
6	R, O, G	R, O, G	R, O, G	R/W, Bk/W, G/W	
7	R/Bk, O/Bk, G/Bk	R/Bk, O/Bk, G/Bk	R/Bk, O/Bk, G/Bk	Bk/R, O/R, BI/R	
8	R, O, G	R, O, G	R, O, G	R/W, Bk/W, G/W	
2 PED	Bk, BI	Bk, BI	Bk, BI	R/Gr, BI/Bk	
4 PED	Bk, BI	Bk, BI	Bk, BI	R/Gr, BI/Bk	
6 PED	Bk, BI	Bk, BI	Bk, BI	R/Gr, BI/Bk	
8 PED	Bk, BI	Bk, BI	Bk, BI	R/Gr, BI/Bk	
PED BUTTON DC+	W/Bk	W/Bk	W/Bk		W/Rd
PED BUTTON COM	W	W	W		W
NORTHEAST	RED TAPE	Double Red Tape	3x Red Tape		4x Red Tape
SOUTHEAST	WHITE TAPE	Double White Tape	3x White Tape		4x White Tape
SOUTHWEST	BLUE TAPE	Double Blue Tape	3x Blue Tape		4x Blue Tape
NORTHWEST	GREEN TAPE	Double Green Tape	3x Green Tape		4x Green Tape

TERMINAL BLOCK DIAGRAM:
INSIDE SIGNAL HEADS

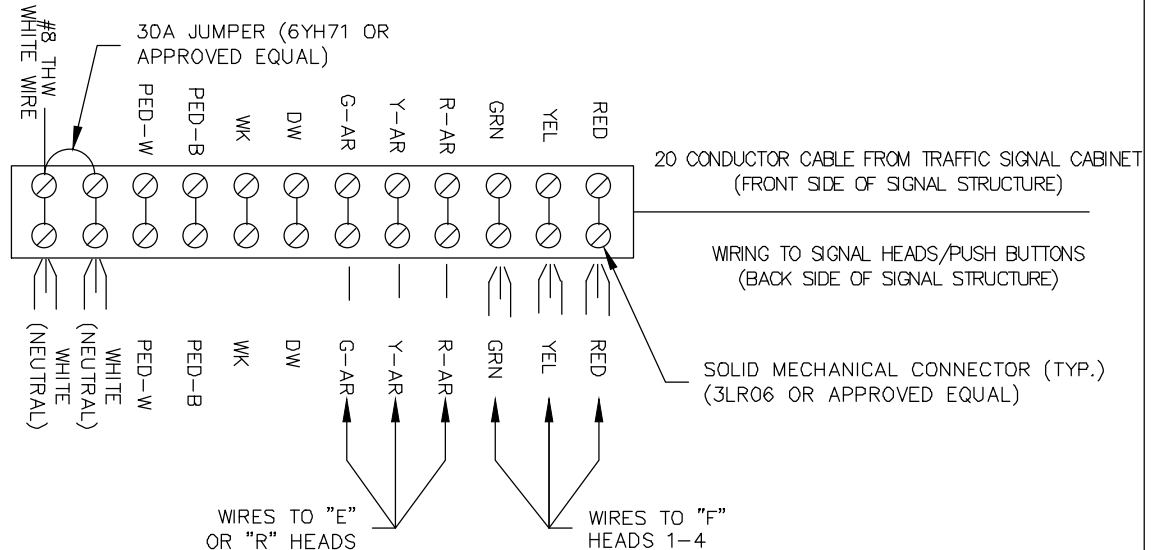


ALL TRAFFIC SIGNAL CABLE SHALL BE IMSA 19-1 SOLID CORE COPPER.

WIRING STANDARD:

- 20 CONDUCTOR (IMSA 19-1) UNSPLICED BETWEEN EACH STRUCTURE AND TRAFFIC SIGNAL CABINET
- 7 CONDUCTOR (IMSA 19-1) TO ALL VEHICLE SIGNAL HEADS
- 4 CONDUCTOR (IMSA 19-1) TO ALL PEDESTRIAN SIGNAL HEADS
- 4 CONDUCTOR (IMSA 19-1) TO ALL PEDESTRIAN PUSH BUTTONS

TERMINAL BLOCK DIAGRAM:
INSIDE SIGNAL STRUCTURE UPRIGHT



JACKRABBIT TRAIL
19500 W

PERRYVILLE RD
18700 W

CITRUS RD
17900 W

COTTON LN
17100 W

SARIVAL AVE
16300 W

REEMS RD
15500 W

BULLARD AVE
14700 W

LITCHFIELD RD
13900 W

DYSART RD
13100 W

CAMELBACK RD
5000 N

INDIAN SCHOOL RD
4100 N

THOMAS RD
2900 N

MCDOWELL RD
1600 N

VAN BUREN ST
300 N

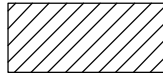
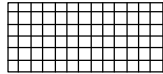
YUMA RD
1200 S

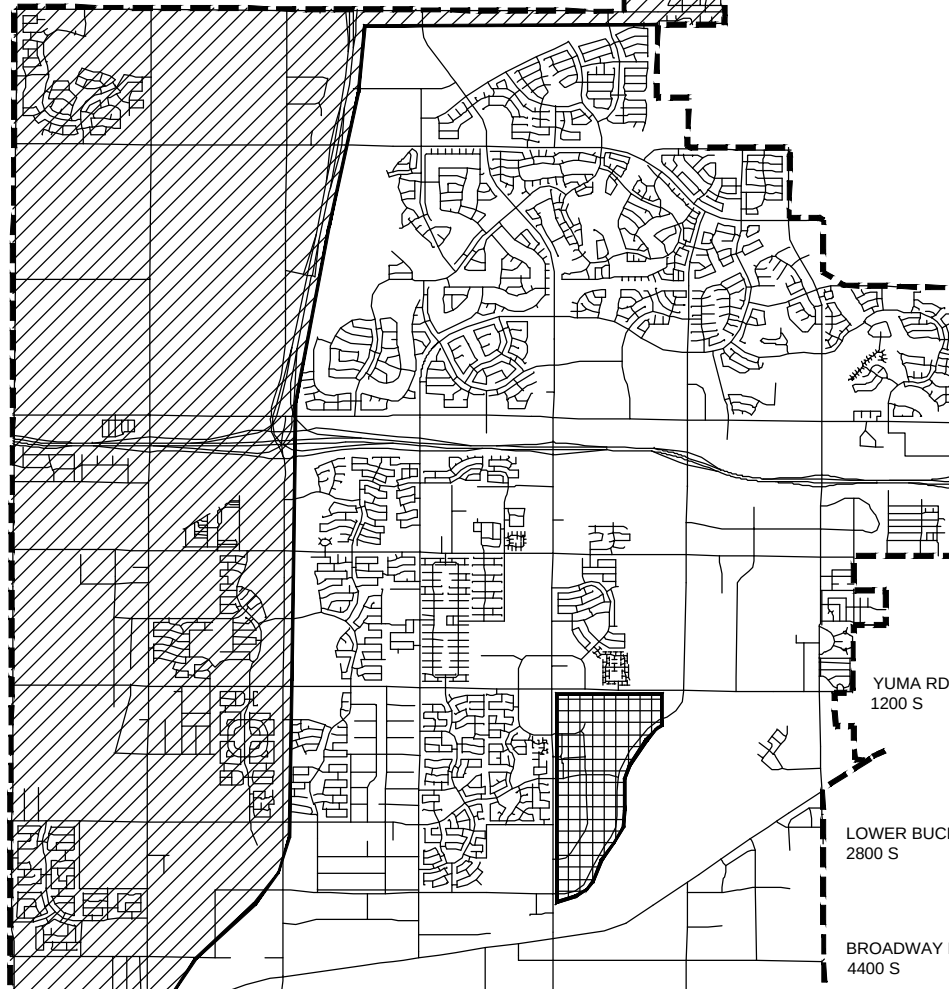
LOWER BUCKEYE RD
2800 S

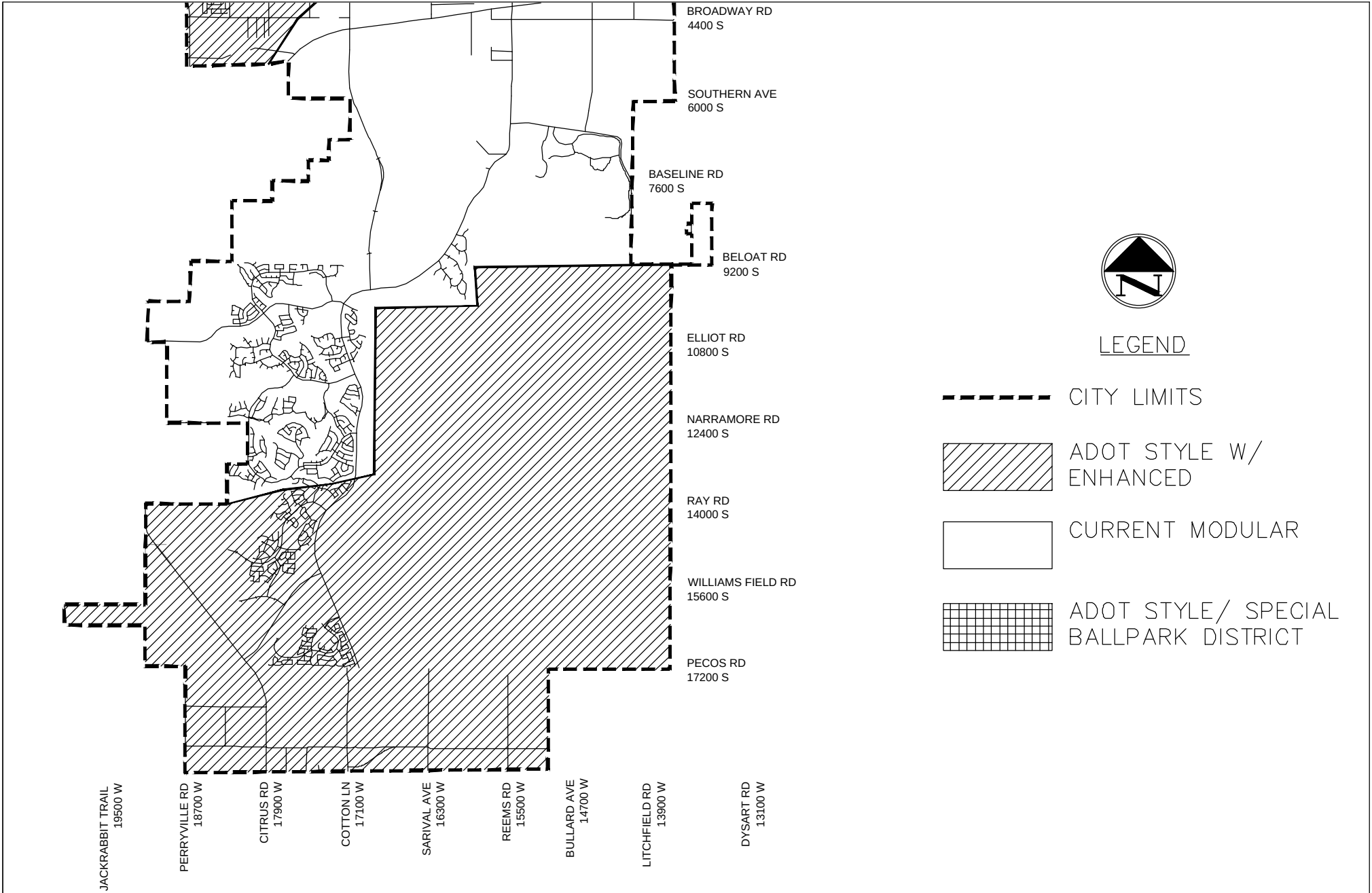
BROADWAY RD
4400 S

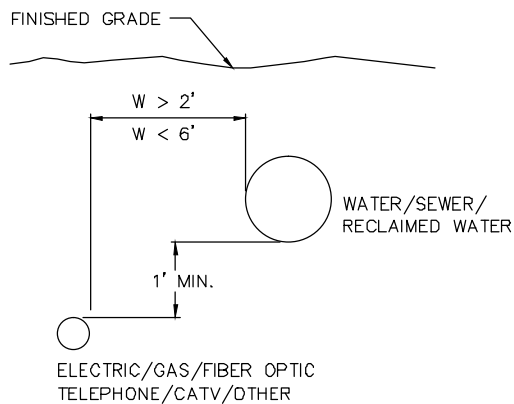


LEGEND

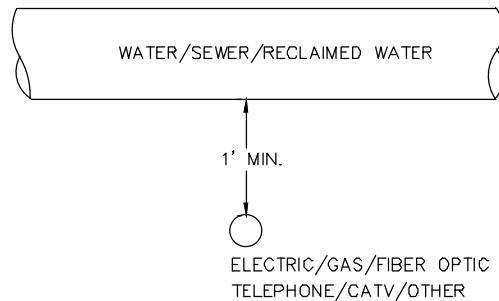
-  CITY LIMITS
-  ADOT STYLE W/
ENHANCED
-  CURRENT MODULAR
-  ADOT STYLE/ SPECIAL
BALLPARK DISTRICT



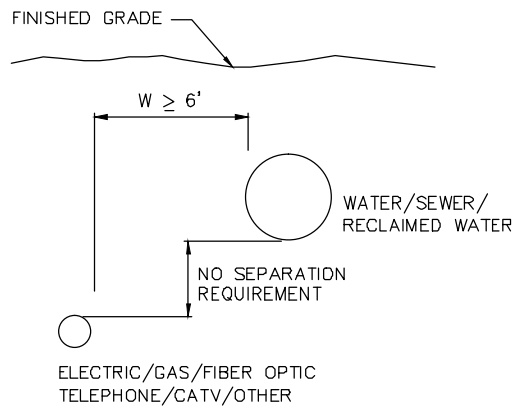




2' TO 6' SEPARATION



CROSSING

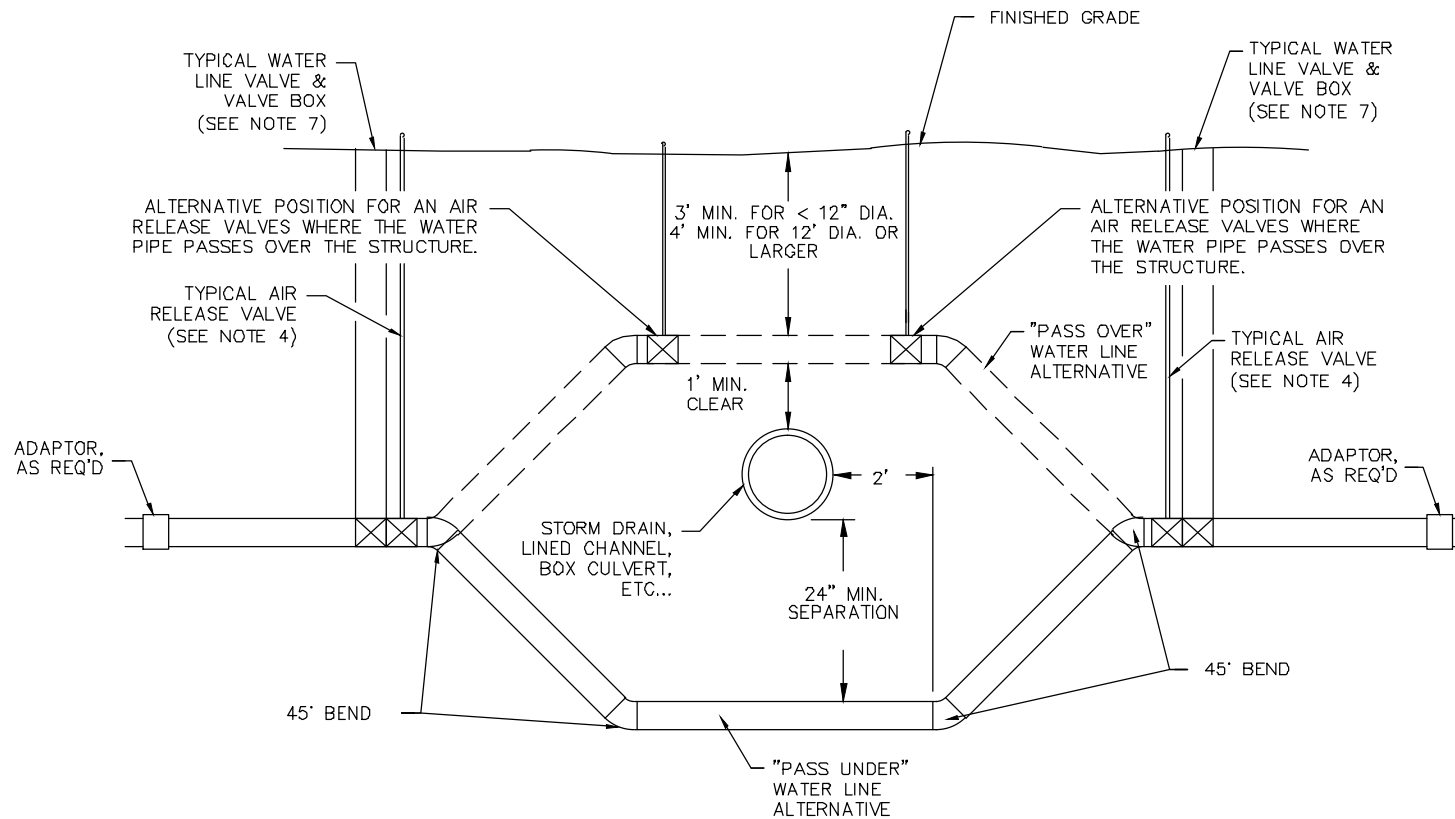


6'+ SEPARATION

NOTES

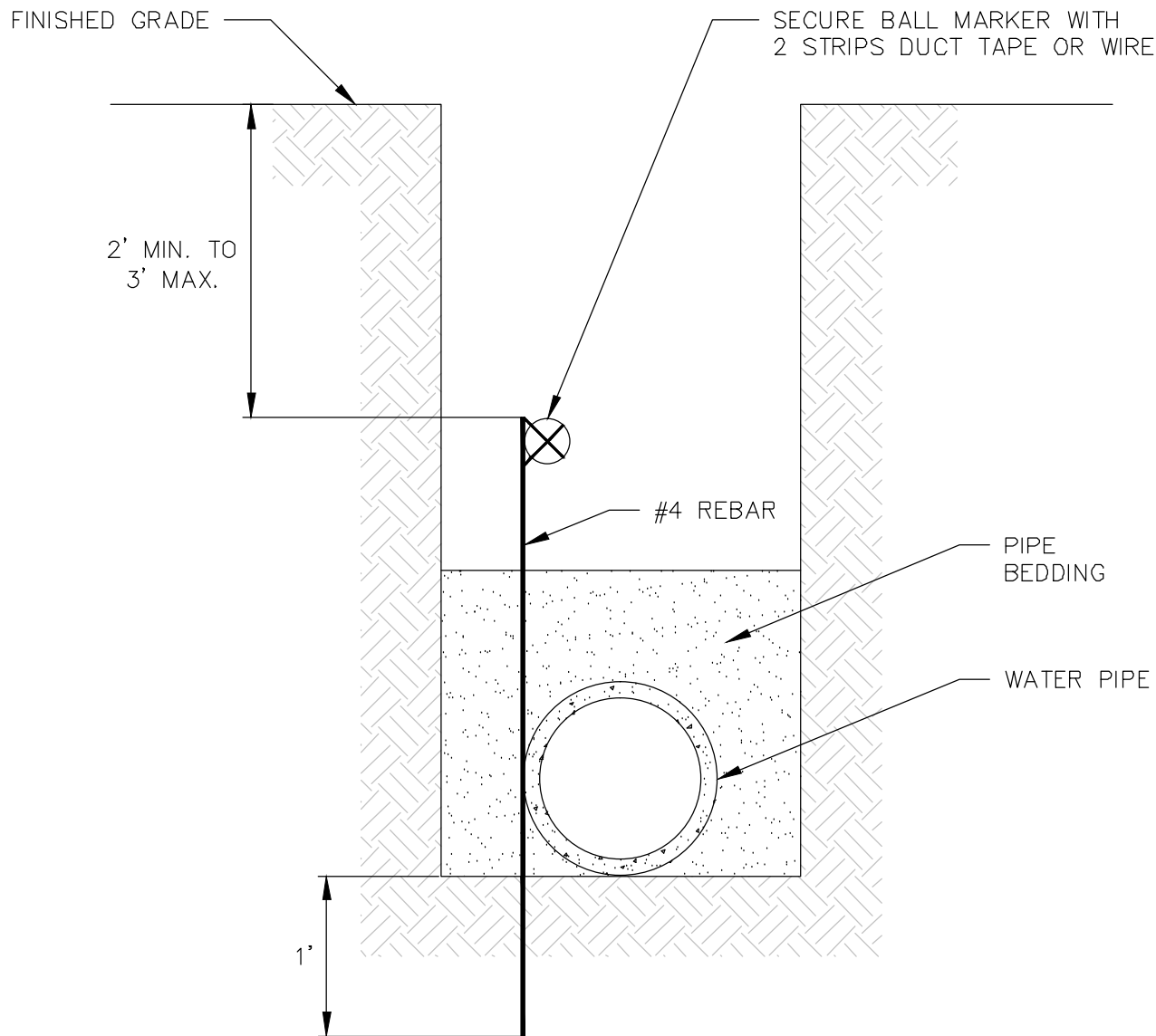
1. ELECTRIC SEPARATION REQUIREMENTS ARE FOR PRIMARY ELECTRIC CONDUCTORS. SEPARATION FOR SERVICE CONDUCTORS SHALL BE PROVIDED BY THE ENGINEER ON THE CONSTRUCTION PLANS.
2. PRIMARY ELECTRIC, GAS, TELEPHONE, CABLE TV OR FIBER OPTIC LINES SHALL NOT CROSS ABOVE A WATER LINE WITHOUT WRITTEN APPROVAL FROM THE CITY'S WATER RESOURCES DEPARTMENT.
3. IF APPROVED, A UTILITY LOCATOR STRIP SHALL BE INSTALLED AND CLSM PER MAG SECTION 604 & 728 SHALL BE USED AS BACKFILL.
4. MINIMUM 2' HORIZONTAL SEPARATION. NO VERTICAL SEPARATION REQUIRED IF HORIZONTAL SEPARATION IS GREATER THAN 6'.

W = HORIZONTAL SEPARATION



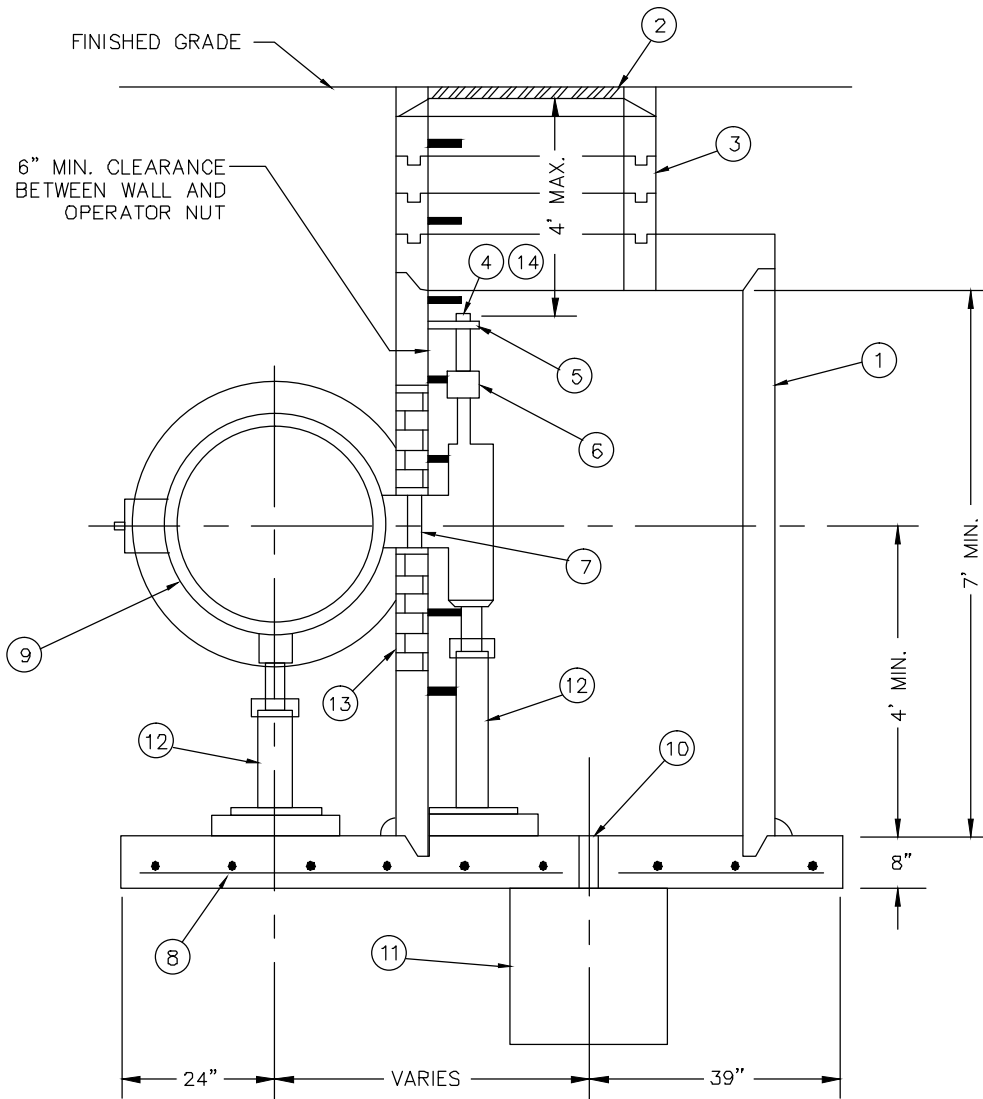
NOTES:

1. THIS DETAIL PROVIDES SEPARATION & COVER REQUIREMENTS ONLY.
2. RESTRAINED JOINTS SHALL BE INSTALLED PER MAG STANDARDS 302 & 303.
3. ALL PIPE SHALL BE DUCTILE IRON PIPE.
4. UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER, AIR RELEASE VALVES SHALL BE INSTALLED AT LOCATIONS ALONG WATER AND RECLAIMED WATER LINES.
5. ELECTRONIC BALL MARKERS SHALL BE LOCATED AT ALL BENDS.
6. VALVES AND FITTINGS ARE NOT ALLOWED WITHIN A VERTICAL REALIGNMENT SECTION.
7. SEE CHAPTER 5.0 & 5.2 OF THE EDS&PM FOR INFORMATION REGARDING THE INSTALLATION OF VALVES ON A VERTICAL REALIGNMENT SECTION.



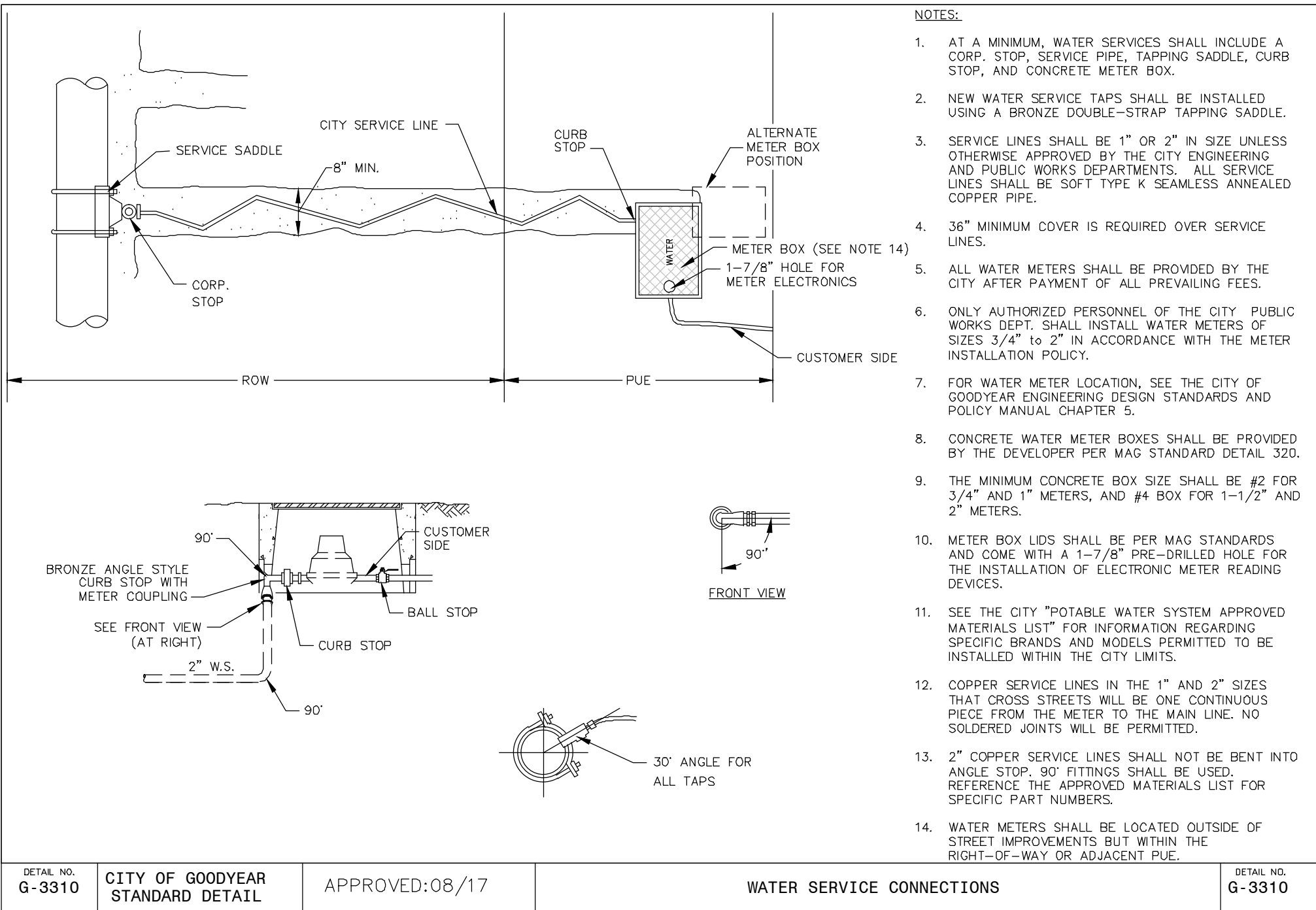
NOTES:

1. CONTRACTOR IS TO INSTALL, ACTIVATE, AND PROGRAM BALL MARKER WITH SIZE OF MAIN, MATERIAL OF MAIN, AND THE TYPE OF FITTING.
2. BALL MARKERS ARE REQUIRED AT CHANGES IN DIRECTION, BENDS, FITTINGS, AND STUBS FOR ALL WATER LINES 6" AND GREATER.
3. FOR WATER LINE DIAMETERS 16" AND GREATER, BALL MARKERS SHALL BE LOCATED AT ALL FITTINGS AND AT A MAXIMUM SPACING OF 440', IF VALVES ARE NOT PROVIDED AT A CLOSER SPACING.
4. SEE THE CITY POTABLE WATER APPROVED MATERIALS LIST FOR ACCEPTABLE BALL MARKER MANUFACTURERS.



NOTES:

1. 48" I.D. MANHOLE SHAFT PER MAG STD. DETAIL 420-2, TYPE "B" TOP.
2. 30" MANHOLE FRAME & COVER PER MAG STD. DETAIL.
3. GROUTED ADJUSTMENT RINGS.
4. OPERATOR NUT.
5. WALL BRACKET.
6. PACKING GLAND.
7. SUGGESTED 6" EXTENSION.
8. #4 REBAR, 12" ON CENTER EACH WAY (2" CLEAR TYPICAL).
9. BUTTERFLY VALVE, LARGER THAN 16 INCHES.
10. 3" DIAMETER DRAIN.
11. 8 CU. FT. GRAVEL SUMP.
12. ADJUSTABLE PIPE SADDLE SUPPORT.
13. RECTANGULAR CUTOUT IN MANHOLE SHAFT FILL SPACE BETWEEN SHAFT AND PIPE WITH 1" SHEET FOAM, BRICK, AND MORTAR.
14. OPERATOR NUT MUST BE ACCESSIBLE FROM MANHOLE AT ALL TIMES.



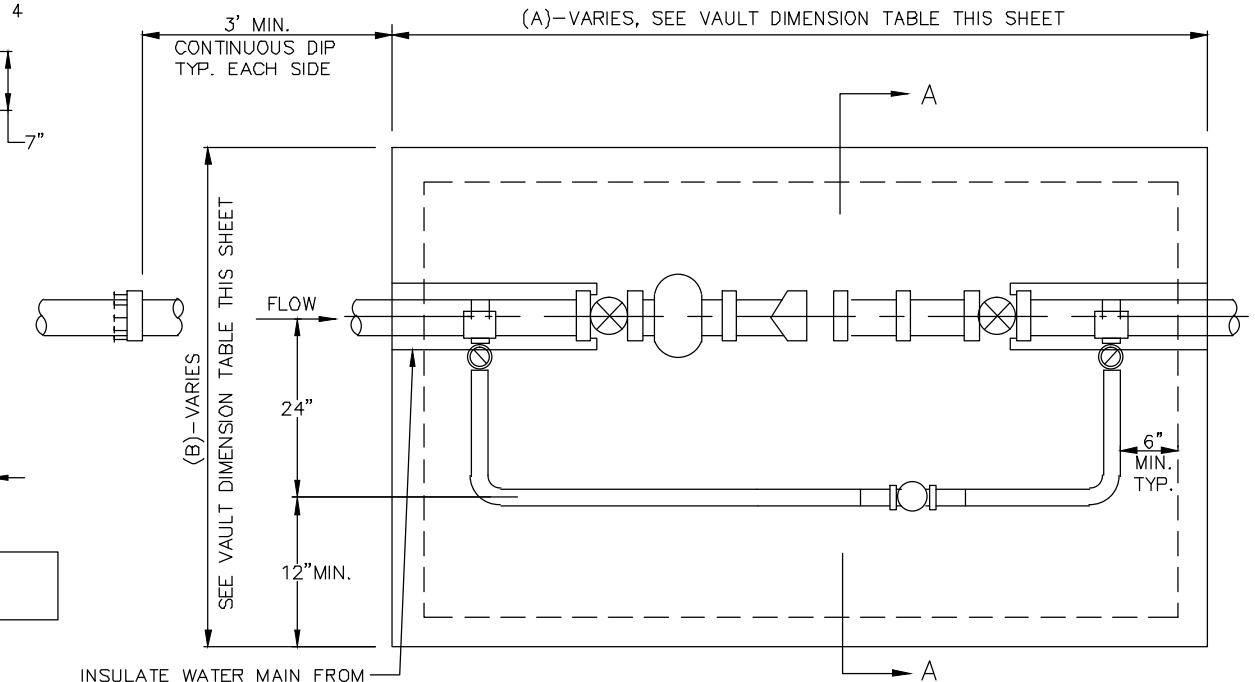
DETAIL NO.
G-3310

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:08/17

WATER SERVICE CONNECTIONS

DETAIL NO.
G-3310

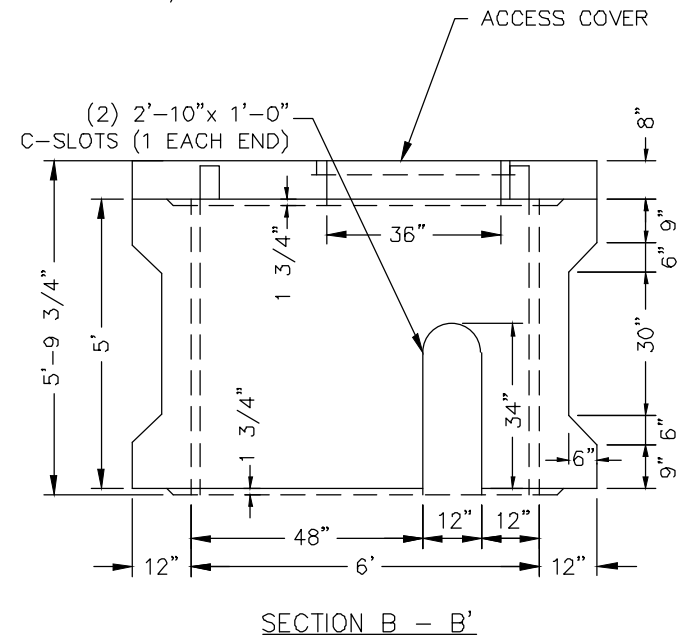
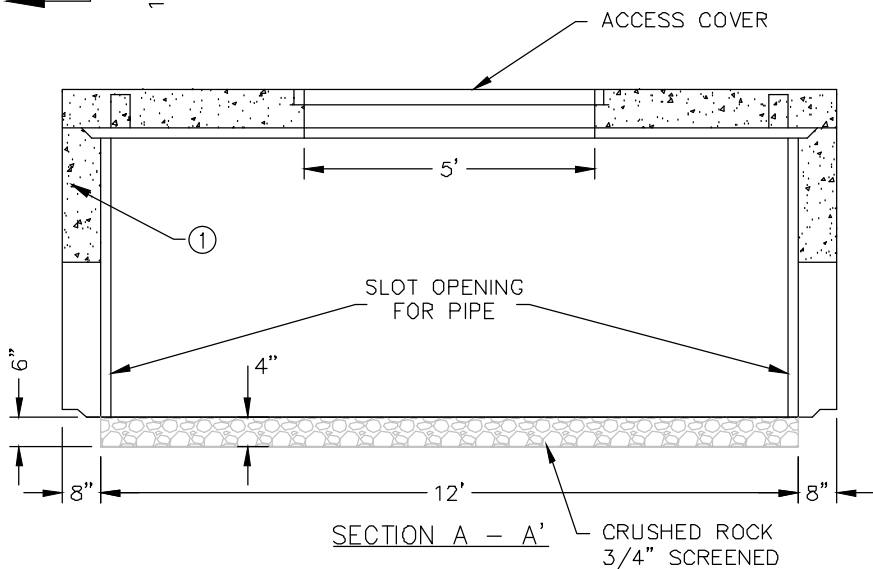
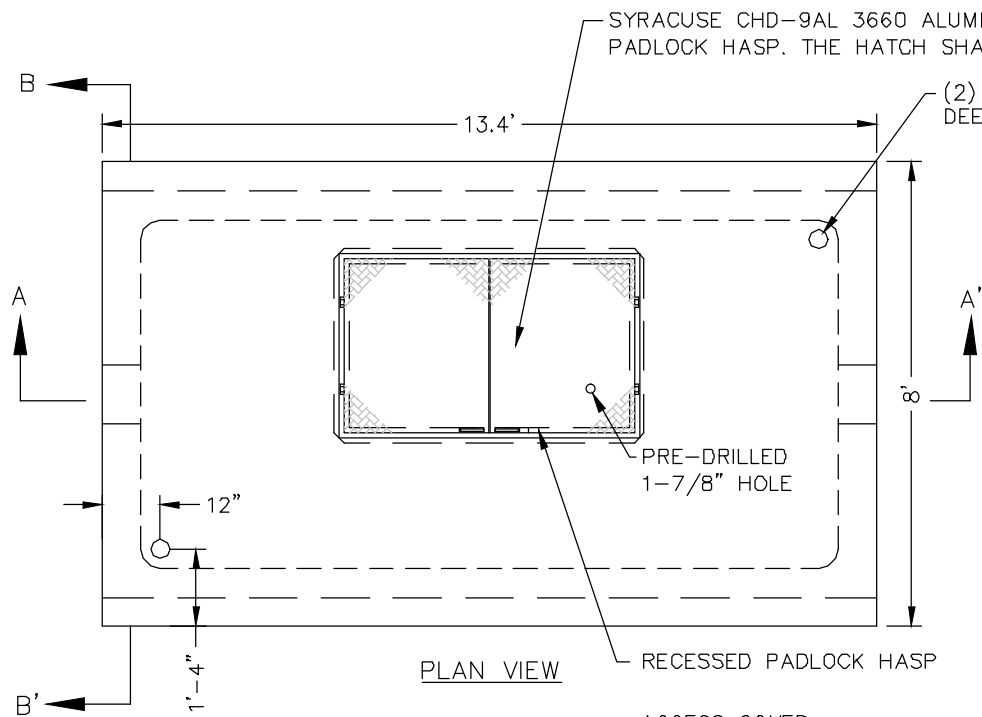


PLAN VIEW

VAULT DIMENSIONS TABLE		
MAIN SIZE	4"	6"
(A)	11'-2"	13'-0"
(B)	5'-8"	7'-0"

NOTES:

1. CONCRETE SHALL BE MAG CLASS A.
2. METER VAULTS MAY BE EITHER CAST-IN-PLACE OR PRE-CAST CONCRETE.
3. ALL FITTINGS SHALL BE FLANGED EXCEPT FOR 2" COPPER BYPASS. UNIFLANGE IS NOT ACCEPTABLE UNLESS APPROVED BY THE CITY ENGINEERING AND PUBLIC WORKS DEPARTMENTS. 2" COPPER BYPASS WILL BE JOINED WITH SILVER SOLDER EXCEPT AT 2" CORP. STOPS.
4. COVERS SHALL HAVE A SYRACUSE CHD-9AL 3660 ALUMINUM FRAME DOUBLE LEAF HATCH WITH RECESSED PADLOCK HASP. THE HATCH SHALL HAVE A PRE-DRILLED 1-7/8" METER READER HOLE.
5. ALL JOINTS SHALL BE SEALED USING CONSEAL CS-101 BUTYL RUBBER ROPE.

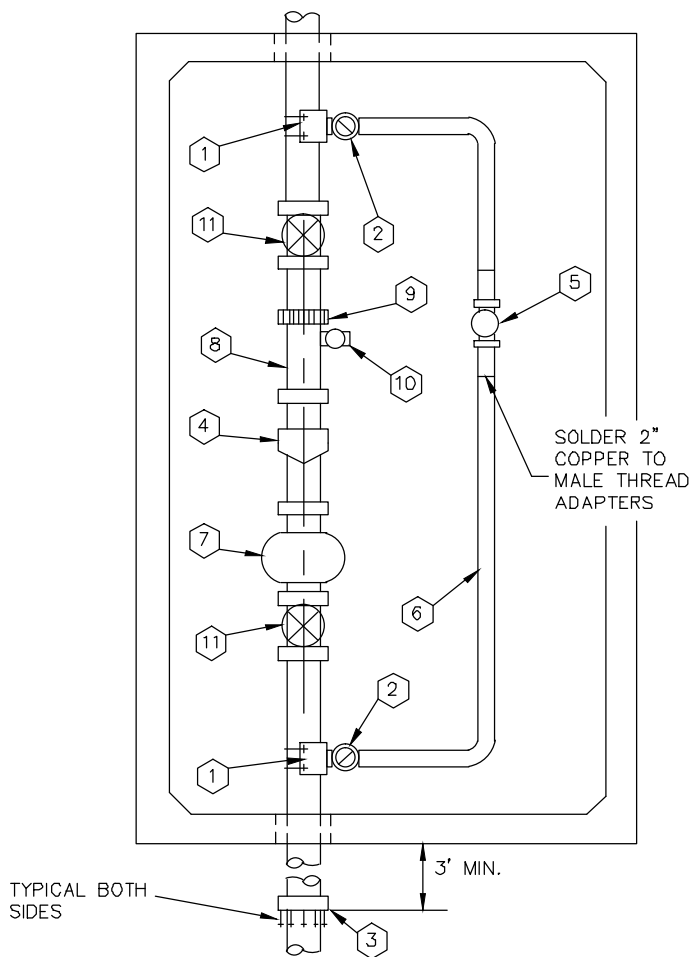


STRUCTURAL NOTES:

- ① CONCRETE SHALL BE MAG CLASS A.
- ② REBAR: ASTM A-615 GRADE 60.
- ③ MESH: ASTM A-185 GRADE 65.
- ④ DESIGN: ACI-318-99 BUILDING CODE ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES".

GENERAL NOTES:

- 1) ALL JOINTS SHALL BE SEALED USING CONSEAL CS-101 BUTYL RUBBER ROPE.



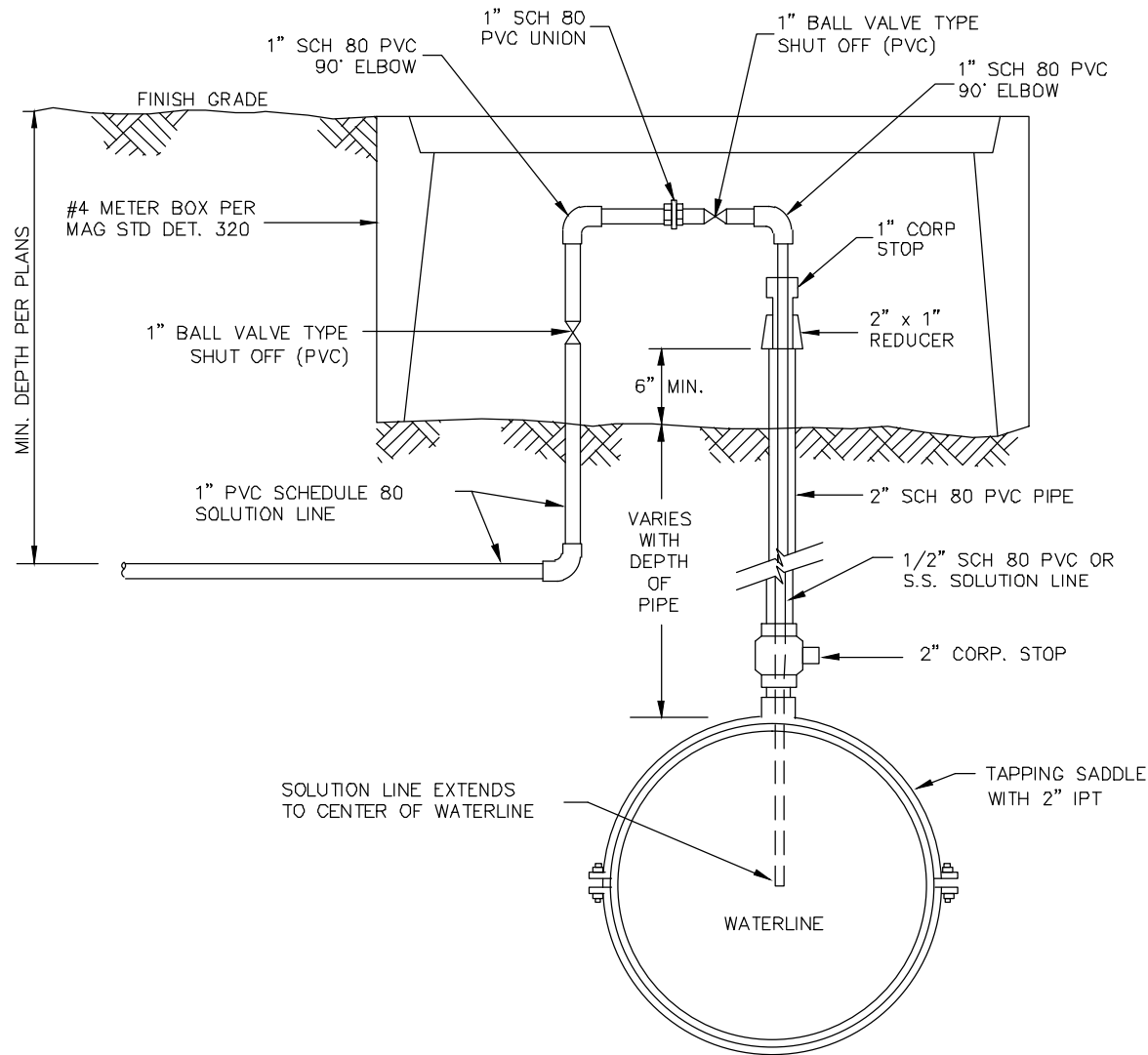
COMPOUND/TURBOMETER

KEY NOTES

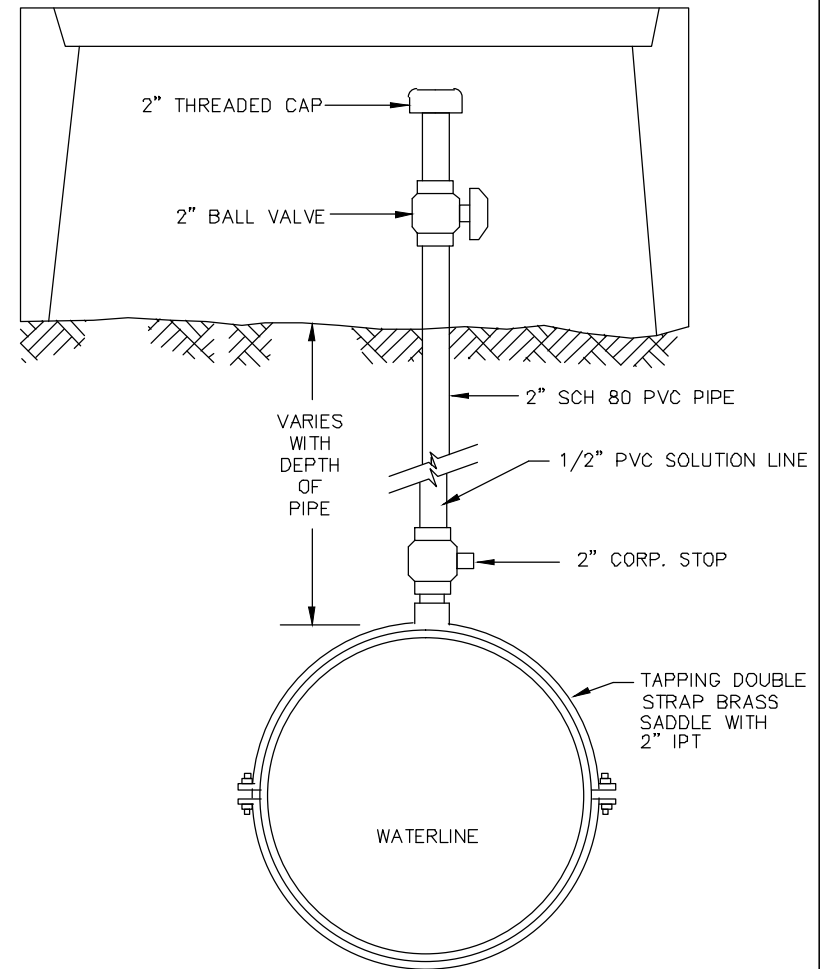
- 1 DOUBLE STRAP ALL BRONZE SERVICE SADDLES, OR FLANGED X FLANGED TEE WITH FLANGED X FLANGED VALVE FOR SIZES 4" OR LARGER.
- 2 CORP. STOP.
- 3 ADAPTER, FLANGED TO MECH. JOINT FOR A.C.P.
- 4 TURBOMETER OR COMPOUND METER.
- 5 BRONZE CHECK VALVE FOR 2" LINE, CAST IRON WITH COUNTERWEIGHT FOR 4" LINES AND LARGER. (SAME SIZE AS BY-PASS LINE).
- 6 2" RIDGED TYPE "K" COPPER BY-PASS LINE, 4" OR LARGER TO BE DUCTILE IRON. NOT LESS THAN ONE PIPE SIZE SMALLER THAN METER IN NOTE 4.
- 7 STRAINER, SUPPLIED WITH METER.
- 8 FLANGED SPOOL (3 PIPE DIAMETERS IN LENGTH, MIN.).
- 9 PROVIDE RESTRAINED FLEX COUPLING ADAPTERS (RFCA) FOR ALL LINES 4" OR LARGER.
- 10 2" THREADED OUTLET AND BALL VALVE NOT NEEDED IF VERTICAL TEST VALVE IS PROVIDED ON METER.
- 11 RESILIENT WEDGE GATE VALVE, FLANGED, WITH HAND WHEEL, OPEN LEFT, WITH NON-RISING STEM.

NOTES:

1. THE DESIGN OF 4" METERS OR METERS LARGER THAN 8" MAY REQUIRE ADDITIONAL INFORMATION FROM THE CITY. CONTACT THE CITY PUBLIC WORKS DEPARTMENT PRIOR TO BEGINNING DESIGN WORK.
2. INSTALLATION OF A REMOTE READING DEVICE TO BE REQUIRED AS DIRECTED BY THE PUBLIC WORKS DEPARTMENT.
3. AN APPROVED BACKFLOW PREVENTION ASSEMBLY SHALL BE REQUIRED DOWNSTREAM OF THE WATER METER. CONTACT PUBLIC WORKS, BACKFLOW PREVENTION FOR SPECIFIC INFORMATION.

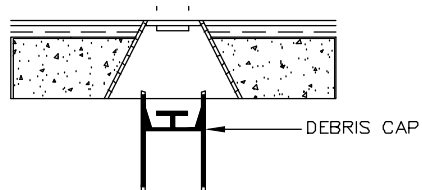


CHLORINE INJECTION ASSEMBLY

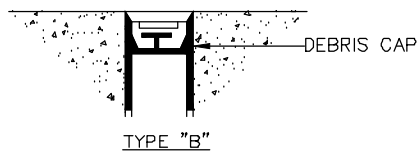


TAP FOR FUTURE CHLORINE INJECTION ASSEMBLY

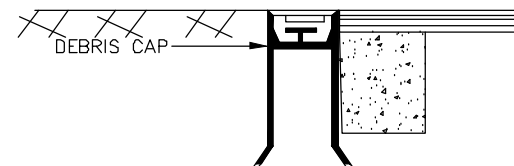
NOTE:
SPECIFICATIONS ON ALL FITTINGS
SHALL EXCEED THE MAXIMUM
PRESSURES OF THE SYSTEM.



TYPE "A"



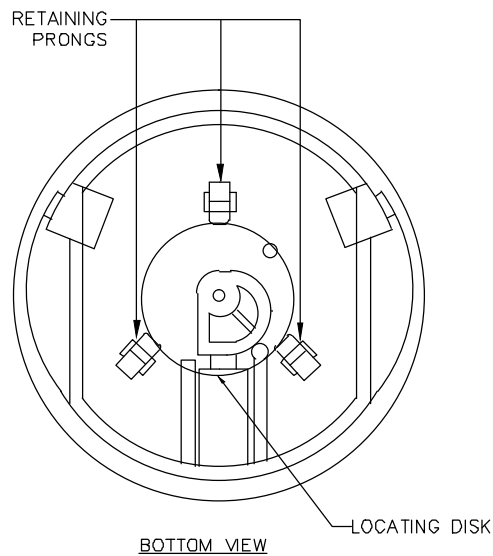
TYPE "B"



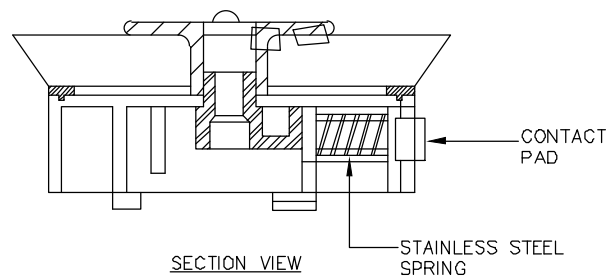
TYPE "C"

NOTES

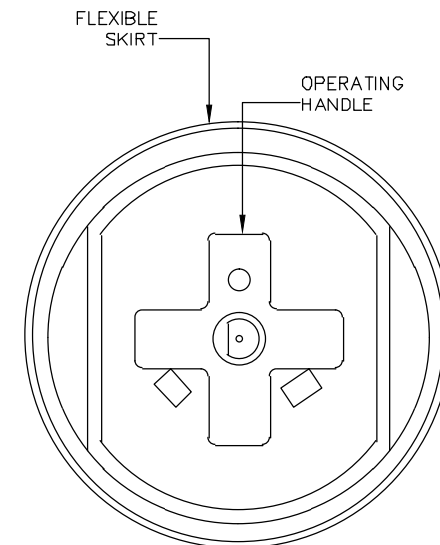
1. DEBRIS CAP SHALL BE INSTALLED AS CLOSE UNDER THE CAST IRON COVER WITHOUT INTERFERING WITH COVER OPERATION.
2. THE DEBRIS CAPS SHALL BE PROVIDED AS IDENTIFIED IN THE APPROVED MATERIALS LIST.
3. THE DEBRIS CAP SHALL BE COMPRISED OF A HOLLOW MEMBER HAVING A CYLINDRICAL OUTER SURFACE, A CLOSURE FOR ONE END, AND THREE-POINT RESILIENT CONTACT PADS PROJECTING FROM THE OUTER SURFACE. THE CAP SHALL HAVE A FLEXIBLE SKIRT PROVIDING AN OUTWARD SEAL PREVENTING DEBRIS FROM GETTING PAST THE CAP. THE CAP MUST WITHSTAND, WITHOUT SLIPPAGE, A MINIMUM VERTICAL FORCE OF 50 POUNDS, AT A LOADING RATE OF 1.0 INCHES/MINUTE. THE CAP SHALL HAVE RETAINING PRONGS TO RETAIN A STANDARD LOCATING COIL.
4. THE CAP SHALL BE MOLDED PER THE APPROVED MATERIALS LIST.



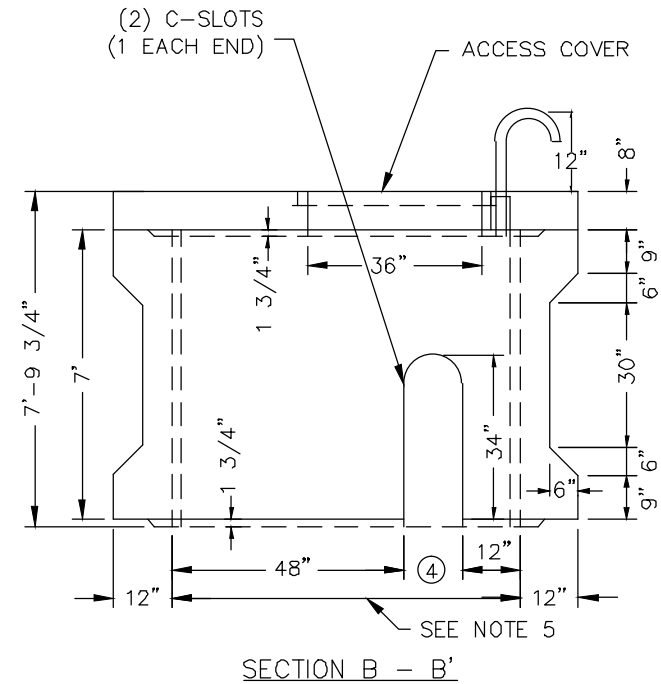
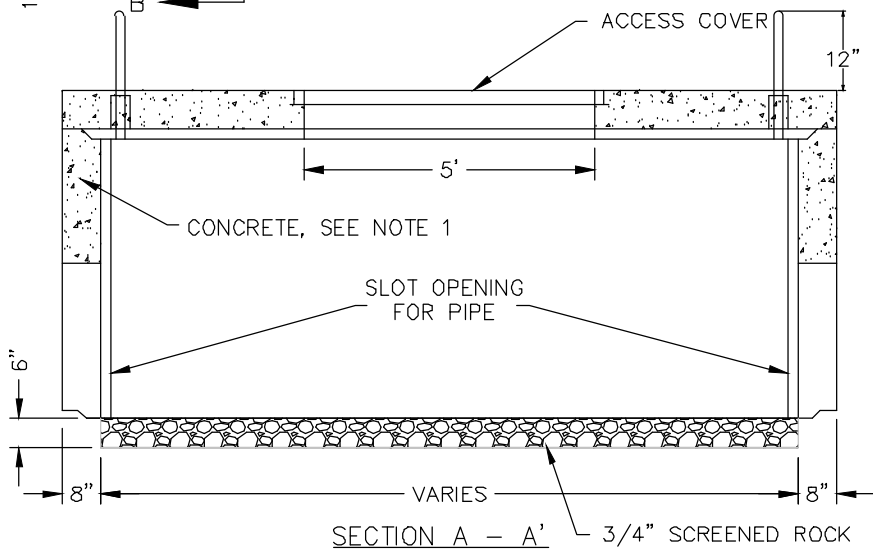
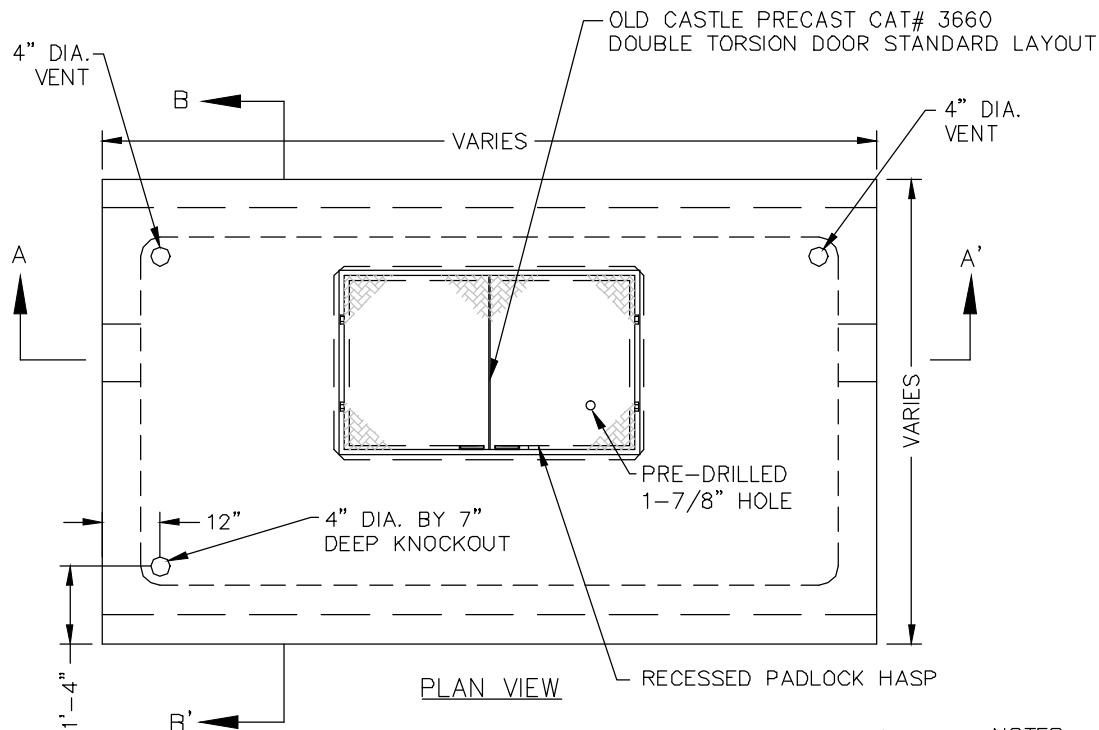
BOTTOM VIEW



SECTION VIEW



TOP VIEW



NOTES:

1. CONCRETE: CLASS A PER MAG STANDARDS.
2. REBAR: ASTM A-615 GRADE 60.
3. MESH: ASTM A-185 GRADE 65.
4. WIDTH SHALL BE 12 INCHES MINIMUM. WIDTH FOR PIPE DIAMETERS GREATER THAN 6 INCHES SHALL EQUAL THE PIPE DIAMETER PLUS 6 INCHES.
5. WIDTH SHALL BE 8 FEET MINIMUM. WIDTH MAY INCREASE AS REQUIRED BY THE CITY ENGINEERING AND PUBLIC WORKS DEPARTMENTS.
6. ALL VAULTS SHALL BE LOCATED OFF THE ROADWAY. 2-4 INCH GALVANIZED VENTS WITH WIRE MESH ON EACH END SHALL BE INSTALLED.
7. DESIGN: ACI-318-99 BUILDING CODE ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES".
8. ALL JOINTS SHALL BE SEALED USING CONSEAL CS-101 BUTYL RUBBER ROPE.

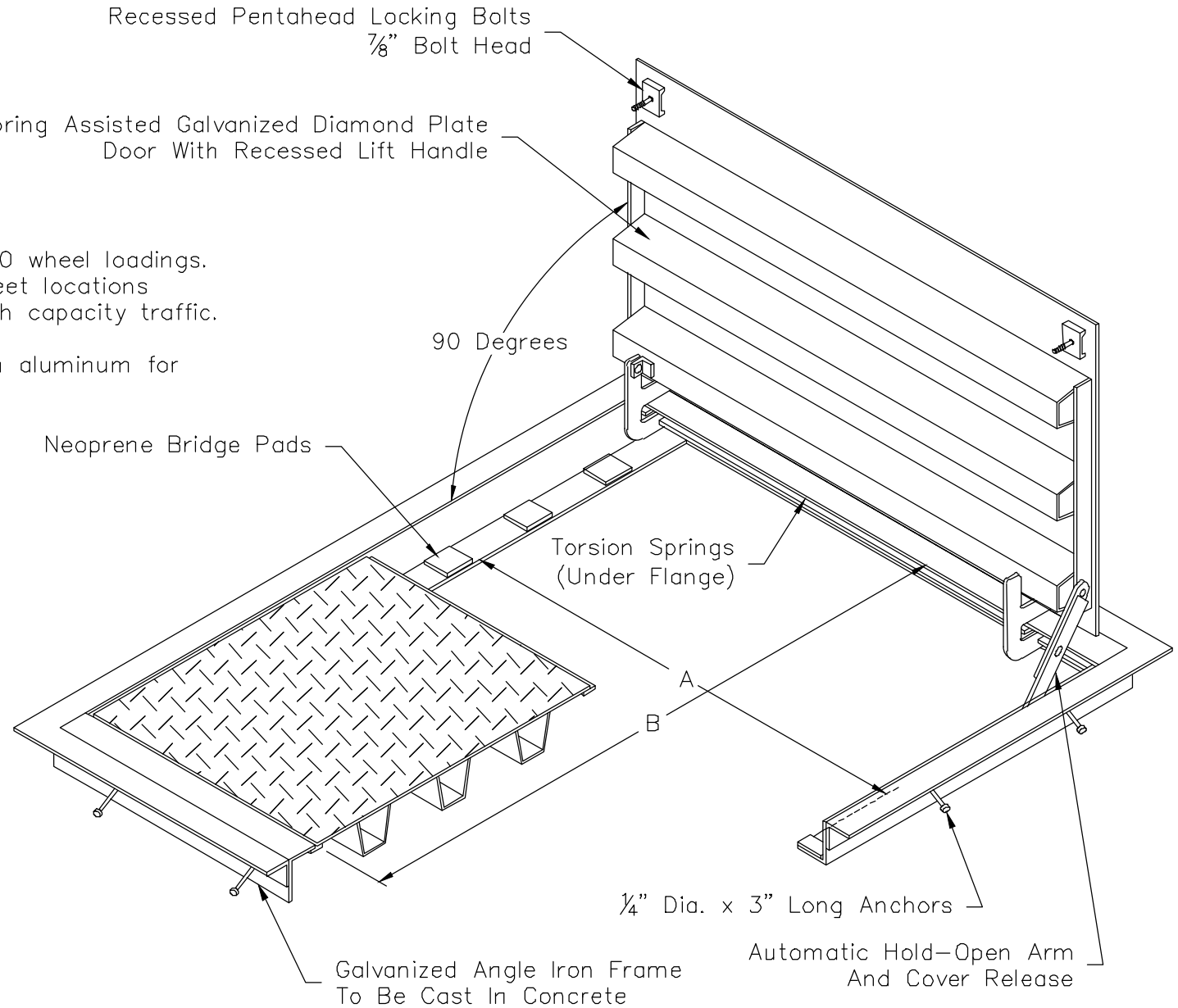
Recessed Pentahead Locking Bolts
7/8" Bolt Head

Spring Assisted Galvanized Diamond Plate
Door With Recessed Lift Handle

NOTE:

Designed to withstand H-20 wheel loadings.
Suitable for use in off-street locations
where not subjected to high capacity traffic.

* These sized are available in aluminum for
pedestrian traffic only.



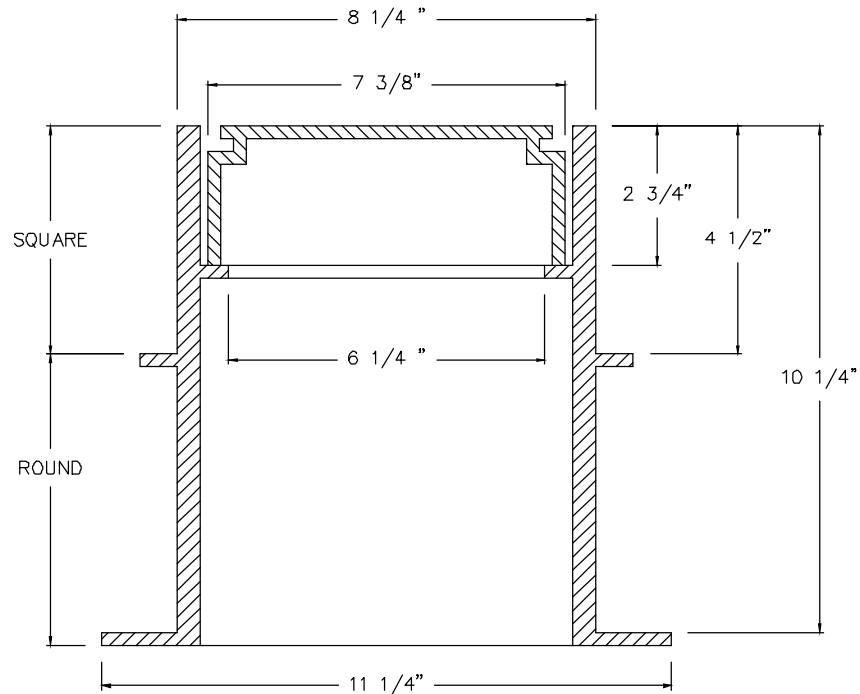
DIMENSIONS

A	B
36"	60"



NOTES

1. THIS VALVE BOX IS DESIGNED TO FIT OVER 6" DIAMETER PIPE OR ATOP 8" DIAMETER PIPE.
2. EACH LID IS CAST WITH TWO PICK POCKETS SET 180 DEGREES APART.
3. A MAG CLASS "AA" CONCRETE APRON SHALL BE USED SURROUNDING THE LID.
4. ALL RECLAIMED WATER VALVE BOXES AND VALVE BOX LIDS SHALL BE PAINTED PURPLE IN COLOR.



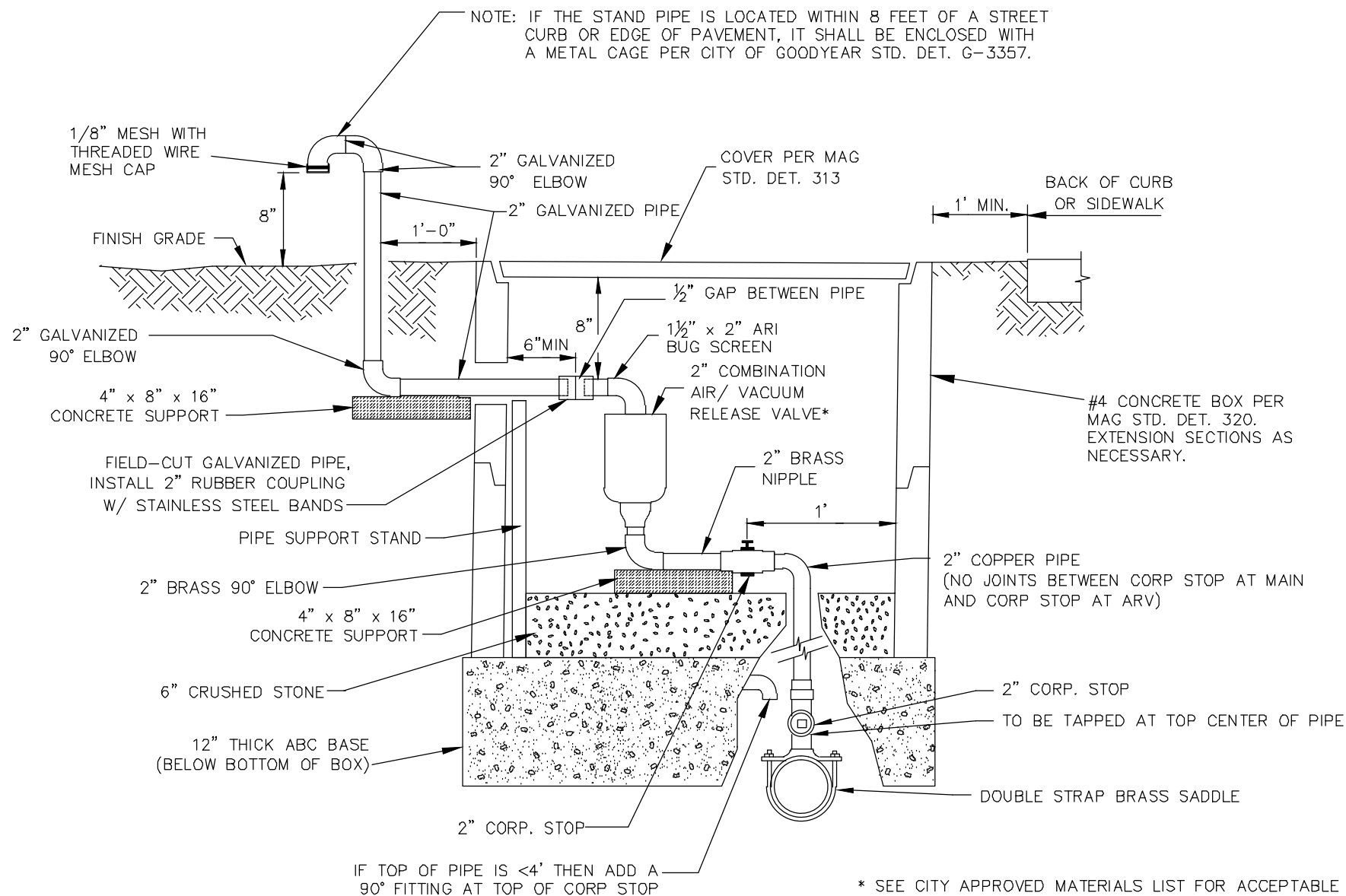
DETAIL NO.
G-3325

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:12/12

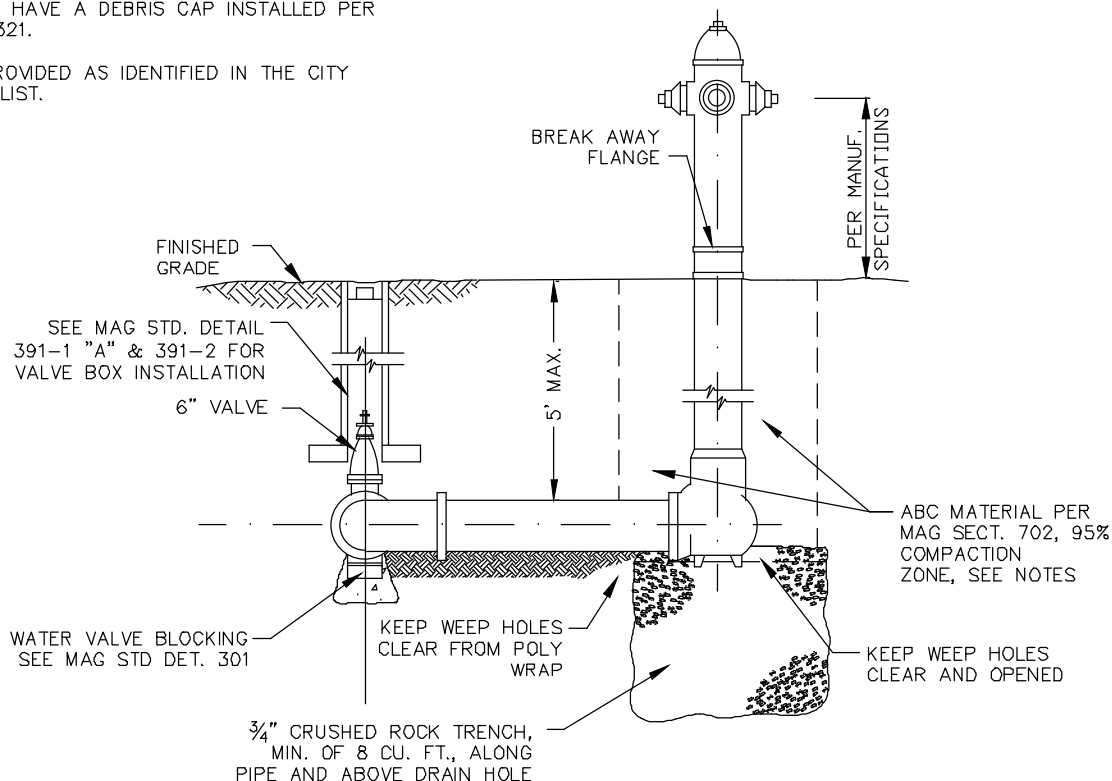
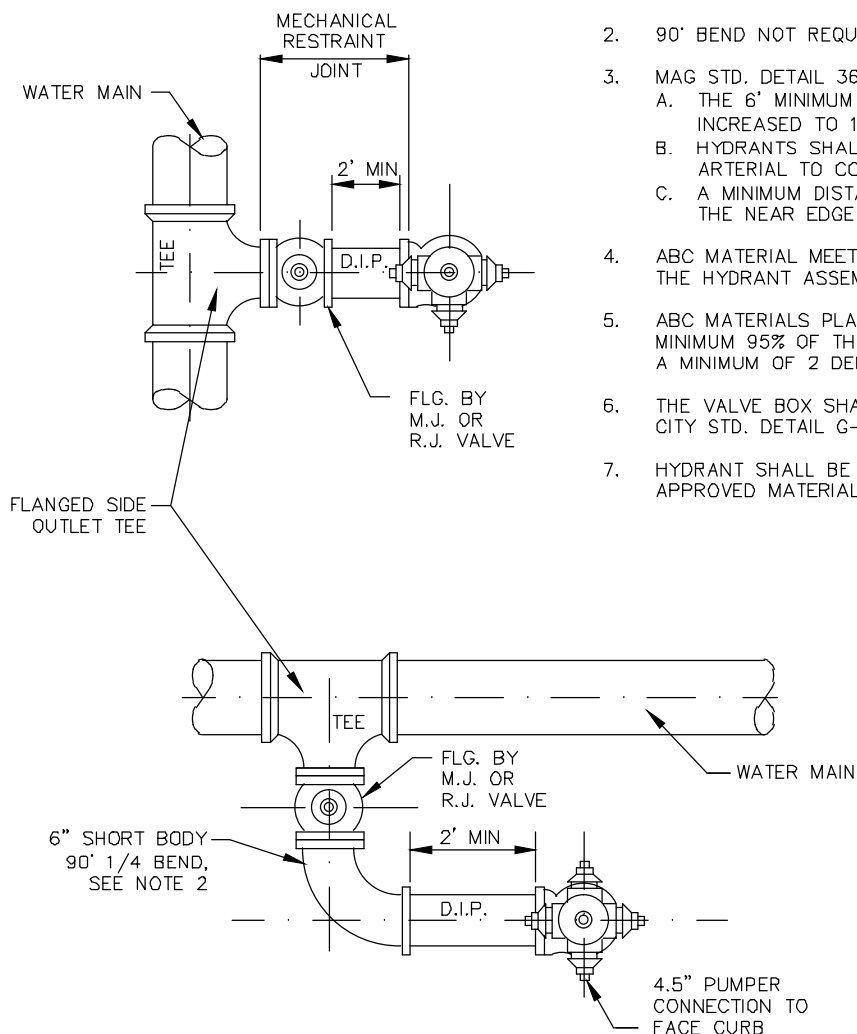
RECLAIMED WATER VALVE BOX AND LID

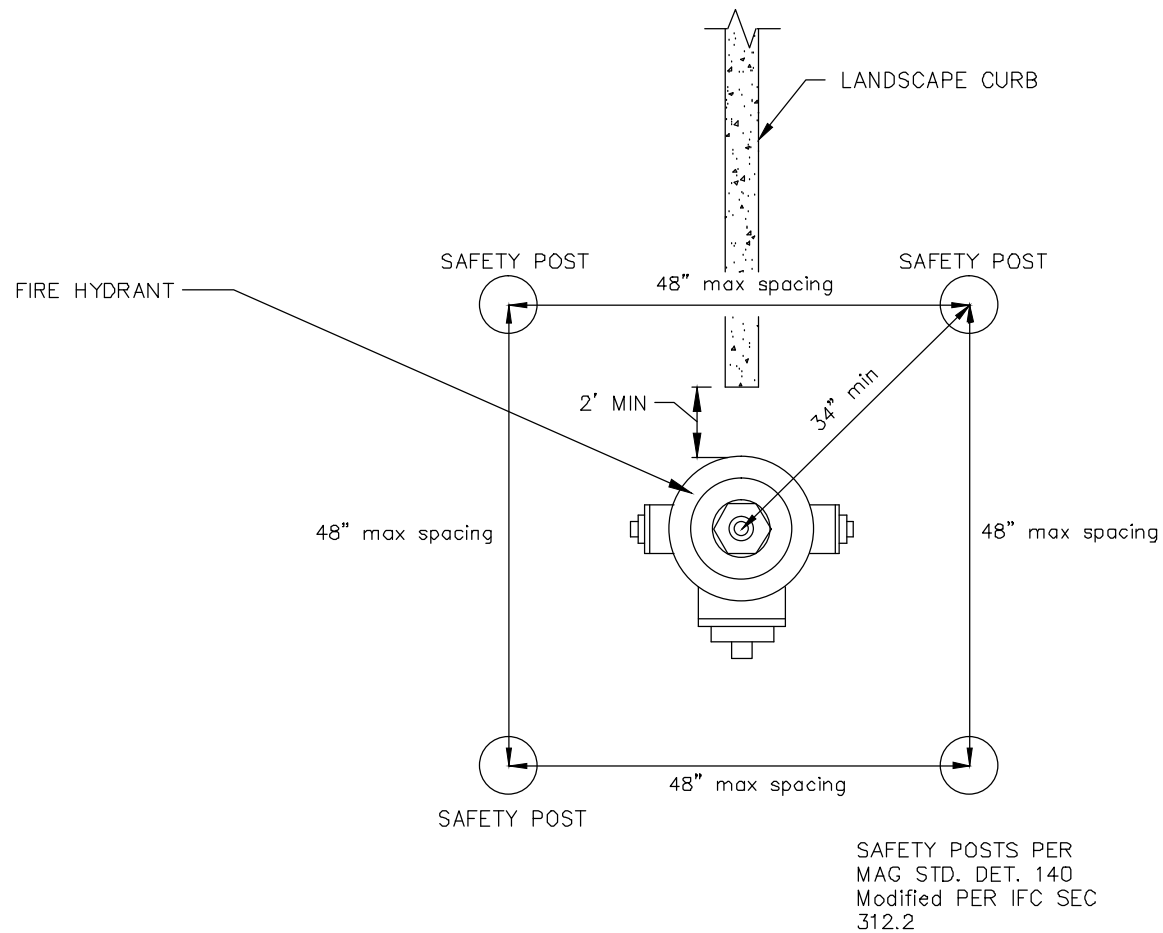
DETAIL NO.
G-3325



NOTES:

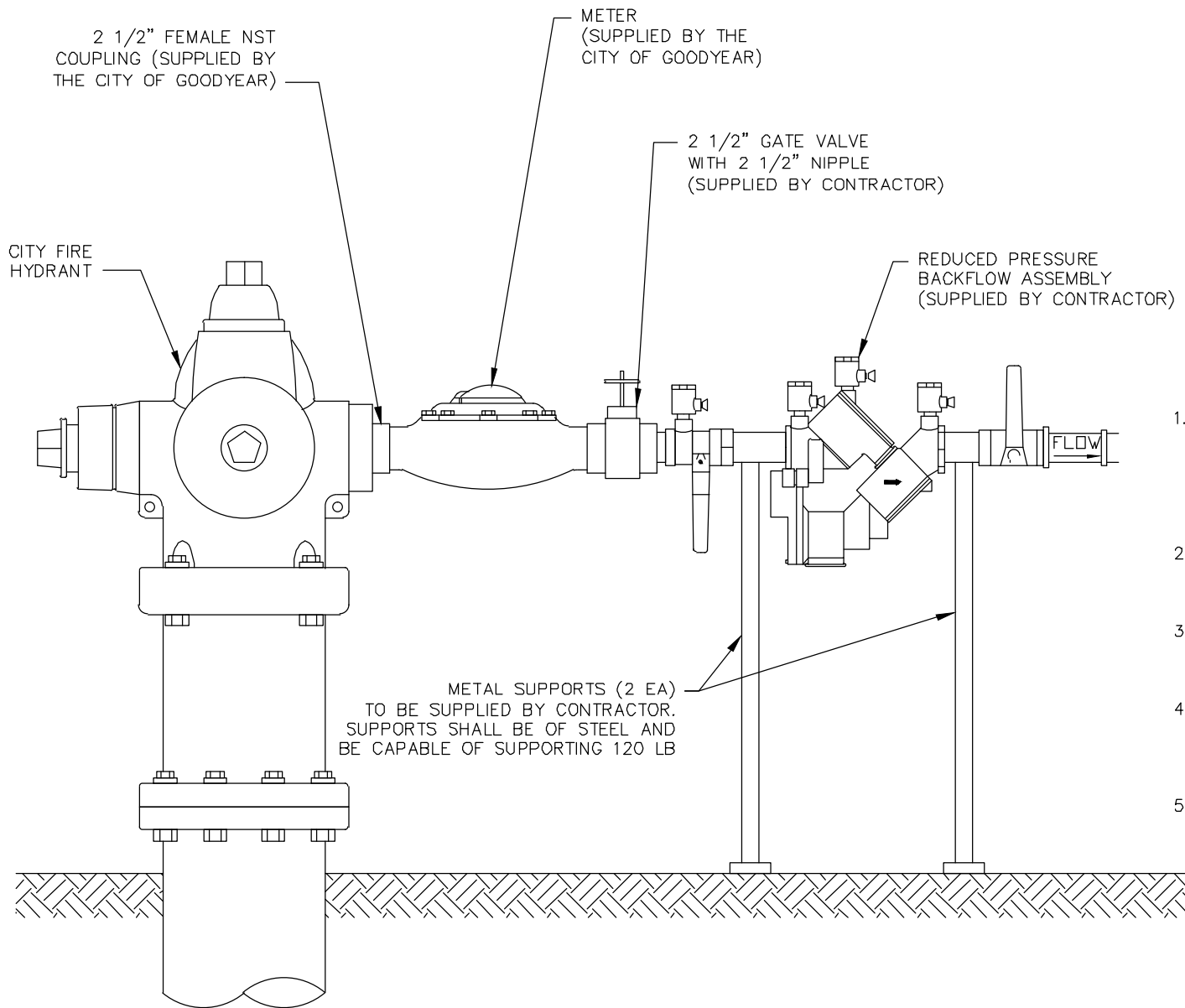
1. ALL JOINTS BETWEEN THE VALVE AND THE MAIN SHALL BE FLANGED TYPE. JOINTS BETWEEN THE VALVE AND HYDRANT SHALL BE RESTRAINT TYPE.
2. 90° BEND NOT REQUIRED IF SUFFICIENT ROOM FOR PERPENDICULAR INSTALLATION.
3. MAG STD. DETAIL 362 SHALL BE USED FOR LOCATING HYDRANTS WITH THE FOLLOWING MODIFICATIONS:
 - A. THE 6' MINIMUM DISTANCE FROM THE P.T. OR P.C. OF THE CURB RETURN TO THE STANDARD LOCATION SHALL BE INCREASED TO 10'.
 - B. HYDRANTS SHALL NOT BE LOCATED WITHIN THE CURB RETURN (ALTERNATIVE LOCATION) AT ARTERIAL TO ARTERIAL OR ARTERIAL TO COLLECTOR ROAD INTERSECTIONS.
 - C. A MINIMUM DISTANCE OF 2' SHALL BE MAINTAINED FROM THE BACK OF CURB TO THE CENTER OF HYDRANT AND FROM THE NEAR EDGE OF SIDEWALK TO THE CENTER OF HYDRANT.
4. ABC MATERIAL MEETING THE REQUIREMENTS OF MAG SECTION 702 SHALL BE USED FOR PIPE BEDDING FROM THE TEE TO THE HYDRANT ASSEMBLY AND AS BACKFILL AROUND THE HYDRANT.
5. ABC MATERIALS PLACED IN AND AROUND HYDRANTS SHALL BE COMPACTED TO A MINIMUM 95% OF THE MAXIMUM DENSITY AS DETERMINED BY A STANDARD PROCTOR. A MINIMUM OF 2 DENSITY TESTS SHALL BE RECORDED AROUND EACH HYDRANT.
6. THE VALVE BOX SHALL HAVE A DEBRIS CAP INSTALLED PER CITY STD. DETAIL G-3321.
7. HYDRANT SHALL BE PROVIDED AS IDENTIFIED IN THE CITY APPROVED MATERIALS LIST.





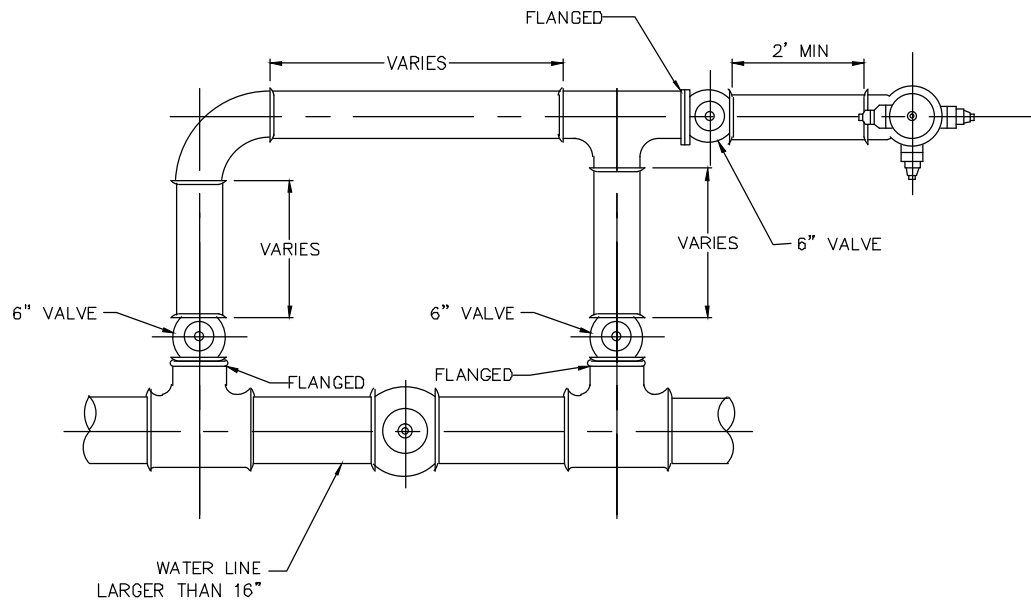
NOTE:

1. SAFETY POSTS ARE NOT REQUIRED IN ALL SITUATIONS.
2. SAFETY POSTS ARE REQUIRED WHEN NO CURB IS PRESENT OR AS DIRECTED BY THE PUBLIC WORKS AND ENGINEERING DEPARTMENTS. SAFETY POSTS WILL NOT BE INSTALLED IN CITY RIGHT-OF-WAY.
3. CONSTRUCTION SHALL COMPLY WITH IFC SECTION 312.2



GENERAL NOTES

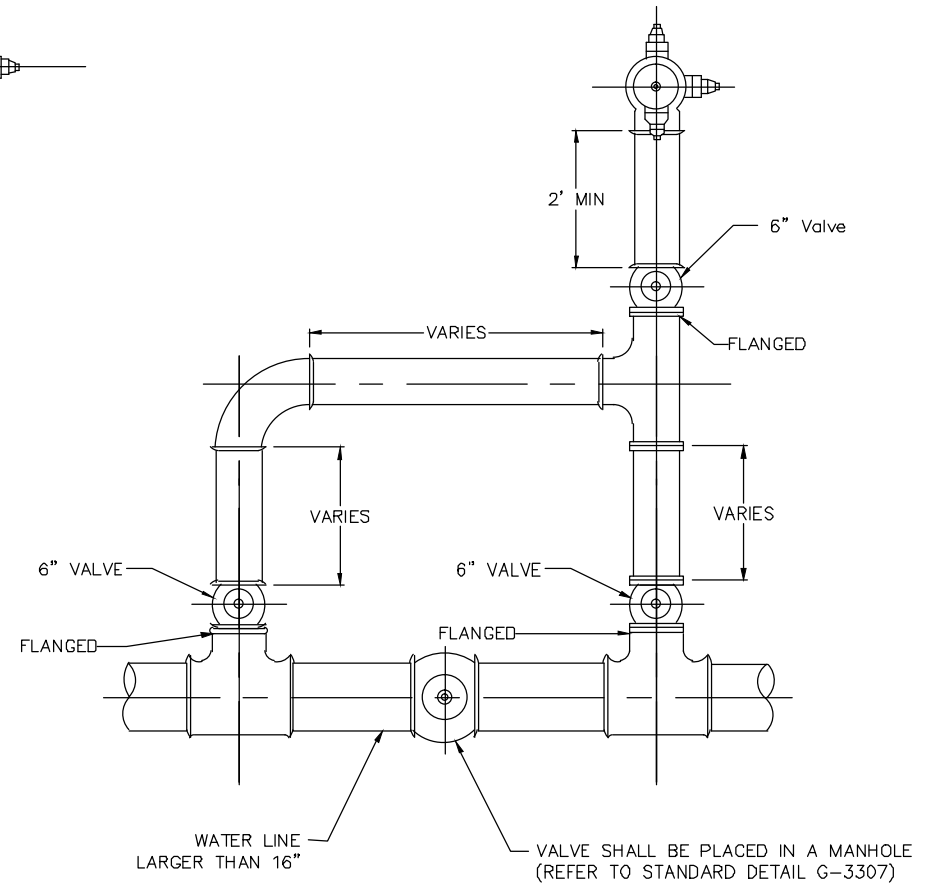
1. BACKFLOW ASSEMBLY SHALL BE TESTED BY A CERTIFIED BACKFLOW ASSEMBLY TESTER AND TESTING INFORMATION SUBMITTED TO THE CITY PRIOR TO USE AND ALSO EACH TIME THE METER IS MOVED.
2. USER SHALL REMOVE THE BACKFLOW ASSEMBLY WHEN THE HYDRANT METER IS REMOVED OR RELOCATED.
3. USER IS LIABLE FOR ANY DAMAGE TO THE HYDRANT AND ALL ATTACHMENTS TO THE HYDRANT.
4. USER SHALL USE THE BACKFLOW ASSEMBLY GATE VALVE TO CONTROL FLOW OF WATER, NOT THE HYDRANT VALVE ASSEMBLY.
5. REQUIRED ON ALL INSTALLATIONS TO POTABLE SYSTEM.



FIRE HYDRANT PARALLEL TO MAIN LINE

NOTES:

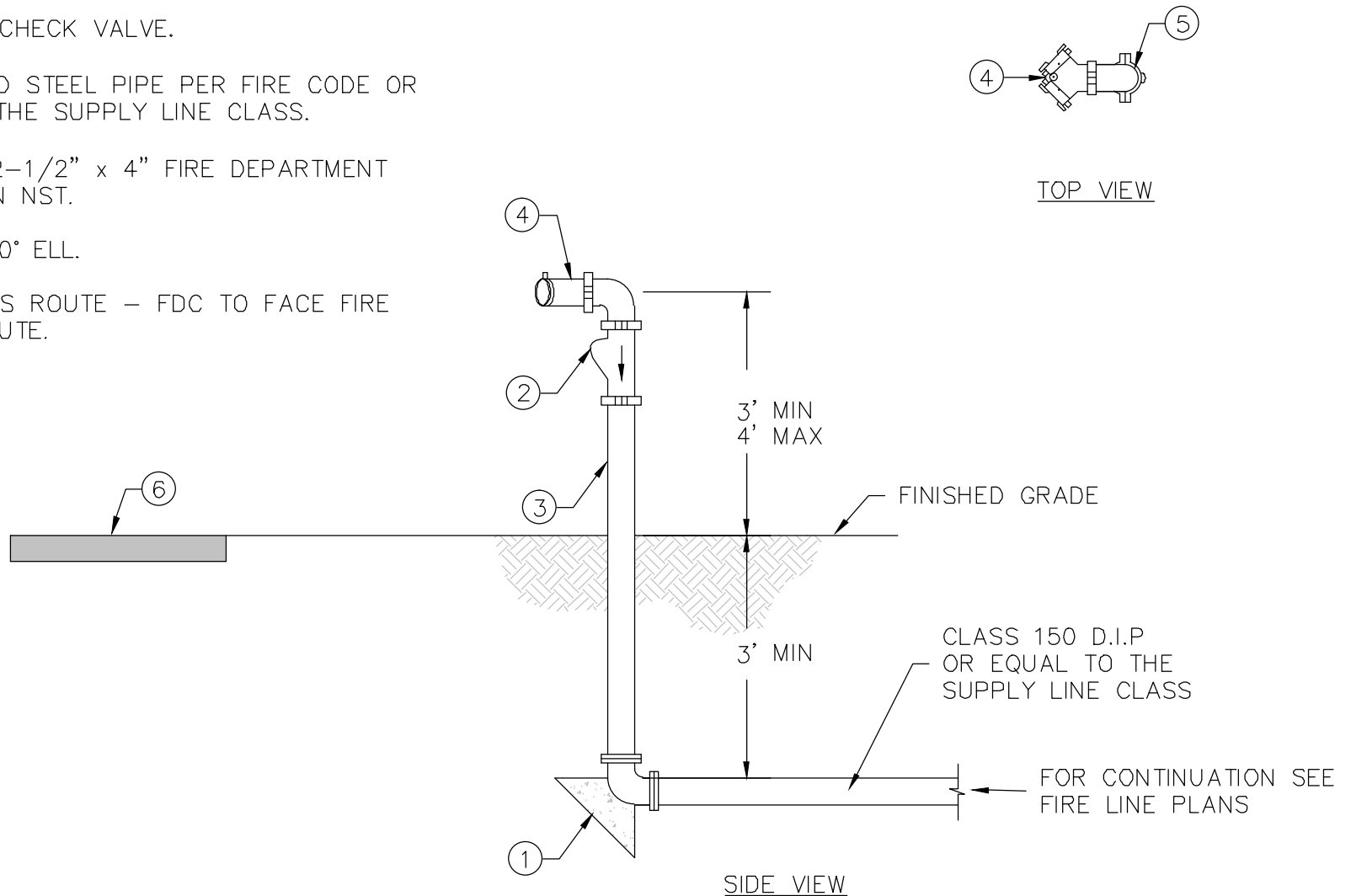
1. THIS DETAIL APPLIES TO WATER LINES WITH DIAMETERS GREATER THAN 16 INCHES OR AS REQUIRED BY THE CITY WATER RESOURCES AND ENGINEERING DEPARTMENTS.
2. ALL JOINTS IN HYDRANT RUN-OUT SHALL BE MECHANICAL RESTRAINT JOINTS.
3. SEE MAG STD. DETAIL 391-1 "A" & 391-2 FOR VALVE BOX INSTALLATION.
4. FOR WATER VALVE BLOCKING SEE MAG STD. DETAIL 301.
5. FOR ADDITIONAL INFORMATION SEE CITY STD. DETAIL G-3330.
6. THE VALVE BOX SHALL HAVE A DEBRIS CAP INSTALLED PER CITY STD. DETAIL G-3321.



FIRE HYDRANT PERPENDICULAR TO MAIN LINE

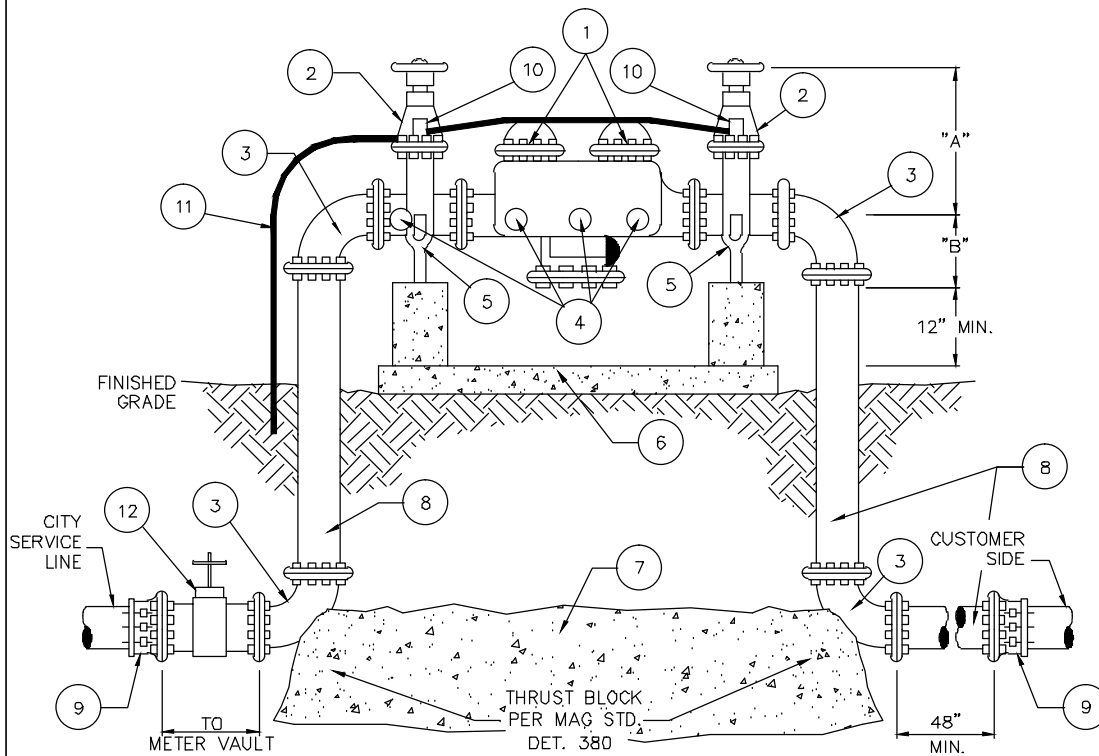
NOTES:

- ① THRUST BLOCKING PER MAG STD. DETAIL 380.
- ② APPROVED CHECK VALVE.
- ③ 4" WRAPPED STEEL PIPE PER FIRE CODE OR EQUAL TO THE SUPPLY LINE CLASS.
- ④ 2-1/2" x 2-1/2" x 4" FIRE DEPARTMENT CONNECTION NST.
- ⑤ GROOVED 90° ELL.
- ⑥ FIRE ACCESS ROUTE – FDC TO FACE FIRE ACCESS ROUTE.



"A"	
ASSEMBLY SIZE	APPROX. DIMENSION
3"	14"
4"	16"-(22" OS&Y)
6"	20"-(30" OS&Y)
8"	25"-(40" OS&Y)
10"	29"-(48" OS&Y)
12"	32"-(56" OS&Y)

"B"	
ASSEMBLY SIZE	APPROX. DIMENSION
3"	10"
4"	11"
6"	12"
8"	22"
10"	23"
12"	24"



REDUCED PRESSURE PRINCIPLE DEVICE

OS&Y = OUTSIDE SCREW & YOKE

NOTES

1. ASSEMBLY SHALL BE APPROVED BY USC FOUNDATION FOR CROSS-CONNECTION AND HYDRAULIC RESEARCH.
2. SEE THE CITY'S "POTABLE WATER SYSTEM APPROVED MATERIALS LIST" FOR APPROVED MANUFACTURERS AND MODEL INFORMATION.
3. FOUR TEST COCKS TO BE INSTALLED PER USC.
4. COPPER FITTINGS SHALL BE CONNECTED WITH LEAD-FREE SOLDER JOINTS.
5. FINISHED GRADE BELOW BACKFLOW PREVENTER SHALL BE 95% COMPACTION.
6. THE ASSEMBLY SHALL BE PAINTED TO BLEND WITH LANDSCAPE SURFACE TREATMENT OR ONSITE STRUCTURES. THE ASSEMBLY MAY ALSO BE SCREENED WITH SHRUBBERY. VEGETATION SHALL BE A MINIMUM OF 24" FROM THE OUTSIDE FACE OF ANY PORTION OF THE BACKFLOW PREVENTION DEVICE.
7. ADEQUATE DRAINAGE FOR SURFACE WATER IS REQUIRED.
8. ASSEMBLY MAY BE REQUIRED TO BE PROTECTED BY GUARD POSTS. GUARD POSTS SHALL BE CONSTRUCTED PER CITY STD. DET. G-3358.

LIST OF MATERIALS

- 1 APPROVED REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE.
- 2 GATE VALVE, RESILIENT SEATED (NON-RISING STEM) (O.S.&Y. REQUIRED ON FIRE LINES).
- 3 90' ELL (FLANGED D.I.P. 3" THROUGH 12").
- 4 TEST COCK, RESILIENT SEATED (4 REQUIRED) FIT WITH BRASS PLUG.
- 5 ADJUSTABLE PIPE SUPPORT PERMANENTLY ATTACHED TO BASE (4" AND LARGER ASSEMBLY ONLY).
- 6 CONCRETE SUPPORT PAD 4" THICK BY 18" WIDE MINIMUM BENEATH 4" AND LARGER ASSEMBLIES. (CLASS "A" CONCRETE)
- 7 EXTEND CONCRETE BETWEEN THRUST BLOCKS.
- 8 PIPE SPOOL (FLANGED D.I.P. 3" THRU 12").
- 9 FLANGED ADAPTER (WHEN REQUIRED).
- 10 TAMPER SWITCH (ON FIRE LINE ONLY, OPTIONAL).
- 11 ELECTRICAL CONDUIT FOR TAMPER SWITCH.
- 12 GATE VALVE (FLANGE X FLANGE). MATCH LINE SIZE.

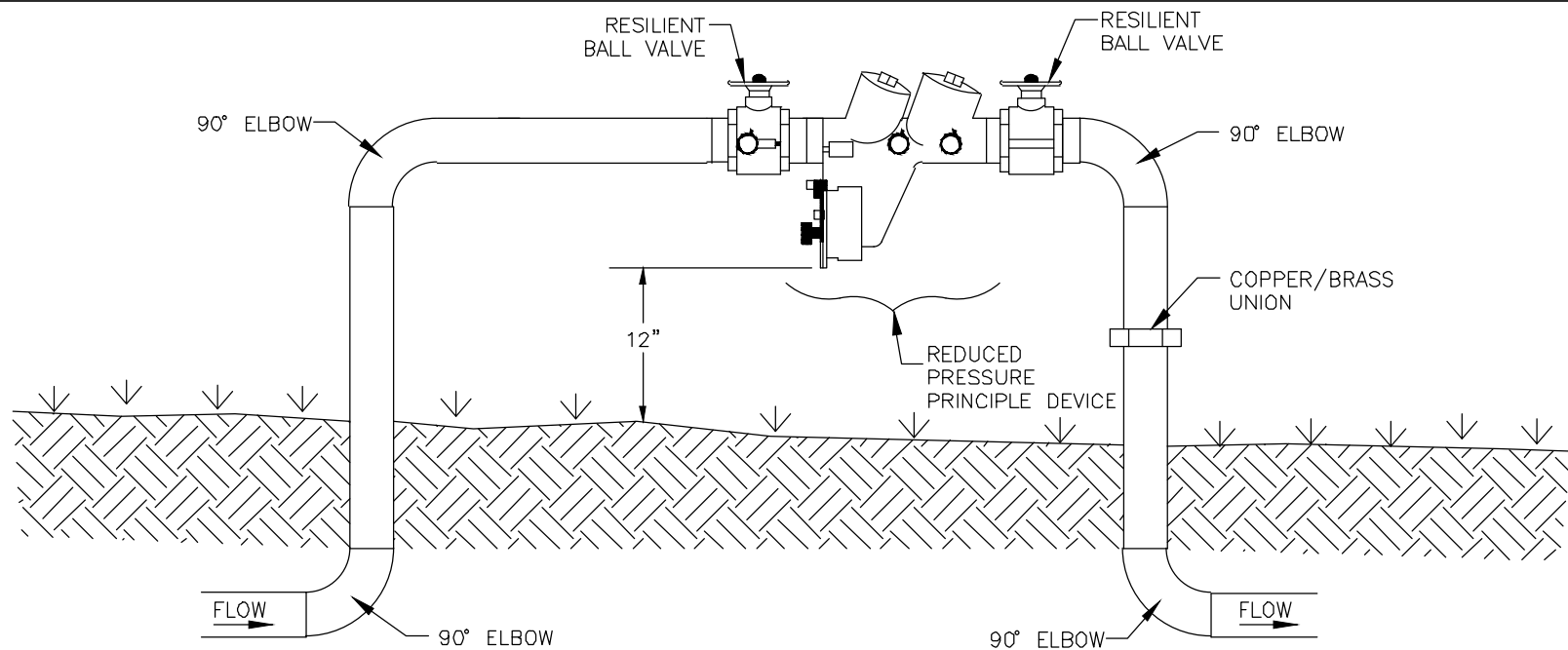
DETAIL NO.
G-3350

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:08/17

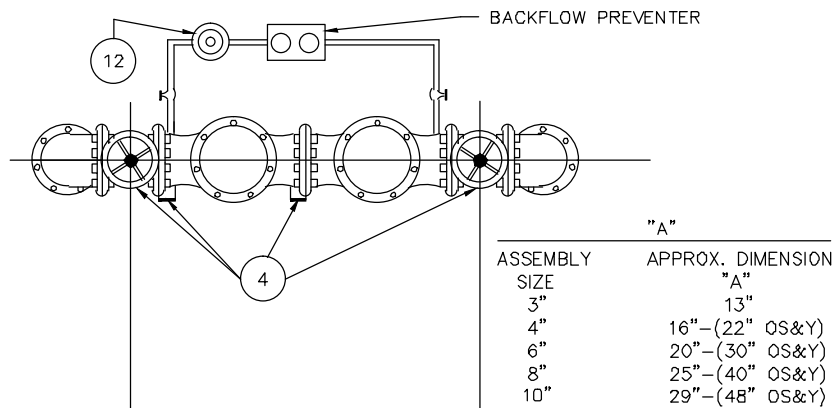
REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY
INSTALLATION - 3" AND LARGER

DETAIL NO.
G-3350



NOTES:

1. ALL PIPE/FITTINGS TO BE TYPE "K" COPPER.
2. REFER TO THE CITY OF GOODYEAR "POTABLE WATER SYSTEM APPROVED MATERIALS LIST" FOR APPROVED BACKFLOW PREVENTION ASSEMBLIES.
3. BACKFLOW PREVENTION ASSEMBLY MUST BE LEVEL AND INSTALLED A MINIMUM AND A MAXIMUM OF 12 INCHES FROM ASSEMBLY BODY TO FINAL GRADE.
4. ALL TEST COCKS SHALL BE FITTED WITH BRASS PLUGS INSTALLED WITH TEFLON TAPE.
5. SHUTOFF VALVES TO BE RESILIENT BALL TYPE WITH REMOVABLE HANDLES.
6. INSTALL BACKFLOW PREVENTION ASSEMBLY WITH RELIEF PORT FACING TOWARD THE GROUND.
7. COMPRESSION TYPE FITTINGS ARE NOT ALLOWED.
8. INSTALL THE BACKFLOW PREVENTION ASSEMBLY IMMEDIATELY DOWNSTREAM OF THE CITY WATER METER.
9. A COPPER/BRASS UNION MUST BE INSTALLED IN THE MIDDLE OF THE DOWNSTREAM RISER.
10. ASSEMBLY SHALL BE APPROVED BY USC FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH.
11. COPPER FITTINGS SHALL BE CONNECTED WITH LEAD-FREE SOLDER JOINTS.
12. PAVER CONCRETE BLOCK UNDER RELIEF PORT, SET AT FINAL GRADE.
13. ASSEMBLIES SHALL HAVE A SECURITY ENCLOSURE AS SHOWN ON CITY STD. DET. G-3357, OR APPROVED EQUAL.

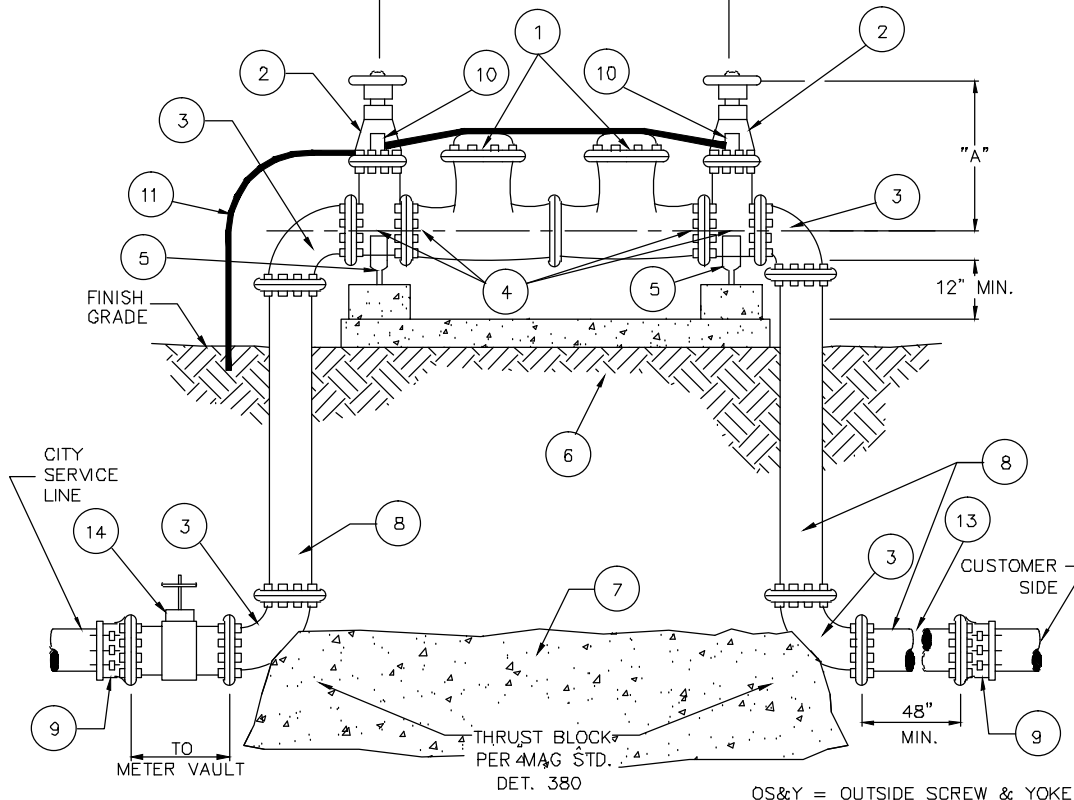


NOTES

1. ASSEMBLY SHALL BE APPROVED BY USC FOUNDATION FOR CROSS CONNECTION AND HYDRAULIC RESEARCH.
2. CONTACT THE CITY OF GOODYEAR WATER RESOURCES DEPARTMENT FOR A LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
3. FOUR TEST COCKS TO BE INSTALLED PER USC
4. COPPER FITTINGS SHALL BE CONNECTED WITH LEAD-FREE SOLDER JOINTS.
5. FINISHED GRADE BELOW BACKFLOW PREVENTER SHALL BE 95% COMPACTION.
6. THE ASSEMBLY SHALL BE PAINTED TO BLEND WITH LANDSCAPE SURFACE TREATMENT OR ONSITE STRUCTURES. THE ASSEMBLY MAY ALSO BE SCREENED WITH SHRUBBERY. VEGETATION SHALL BE A MINIMUM OF 24" FROM THE OUTSIDE FACE OF ANY PORTION OF THE BACKFLOW PREVENTION DEVICE.
7. ADEQUATE DRAINAGE FOR SURFACE WATER IS REQUIRED.
8. ASSEMBLY MAY BE REQUIRED TO BE PROTECTED BY GUARD POSTS. GUARD POSTS SHALL BE CONSTRUCTED PER CITY STD. DET. G-3358.

LIST OF MATERIALS

- 1 APPROVED DOUBLE CHECK VALVE ASSEMBLY.
- 2 GATE VALVE, RESILIENT SEATED (NON-RISING STEM) (D.S.&Y. REQUIRED ON FIRE LINES).
- 3 90' ELL (FLANGED D.I.P. 3" THROUGH 10").
- 4 TEST COCK, RESILIENT SEATED (4 REQUIRED) FIT WITH BRASS PLUG.
- 5 ADJUSTABLE PIPE SUPPORT PERMANENTLY ATTACHED TO BASE (4" AND LARGER ASSEMBLY ONLY).
- 6 CONCRETE SUPPORT PAD 4" THICK BY 18" WIDE MINIMUM BENEATH 4" AND LARGER ASSEMBLIES. (CLASS "A" CONCRETE)
- 7 EXTEND CONCRETE BETWEEN THRUST BLOCKS.
- 8 PIPE SPOOL (FLANGED D.I.P. 3" THRU 10").
- 9 FLANGED ADAPTER (WHEN REQUIRED).
- 10 TAMPER SWITCH (ON FIRE LINE ONLY, OPTIONAL).
- 11 ELECTRICAL CONDUIT FOR TAMPER SWITCH.
- 12 3/4" WATER METER.
- 13 PIPE REDUCER/ INCREASER, IF REQUIRED, SHALL HAVE FLANGED ENDS AND SHALL BE INSTALLED PRIOR TO THE THRUST BLOCK.
- 14 GATE VALVE (FLANGE X FLANGE). MATCH LINE SIZE.



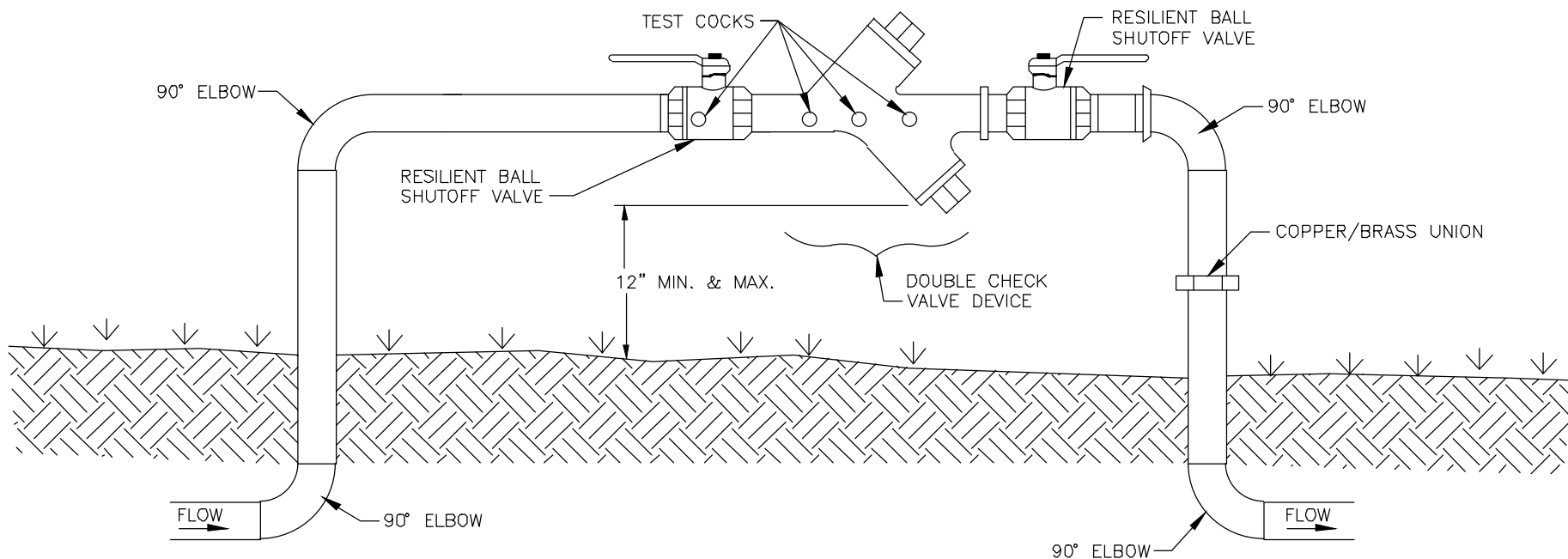
DETAIL NO.
G-3352

CITY OF GOODYEAR
STANDARD DETAIL

APPROVED:08/17

DOUBLE CHECK VALVE BACKFLOW PREVENTION ASSEMBLY
INSTALLATION - 3" TO 10"

DETAIL NO.
G-3352



NOTES:

1. ALL PIPE/FITTINGS TO BE TYPE "K" COPPER.
2. REFER TO THE CITY OF GOODYEAR "POTABLE WATER SYSTEM APPROVED MATERIALS LIST" FOR APPROVED BACKFLOW PREVENTION ASSEMBLIES.
3. BACKFLOW PREVENTION ASSEMBLY MUST BE LEVEL AND INSTALLED A MINIMUM AND A MAXIMUM OF 12 INCHES FROM ASSEMBLY BODY TO FINAL GRADE.
4. ALL TEST COCKS SHALL BE FITTED WITH BRASS PLUGS INSTALLED WITH TEFLON TAPE.
5. SHUTOFF VALVES TO BE RESILIENT BALL TYPE WITH REMOVABLE HANDLES.
6. COMPRESSION TYPE FITTINGS ARE NOT ALLOWED.
7. INSTALL THE BACKFLOW PREVENTION ASSEMBLY IMMEDIATELY DOWNSTREAM OF THE CITY WATER METER.
8. A COPPER/BRASS UNION MUST BE INSTALLED IN THE MIDDLE OF THE DOWNSTREAM RISER.
9. ASSEMBLY SHALL BE APPROVED BY USC FOUNDATION FOR CROSS CONNECTION AND HYDRAULIC RESEARCH. CONTACT THE CITY OF GOODYEAR WATER RESOURCES DEPARTMENT FOR A LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
10. COPPER FITTINGS SHALL BE CONNECTED WITH LEAD-FREE SOLDER JOINTS.
11. ASSEMBLIES SHALL HAVE A SECURITY ENCLOSURE AS SHOWN ON CITY STD. DET. G-3357, OR APPROVED EQUAL.

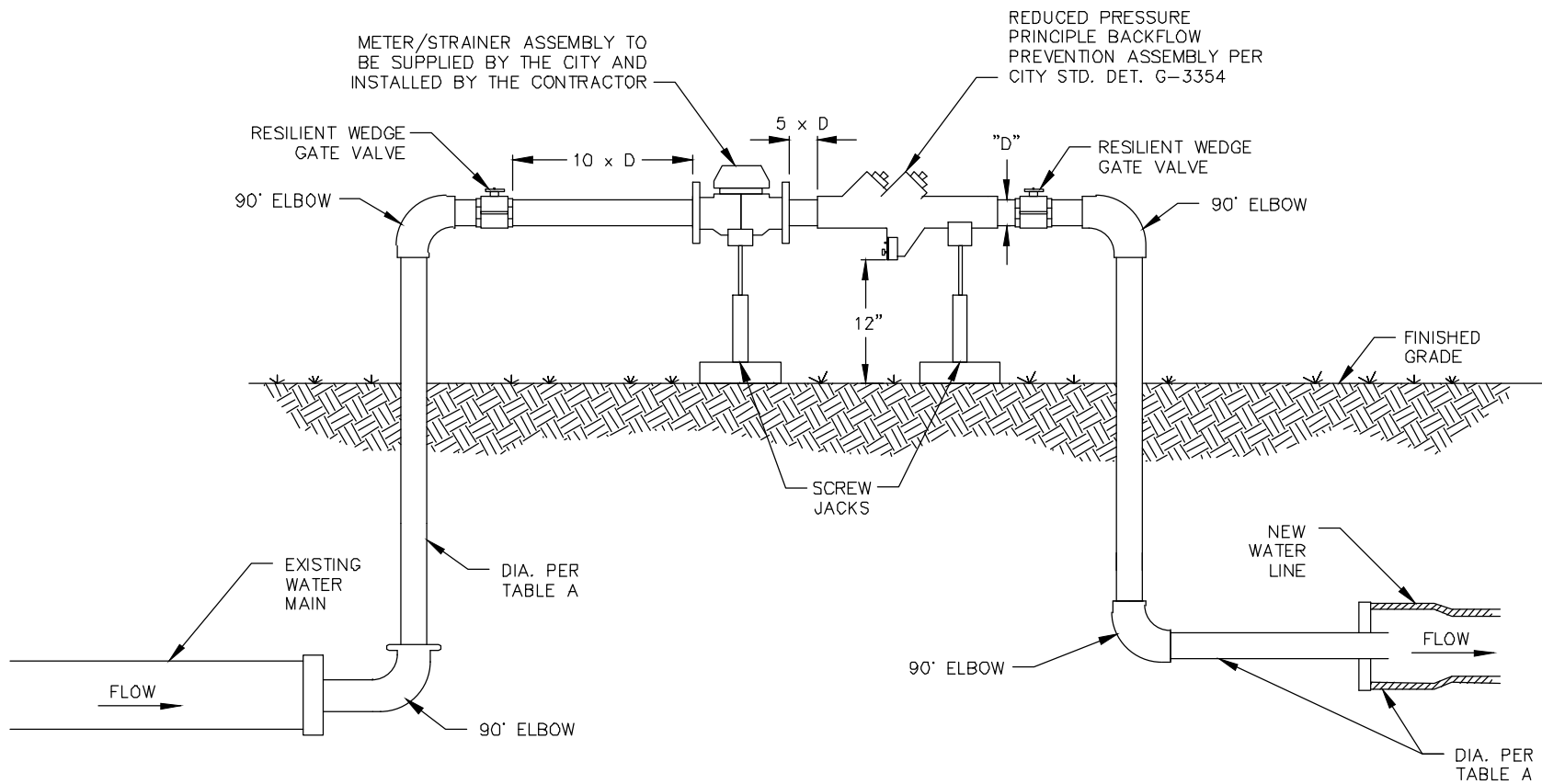
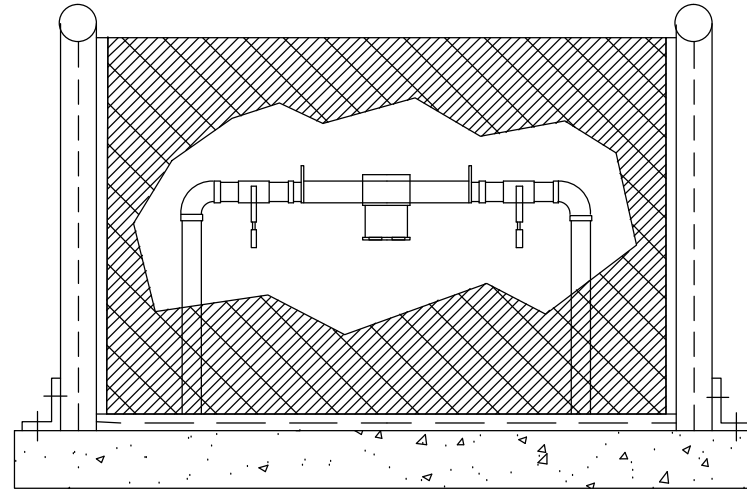
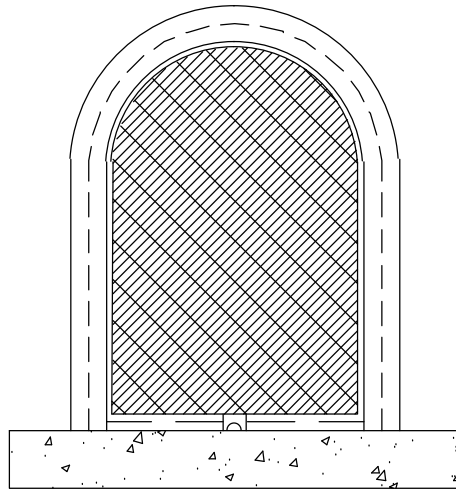


TABLE A

NEW WATER LINE PIPE DIAMETER (inches)	FLOW VELOCITY (gpm)	SIZE OF CONNECTION (inches)	LENGTH OF PIPE BEFORE METER (inches)	LENGTH OF PIPE AFTER METER (inches)	MINIMUM NUMBER OF 2.5" NOZZLES FLOWING
6	200	4	40	20	1
8	400	4	40	20	1
10	600	4	40	20	1
12	900	4	40	20	2
16	1600	6	60	30	2
20	1800	6	60	30	2
24	2000	6	60	30	2

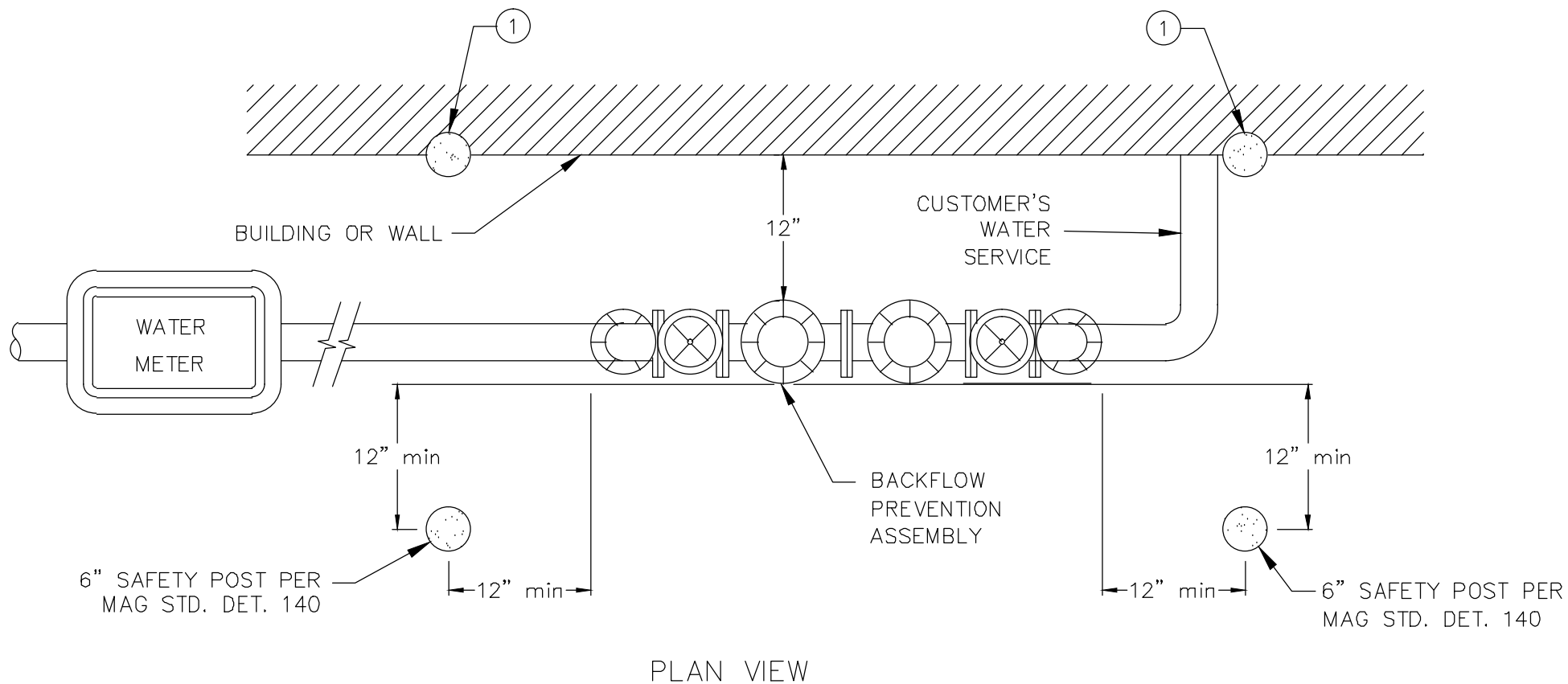
NOTES:

- DO NOT INSTALL ELBOWS, BENDS, NONCONCENTRIC REDUCERS, CHECK VALVES, BACK FLOW PREVENTERS AND/OR PRESSURE REDUCING DEVICES WITHIN 10 PIPE DIAMETERS UPSTREAM OR 5 PIPE DIAMETERS DOWNSTREAM OF THE METER.
- ALL JOINTS AND FITTINGS BELOW GROUND SHALL BE FLANGED, MECHANICAL, OR RESTRAINED.
- ALL JOINTS ABOVE GROUND SHALL BE FLANGED.



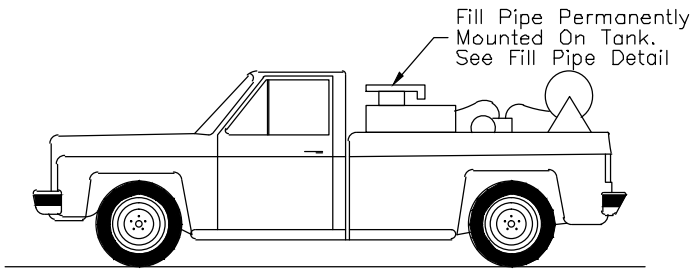
NOTES

1. SET EYEBOLT WITH BOTTOM OF CIRCLE FLUSH WITH CONCRETE BASE, SUCH THAT EYEBOLT CANNOT BE TURNED IN PLACE.
2. BOLT BRACKETS TO ENCLOSE ON ENDS OR BOTH SIDES. USE 1/4" X 1-1/4" TAMPER-PROOF BOLTS WITH HEX NUTS AND WASHERS.
3. SUGGESTED PAD DIMENSIONS - 32"L x 18"W x 3-3/4" THICK.
4. COLOR OF ENCLOSURE SHALL MATCH COLOR OF NEAREST STRUCTURE, WALL OR LANDSCAPING.

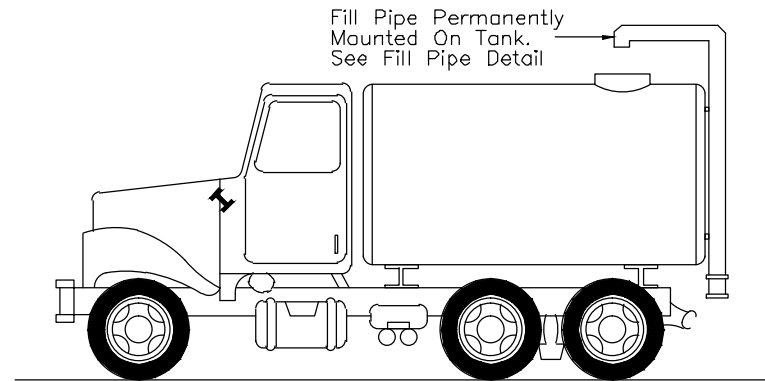


NOTE:

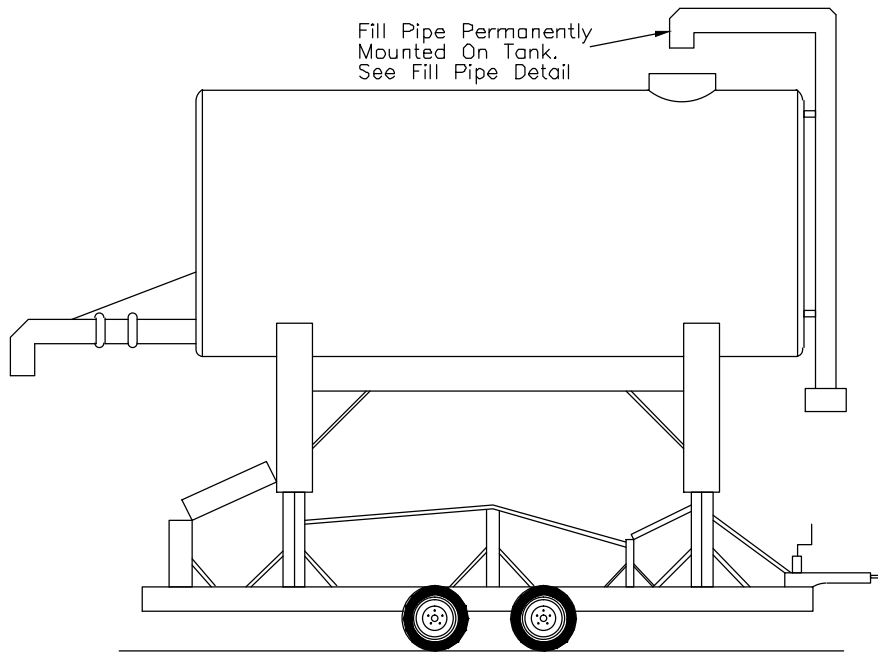
- ① ADDITIONAL SAFETY POSTS, PER MAG STD. DET. 140, ARE REQUIRED IF THE BACKFLOW PREVENTION ASSEMBLY IS LOCATED GREATER THAN 7' FROM THE NEAREST STRUCTURE (WALL, BUILDING, OR OTHER SIGNIFICANT STRUCTURE).



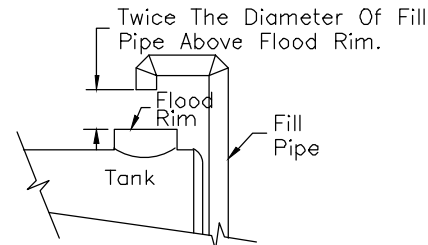
PESTICIDE APPLICATOR TRUCK



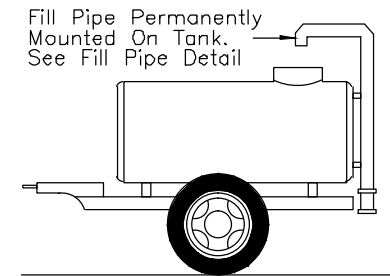
WATER TRUCK



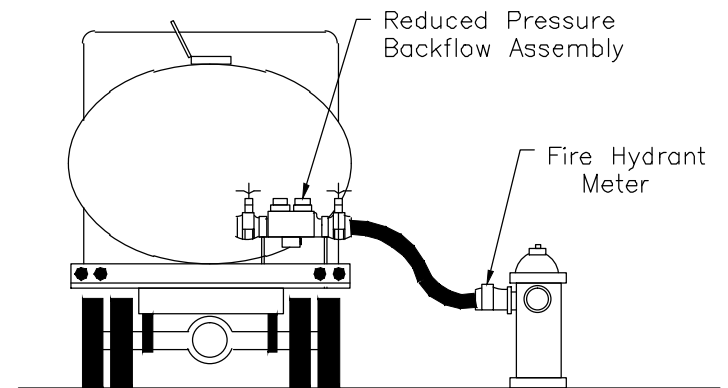
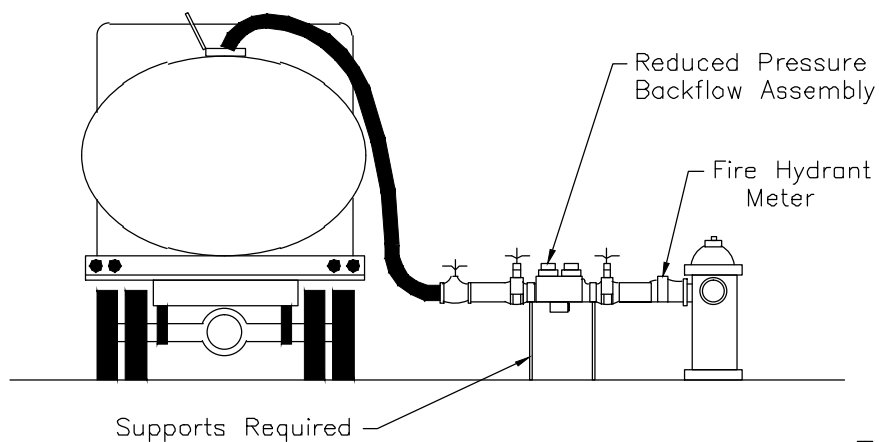
ELEVATED TANK



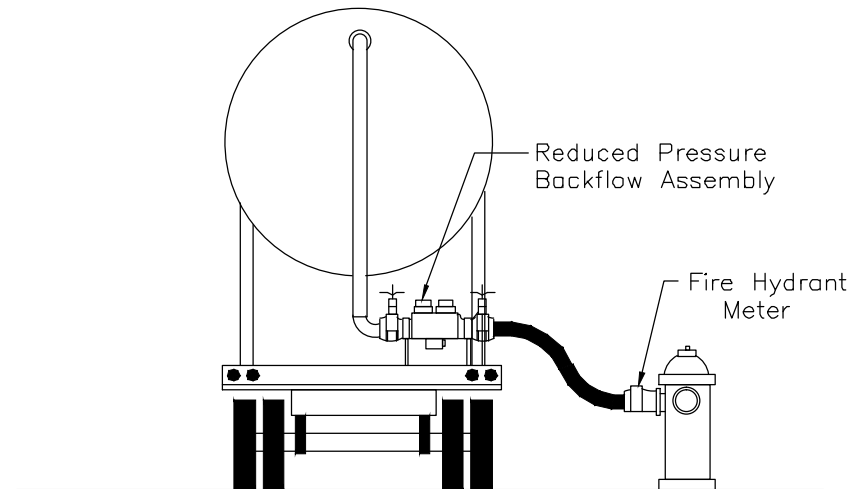
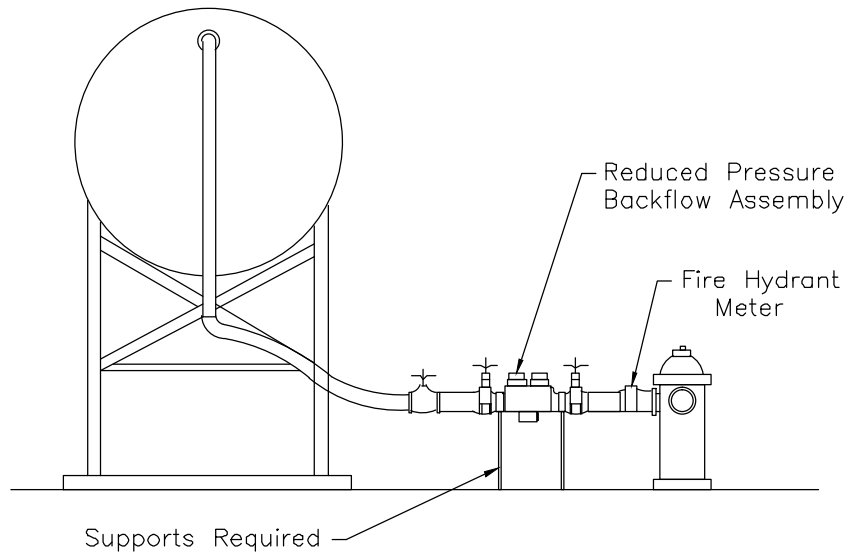
FILL PIPE DETAIL



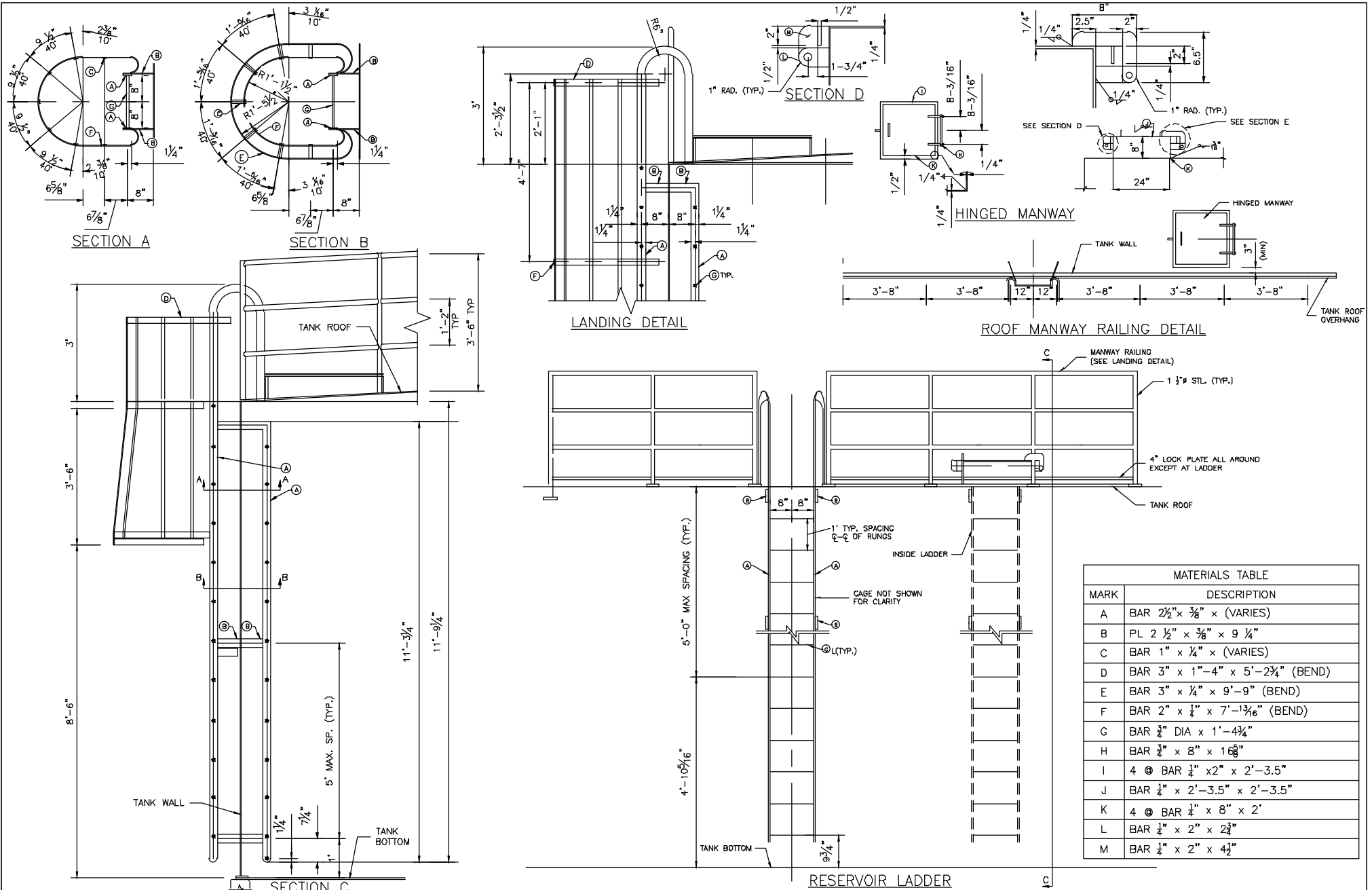
WATER WAGON

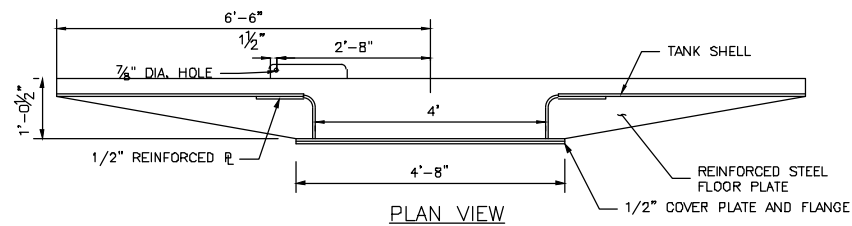
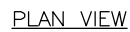


TANK TRUCKS



ELEVATED TANKS

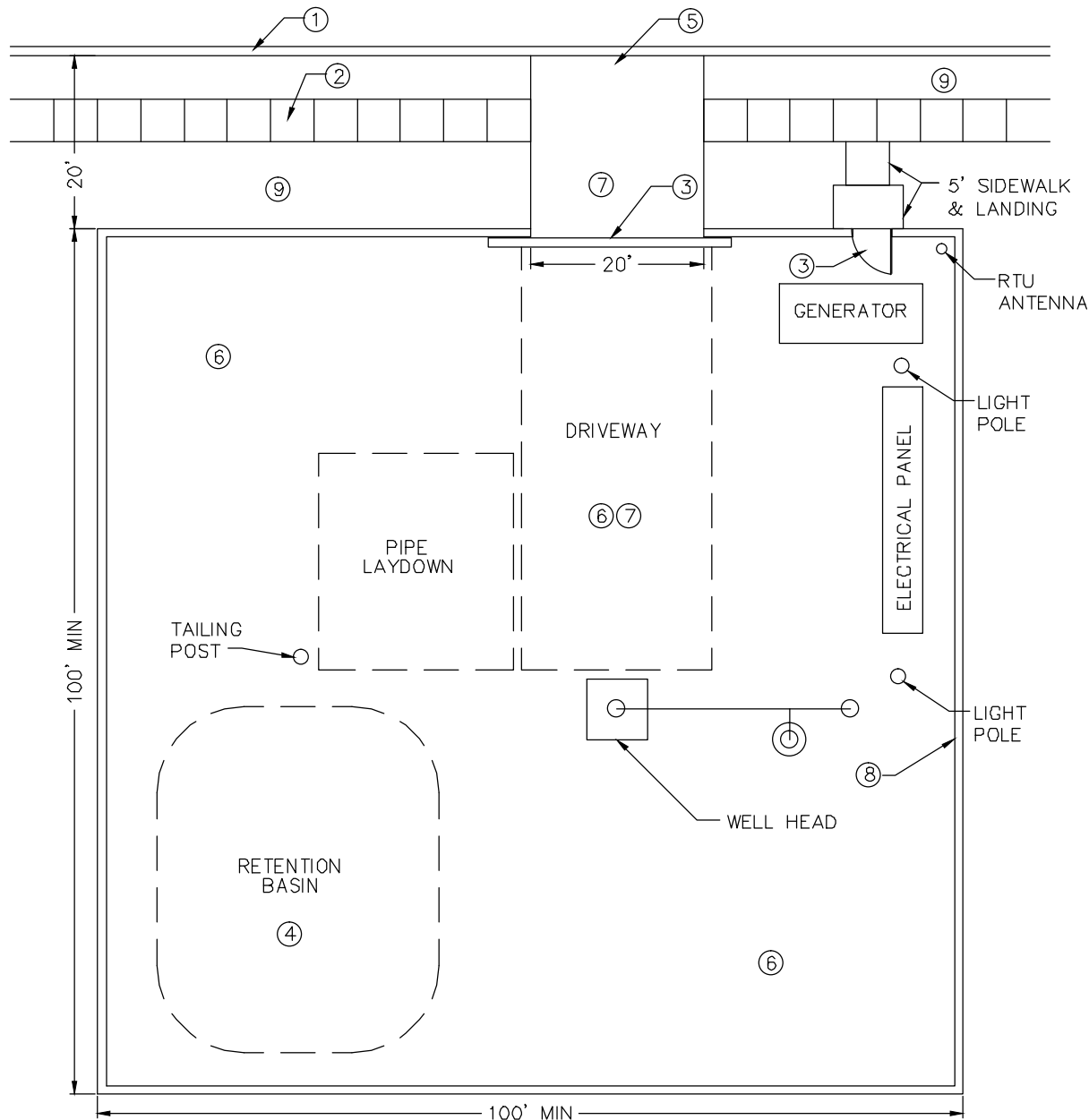




PLAN VIEW

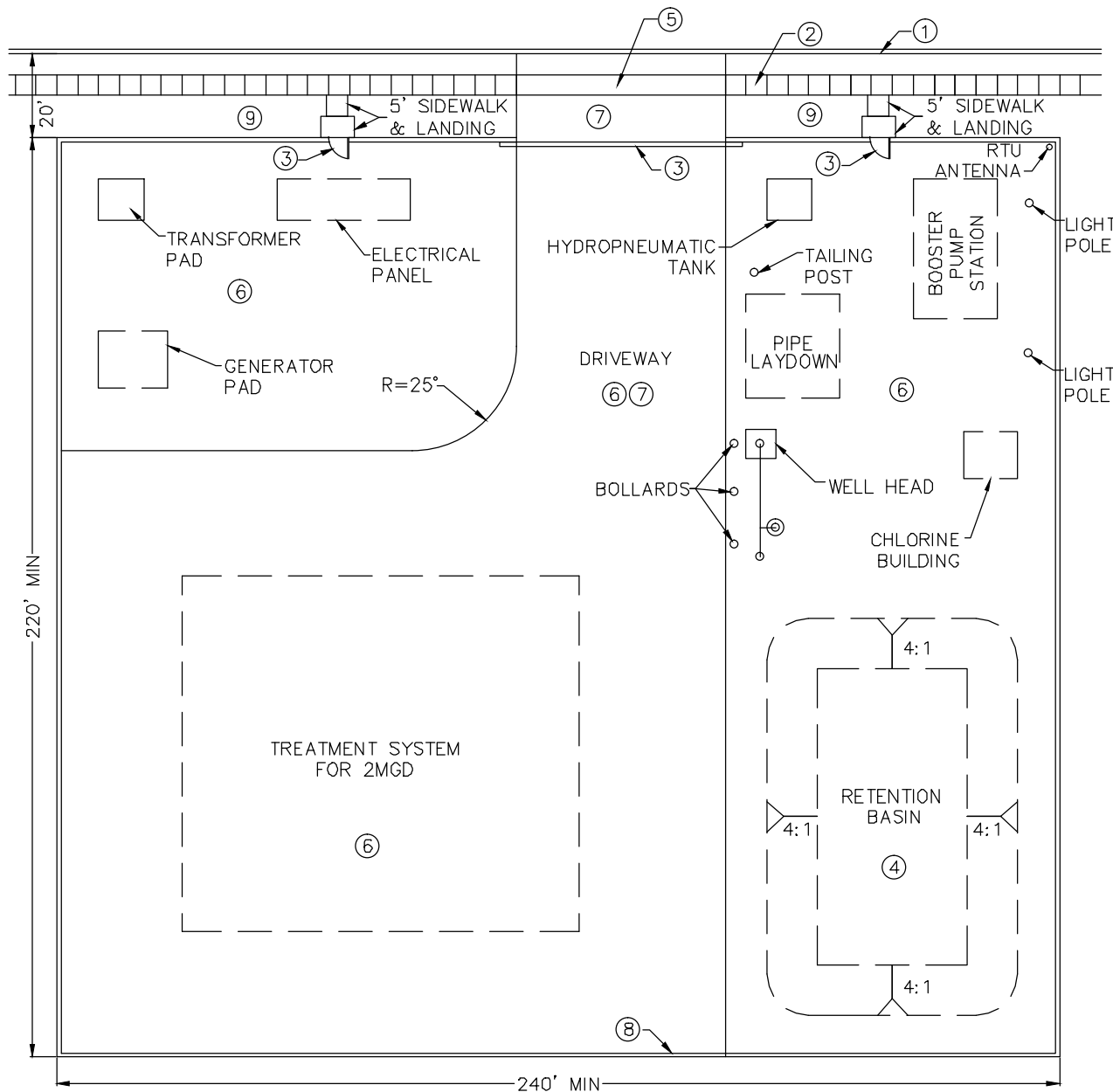
ACCESS HATCH AND FLANGE DETAIL

SECTION A-A



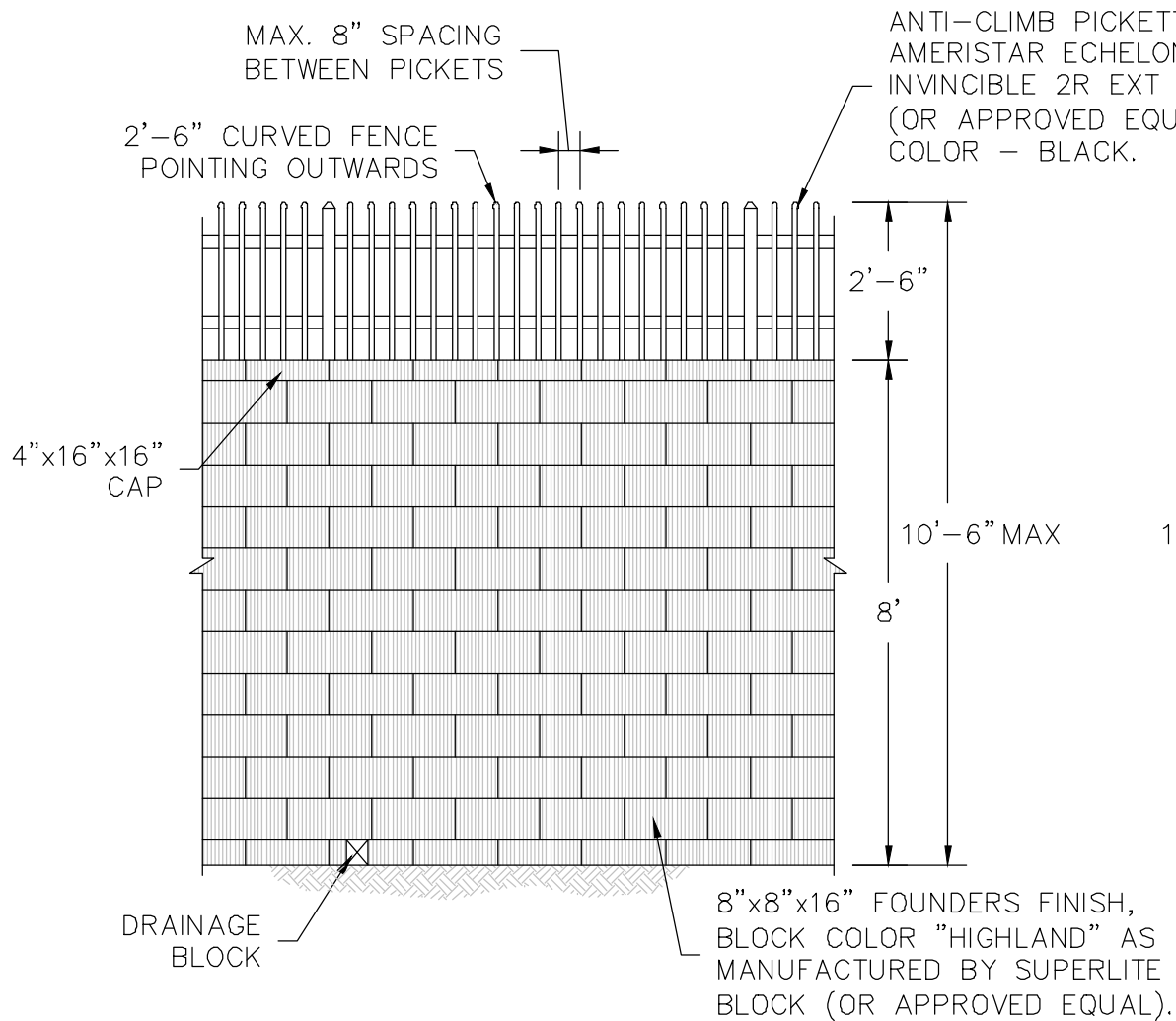
NOTES:

1. CURB & GUTTER PER MAG STD. DET. 220-1 TYPE A COLLECTOR OR ARTERIAL STREETS; TYPE A OR C FOR LOCAL STREETS.
2. 8' SIDEWALK FOR ARTERIAL AND COLLECTOR STREETS; 5' SIDEWALK FOR LOCAL STREETS.
3. AUTOMATED ROLL GATE AND ACCESS DOOR TO BE PROVIDED PER CITY STD. DET. G-3390-1 & 2.
4. RETENTION BASINS SHALL HAVE A MAXIMUM 4:1 SIDE SLOPES AND A MAXIMUM 3' HIGH WATER DEPTH DURING THE 100 YEAR 6 HOUR STORM EVENT AND ENOUGH CAPACITY TO PUMP THE WELL TO WASTE OR DRY WELL FOR A MINIMUM OF 3 HRS AT FULL FLOW.
5. ARTERIAL AND COLLECTOR STREET DRIVEWAYS SHALL BE PER CITY STD. DET. G-3236 & MAG STD. DET. 251; LOCAL STREET DRIVEWAYS SHALL BE PER CITY STD. DET. G-3236 AND MAG STD. DET. 250.
6. A MAXIMUM 1% GRADE SHALL BE MAINTAINED ACROSS THE SITE.
7. DRIVEWAYS AND AREAS ACCESSED BY VEHICLES ON-SITE WILL BE REQUIRED TO BE PAVED PER THE STRUCTURAL SECTION RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
8. A MINIMUM 8' HIGH CMU BLOCK WALL WILL BE REQUIRED AROUND THE SITE WITH 2' PICKETS, (REFER TO DETAIL G-3366). WHERE TREATMENT FACILITIES WILL BE HIGHER THAN 8', WALL HEIGHTS OR SPECIAL PAINTING REQUIREMENTS MAY BE REQUIRED AS DIRECTED BY THE CITY WATER RESOURCES AND PLANNING DEPARTMENTS.
9. AREA TO BE LANDSCAPED PER CITY LANDSCAPING STANDARDS.
10. THIS DETAIL WAS DEVELOPED TO SERVE AS A PRELIMINARY GUIDE FOR ALLOCATING LAND AREA FOR A TYPICAL WELL SITE WITH ONSITE RETENTION. THE DETAIL MAY NOT SHOW ALL INFRASTRUCTURE OR THEIR EXACT LOCATIONS. LAND AREA SHOWN MAY BE SUBJECT TO CHANGE CONTINGENT UPON SUPPLY AND DISCHARGE FLOWS, STORAGE, TREATMENT, AND SITE LOCATION AS REQUIRED BY THE CITY.

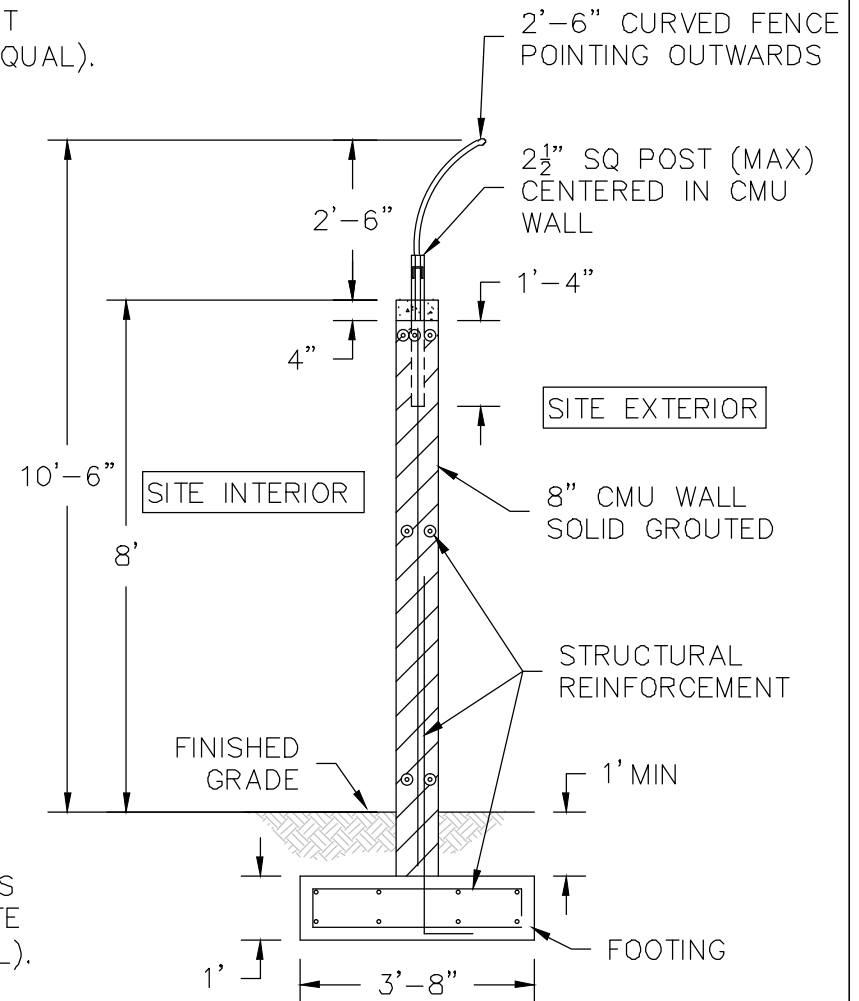


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7. DRIVEWAYS AND AREAS ACCESSED BY VEHICLES ON-SITE WILL BE REQUIRED TO BE PAVED PER THE STRUCTURAL SECTION RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
8. A MINIMUM 8' HIGH CMU BLOCK WALL WILL BE REQUIRED AROUND THE SITE WITH 2' PICKETS, (REFER TO DETAIL G-3366). WHERE TREATMENT FACILITIES WILL BE HIGHER THAN 8', WALL HEIGHTS OR SPECIAL PAINTING REQUIREMENTS MAY BE REQUIRED AS DIRECTED BY THE CITY WATER RESOURCES AND PLANNING DEPARTMENTS.
9. AREA TO BE LANDSCAPED PER CITY LANDSCAPING STANDARDS.
10. THIS DETAIL WAS DEVELOPED TO SERVE AS A PRELIMINARY GUIDE FOR ALLOCATING LAND AREA FOR A TYPICAL WELL SITE WITH ONSITE RETENTION AND ONSITE WATER TREATMENT. THE DETAIL MAY NOT SHOW ALL INFRASTRUCTURE OR THEIR EXACT LOCATIONS. LAND AREA SHOWN MAY BE SUBJECT TO CHANGE CONTINGENT UPON SUPPLY AND DISCHARGE FLOWS, STORAGE, TREATMENT, AND SITE LOCATION AS REQUIRED BY THE CITY.



TYPICAL CMU WALL ELEVATION



TYPICAL CMU WALL REINFORCING

NOTE:

1. WALL PERMIT REQUIRED TO BE OBTAINED FROM BUILDING SAFETY DEPARTMENT.

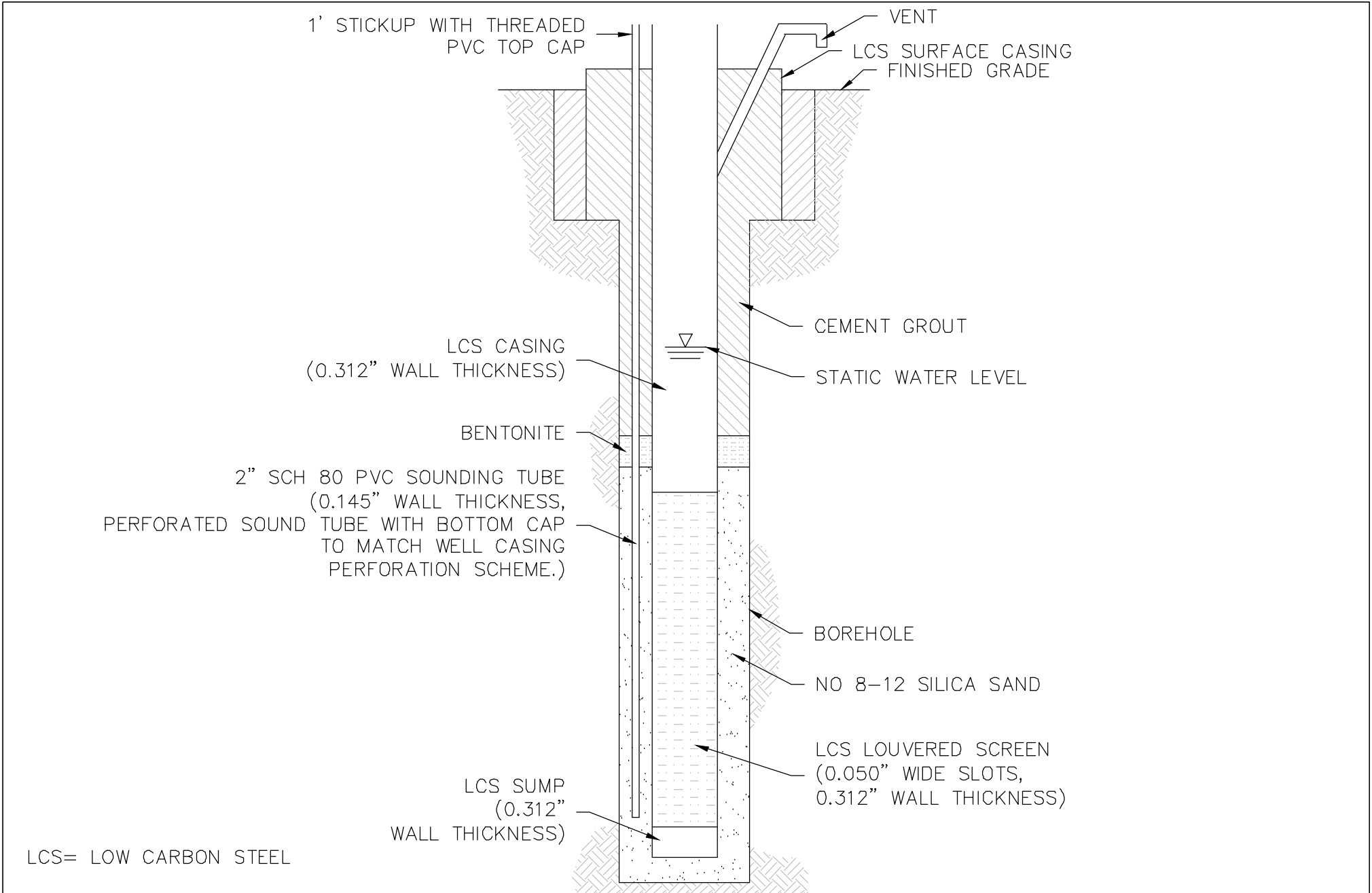
DETAIL NO.
G-3366

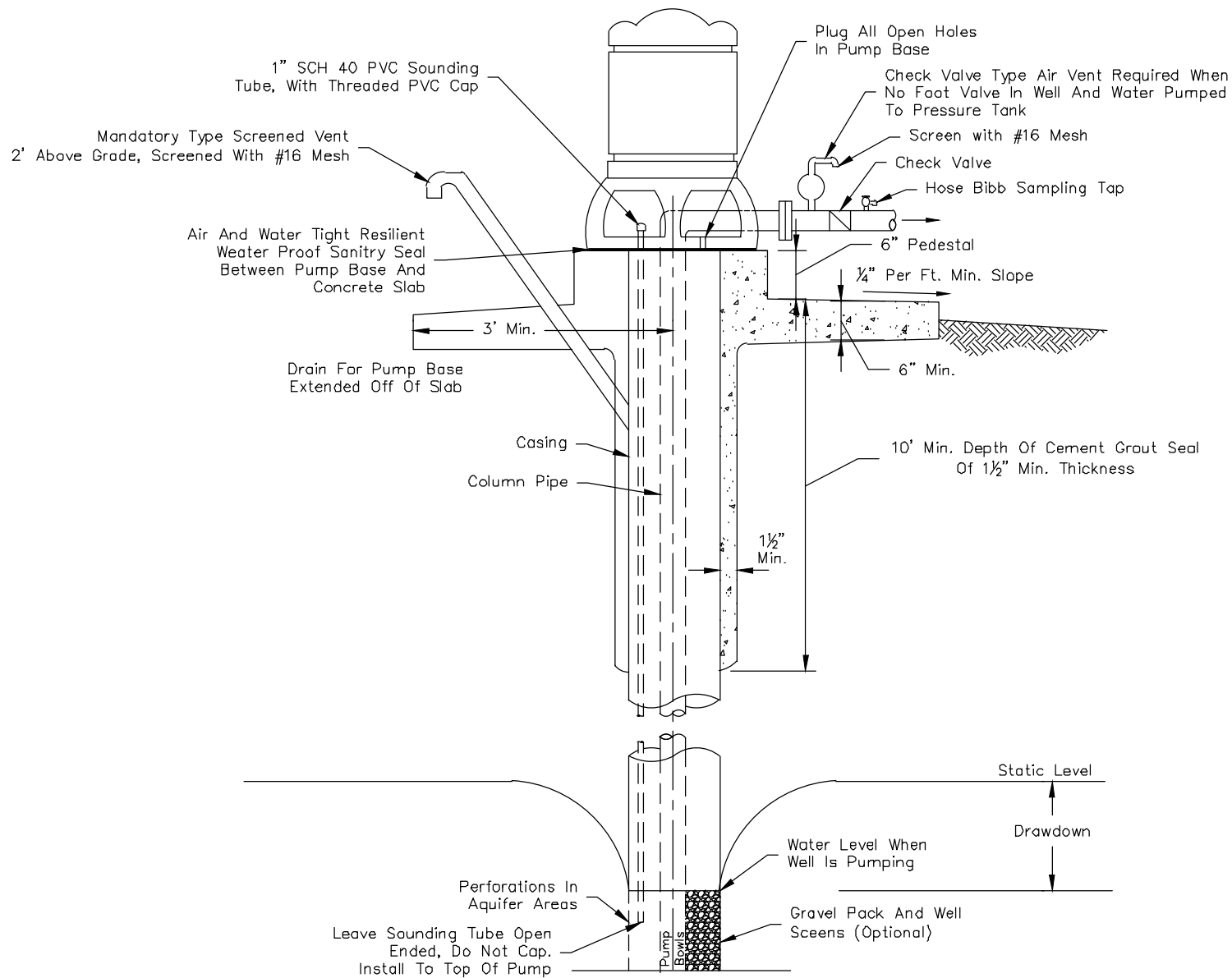
CITY OF GOODYEAR
STANDARD DETAIL

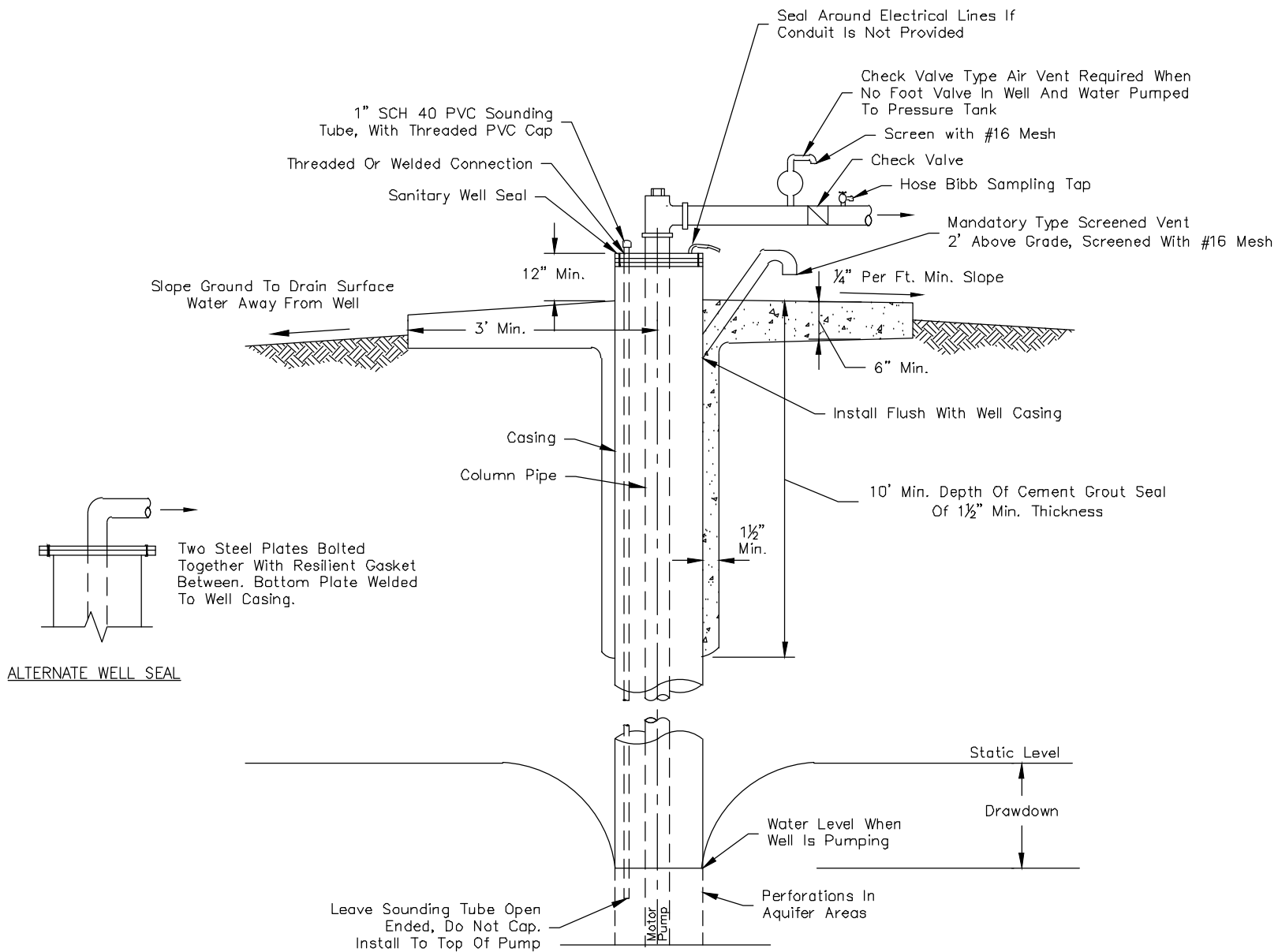
APPROVED:08/17

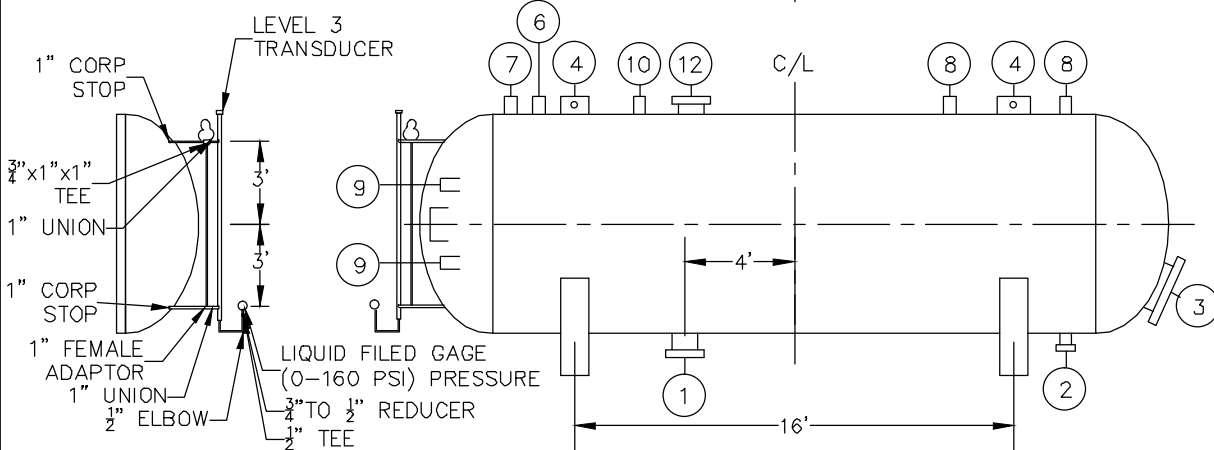
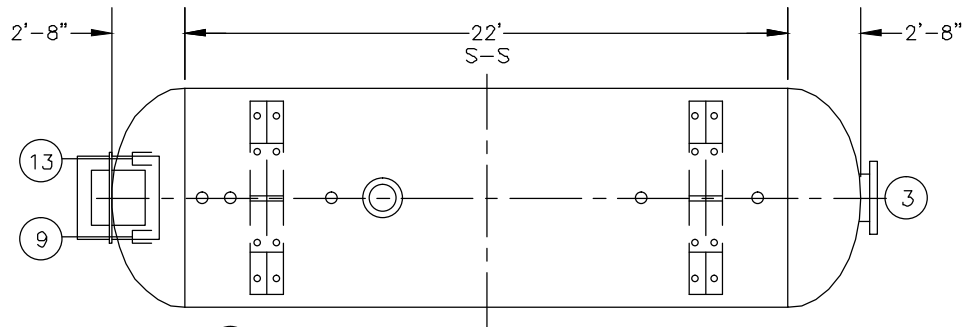
WALL ELEVATION FOR WELL SITE OR PUMP STATION

DETAIL NO.
G-3366

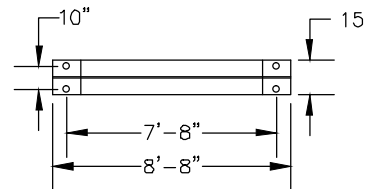
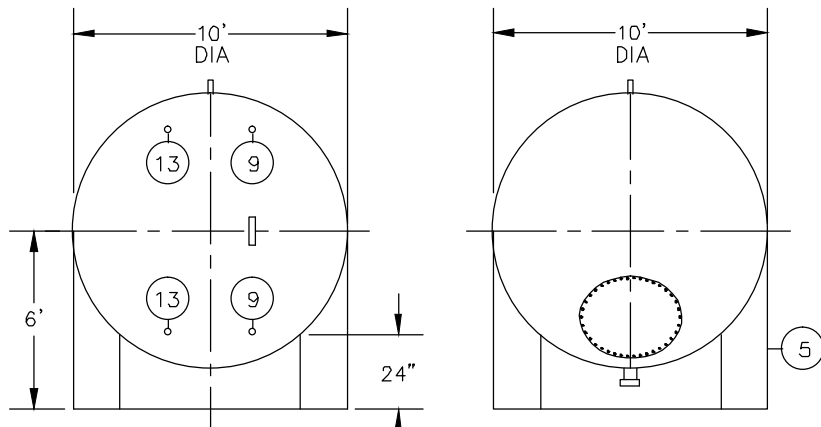








WATER SIGHT GAUGE



BASEPLATE

1-1/2" DIA HOLES
TYP 4 PLCS

NOZZLE SCHEDULE

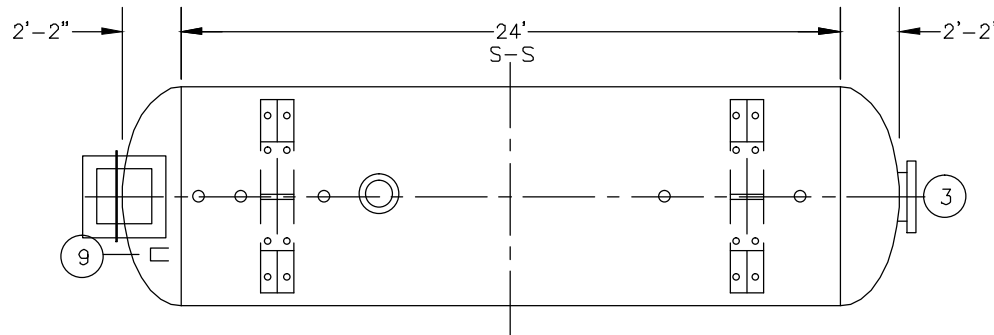
- ① INLET - 12" 150# FFSO.
- ② DRAIN - 4" 150# FFSO.
- ③ MANWAY - 30" HINGED ACCESS DOOR.
- ④ LIFT LUGS - 1" THK.
- ⑤ SADDLES - 3/4" THK, 1-1/4" THK BASE.
- ⑥ COUPLING - 2-1/2" 3000# NPT (VAC BRKR).
- ⑦ COUPLING - 2" 3000# NPT (SAFETY VALVE).
- ⑧ COUPLING - 2" 3000# NPT (AIRLINE).
- ⑨ COUPLING - 2" 3000# NPT (PROBE WELL).
- ⑩ COUPLING - 2" 3000# NPT (PRESS CONTROL).
- ⑪ FLANGE - 10" 150# FFSO (SPARE).
- ⑫ FLANGE - 8" 150# FFSO (SPARE).
- ⑬ COUPLING - 2" 3000# NPT (SPARE).

NOTE: ACCESS TO MANWAY SHOULD NOT
REQUIRE A LADDER OR SCAFFOLDING.

VESSEL DESIGN: ASME SEC VIII DIV 1
DESIGN PRESSURE: 250 PSIG
INTERNAL COATING: DEVO OR DUDICK NSF APPROVED,
10-12 MILS
EXTERNAL COATING: DEVO OR DUDICK NSF APPROVED,
4-6 MILS
SHIPPING WEIGHT: 38,000 POUNDS
FLOODED WEIGHT: 160,000 POUNDS

HYDROTANK SET POINTS

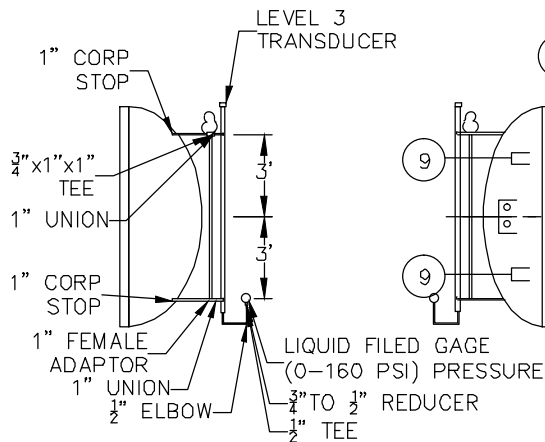
NEUTRAL TARGET LEVEL @ 50% FROM TOP
LSHH @ 65% OR 62.4" (33.6" FROM TOP / 35%) VS. 19%
LSH @ 60% OR 57.6" (38.4" FROM TOP / 40%) VS. 31%
LSL @ 40% OR 38.4" (57.6" FROM TOP / 60%) VS. 69%
LSLL @ 35% OR 33.6" (62.4" FROM TOP / 65%) VS. 81%



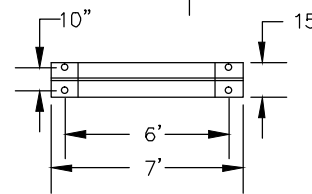
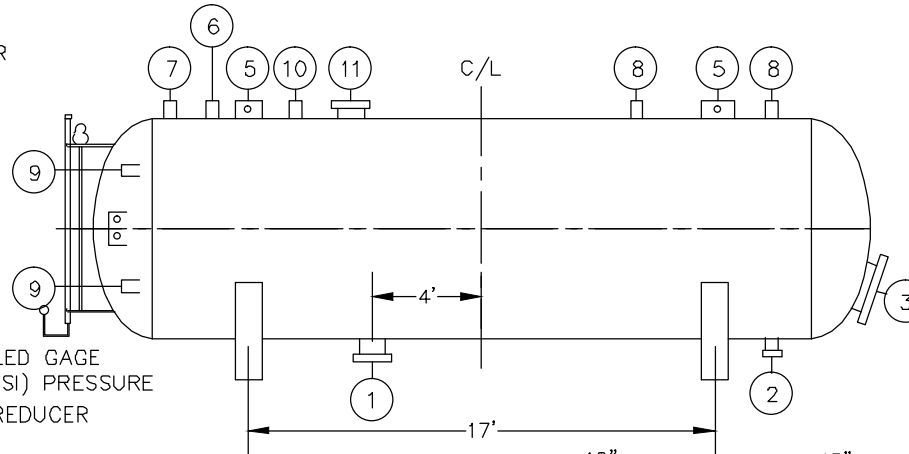
NOZZLE SCHEDULE

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- ② DRAIN - 4" 150# FFSO.
- ③ MANWAY - 30" HINGED ACCESS DOOR.
- ④ SADDLES - 3/4" THK, 1-1/4" THK BASE.
- ⑤ LIFT LUGS - 1" THK.
- ⑥ COUPLING - 2" 3000# NPT (VAC BRKR).
- ⑦ COUPLING - 2" 3000# NPT (PSV).
- ⑧ COUPLING - 2" 3000# NPT (AIRLINE).
- ⑨ COUPLING - 2" 3000# NPT (PROBE WELL).
- ⑩ COUPLING - 2" 3000# NPT (PRESS CONTROL).
- ⑪ FLANGE - 8" 150# FFSO (SPARE).

NOTE: ACCESS TO MANWAY SHOULD NOT REQUIRE A LADDER OR SCAFFOLDING.



WATER SIGHT GAUGE



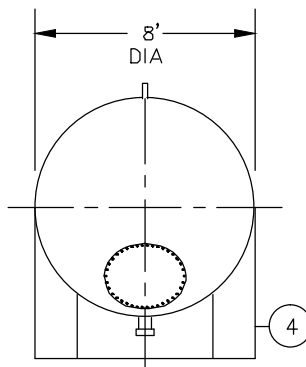
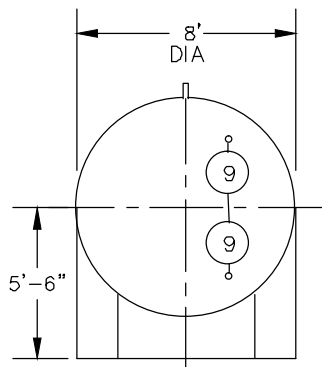
BASEPLATE

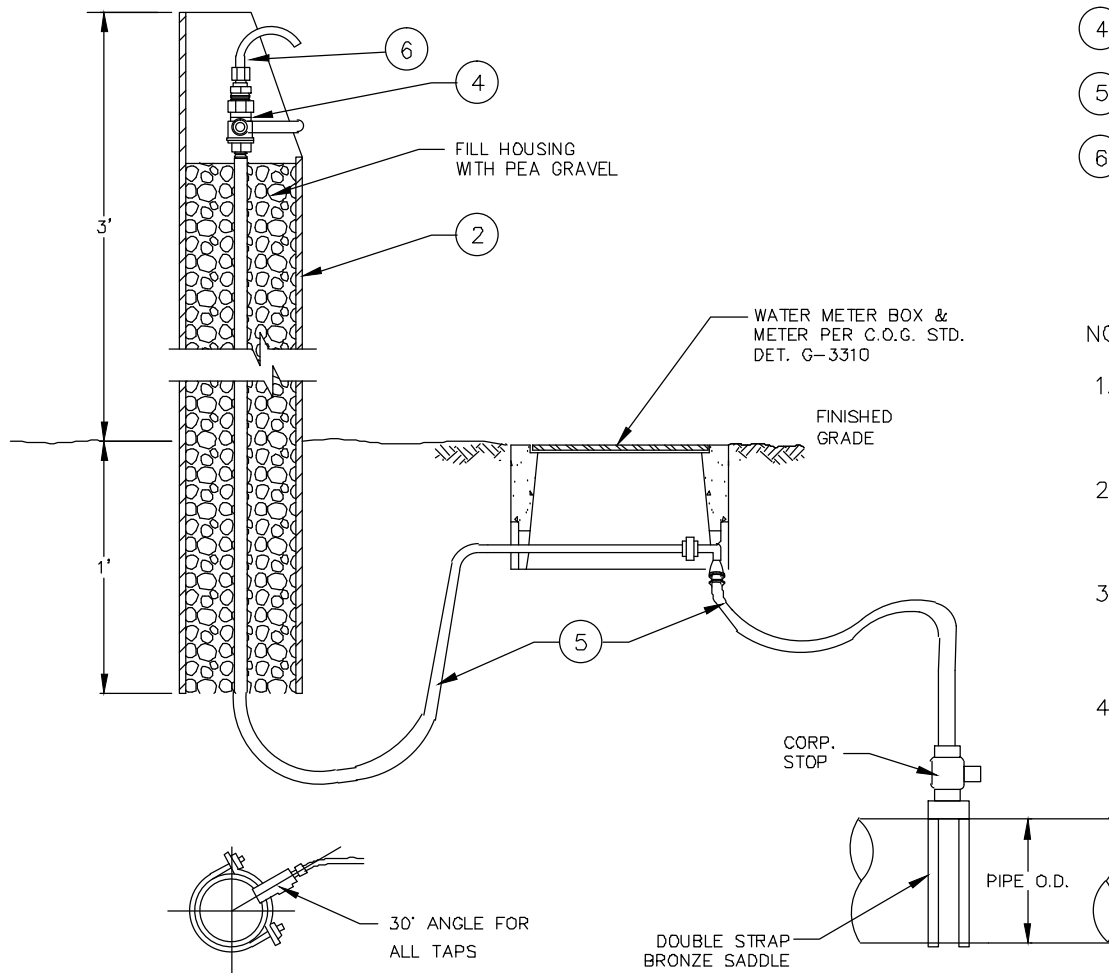
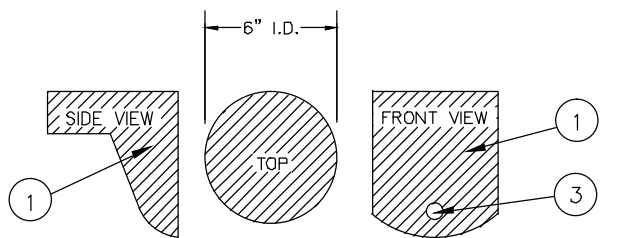
1-1/4" DIA HOLES
TYP 4 PLCS

VESSEL DESIGN: ASME SEC VIII DIV 1
 DESIGN PRESSURE: 250 PSIG
 INTERNAL COATING: DEVO OR DUDICK NSF APPROVED
 10-12 MILS
 EXTERNAL COATING: DEVO OR DUDICK NSF APPROVED
 4-6 MILS
 SHIPPING WEIGHT: 38,000 POUNDS
 FLOODED WEIGHT: 160,000 POUNDS

HYDROTANK SET POINTS

NEUTRAL TARGET LEVEL @ 50% FROM TOP
 LSHH @ 65% OR 62.4" (33.6" FROM TOP / 35%) VS. 19%
 LSH @ 60% OR 57.6" (38.4" FROM TOP / 40%) VS. 31%
 LSL @ 40% OR 38.4" (57.6" FROM TOP / 60%) VS. 69%
 LSL @ 35% OR 33.6" (62.4" FROM TOP / 65%) VS. 81%



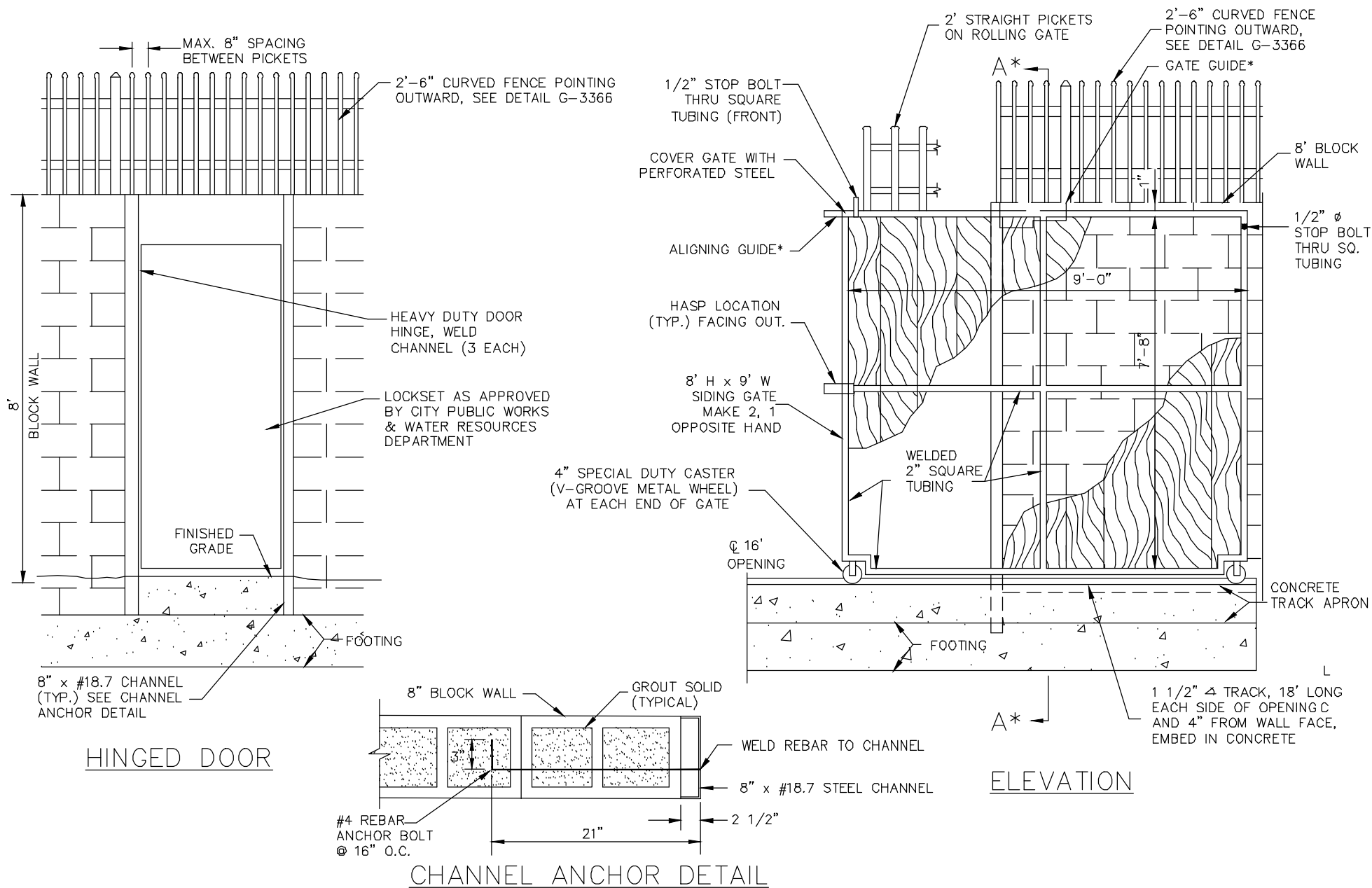


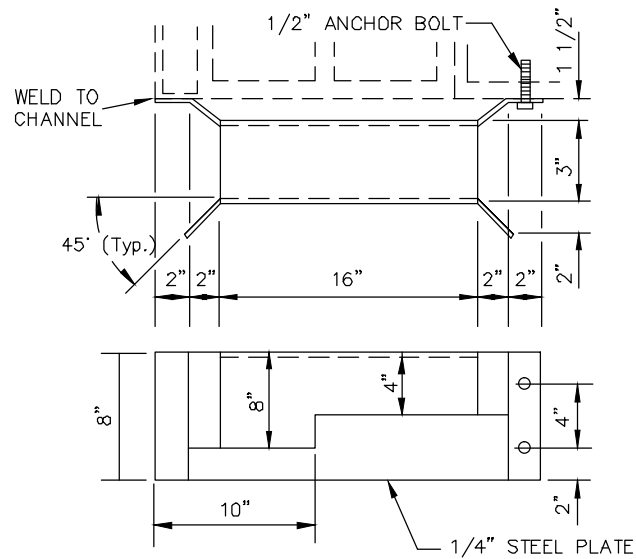
LIST OF MATERIALS:

- ① ALUMINUM LID
- ② ALUMINUM HOUSING – 6" x 48"
- ③ FLUSH MOUNTED LOCK
- ④ BALL VALVE, 1/2" x 3/8", 400 P.S.I.
- ⑤ COPPER SERVICE LINE (1" MIN.)
- ⑥ 1/2" SAMPLING SPIGOT

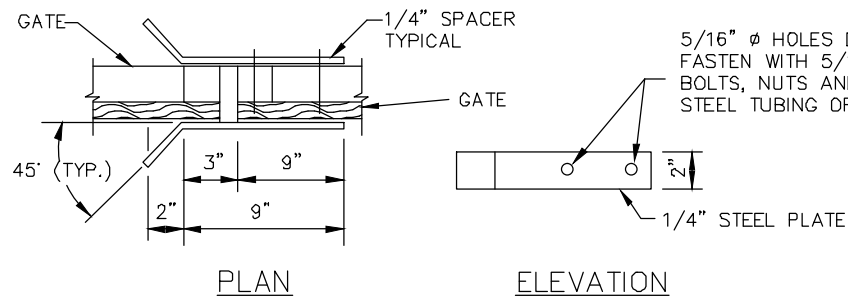
NOTES:

1. CARE SHOULD BE GIVEN TO LOCATE WATER SAMPLING STATIONS ADJACENT TO OPEN SPACES WHENEVER POSSIBLE.
2. IF A WATER SAMPLING STATION IS TO BE LOCATED IN FRONT OF A RESIDENCE, IT SHALL BE LOCATED ON A LOT LINE.
3. ONE SAMPLING STATION TO BE INSTALLED PER EVERY 100 RESIDENTIAL (SINGLE OR MULTIFAMILY) POTABLE SERVICE TAPS.
4. REFER TO THE CITY "APPROVED MATERIALS LIST" FOR ACCEPTABLE MODELS.

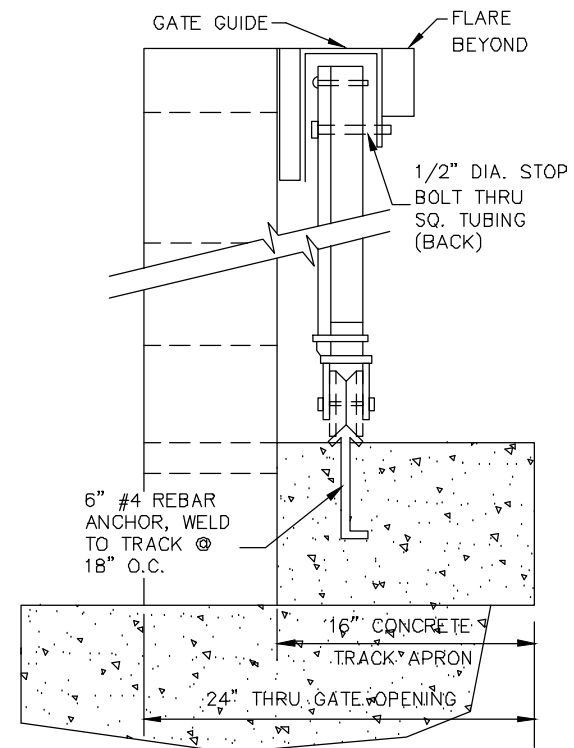




GATE GUIDE DETAIL
(MAKE 2, 1 OPPOSITE HAND)



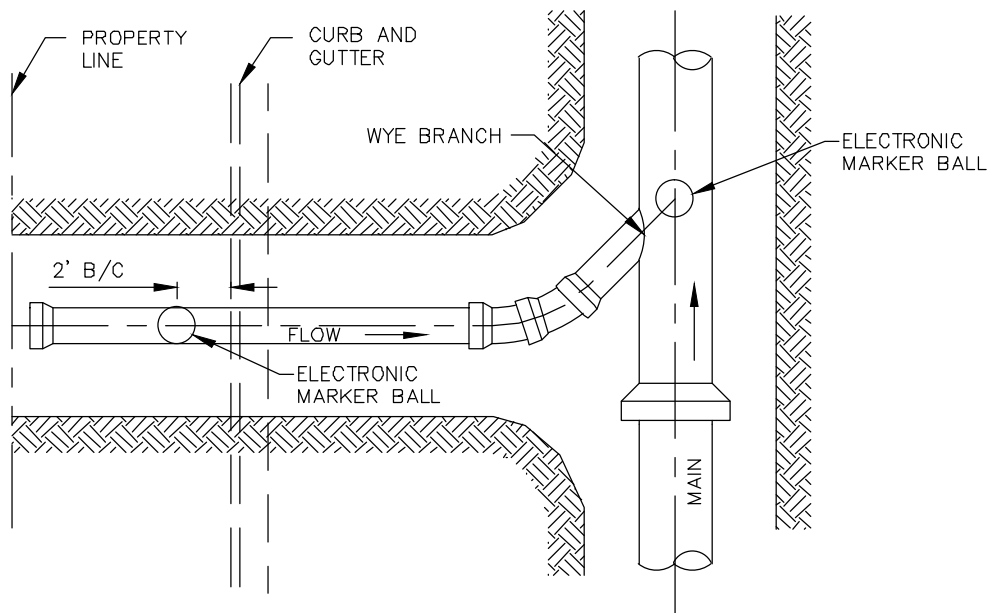
ALIGNING GUIDE DETAIL
(2 REQUIRED)



SECTION A-A

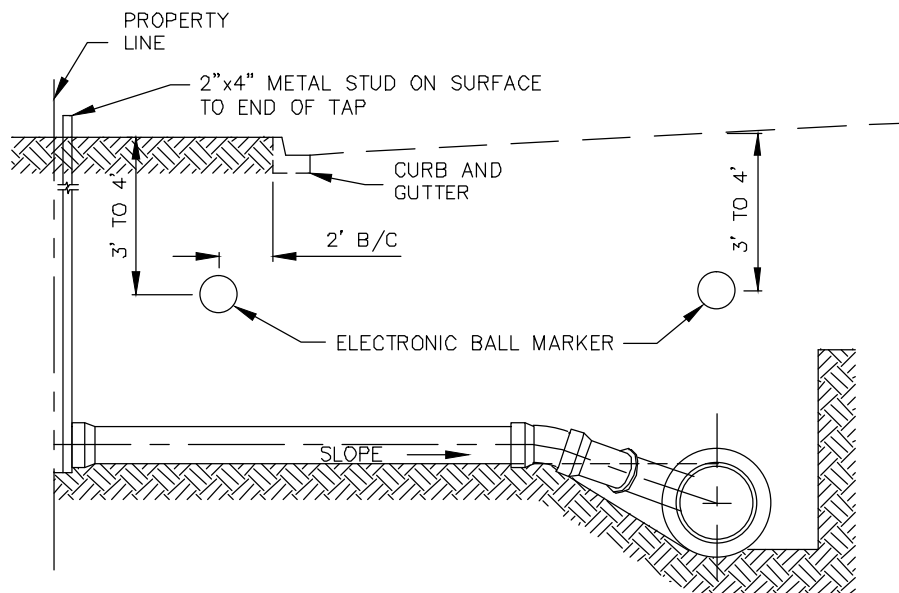
NOTES:

1. CONTRACTOR SHALL PRIME AND PAINT ALL METAL SURFACES, AND SHALL SEAL ALL WOOD SURFACES. BEFORE APPLICATION, THE COLOR AND MANUFACTURE OF THE PAINT AND SEALER SHALL BE APPROVED BY THE CITY PUBLIC WORKS & WATER RESOURCES DEPARTMENT.
2. PRIOR TO PAINTING, ALL SURFACES SHALL BE CLEANED FREE OF CONCRETE, MORTAR, RUST, DIRT, AND ANY OTHER OBJECTIONAL MATERIALS.
3. APPLY ONE (1) PRIMER COAT AND TWO (2) EXTERIOR ALKYD GLOSS ENAMEL COATS TO METAL.



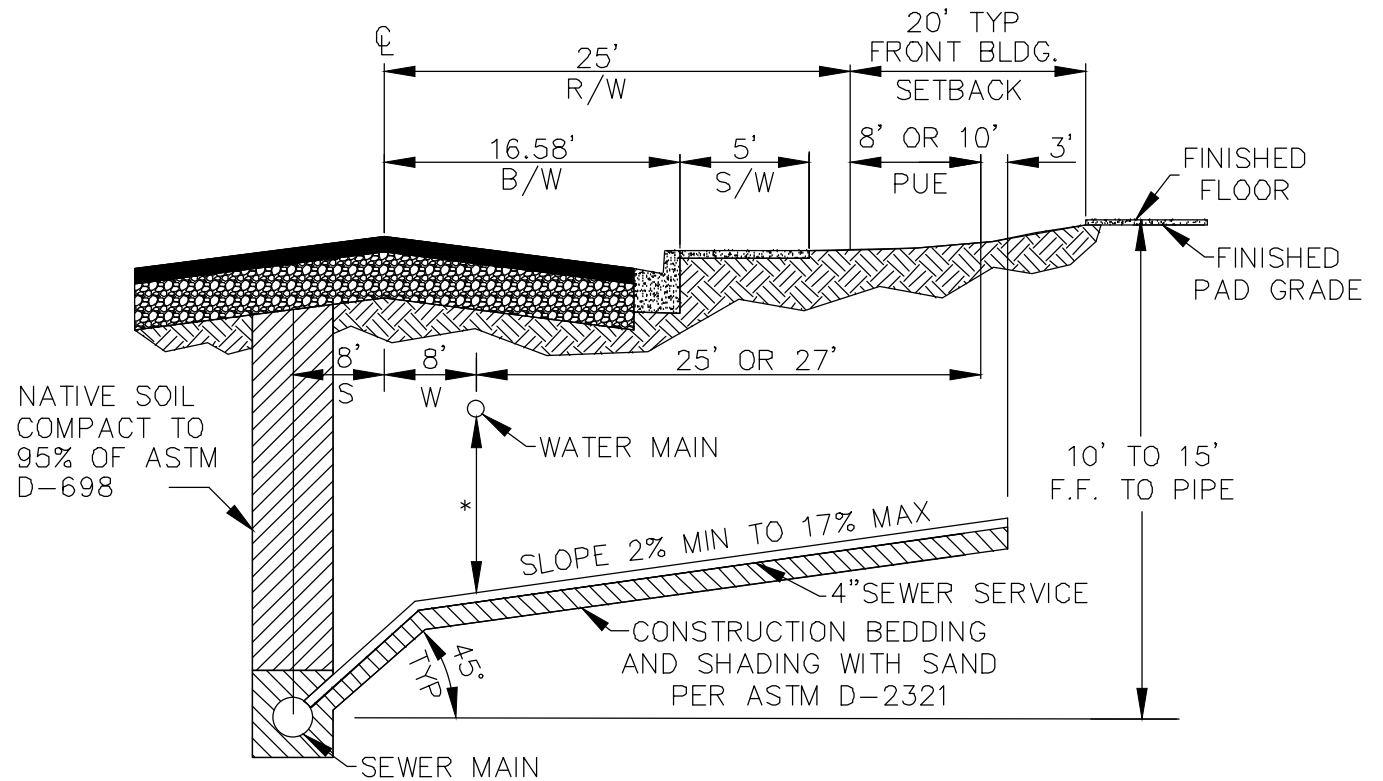
NOTES:

1. APPROVED ELECTRONIC BALL MARKER MANUFACTURER'S CAN BE FOUND IN THE CITY'S APPROVED MATERIALS LIST.
2. MARKER BALLS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, 2' BEHIND THE BACK OF CURB ABOVE PIPE (OR 2' BEHIND WALK FOR ATTACHED SIDEWALK). AN ADDITIONAL MARKER BALL SHALL BE INSTALLED ABOVE THE WYE.
3. ELECTRONIC MARKER BALLS SHALL BE RESTORED BY CONTRACTOR IF DISTURBED WHEN PRIVATE SERVICE LINE CONNECTION IS INSTALLED.
4. MARKER BALLS SHALL BE USED IN ADDITION TO A 2"x4" METAL STUD.



NOTES:

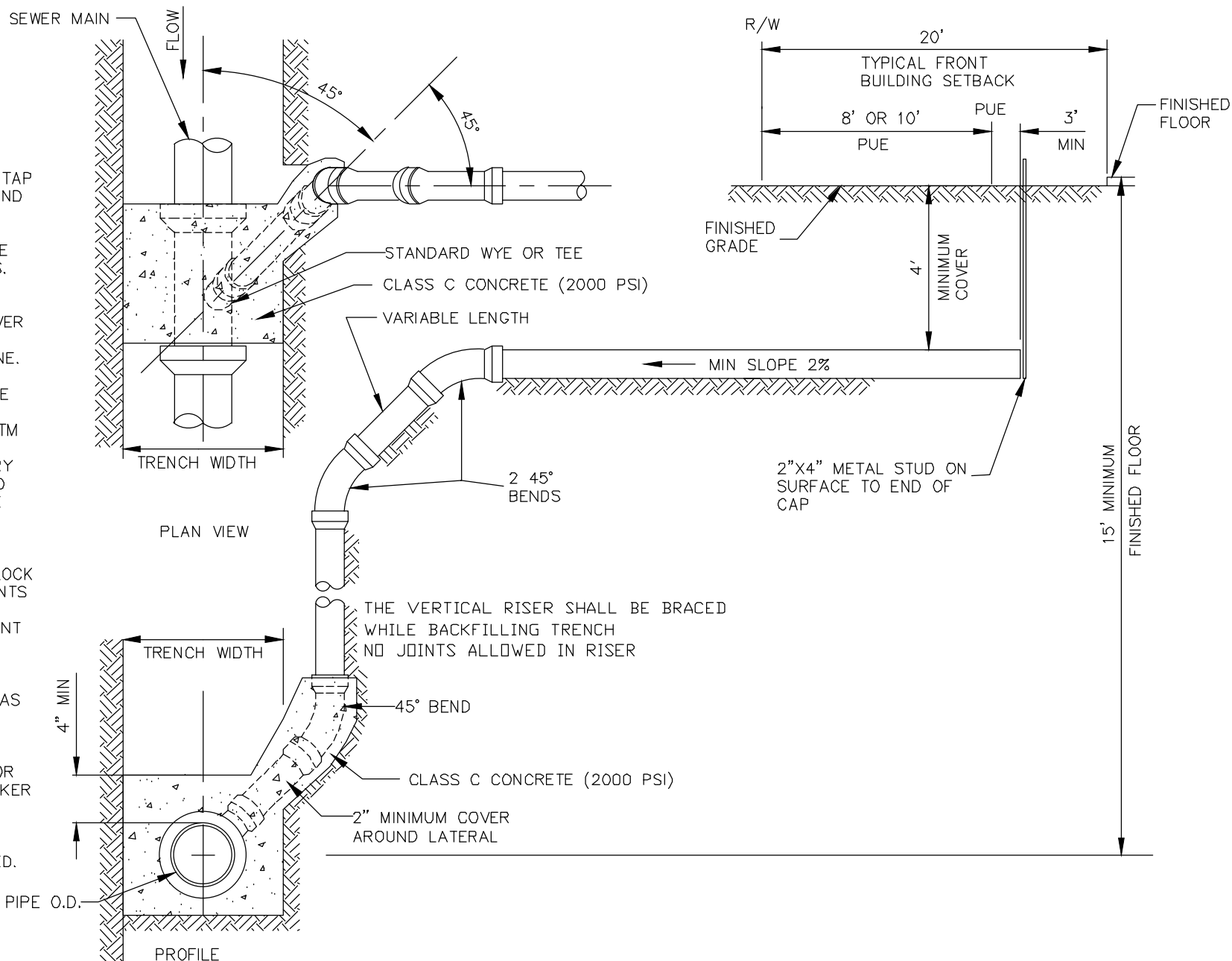
1. CONSTRUCTION DETAIL APPLIES WHERE CONTRACTOR BUILDS SERVICE CONNECTION. TAP EXTENDS 3' BEYOND P.U.E.
2. SIZE OF TAP SHALL BE DESIGNATED ON PLANS.
3. CONSTRUCT TAP AT MINIMUM SLOPE IF COVER WILL BE LESS THAN 5' AT PROPERTY LINE.
4. ALL FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321. THE CONTRACTOR MAY VARY FROM THE DRAWING TO USE THE APPROPRIATE WYES, TEE-WYES, AND BENDS TO ENSURE NO MISALIGNMENT OF THE PIPE AND FITTINGS. BLOCK OR BRACE FITTING JOINTS TO ENSURE ZERO DEGREES ANGULAR JOINT DEFLECTION.
5. END OF TAP TO BE SEALED AND MARKED AS NOTED.
6. SEE CITY STD. DET. G-3428 & G-3305 FOR ELECTRONIC BALL MARKER LOCATIONS.

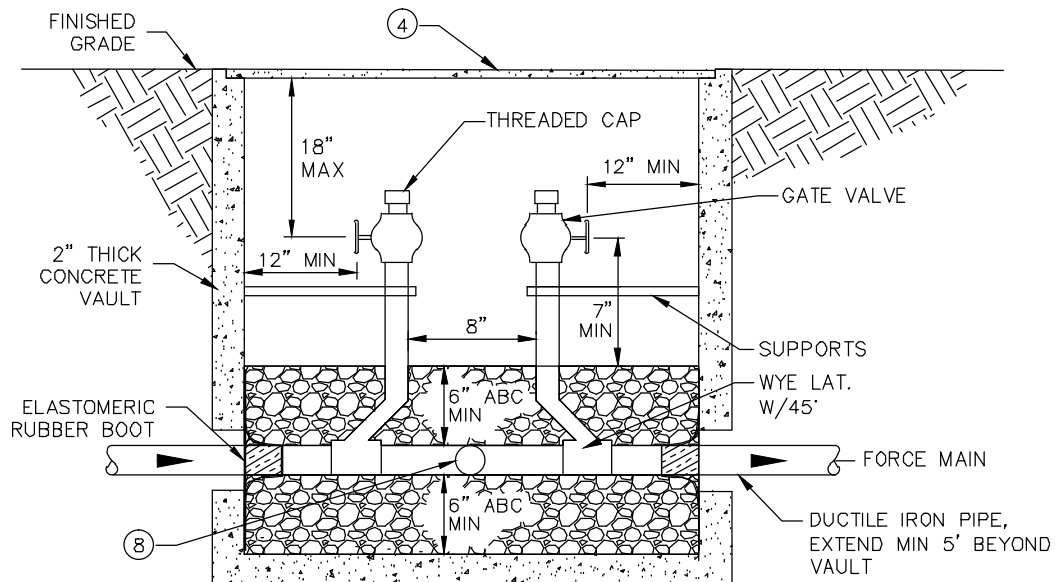
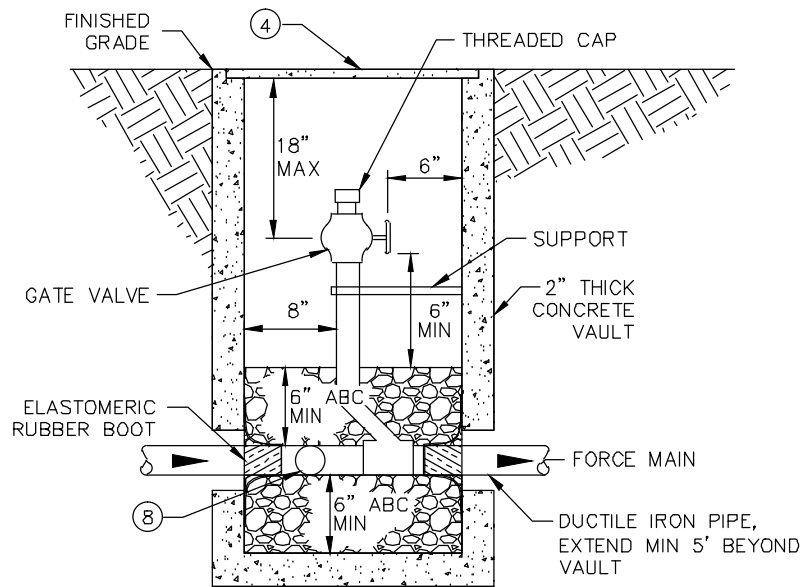


* PROVIDE A MINIMUM SEPARATION BETWEEN WATER LINE AND SEWER SERVICE PER MAG STD. DET. 404-1

NOTES:

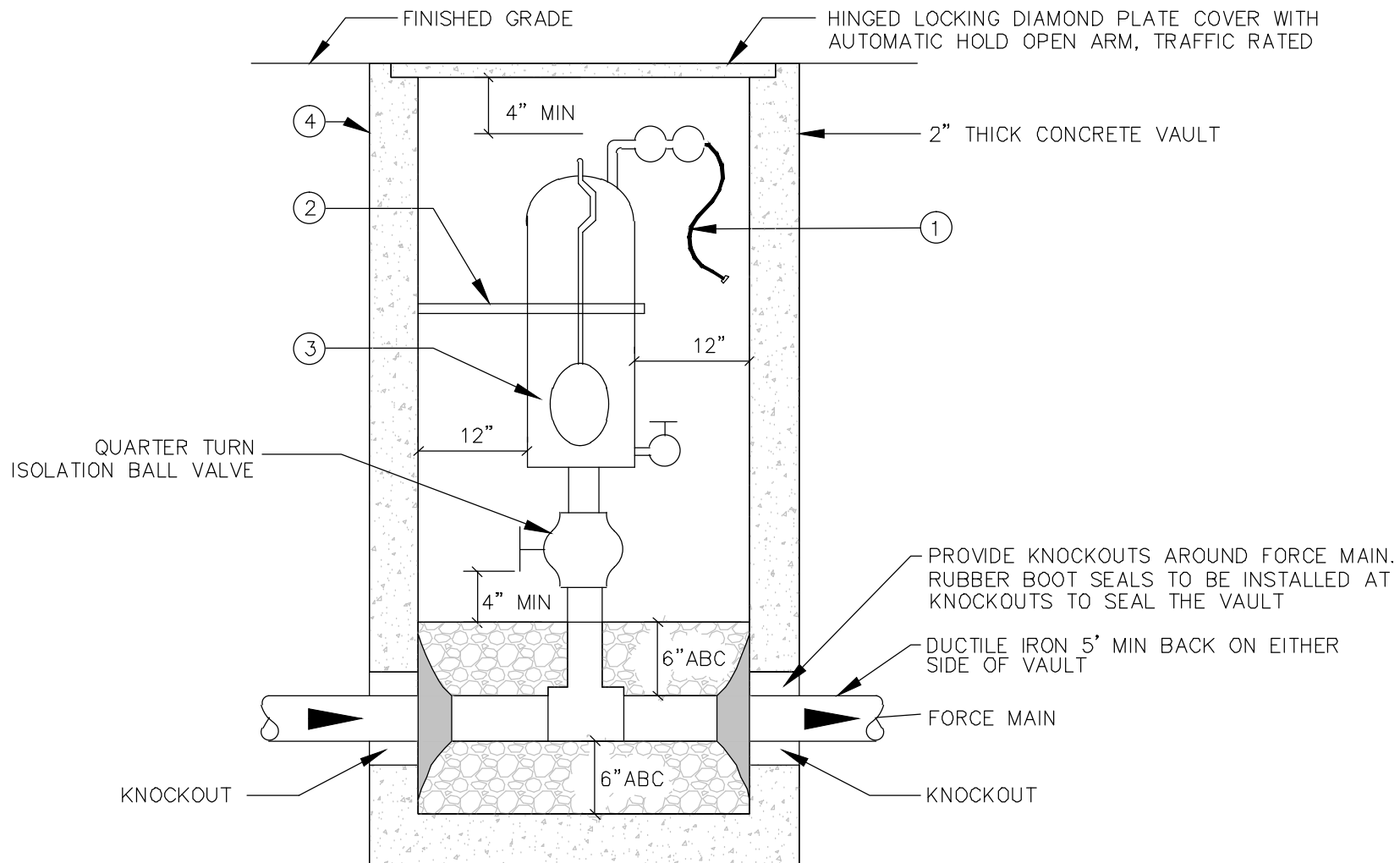
1. CONSTRUCTION DETAIL APPLIES WHERE CONTRACTOR BUILDS SERVICE CONNECTION. TAP EXTENDS 3 FEET BEYOND P.U.E.
2. SIZE OF TAP SHALL BE DESIGNATED ON PLANS.
3. CONSTRUCT TAP AT MINIMUM SLOPE IF COVER WILL BE LESS THAN 5 FEET AT PROPERTY LINE.
4. ALL FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321. THE CONTRACTOR MAY VARY FROM THE DRAWING TO USE THE APPROPRIATE WYES, TEE-WYES AND BENDS TO ENSURE NO MISALIGNMENT OF THE PIPE AND FITTINGS. BLOCK OR BRACE FITTING JOINTS TO ENSURE ZERO DEGREES ANGULAR JOINT DIRECTION.
5. END OF TAP TO BE SEALED AND MARKED AS NOTED.
6. SEE CITY STD. DET. G-3428 & G-3305 FOR ELECTRONIC BALL MARKER LOCATIONS.
7. SEWER PIPE SHALL BE SDR 26 IF PVC IS USED.





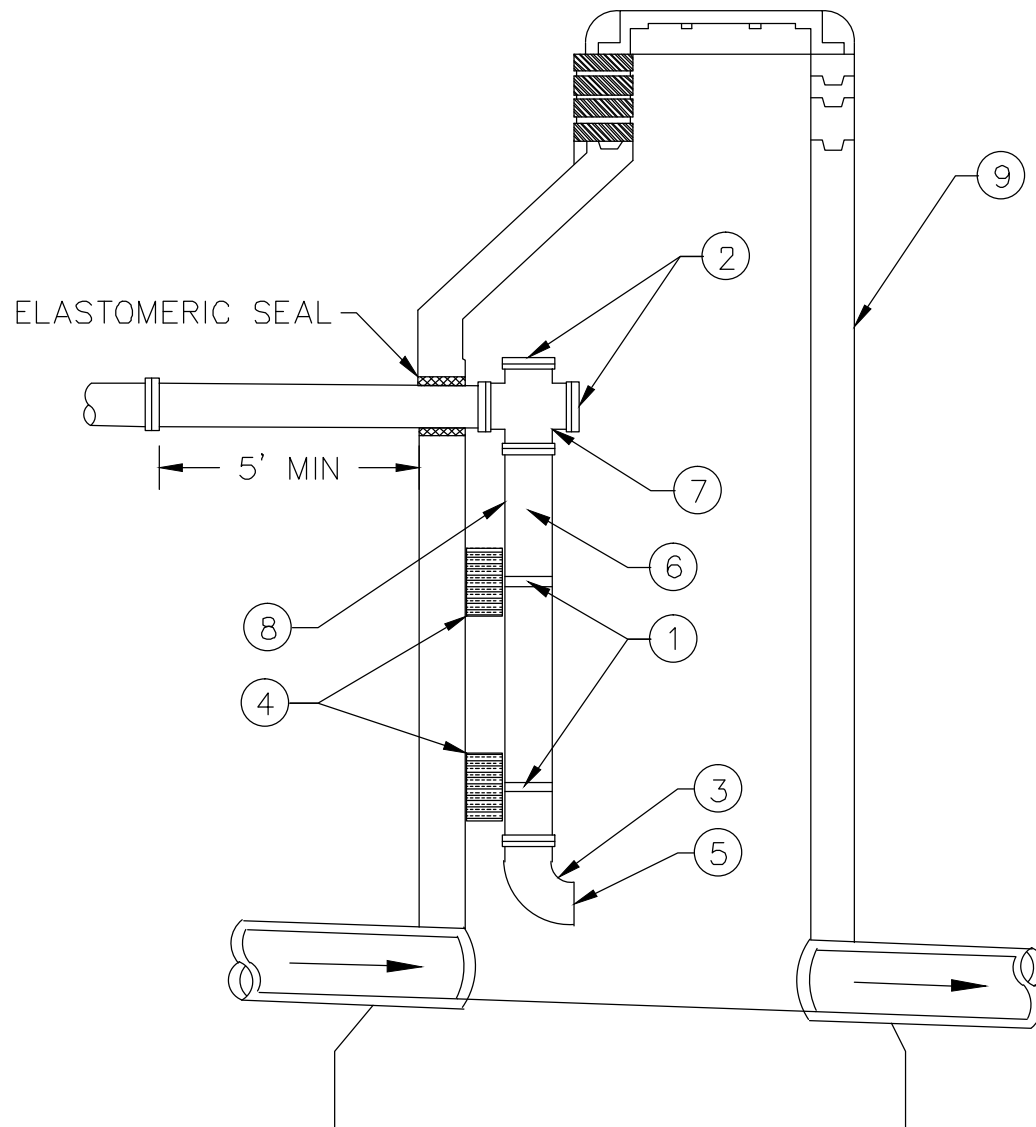
NOTES:

1. ONE-WAY CLEANOUTS SHALL BE INSTALLED ON MAXIMUM 400- FOOT CENTERS ALONG FORCE MAIN. ROTATE VAULT AS REQUIRED TO KEEP BEHIND BACK OF CURB.
2. TWO-WAY CLEANOUTS SHALL BE INSTALLED ON A MAXIMUM 800-FOOT CENTERS ALONG FORCE MAIN. ROTATE VAULT AS REQUIRED TO KEEP BEHIND BACK OF CURB.
3. AN AIR RELEASE VALVE SHALL BE INSTALLED ADJACENT TO ANY FORCE MAIN CLEANOUT.
4. LOCKING DIAMOND PLATE COVER WITH AUTOMATIC HOLD OPEN ARM, TRAFFIC-RATED.
5. RISER PIPES TO BE SAME DIAMETER AS FORCE MAIN (PLUG END WITH THREADED CAP).
6. PROVIDE KNOCKOUTS AROUND FORCE MAIN. RUBBER BOOT SEALS TO BE INSTALLED AT KNOCKOUTS TO SEAL THE VAULT.
7. PROVIDE 12" ABC MATERIAL AROUND FORCE MAIN.
8. PROVIDE GATE VALVE FOR FORCE MAINS WITH DIAMETERS OF 2" OR LESS.
9. A MINIMUM 12" OF CLEARANCE SHALL BE MAINTAINED BETWEEN THE VAULT WALLS AND THE CLEANOUT EQUIPMENT.



NOTES:

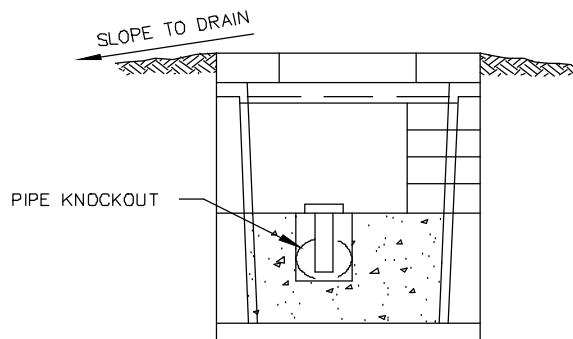
1. SUPPORT FOR AIR RELEASE VALVE.
2. SEWAGE AIR RELEASE VALVE FROM THE APPROVED MATERIALS LIST.
3. ROTATE VAULT AS REQUIRED TO KEEP BEHIND BACK OF CURB.



NOTES:

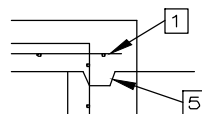
1. GRADE 316 STAINLESS STEEL FASTENERS. INSTALL 1 PER SECTION OF MANHOLE (MINIMUM OF 2).
2. BLIND FLANGE W/STAINLESS STEEL BOLTS GRADE 316 3" AND ABOVE IPT CAP, 2" BELOW.
3. MJ X PLAIN END 90 DEGREE ELBOW RESTRAINED TO DIRECT FLOW DOWN STREAM.
4. ELASTROMERIC SPACER (1 PER FASTENER).
5. FORCE MAIN SHALL TRANSITION INTO A GRAVITY LINE WITHIN A MANHOLE IN A MANNER THAT MINIMIZES AGITATION OF SEWAGE. THE CROWN OF THE FORCE MAIN AND OUTLET GRAVITY LINE SHALL MATCH WHERE POSSIBLE, WITH BENCH GROUTING INSTALLED TO DIRECT FLOW INTO THE OUTLET WITH A MINIMAL CHANGE IN THE GRAVITY FLOW ANGLE.
6. THE FORCE MAIN LINES WITHIN THE MANHOLE SHALL HAVE 401 EPOXY COATING ON THE PIPE.
7. FLG CROSS W/401 EPOXY COATING ON THE OUTSIDE.
8. DIP PER APPROVED MATERIALS LIST.
9. MINIMUM 5' DIAMETER MANHOLE.

NOTE: DISCHARGE OUTLET SHALL NEVER BE BELOW CROWN OF DOWNSTREAM PIPE.

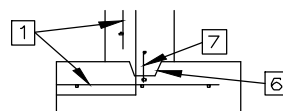


SECTION A-A

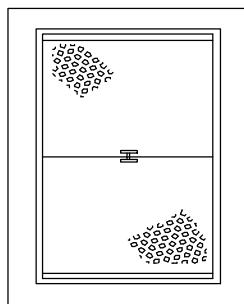
PRE-CAST VAULT



TOP KEY
DETAIL "A"



BOTTOM KEY
DETAIL "B"



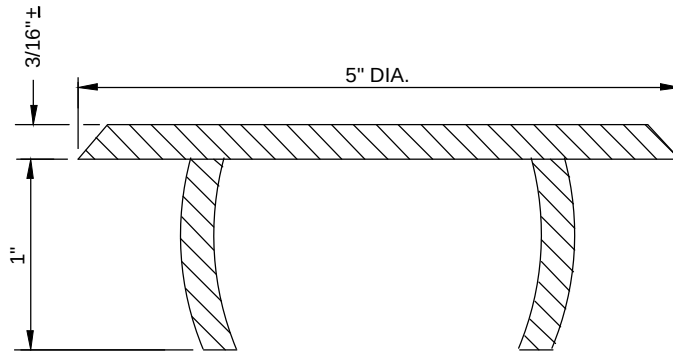
COVER WITH LID

CONSTRUCTION NOTES:

- [1] REINFORCED STEEL AND CLEARANCE AS APPROVED BY THE ENGINEER.
- [2] BLOCK MASONRY MAY BE USED IN LIEU OF CIP WALLS. 8" BLOCK MASONRY, GROUT EACH CELL TO FULL HEIGHT (GROUT PER MAG SECTION 776).
- [3] 2 TORSION SPRING-ASSISTED GALVANIZED DIAMOND PLATE ACCESS DOORS (DESIGN LOADING AASHO-H20), LOCKING WITH TYPE 304SS HARDWARE AND SAFETY BAR.
- [4] LADDER SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DETAIL AND SHALL MEET THE REQUIREMENTS OF OSHA FOR TYPE 1A (300lbs) FIXED LADDERS, SINGLE SECTION. DETAILS OF LADDER CONSTRUCTION, ALONG WITH A CERTIFICATION THAT THE LADDER MEETS OR EXCEEDS OSHA REQUIREMENTS FOOT TYPE 1A (300lbs) SERVICE SHALL BE SUBMITTED FOR REVIEW PRIOR TO FURNISHING AND INSTALLING. MILL FINISHED ALUMINUM LADDER OR APPROVED CORROSION-RESISTANT MATERIAL.
- [5] 2"x4" KEY, CENTER ON WALL (INSTALL ROPE CAULK CONTINUOUSLY).
- [6] 1-5/8" x 2-1/2" x 3" KEY.
- [7] 4" PVC DUMBELL-TYPE CONTINUOUS WATERSTOP 3/8" MIN. THICKNESS. (WASH THOROUGHLY PRIOR TO INSTALLATION).
- [8] ANCHOR STRAPS (3 EACH SIDE) WITH 5/8" x 3-1/2" 316SS ANCHOR BOLTS WITH LOCK WASHER AND NUT.

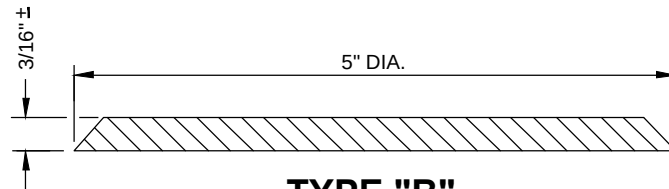
EQUIPMENT DESCRIPTION

MOLDED FIBERGLASS REINFORCED POLYESTER PARSHALL FLUME (OR APPROVED EQUAL) SHALL BE INSTALLED. THE FLUME SHALL BE MOLDED IN ONE PIECE WITH AMPLE WALL THICKNESS AND REINFORCING RIBS TO PREVENT DISTORTION DURING SHIPMENT, INSTALLATION, AND OPERATION. THE FLUME SHALL BE SELF-SUPPORTING AND REQUIRE NO EXTERNAL SUPPORTING STRUCTURE. INTERIOR DIMENSIONS SHALL CONFORM TO THOSE IN THE LATEST REVISION OF WATER MEASUREMENT MANUAL PUBLISHED BY THE U.S. DEPARTMENT OF THE INTERIOR, WATER AND POWER RESOURCES SERVICES. THE THROAT WIDTH AND FLUME HEIGHT (*E DIMENSION) SHALL BE PER PLAN.



TYPE "A"

TO BE INSTALLED IN WET CONCRETE
DURING CONSTRUCTION



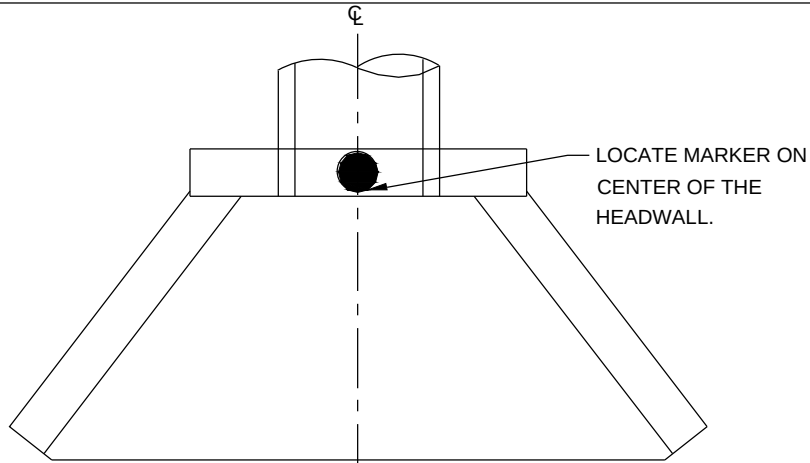
TYPE "B"

TO BE INSTALLED WITH ADHESIVE
ON EXISTING STRUCTURES

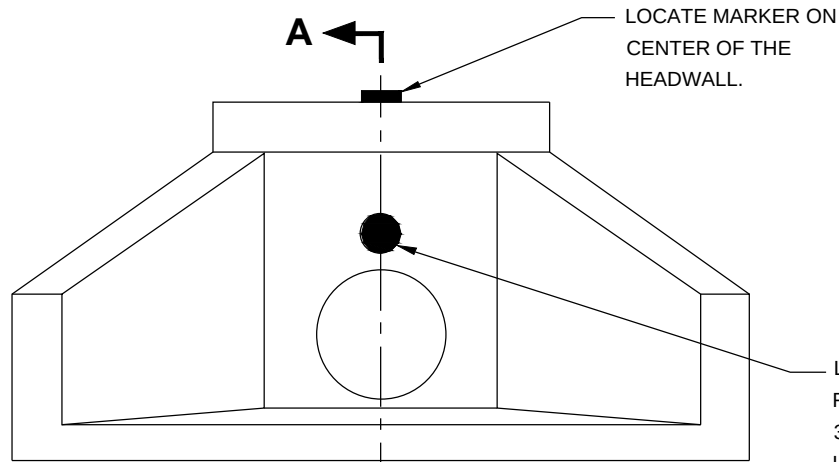


NOTES:

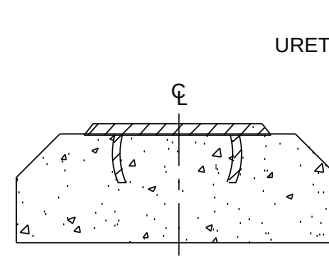
1. MATERIAL: CAST ALUMINUM.
2. THE TOTAL WIDTH OF INDIVIDUAL LETTERS TO BE SUCH THAT LETTERS AND WORDS ARE EQUALLY SPACED AND BALANCED.
3. LETTERS TO BE 1/2" IN HEIGHT. TYPE OF LETTERS TO BE SUBMITTED FOR APPROVAL.



PLAN VIEW

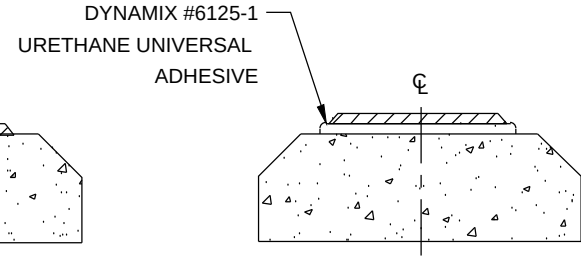


SIDE VIEW



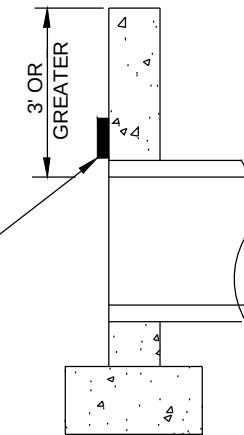
TYPE "A"

TO BE INSTALLED IN WET CONCRETE
DURING CONSTRUCTION



TYPE "B"

TO BE INSTALLED WITH ADHESIVE
ON EXISTING STRUCTURES



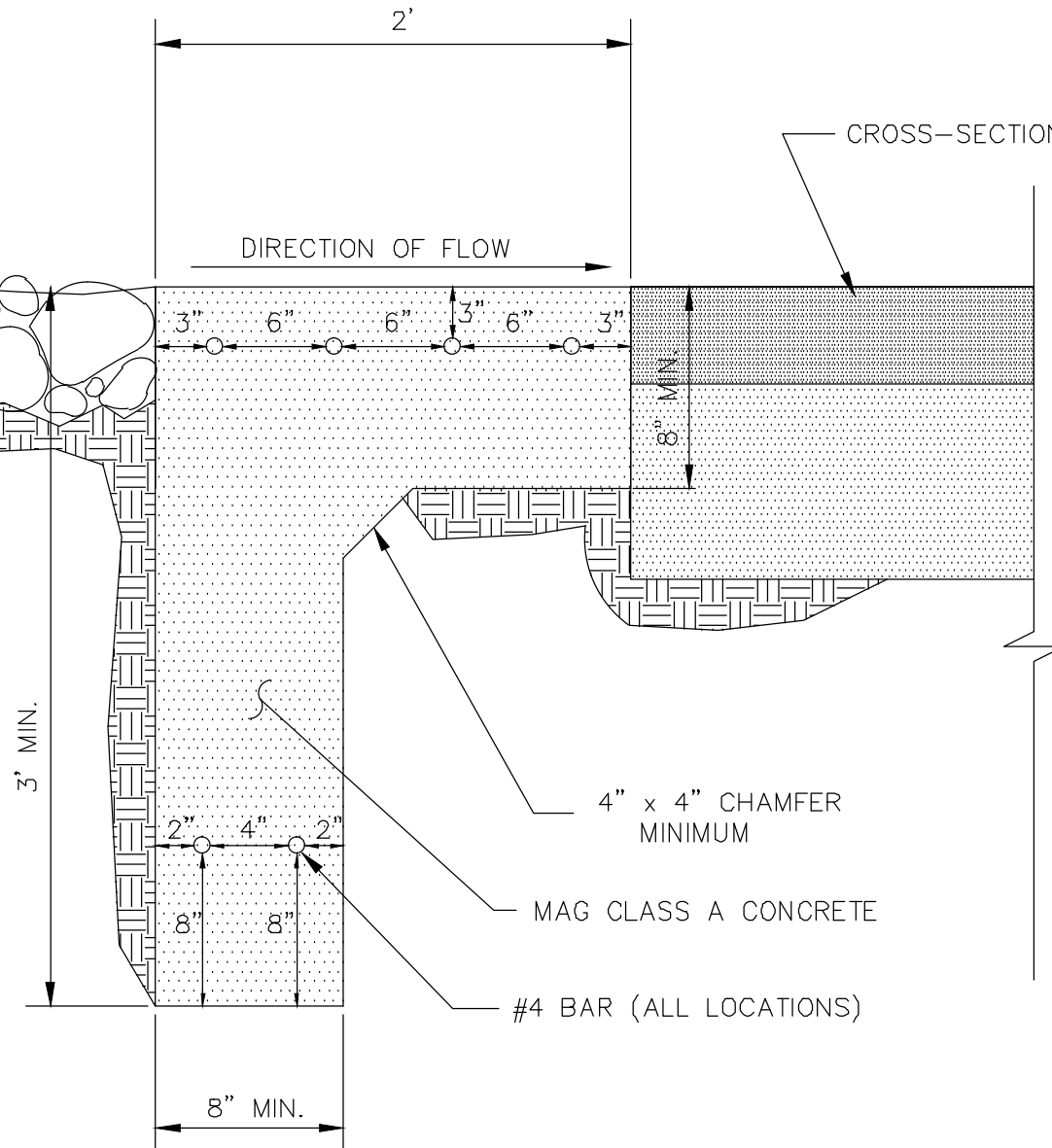
SECTION A-A

RIP-RAP
(D50 PER PLAN)

CROSS-SECTION PER PLANS

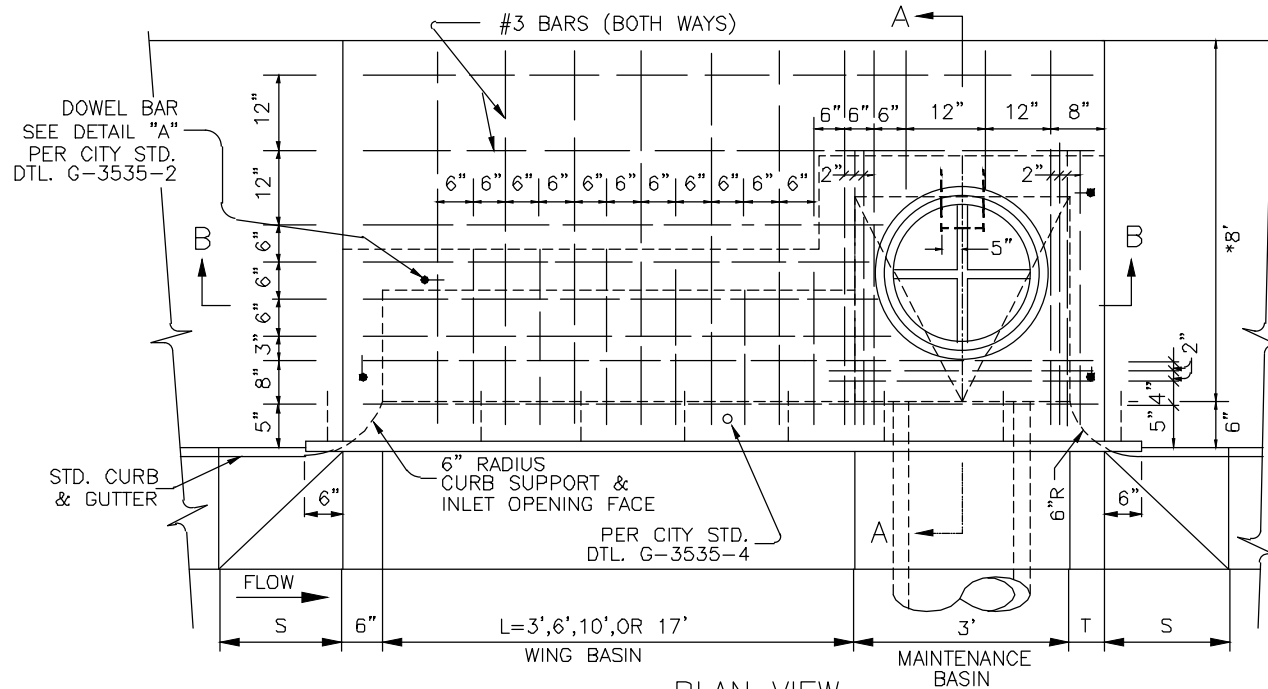
DIRECTION OF FLOW

NOTE:
CUT-OFF WALLS SHALL BE USED
AT THE UPSTREAM AND
DOWNSTREAM PAVEMENT EDGES
OF ALL AT-GRADE WATER
CROSSINGS.
ALL AT-GRADE CROSSINGS
SHALL BE APPROVED BY THE
CITY ENGINEERING DEPARTMENT.



SIZE OF OUTFALL CONDUIT	FRAME ANGLES	SHEAR PIN CLIP ANGLES	SHEAR PINS	ANCHOR BOLTS	HINGE PINS	HINGE ANGLE	HINGE STANDARD PIPE	*NO. OF EQUAL BARRIER BAR SPACES (HORIZ.)	NO. OF EQUAL BARRIER BAR SPACES (VERT.)	H (OUT TO OUT FRAME ANGLES)	W * (OUT TO OUT FRAME ANGLES)	A	B
30"	2x2x1/4	4x4x1/4	1-1/8Ø	5/8Ø	1/2"Ø	2x2x1/4	3/4"	3	5	34"	20"	SINGLE HINGE CENTERED	
36"	2x2x1/4	4x4x1/4	1-1/8Ø	5/8Ø	3/4Ø	2-1/2X 2-1/2X1/4	1"	4	6	40"	26"	SINGLE HINGE CENTERED	
42"	2x2x1/4	4x4x1/4	2-1/8Ø	5/8Ø	1/2"Ø	2x2x1/4	3/4"	5	6	42"	32"	2 HINGES	
48"	3x3x7/16	5x3x1/4	2-1/8Ø	5/8Ø	3/4"Ø	2-1/2x1/4	1"	5	7	47"	38"	3"	1"
54"	3x3x7/16	5x3x1/4	2-1/8Ø	5/8Ø	3/4"Ø	2x2x1/4	1"	6	8	54"	44"	5"	3"
60"	3x3x7/16	5x3x1/4	2-1/8Ø	5/8Ø	3/4"Ø	2x2x1/4	1"	7	9	60"	50"	9"	4"
66"	3x3x7/16	5x3x1/4	2-1/8Ø	5/8Ø	3/4"Ø	2x2x1/4	1"	8	10	66"	56"	11"	6"
72"	4x4x5/8	5x3x1/4	2-3/16Ø	5/8Ø	1"Ø	3x3x3/8	1-1/4"	9	11	73"	62"	15"	7"
78"	4x4x5/8	5x3x1/4	2-3/16Ø	5/8Ø	1"Ø	3x3x3/8	1-1/4"	10	11	79"	68"	17"	9"
84"	4x4x5/8	5x3x1/4	2-3/16Ø	5/8Ø	1"Ø	3x3x3/8	1-1/4"	11	13	86"	74"	21"	10"
90"	4x4x5/8	5x3x1/4	2-3/16Ø	5/8Ø	1"Ø	3x3x3/8	1-1/4"	12	13	92"	80"	23"	12"
96"	4x4x5/8	5x3x1/4	2-3/16Ø	5/8Ø	1"Ø	3x3x3/8	1-1/4"	12	14	98"	86"	29"	12"

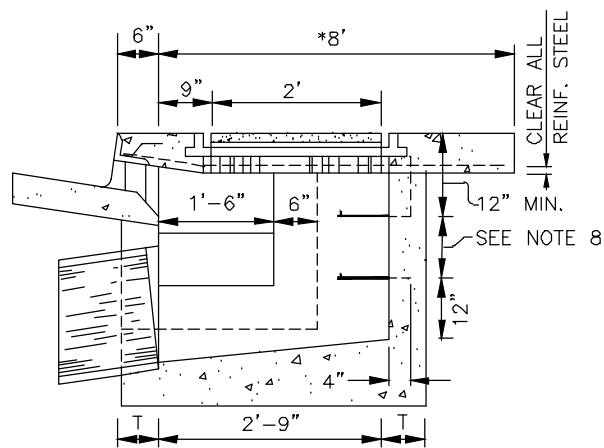
*NOTE: ADJUST THESE VALUES FOR SKEWED CONDUITS. PROVIDE 5" MAXIMUM OPENING AT EACH SIDE AND BETWEEN BARS.



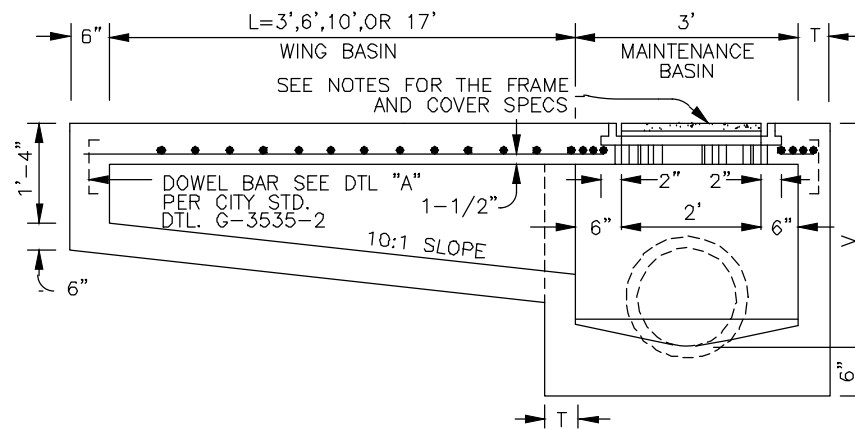
PLAN VIEW

NOTES

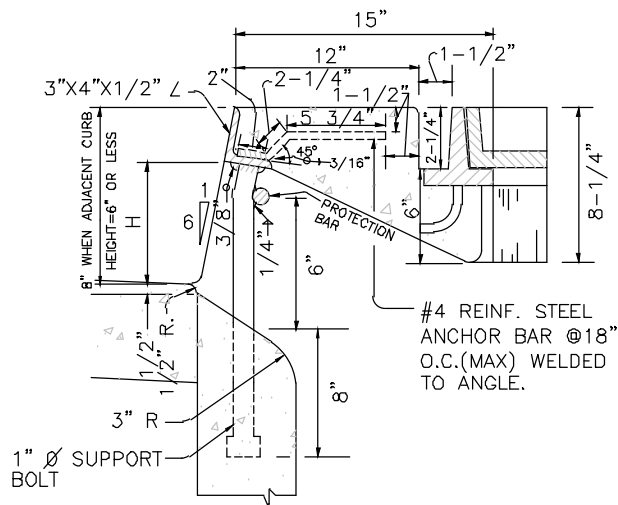
1. FOR CONSTRUCTION NOTES, TABLES AND ADDITIONAL DETAILS SEE CITY STD DTL. G-3535-2.



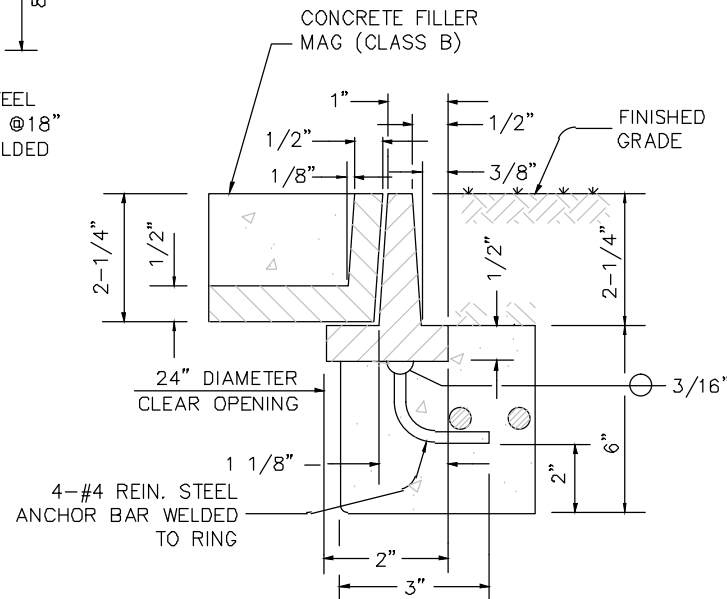
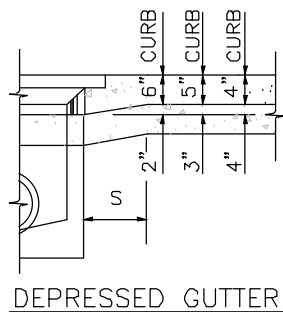
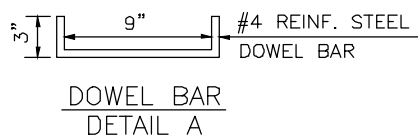
SECTION A-A
TRANSITION (BOTH SIDES)



SECTION B-B



INLET CURB OPENING



CATCH BASIN LID WITHIN LANDSCAPE

TABLE A

CATCH BASIN WALL THICKNESS
T = 6" IF V = 4' OR LESS
T = 8" IF V = 4' TO 8'
(IF V EXCEEDS 8', SPECIAL DESIGN IS REQUIRED.)
L = 0' UNLESS SPECIFIED ON THE PLANS
V = 3'-6" MIN. WHEN L = 0', 3', OR 6'
V = 4' MIN. WHEN L = 10' OR 17'

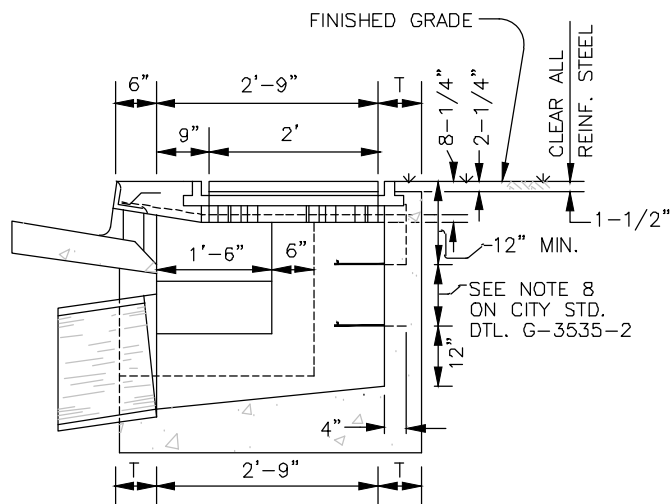
*5' IN LOCATIONS WHERE 5' SIDEWALK IS ALLOWED

NOTES

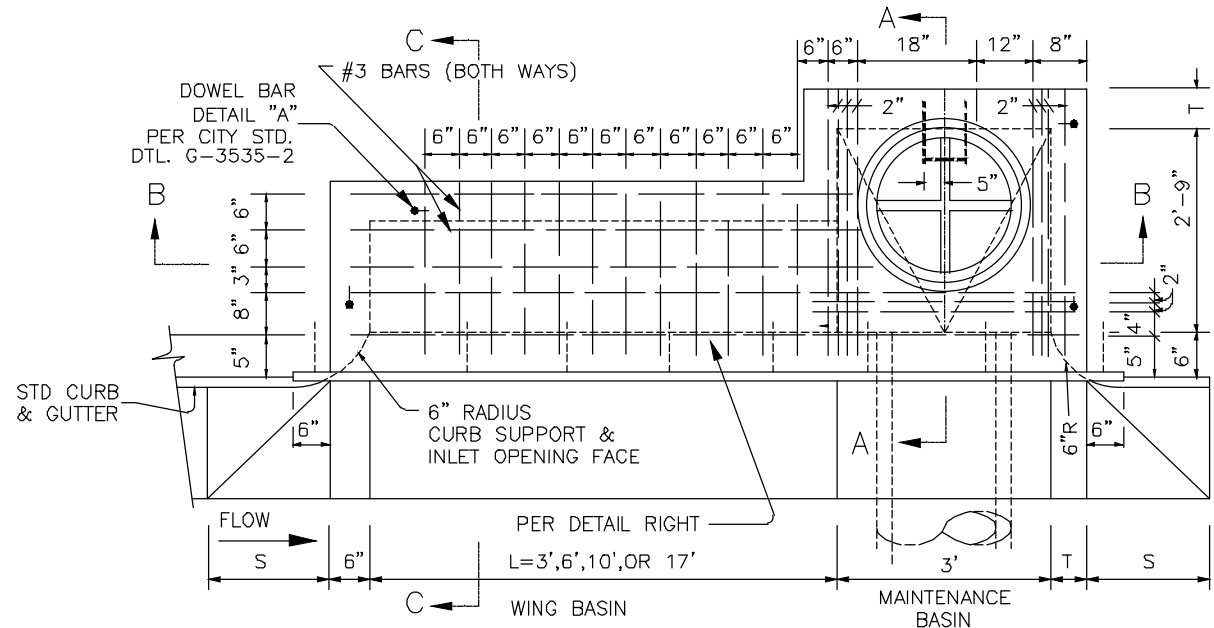
1. TYPES ARE DESIGNATED AS FOLLOWS:
'M'.. NO WING; 'M-1'.. ONE WING;
'M-2'.. TWO WINGS.
2. ALL CONCRETE SHALL BE CLASS 'A'.
3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM TO ASTM SPECIFICATION 615.
4. CONNECTOR PIPES SHALL BE PLACED IN THE APPROPRIATE WALL OF THE MAINTENANCE BASIN.
5. FLOOR OF BASIN SHALL BE TROWELLED TO A HARD, SMOOTH SURFACE AND SHALL SLOPE FROM ALL DIRECTIONS TO OUTLET.
6. CONSTRUCTION DRAINS SHALL BE INSTALLED IN ALL INLETS BUILT WITH PAVING PROJECTS.
7. LOCATE WING BASIN ON UPSTREAM SIDE OF MAINTENANCE BASIN FOR TYPE M-1. WING BASINS FOR TYPE M-2 SHALL BE BOTH SIDES OF MAINTENANCE BASIN.
8. STEPS (MAG DTL. 428 POLYPROPYLENE)-V=3' (INCL.), PLACE ONE STEP 12" ABOVE THE FLOOR OF THE BASIN. V OVER 3', PLACE STEPS AT 12" INTERVALS FROM THE FLOOR OF THE BASIN WITH THE TOP STEP AT 12" (MIN.) BELOW THE TOP OF THE GRATE.
9. ACCESS FRAME AND COVER PER MAG STD DTL. 536-2

TABLE B

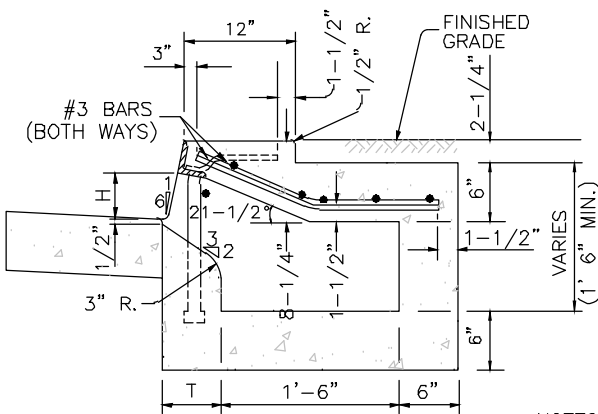
GUTTER TRANSITION	
CURB HEIGHT (H)	DIM 'S'
4"	3'-3"
5"	2'-6"
6"	1'-9"



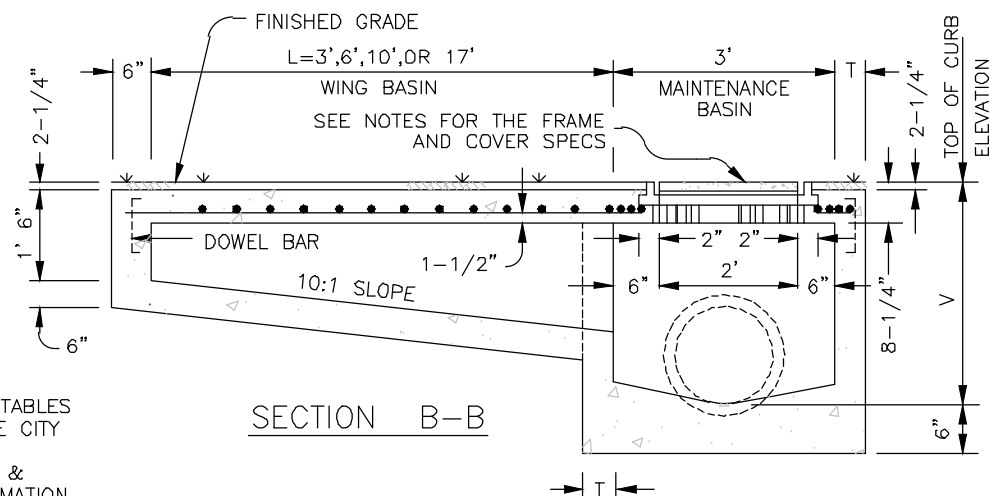
SECTION A-A



PLAN VIEW



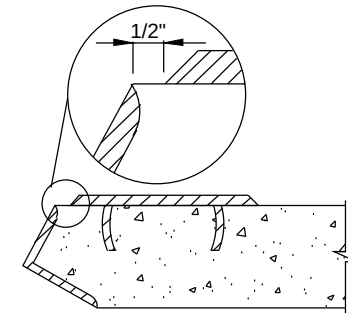
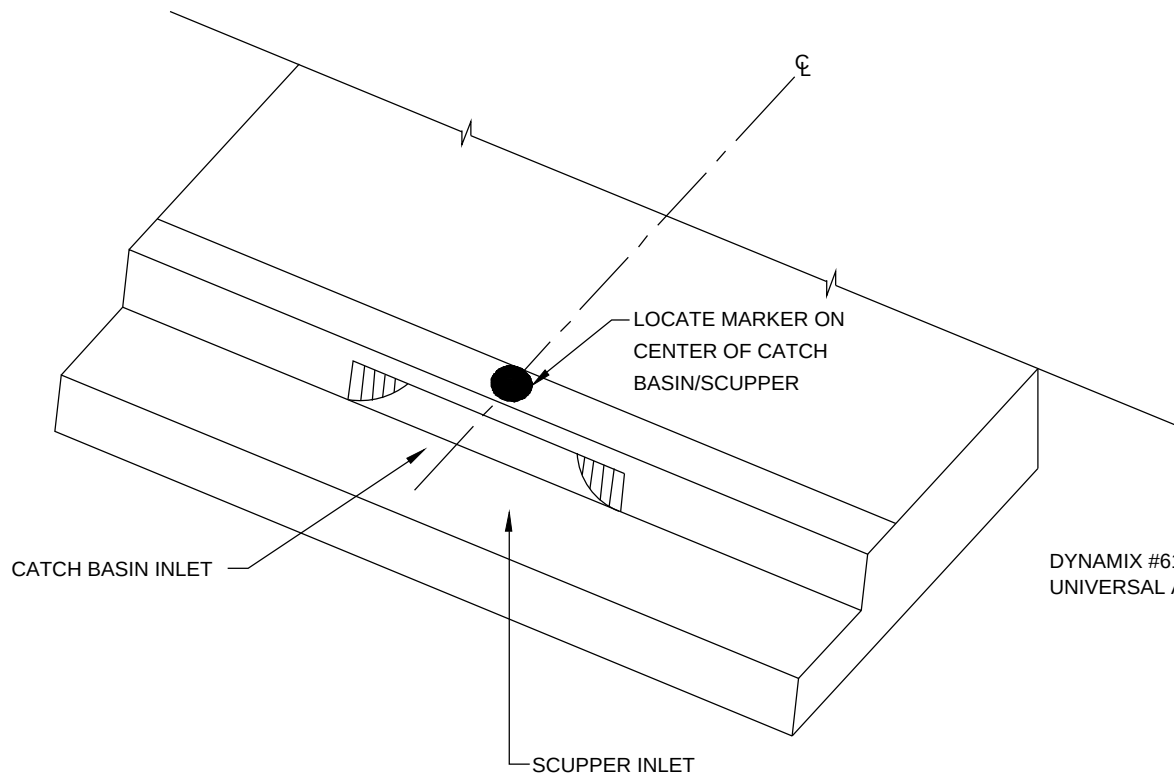
SECTION C-C



SECTION B-B

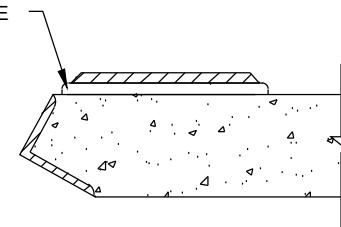
NOTES:

1. FOR CONSTRUCTION NOTES, TABLES AND ADDITIONAL DETAILS SEE CITY STD. DTL. G-3535-2.
2. SEE G-3535-2 FOR FRAME & COVER IN LANDSCAPE INFORMATION.

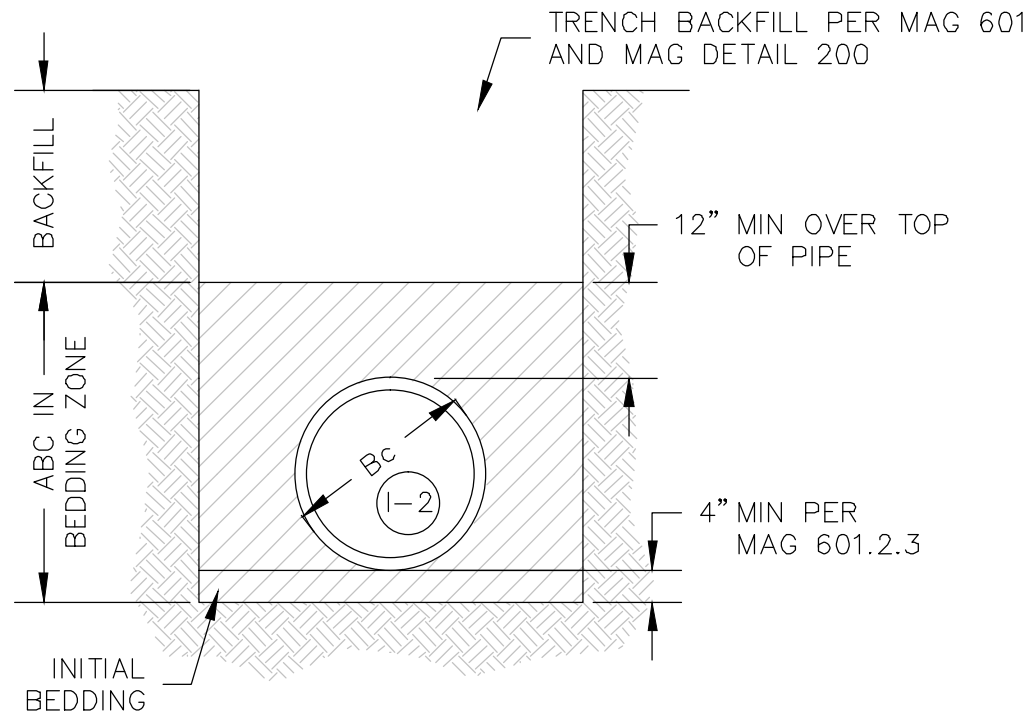


TYPE "A"
TO BE INSTALLED IN WET CONCRETE
DURING CONSTRUCTION

DYNAMIX #6125-1 URETHANE
UNIVERSAL ADHESIVE



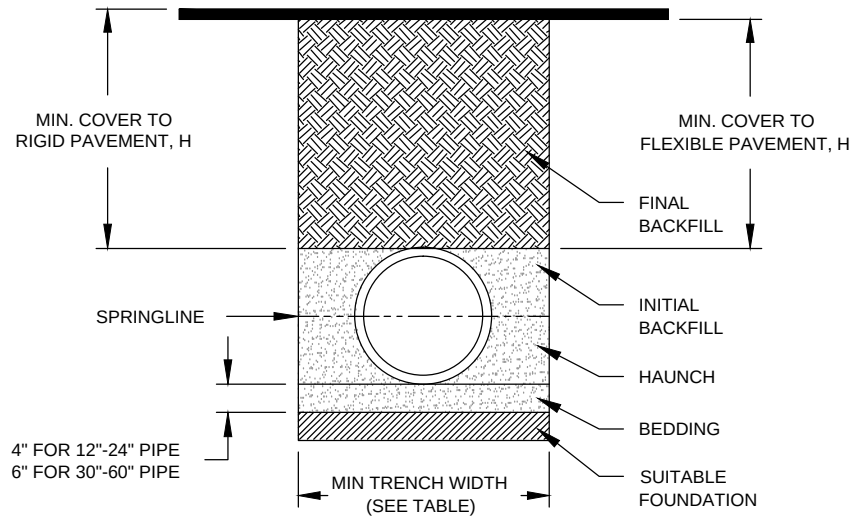
TYPE "B"
TO BE INSTALLED WITH ADHESIVE
ON EXISTING STRUCTURES



NOTES:

1. FOR USE WITH CORRUGATED HDPE PIPE WHICH SHALL CONFORM WITH MAG 618. HDPE PIPE SHALL NOT EXCEED 48" IN DIAMETER.
2. ALL ABC BEDDING MATERIAL TO BE IN ACCORDANCE WITH MAG 603.4.6, WITH MINIMUM THICKNESS PER THIS DETAIL.
3. NO BEDDING IS TO BE CONSIDERED TO BE A PART OF THE ROADWAY STRUCTURAL SECTION.
4. CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID PIPE MOVEMENT WHEN PLACING BEDDING.
5. THIS DETAIL IS NOT TO SUPERSEDE MORE STRINGENT MANUFACTURER REQUIREMENTS.
- 6.
7. COMPACTION TESTS SHALL BE DONE ON BOTH SIDES OF THE PIPE. THE MINIMUM NUMBER OF TESTS TO BE PROVIDED IS ONCE PER ROADWAY TRAVEL LANE, AT INTERVALS, OR FOR THE DAY'S WORK IF IT IS LESS THAN 100'.
8. PIPES 18" TO 24" WILL BE MANDREL-TESTED FOR 5% MAXIMUM DEFLECTION PER ASTM F-894.
9. TRENCH EXCAVATION PER MAG 603.2.

TRENCH INSTALLATION DETAIL



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED PER MAG SECTION 618.

TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

PIPE DIAM.	SURFACE LIVE LOADING CONDITION	
	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 3, MAXIMUM COVER FOR ADS HP STORM PIPE, ft

PIPE DIA	CLASS I	CLASS II			CLASS III		CLASS IV
	COMPACTED	95%	90%	85%	95%	90%	95%
12" (300mm)	41 (12.5m)	28 (8.5m)	21 (6.4m)	16 (4.9m)	20 (6.1m)	16 (4.9m)	16 (4.9m)
15" (375mm)	42 (12.8m)	29 (8.8m)	21 (6.4m)	16 (4.9m)	21 (6.4m)	16 (4.9m)	16 (4.9m)
18" (450mm)	44 (13.4m)	30 (9.1m)	21 (6.4m)	16 (4.9m)	22 (6.7m)	17 (5.2m)	16 (4.9m)
24" (600mm)	37 (11.3m)	26 (7.9m)	18 (5.5m)	14 (4.3m)	19 (5.8m)	14 (4.3m)	14 (4.3m)
30" (750mm)	39 (11.9m)	27 (8.2m)	19 (5.8m)	14 (4.3m)	19 (5.8m)	15 (4.6m)	14 (4.3m)
36" (900mm)	28 (8.5m)	20 (6.1m)	14 (4.3m)	10 (3.0m)	14 (4.3m)	11 (3.4m)	10 (3.0m)
42" (1050mm)	30 (9.1m)	21 (6.4m)	14 (4.3m)	10 (3.0m)	15 (4.6m)	11 (3.4m)	10 (3.0m)
48" (1200mm)	29 (8.8m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	10 (3.0m)
60" (1500mm)	29 (8.8m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	9 (2.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE

HP STORM TRENCH INSTALLATION DETAIL (ALTERNATE)

TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED PER MAG SECTION 618.

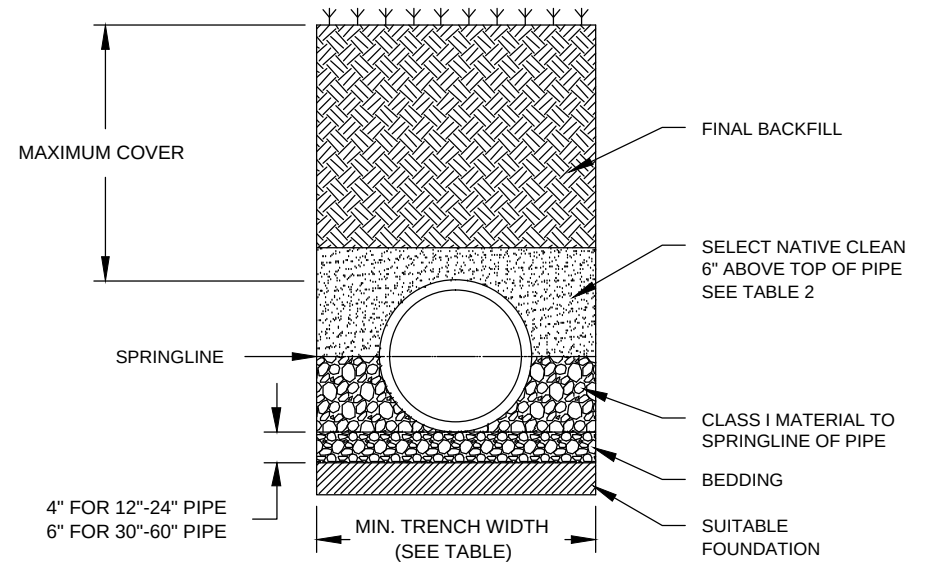


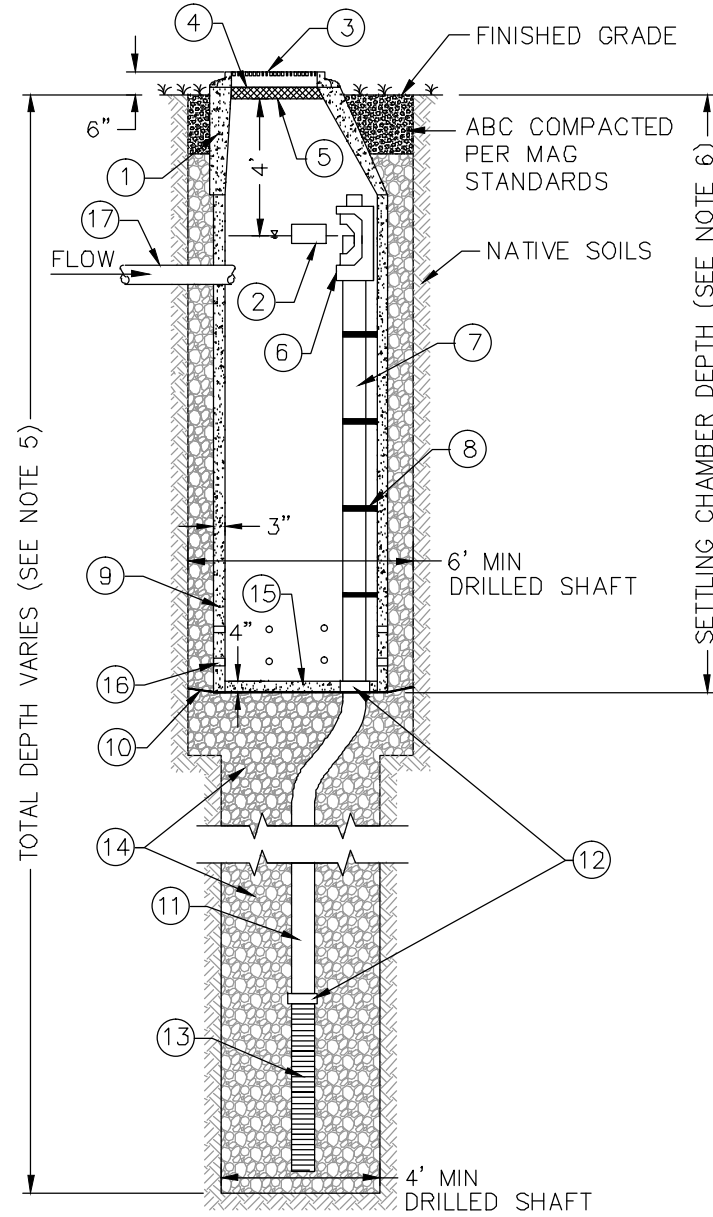
TABLE 2, MAXIMUM COVER FOR ADS HP STORM PIPE, ALTERNATE INSTALLATION, ft ($\gamma_s=120$)

PIPE DIAM.	SELECT NATIVE CLEAN MATERIAL CLASSIFICATION		
	CLASS II	CLASS III	CLASS IV
12" (300mm)	17 (5.2m)	14 (4.3m)	11 (3.4m)
15" (375mm)	17 (5.2m)	14 (4.3m)	10 (3.0m)
18" (450mm)	16 (4.9m)	13 (4.0m)	10 (3.0m)
24" (600mm)	14 (4.3m)	12 (3.7m)	9 (2.7m)
30" (750mm)	13 (4.0m)	12 (3.7m)	8 (2.4m)
36" (900mm)	11 (3.4m)	11 (3.4m)	7 (2.1m)
42" (1050mm)	11 (3.4m)	11 (3.4m)	7 (2.1m)
48" (1200mm)	11 (3.4m)	10 (3.0m)	6 (1.8m)
60" (1500mm)	11 (3.4m)	10 (3.0m)	6 (1.8m)

FILL HEIGHT TABLE GENERATED ASSUMING DRY CONDITIONS, OUTSIDE OF WATER TABLE. FOR INSTALLATION WITHIN THE WATER TABLE, CONTACT APPLICATIONS ENGINEERING.

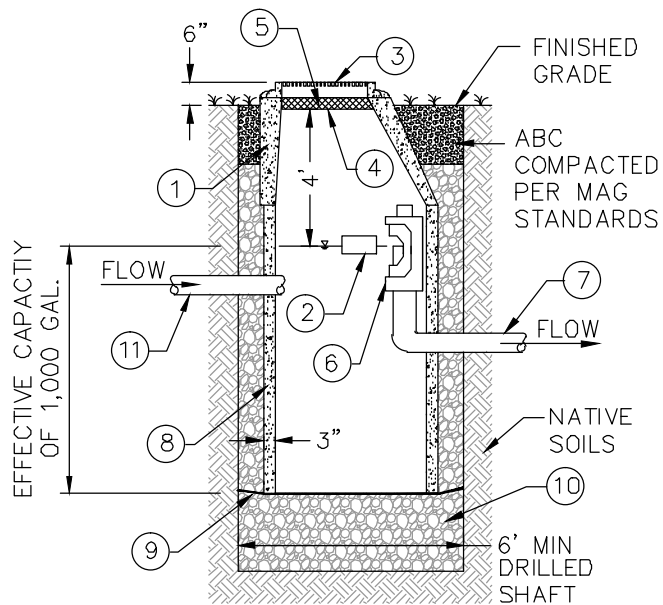
SPECIFICATIONS:

1. MODIFIED MANHOLE CONE.
2. HYDROPHOBIC PETROCHEMICAL SPONGE. MIN 128 oz. CAPACITY.
3. MINIMUM 30" DIA. BOLTED RING AND GRATE. FOR USE IN RETENTION BASIN BOTTOM ONLY (TOP OF GRATE RAISED TO 6" ABOVE BASIN BOTTOM). OR MINIMUM 30" DIA. BOLTED C.I. RING AND COVER WITH RAISED LETTERS "STORM WATER ONLY". FOR USE OUTSIDE OF RETENTION BASIN BOTTOM (TOP SHALL BE FLUSH WITH ADJACENT FINISHED GRADE).
4. FABRIC SEAL - 100X U.V. RESISTANT GEOTEXTILE - TO BE REMOVED BY OWNER AT PROJECT COMPLETION. FOR USE WITH GRATE ONLY.
5. DEBRIS BASKET - 6" X 30" DIA. 10 GA. FLATTENED EXPANDED STEEL SCREEN. FUSION BONDED EPOXY COATED. FOR USE WITH GRATE ONLY.
6. DEBRIS SCREEN - ANTI SIPHON (ROLLED 13 GAGE BY 0.265" MAXIMUM SWO FLATTENED EXPANDED STEEL. GALVANIZED OR FUSION BONDED EPOXY COATED.
7. 8" DIA. SCHEDULE 40 PVC OVERFLOW PIPE.
8. SUPPORT BRACKET (TYP.) GALVANIZED OR FUSION BONDED EPOXY COATED STEEL MIN. 3/8".
9. PRECAST CONCRETE LINER, 4000 PSI - 48" ID, 54" OD.
10. GEOFABRIC 100 mil MIN., 300 lb. MIN. T.S.
11. 6" - 12" DIA. SCH. 40 PVC INJECTION PIPE. NO PERFORATIONS.
12. COUPLER (MDI CAULDER, TRI-A, OR EQUAL).
13. INJECTION SCREEN - SCH. 40 PVC 0.120" SLOTTED WELL SCREEN WITH 23 SLOTS PER ROW/FT. 6" - 12" DIA. OVERALL LENGTH = 96" WITH COUPLER.
14. 3/8" TO 1-1/2" WASHED ROCK.
15. 4" THICK CONCRETE BASE FOR USE WITH THE PARKING LOT DRAINAGE DRYWELL ONLY.
16. 1" DIA. PERFORATIONS - 8 PER LINEAR FOOT FOR BOTTOM 3 FEET OF CHAMBER. APPLIES TO THE PARKING LOT DRAINAGE DRYWELL USE ONLY.
17. OPTIONAL INFLOW PIPE OR PRE-TREATMENT CONNECTOR PIPE - MIN. 4" DIA. SCH. 40 PIPE.



NOTES:

1. STD. DRYWELLS SHALL BE LOCATED NO CLOSER THAN 20' TO THE NEAREST OUTFALL THAT CONVEYS STORMWATER FROM PAVED AREAS.
2. A PERCOLATION TEST SHALL BE PERFORMED ON THE DRYWELL TO VERIFY THAT DESIGN PERCOLATION RATES HAVE BEEN ACHIEVED. A COPY OF THE REPORT SHALL BE SUBMITTED TO THE CITY PRIOR TO FINAL APPROVAL OF THE GRADING AND DRAINAGE AND DRYWELL CONSTRUCTION FOR THE PROJECT. TEST WATER SHALL BE POTABLE WATER ONLY PER ORDINANCE.
3. DRYWELLS WITH BORE LOGS THAT INDICATE GREATER THAN 10 FEET OF PERMEABLE SOIL HAS BEEN PENETRATED AS DETERMINED BY A GEOTECHNICAL ENGINEER SHALL NOT REQUIRE A PERCOLATION TEST.
4. DRYWELL AS-BUILT DRAWINGS SHALL PROVIDE THE ADEQ REGISTRATION NUMBER, LATITUDE AND LONGITUDE, AND ANNUAL DRYWELL INSPECTION REPORT FOR EACH DRYWELL CONSTRUCTED ON A PROJECT
5. THE TOTAL DEPTH OF A DRYWELL SHALL BE 75' OR UNTIL 10' OF PERMEABLE SOIL IS PENETRATED.
6. THE DEPTH OF THE SETTLING CHAMBER SHALL BE A MINIMUM OF 18'. GREATER DEPTHS MAY BE REQUIRED BY THE CITY ENGINEERING DEPARTMENT.

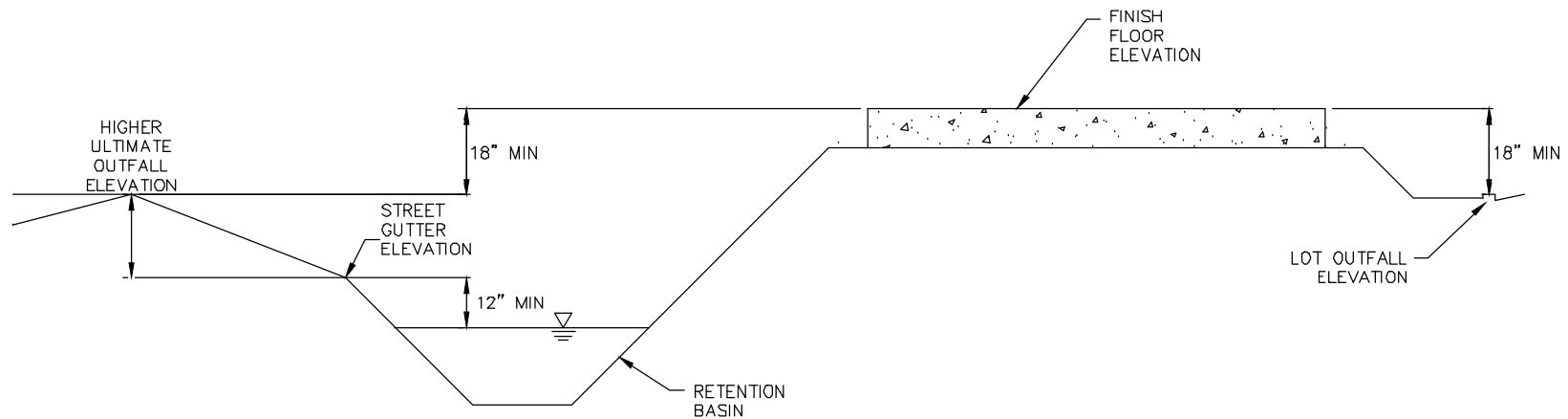
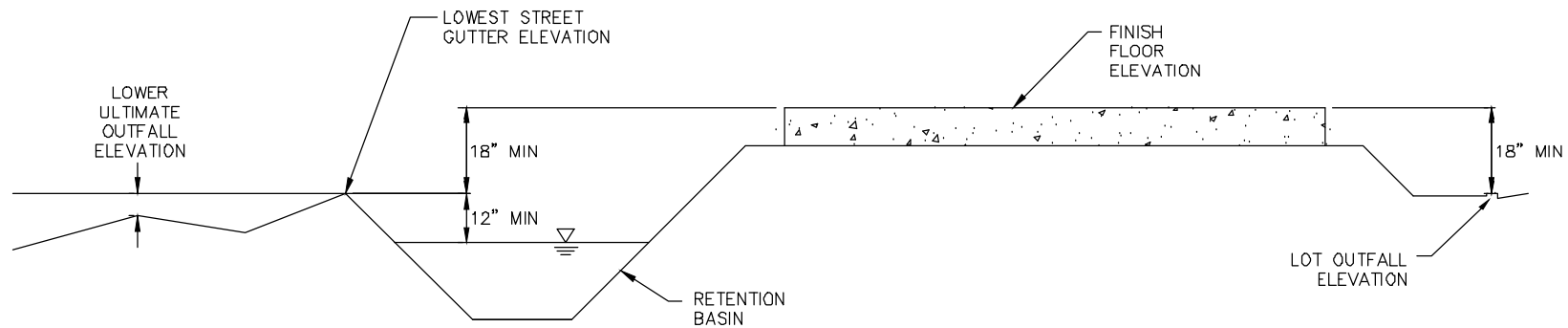


NOTES:

1. DRYWELL PRE-TREATMENT CHAMBERS SHALL BE USED TO IN RETENTION BASINS THAT COLLECT DRAINAGE DIRECTLY FROM PARKING LOTS OR OTHER AREAS THAT GENERATE HIGH LEVELS OF OILS, SANDS, AND DEBRIS.
2. DRYWELL PRE-TREATMENT CHAMBERS SHALL BE USED IN CONJUNCTION WITH A STANDARD DRYWELL WITH THE MODIFICATIONS AS INDICATED ON THE STANDARD DRYWELL DETAIL.

SPECIFICATIONS:

1. MODIFIED MANHOLE CONE.
2. HYDROPHOBIC PETROCHEMICAL SPONGE. MIN 128 oz. CAPACITY.
3. MINIMUM 30" DIA. BOLTED RING AND GRATE. FOR USE IN RETENTION BASIN BOTTOM ONLY.
4. FABRIC SEAL - 100X U.V. RESISTANT GEOTEXTILE - TO BE REMOVED BY OWNER AT PROJECT COMPLETION.
5. DEBRIS BASKET - 6" X 30" DIA. 10 GA. FLATTENED EXPANDED STEEL SCREEN. FUSION BONDED EPOXY COATED.
6. DEBRIS SCREEN - ANTI SIPHON (ROLLED 13 GAGE BY 0.265" MAXIMUM SWO FLATTENED EXPANDED STEEL. GALVANIZED OR FUSION BONDED EPOXY COATED.
7. 8" DIA. SCHEDULE 40 PVC CONNECTOR PIPE WITH FLOW REGULATOR. SEE NOTE 1. 10-FOOT MINIMUM.
8. PRECAST CONCRETE LINER, 4000 PSI - 48" ID, 54" OD.
9. GEOFABRIC 100 mil MIN., 300 lb. MIN. T.S.
10. 3/8" TO 1-1/2" WASHED ROCK.
11. INFLOW PIPE - MINIMUM 4" DIA. SCH. 40 PIPE.



SILT CONTROL BARRIER
(IF NEEDED FOR
RUN-ON CONTROL)

REAR LOT LINE

SILT FENCE
(TYP)

SIDE LOT LINE

SIDE LOT LINE

DIRECTION OF
RUNOFF

HOME FOOTPRINT

STUCCO
WASHOUT

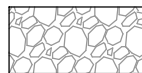
DIRECTION OF
RUNOFF

R/W

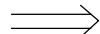
CURB LINE

LOT LINE

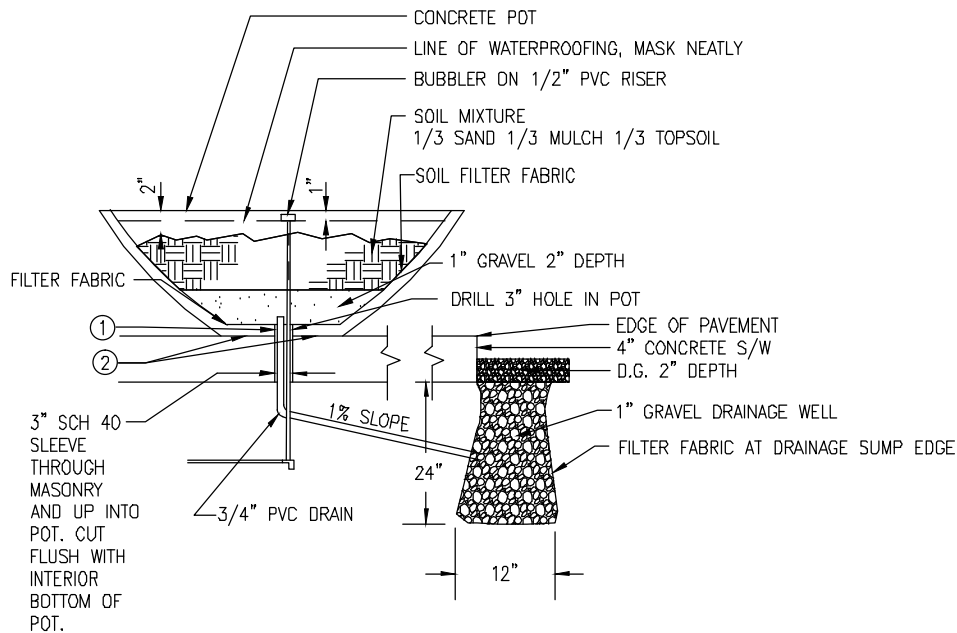
SILT CONTROL
BARRIER



GRAVEL
ENTRANCE



DIRECTION OF SURFACE
WATER RUNOFF

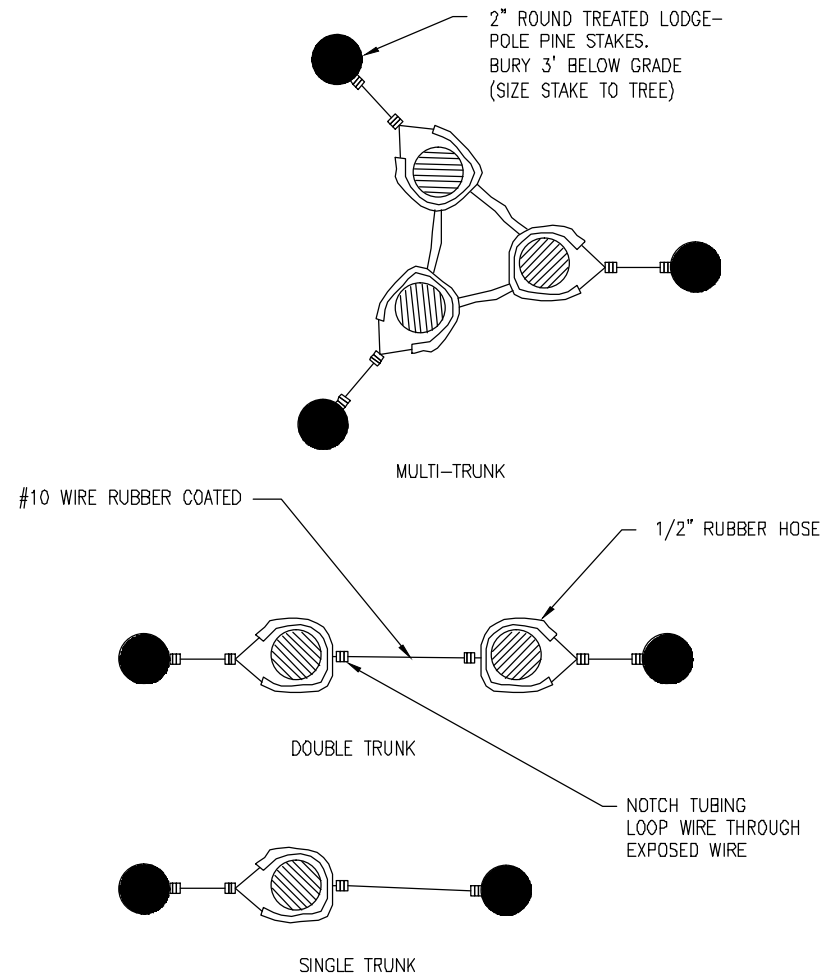


- ① SEAL BETWEEN POT AND PIPING PRIOR TO WATERPROOFING APPLICATION, THEN THOROUGHLY APPLY WATERPROOFING AROUND PIPES TO PROVIDE PRIMARY SEAL.
- ② SET POT IN URETHANE SEALANT/CAULT (COMPLETE RING ROUND PIPING TO PROVIDE A SECONDARY SEAL)

- NOTES:
- * ALL POTS TO BE GROUPED ON SEPARATE VALVE(S) UNLESS NOTED
 - * COORDINATE DRAINAGE WELL AND SLEEVING WITH CONCRETE CONTRACTOR
 - * LOCATE POTS ACCORDING TO LAYOUT ON PLAN
 - * SHIM POTS LEVEL AS NEEDED WATERPROOF INSIDE OF POT
 - * CRACKED OR CHIPPED POTS ARE NOT ACCEPTABLE
 - * WATERPROOFING TO BE PACIFIC POLYMERS ELASTO-DECK BT OR OTHER EQUIVALENT ELASTOMETRIC MATERIAL. CEMENTITIOUS WATERPROOFING IS NOT ACCEPTABLE.
 - * EXTEND PIPE 1/4" INSIDE THE POT

PLANTER POT PLANTING DETAIL (AT GRADE POT W/DRAINAGE WELL)

NOTE
ALL MULTI-TRUNKED TREES
TO HAVE ALL MAJOR
LEADERS STAKED



TREE GUYING DETAIL

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. REMOVE SUCKERS AND POORLY ATTACHED LOWER BRANCHES AS DIRECTED BY CITY OF GOODYEAR REPRESENTATIVE.
3. TREE SHALL HAVE A SINGLE, RELATIVELY STRAIGHT CENTRAL LEADER AND TAPERED TRUNK FREE OF CODOMINANT STEMS.
4. TREES WITH CALIPER EQUAL TO OR LESS THAN 4" WILL BE MEASURED AT 6" ABOVE THE SOIL LINE.
5. TREE SHALL HAVE TWO (2) STAKES AT 9 O'CLOCK AND 3 O'CLOCK POSITIONS. STAKES SHALL BE SET WITH THE PREVAILING WIND.
6. CONTRACTOR SHALL REMOVE TREE STAKES TWELVE (12) MONTHS FROM AUTHORIZED MAINTENANCE PERIOD START DATE, ADJUST TREE TIES TO ACCOMODATE TREE GROWTH AND PRUNE TREE AS DIRECTED BY CITY OF GOODYEAR REPRESENTATIVE.
7. CONTRACTOR SHALL REMOVE NURSERY STAKES IMMEDIATELY AFTER PLANTING.

2-1/2" I.D. RUBBER HOSE LOOP WITH 12 GA. DOUBLE STRAND GALVANIZED AND ANNEALED WIRE. MAINTAIN 4" I.D. MINIMUM LOOP AROUND TREE. WRAP WIRE AROUND TREE STAKE, AND STAPLE. LOCATE TIE ABOVE FIRST BRANCH.

2" DIA. LODGEPOLE PINE STAKES. STAKES SHALL BE 10' VERTICAL. LOCATE 12" OUTSIDE ROOTBALL. (TYP. OF 2) TREE TRUNK SHALL BE CAPABLE OF MOVEMENT IN ALL DIRECTIONS. TREE STAKE SHALL NOT PROTRUDE INTO CANOPY (CUT STAKE AS DIRECTED BY CITY OF GOODYEAR REPRESENTATIVE)

THE STANDARD HEIGHT TO LOWEST SCAFFOLD LIMB ON THE TRUNK SHALL BE 36" MIN.

4" DEEP WATERING BASIN SHALL BE GENTLE AND UNIFORM THROUGHOUT, WITHOUT ANY OBTRUSIVE EDGES. BOTTOM OF BASIN TO BE 48" DIAMETER WITH 6:1 TAPER TO GRADE. SET TOP OF TREE ROOT BALL AT SOIL SURFACE.

FINISHED GRADE: 2" DEEP DECOMPOSED GRANITE PER LANDSCAPE SCHEDULE. MAINTAIN 4" CLEAR ZONE AROUND TRUNK

PLANT TABLET: LOCATION OF PLANT TABLETS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS (SEE NOTE 1)

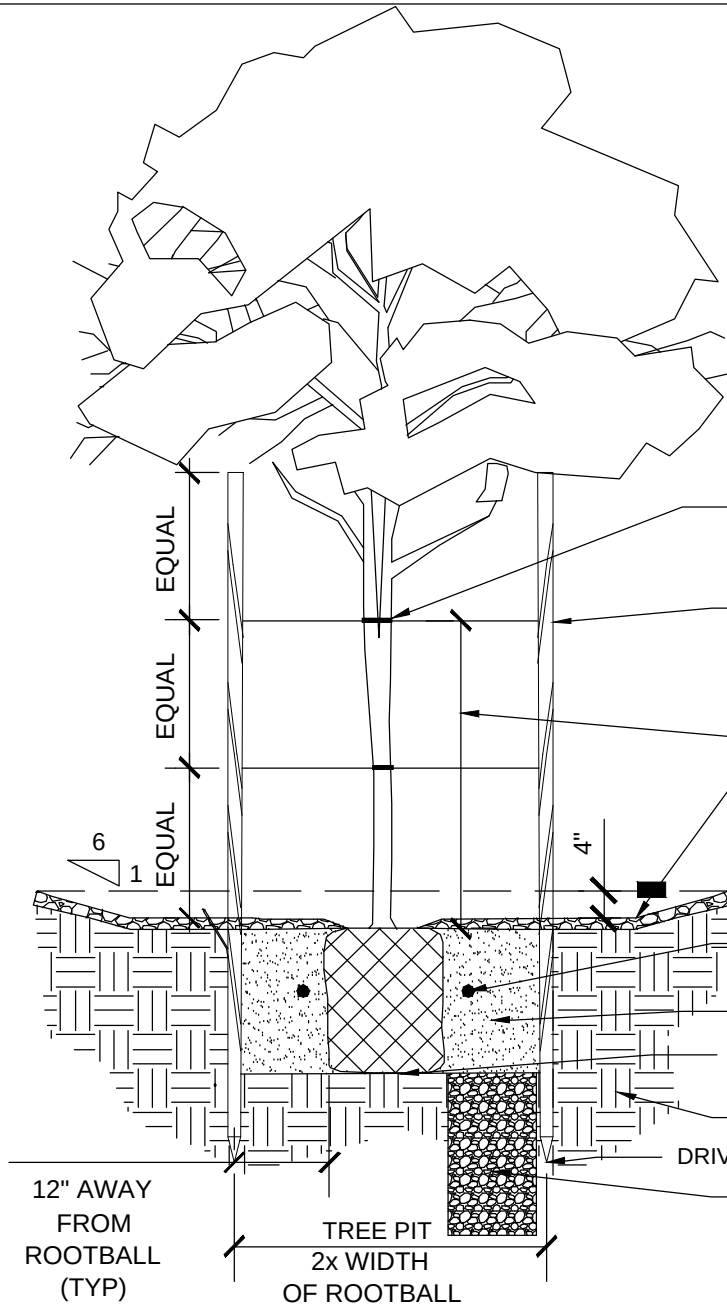
BACKFILL MIX (SEE NOTE 1)

SET ROOTBALL ON NATIVE UNDISTURBED SOIL. SCARIFY SIDES AND BOTTOM OF PLANT PIT. SCARIFY/SHAVE A MAXIMUM OF 2" OFF THE ROOTBALL.

UNDISTURBED NATIVE SOIL OR SUBGRADE

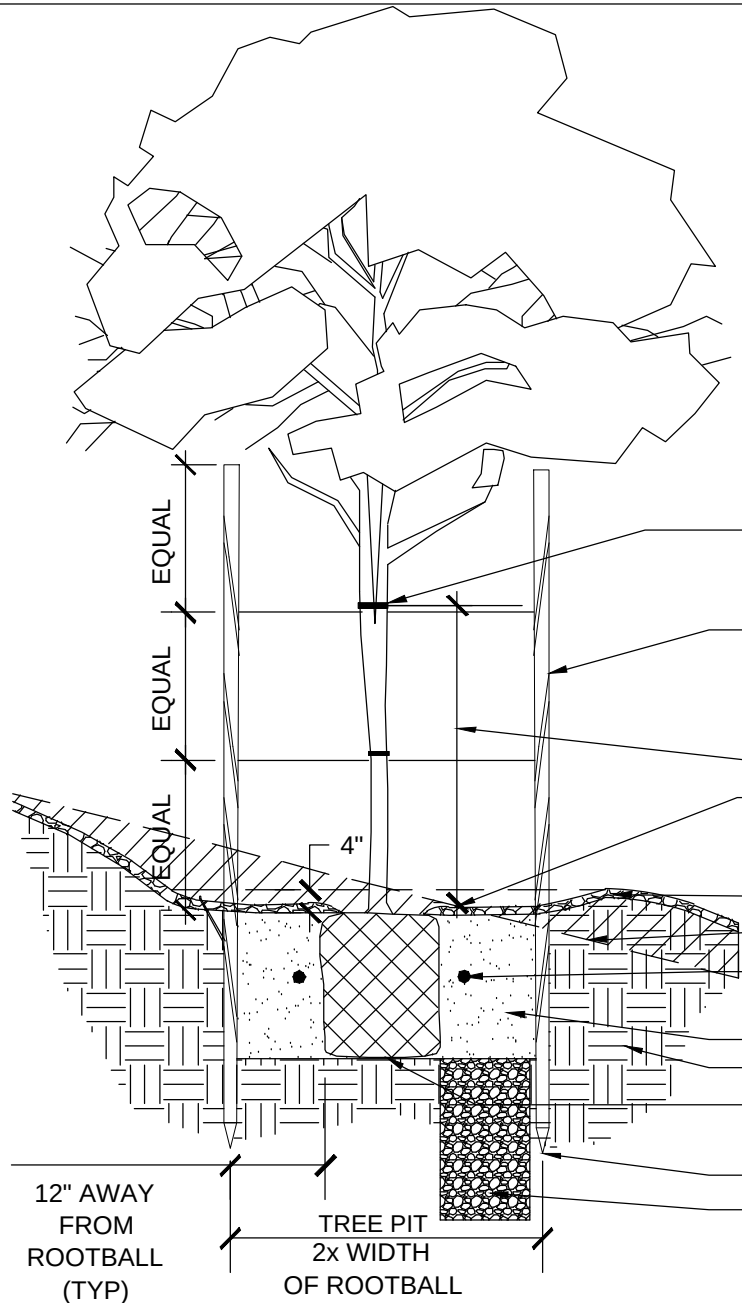
DRIVE STAKES 12" MIN. INTO UNDISTURBED SOIL (TYP.) OR SUBGRADE

IF PLANT PIT DOES NOT DRAIN THEN DRILL ONE (1) 12" DIAMETER X 24" DEEP HOLE. BELOW EXCAVATED PIT, RE-TEST PERCOLATION PER SPECIFICATIONS , CERTIFY PERCOLATION TEST AND FILL HOLE WITH PEA GRAVEL. COORDINATE LOCATION WITH TREE STAKES



NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. REMOVE SUCKERS AND POORLY ATTACHED LOWER BRANCHES AS DIRECTED BY CITY OF GOODYEAR REPRESENTATIVE.
3. TREE SHALL HAVE A SINGLE, RELATIVELY STRAIGHT CENTRAL LEADER AND TAPERED TRUNK FREE OF CODOMINANT STEMS.
4. TREES WITH CALIPER EQUAL TO OR LESS THAN 4" WILL BE MEASURED AT 6" ABOVE THE SOIL LINE.
5. TREE SHALL HAVE THREE (3) STAKES AT 2 O'CLOCK, 6 O'CLOCK, AND 10 O'CLOCK POSITIONS.
6. CONTRACTOR SHALL REMOVE TREE STAKES TWELVE (12) MONTHS FROM AUTHORIZED MAINTENANCE PERIOD START DATE, ADJUST TREE TIES TO ACCOMMODATE TREE GROWTH AND PRUNE TREE AS DIRECTED BY CITY OF GOODYEAR REPRESENTATIVE.
7. CONTRACTOR SHALL REMOVE NURSERY STAKES IMMEDIATELY AFTER PLANTING.



2-1/2" I.D. RUBBER HOSE LOOP WITH 12 GA. DOUBLE STRAND GALVANIZED AND ANNEALED WIRE. MAINTAIN 4" I.D. MINIMUM LOOP AROUND TREE. WRAP WIRE AROUND TREE STAKE, AND STAPLE. LOCATE TIE ABOVE FIRST BRANCH.

2" DIA. LODGEPOLE PINE STAKES. STAKES SHALL BE 10' VERTICAL. LOCATE 12" OUTSIDE ROOTBALL. (TYP. OF 2) TREE TRUNK SHALL BE CAPABLE OF MOVEMENT IN ALL DIRECTIONS. TREE STAKE SHALL NOT PROTRUDE INTO CANOPY (CUT STAKE AS DIRECTED BY CITY OF GOODYEAR REPRESENTATIVE)

THE STANDARD HEIGHT TO LOWEST SCAFFOLD LIMB ON THE TRUNK SHALL BE 36" MIN.

4" DEEP WATERING BASIN SHALL BE GENTLE AND UNIFORM THROUGHOUT, WITHOUT ANY OBTRUSIVE EDGES. BASIN TO BE 6' DIAMETER. SET TOP OF TREE ROOT BALL AT SOIL SURFACE.

GENTLE SLOPE TREE WELL

6:1 MAX GRADED SLOPE (CUT SOIL ON UP-SLOPE AND PLACE ON DOWN-SLOPE)

PLANT TABLET: LOCATION OF PLANT TABLETS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS (SEE NOTE 1)

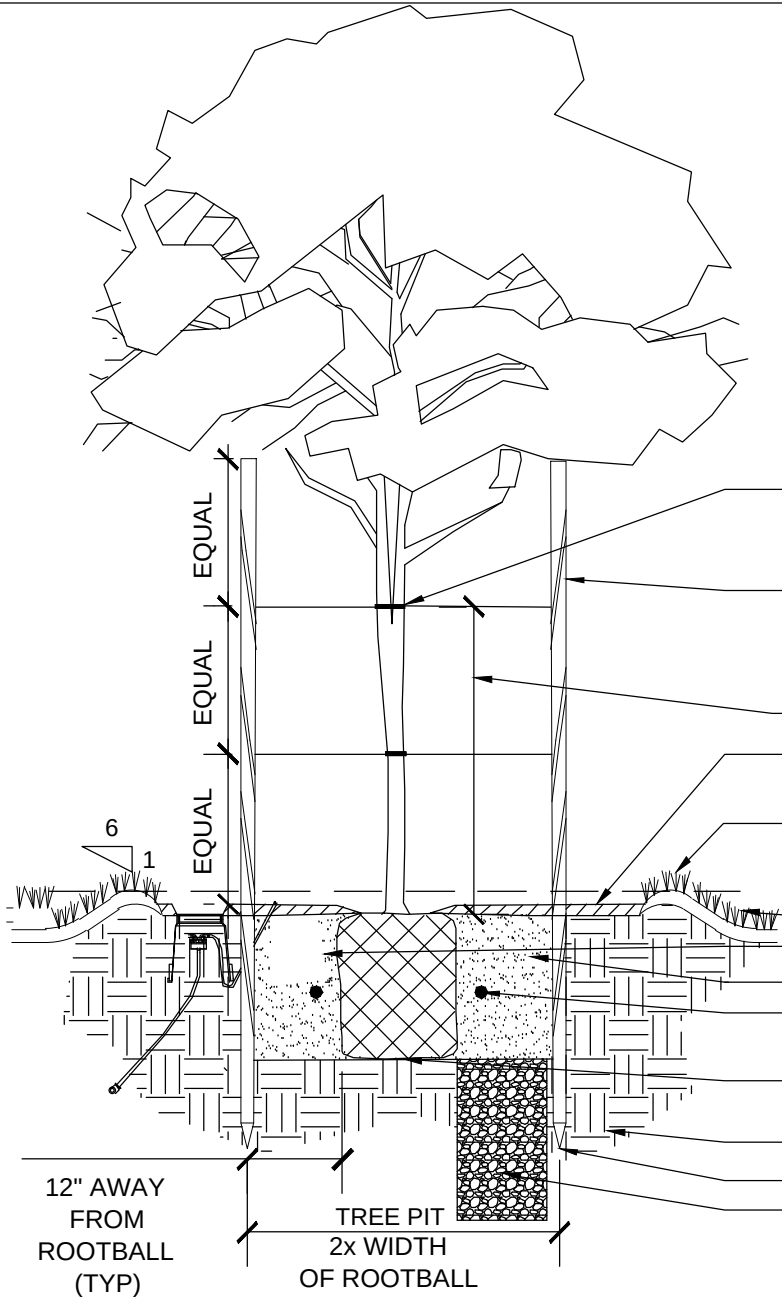
BACKFILL MIX (SEE NOTE 1)

UNDISTURBED NATIVE SOIL OR SUBGRADE

SET ROOTBALL ON NATIVE UNDISTURBED SOIL. SCARIFY SIDES AND BOTTOM OF PLANT PIT. SCARIFY/SHAVE A MAXIMUM OF 2" OFF THE ROOTBALL.

DRIVE STAKES 12" MIN. INTO UNDISTURBED SOIL OR SUBGRADE (TYP.)

IF PLANT PIT DOES NOT DRAIN THEN DRILL ONE (1) 12" DIAMETER X 24" DEEP HOLE. BELOW EXCAVATED PIT, RE-TEST PERCOLATION PER SPECIFICATIONS, CERTIFY PERCOLATION TEST AND FILL HOLE WITH PEA GRAVEL. COORDINATE LOCATION WITH TREE STAKES



NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. REMOVE SUCKERS AND POORLY ATTACHED LOWER BRANCHES AS DIRECTED BY CITY OF GOODYEAR REPRESENTATIVE.
3. TREE SHALL HAVE A SINGLE, RELATIVELY STRAIGHT CENTRAL LEADER AND TAPERED TRUNK FREE OF CODOMINANT STEMS.
4. TREES WITH CALIPER EQUAL TO OR LESS THAN 4" WILL BE MEASURED AT 6" ABOVE THE SOIL LINE.
5. TREE SHALL HAVE TWO (2) STAKES AT 9 O'CLOCK AND 3 O'CLOCK POSITIONS.
6. CONTRACTOR SHALL REMOVE TREE STAKES TWELVE (12) MONTHS FROM AUTHORIZED MAINTENANCE PERIOD START DATE, ADJUST TREE TIES TO ACCOMODATE TREE GROWTH AND PRUNE TREE AS DIRECTED BY CITY OF GOODYEAR REPRESENTATIVE.
7. CONTRACTOR SHALL REMOVE NURSERY STAKES IMMEDIATELY AFTER PLANTING.

2-1/2" I.D. RUBBER HOSE LOOP WITH 12 GA. DOUBLE STRAND GALVANIZED AND ANNEALED WIRE. MAINTAIN 4" I.D. MINIMUM LOOP AROUND TREE. WRAP WIRE AROUND TREE STAKE, AND STAPLE. LOCATE TIE ABOVE FIRST BRANCH.

2" DIA. LODGEPOLE PINE STAKES. STAKES SHALL BE 10' VERTICAL. LOCATE 12" OUTSIDE ROOTBALL. (TYP. OF 2) TREE TRUNK SHALL BE CAPABLE OF MOVEMENT IN ALL DIRECTIONS. TREE STAKE SHALL NOT PROTRUDE INTO CANOPY (CUT STAKE AS DIRECTED BY CITY OF GOODYEAR REPRESENTATIVE)

THE STANDARD HEIGHT TO LOWEST SCAFFOLD LIMB ON THE TRUNK SHALL BE 36" MIN.

3" THICK WOOD FIBAR. COLOR AND SIZE TO BE APPROVED BY CITY PRIOR TO CONSTRUCTION. MAINTAIN 3" CLEAR ZONE AROUND TREE TRUNK

4" DEEP WATERING BASIN SHALL BE GENTLE AND UNIFORM THROUGHOUT, WITHOUT ANY OBTRUSIVE EDGES. BASIN TO BE 6' DIAMETER. SET TOP OF TREE ROOT BALL AT SOIL SURFACE.

FINISHED GRADE: TURF

LOCATE IRRIGATION EMITTER PER DETAIL G-3620-18

BACKFILL MIX (SEE NOTE 1)

PLANT TABLET: LOCATION OF PLANT TABLETS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS (SEE NOTE 1)

SET ROOTBALL ON NATIVE UNDISTURBED SOIL. SCARIFY SIDES AND BOTTOM OF PLANT PIT. SCARIFY/SHAVE A MAXIMUM OF 2" OFF THE ROOTBALL.

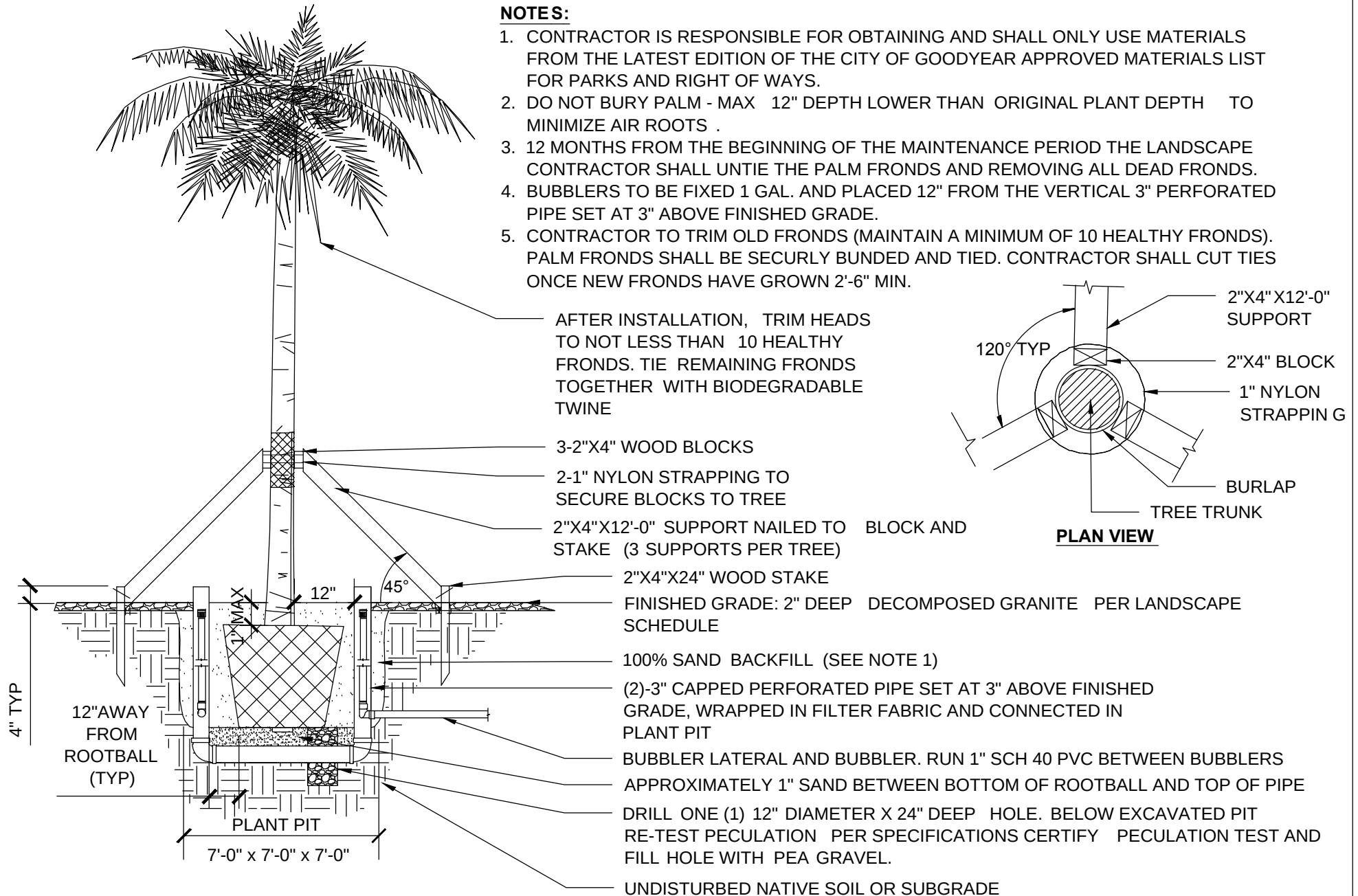
UNDISTURBED NATIVE SOIL OR SUBGRADE

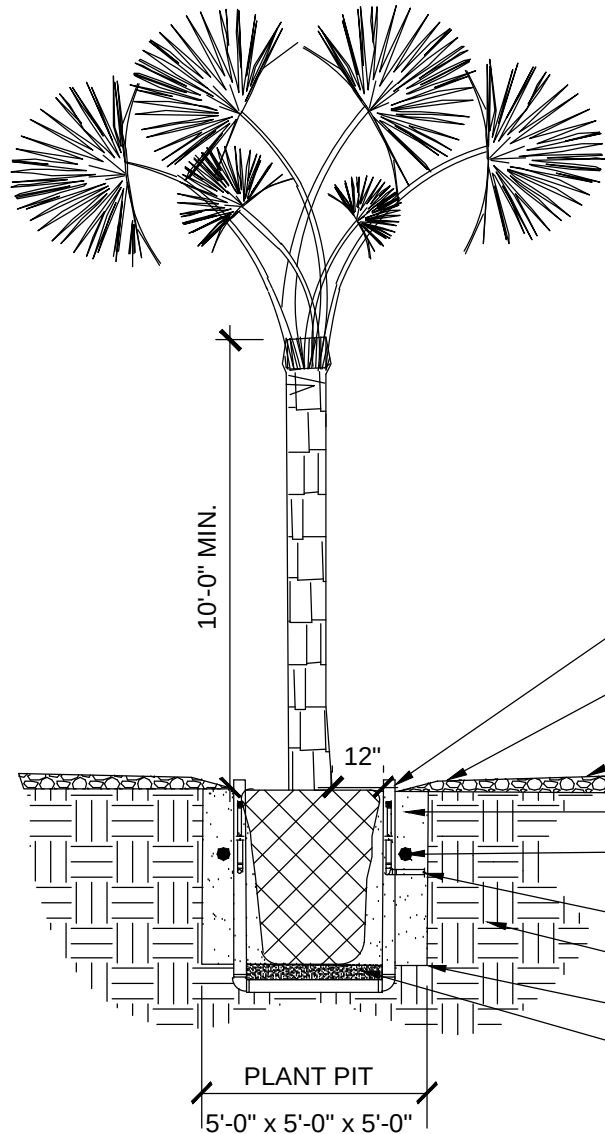
DRIVE STAKES 12" MIN. INTO UNDISTURBED SOIL (TYP.) OR SUBGRADE

IF PLANT PIT DOES NOT DRAIN THEN DRILL ONE (1) 12" DIAMETER X 24" DEEP HOLE. BELOW EXCAVATED PIT RE-TEST PERCOLATION PER SPECIFICATIONS CERTIFY PERCOLATION TEST AND FILL HOLE WITH PEA GRAVEL. COORDINATE LOCATION WITH TREE STAKES

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. DO NOT BURY PALM - MAX 12" DEPTH LOWER THAN ORIGINAL PLANT DEPTH TO MINIMIZE AIR ROOTS .
3. 12 MONTHS FROM THE BEGINNING OF THE MAINTENANCE PERIOD THE LANDSCAPE CONTRACTOR SHALL UNTIE THE PALM FRONDS AND REMOVING ALL DEAD FRONDS.
4. BUBBLERS TO BE FIXED 1 GAL. AND PLACED 12" FROM THE VERTICAL 3" PERFORATED PIPE SET AT 3" ABOVE FINISHED GRADE.
5. CONTRACTOR TO TRIM OLD FRONDS (MAINTAIN A MINIMUM OF 10 HEALTHY FRONDS). PALM FRONDS SHALL BE SECURLY BUNDED AND TIED. CONTRACTOR SHALL CUT TIES ONCE NEW FRONDS HAVE GROWN 2'-6" MIN.





NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. DO NOT BURY PALM - MAX 12" DEPTH LOWER THAN ORIGINAL PLANT DEPTH.
3. BUBBLERS TO BE FIXED 1 GAL. AND PLACED 12" FROM THE VERTICAL 3" PERFORATED PIPE SET AT 3" ABOVE FINISHED GRADE.
4. TREE BRACING PER DETAIL 3610-4.
5. CONTRACTOR TO TRIM OLD FRONDS (MAINTAIN A MIN. OF 10 HEALTHY FRONDS). PALM FRONDS SHALL BE SECURELY BUNDLED AND TIED. CONTRACTOR SHALL CUT TIES ONCE NEW FRONDS HAVE GROWN 2'-6" (MIN.).

(2) 3" CAPPED PERFORATED PIPE SET AT 3" ABOVE FINISHED GRADE, WRAPPED IN FILTER FABRIC

2" DEEP WATERING BASIN SHALL BE GENTLE AND UNIFORM THROUGHOUT WITH NO OBTRUSIVE EDGES. BASIN TO BE 2 TIMES WIDTH OF ROOTBALL

FINISH GRADE: 2" DEPTH DECOMPOSED GRANITE PER LANDSCAPE SCHEDULE

BACKFILL MIX (NATIVE SOIL)

LOCATION OF PLANT TABLET PER MANUFACTURER'S SPECIFICATION (SEE NOTE 1)

BUBBLER LATERAL AND BUBBLER

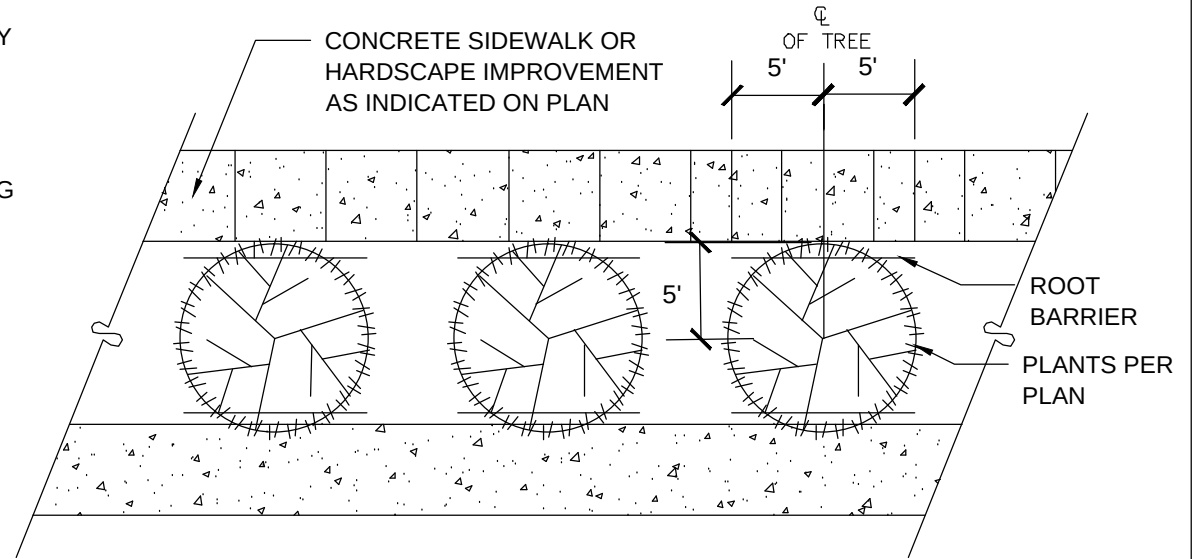
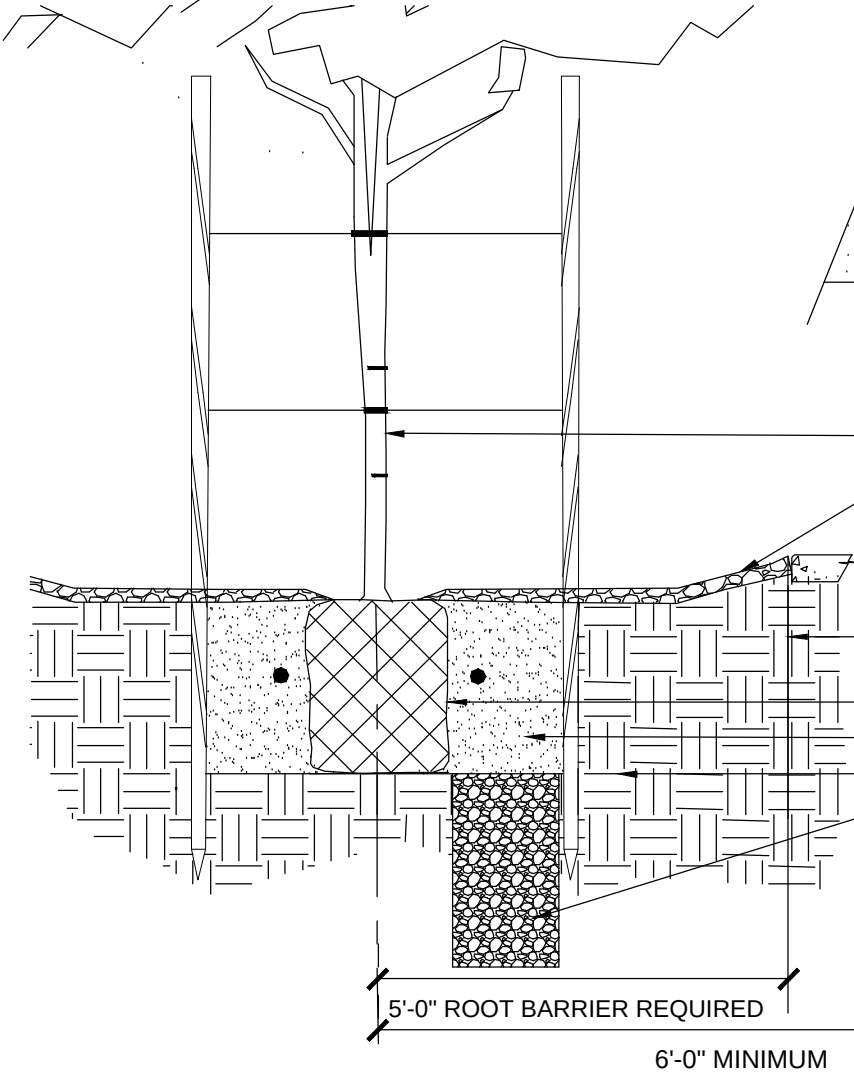
UNDISTURBED NATIVE SOIL OR SUBGRADE

SET ROOTBALL ON NATIVE UNDISTURBED SOIL AND/OR SUBGRADE

APPROXIMATELY 1" SAND BETWEEN BOTTOM OF ROOTBALL AND TOP OF PIPE

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. A ROOT BARRIER IS REQUIRED FOR TREES PLANTED LESS THAN 5'-0" FROM ANY PAVED OR CONSTRUCTED SURFACES, INCLUDING WALLS/FOOTINGS.



TREE INSTALLATION PER TREE PLANTING DETAIL G-3610-1

FINISHED GRADE: 2" DEEP DECOMPOSED GRANITE

ROOT BARRIER IS REQUIRED ADJACENT TO ANY PAVED OR CONSTRUCTED HARD SURFACES ; SIZE: 24" DEEP

ROOT BALL

SOIL BACKFILL

UNDISTURBED NATIVE SOIL OR SUBGRADE

DRILL ONE (1) 12" DIAMETER X 24" DEEP HOLE. BELOW EXCAVATED PIT RE-TEST PERCOLATION PER SPECIFICATION. CERTIFY PERCOLATION TEST AND FILL HOLE WITH PEA GRAVEL.



TO CENTER LINE OF PIPE

WATER OR SEWER LINE (DEPTH AND DIAMETER OF PIPE VARIABLE)

DETAIL NO.
G-3610-6

CITY OF GOODYEAR
STANDARD DETAIL

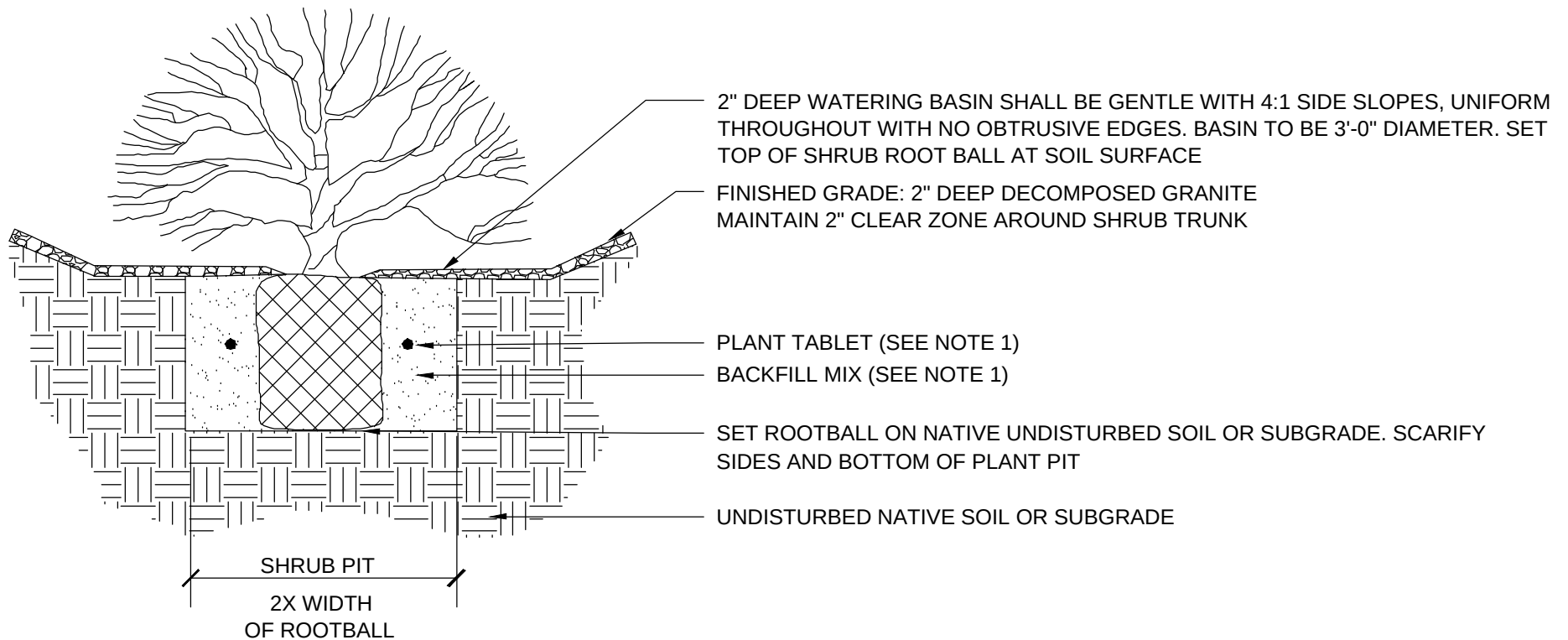
APPROVED:08/17

ROOT BARRIER

DETAIL NO.
G-3610-6

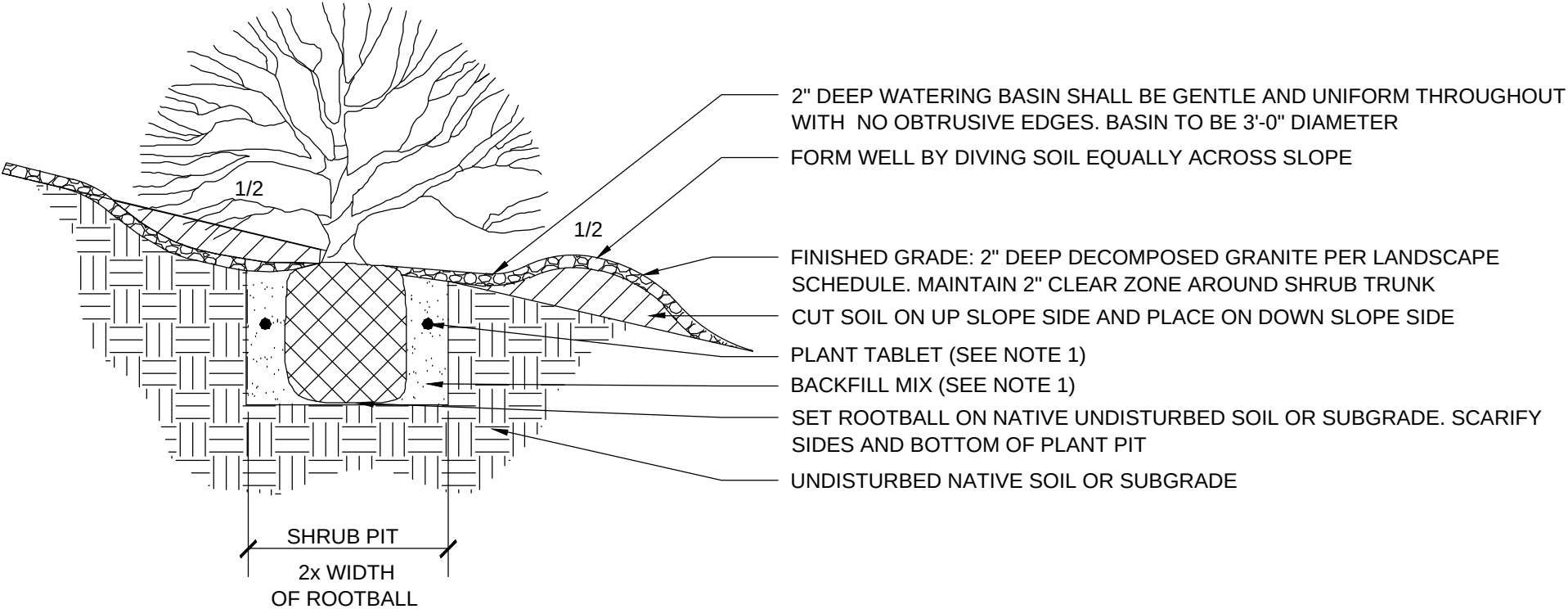
NOTES:

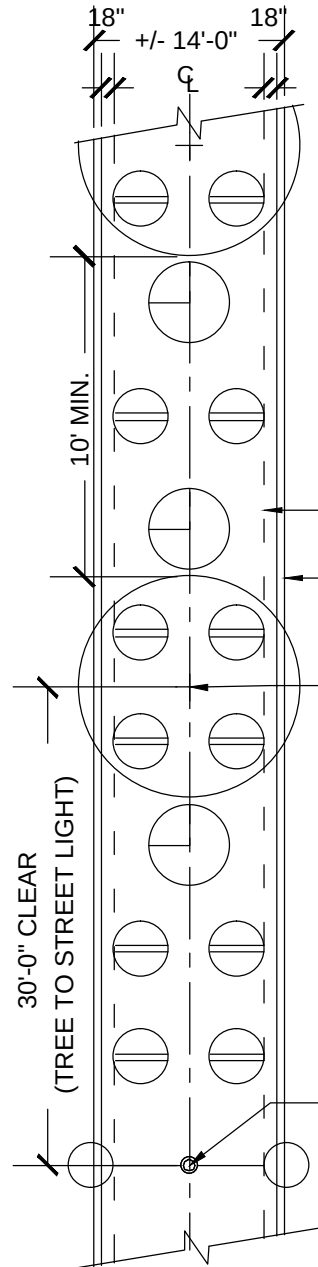
1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.



NOTES:

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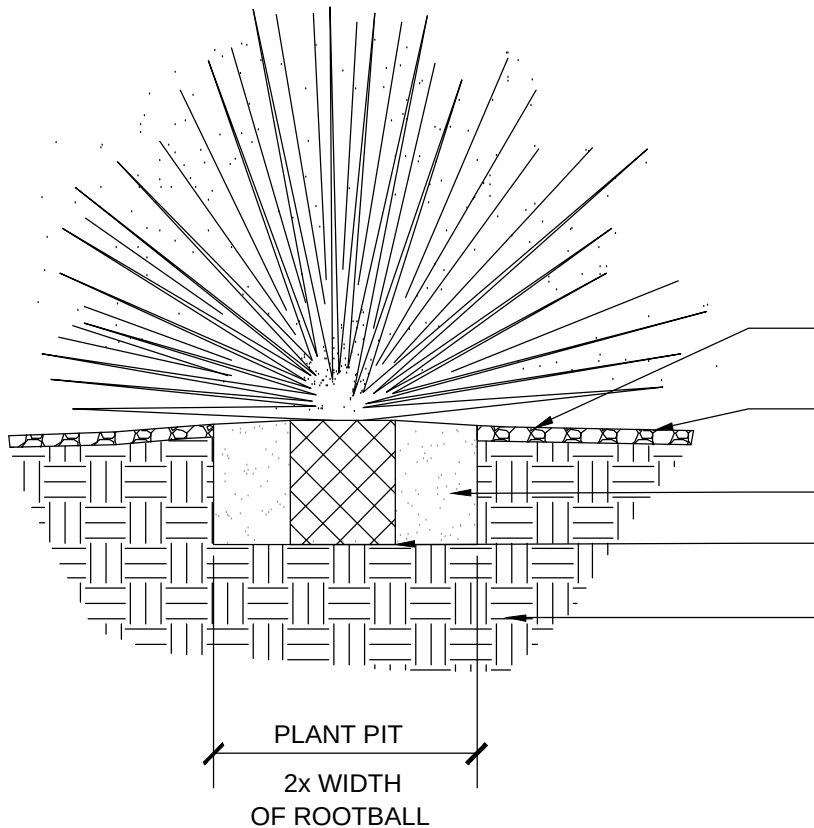
NOTES:

1. CONTRACTOR SHALL USE CURRENT CITY OF GOODYEAR PARKS AND RIGHT-OF-WAYS "MATERIALS LIST" AS REFERENCED ON THE DETAIL.
2. GRADE OF MEDIAN SHALL SLOPE 8% FROM FACE OF CURB TO MIDDLE OF MEDIAN.
3. MAINTAIN TOP OF DECOMPOSED GRANITE 1" BELOW TOP OF CURB
4. SOIL WITHIN MEDIAN SHALL BE SLOPED TOWARD THE CENTER OF THE MEDIAN WITH AN 8% GRADIENT.

18" CLEAR FROM FACE OF CURB TO
OUTSIDE EDGE OF MATURE SHRUB CANOPY
MEDIAN CURB

STREET TREE SPACED 1 1/2 TIMES THE WIDTH OF THE CANOPY.

STREET LIGHT; MAINTAIN 1 1/2 TIMES
THE WIDTH OF THE TREE CANOPY
CLEAR BETWEEN TREE AND STREET
LIGHT



NOTES:

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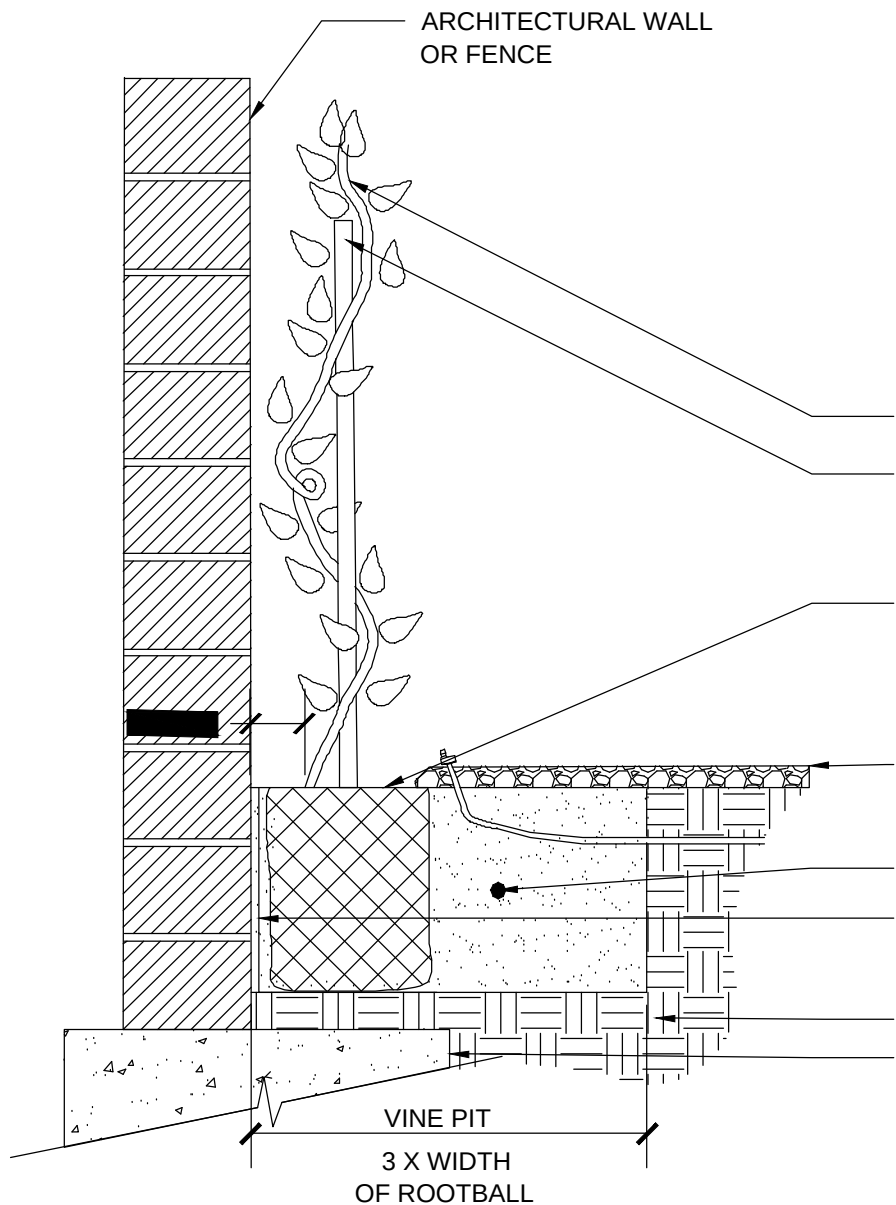
TO REDUCE PONDING, ESTABLISH POSITIVE DRAINAGE AWAY FROM PLANT BASE

FINISHED GRADE: 2" DEEP DECOMPOSED GRANITE PER LANDSCAPE SCHEDULE
MAINTAIN 4" CLEAR ZONE AROUND ACCENT TRUNK

BACKFILL MIX (SEE NOTE 1)

SET ROOTBALL ON NATIVE UNDISTURBED SOIL OR SUBGRADE. SCARIFY
SIDES AND BOTTOM OF PLANT PIT

UNDISTURBED NATIVE SOIL OR SUBGRADE



NOTES:

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2. ALTERNATE METHOD OF ATTACHMENT. VINE SHALL BE ATTACHED TO SURFACE OF FREESTANDING MASONRY WALLS WITH CLEAR EPOXY VINE TIES. DO NOT ATTACH VINES TO BUILDING.
3. VINES WITH NURSERY ESPALIER STAKE TO BE MOVED OUT OF ROOTBALL AND INSTALLED 6" FROM BUILDING.
4. TOP OF WATERING BASINS TO BE MIN 6" BELOW FINISHED FLOOR OF BUILDING.

SPREAD VINE ONTO WALL WITH VINYL PLANT TIES (SEE NOTE 1)

CONTRACTOR SHALL REMOVE NURSERY STAKE ONCE VINE HAS ATTACHED TO ARCHITECTURAL WALL OR FENCE

SET ROOTBALL TIGHT TO FOOTING, REMOVE ANY EXCESS TRASH OR CONCRETE THAT WOULD AFFECT PLANTING PIT

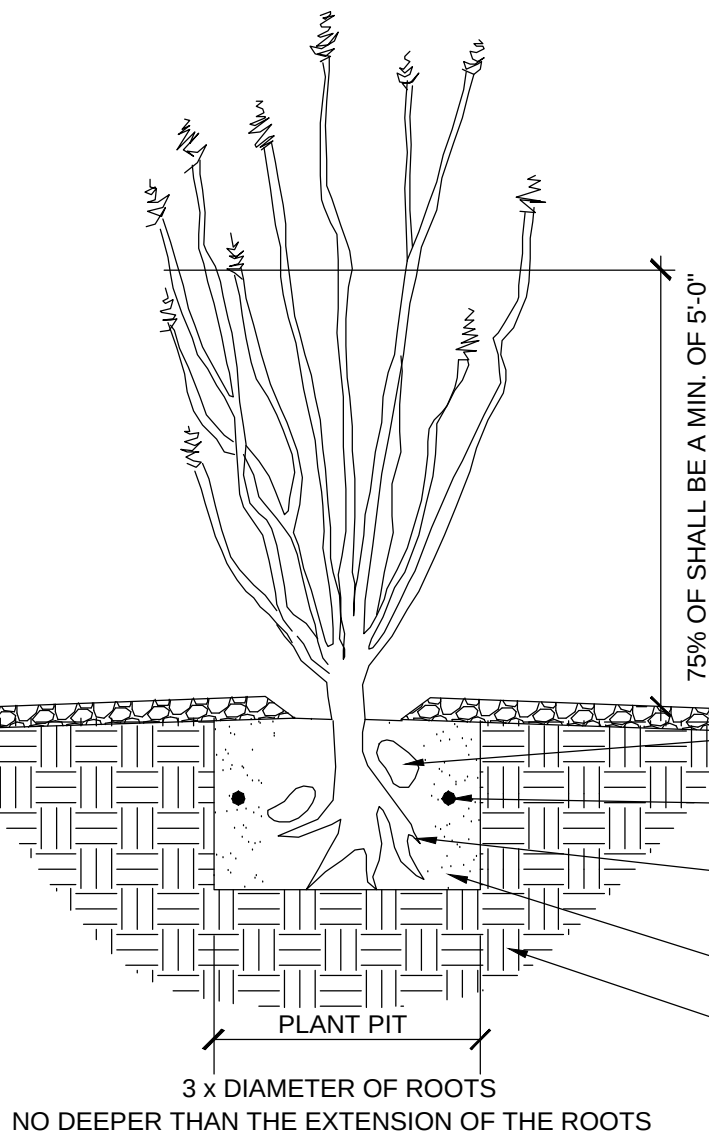
FINISHED GRADE: 2" DEEP DECOMPOSED GRANITE PER LANDSCAPE SCHEDULE

PLANT TABLET (SEE NOTE 1)

CONTRACTOR SHALL INSTALL A 3'-0" WIDE WATER PROOF MAT BETWEEN WALL AND FOOTING; ATTACH PER MANUFACTURER'S RECOMMENDATIONS (SEE NOTE 1)

UNDISTURBED NATIVE SOIL OR SUBGRADE

ANY DEVIATION TO STANDARD INSTALLATION TO AVOID CONFLICTS WITH THE WALL OR FENCE FOOTING SHALL BE COORDINATED WITH THE CITY OF GOODYEAR REPRESENTATIVE



NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. OCOTILLO SHALL HAVE TWELVE (12) CANES MINIMUM
3. DURING WARM GROWING MONTHS, IRRIGATE EVERY MONTH IF NO RAIN.
4. TO REDUCE PONDING, ESTABLISH POSITIVE DRAINAGE AWAY FROM OCOTILLO BASE.

FINISHED GRADE: 2" DEEP DECOMPOSED GRANITE
MAINTAIN 4" CLEAR ZONE AROUND OCOTILLO BASE

USE 6" TO 8" ROCKS TO ANCHOR ROOTS

PLANT TABLET: LOCATION OF PLANT TABLETS SHALL BE PER
MANUFACTURER'S RECOMMENDATIONS (SEE NOTE 1)

ROOT PRUNE ALL SHREDDED OR DAMAGED ROOTS AND DUST
ENTIRE ROOT STRUCTURE WITH WETTABLE SULPHUR (1.5 MIN.) AT
PLANTING SITE

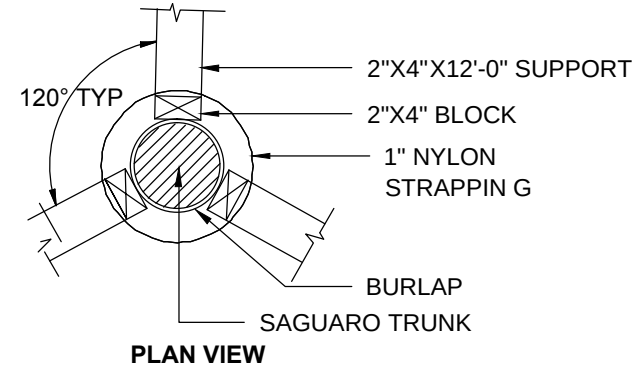
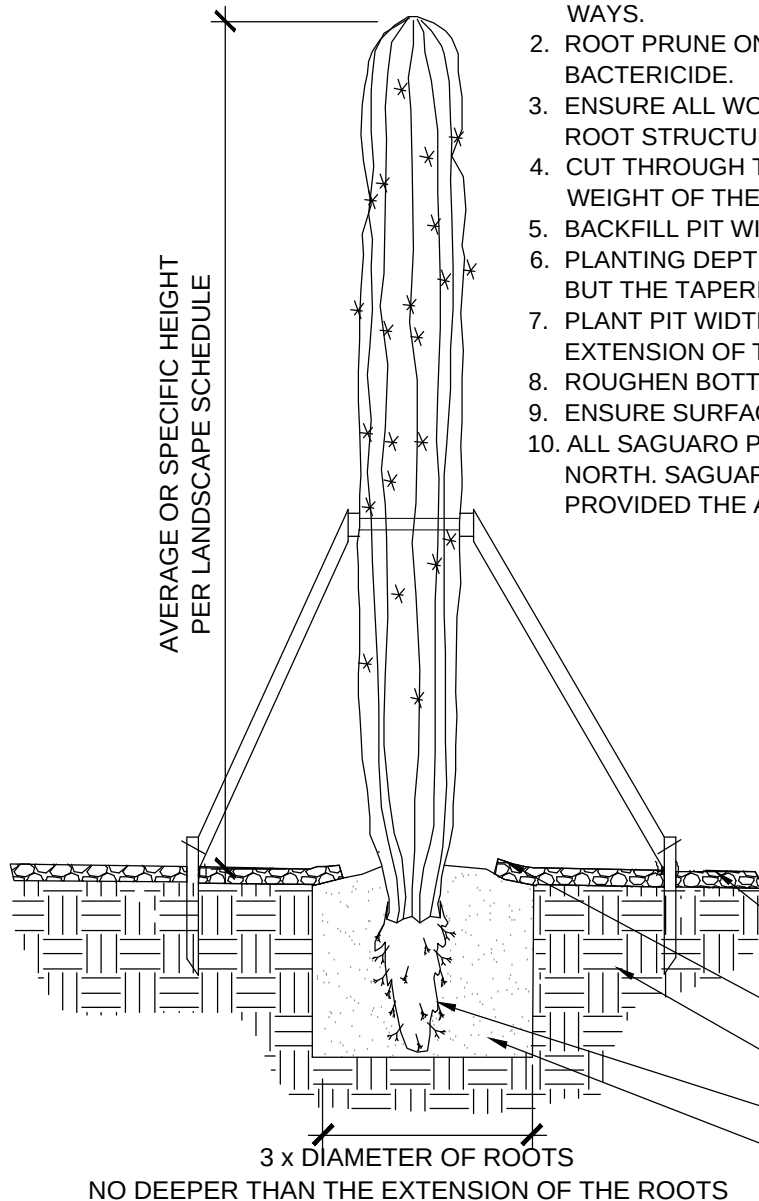
BACKFILL WITH MOIST NATIVE SITE SOIL.
FOR SOIL MIX (SEE NOTE 1)

UNDISTURBED NATIVE SOIL OR SUBGRADE

3 x DIAMETER OF ROOTS
NO DEEPER THAN THE EXTENSION OF THE ROOTS

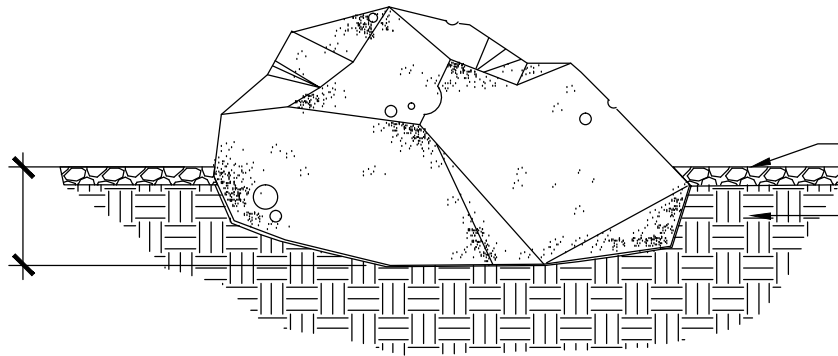
NOTES:

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2. ROOT PRUNE ONLY SHREDDED OR DAMAGED ROOTS. TREAT ALL SURFACE WOUNDS WITH BACTERICIDE.
3. ENSURE ALL WOUNDS TO THE ROOT SYSTEM ARE CLEAN CUT BEFORE PLANTING. TREAT ENTIRE ROOT STRUCTURE WITH WETTABLE SULFUR AND AGRA-MYCIN.
4. CUT THROUGH TAPROOT TO PROVIDE A FLAT BASE WITH DIAMETER SUFFICIENT TO SUPPORT THE WEIGHT OF THE UNSUPPORTED SAGUARO.
5. BACKFILL PIT WITH 6" LAYERS OF ROTTED, COMPACTED, MOIST, NATIVE SITE SOIL.
6. PLANTING DEPTH SHALL BE THE DEPTH AT WHICH THE PLANT WAS GROWN OR SLIGHTLY DEEPER, BUT THE TAPERING OF THE ROOT COLLAR MUST BE VISIBLE.
7. PLANT PIT WIDTH SHALL BE 3 TIMES THE DIAMETER OF THE STEM AND NO DEEPER THAN THE EXTENSION OF THE ROOTS.
8. ROUGHEN BOTTOM AND SIDES OF PLANT PIT PRIOR TO SETTING.
9. ENSURE SURFACE WATER CANNOT STAND AGAINST THE ROOT COLLAR.
10. ALL SAGUARO PLACEMENT SHALL MATCH ORIGINAL ORIENTATION WITH THE NORTH SIDE FACING NORTH. SAGUARO ARE SPECIFIED BY HEIGHT. A VARIETY OF HEIGHTS MAY BE ACCEPTABLE PROVIDED THE AVERAGE IS NOT LESS THAN SPECIFIED.



- FINISHED GRADE: 2" DEEP DECOMPOSED GRANITE PER LANDSCAPE SCHEDULE. MAINTAIN 4" CLEAR ZONE AROUND SAGUARO BASE
- 4" HEIGHT BERM TO PROVIDE POSITIVE DRAINAGE AWAY FROM BASE
- UNDISTURBED NATIVE SOIL OR SUBGRADE
- 8" TO 12" MIN. TAPROOT BELOW ROOT BASE WITH LATERAL ROOTS
- SOIL MIX USE 30%-40% SAND AND 60%-70% NATIVE SOIL

BOULDER SHALL BE BURIED
BELOW GRADE FOR NATURAL AESTHETICS



NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. BOULDERS SHALL BE PLACED UNDER THE DIRECTION OF CITY OF GOODYEAR REPRESENTATIVE.
3. SEE LANDSCAPE SCHEDULE FOR TYPE AND SIZE OF BOULDER.
4. BOULDERS TO BE PLACED IN A WAY THAT THERE IS NO SCARRING.

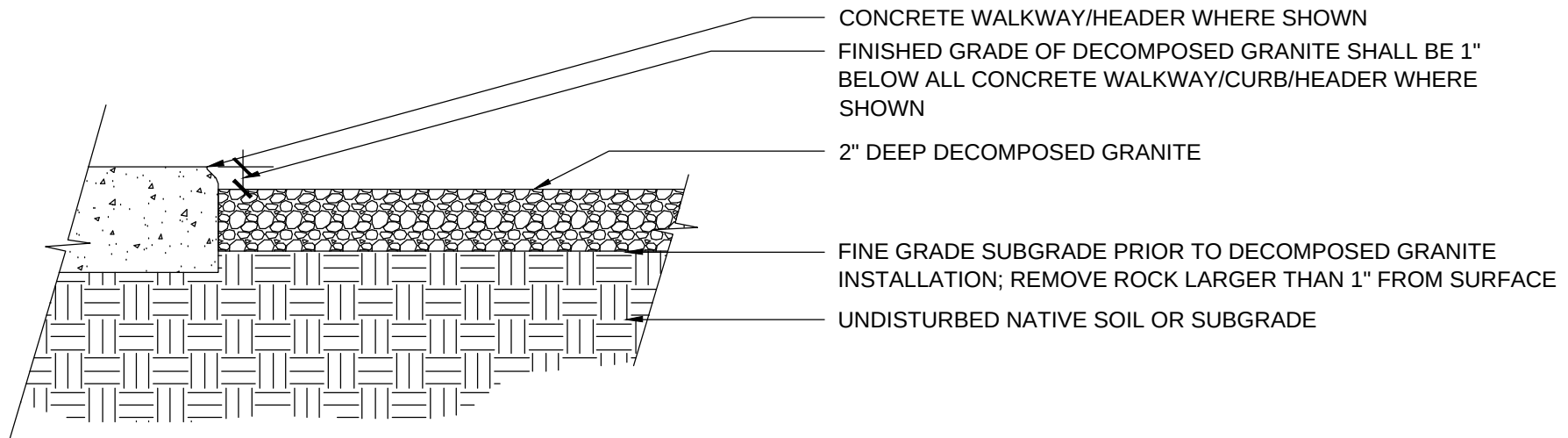
FINISHED GRADE: 2" DEEP DECOMPOSED GRANITE PER LANDSCAPE SCHEDULE

UNDISTURBED NATIVE SOIL OR COMPACTED SUBGRADE

DETAIL NO. G-3610-14	CITY OF GOODYEAR STANDARD DETAIL	APPROVED:08/17	BOULDER	DETAIL NO. G-3610-14
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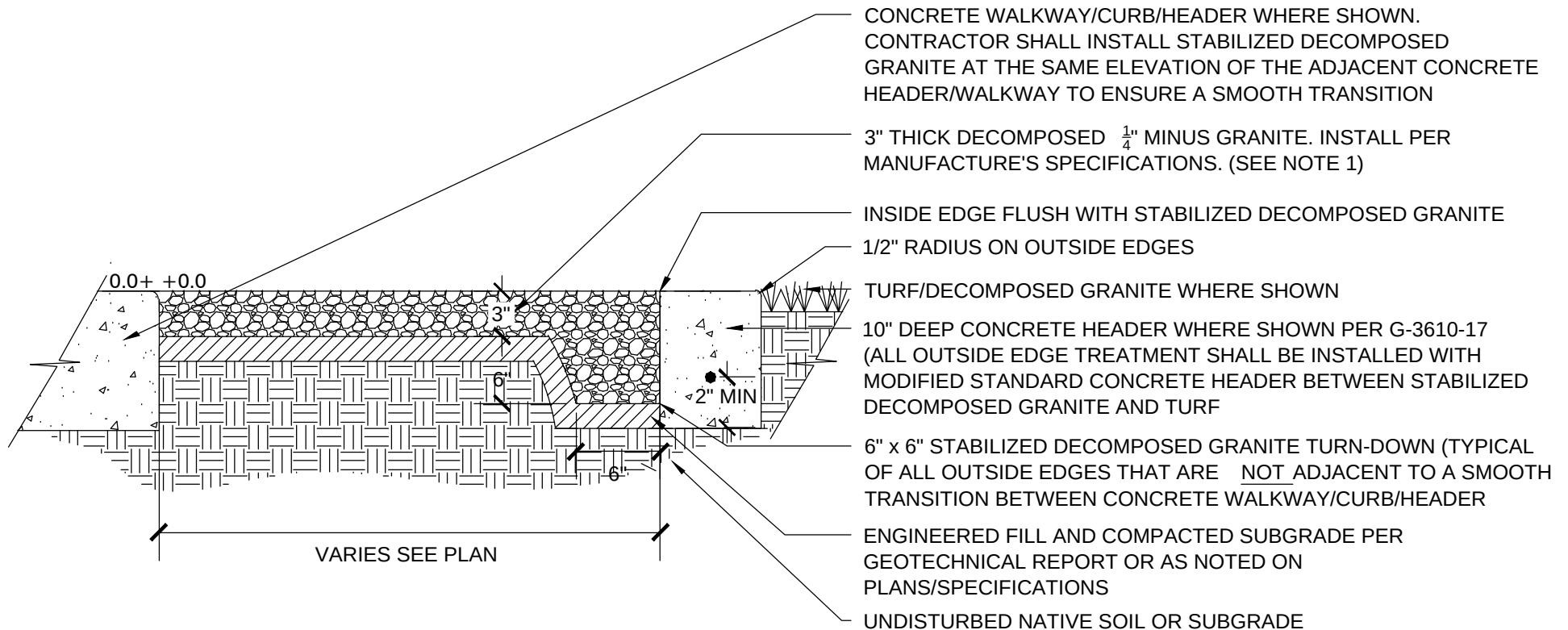
NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. APPLY PRE-EMERGENT HERBICIDE PRIOR TO INSTALLATION OF DECOMPOSED GRANITE, ONE WEEK AFTER INSTALLATION OF DECOMPOSED GRANITE, AND ONE WEEK BEFORE PROJECT IS TURNED OVER TO THE CITY OF GOODYEAR. PRE-EMERGENT TO BE APPLIED AT 6 MONTH INTERVALS (MAX.) AND SHALL BE FULL-STRENGTH. EACH APPLICATION OF PRE-EMERGENT SHALL BE WATERED IN PER MANUFACTURER'S RECOMMENDATIONS.
3. FINISH GRADE SHALL BE RAKED SMOOTH WITH NO CONTAMINATES OF CONSTRUCTION AND/OR UNDULATION CREATED BY CONSTRUCTION.
4. PRIOR TO INSTALLATION, THE COLOR AND GRADATION OF THE DECOMPOSED GRANITE SHALL BE APPROVED BY THE CITY OF GOODYEAR REPRESENTATIVE.



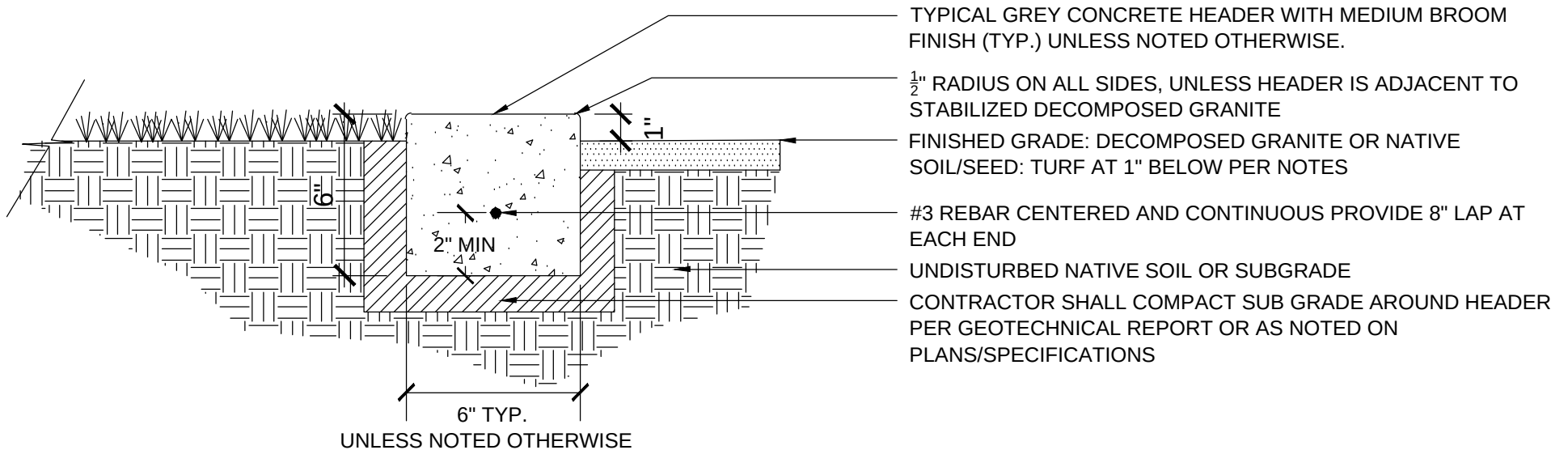
NOTES:

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2. CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN STABILIZED DECOMPOSED GRANITE AND CONCRETE WALKWAY/CURB/HEADER WHERE SHOWN.
3. THERE SHALL BE NO PONDING ON STABILIZED DECOMPOSED GRANITE. ENSURE POSITIVE DRAINAGE.
4. APPLY PRE-EMERGENT HERBICIDE PRIOR TO INSTALLATION OF STABILIZED DECOMPOSED GRANITE, ONE WEEK AFTER INSTALLATION OF STABILIZED DECOMPOSED GRANITE, AND ONE WEEK BEFORE PROJECT IS TURNED OVER TO THE CITY OF GOODYEAR. PRE-EMERGENT SHALL BE APPLIED AT 6 MONTH INTERVALS (MAX.) AND SHALL BE FULL-STRENGTH. EACH APPLICATION OF PRE-EMERGENT SHALL BE WATERED IN PER MANUFACTURERS RECOMMENDATIONS.



NOTES:

1. HEADER SHALL BE FLUSH WITH ADJACENT STABILIZED DECOMPOSED GRANITE PATHWAY AND TRANSITION WITH CONCRETE WALKWAYS.
2. ADJACENT TO TURF; FINISHED GRADE OF TURF SHALL BE 1" BELOW TOP OF CONCRETE HEADER.
3. CITY OF GOODYEAR REPRESENTATIVE SHALL APPROVE FORM WORK PRIOR TO PLACING CONCRETE.
4. CONCRETE SHALL BE MAG. CLASS "B".
5. EXPANSION JOINTS @ 24'-0" ON CENTER AND AT ALL LOCATIONS WHERE NEW CONCRETE MEETS EXISTING CONCRETE.
6. CONTRACTOR SHALL INSTALL CONTROL JOINTS EVERY 4'-0" O.C. OR AT EQUAL DISTANCE ALONG HEADER IF SECTION LENGTH IS NOT DIVISIBLE BY 4'-0".
7. STRAIGHT SECTIONS TO MEET CURVED SECTIONS AT TRUE TANGENT POINTS WITH NO BROKEN CURVE SECTIONS.
8. CURVED SECTIONS TO BE FORMED IN SMOOTH, EVEN CURVES.
9. FORM STAKING SHALL KEEP CONCRETE FROM DEFORMING OR LEAKING. ALL SPILL OF EXCESS CONCRETE SHALL BE CLEANED UP AND REMOVED FROM SITE BY CONTRACTOR.



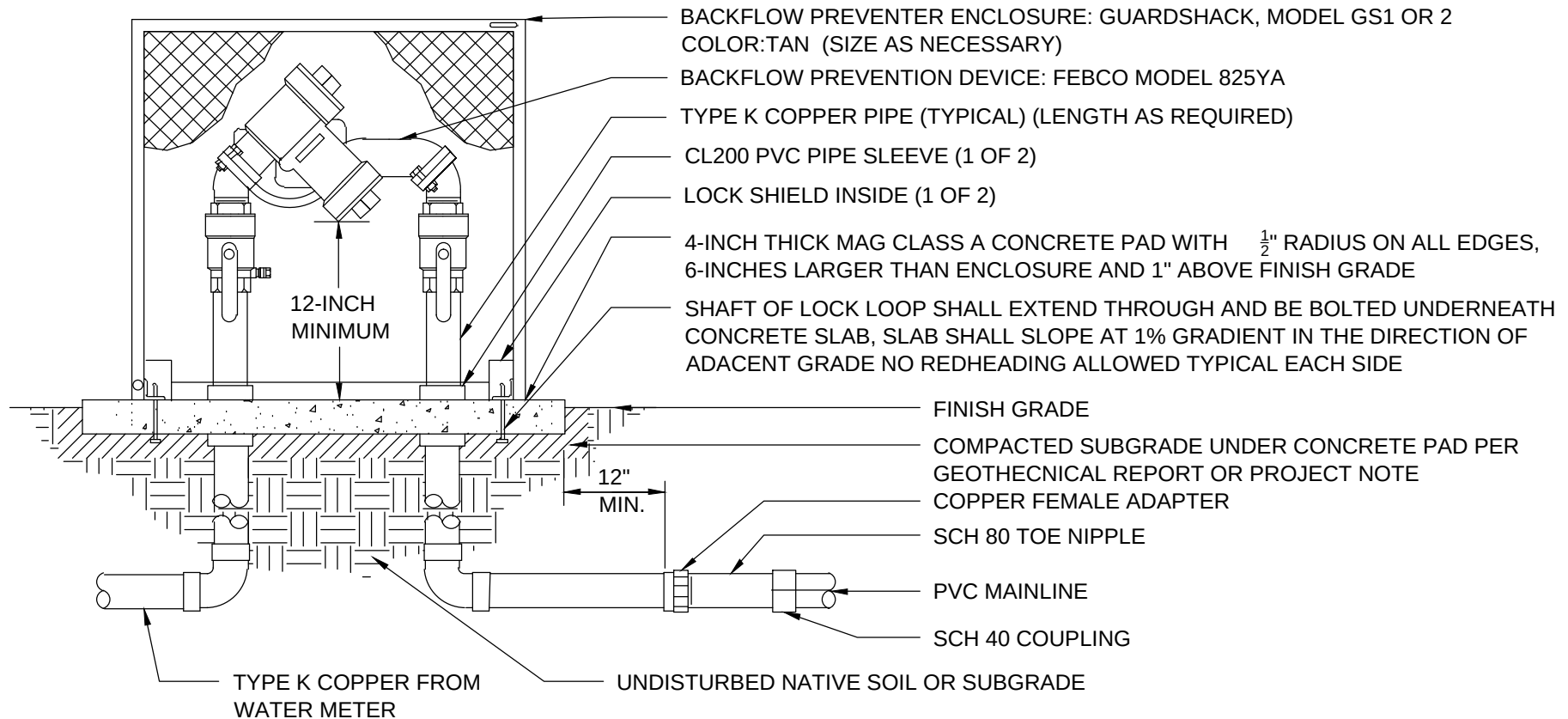
WIRE SIZE (AWG)	MAXIMUM NUMBER OF WIRES TO BE INSTALLED IN A SCHEDULE 40 PVC SLEEVE			WIRE SIZE (AWG)
	2"	2-1/2"	3"	
14	25	40	56	14
12	20	33	50	12

NOTE:

1. ALL WIRE SLEEVES TO BE SHC. 40 PVC AND SHALL BE INSTALLED WITH A MINIMUM OFFSET AT THE JOINTS TO PERMIT EASY INSTALLATION AND REMOVAL OF CONTROL AND COMMON WIRES. ALL WIRES SHALL BE INSTALLED IN SLEEVES UNDER THE PAVED AREAS. SLEEVES SHALL EXTEND AT LEAST 12" BEYOND THE EDGES OF THE PAVEMENT. SIZE OF SLEEVES SHALL BE AS SHOWN.

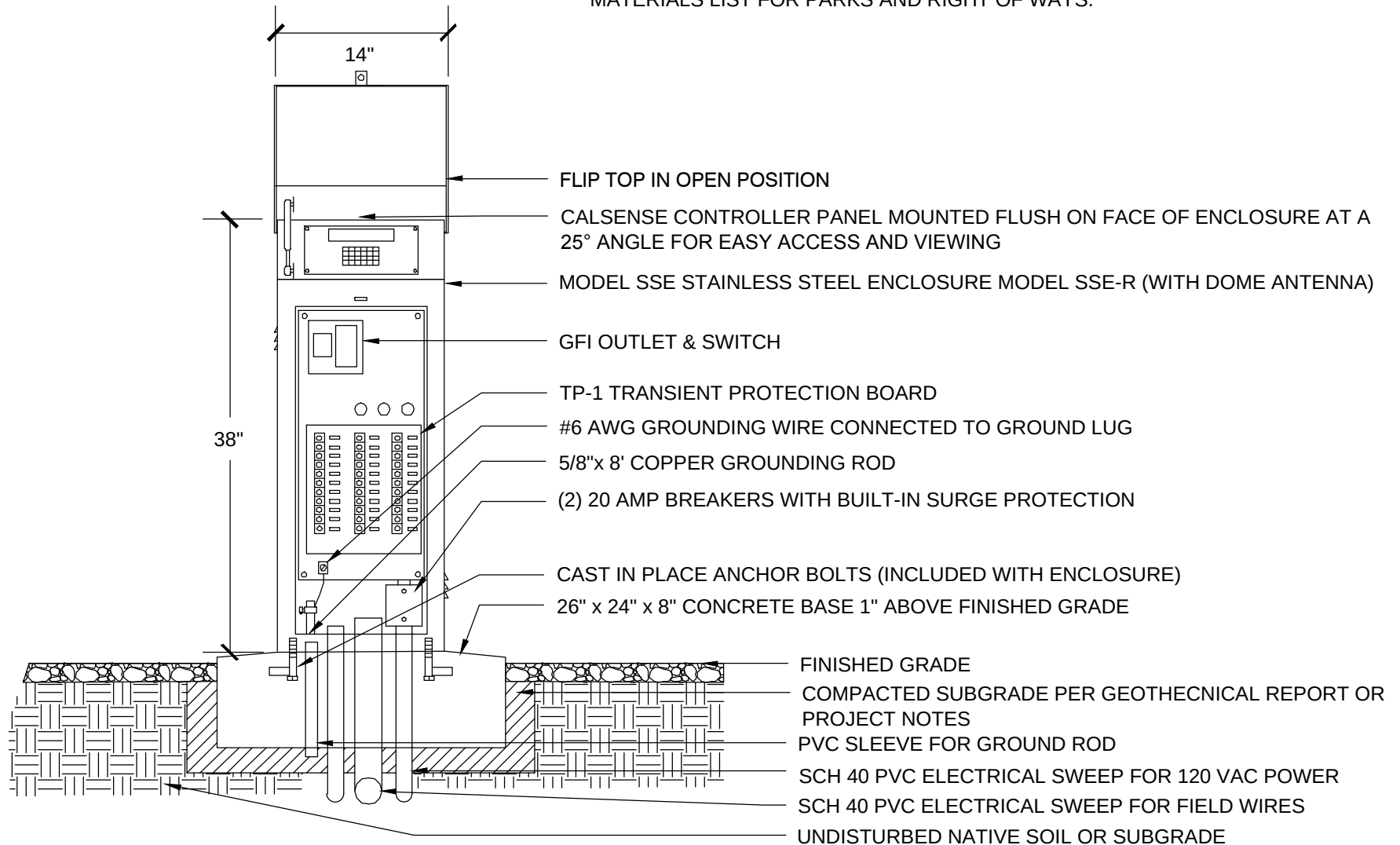
NOTES:

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2. SUBMIT SHOP DRAWINGS SPECIFYING ENCLOSURE SIZE AND SHOWING RELATIVE LAYOUT OF EQUIPMENT.
3. CONTRACTOR SHALL PROVIDE A LOCK FOR THE ENCLOSURE UNTIL SUBSTANTIAL COMPLETION APPROVAL. AT THAT TIME CONTRACTOR SHALL REMOVE HIS LOCK AND THE CITY SHALL PROVIDE A LOCK FOR THE ENCLOSURE.
4. IRRIGATION MAINLINES LESS THAT 2" SHALL BE SCH. 40, MAINLINES 2"-3" SHALL BE BALL GASKET CLASS 315, MAINLINES GREATER THAN 3" SHALL BE CLASS 200. MAINLINES SHALL COMFORM TO ASTM D1785.
5. CONTRACTOR SHALL FURNISH FITTINGS AND PIPING SIZED IDENTICALLY WITH NOMINAL BACKFLOW PREVENTION DEVICE.



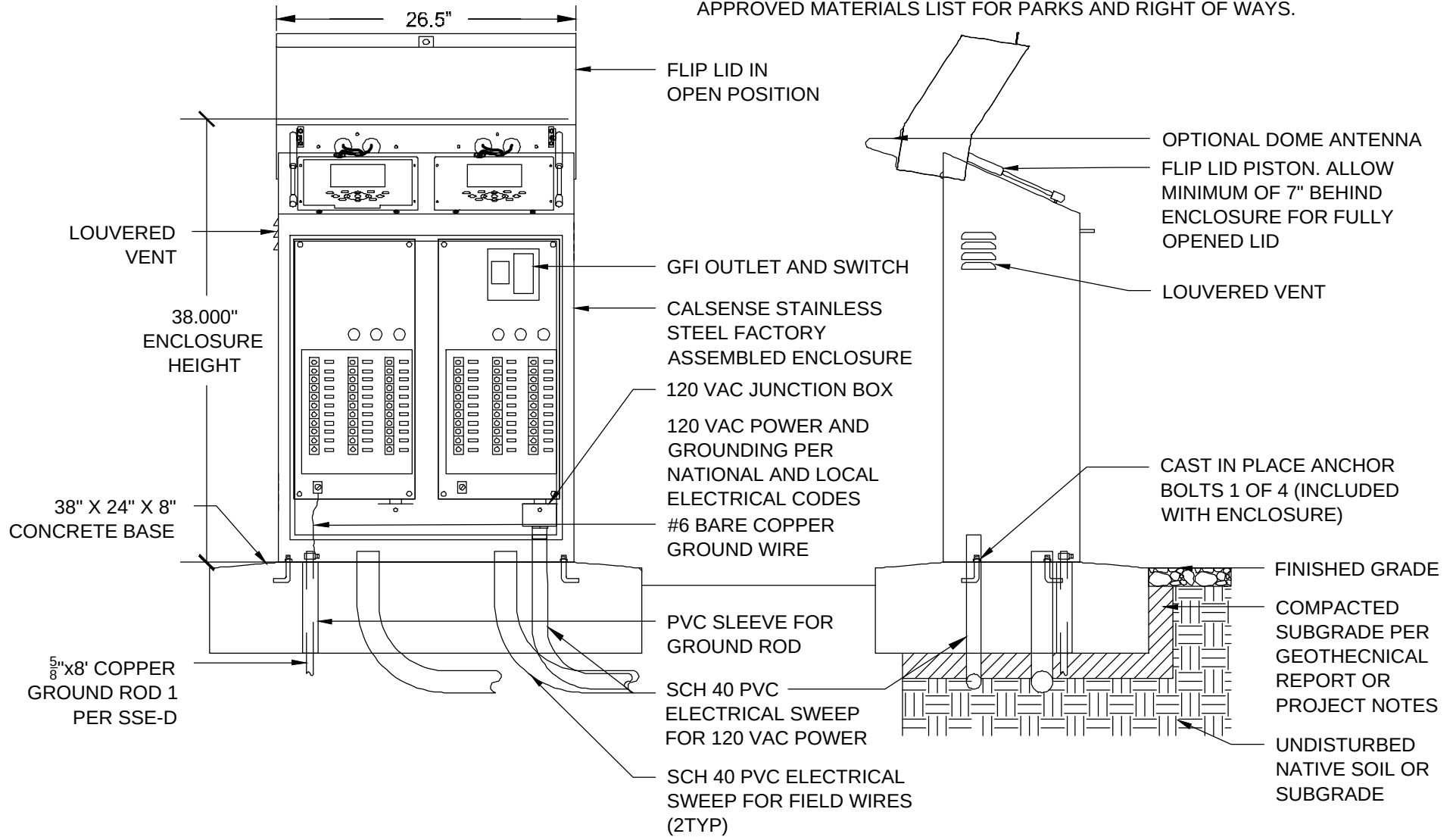
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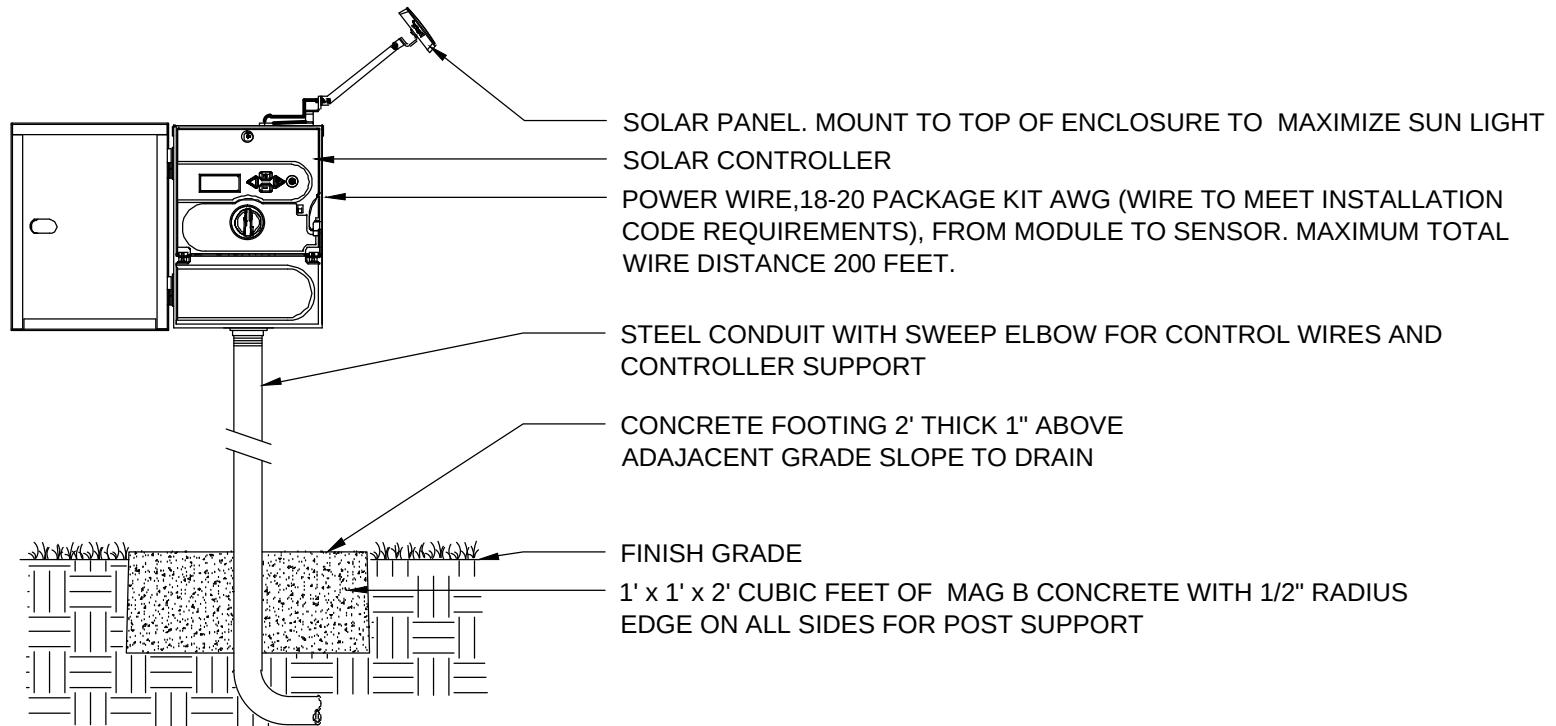
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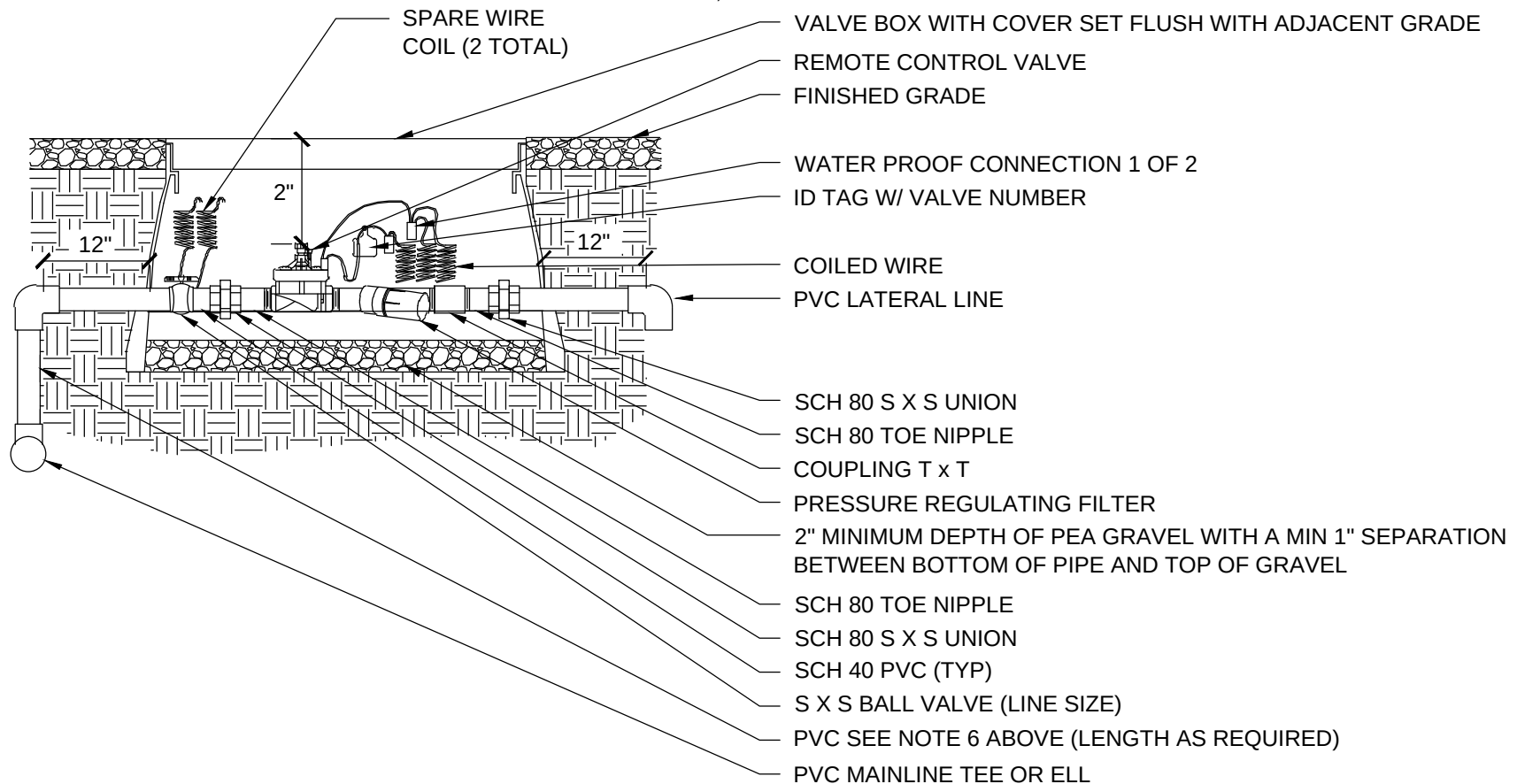
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2. INSTALL CONTROLLER PER MANUFACTURER'S SPECIFICATIONS.
3. SPECIFY STATION MODEL CONTROLLER. MOUNT CONTROLLER WITH LCD SCREEN AT EYE LEVEL.



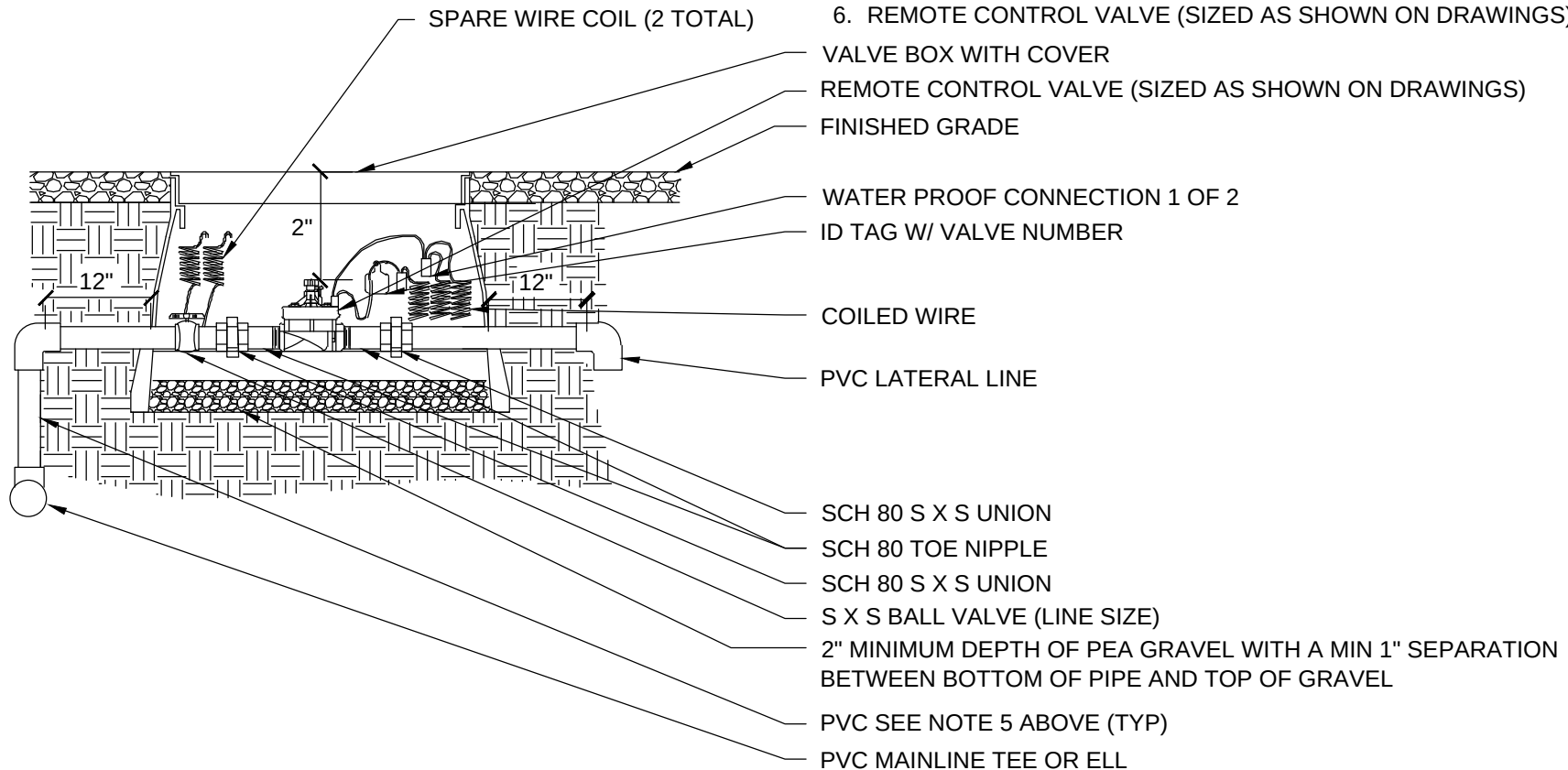
NOTES:

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2. STATION NO. ENGRAVED ON LID.
3. MAINLINE SHALL NOT TO BE INSTALLED UNDER VALVE BOX.
4. ALL VALVE BOXES TO BE (MIN) 3 FEET APART FROM EACH OTHER.
5. INSTALL 2 EXTRA WIRES, ONE WHITE (COMMON) AND ONE GREEN INTO EACH VALVE BOX AND COIL PER NOTE 1 ABOVE.
6. IRRIGATION MAINLINES LESS THAT 2" SHALL BE SCH. 40, MAINLINES 2"-3" SHALL BE BALL GASKET CLASS 315, MAINLINES GREATER THAN 3" SHALL BE CLASS 200. MAINLINES SHALL COMFORM TO ASTM D1785.
7. COILED WIRE, WRAP AROUND 1" PVC PIPE 15 TIMES.



NOTES:

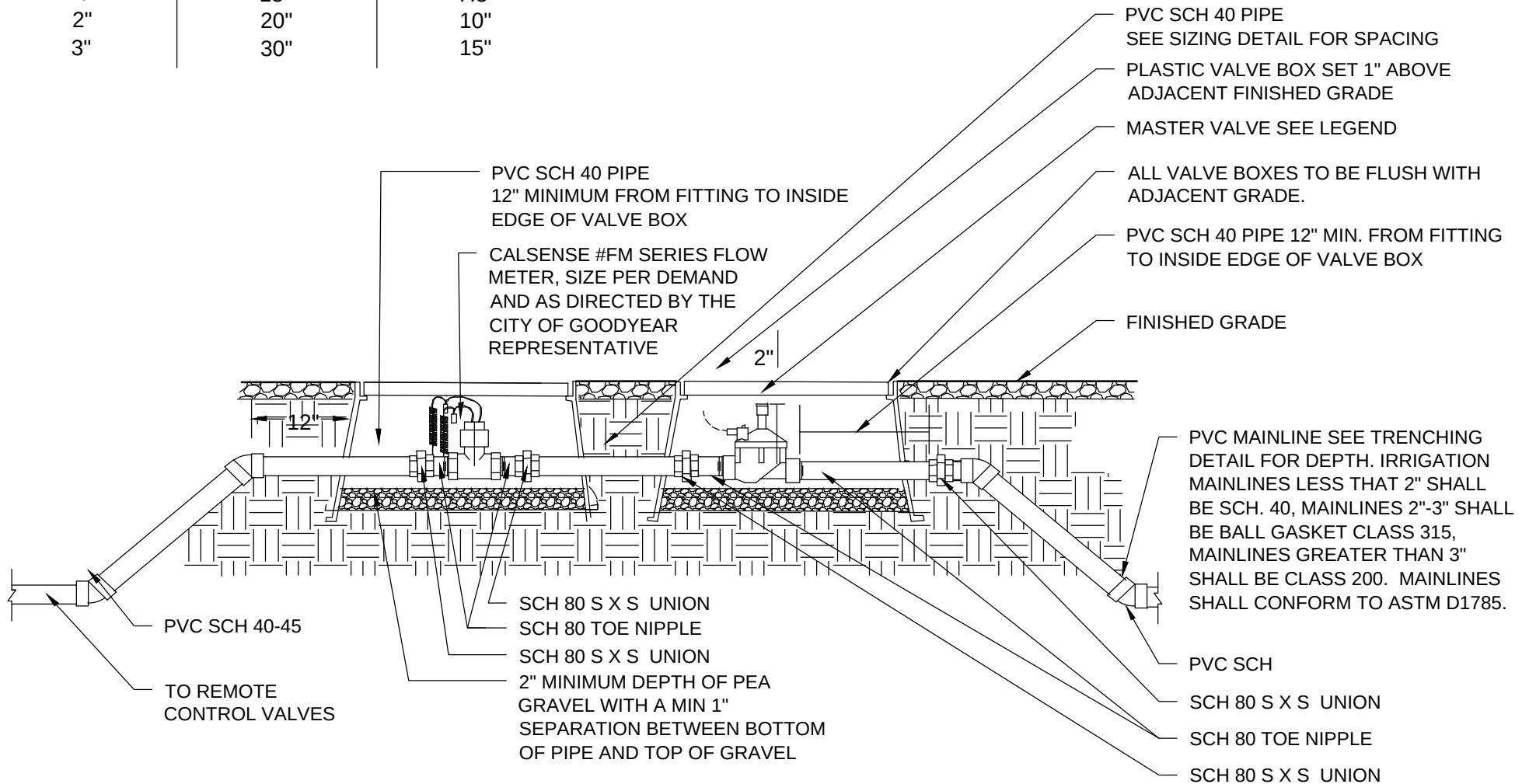
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2. EXPANSION COIL WRAP AROUND 1" PIPE 15 TIMES.
3. VALVE BOX COVER IS ENGRAVED WITH THE VALVE NUMBER (2" HIGH MIN.).
4. VALVE BOXES SHALL NOT BE PLACED IN TURF UNLESS ABSOLUTELY NECESSARY. KEEP TOP OF VALVE BOX FLUSH WITH ADJACENT GRANDE.
5. IRRIGATION MAINLINES LESS THAT 2" SHALL BE SCH. 40, MAINLINES 2"-3" SHALL BE BALL GASKET CLASS 315, MAINLINES GREATER THAN 3" SHALL BE CLASS 200. MAINLINES SHALL CONFORM TO ASTM D1785.
6. REMOTE CONTROL VALVE (SIZED AS SHOWN ON DRAWINGS).



FLOW METER SIZE	MIN UPSTREAM DISTANCE	MIN DOWNSTREAM DISTANCE
1"	12"	5"
1-1/4"	12.5"	6.25"
1-1/2"	15"	7.5"
2"	20"	10"
3"	30"	15"

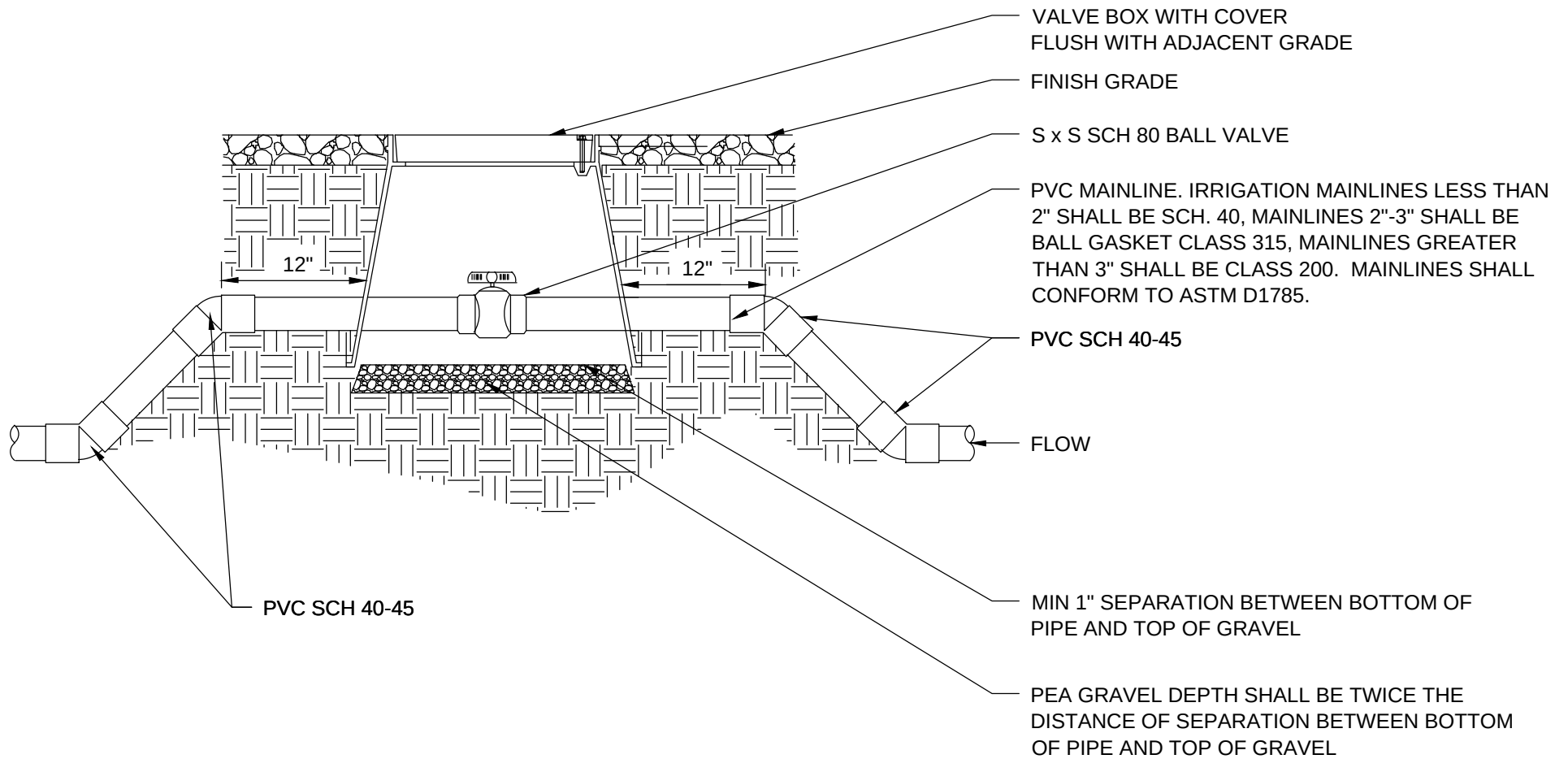
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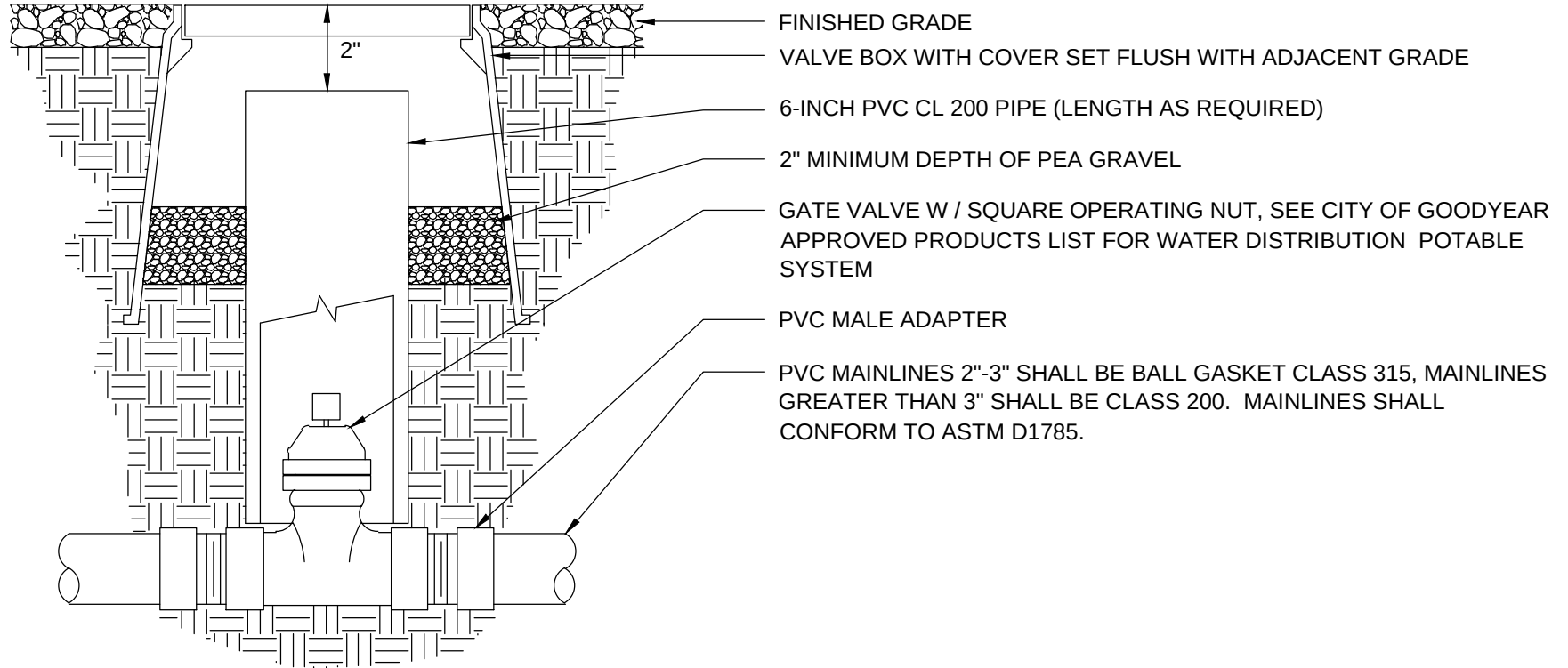
NOTES:

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2. BALL VALVE SHALL MATCH NOMINAL SIZE OF MAINLINE PIPE.



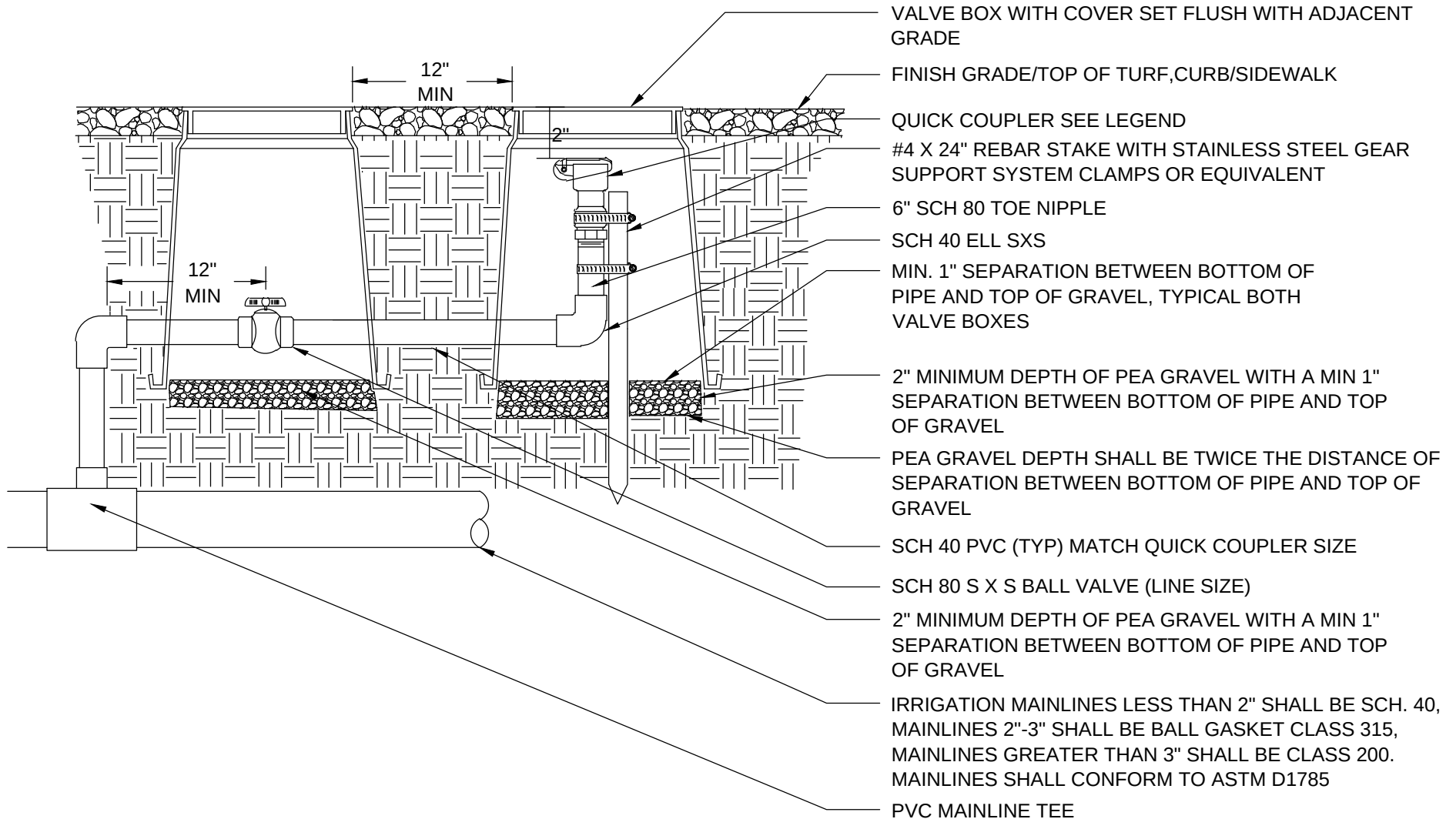
NOTES:

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2. NOMINAL SIZE OF GATE VALVE TO MATCH NOMINAL MAINLINE SIZE.



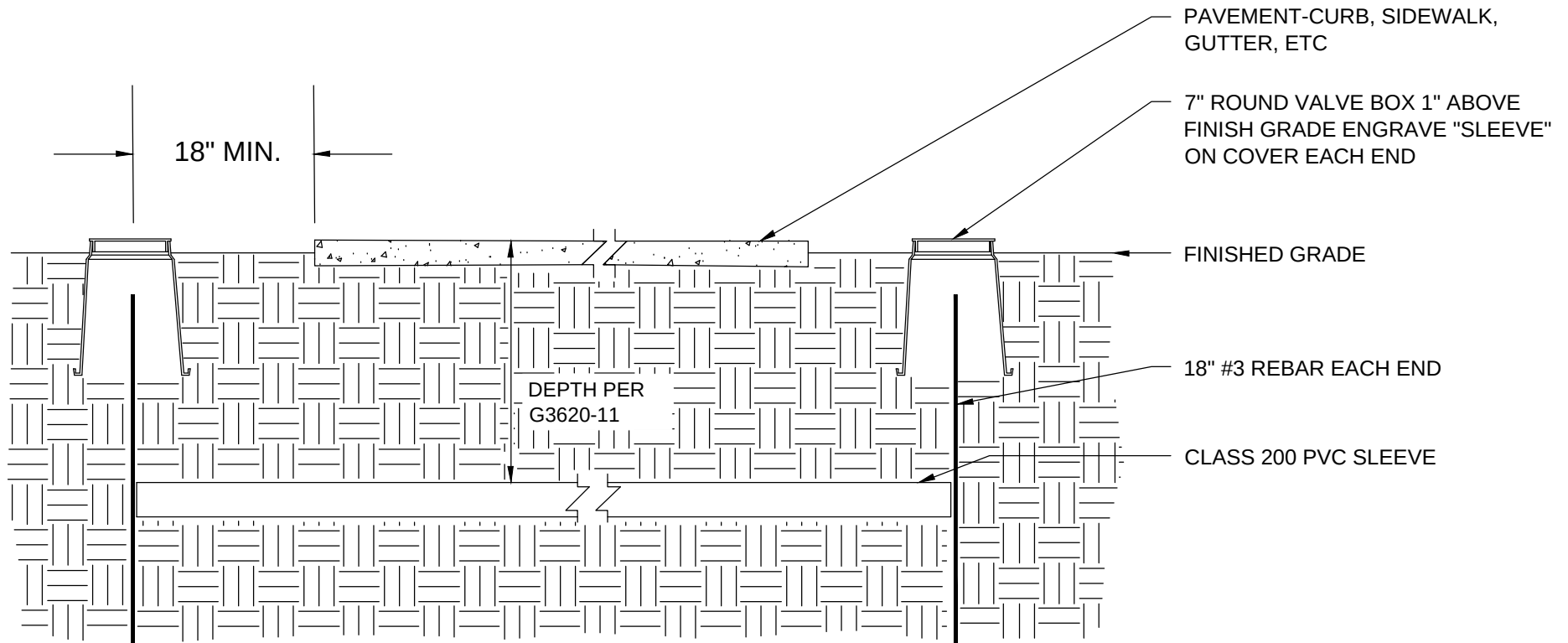
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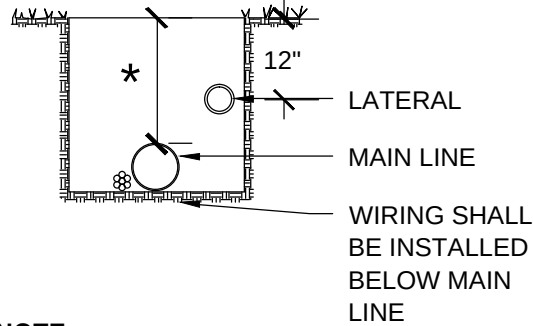


NOTES:

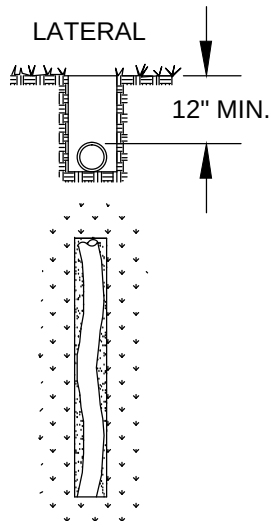
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2. VALVE BOX AND REBAR MARKERS TO BE INSTALLED WHEN LANDSCAPE AND IRRIGATION IS A FUTURE CONTRACT.



MAINLINE AND WIRING WITH LATERAL

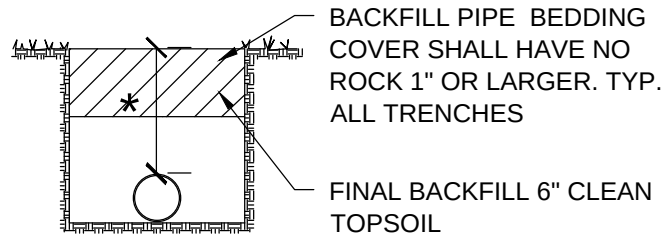


NOTE:
TAPE AND BUNDLE TUBING OR WIRING AT 10' INTERVALS.

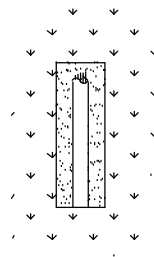
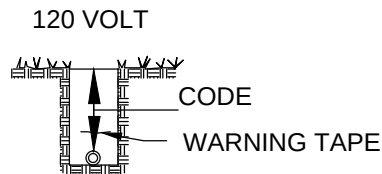


NOTE:
ALL PLASTIC PIPING TO BE SNAKED IN TRENCHES WITH A 2" MIN. CLEARANCE BETWEEN PIPES AND PIPES AND SIDE OF TRENCH.

MAINLINE AND WIRING WITHOUT LATERAL



* PIPE DIA	TRENCH DEPTHS
3/4" - 2"	18"
2-1/2" - 3"	24"
4" - 6"	36"
8" - 12"	48"



NOTE:
ALL 120 VOLT WIRING IN CONDUIT TO BE INSTALLED IN ACCORDANCE WITH LOCAL CODE.

APPROVED "ELECTRICAL POWER WIRES BELOW" WARNING TAPE SHALL BE INSTALLED 12" ABOVE ALL POWER WIRING IN TRENCHES.

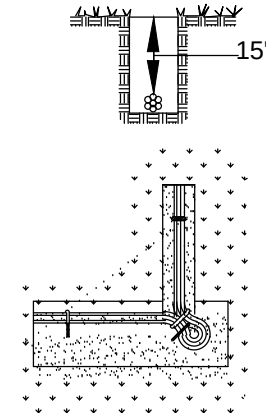
NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. NO TRENCH TO BE CLOSER THAN 18" TO CONCRETE SIDEWALK CURBS, ELECTRIC POLES, J-BOXES, ELECTRIC CABINETS, STREET SIGNALS, SIGNS, ETC.
3. WHEN MULTIPLE MAIN OR LATERAL LINES RUN IN THE SAME TRENCH MAINTAIN 3" HORIZONTAL CLEARANCE BETWEEN PIPES.
4. DETAIL APPLIES WHEN A 2" OR LARGER MAINLINE IS IN A SEPARATE TRENCH.

WIRE LEGEND

RED-CONTROLLER
BLUE-MASTER VALVE
BLACK/ORANGE-FLOW METER
WHITE-COMMON
GREEN-EXTRA

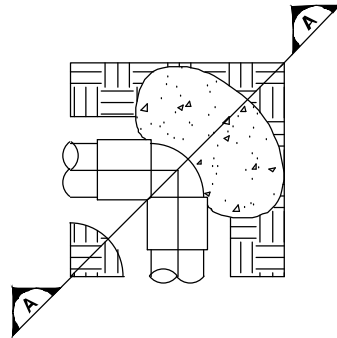
CONTROL WIRING NOT IN MAINLINE TRENCH



NOTE:
TIE A LOOSE 20" LOOP IN ALL WIRING AT CHANGES OF DIRECTION GREATER THAN 30°. UNTIE ALL LOOPS AFTER ALL CONNECTIONS HAVE BEEN MADE.

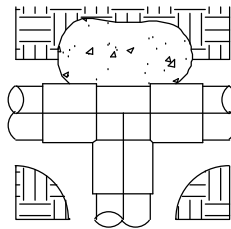
NOTES:

1. MINIMUM THRUST BLOCK AREAS ARE BASED ON A SOIL BEARING CAPACITY OF 3000 LBS/SF
2. THRUST BLOCK SHALL EXTEND INTO UNDISTURBED SOIL.
3. THRUST BLOCK SHALL BE MAG SECT. 725-CLASS C.
4. MAINLINE PIPING 4" AND LARGER SHALL HAVE MEGA/LUG JOINT RESTRAINTS INSTALLED AT ALL FLOW DIRECTION CHANGES (CONCRETE THRUST BLOCK NOT REQUIRED IF BELL END HARNESS JOINT RESTRAINTS ARE INSTALLED PER MAG 303-1 AND 303-2).



90° ELL

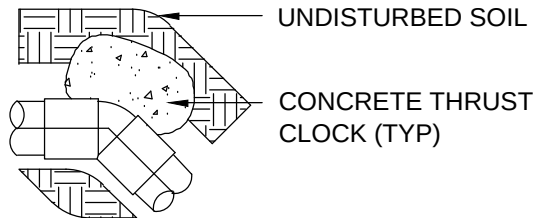
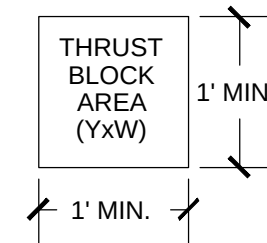
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TEE

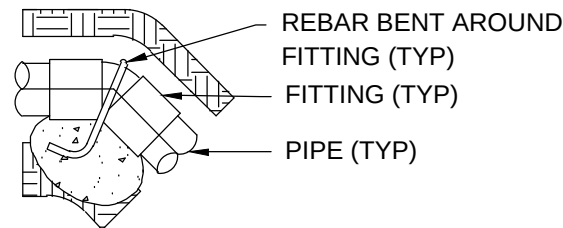
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MINIMUM THRUST BLOCK AREA (YxW)		
PIPE SIZE	IRRIGATION PIPE	
	TEE, DEAD END 90° BEND	45°, 22.5°
3"	2 SF	1 SF
4"	2 SF	1 SF
5" & LARGER	2 SF	1.5 SF
	PER MAG DETAIL 380	PER MAG DETAIL 380



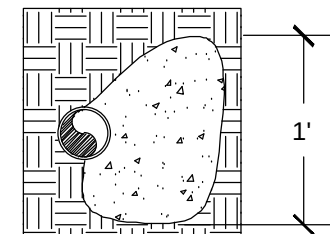
45° ELL

SCALE: NTS



45° ELL (VERTICAL)

SCALE: NTS

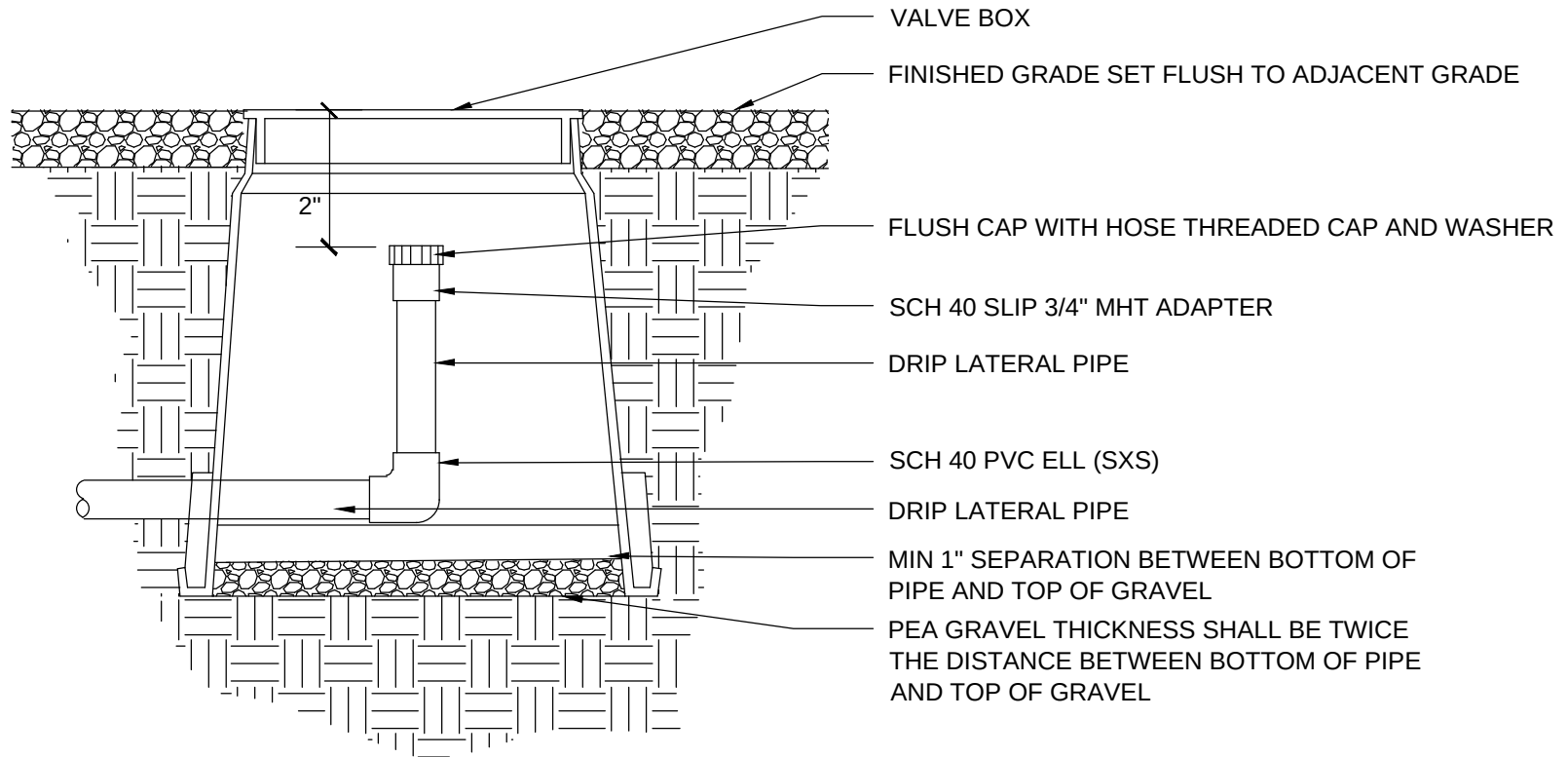


SECTION

A-A

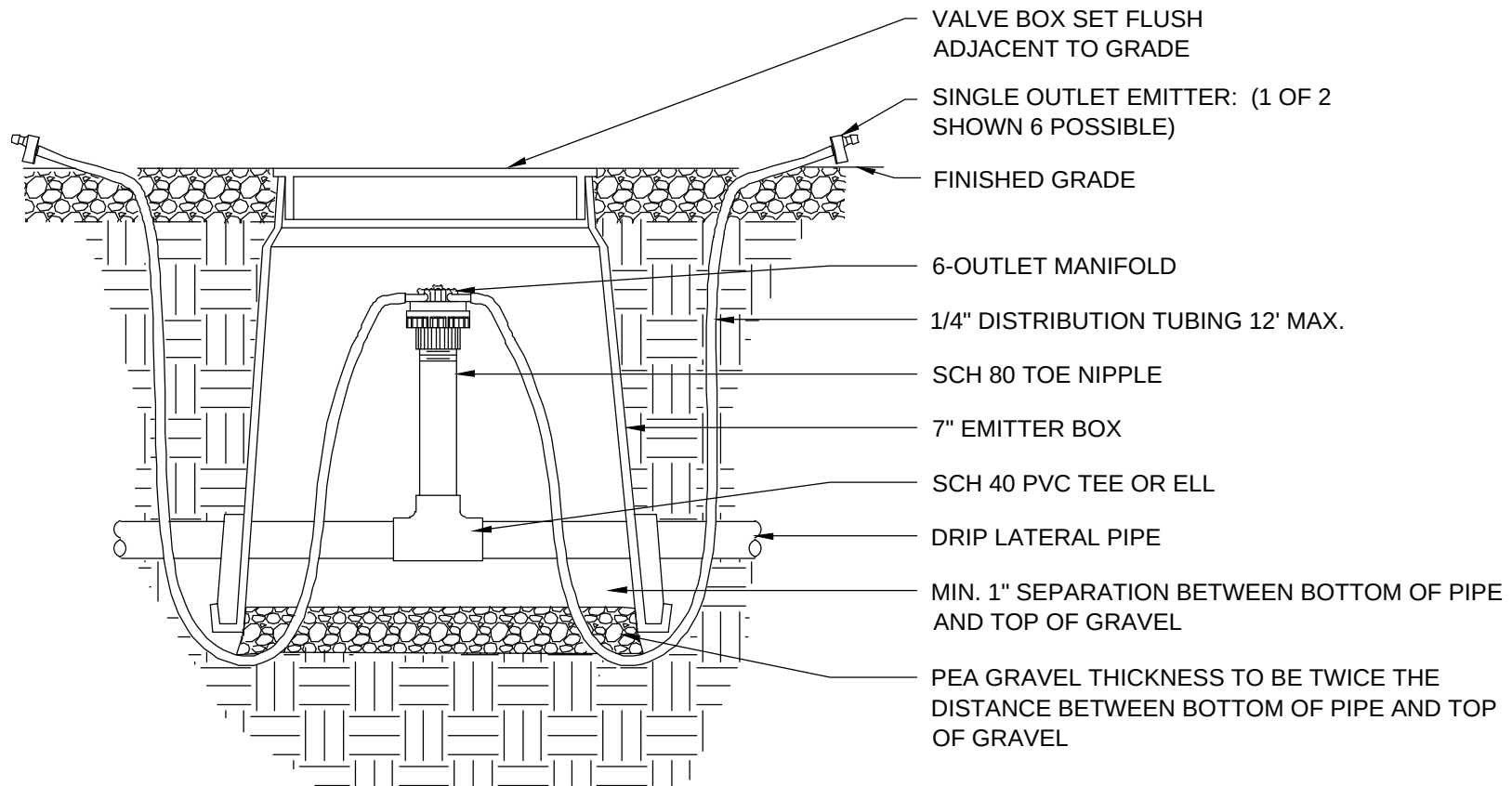
NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.



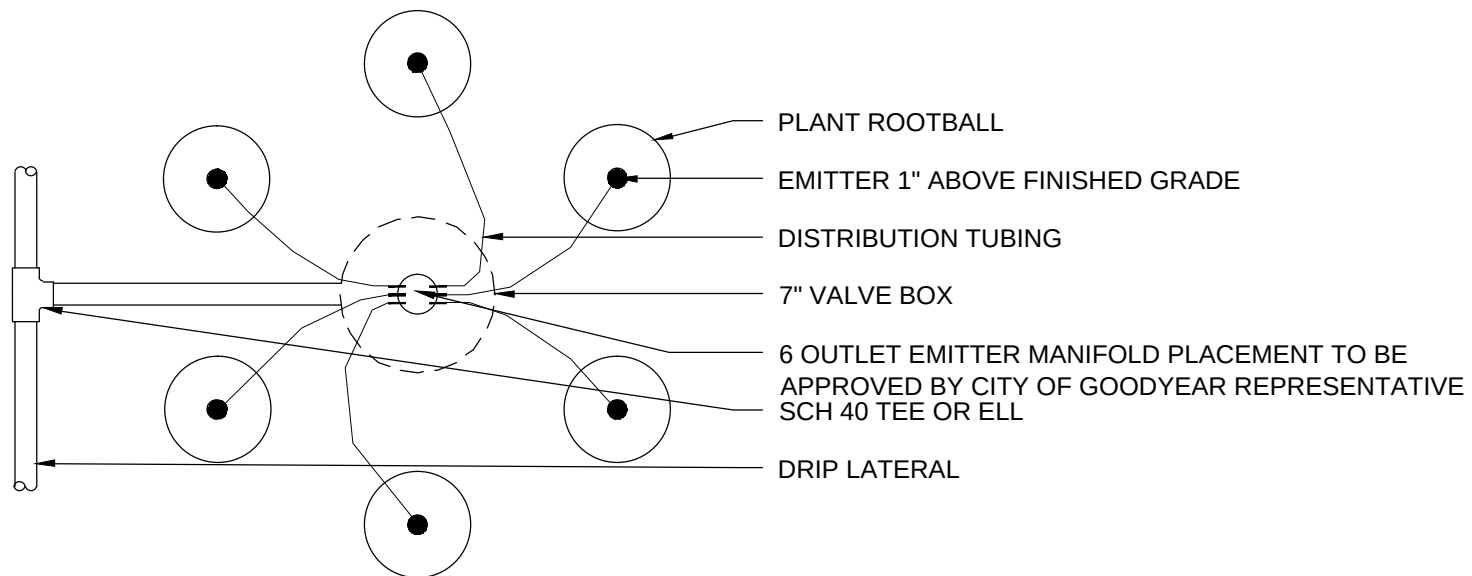
NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.
2. EMITTER TUBE OUTLET SHALL BE LOCATED DIRECTLY OVER ROOT BALL FOR PLANTS.
3. EMITTER TUBE OUTLET FOR CACTI ACCENTS SHALL NOT BE PLACED DIRECTLY ON ROOT BALL BUT 4" TO 6" AWAY.
4. NUMBER OF EMITTER TUBES REQUIRED PER PLANT IS BASED ON PLANT SIZE. SEE EMITTER SCHEDULE.
5. ONE 6-ORIFICE MANIFOLD PER TREE. THE EMITTERS ARE PLACED EVENLY AROUND TREE PER CITY OF GOODYEAR STANDARD DETAIL G-3620-18. MANIFOLD PLACEMENT TO BE APPROVED BY CITY OF GOODYEAR REPRESENTATIVE.
6. MANIFOLD OUTLETS NOT USED SHALL BE PLUGGED TO THE SATISFACTION OF THE CITY OF GOODYEAR REPRESENTATIVE.
7. TREE MANIFOLD EMITTER VALVE BOX SHALL BE 5' MIN. FROM TREE TRUNK AND 12" FROM PAVEMENT EDGE.
8. EMISSION POINTS SHALL BE LOCATED UPHILL OF PLANT CENTERLINE AND SHALL DELIVER WATER DIRECTLY TO ROOT BALL (TYP.).



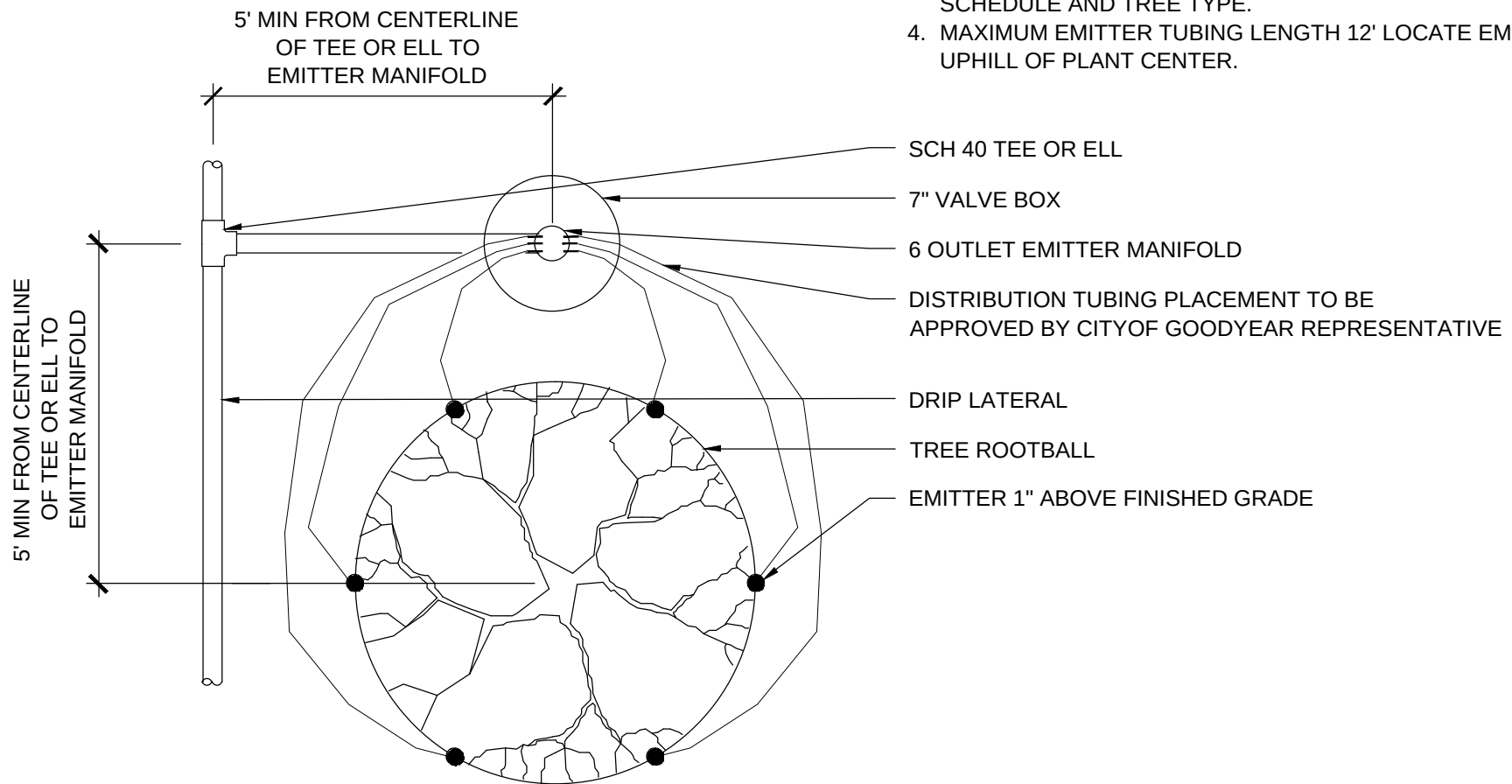
NOTES

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS .
2. EMITTER OUTLETS SHALL BE LOCATED TO DIRECT WATER FLOW TO MIDDLE OF ROOTBALL.
3. PROVIDE SPECIFIED NUMBER OF OUTLETS PER EMITTER SCHEDULE AND PLANT TYPE.
4. MAXIMUM EMITTER TUBING LENGTH 12' LOCATE EMITTERS UPHILL OF PLANT CENTER.



NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS .
2. EMITTER OUTLETS SHALL BE EQUALLY SPACED, AND LOCATED TO DIRECT WATER FLOW TO PERIMETER OF DRIP LINE AS WELL AS ROOT BALL.
3. PROVIDE SPECIFIED NUMBER OF OUTLETS PER EMITTER SCHEDULE AND TREE TYPE.
4. MAXIMUM EMITTER TUBING LENGTH 12' LOCATE EMITTERS UPHILL OF PLANT CENTER.



NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SHALL ONLY USE MATERIALS FROM THE LATEST EDITION OF THE CITY OF GOODYEAR APPROVED MATERIALS LIST FOR PARKS AND RIGHT OF WAYS.

